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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; (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 APPLICABLE RELATED COSTS THROUGH ITS INTEGRATED COAL GASIFICATION COMBINED CYCLE GENERATING FACILITY COST RECOVERY ADJUSTMENT, STANDARD CONTRACT RIDER NO. 61 PURSUANT TO IND. CODE §§ 8-1-8.8-11 AND -12; AND (3) ESTABLISHMENT OF A SUBDOCKET PROCEEDING TO REVIEW THE COST ESTIMATE FOR THE IGCC PROJECT; AND (4) APPROVAL OF A REQUEST TO UPDATE ITS DEPRECITATION RATES FOR PRODUCTION, TRANSMISSION, DISTRIBUTION AND GENERAL PLANT AND EQUIPMENT	CAUSE NO. 43114 IGCC 4S1 APPROVED: DEC 27 2012

ORDER OF THE COMMISSION

Presiding Officers:
James D. Atterholt, Chairman
Kari A.E. Bennett, Commissioner
Larry S. Landis, Commissioner
Carolene Mays, Commissioner
David E. Ziegner, Commissioner
David E. Veleta, Administrative Law Judge

INDIANA UTILITY REGULATORY COMMISSION

CAUSE NO. 43114 IGCC 4S1

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INDIANA UTILITY REGULATORY COMMISSION

CAUSE NO. 43114 IGCC 4S1

INTRODUCTION

On November 24, 2009, Duke Energy Indiana, Inc. ("Duke", "Company" or "Petitioner") filed its Verified Petition ("Petition") with the Indiana Utility Regulatory Commission ("Commission") in Cause No. 43114 IGCC-4. In its Petition, Duke requested (1) approval of the Company's ongoing review progress report concerning the Edwardsport Integrated Gasification Combined Cycle Generating Facility ("IGCC Project"); (2) authorization to reflect additional actual costs incurred for the IGCC Project under construction in its rates and authorization to recover certain other applicable related costs via the Integrated Coal Gasification Combined Cycle Generation Facility Cost Recovery Adjustment, Standard Contract Rider No. 61 ("Rider 61" or "IGCC Rider"); and (3) establishment of a subdocket proceeding to review a revised cost estimate for the IGCC Project.

Pursuant to a Docket Entry issued on January 27, 2010, the Presiding Officers granted Duke's Motion for Subdocket under Cause No. 43114 IGCC-4, thereby establishing this Cause No. 43114 IGCC-4S1 ("IGCC-4S1").

On February 25, 2011, the Commission issued a Docket Entry which bifurcated IGCC-4S1 into two phases – Phase I to address the Commission's review of the IGCC-4 progress report, the IGCC Project cost estimate increase, the continued need for additional capacity, and the reasonableness of going forward with the IGCC Project; and Phase II to address allegations of fraud, concealment and/or gross mismanagement.

On March 7, 2011, the Commission issued Docket Entries in Cause Nos. 43114 IGCC-5 ("IGCC-5") and 43114 IGCC-6 ("IGCC-6") providing that the Commission's review of the progress reports submitted in those Causes should be considered in Phase I of IGCC-4S1, and its review of any allegations of fraud, concealment and/or gross mismanagement relative to the ongoing review progress reports presented in IGCC-5 and IGCC-6 shall be considered in Phase II of IGCC-4S1.

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 IGCC-4S1 Phase I, beginning on October 26, 2011. An Evidentiary Hearing was also held in IGCC-4S1 Phase II, beginning on November 9, 2011. The hearings for both phases extended over the course of 25 days. The parties to the proceeding, other than Duke, included the Sierra Club, Citizens Action Coalition of Indiana, Save the Valley, and Valley Watch (collectively "Joint Intervenors"), Nucor-Steel-Indiana, a division of Nucor Corporation ("Nucor"), Steel Dynamics, Inc. ("SDI"), the Duke Industrial Group ("Industrial Group"), and the Indiana Office of Utility Consumer Counselor (the "OUCC"). Nucor and SDI did not present testimony in this proceeding.

In preparation for taking final action on an order subject to judicial review, the Commission convened a publicly noticed Executive Session in this matter pursuant to Indiana Code § 8-1-1-5(f). The Executive Session was held on Monday, March 26, 2012, at 2:00 p.m. in

the Board Room of the Indiana Utility Regulatory Commission, 101 West Washington Street, Suite 1500 East, Indianapolis, Indiana. Present from the Commission were Chairman James Atterholt, Commissioners David E. Ziegner, Larry S. Landis, Carolene Mays and Kari A.E. Bennett; Doug Webber, General Counsel; Loraine Seyfried, Chief Administrative Law Judge; David Veleta, Administrative Law Judge; Dale Thomas, Assistant Director of the Electric Division; and Mike Wiliams, Utility Analyst.

On April 30, 2012, Duke, Nucor, the Industrial Group, and the OUCC (collectively the "Settling Parties"), filed a Verified Petition to Reopen the Records in this matter and indicated that they had reached a settlement agreement ("Settlement Agreement"). A copy of the Settlement Agreement is attached hereto and incorporated herein by reference.

Pursuant to a Docket Entry issued May 2, 2012 by the Presiding Officers, an Attorneys' Conference was held in this Cause on May 9, 2012 at 2:30 p.m. in Room 222 of the PNC Center, 101 West Washington Street, Indianapolis, Indiana. Chairman Atterholt and Commissioners Bennett, Landis, Mays and Ziegner were present. During the Attorneys' Conference, the Joint Intervenors and the Settling Parties discussed reopening the Phase I and Phase II records in this proceeding, and the Settling Parties proposed a new timeframe for the filing of additional evidence, and the scheduling of an Evidentiary Hearing.

On May 11, 2012, the Presiding Officers issued a Docket Entry setting the procedural schedule for the submission of testimony and exhibits regarding the Settlement Agreement in this proceeding.

On May 25, 2012, Joint Intervenors filed a Motion to Modify the Procedural Schedule in this Cause. On June 8, 2012, the Presiding Officers modified the procedural schedule in this Cause to provide the Joint Intervenors with additional time to prepare testimony and exhibits.

A Settlement Hearing commenced on July 16, 2012. At that time, the direct and rebuttal testimonies and exhibits of the Settling Parties in support of, and Joint Intervenors' testimony responding to, the Settlement Agreement were admitted into evidence.

On October 22, 2012, the Commission convened another publicly noticed Executive Session in this matter pursuant to Indiana Code § 8-1-1-5(f). Present from the Commission were Chairman James Atterholt, Commissioners David E. Ziegner, Larry S. Landis, Carolene Mays and Kari A.E. Bennett; Doug Webber, General Counsel; Loraine Seyfried, Chief Administrative Law Judge; David Veleta, Administrative Law Judge; Dale Thomas, Assistant Director of the Electric Division; and Mike Wiliams, Utility Analyst.

On November 28, 2012, the Commission convened a final publicly noticed Executive Session in this matter pursuant to Indiana Code § 8-1-1-5(f). Present from the Commission were Chairman James Atterholt, Commissioners David E. Ziegner, Larry S. Landis, Carolene Mays and Kari A.E. Bennett; Doug Webber, General Counsel; Loraine Seyfried, Chief Administrative Law Judge; David Veleta, Administrative Law Judge; Dale Thomas, Assistant Director of the Electric Division; and Mike Wiliams, Utility Analyst.

On December 18, 2012, Joint Intervenors filed *Joint Intervenors' Objection To Participation of Chief Administrative Law Judge Loraine Seyfried In All Commission Deliberations In This and Related Proceedings* ("Motion").[1]

This is not the first time that Joint Intervenors have raised an issue after the Commission has held publicly noticed Executive Sessions related to the IGCC Project. The Commission convened an Executive Session in Cause No. 43114, the original IGCC proceeding on November 16, 2007. Following the Executive Session, the Order in Cause No. 43114 was placed on the Commission's publicly noticed Final Agenda for the Commission's Conference on November 20, 2007. On November 19, 2007, Joint Intervenors requested the Commission reopen the record in that proceeding for the purpose of taking additional evidence. The Commission denied the motion in that proceeding. The Joint Intervenors once again have waited until after publicly noticed Executive Sessions to move for some additional relief. The Commission has conducted three Executive Sessions in this Subdocket, and it was not until 20 days after the third Executive Session that Joint Intervenors chose to voice any objection. Thus, Joint Intervenors Motion is untimely, and therefore is denied.

Having considered the evidence and being duly advised, the Commission now finds:

1. Notice and Jurisdiction. Due, legal, and timely notice of the Evidentiary Hearings in this Cause were given and published by the Commission as required by law. Duke is a public utility as defined by Indiana 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 and the subject matter of this proceeding.

2. Petitioner's Characteristics. Petitioner is an Indiana corporation with its principal office located at 1000 East Main Street, Plainfield, Indiana. Duke 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 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.

3. Description of the IGCC Project. The IGCC Project is an approximately 618 megawatt Integrated Gasification Combined Cycle facility in Knox County, Indiana located on approximately 220 acres of land adjacent to Duke's retired Edwardsport Generation Station. It has been under construction since 2008. The IGCC Project is designed to use Indiana bituminous coal from the geologic formation known as the Illinois Basin.

[1] It is a practice of the Commission for the Chief Administrative Law Judge to attend Executive Sessions regardless of whether they are the assigned Administrative Law Judge. *See Northern Indiana Public Service Company*, Cause No. 43969, 2011 Ind. PUC LEXIS 369 (IURC December 21, 2011), *Indiana Finance Authority*, Cause No. 43976, 2011 Ind. PUC LEXIS 345 (IURC November 22, 2011), *Duke Energy Indiana, Inc.*, Cause No. 43743, 2011 Ind. PUC LEXIS 300 (IURC October 19, 2011), *Northern Indiana Public Service Company*, Cause No. 38706 FAC 80 S2, 2010 Ind. PUC LEXIS 326 (IURC September 22, 2010).

4. Prior and Ongoing Related 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 IGCC Project. The CPCN Order approved Petitioner's estimated construction cost for the IGCC Project of $1.985 billion including allowance for funds used during construction ("AFUDC") as well as Petitioner's proposed IGCC Rider, which provides for the timely recovery of costs in connection with the IGCC Project. The Commission also approved the Petitioner's request for ongoing review of the IGCC Project.

On December 20, 2007, Joint Intervenors filed their notice of appeal of the Commission's CPCN Order. On October 16, 2008, the Indiana Court of Appeals affirmed the Commission's CPCN Order. *Citizens Action Coalition of Indiana, Inc. v. PSI Energy, Inc.*, 894 N.E.2d 1055 (Ind. Ct. App. 2008).

On May 1, 2008, Petitioner filed its first semi-annual IGCC Rider and ongoing review progress report proceeding related to the IGCC 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 cost estimate of the IGCC 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 construction cost estimate for the IGCC Project of $2.350 billion including AFUDC and its ongoing review progress report, the timely recovery of construction and operating costs through the IGCC Rider reflecting actual expenditures through February 28, 2008, and studies related to carbon capture at the IGCC Project and cost recovery for such studies. On January 27, 2009, the OUCC filed a Motion for Clarification. On April 1, 2009, the Commission issued an order denying the OUCC's Motion for Clarification.

On November 3, 2008, Petitioner filed its second semi-annual IGCC Rider and ongoing review progress report proceeding related to the IGCC 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 IGCC Project through September 30, 2008, and for certain external costs, and of the Company's updated ongoing progress report for the IGCC Project.

On May 1, 2009, Petitioner filed its third semi-annual IGCC Rider and ongoing review progress report proceeding related to the IGCC Project, designated as Cause No. 43114 IGCC-3. On December 2, 2009, the Commission issued its order in Cause No. 43114 IGCC-3 (the "IGCC -3 Order") in which it approved the Company's request for recovery under the IGCC Rider of the additional actual costs of the IGCC Project through March 31, 2009, and for certain external costs, and of the Company's updated ongoing progress report for the IGCC Project.

On November 24, 2009, Petitioner filed its forth semi-annual IGCC Rider and ongoing review progress report proceeding related to the IGCC Project, designated as Cause No. 43114 IGCC-4. On July 28, 2010, the Commission issued its order in Cause No. 43114 IGCC-4 which

approved the ongoing review progress report on an interim basis pending the outcome of this subdocket.

On June 2, 2010, Petitioner filed its fifth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-5 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through March 31, 2010, and certain other applicable related costs.

On November 5, 2010, Petitioner filed its sixth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-6 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through September 30, 2010, and certain other applicable related costs.

On May 31, 2011, Petitioner filed its seventh semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-7 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through March 31, 2011, and certain other applicable related costs.

On November 30, 2011, Petitioner filed its eighth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-8 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through September 30, 2011; and (3) approval of the depreciation rates to be used for the IGCC Project upon its in-service, and certain other applicable related costs.

On June 8, 2012, Petitioner filed its ninth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-9 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through March 31, 2012, and certain other applicable related costs.

On November 20, 2012, Petitioner filed its tenth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-10 and requesting approval of: (1) the Company's updated ongoing progress report for the IGCC Project; and (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through September 30, 2012, and certain other applicable related costs.

5. **<u>Relief Requested</u>.** In this proceeding, Petitioner initially requested that the Commission modify the CPCNs previously granted for the IGCC Project by approving an increase in the cost estimate for the IGCC Project, from the currently approved estimate of $2.35 billion to a new cost estimate of $2.88 billion including AFUDC. Subsequently, Duke proposed to voluntarily cap the costs that it would seek from customers and sought approval of an IGCC Project cost estimate of $2.72 billion in direct construction costs, plus all associated AFUDC costs on the $2.72 billion for a total of approximately $3 billion.

Pursuant to the Settlement Agreement filed in this Cause, the Settling Parties request that the Commission modify the CPCNs for the IGCC Project to reflect a Hard Cost Cap of $2.595 billion plus additional AFUDC agreed to in the Settlement Agreement regarding the overall IGCC Project cost estimate, and find that the costs incurred up to the Hard Cost Cap (plus additional AFUDC), to the extent presented in this proceeding (through the IGCC 6 proceeding), are reasonable and are not affected by imprudence, gross mismanagement, concealment, or fraud. Additionally, the Settling Parties request that the Commission approve the changes to depreciation rates outline in the Settlement Agreement. The Settling Parties also request that the Commission approve the prospective change in treatment of deferred taxes, as provided for in the Settlement Agreement. The Settling Parties further request confirmation that Duke has authority to defer, for subsequent recovery over a 3-year period, post-in-service operations and maintenance ("O&M"), depreciation, and property tax expenses associated with the IGCC Project. Finally, the Settling Parties request that, to the extent necessary, the Commission approve the litigation expense payments and additional funding commitments in the Settlement Agreement.

6. Evidence in Phase I and Phase II. Prior to the submission of the Settlement Agreement, the Parties presented extensive evidence, which is briefly summarized here and further considered in the discussion of the Settlement Agreement below.

A. Petitioner's Phase I Case-In-Chief Evidence.

a. James E. Rogers. Mr. Rogers, President, Chief Executive Officer and Chairman of the Board of Duke Energy Corporation, provided an overview of the key issues related to the IGCC Project, discussed the rate mitigation measures that the Company proposed, and presented the risks and uncertainties associated with converting the IGCC Project to a natural gas combined cycle ("NGCC") facility.

Mr. Rogers testified that the Company's pending request for approval of an increase in the cost estimate to $2.72 billion plus AFUDC is reasonable and necessary. The increase in the cost estimate was due to a substantial increase in the scope and quantities of raw materials, lower-than-expected labor productivity, and changes in the grey water treatment and disposal system. To find a reasonable, constructive, and balanced solution to the impact of the IGCC Project's increased costs, Mr. Rogers explained that the Company proposed several measures to mitigate customer rates.

Mr. Rogers emphasized that while the IGCC Project is a large investment, it is a long-term investment that will provide long-term benefits to the Company's customers. When completed, the Company expects the IGCC Project will provide low-cost, clean, and affordable energy to its customers for at least 30 years. Mr. Rogers stated the baseload capacity the IGCC Project provides is needed not only to meet future demand, but to replace capacity from the anticipated retirements of older, smaller coal-fired units in the next few years.

Mr. Rogers explained that the IGCC Project is a "mega-project" with its share of challenges. He stated that through the ongoing review process, the Company provided the Commission with regular updates about the status and progress of the IGCC Project, including information regarding the need, cost, status, cost pressures, schedule and other challenges that the Company has addressed from the beginning of the IGCC Project.

Mr. Rogers explained that conversion to a natural-gas fired plant would not be the most reasonable course of action. In the Company's view, conversion could increase the risk that its customers will experience price volatility. Historically, natural gas has exhibited significant price volatility, and such price volatility will likely continue in the future. Although shale gas production appears to be viable and economic in the near term, the environmental and safety concerns surrounding the shale gas production industry make continued viable and economic production of shale gas uncertain.

In addition to rate impacts resulting from gas price volatility, Mr. Rogers testified that conversion to a natural gas facility would have several other negative consequences. Mr. Rogers opined that the Company would also forfeit federal and state tax incentives if it converted to natural gas and, as a result, customers would not receive the benefit of hundreds of millions of dollars in tax incentives. Moreover, if the Company converted the IGCC Project, the IGCC Project would produce about 130 fewer MWs, would not be able to support Indiana coal mining jobs over the life of the plant, and the Company would need to apply for and obtain a new air permit.

b. Douglas F. Esamann. Mr. Esamann, President, Duke Energy Indiana, Inc., testified the Company must modernize its generation fleets in order to reliably and economically meet customer requirements, and that the IGCC Project continues to be a necessary baseload resource – in the short term and even more so over its expected operational life. Mr. Esamann explained that impending Environmental Protection Agency ("EPA") regulations will likely result in the early retirement and/or significant derates of numerous coal-fired units on the Company's system and in the region by 2015 or 2016. Additionally, the temporary decline in the Company's load forecast due to the economic recession does not obviate the need for new capacity on the Company's system because, among other things, recent statistics indicate that the economy and, therefore, electric demand, is rebounding from the recession. Mr. Esamann testified that cancellation of the IGCC Project is not a productive solution, and that the IGCC Project remains a robust and cost-effective option. If the IGCC Project were cancelled, the Company would have a shortfall in its near-term capacity needs.

Finally, Mr. Esamann testified that, in addition to the Company's continuing focus on controlling IGCC Project costs, the Company proposed to mitigate the IGCC Project's rate impact through a number of ratemaking proposals. For example, the Company unilaterally committed at that time to a construction capital cost "Hard Cap" of $2.72 billion (excluding AFUDC; actual accrued AFUDC resulting from IGCC Project costs up to the Hard Cap amount would be recovered), and proposed to prospectively eliminate the deferred tax financial incentive previously authorized by the Commission. The Company also proposed to implement updated depreciation rates, resulting in lower depreciation expenses for the entire system upon Commission approval in this proceeding. In addition, Mr. Esamann explained that the IGCC Project qualifies for a federal bonus tax depreciation benefit through the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010, which may permit a substantial portion of the IGCC Project costs to qualify for at least the 50% bonus depreciation treatment. The benefits of this tax treatment would be passed to ratepayers.

c. Richard W. Haviland. Mr. Haviland, Senior Vice President of Construction and Major Projects, Duke Energy Business Services, LLC, provided an overview of the construction

challenges facing the IGCC Project affecting the cost estimate and explained how the IGCC Project team responded in a proactive, reasonable, and prudent manner in addressing all these challenges. Mr. Haviland also provided an update on the cost forecast for completion of the IGCC Project.

Mr. Haviland explained that the IGCC Project's cost estimate increased from $2.35 billion because additional scope and quantity changes were needed that could not be identified at the time the FEED Study took place. He explained, first, that the changes were driven primarily by bulk quantity increases. The quantity changes had a ripple effect on other cost and schedule items and, thus, resulted in increased engineering costs, schedule compression and extensions, delayed delivery of equipment, and increased field construction costs.

Second, lower-than-expected labor productivity also contributed to the increased cost estimate. The craft labor productivity rates were lower than the rates the site contractors put in their bids and the levels assumed in the approved cost estimate. Many factors affected labor productivity including late engineering, engineering changes, late equipment and material delivery, craft availability, craft skill level, schedule compression, overtime, and field planning. Mr. Haviland testified that the Company worked closely with contractors and trade union leadership to mitigate issues impacting productivity.

Third, the Company had to implement a Zero Liquid Discharge ("ZLD") system to treat grey water, a byproduct of the gasification process, after determining that environmental regulations precluded permitting the deep well injection ("DWI") disposal system as nonhazardous. This design change also contributed to the increased cost estimate. The DWI system design was based on the FEED Study grey water characteristics, which the General Electric Company ("GE")/Bechtel Corporation ("Bechtel") Alliance (collectively the "Alliance") reported to be nonhazardous. GE later changed the grey water characteristics to include higher-than-expected arsenic and selenium levels. Mr. Haviland testified that these changes caused the grey water to be considered hazardous, unless it qualified for a statutory exemption. Believing this exemption applied, the Company worked with the EPA so that it could continue to pursue the lower cost DWI system. Ultimately, however, the EPA did not agree that the exemption applied to the IGCC Project's grey water stream and the Company had to redesign the system to treat and recycle the grey water.

Mr. Haviland also explained the Company's work to revise the cost estimate that began in late 2009 and continued through early 2010. He explained that the Company did not re-evaluate quantities as part of the revised budget it submitted to the Commission in May 2008 because detailed engineering had just begun and, as a result, there was no more engineering information available at that time. Furthermore, neither Bechtel nor GE indicated that there was a need for re-evaluation. It was not until June 2009 that the IGCC Project team was first made aware of engineering and quantity increases, at which point the IGCC Project team began tracking and reporting quantities on a weekly basis. To mitigate the impact of additional quantity increases, the Company held conference calls with Bechtel twice a week to address the areas that were negatively affecting the IGCC Project's cost. By the end of December 2009, the Company believed that it had defined the quantities and scope sufficiently, and could thus begin revising the estimate for the IGCC Project. Some allowances for additional quantity growth were included in the new estimate.

Mr. Haviland also provided an updated on the then-forecasted cost for completion of the IGCC Project. He explained that since the Company presented its April 2010 case-in-chief testimony, the IGCC Project has continued to experience management challenges and cost pressures, and that the ultimate cost of the IGCC Project will be dependent on the impacts from three factors: (1) increased construction costs due primarily to labor productivity, (2) the need for contingency associated with start-up and testing, and (3) financing AFUDC charges.

d. W. Michael Womack. Mr. Womack, Vice President, Edwardsport IGCC Project, Duke Energy Business Services, LLC, presented the Company's updated cost estimate at that time, and explained that the cost estimate increased from the approved $2.35 billion estimate due to three primary causes: (1) quantity increases and the increased cost of support services that accompany such scope growth, (2) the developing design of the grey water treatment system, and (3) reduced labor productivity.

Mr. Womack also described the IGCC Project controls Duke has in place. IGCC Project controls are used to identify potential problems in the engineering, procurement and construction schedule or budget that could delay or increase the costs of a construction IGCC Project. Once problems are identified, they can be immediately addressed with the contractors or vendors involved. The Company uses daily, weekly, and monthly IGCC Project reports to monitor the IGCC Project, and schedules regular meetings to manage the IGCC Project. An auditor for the builder's risk insurer for the IGCC Project, Swiss Re, evaluated the IGCC Project and IGCC Project team in the fall of 2009 and gave the IGCC Project the insurer's best rating regarding risk of loss to the underwriter. Part of the scorecard for determining this rating is the management structure, experience, and practices of the IGCC Project team. Only two IGCC Projects out of 31 world-wide received this rating.

Mr. Womack explained why the Company should not have stopped the IGCC Project, in the fall of 2009, once it realized that the IGCC Project's costs would exceed the approved cost estimate of $2.35 billion, pending reevaluation of its costs. A reevaluation was not a reasonable option at that time because the Company could not have conducted a meaningful re-estimation of the IGCC Project's costs until the increases in scope and quantities from the detailed engineering began to level off in late 2009 and early 2010. Moreover, for numerous reasons, suspending construction of the IGCC Project at that point in time would have actually increased the total costs.

Mr. Womack also presented the Company's ongoing review progress reports in IGCC-5 and IGCC-6. In both his IGCC-5 and IGCC-6 testimonies, he described the status of the IGCC Project, the expected completion date, and the most important issues affecting the schedule at the time, provided updates on engineering progress, procurement, construction work in progress, and provided the information the Commission requested in its January 7, 2009 order in Cause No. 43114 IGCC-1 and its May 13, 2009 Order in Cause No. 43114 IGCC-2. He also provided Ms. Douglas with the costs she used in each proceeding. In his IGCC-6 testimony, he also described actions the Company is taking to avoid further delays to the IGCC Project schedule.

e. Patricia D. Galloway. Dr. Galloway, Chief Executive Officer and Chief Financial Officer of Pegasus Global Holdings, Inc., testified about construction mega-projects in general and, more specifically, about power generation mega-projects. She also testified about the

differences between planning, managing, controlling and completing a typical construction project and a mega-project.

She further addressed fundamental concepts of prudence as they apply to decision making during the planning and execution of a power generation mega-projects. The distinction between mega-project construction and a typical construction project is important because the challenges presented by a typical construction project are much less significant than those presented by constructing a mega-project. Without the proper context, the reasonableness or prudence of decisions made and actions taken by management in the midst of constructing a mega-project may be judged unfairly. There is no "one-size-fits-all" or "best" methodology for allocating or subcontracting mega-projects; they generally have multiple delivery methodologies and contracting approaches. Changes that will impact the planned execution of a mega-project are inevitable. When issues or events impact, or have the potential to impact, the execution of the project, one must analyze the situation, evaluate the options, and change the execution approach to mitigate events or issues. Mega-projects use standard construction industry project controls, consisting of three major components: cost control, schedule control and reporting. Project controls for mega-projects evolve over time. It is typically not possible to follow a rigid execution plan or rigid schedule in a mega-project. While all construction projects are dynamic, mega-projects are confronted with an even greater range of issues that require adjustments to the project's execution plans. In evaluating prudence, one must examine how management reacted to changes in the project environment as the project moved through its execution cycle.

Dr. Galloway testified that there are generally accepted prudence standards for management decisions. She explained that decisions are prudent if made in a reasonable manner in light of conditions and circumstances which were known or reasonably should have been known when the decision was made. In essence, management makes prudent decisions when it makes an informed decision under the circumstances at the time the decision is made. Prudence cannot be judged from the perspective of hindsight, and it is possible for there to be more than one prudent response to the same set of circumstances and information. Most, if not all, management decisions do not involve right or wrong answers, as there typically are multiple decisions that can be made that are equally reasonable and prudent under the circumstances, and it is not appropriate in a prudence audit/review to substitute one's judgment for that of management. Moreover, prudence cannot be judged by a test of optimality, whether the best outcome resulted, particularly in a mega-project when the ultimate results of a decision may not be fully known until years in the future.

f. Janice D. Hager. Ms. Hager, Vice President, Integrated Resource Planning and Regulated Analytics, Duke Energy Business Services, LLC, explained the assumptions underlying the analysis, and interpreted the results of that analysis. She explained that the Company's IRP analyses for this Cause included three scenarios: 1) Completion of the IGCC Project ("Complete as IGCC"); 2) stopping the coal gasification portions of the IGCC Project and instead completing the plant as a NGCC plant ("Complete as NGCC"); and 3) stopping the entire IGCC Project and meeting customer needs through alternative means ("No IGCC"). Under the updated IRP analysis, the present value of revenue requirements ("PVRR") of all three options were relatively close, with less than a 1% difference in the PVRR among any of the options. Because there was only a marginal difference in the PVRR percentages for the three different options, the Company took into account both quantitative and qualitative factors in

reaching the conclusion that completing the IGCC Project was the most reasonable course of action.

In supplemental testimony, Ms. Hager testified that the base case analytical results of her most recent IRP analyses show that completion of the IGCC Project is the least-cost option for customers over the life of the plant compared to converting the plant to an NGCC or meeting customers' energy and capacity requirements by other means if the plant were cancelled. Further, the Complete as IGCC portfolio is the preferred option under most sensitivity analyses. Under the most recent IRP analyses, when the Complete as IGCC is not the preferred option, the Complete as NGCC is the preferred option. Cancelling the IGCC plant (the No IGCC scenario) is never the least-cost option for customers.

g. Jack L. Stultz. Mr. Stultz, Plant Manager of the IGCC Project, provided supplemental testimony explaining the basis for the availability factors that Ms. Hager incorporated into her IRP analysis. He also testified to his belief that the plant will be reliable and that it will operate at its expected availability.

Mr. Stultz explained that he anticipates the IGCC Project will achieve an overall availability of 85% or higher over the long-term operating on syngas; however, the availability of the plant will be lower during the early months of commercial operation. He anticipates that, during the first 15 months of commercial operation, 75% is a reasonable availability rate for the IGCC Project operating on syngas. Thereafter, the IGCC Project's availability operating on syngas should be at least 85%. It is also reasonable to assume that during periods when not operating on syngas, the plant will be able to operate on natural gas much of the time, and the plant will achieve at least 90% availability with this flexibility. In the event of any gasification problem, the combustion turbines can change from syngas to natural gas in roughly three minutes, remaining in service with an output reduction from 586 MW to 458 MW (summer rating).

In addition, Mr. Stultz testified that while the IGCC Project is unique in its size and its advanced equipment, it is not unique with respect to coal gasification technology, which has been used since the early 20th century. Thus, each of the major technologies that make up the components of the Edwardsport plant has a long history of reliable performance. Furthermore, Mr. Stultz testified that his and GE's IGCC Project teams studied the Polk and Wabash River 1 plants and have applied lessons learned from those facilities to improve Edwardsport's reliability.

h. Richard G. Stevie. Dr. Stevie, Chief Economist, Strategy and Planning, Duke Business Services, LLC, presented the Company's load forecasts. He explained how the Company prepared the load forecasts, and provided testimony on the leading economic indicators and trends signaling changes in load growth. Dr. Stevie's load forecasts are incorporated into Ms. Hager's IRP analyses.

i. John L. Stowell. Mr. Stowell, Vice President, Health & Safety Policy, Duke Energy Business Services, LLC, supported the Company's CO_2 price assumptions incorporated into the IRP analysis. He explained that, because of cost concerns, Congress has not yet passed any CO_2 legislative proposals and the Company's current range of CO_2 prices reasonably reflects the current political landscape in Washington and the significant uncertainty surrounding future

climate change legislation. Accordingly, he concluded that Ms. Hager's CO_2 emission allowance modeling assumptions are reasonable. He further explained that Edwardsport is well-positioned with regard to the impending environmental regulations.

Mr. Stowell also discussed environmental regulations that may result in the derating or retirement of some of Duke's coal-fired units. Specifically, he explained that the EPA has already finalized several environmental regulations and is expected to finalize additional air, water, and waste regulations applying either directly or indirectly to coal-fired electric generating facilities in Indiana, including (1) new lower national ambient air quality standards for sulfur dioxide, nitrogen oxides, ozone and fine particles, (2) regulations limiting emissions of hazardous air pollutants, nitrogen oxides and sulfur dioxide, (3) regulations governing the management of coal combustion residuals, (4) the impact of power plants' cooling water systems on aquatic resources, and water discharges to surface waters, and (5) regulation of greenhouse gas emissions. Mr. Stowell expects these new rules to take effect by 2017.

j. Joseph A. Miller, Jr. Mr. Miller, Jr., General Manager, Analytical and Investment Engineering, Duke Energy Business Services, LLC[2], provided estimates of the "costs-to-go" for the complete as IGCC and the complete as NGCC scenarios in the IRP analyses presented in Ms. Hager's testimony. In addition, Mr. Miller discussed the Company's environmental risk assessment measuring the potential impacts of potential environmental regulations on its coal-fired generating units.

In his supplemental testimony, Mr. Miller explained that the "costs-to-go" estimates for completion of the IGCC Project and conversion to an NGCC were $486 million and $255 million, respectively, based on a December 31, 2010 cut-off date. The same estimates based on a June 30, 2010 cut-off date were $790 million and $360 million, respectively. He developed the estimates taking into consideration the $2.72 billion hard cap proposal on all construction costs proposed at that time. He also took into consideration the estimated committed costs for the IGCC Project as of December 31, 2010. The same process was used to calculate the costs to go for completing the IGCC Project as an IGCC, and completing the IGCC Project as a natural gas-only fueled combined cycle plant. The "costs-to-go" calculation for the complete as NGCC scenario included an estimate of the net sunk costs (*i.e.*, committed costs, credited with salvage and restock credits as of the cut-off date).

Mr. Miller testified that he also conducted an analysis involving cancelling the IGCC Project and estimating the net sunk costs using the same cut-off date. The difference between the net sunk cost estimates for the complete as NGCC scenario and the scenario involving cancellation of the IGCC Project was relatively small. The estimated "costs-to-go" for completion of the IGCC Project as an IGCC plant, excluding AFUDC, totaled about $486 million, and the "costs-to-go" for completion of the IGCC Project as an NGCC, excluding AFUDC, totaled about $255 million.

Mr. Miller further testified that converting the IGCC plant to an NGCC plant is feasible, but there are risks involved that require further study. One risk is that the NGCC conversion is in the conceptual stage, and there are no detailed engineering and design or firm cost estimates.

2 Mr. Miller adopted the April 16, 2010 direct testimony and the September 2, 2010 rebuttal testimony of Robert Moreland.

In contrast, such risks are relatively small for the complete as IGCC option because the detailed engineering and design is essentially complete.

Another potential risk posed by NGCC conversion is that it eliminates the option of dual fuel firing. As a result, the only fuel option that would be available if conversion takes place is natural gas. The conversion to an NGCC will also cause an approximately 130 MW reduction in generating capacity for the station, due in part to the loss of steam from the gasifier and the reduction in mass flow through the combustion turbines that would result from burning natural gas. Further, Mr. Miller explained that NGCC conversion would expose customers to the higher fuel cost and cost volatility associated with the natural gas markets, as explained in greater detail by Mr. Rogers. Finally, Mr. Miller noted that the NGCC plant would not have the same performance characteristics as the IGCC plant because the power (megawatt) output and the heat rate (efficiency) will be impacted if conversion takes place.

With respect to environmental risks, Mr. Miller explained that the Company's Exhibit SS-1 details the potential retirement risk of several of Duke's coal-fired generating units by 2015 as a result of pending EPA environmental regulations. The exhibit shows that 16 percent (approximately 862 MW) of Duke's coal-fired generation has a medium to high risk of retirement or de-rating by 2015. In determining this number, Duke took into account the pending federal environmental regulations described in detail by Mr. Stowell, all of which were currently in the process of rule promulgation at the EPA.

k. Robert G. Presnak. Mr. Presnak, Senior Vice President, Sargent & Lundy, LLC, addressed the results of a study conducted by Sargent & Lundy, LLC ("S&L"), an engineering consulting firm that works mainly with electric utility companies, estimating the cost of dismantling certain generating stations owned by the Company. According to Mr. Presnak, S&L's cost estimates were carefully prepared using reasonable assumptions, are consistent with other available data and industry experience, and are as accurate as possible.

Mr. Presnak explained that dismantling a generating station at the end of its useful life is necessary for a number of reasons, such as removing safety risks and health hazards and allowing the land upon which the generating station is located to be used for another purpose. In determining the current cost estimates of dismantling or decommissioning the Company's generating units, S&L updated similar analyses that it conducted in 1989, 1992, 2002, and 2008. Using conservative assumptions, standard estimating techniques, and the best information available, S&L prepared the current net costs of dismantling the Company's generating stations.

l. Kent K. Freeman. Mr. Freeman, Rate Strategy and IGCC Projects Director, Rates for Indiana, Duke Energy Business Services, LLC, testified about the retail rate impact analysis for the IGCC plant and the rate mitigation measures that the Company proposed.

Mr. Freeman testified that the Company proposed two measures to mitigate the rate impact of the IGCC Project. First, the Company proposed to eliminate the approved treatment of deferred income taxes on the first $1.985 billion of the IGCC Project expenditures, on a prospective basis – *i.e.*, going forward, the Company would include deferred income taxes as a zero cost source of funds in the capital structure for the entire cost of the IGCC Project. Second, the Company included a reduction to the retail revenue requirement to reflect a reduction in depreciation expense resulting from the implementation of new depreciation rates from a new

depreciation study as discussed in Mr. Spanos' testimony. Both mitigation measures result in lower retail rates in the early years of the IGCC Project and thereby help to offset a portion of the projected increase in rates from the new cost estimate.

Mr. Freeman testified that, after taking into account the Company's rate mitigation measures, revenue and customer rates are expected to reach their highest point during the twelve months ending March 31, 2014, after the IGCC Project's in-service date. At that time, the average retail revenues are expected to increase by approximately 16.3% when compared to the base period used for comparison purposes. In his direct testimony, Mr. Freeman testified that the average retail revenue increase based on the Company's IGCC Project cost estimate at that time of $2.88 billion, including AFUDC of $164 million, was approximately 19.2%. That figure, however, resulted from an analysis that did not account for the Company's proposed rate mitigation measures. Thus, the rate mitigation measures result in a reduction of customers' rates by an average of approximately 2.9%. Retail rates could be further reduced by the bonus tax depreciation as discussed in Mr. Esamann's testimony.

m. John J. Spanos. Mr. Spanos, Vice President, Valuation and Rate Division, Gannett Fleming, Inc., performed his depreciation study using the straight-line remaining-life method of depreciation, with the equal life group procedure. The annual depreciation is based on a method of depreciation accounting that seeks to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit, or group of assets, in a systematic and rational manner. Mr. Spanos determined the recommended annual depreciation accrual rates in two phases. In the first phase, he estimated the service life and net salvage characteristics for each depreciable group. In the second phase, he calculated the composite remaining lives and annual depreciation accrual rates based on the service life and net salvage estimates determined in the first phase. Mr. Spanos' depreciation study incorporated the S&L study that estimated the cost of dismantling certain generating stations owned by the Company described in Mr. Presnak's testimony.

Mr. Spanos explained that the service life and net salvage study consisted, among other things, of compiling historic data from records related to the Company's plant, analyzing the data to obtain historic trends of survivor and net salvage characteristics, obtaining supplementary information from management and operating personnel, and interpreting the data as well as the estimates used by other electric utilities to form judgments of average service life and net salvage characteristics. After estimating the service life and net salvage characteristics for each depreciable property group, Mr. Spanos calculated the annual depreciation accrual rates for each group based on the straight-line remaining-life method, using remaining lives weighted consistent with the equal-life group procedure. The calculation of annual depreciation accrual rates were developed as of December 31, 2009.

B. Industrial Group's Phase I Evidence.

a. Michael P. Gorman. Mr. Gorman, a consultant in the field of public utility regulation and a Managing Principal with Brubaker & Associates, Inc., energy, economic and regulatory consultants, testified on behalf of the Industrial Group. Mr. Gorman testified that Duke's request to increase the cost estimate from $2.35 billion to $2.88 billion should be denied because Duke had not shown the increased costs to be necessary and prudently incurred. He

stated that, to the contrary, the cost increases including financing costs were not reasonable, necessary or prudent.

Mr. Gorman explained that much of the proposed increase was associated with disputes between Duke on one hand and GE and Bechtel on the other. Duke, he explained, had accused these contractors of increasing unjustly the cost of the IGCC Project. Mr. Gorman described how Duke had sought significant commercial concessions from these contractors. Mr. Gorman further testified that regardless of whether the cost overruns were attributable to GE, Bechtel or Duke, they were unnecessary and imprudent and unrecoverable.

Mr. Gorman also discussed the grey water system and its costs. He testified that Duke had failed to demonstrate that the costs were necessary and prudent, and he referred to the testimony of Mr. Hoenig that addressed specifically Duke's imprudence with respect to the grey water system. Mr. Gorman identified the increase in AFUDC attributable to the imprudent cost increases sought by Duke. He recommended that Duke not be permitted to recover the increased AFUDC.

Finally, Mr. Gorman recommended a hard cap for the IGCC Project of $2.35 billion inclusive of AFUDC. He also testified that the hard cap should cover all costs that could have been capitalized, given the concern that Duke might have moved costs away from the IGCC Project to keep the IGCC Project cost lower. Mr. Gorman also addressed the need to not permit a fair value determination on the plant capped at $2.35 billion to exceed what the original cost return on depreciated original cost rate base would be.

b. Dwight R. Hoenig. Mr. Hoenig is the President of Turner/Maclane Environmental Consulting. Mr. Hoeing testified on behalf of the Industrial Group about problems with Duke's grey water treatment and disposal system. Mr. Hoenig concluded that these problems are the direct result of Duke's October 2006 independent decision to deviate from the ZLD grey water treatment system designed by the GE-Bechtel Alliance, substituting instead a DWI plan. Mr. Hoenig explained that the DWI plan did not work, and now Duke has returned to a ZLD system.

Mr. Hoenig identified several problems with Duke's handling of grey water disposal at Edwardsport. He explained that Duke lacked the necessary information on the hydrogeology at Edwardsport to justify deviating from the Alliance's ZLD system in favor of a DWI system, noting that the limited data which was available should have raised serious questions about the technical and economic feasibility of the DWI plan. When Duke finally did obtain data about the hydrogeology of the Edwardsport area, it confirmed the warning signs that Duke's injection plan was not feasible.

Mr. Hoenig asserted even if DWI were feasible, Duke's decision to abandon the Alliance's ZLD plan was still unjustified because Duke lacked the necessary information on the chemical makeup of the grey water to pursue DWI. He explained that the Alliance ZLD system did not contemplate a discharge of grey water from the site, and that Duke failed to conduct a proper investigation of the factual and regulatory issues associated with disposing of the water through DWI. By deviating from the proven technology of ZLD in favor of a technology unprecedented for application at an IGCC plant, Duke took on an additional and unquantified risk, which did not pan out.

Finally, Mr. Hoenig testified that Duke waited an unreasonable time after receiving material information regarding the classification of the grey water as hazardous waste to take appropriate action. Mr. Hoenig explained that in October and November 2007, GE revised its grey water composition estimate and characterized the discharge as hazardous waste under the Resource Conservation and Recovery Act ("RCRA"). Yet Duke waited seven to eight months until August 2008 to take any substantial action, at which time Duke asked the EPA for an exemption from RCRA under the Bevill Amendment. Then, without taking significant steps to develop a backup plan in the event of a denial, Duke waited five more months for the EPA's determination. In January 2009 the EPA denied the exemption, and Duke spent several more months trying to convince the EPA to change its mind. Finally, the EPA reiterated its denial in the summer of 2009, and Duke signed a contract for the construction of a ZLD system.

Mr. Hoenig examined all of Duke's actions with respect to its grey water treatment and disposal system from 2006 onward and concluded that Duke's actions in these respects were imprudent. His understanding is that the fiscal impact of Duke's imprudence is $156 million.

C. OUCC's Phase I Evidence.

a. Barbara A. Smith. Ms. Smith is the Director, Resource Planning and Communications with the OUCC. Ms. Smith provided a brief regulatory history of the IGCC Project. She noted that the OUCC testimony in the CPCN docket filed on September 7, 2006 supported the IGCC Project because it addressed environmental concerns, included the promise of carbon capture and sequestration at the IGCC Project site and filled a need for baseload capacity identified in Duke's most recent IRP. The estimated cost of the plant was $1,985,000,000. Ms. Smith testified that Duke also requested favorable ratemaking treatment for timely recovery and an enhanced return on shareholder equity consisting of a 200 basis points adder. As Ms. Smith pointed out, the OUCC opposed several of Petitioner's request for regulatory relief, such as the Petitioner's request for enhanced return and its proposal to exclude deferred income taxes from the capital structure.

Ms. Smith stated that Indiana remains a coal-rich state and the Governor's Homegrown Energy Strategy places an emphasis on clean coal as part of meeting Indiana's future energy needs. The OUCC supports this objective. Ms. Smith explained that testimony she filed in the 43114 CPCN case outlined the environmental advantages of IGCC technology over pulverized coal technology and that "...these advantages are enhanced by the probability of carbon regulation sooner rather than later" and "while IGCC-produced electricity has somewhat higher capital costs in the short run, the technology combines with a plan to capture and sequester carbon has a positive environmental impact and should drive energy costs toward a reasonable low cost energy option in the near future." Ms. Smith also noted that in its proposed order in Cause No. 43114, "[t]he OUCC supports the building of the IGCC Project only if the plant design includes a plan to provide a target of 20% carbon capture." The Commission granted Duke its CPCN on November 20, 2007.

Ms. Smith stated that less than six months following approval of the CPCN, Duke's first rider ("IGCC-1") requested approval for $2,350,000. Ms. Smith explained that in IGCC-1 the OUCC recommended the Commission reconsider its decision to give Duke an enhanced return on the entire IGCC Project, or in the alternative, on the additional $365M funding request. The

Commission required a carbon capture and sequestration study in Cause No. 43655 and Duke testified that the Edwardsport site was not conducive to carbon sequestration/storage and that any carbon from the plant would need transported a minimum of 50 miles away. Ms. Smith opined that this additional effort and the yet unquantified sequestration costs would undoubtedly add significantly to the IGCC Project costs.

Ms. Smith added that in November 2009 Duke filed its fourth IGCC rider forecasting an additional cost increase of $150 million to a total of $2,500,000,000 without remaining contingency and escalation amount. Ms. Smith testified that in April 2010 when Duke filed its testimony in this proceeding, its updated cost was $2,880,000,000.

Ms. Smith testified that some of the factors initially leading the OUCC to support the IGCC Project remain, but that there were some recent factors causing the OUCC increasing level of concern. She further testified that the OUCC's primary concerns with the current IGCC Project status included excessive IGCC Project cost increases and ongoing inaccurate IGCC Project cost estimates, as well as the underlying reasons thereof. In addition, Ms. Smith testified that Duke had not demonstrated budgetary constraints on the IGCC Project and there was a lack of responsibility or accountability for those cost overruns. Ms. Smith testified that it remained incumbent on Duke to demonstrate that these additional increased costs were reasonable, necessary and had been prudently incurred. Ms. Smith stated that Duke failed to demonstrate prudence in this proceeding.

Ms. Smith testified that, including the revised estimate included in this proceeding, the IGCC Project cost increase was approximately $895,000,000, which was an approximately 45% increase from the original $1,985,000,000 estimate. She stated that although Duke ultimately chose to become the overall project manager, it had not taken responsibility for its poor project management that resulted in the cost overruns.

Ms. Smith further argued that Duke's failure to complete IGCC Project scope and design work before construction resulted in serious, repeated cost and scheduling problems. Ms. Smith stated that the justifications for the cost increases were not transparent and trackable in the documentation filed by Petitioner in this subdocket, but were the result of changes in scope and shifting funds between cost categories. Ms. Smith stated that the evidence revealed Duke had embedded contingency costs in various direct IGCC Project cost accounts, which may have overstated the actual total direct project costs.

Ms. Smith testified that in its initial IGCC filing Duke estimated the retail rate impact at 13% to 16%. She emphasized that the OUCC is sensitive to the rate impact of any utility proposal, but while the OUCC did consider the rate impact on consumers, it determined after balancing all elements in the case, that the 16% was marginally acceptable. Ms. Smith testified that the additional $895,000,000 would increase the rate impact to approximately 19.2%. She stated the OUCC does not believe Duke demonstrated budgetary restraint with its continual projected cost overruns and that there was little incentive for Duke to be cost conscious since the risk of the overruns was to be borne solely by the ratepayers.

Ms. Smith stated the OUCC's belief that at the time of making its project estimates and decisions, Duke should have reasonably known that costs would continue to increase as Duke's project management errors continued to spawn additional risks and as contingency funds began

to disappear. Ms. Smith testified that it is her experience that in the U.S. corporate environment, capital cost overruns of 45% would not be readily acceptable to shareholders and senior management even if detailed justification explaining those overruns was supplied.

Ms. Smith summarized the OUCC recommendations to the Commission deny cost recovery over $2,350,000,000 since Duke has not met its burden that it acted prudently to control costs. Ms. Smith testified the OUCC believed this is the best option because the $2,350,000,000 included all Project costs, minus cost adders Duke had applied to the detailed items that Mr. Alvarez's testimony explained as embedded contingency and not a direct cost suitable for recovery. Further, Ms. Smith stated that rejection of Petitioner request was warranted because of Duke's failure to demonstrate that the requested cost increase from $2,350,000,000 to $2,880,000,000 was prudent. Ms. Smith testified that OUCC also recommends the Petitioner in its next tracker filing be ordered to include all of its zero cost deferred income taxes back into the capital structure when calculating the weighted cost of capital for the IGCC plant for the remainder of the IGCC Project.

b. Anthony A. Alvarez. Mr. Alvarez, Utility Analyst with the OUCC, presented testimony to discuss the prudency of the Petitioner's cost estimate for the completion of the IGCC Project. He addressed Duke's apparent manipulation of the budget allocations and the lack of transparency in both the $2.35 billion and the $2.88 billion cost estimates which call into question the overall reasonableness of Duke's estimates. He stated that Duke failed to inform the Commission that the vast majority of the cost increase it is requesting in this proceeding will be channeled to its own managed work scopes.

Mr. Alvarez testified that Duke systematically took control, carved out larger work scopes beyond what was originally contemplated, and repeatedly re-allocated budgets to its own advantage, while misrepresenting its capability to the Commission putting the IGCC Project and the ratepayers at a higher risk. He explained that Duke's Control Budget Reports and Control Budget Worksheet showed a pattern wherein the Duke Managed Work Scopes budget allocation repeatedly got the largest allocation increased in the $2.88 billion revised cost estimate. Mr. Alvarez addressed Duke's request for $126.3 million additional cost contingencies, and demonstrated that Duke's supporting revealed the appearance of additional embedded contingencies within the $2.88 billion cost estimate.

Mr. Alvarez testified that along with actual cost reductions, the embedded contingencies have been used to off-set other IGCC Project cost increases. He stated that in perspective, the embedded contingency is greater than the explicit contingency and more than doubles the total contingency fund in the $2.35 billion cost estimate. Mr. Alvarez described the additional embedded contingency found in Mr. Womack's Petitioner Confidential Ex. J-5, which Mr. Womack purported to reconstruct Mr. Alvarez's OUCC Confidential Exhibit AAA-5. Mr. Alvarez testified that the additional contingency found in Mr. Womack's Petitioner Confidential Ex. J-5 was not explicitly shown in any of the Petitioner's prior filings.

Mr. Alvarez testified that embedded contingencies were contingencies included within the direct IGCC Project costs and not reflected in either the "Escalation" or "Allowance for Cost Risk" categories. He revealed that Duke's embedded contingencies take the form of curious descriptions such as "Guesstimates," "Educated Guesses," "Miscellaneous Other," "Potential Additional," etc. He stated that embedded contingencies made it difficult for regulators and other

interested parties to understand the actual cost of the IGCC Project. He explained that the presence of additional embedded contingency reduced the motivation of the utility or its agents to control costs, and, in fact, have the unfortunate effect of providing incentive for utilities to fully spend the already approved amounts. He testified that the absence of transparency obscures the actual IGCC Project costs as cost overruns were covered by the embedded contingencies while the explicit contingencies showed no reduction. He stated that this situation potentially casted serious doubt on the competency of Duke's project management and placed the reasonableness of the cost estimates into serious question.

c. Wes R. Blakley. Mr. Blakley is a Senior Utility Analyst in the OUCC's Electric Division. In Phase I of this proceeding he discussed the history of the OUCC's previous recommendations in this cause relating to cost recovery for the IGCC Project. He also responded to Petitioner's supplemental testimony supporting new requests for recovery of costs for the IGCC Project. Mr. Blakley continued to recommend the elimination of the deferred income tax incentive.

Mr. Blakley criticized Petitioner's proposed rate mitigation measures. He testified that although Duke now includes deferred income taxes in its capital structure, Petitioner presented the savings as static over the next 30 years. The savings would actually vary with rates and capital structure weightings. Mr. Blakley also testified that Duke's proposal for a depreciation credit was good, but would only benefit customers until the next rate case. He opined that the bonus tax depreciation proposal was a result of favorable tax treatment by the federal government and not a real rate mitigation proposal. He criticized Duke's then-proposed hard cap proposal because it actually floated costs for AFUDC and subsequent capital expenses. Finally, he explained an OUCC proposal to refund to customers the amount of incentive revenue collected by Duke as a result of zero cost deferred income tax being excluded from the capital structure.

d. Robert G. James. Mr. James, director of the Capital project Management practice for Accumyn LLC, testified on behalf of the OUCC. Mr. James took the position that Duke failed to appropriately manage development of the IGCC grey water disposal method and the related cost impact on the IGCC Project. His opinions were based on his review of testimony and exhibits submitted in this cause, documents submitted in previous IGCC dockets and the underlying original cause, discovery responses provided from Duke (both confidential and public), numerous emails between Duke project managers and other Duke employees, GE, Bechtel and other entities and multiple IGCC Project progress reports.

Mr. James described the original GE-Bechtel Alliance's IGCC Reference Plant design that included a ZLD disposal process for "grey water", the waste water produced by the gasification process after most suspended solids have been removed. He explained that ZLD systems can combine filtration, evaporation, crystallization and thermal applications to remove solids and produce water suitable for other uses, a process critical for IGCC plants to function.

Mr. James testified Duke abandoned ZLD in October 2006, and in the April 2007 FEED Study presented to the Commission, instead recommended pressurized injection of the IGCC waste water into underground wells for storage, a process known as DWI. Mr. James testified DWI was dependent on, among other things, the grey water chemical composition being characterized as non-hazardous according to RCRA. He argued Duke's IGCC Project

management team assumed the IGCC grey water would be non-hazardous based only on the preliminary analysis prepared for the IGCC Project's FEED Study.

Duke was in the process of implementing DWI at its Gibson facility where, just a few months later, Duke would admit to experiencing operational deficiencies. Mr. James believed the Gibson project, coupled with the purported comparative cost savings between the two processes apparently fueled Duke's decision to switch to DWI.

Mr. James testified that by September 2007, serious concerns with the DWI process were being expressed by Duke engineers while the Duke IGCC Project team was simultaneously discussing their "low confidence" in the FEED Study preliminary analysis, particularly GE's non-hazardous grey water analysis. He noted a preliminary version of GE's revised grey water chemical composition data had been discussed with Duke on October 24, 2007 and also included in a letter circulated on November 5, 2007. This new, revised chemical composition included elevated concentrations of arsenic and selenium, changing the grey water characterization to "hazardous" according to RCRA. Mr. James said these dates demonstrate that Duke knew GE's revised hazardous grey water chemical composition two to four weeks before the Commission approved Duke's $1.985 billion estimate for the IGCC Project in its November 20, 2007 CPCN order was issued, but failed to inform the Commission or any party.

Mr. James argued Duke then took little to no action until June or July 2008, when Duke considered whether DWI could be allowed through an exemption to RCRA requirements under the Bevill Amendment. He said Duke wrongly believed that the amendment had "specific language" that "would exclude gasification wastewaters from RCRA requirements." Mr. James said Duke pursued this exemption for 17 months until November 2009, despite concerns the DWI plan would either be disallowed by the EPA or would subject the entire Edwardsport plant to undesirable ramifications. Ultimately Duke's project management team reverted to a ZLD treatment and removal process. Mr. James testified that Duke believed the net difference in costs for in the switch from DWI to ZLD would be in the range of $61 million, but comparing the May 2008 and April 2011 grey water disposal IGCC Project estimates (which incorporate the change from DWI to ZLD), revealed cost increases of approximately $100 million. He said total grey water disposal costs were reported to include additional millions for drilling a DWI test well in September 2008, almost one year after the grey water had been characterized as hazardous. Permission to "plug" the test well was requested from the EPA Underground Injection Control ("UIC") Branch in November 2009.

Mr. James concluded from early in the IGCC Project's basic design phase and well into its detailed engineering phase, Duke failed to properly manage development of the grey water disposal method. Duke directed the use of DWI, disregarding the ZLD disposal method originally planned. He claimed Duke lacked sufficient information to reliably conclude that DWI could be implemented on the IGCC Project or that DWI was a more cost effective option than ZLD. He argued common project management checks and balances were missed, including the failure to manage its permitting process to ensure approval was in place before fully committing to the an alternate DWI approach for the IGCC Project's grey water disposal. Mr. James determined that these actions led to an extraordinary unplanned delay and a greater than four-fold increase in grey water treatment and disposal costs. Mr. James claimed the Duke IGCC Project team continued with DWI in spite of evidence of increased hazardous characteristics of

grey water and the high risk of failure of its permitting process while failing to notify the Commission of the risks.

D. Joint Intervenor's Phase I Evidence.

a. David A. Schlissel. Mr. Schlissel, President of Schlissel Technical Consulting, Inc., testified in Phase I on behalf of Joint Intervenors that Duke had been imprudent with respect to its planning and management of the IGCC Project after April 1, 2009. He also testified that the Company-proposed voluntary cap of $2.72 billion plus AFUDC provided inadequate protections for ratepayers and that there was continued risk associated with the completion of the IGCC Project.

Mr. Schlissel testified that prudent resource planning requires consideration of uncertainties in resource planning analyses by examining ranges of values for the key input parameters – parameters such as plant construction costs, fuel costs, CO_2 costs, load forecasts, and operating performance. While the Commission does not expect utilities to have perfect foresight, a reasonable effort in any marketplace requires the utility to learn from experience. However, in this case, Duke had not learned from its experience with the IGCC Project.

Mr. Schlissel noted that the Company was aware as early as 2007 that the IGCC Project was exposed to a significant risk of continuing construction cost escalation. As a first-of-a-kind project, the IGCC Project would clearly be exposed to significant risks and uncertainties ("first mover risks"). In addition, beginning in about 2003, industry experience demonstrated that coal plant construction costs were skyrocketing. The Company knew as far back as 2006 and 2007 that there were first mover risks to which it would be exposed – i.e. that Edwardsport did not merely represent a "scaling up" of existing IGCC technology, but was instead a new and immature IGCC technology. The potential for escalation at Edwardsport was especially acute because, in addition to the considerations above, this was a mega-project with an estimated cost in excess of $1 billion and an expedited construction schedule. The Company also knew at that time that there was no reference plant, as its design incorporated a number of significant, new design features. Further, the IGCC Project design was not even complete then. Despite this, the Company provided overly-optimistic and overly-confident testimony concerning the design of the IGCC Project and boasted that it would be able to build it with fewer commodities than originally planned.

Mr. Schlissel testified that by the early fall of 2009, Duke already had substantial evidence that building Edwardsport as an IGCC plant was going to cost significantly more than the previously approved $2.35 billion estimate. He noted that he had previously testified in Cause No. 43114 IGCC-1 that the cost for the IGCC Project could exceed the Company's $2.35 billion cost estimate. For this reason, at that time, Mr. Schlissel had recommended Duke perform a series of sensitivity scenarios assuming cost increases of 20 percent and 40 percent over its then-current $2.35 billion cost estimate. Furthermore, Mr. Schlissel had presented evidence regarding the significant cost increases that had been experienced by other coal-fired power plant construction projects through mid-2008. Mr. Schlissel testified that Duke had rejected that recommendation, and, instead, expressed continued confidence in its $2.35 billion estimate.

Mr. Schlissel testified further that the Company's consultants had specifically told Duke that there was significant uncertainty with the $2.35 billion cost estimate. A January 2009 report by Ernst & Young entitled "Edwardsport IGCC Project Controls and Project Management Process Assessment" emphasized the potential range of cost uncertainty for a project like Edwardsport and suggested that the allowances for IGCC Project contingency and escalation could be too small.

Citing Mr. Womack's Cause No. 43114 IGCC-3 testimony, Mr. Schlissel testified that Duke affirmatively knew by May 2009 that the IGCC Project was under price pressures. Internal communications between Duke, GE and Bechtel revealed as much.

Mr. Schlissel also cited to Duke's April 2010 direct testimony in this proceeding, in which Duke attributes the cost increase above the approved $2.35 billion to significant increases in scope and complexity when compared to the original Feed Study estimate. Mr. Schlissel also cited to Mr. Haviland's description of why the cost increased so dramatically, including that the project being built has significantly more scope than the FEED Study estimated resulting from the fact that this is a first-of-a-kind plant with no reference plant and the fact that engineering was based on preliminary design and not detailed engineering. Mr. Schlissel noted that these scope increases, according to Mr. Haviland, "increased quantities, schedule compression, schedule extension to relieve some of the schedule compression, late deliveries of equipment, field and shop rework due to compression and late engineering changes, and increased construction costs affected by the aforementioned factors and the fact that we are installing and managing a larger IGCC Project." Mr. Haviland also identified issues with the Grey Water Disposal System and labor productivity issues as a cause for escalating costs at Edwardsport.

Mr. Schlissel then provided evidence that the Company knew its 2007 and 2008 statements of confidence to the Commission in its earlier Edwardsport cost estimates had been proven wrong. He testified that Duke knew that natural gas prices had collapsed in late 2008 and early 2009, thus making the economics of natural gas-fired alternatives significantly more attractive. However, Duke imprudently failed to re-examine the economics of completing Edwardsport as an IGCC plant on a timely basis in the fall of 2009 to reflect the much higher costs and risks to which ratepayers were being exposed. Instead, Duke continued to spend money at a rapid rate between October 2009 and March 2010, turning to-go costs into sunk costs and trying to make the IGCC Project into a self-fulfilling prophecy.

Mr. Schlissel testified that when Duke finally did submit new economic analyses to the Commission in April 2010, the new analyses were biased due to the Company's failure to (a) allow for any further increases in the cost of the IGCC Project and (b) acknowledge that the plant might operate, even in its initial years, at less than the optimal 85 percent availability that Duke had assumed in its earlier economic analyses. Duke also assumed unreasonably high natural gas prices.

While the Company indicated that the cost increase was due to scope and complexity expansion and the cascading effects of those problems, Mr. Schlissel testified that Duke was aware that the design of the IGCC Project continued to evolve after it presented to the Commission its $2.35 billion estimate and prior to the fall of 2009. To support his testimony, Mr. Schlissel cited a May 8, 2008 Report to the Duke Energy Corporation Board of Directors on Edwardsport.

Mr. Schlissel testified that, given this specific commitment, as well as the general expectation that a prudent project manager would work closely with and monitor the work of its prime contractors like GE and Bechtel, it is hard to accept the current testimony of Duke witnesses that the Company suddenly awoke in the late summer and early fall of 2009 to find a substantially larger plant with major scope changes and substantial increases in the bulk commodities being installed. More likely is the scenario that the Company imprudently defaulted on its commitment to its Board to mitigate the risk of scope changes by "close review of the design as it progresses."

Subsequent e-mails from Mr. Haviland in October of 2008 also show that Duke knew that the Edwardsport design continued to evolve. Mr. Schlissel included excerpts from internal Duke e-mails from October of 2008, discussing problems with scope changes, evolving designs, late purchases, new product introductions, and problems between Duke and GE. According to Mr. Schlissel, these e-mails call into question Duke's claim that it was surprised in August 2009 to find that it was building a bigger plant at Edwardsport than had been anticipated in the 2007 FEED Study.

Mr. Schlissel also testified that despite Mr. Womack indicating in Cause No. 43114 IGCC-3 to the Commission that there had been significant scope increases with the raw water treatment and grey water disposal systems, Mr. Womack had nevertheless expressed continued confidence in the Company's then-current schedule and budget. As late as August 2009, Mr. Womack testified to his continued confidence in the $2.35 billion cost estimate, despite noting a number of factors that were putting price pressures on the IGCC Project.

Mr. Schlissel testified that it is extremely unlikely that Duke's contractors concealed the scope growth from Duke. Duke managed the project and contractors and even had its engineers and project management personnel meet and work closely with GE and Bechtel. Instead, Mr. Schlissel testified that the scope growth appears to be a result of the first mover risks. However, even if contractors had somehow concealed scope growth from Duke, Duke as the project manager has a remedy at law against its contractors. The ratepayers should not be held responsible for those costs.

In addition to the drivers of the cost increases listed above, Mr. Schlissel identified several other reasons for the cost increases experienced in the summer and fall of 2009 beyond design evolution and increasing quantities of bulk commodities. On October 10, 2009, Mssrs. Turner and Haviland informed the Duke Board of Directors' Finance and Risk Management Committee that the Company forecasted a $100 million cost overrun at Edwardsport and that additional contingency would be required. According to information Turner and Haviland provided to the Committee, the increase was due to normal design evolution, IGCC technology related design evolution (i.e. no reference plant), unanticipated scope increases, Bechtel execution issues, and increased quantities.

Mr. Schlissel also testified that even with the Company's proposed $2.72 billion construction cost "cap," ratepayers would continue to bear significant additional risks associated with completion and operation of the IGCC Project. Duke's planning did not account for those risks.

Mr. Schlissel testified that there is a significant potential for operating problems in a first-of-a-kind unit. In addition, the IGCC Project could experience further cost increases outside the scope of the Company's proposed cap. According to Mr. Schlissel, the IGCC Project could experience additional schedule delays prior to its actual in-service date, which would increase AFUDC costs and, perhaps, replacement power costs for ratepayers. He testified that Duke could incur significant operating and maintenance expenses and capital expenditures after the IGCC Project is declared substantially complete by GE, which would require Duke to remedy problems related to the mismanaged planning, engineering, or construction of the IGCC Project or resulting from what the Company now acknowledges is a first-of-a-kind plant with a unique GE design.

He also testified that, even with Edwardsport, Duke will remain dependent on coal for more than 90 percent of its generation with only a minimal reliance on natural gas and that this heavy dependence on coal exposes the Company's ratepayers to significant risks. Mr. Schlissel testified that Edwardsport's capital costs could be significantly higher than the Company has assumed if Carbon Capture and Storage ("CCS") is required to comply with an eventual federal climate change regulatory regime. Coal prices could be higher than the Company has assumed and natural gas prices could be lower. In addition, CO_2 allowance costs could be significantly higher than Duke has modeled. The solution, according to Mr. Schlissel, is not to replace old coal with new coal, especially without considering the costs of CCS, a claimed benefit of the new coal plant.

Mr. Schlissel testified that when Duke became aware of these cost increases, it failed to immediately re-evaluate its estimated cost for completing the IGCC Project and further failed to re-examine the economics of completing the plant as an IGCC unit. According to Mr. Schlissel, it was not until late December 2009 or early January 2010 that Duke started work on a new cost estimate. Mr. Schlissel noted that this failure stands in contrast to Mr. Haviland's stated belief that it was necessary to begin a re-evaluation of the cost of building the IGCC Project in June 2009. Specifically, Mr. Schlissel cited to a June 2009 e-mail by Mr. Haviland to Mr. Womack seeking to have Bechtel cost engineers pull all the costs together for the entire IGCC Project. Mr. Schlissel saw some indication that Mr. Haviland spoke with Bechtel about preparing an updated cost estimate; however, it appears that nothing happened until mid-August – at which time Mr. Womack told Bechtel to "stand down" from this plan.

Mr. Schlissel also testified that a re-examination of the economics of building the IGCC Project as an IGCC unit should have been conducted based on the collapse in natural gas prices which occurred in 2008 as a result of innovations in the extraction of shale gas. Shale gas has resulted in a sharp decline in natural gas prices, current and forecasted, for the longer term. Also, Mr. Schlissel noted that, despite the fact that it is not possible to predict natural gas prices, it appears that gas prices will not reach previous levels for a sustained period of time because of the newly discovered ability to produce gas through non-traditional recovery methods.

Mr. Schlissel testified that prudent management requires that companies re-evaluate the reasonableness of continuing with IGCC Projects in light of significantly changed circumstances. In accordance with prudent management principles, Duke should have aggressively re-examined the economics of completing Edwardsport as an IGCC plant. In particular, Duke acted in a manner calculated to make the IGCC Project a self-fulfilling prophecy by delaying preparation and submittal to the Commission of a significantly increased cost estimate while rapidly

reducing remaining to-go costs to a level that would be low enough to induce the Commission into approving continued construction.

Mr. Schlissel testified that Duke had ample opportunity to reconsider the economics of continuing the IGCC Project during the period from November 2009 to March 2010. The Company was preparing its 2009 Integrated Resource Plan filing during the summer and fall of 2009 with an original submission date planned for November 2009. Duke could have included scenarios with higher estimated costs for Edwardsport in the modeling analyses that it was preparing for the IRP filing before it was finally made in January 2010. The Company filed additional related modeling analyses in this proceeding and clearly had the resources and expertise to prepare modeling analyses.

Mr. Schlissel stated that Duke has shown that it can prepare such analyses in a very short period of time when it chooses to. As an example, Mr. Bloemer at Duke requested that Ms. Jenner at one point run a series of 28 sensitivity analyses using the Strategist model on January 31, 2007. The results were provided on February 5, 2007.

Mr. Schlissel testified that Joint Intervenors specifically requested Duke to rerun its analyses with varied costs and assumptions in CAC Data Request 25.48. However, Duke objected and did not run the analyses.

Mr. Schlissel testified that the Company itself prepared a new cost estimate with assistance from Bechtel, Ernst & Young and others – but the Company did not do so until January and February of 2010, despite the fact that Bechtel and Mr. Haviland believed a re-examination was important as early as June of 2009. Mr. Schlissel testified that the Company did not have to wait to complete the re-estimate as it already had adequate information by September 2009 to know that the cost was going to be substantially more than $2.35 billion. Mr. Schlissel further testified that even without the new cost estimate, Duke could have re-examined the cost of the IGCC Project as an IGCC Unit. However, basing its new economic analyses on a single new cost estimate as Duke had done previously in 2007 and 2008, it represented an imprudent failure to learn from experience.

Mr. Schlissel testified that in Duke's April 2010 updated modeling analyses, the IGCC was the most expensive option in both the Base Load and High Energy Efficiency scenarios – as compared to options for completing the plant as NGCC or supplying customer demands via other alternatives ("No IGCC"). By comparing the present value revenue requirements ("PVRR") of the various options, Duke's analyses showed that completing the project as IGCC – the course chosen by Duke – was the most expensive option for Duke.

Mr. Schlissel stated that if the Company had redone its analyses in the fall of 2009, the option chosen by Duke – i.e., "complete as IGCC" – would have been shown to be even more expensive relative to other options. Mr. Schlissel supported this conclusion by pointing to Ms. Hager's Direct Testimony, where she states that as progress on the IGCC Project continues, costs are shifted from "costs to go" to "sunk costs" thereby reducing the PVRR of the Complete as IGCC scenarios as time passes.

Mr. Schlissel testified that the cost disparity showing IGCC as the most expensive option was probably even greater than shown in Duke's analyses. Specifically, Duke's analysis

contained a number of biases that distorted the results of the April 2010 modeling analyses by making the PVRR for completing the project as IGCC appear lower than it really should have been. These biases include: (1) Duke's failure to include scenarios with costs in excess of $2.88 billion despite the increases that it had previously experienced; (2) Duke's assumption that the IGCC Project would achieve an annual 85 percent availability immediately after it commenced commercial operations; and (3) Duke's use of natural gas prices that were significantly higher than its own, internal gas price forecasts.

Mr. Schlissel also testified that the decision to assume no further escalation was an imprudent decision by Duke. Despite suggestions from other parties and Duke's own recent history in miscalculating total costs, the Company again failed to consider the possibility that the cost of the IGCC Project would increase beyond $2.88 billion.

Mr. Schlissel points to Ernst & Young's Report to demonstrate the lack of reasonableness of relying strictly on the $2.88 billion estimate without modeling situations, including higher project costs. The Ernst & Young Report, published prior to the April 2010 Direct Testimony, revealed that the Company only reviewed 38 percent of the line items making up the estimate. Further, Ernst & Young presented a range of possible costs for the IGCC Project – an approach Mr. Schlissel himself had also previously recommended.

Mr. Schlissel also testified that immediately after the $2.88 billion estimate was submitted, Duke realized it was insufficient. This is evidenced by an April 14, 2010 e-mail from Mr. Haviland to Mr. Turner which states: "We cannot start eating contingency before the ink is dry on our testimony – Bechtel and E&Y think it is low already I would prefer that you and Lynn make this go away or we increase our # by $10-20 M anticipating this kind of corporate stuff for the next 2 yrs . . . we need to make this decision today so Mike can change his testimony if required."

Further, Mr. Schlissel noted that by late July 2010, a Duke "Forecast Cost to Complete Update" showed that the Company forecasted that the cost of completing the IGCC Project would be greater than the $2.88 billion. Mr. Schlissel also cited to an Edwardsport Status Report to indicate that Duke knew the $2.88 billion estimate was not lasting. In the Edwardsport Status Report, Mr. Haviland noted that based on his reforecast and experience, Duke would use all but $40 million of the estimate, but said this posed a problem because construction may use all contingency leaving nothing left for NPDES permit or startup and commissioning. Mr. Pickering on August 16, 2010 said that the Company was moving to rebaseline the cost estimate again. Mr. Haviland wrote to agree with the rebaseline plan on August 16, 2010.

Finally, Mr. Schlissel noted that – unlike in Duke's April of 2010 analyses – Ms. Hager actually did include in her later testimony resource planning modeling runs using higher cost sensitivities. Again these analyses showed completing as IGCC was the most expensive option. Again, this reinforces the conclusion that if this had simply been done in the April 2010 Direct Testimony, the IGCC Project would have been shown to be even less economical than Duke stated in the April 2010 estimate, because, again, more costs since April had been converted from costs "to go" to sunk costs.

Mr. Schlissel testified that Duke has based the economic feasibility of the IGCC Project in part on the availability and capacity factors assumed in its modeling – specifically, an 85%

projected availability rate for the plant. However, Duke has refused to give any performance guarantees to the Commission. Moreover, GE, the principal vendor, has given Duke no guarantees as to availability or capacity factors for the plant.

According to Mr. Schlissel, the unwillingness of both Duke and GE to provide any type of guarantee shows that neither Duke nor GE is willing to accept economic responsibility for the IGCC Project's performance. Instead, both Duke and GE want the ratepayers to bear all of the risks of the IGCC Project – whether or not it performs according to the assumptions utilized in determining the economic viability of the plant.

Mr. Schlissel further testified that it was unreasonable to assume that the plant would achieve as high capacity factors and availability in all years as Duke assumed. In particular, during the early years of operation, there is no basis for assuming a high availability or capacity factor. Mr. Schlissel noted that Mr. McCollum of Duke told the North Carolina Utilities Commission in 2007 that it took the two existing U.S. IGCC plants six to eight years to reach 80 percent capacity factors. Further, both plants had serious operating issues that affected availability and neither Polk Station nor Wabash River achieved 84 percent availability in any year through 2006. In fact, the actual availability through 2006 was significantly lower than what Duke now assumes in its modeling of the IGCC Project. Polk Station's availability as an IGCC ranged between 55.3 percent and 79.5 percent in the nine years between 1998 and 2006. Wabash River's availability ranged between 35.4 percent and 78.7 percent during the same period. In its first ten years, Polk Station had availability ranging between 34 and 83 percent and Wabash River between 18.6 percent and 78.7 percent. In stark contrast to this reality, Duke assumed in its modeling that in 2013 – months after Edwardsport goes online – it will achieve availability in excess of 80 percent every year.

Mr. Schlissel noted that internal Duke e-mails reveal that from late January and early February 2007 the Company ran a series of what appear to have been 28 strategist sensitivity scenarios addressing uncertainty in the heat rates, availability, capacity and ownership share. Included among these sensitivities was strategist modeling runs that assumed 75 percent, 80 percent, 85 percent, and 90 percent availabilities for Edwardsport. However, Duke has assumed an 85 percent availability in every single analysis it presented to the Commission prior to March 2011.

As noted by Mr. Schlissel, the information and documents submitted by Duke witness Stultz show that an 85 percent availability for a mature IGCC unit is only a goal, and that it may take some years to achieve that level of operating performance. These documents also suggest that Duke's assumption that Edwardsport will be able to operate at full power for nearly 100 percent of the hours it is on-line is extremely optimistic.

Mr. Schlissel testified that the assumption of an approximate 82 percent capacity factor in almost every year of the study period affected and heavily biased the results of the modeling analyses. The use of these assumptions was imprudent. Further, Mr. Schlissel testified that it was imprudent for the Company to fail to determine the capacity factor at which the IGCC Project must run to be the least cost option. Contrary to Mr. Stultz's contentions, Mr. Schlissel was not stating simply that Duke's assumed capacity factors and availability were "too high"; rather, the Company should have used a range of availability and capacity factors to reflect

uncertainty inherent in the IGCC Project's operating performance. In his opinion, it was imprudent for Duke not to do so.

Mr. Schlissel concluded with several recommendations. Specifically, he recommended that the Commission: (1) not approve any increase in the allowed cost of Edwardsport above $2.35 billion; (2) hold Duke's ratepayers harmless for any or all of the following: A. The future economic consequences of the IGCC Project failing to achieve 85 percent availability on an annual basis.; B. Any coal prices in excess of the highest set of prices used in Duke's economic analyses in this Cause.; C. Future CO_2 costs in excess of the "high" set of costs used in Duke's economic analyses in this Cause.; and D. Additional operating and maintenance expenses and/or capital expenditures incurred after the date when the IGCC Project is certified by GE as substantially complete that are required to remedy problems related to the mismanaged design, engineering or construction of the IGCC Project or resulting from what the Company now acknowledges is a first-of-a-kind plant with a unique IGCC design.

E. Petitioner's Phase I Rebuttal Evidence.

a. James E. Rogers. Mr. Rogers testified that although the IGCC Project encountered numerous construction challenges, the Company's management of the project has been reasonable and prudent, and increased costs have been reasonable and necessary. He further testified that Duke and its IGCC Project team are highly competent and capable of managing large complex construction projects, including the IGCC Project, and that the Company's management of the IGCC Project has been transparent to the Commission and the parties to the proceeding.

b. Douglas F. Esamann. Mr. Esamann explained that the purpose of Phase I of the proceeding is to review of the Company's progress reports concerning construction, the Company's request to increase its cost estimate, the continued need for capacity that the IGCC Project will provide, and the reasonableness of going forward with the IGCC Project. Mr. Esamann pointed out that no party is challenging the fact that the Company has a real continuing need for the capacity that the IGCC Project will provide, and no one is recommending that the IGCC Project should not go forward to completion as an IGCC plant at this time. The only major contested issue for the Commission to decide in Phase I of the proceeding is whether the Company's request to modify its CPCN to increase the cost estimate for the IGCC Project should be granted.

Mr. Esamann reiterated that the Company requested approval at that time of a voluntary hard cap on construction costs of $2.72 billion, plus the actual AFUDC accrued on that $2.72 billion, even though it forecasted that the costs of the IGCC Project will likely be above the voluntary hard cap amount, prior to consideration of potential cost mitigation measures. The Company agreed to a hard cap at that time that was at least $104 million below the IGCC Project's projected costs, notwithstanding the fact that the Company prudently managed the IGCC Project and, as such, all costs associated with the IGCC Project are properly recoverable from customers.

Mr. Esamann also testified that the Company prudently managed the IGCC Project, including the management of its contractors, GE and Bechtel. In particular, the Company demonstrated that it acted reasonably regarding the quantity increase, it prudently managed the

IRP process including the timing thereof, and its actions related to grey water were prudent and reasonable when viewed in light of the information that was known or reasonably should have been known at the time.

Mr. Esamann further testified that, as long as the Company has been prudent in its selection of contractors and its management of them, it would be unreasonable to disallow cost recovery because of actions taken by the Company's contractors. Moreover, there has been no evidence presented in this proceeding as to what, if any, specific decisions or actions taken by GE or Bechtel were "imprudent." That the cost estimate of the IGCC Project increased does not mean that the costs are not necessary or that the IGCC Project has not been managed and constructed prudently.

Finally, Mr. Esamann explained that GE and Bechtel are not parties to this proceeding, and the Commission does not have jurisdiction to resolve potential disputes against them. The Company continues to examine the potential for claims against GE and/or Bechtel and will pursue any claims if and when appropriate, and before entering the April 30, 2012 Settlement Agreement, the Company proposed to apply the proceeds of any successful monetary awards resulting from claims against GE, Bechtel, or any other contractor, against the overall final cost of the IGCC Project.

c. Richard W. Haviland. Mr. Haviland reiterated that the ultimate completed cost of the IGCC Project is primarily, but not exclusively, dependent on the impacts from increased construction costs, due primarily to labor productivity, the need for contingency associated with start-up and testing, and financing charges. The weather also negatively impacted several components of the IGCC Project cost, including the general productivity of all the craft workers, the time-related support services, such as equipment rental and scaffolding rental, and the project management and other overhead expenses. Based on data and IGCC Project reports through the end of May 2011, the current IGCC Project cost forecast was $2.82 billion in construction costs excluding any mitigation efforts and contingency for start-up event risk and estimated AFUDC increases. The costs, however, could continue to increase. The Company was developing a more detailed forecast, which was expected to be finished by the middle of August 2011. Notwithstanding this, the Company was not requesting that the Commission increase the $2.72 billion construction cost estimate that it had proposed at that time as the Hard Cost Cap. The Company was instead working to mitigate costs through various means, such as site management, developing not-to-exceed contracts and fixed fee contracts, and engaging the pipefitter international union leadership to assist with craft labor issues.

Mr. Haviland also testified that the Company performed its complete re-estimate just a few months after Mr. Schlissel argued that the re-estimate should have been completed. Mr. Haviland explained that Duke could not have completed the re-estimate sooner because it was not until then that the quantity increases had slowed their rate of increase and detailed engineering completion exceeded 90% so that a thorough re-estimate was possible. Finally, Mr. Haviland's August 2011 testimony also corrected Intervenor and the OUCC witnesses' mischaracterizations of certain emails and his prior testimony concerning, among other things, the Company's knowledge of increased costs and its ability to manage the IGCC Project, and he clarified his prior statements concerning grey water.

d. W. Michael Womack. Mr. Womack testified that there is no basis for Mr. Alvarez's accusations that the Company manipulated the IGCC Project's budget and concealed the IGCC Project's true costs. The core problem with Mr. Alvarez's accusations is that Mr. Alvarez misunderstood the documents on which he relied. The Company thoroughly reported the IGCC Project's budget information in an open and transparent manner. Mr. Womack explained in detail why Mr. Alvarez's contentions about "embedded contingencies" were misplaced. Over the course of the IGCC Project, three internal and external audits were performed, and none of them found that either budget or cost information was manipulated or concealed. No project management professionals assigned to the IGCC Project – including Bechtel personnel – ever suggested that the Company manipulated the budget or cost reports. Moreover, Mr. Womack reiterated that the Company made detailed cost and budget information available to all parties and to the Commission through its monthly progress reports. He also responded to Mr. Alvarez's allegations that the Company personnel have not competently managed the IGCC Project, as well as an issue related to the capitalization of costs after the plant's in-service date.

Additionally, Mr. Womack explained that Mr. Schlissel's testimony claiming that, by May 2009, the Company knew that the estimated cost of the IGCC Project was likely to exceed the $2.35 billion estimate was inaccurate. Although the Company knew at that time that it was under cost pressure, particularly due to the scope changes to the raw water treatment system and the grey water treatment system, the Company believed that it could mitigate and cover those changes from the remaining escalation and contingency funds. Therefore, it is not the case that the Company knew or should have known in May 2009 that it would exceed the $2.35 billion estimate. At that time, the Company still believed that $2.35 billion was in the zone of reasonable outcomes. In July and August 2009, the Company performed a detailed analysis – called a Monte Carlo analysis – to assess the likelihood of completing the IGCC Project within the approved estimate. That analysis was based on the best-available information and confirmed the Company's belief that the IGCC Project could be completed within the approved estimate.

Mr. Womack also explained that he disagreed with Mr. Schlissel's suggestion that Duke should have included a high-capital cost estimate in its IRP analysis. Nonetheless he advised Ms. Janice Hager that for purposes of a high capital cost sensitivity analysis, a 10% capital cost increase would represent a reasonable high cost figure.

e. Robert J. Burch. Mr. Burch testified that the decision to explore the feasibility of DWI as a method for the disposal of the grey water stream was based on reliable and sufficient information. This information included the Company's expert consultant's recommendations, the feasibility and expected cost of DWI, the relative expected costs of DWI and the ZLD alternative, and the Company's prior experience with DWI at Gibson Station.

Mr. Burch disagreed with assertions that the Company delayed taking appropriate action after GE updated the grey water characteristics. Mr. Burch testified that the Company promptly assessed the impacts of this new information and in fact prepared and circulated within hours a preliminary assessment of the potential operating, permitting, and financial impacts, as well as possible contingency options, including but not limited to returning to the ZLD backup solution.

f. Patricia D. Galloway. Dr. Galloway discussed the results of her team's prudence review and evaluation of the decisions surrounding the IGCC Project and, specifically, the

requested $530 million increase in the IGCC Project cost estimate. The prudence review focused on the management processes employed by the Company to make decisions and compared them to generally accepted prudence standards for decision-making processes. The evaluation considered whether management had an appropriate decision-making structure and an appropriate process in place to ensure that management made informed decisions based on information reasonably available to or known by management at the time. The evaluation also considered whether management reasonably and prudently implemented its decisions.

Based on the evaluation, Dr. Galloway concluded that the Company's management decisions about the IGCC Project were reasonable and prudent, with the exception of its decision to continue with DWI after it received new information about the grey water characteristics in November 2007. Dr. Galloway testified that, generally, the Company made rational, deliberate, and prudent decisions based on an established process, and the Company used this process to collect the best information available at the time, evaluate that information in light of the circumstances at the time, identify viable alternatives or options, and make reasonable decisions. Furthermore, the Company prudently took steps to update information in light of evolving conditions and circumstances affecting prior decisions, and it carefully considered the estimated costs and impacts and potential short- and long-term benefits to the Company and its customers under each alternative or option. This deliberate process produced reasonable and prudent management decisions with respect to whether and how to proceed with the IGCC Project given the conditions and circumstances facing the Company at the time.

Specifically, Dr. Galloway analyzed the allegations of imprudence related to the increase in bulk commodity quantities (*e.g.*, steel, pipe, valves, and electric cable), the timing of the IGCC Project re-estimate, the implementation of a grey water disposal system, and the IRP analysis. With the exception of the decision to continue with DWI after November 2007, Dr. Galloway found that the Company acted reasonably. She concluded that the only reasonable cost disallowance would be for the $12.02 million attributable to the continued pursuit of DWI after November 2007.

Moreover, the Company's decisions and management of GE and Bechtel were reasonable and prudent given the information available to the Company at the time. The Company reasonably and actively managed GE and Bechtel, as it questioned them concerning expected quantity increases and other issues which ultimately added costs to the IGCC Project. Had the Company been given timely and accurate information by its contractors regarding the true status of engineering and quantity information, the IGCC Project might not have experienced the same costs.

g. Kenneth J. Cooper. Mr. Cooper testified that it was reasonable for the Company to pursue the DWI approach, and he disagreed with Mr. Hoenig's contention that it was unreasonable for the Company to rely on the referenced 2006 Feasibility Assessment. Mr. Cooper explained that, based on his review, the 2006 Feasibility Assessment provided to the Company by its contractor, Subsurface, was typical of well feasibility reports that he has examined for other injection well IGCC Projects. Moreover, Mr. Hoeing incorrectly asserted that the Company was unreasonable in relying on the feasibility assessment because it was based on unreferenced studies of unnamed well data. In Mr. Cooper's experience, it is common for feasibility assessments to include detailed information about references upon which they are based and unreferenced professional knowledge. Technical professionals often utilize

professional judgment and data from internal company files and past experience as part of the process of evaluating geologic systems without providing published or other references. Such practices do not invalidate technical opinions or advice based on such "unreferenced" data, so long as the information is considered valid.

Mr. Cooper also testified that Mr. Hoenig incorrectly claimed that it was unreasonable for the Company to rely on information regarding well costs and economics provided in the 2006 Feasibility Assessment. The initial characterization of the Class I Waste Water Injection Well provided to the Commission within the executive summary of the April 2007 Edwardsport IGCC FEED Study Report was a realistic representation of the deep-well alternative at that early stage of the IGCC Project. The FEED Study Report correctly identified DWI as an option that could have had substantial advantages as compared to the relatively higher capital and operating cost ZLD system originally proposed by the Alliance, and the report clearly identified the fact that "a test well will be completed early in the IGCC Project to confirm the use of this disposal method."

Mr. Cooper further disagreed with Mr. Hoenig's testimony characterizing the Company's August 2006 evaluation of the Subsurface Feasibility Assessment as inadequate. Based on Mr. Cooper's assessment, it is clear that multiple injection zones had been identified as potential targets, and common issues of concern had been identified, considered, and found acceptable for continued pursuit of using DWI.

Moreover, Mr. Cooper testified that the Company reasonably decided not to pursue a hazardous permit. Among other matters, Mr. Cooper explained that the Company would have taken on significant additional scheduling risk for the grey water waste management if it had tried to modify the well approach to allow hazardous waste management via multiple deep wells in the latter half of 2011. Moreover, the Company took prudent action by acknowledging that a 24-30 month timeframe was likely insufficient time to permit, construct, test, and initiate hazardous deep well operations at the site.

h. Janice D. Hager. Ms. Hager responded to Mr. Schlissel's accusations of imprudence with regard to resource planning and reiterated that the Company timely conducted its IRP analysis and timely filed the results with the Commission. She also testified that the Company used reasonable assumptions with regard to natural gas prices and sensitivities related to capital costs, and she explained that it was not necessary or appropriate to include the costs of carbon capture and sequestration in the analyses.

i. Jack L. Stultz. Mr. Stultz testified that, although there will be unexpected issues, the Company has positioned itself to achieve high reliability by learning from the experience of other plants and through the use of training, extensive reviews and analysis, and an extended start-up, validation and testing period. Based on all of these factors, Mr. Stultz concluded that the assumptions regarding the availability and expected capacity factor of the IGCC Project are reasonable.

Mr. Stultz noted that Mr. Schlissel failed to recognize and appreciate the difference between availability (an input) and capacity factor (an output). In the latest IRP modeling runs, when the Company used 85% availability, the capacity factor that was derived from the base runs was 84%. The Company also conducted a sensitivity analysis where it used 75% availability for the first 15 months and 85% availability for the remainder of the plant's life with

an output capacity factor of 72% for the first 15 months and of 84% for the remainder of the plant's life. The Company's estimate of an average 85% availability is the average expected availability over the course of the IGCC Project's commercial operation life.

Mr. Stultz addressed Mr. Schlissel's comparison of the IGCC Project to the Wabash River 1 and Polk IGCC Projects, explaining, for example, that the Edwardsport design included specific design changes to mitigate the primary causes of all three outages experienced at Polk and, thus, the availability statistics of that IGCC Project are not comparable. Also, he explained that it is difficult to compare Wabash River to Edwardsport for any type of performance evaluation because Wabash River utilizes a different gasification technology design.

Finally, Mr. Stultz noted that contrary to Mr. Schlissel's assertion, the Company should not be required to hold ratepayers harmless from future consequences of failing to achieve an 85% capacity factor. To begin with, availability is a better metric for reliability than capacity because the plant could be available to run but is unable to run, at times, due to factors outside the Company's control, such as transmission constraints. Importantly, Company personnel are committed to operating the plant safely and reliably at the lowest reasonable cost and in compliance with all applicable laws and regulations, and Company management should not be forced to comply with an arbitrary short-term availability requirement to the potential detriment of other important objectives. This is particularly the case where there is no basis for concluding the plant will not operate reliably. If reliability issues arise after the plant is in commercial operation, the Commission can investigate such problems at that time. The Company has, however, prudently managed the IGCC Project, and ongoing O&M and capital costs are typical and expected.

j. Richard G. Stevie. Dr. Stevie provided updated information on the projection of loads, which includes the Company's 2010 summer load forecast utilized in Ms. Hager's most recent IRP analyses. He also provided testimony relating to energy efficiency.

k. John L. Stowell. Mr. Stowell's testimony provided an overview of the current prospects for federal legislation regulating carbon emissions. His testimony also provided support for the CO_2 emission allowance prices used in the Company's IRP analyses. Additionally, he explained that the development and deployment of clean coal technologies is critical to addressing climate change at low cost, and that Edwardsport is the first step of what is anticipated to be a new wave of clean coal technologies.

l. Kris R. Nielsen. Dr. Nielsen responded to Mr. Schlissel's testimony regarding natural gas prices and supplies and evaluated the fundamental forecasting process that the Company used in its economic models in support of the $530 million increase for the IGCC Project. He opined that prices for natural gas will trend upward and that there will continue to be swings in gas prices, notwithstanding the current relative abundance of natural gas supplies. Following his investigation of Company processes and procedures, including interviewing relevant Company personnel, he concluded that the Company used an annual process that assured the best available commodities future pricing forecasts.

Specifically, with respect to Mr. Schlissel's opinions regarding the Company's gas prices "as an input to the economics of the $530 million cost increase of the IGCC Project," Dr. Nielsen testified that while unconventional and shale gas have increased secure sources of gas in the U.S.

generally, regionally there is a great deal of production cost uncertainty and, thus, gas price uncertainty in the post 2014-2015 timeframe. He explained that supply and demand, as well as the future shale gas production costs will rise because of environmental regulation, production taxes, processing costs, transportation costs, etc. After 2015, dynamics such as world demand for Liquefied Natural Gas will put pressure on more balanced supply and demand, and long-term pricing of gas supplies under contracts set to a par to oil will have an ameliorating effect on the historical volatility of gas prices. Gas prices will, however, rise steadily thereafter -- about 2.8% to 3.9% per year depending on the global region. Accordingly, the Company appropriately took into account gas pricing in re-evaluating the economic support underlying its investment decisions. On the other hand, Mr. Schlissel incorrectly assumed that a 2009 Louisiana utility report regarding the extent of natural gas supplies and pricing applies to Indiana, but it does not. Mr. Schlissel also selectively quoted two 2009 media articles on the size and impact of unconventional gas supplies for the U.S. in future years.

Additionally, Dr. Nielsen noted that Mr. Schlissel incorrectly asserted that the Company "used" higher gas prices than its current projection and was imprudent in doing so. Dr. Nielsen explained that he evaluated how the Company prepared its long range estimates of gas supply and price, and concluded that the Company used an annual process that employed forecasts from reliable vendors and which assured the best available commodities future pricing forecasts. Specifically, long-range gas price forecasts were developed using the most current information, and the process was consistent with the advice that Dr. Nielsen provided his clients during the 2008-2011 time period.

m. Stephen G. De May. Mr. De May testified about the importance of maintaining the Company's financial objectives that include maintaining strength and flexibility of its balance sheet and credit quality. Mr. De May explained that maintaining strong credit quality provides the Company with better access to capital markets, financial flexibility, and lower debt financing costs. Mr. De May also described how the regulatory environment in these proceedings may affect the market's perception of the Company's financial strength.

n. Joseph A. Miller, Jr. Mr. Miller's testimony reported on the updated costs to complete, costs to convert, and net costs to cancel the IGCC Project that were used in Ms. Hager's most recent IRP analyses at that time.

o. Kent K. Freeman. Mr. Freeman responded to the testimony regarding his proposals to modify the current non-native sales sharing mechanism and to limit the length of time the Company's Standard Contract Rider No. 61 is in place. He also discussed the impact of the cap proposals made by Mr. Phillips and Ms. Smith on the AFUDC amount included in the IGCC Project cost estimate, and provided an update on the expected amount of AFUDC that will accrue on the IGCC Project.

F. Industrial Group's Phase II Case-in-Chief.

a. Michael P. Gorman. Mr. Gorman addressed what he found to be Duke's concealment of significant relevant information and Duke's failure to timely disclose that information. He stated that the significant and relevant concealed information relates to many areas including: Duke's election to manage the IGCC Project rather than obtain a LSTK contract; Duke's failure to understand the risks of the IGCC Project and Duke's imposition of unknown

risks on the ratepayers; Duke's problematic handling of the grey water issue; and Duke's senior executives' communications with the former chairman of the Commission about Edwardsport.

Mr. Gorman explained that the pre-approval process is a unique regulatory proceeding because the Commission generally will get only one chance to get it right, and the cost involved is very significant. Therefore, he stated that a thorough disclosure of design risks and construction costs risk is needed in a pre-approval proceeding. He explained that accountability for concealment serves as the check on non-disclosure.

Mr. Gorman discussed the testimonies of Mr. Banta and Mr. Hoenig, and the areas where each detailed Duke's concealment of significant relevant information on a variety of matters. Mr. Gorman testified that Duke's withholding of important information prevented interested parties from making informed recommendations to the Commission and the Commission itself from developing thoroughly informed decisions concerning Edwardsport. Mr. Gorman also stated that the failures of Duke to disclose certain communications with the former Chairman of the Commission also constituted concealment of significant relevant information.

Mr. Gorman recommended that Duke be permitted to recover not more than its original cost estimate of $1.985 billion. He also recommended that the cap apply to all costs that could have been capitalized to the IGCC Project and that any future determination of the plant's fair value be no greater than $1.985 billion less depreciation.

b. Dwight R. Hoenig. Mr. Hoenig testified that Duke failed to timely inform the Commission about significant issues associated with the Edwardsport hydrogeology, which made (and make) the feasibility of a DWI plan highly questionable. Mr. Hoenig pointed out that Duke's testimony attributes the failure of its DWI plan entirely to GE's recalculation of the grey water chemical composition estimate—which classified the grey water as hazardous waste under RCRA—and the EPA's denial of an exemption to RCRA under the Bevill Amendment. Mr. Hoenig emphasized that Duke's testimony did not address the most important problem with its DWI plan: if the water cannot be feasibly injected into the wells due to poor hydrogeological conditions, it is irrelevant whether the waste classification is hazardous or non-hazardous. Mr. Hoenig highlighted the fact that in a permit application filed with the Indiana Department of Environmental Management, Duke stated that "serious technical feasibility concerns" with its DWI plan were "perhaps more important" than the hazardous waste issue. Mr. Hoenig testified that Duke did not reveal these problems to the Commission. In addition, Mr. Hoenig testified that Duke made an erroneous statement in the FEED Study that was filed with the Commission in April 2007. Duke referred to its experience at Gibson Station as a basis for deviating from the Alliance's ZLD design. However, Duke misstated this experience, thereby clouding the level of risk posed by the DWI plan at Edwardsport.

Mr. Hoenig also concluded from his extensive review that Duke failed to inform the Commission about issues associated with the classification of the grey water on a timely basis. Mr. Hoenig noted that it is undisputed that Duke knew that its grey water was expected to be hazardous by October 2007, yet did not inform the Commission of this fact until May 28, 2009. On the contrary, on several occasions, Duke submitted testimony about the injection wells without revealing that the grey water was hazardous.

c. Michael Banta. Mr. Banta testified as an expert witness for the Industrial Group. Mr. Banta's testimony addressed specific issues related to the term concealment in the context of the legal standard fraud, concealment, or gross mismanagement. This legal standard appears throughout various statutes relating to power plant construction approvals. Mr. Banta explained that in his opinion, the term concealment is not limited to situations involving fraudulent concealment, active concealment, passive concealment, or concealment with a conscious intent to deceive. Rather, Mr. Banta used the term concealment in its common and most inclusive sense, as anything rendered not visible, not revealed or not disclosed—i.e. failure to disclose significant relevant information.

Mr. Banta contrasted the evidence regarding the Company's internal assessments at various times regarding contracting approaches that might be used for the IGCC Project and the risks and benefits associated with those different contracting approaches and what the Company told the Commission regarding those issues.

d. William N. D'Onofrio. Mr. D'Onofrio is the Principal Consultant and founder of D'Onofrio & Associates, LLC. Mr. D'Onofrio testified to the existence of communications by senior Duke officials with the former Chairman of the Commission, and Duke's concealment of such communications from the full Commission and the parties to a pending regulatory proceeding.

He disputed that meetings between Duke's senior executives and the former Chairman were informational. Mr. D'Onofrio testified it was difficult to imagine that a meeting with the former Chairman to inform him of the two substantial IGCC Projected cost increases in the IGCC Project, information Duke's executives had apparently not yet shared with Duke's Board, its shareholders, the investment community or any of the parties to the pending proceedings, could be simply described as educational or informational and not intended to persuade or advocate a position. He observed that his conclusion was supported by the agreement of Mr. Rogers and Mr. Turner on February 26, 2010, two days after the second such meeting, that it was best not to put information about the meeting with the former Chairman in writing.

Mr. D'Onofrio concluded that Duke's failure to disclose Duke's communications with the former Chairman constituted concealment of significant and relevant information that the full Commission and the other parties were entitled to know.

G. OUCC's Phase II Case-in-Chief.

a. Barbara A. Smith. Ms. Smith testified that in a February 25, 2012 docket entry, the Commission stated, "[p]ursuant to the Indiana Code 8-1-8.5-6.5, allegations of fraud, concealment or gross mismanagement may be examined in every proceeding involving a facility being constructed pursuant to a CPCN and a Clean Coal Technology certificate." Ms. Smith added that Indiana Code 8-1-8.8-6.5 states that, "[a]bsent fraud, concealment or gross mismanagement, a utility shall recover through rates the actual costs the utility has incurred in reliance on a certificate issued under this chapter...". Ms. Smith stated, in her opinion, this language suggests that if fraud, concealment or gross mismanagement exist, the utility may not be permitted to recover costs for the facility through rates, even if those costs have already been incurred by the utility.

Ms. Smith testified that she agreed with the conclusion drawn in the Phase II testimony of OUCC consultants Robert James and Scott Bayley from Accumyn Consulting that, from the beginning, Duke grossly mismanaged the IGCC Project and attempted to conceal mistakes caused by its mismanagement from the Commission and other interested stakeholders. OUCC utility analyst Cindy Armstrong supplemented Accumyn's findings regarding alleged Company's gross mismanagement of its grey water problem.

Ms. Smith stated that the OUCC's definition of gross mismanagement as defined by Messrs. Bayley and James was, "a set of circumstances resulting from management ineptitude or oversight that severely hampers accomplishment of IGCC Project goals".

Ms. Smith summarized the OUCC testimony regarding Duke's gross mismanagement of the IGCC Project. She testified that after reviewing thousands of pages of construction-related documents, it was apparent to Messrs. James and Bayley that Duke personnel were unqualified and ill-equipped to manage a IGCC Project of this scale which is the largest IGCC facility ever built in the world. Ms. Smith testified that since Duke personnel may have had the expertise to operate complex power plants and had managed the construction of pollution control projects in the past, it apparently believed that it could manage the construction of this multi-billion dollar project. Ms. Smith stated that assumption was short-sighted and resulted in excessive cost overruns that plagued this project from the very beginning.

Ms. Smith testified that the American Heritage Dictionary defines "conceal" as "[t]o hide or keep from observation, discovery, or understanding; keep secret."

Ms. Smith testified that the Commission can find Duke guilty of concealment for concealing pertinent information from the OUCC and Intervenors ("Interested Parties") because Interested Parties are advocates who have the right and, in fact, the responsibility to investigate the significance of the actions and conduct by Duke while it is seeking to recover billions of dollars from its ratepayers. Ms. Smith testified that Duke made it clear in other filings in this and related dockets that it intends to claim that because it provided information to the Commission that it did not engage in concealment when it failed to provide the information to the Interested Parties. That rationale does not seem reasonable. The Interested Parties have had the ability to look behind the curtain of Duke-controlled information contained in monthly progress reports and have discovered something quite different. Ms. Smith testified that the Commission, as the decision maker, should expect the Interested Parties to provide the most persuasive and relevant evidence available. The Interested Parties have done so here.

Ms. Smith testified that there is not a bright line that distinguishes evidence that demonstrates gross mismanagement or concealment. Many of the events outlines in the OUCC's gross mismanagement section may also constitute concealment. For instance, Duke's mishandling of the FEED Study and the events surrounding the Study were not adequately disclosed to the Commission or the Interested Parties which an example of both gross mismanagement and concealment. Ms. Smith testified that additional evidence of concealment is discussed by Messrs. Bayley and James in the IGCC Project Budget Manipulation section of the Report. Messrs. Bayley and James testify that the information Duke provided to the Commission lacked transparency with respect to changes in project scope, design, schedule or cost implications. As the scope of the IGCC Project and its estimated costs escalated, Duke altered its

budget presentation, making it difficult to track and understand the change in budgeted line items.

Ms. Smith stated that the OUCC recommends that the Commission limit the amount of cost recovery by Duke to $1.985 billion. Ms. Smith testified that the evidence submitted by the OUCC and other Interested Parties in this docket presented a compelling case of a Company that had unnecessarily cost ratepayers millions of dollars. She concluded that the offending conduct didn't lend itself to easy quantification. There was no mathematical formula to assess the damage. Therefore, returning to the language of Indiana Code § 8-1-8.5-6.5, since Duke was guilty of gross mismanagement and concealment, it should not be allowed to recover all of the actual expenses it has incurred on this IGCC Project. Ratepayers should get the benefit of their original bargain: a fully functional IGCC facility for $1.985 billion.

b. Robert G. James. Mr. James also testified on OUCC's behalf in Phase II. He said he was primary author of most of Section V of Accumyn's Report. His testimony focused on Duke's gross mismanagement of 1) the IGCC Project, 2) construction management and 3) typical construction industry standards and practices. Mr. James defined gross mismanagement as circumstances arising out of management ineptitude or oversight that severely hampered accomplishment of project goals. He testified that after Duke appointed itself as the overall project manager, its decisions included "risky fast-tracked schedule compression and unconventional management tactics that have burdened the IGCC Project with extraordinary quantity increases and huge changes to cost and schedule baselines." Specifically, Mr. James alleged:

Duke failed to fully complete its Process Design Package ("PDP"), or basic design, at the conclusion of its FEED Study, and also failed to achieve a LSTK contract arrangement. As a result, the IGCC Project is 50% larger than the FEED Study estimate and suffered both extraordinary scope-growth and unnecessary transfer of risk to both Duke and ratepayers.

Duke effectively transferred control of engineering and construction of the largest integrated gasification combined cycle power plant ever to be built to itself, although it had little experience or expertise in construction of complex, scaled-up reference plant, multi-billion dollar, process & power-based mega-projects. Duke's unilateral decision to implement a hybrid project delivery method and "flexible contracting approach" strayed from engineering and construction management standards, leading to multiple setbacks in its execution of the IGCC Project.

Duke's inability to accurately estimate costs and schedule elements of its IGCC Project controls program caused frequent estimate re-baselining and negatively impacted schedule execution. These failures resulted in extraordinary quantity growth, cost increases, and schedule delay.

Duke's failed management of its grey water disposal method, including its decision to abandon ZLD for DWI, was based on insufficient research and led to an extraordinary unplanned delay and cost overruns.

According to Mr. James, Duke knew its basic PDP was incomplete when the FEED Study was filed with the Commission, despite descriptive terms in the study portraying a greater

degree of precision and finality. This is turn forced GE to continue process design work into the detailed engineering and design phase and ultimately required Duke to issue change orders to both GE and Bechtel for post-FEED Study work. Mr. James faulted Duke for failing to secure a LSTK cost estimate for the IGCC Project, a planned deliverable of the FEED Study. Losing the LSTK removed key advantages available to Duke, the Commission and ratepayers, including advance knowledge of the final cost before the start of engineering and construction work and cost and schedule risk placed on GE/Bechtel rather than Duke ratepayers.

Mr. James examined Duke's prior construction project management experience with smaller, less complex projects and concluded none of these projects reached a quarter of the total installed cost currently estimated for the IGCC Project, or matched its complexity. He explained how Duke's "flexible contracting approach" - where Duke effectively appointed itself project manager and selected which portions of the IGCC Project would be undertaken using fixed price, lump sum, cost reimbursable, target cost and or other contract arrangements – was responsible for, among other things: Failing to timely complete the PDP, negatively impacting finalization of material quantities, and cost and scheduling of the IGCC Project; Rejecting craft labor premiums (with no evidence of an area labor survey) and simultaneously rejecting Bechtel's experienced recommendation; Failing to appropriately develop the Integrated Master Schedule; Mismanaging fast-tracked design and construction; Extensive material and supply quantity growth (due to the incomplete basic design); Conflicts with "shared management" with GE/Bechtel, and Failing to adequately manage project controls such as project estimates & scheduling

Mr. James also testified Duke had grossly mismanaged the Grey Water Disposal portion of the IGCC Project. Raising many of the same items he discussed in his Phase I testimony as well as additional concerns, Mr. James concluded that Duke's decision to move from ZLD to DWI (and ultimately back to ZLD) caused both extraordinary unplanned delay and a greater than four-fold increase in associated costs.

c. Cynthia Armstrong. Ms. Armstrong, Utility Analyst for the OUCC, discussed environmental laws pertaining to the disposal of grey water and what Duke knew or reasonably should have known about this topic. Ms. Armstrong testified that Duke should not be permitted to recover in rates its capital expenditures related to both grey water treatment and DWI at the plant, due to its own gross mismanagement of these projects. Ms. Armstrong asserted that Duke failed to manage the facility's disposal of grey water in a timely and proper manner consistent with environmental regulations.

To explain the OUCC's position, Ms. Armstrong provided a timeline of the Edwardsport IGCC grey water disposal plans. Ms. Armstrong noted that the Alliance's IGCC Reference Plant design originally included ZLD as the grey water disposal process. However, Armstrong testified, a feasibility study for the Edwardsport site concluded that the geologic formation at Edwardsport could support DWI for the grey water, and a cost evaluation of DWI showed that it had lower capital and operating expenses when compared to ZLD. Armstrong testified that Duke IGCC Project staff made the decision to dispose of the grey water via DWI and to halt and remove ZLD from the overall IGCC Project design in October 2006. She pointed out that during the process of determining whether or not DWI was a suitable option for grey water disposal, Petitioner's staff noted that the water to be disposed of would have to remain non-hazardous.

Ms. Armstrong then explained UIC program, the RCRA and how the two regulations interact. Armstrong stated that Section 1421 of The Safe Water Drinking Act ("SWDA"), which was passed in 1974, requires the EPA to set minimum standards for State UIC programs in order to prevent underground injection which endangers drinking water sources. She noted that Section 1421 (b) requires States to prohibit any underground injection without first obtaining a permit. She explained that Class I wells inject hazardous and non-hazardous wastes into deep, isolated rock formations that are below the lowermost underground source of drinking water ("USDW") and that there are four types of Class I wells: hazardous waste disposal wells, non-hazardous waste disposal wells, municipal wastewater disposal wells, and radioactive waste disposal wells. She stated that Class I hazardous waste wells have the most stringent construction, permitting, operating, and monitoring requirements of the four types of wells. Armstrong explained that operators of new Class I hazardous waste wells are required to obtain a permit to operate as a hazardous waste treatment, storage, and disposal facility ("TSD") under Subtitle C of the RCRA.

Ms Armstrong indicated that Subtitle C of RCRA created a cradle-to-grave tracking and management system for hazardous waste and regulates generators, transporters, and owners or operators of TSD facilities. She explained that a waste is regulated as hazardous if either the EPA has determined they are hazardous, known as a "listed" waste, or if they exhibit one or more key hazardous characteristics: ignitability, corrosivity, reactivity, and toxicity. She stated that RCRA Subtitle C requires owners or operators of TSD facilities to obtain a permit prior to doing business. She noted several conditions of operating in accordance with a TSD permit, including protocols for inspections of operations and equipment, monitoring, and possession of emergency equipment, extensive personnel training regarding operating, safety, and emergency responsibilities, and corrective action to address environmental contamination both on the TSD property and contiguous property. She observed that a facility not expecting to qualify as a TSD facility could face delays in the overall IGCC Project schedule and increases in operating costs in order to obtain a TSD permit. She pointed out that industrial water discharges that are regulated by a National Pollutant Discharge Elimination System ("NPDES") permit are not subject to RCRA regulation.

Armstrong testified that a ZLD system is typically used to manage and treat grey water streams from IGCC facilities. She indicated that proposing DWI as the only option for grey water disposal presented a greater degree of regulatory risk than the ZLD option. She noted that while the grey water composition estimates from GE may not have been considered hazardous under RCRA at the time that Duke made this decision, if the grey water specifications changed during the design or engineering process resulting in water that would be considered hazardous under RCRA, Duke's ability to receive the proper permits would become much more complex and costly. She showed that according to industry guidelines regarding IGCC plants, the wastewater streams from an IGCC facility could vary greatly depending on the size, fuel, and technological process design characteristics of the plant. Thus, Armstrong reasoned, the composition of the Edwardsport IGCC facility's grey water was highly unpredictable and was subject to change in composition prior to completion of the IGCC Project, especially since the engineering design of the facility was not complete at the time this decision was made. She further explained that if the facility failed to obtain the proper RCRA and UIC operating permits in time, the ability of the IGCC plant to commence service by the scheduled operation date could be jeopardized. She observed that Duke staff was concerned with using DWI as the only disposal option, and described it as a potential "single point of failure for the plant" early in the IGCC Project.

Ms. Armstrong revealed that Duke staff participated on in a phone conference with GE personnel regarding the grey water's selenium content on October 27, 2007. During the call, GE staff notified Duke that it had been collecting waste water samples from GE Gasification over the last year, and that it would be updating the grey water specifications for trace elements soon. More specifically, the new grey water specifications would show a mean increase in selenium to at least 2.5 parts per million ("ppm"). Ms. Armstrong presented Duke staff notes that indicated a selenium content greater than 1 ppm would cause the well to be re-classified as hazardous and would require Duke to either re-file for hazardous permitting or disallow DWI. Ms. Armstrong indicated that GE notified Duke that the IGCC plant's grey water specifications would be updated to reflect a higher range of trace elements contained within the grey water on November 5, 2007. Ms. Armstrong stated that GE provided another update on November 26, 2007.

Ms. Armstrong determined that new grey water values presented by GE contained higher levels of selenium and arsenic that would classify the water as hazardous under 40 C.F.R. § 261.24. She concluded that if the Edwardsport IGCC facility continued its plan to inject its grey water, it would be considered a TSD facility, unless an exception to RCRA applied. However, Ms. Armstrong showed that first evidence of Duke Staff addressing the issue that the grey water specifications could be hazardous was in June 2008, approximately seven months after Duke received the new grey water estimates. Armstrong noted that according to Duke, its consultant had reviewed the GE contaminant concentrations in November 2007 and concluded that no change in the permitting approach was required, but Armstrong stated she could find no evidence that supports this assertion. Armstrong noted that the drilling for the IGCC plant's initial test well for grey water injection began in May 2008 and continued through November 2008.

Ms. Armstrong testified that once the potential for grey water defined as hazardous under RCRA was identified, Duke sought to determine if the IGCC Project's grey water would qualify for a specific exemption to RCRA requirements under the Bevill Amendment, which included an exemption for "process wastewater from coal gasification." Ms. Armstrong suggested that the analysis of whether the Bevill Amendment would apply to the IGCC grey water was complex and involved more than simply assuming that all gasification wastewater would be exempt from RCRA regulations. She explained that in the Mining Waste Exclusion Rule finalized on September 1, 1989, the EPA stated that wastes not presently being generated or currently meeting the high volume/low hazard standard would not be considered for special waste status in the future. Therefore, she reasoned that the Edwardsport IGCC facility grey water would not necessarily have been exempt from regulation under RCRA, since it was not in existence at the time the final 1989 Mining Waste Exclusion Rule was enacted, and there would be no historical generation of the gasification wastewater stream. She further explained that it would be difficult for Duke to prove the high volume/low hazard standard dictated by the Bevill Amendment, since the grey water would qualify as hazardous under toxicity characteristic ("TC") standards.

Ms. Armstrong found that the EPA subsequently stated that the waste streams identified in its 1990 Report to Congress served as the basis for a determination of whether or not a waste was Bevill-exempt. Ms. Armstrong noted that at the time the report was generated, the EPA had studied the only commercially-operating gasification facility in the U.S. that reported special mineral processing wastes (gasifier ash and process wastewater), the Great Plains Coal Gasification Plant facility located in North Dakota. She reported that the EPA concluded that the wastewater from the Great Plains facility did not exhibit any of the hazardous characteristics

outlined in RCRA. Armstrong explained that for Duke to show that the Edwardsport grey water qualified as Bevill-exempt, it needed to show that its grey water was similar in characteristics to the Great Plains facility, and she reasoned this would not be possible. Armstrong further explained that to determine whether a mining process waste is exempt, the waste stream must be "uniquely associated" with the industry. She stated that the entire process design that contributed to the grey water of the Edwardsport facility had to be individually evaluated in order to determine if the water could be Bevill-exempt. Ms. Armstrong showed that members of the Duke Environmental staff were concerned that the Bevill Amendment would not apply to Edwardsport when it discovered the grey water issue in June 2008.

Ms. Armstrong testified that Duke began discussions with the EPA regarding this exemption in August 2008, and after multiple discussions, the Region V EPA Office deferred the decision to EPA headquarters in Washington, D.C. Armstrong stated that the EPA issued a final determination that the Bevill Amendment would not apply to the IGCC gasification waste water stream in November 2009. Ms. Armstrong indicated that Duke's records show that the IGCC Project team focused its efforts on evaluating ZLD and other waste water treatment systems after the conference call with the EPA in January 2009. She stated that Duke selected HPD Veolia to develop the detailed process necessary for the ZLD system and to supply the necessary equipment and entered into the contract with HPD Veolia on July 28, 2009.

Ms. Armstrong asserted that Duke exposed completion of the IGCC Project schedule on time to a greater degree of risk by initially removing ZLD from the scope of the IGCC Project design. She found that Duke employees clearly knew the importance of ensuring the grey water from the facility was non-hazardous at the time this decision was made. She stressed that Duke's over-reliance on the initial grey water estimates of a theoretical, first-of-its-kind plant of its size would eventually doom the prospect of disposing the wastewater via underground injection wells, increase the overall IGCC Project cost, and potentially jeopardize the operation of the IGCC facility on schedule. Armstrong noted that there are no existing IGCC facilities operating in the U.S. using DWI for grey water disposal and re-iterated that industry documents indicate that ZLD systems are typically used to manage and treat individual wastewater streams from IGCC facilities. Armstrong declared the failure of Duke staff to analyze and react to the new grey water analysis for several months created a delay in Duke receiving confirmation from the EPA that the grey water would be subject to RCRA regulation. During this time, she noted, the first proposed injection well was drilled at the Edwardsport site. Armstrong reasoned that if Duke had received indication from the EPA that the grey water would not be exempt from RCRA regulation at an earlier time, it is possible that the expenses of this well would not have been incurred by the Company. She further asserted that Duke may have had more time to apply for a RCRA permit and take any corrective action that the permitting process would require. She concluded that Duke's failure to immediately address the new grey water estimates severely limited its permitting options for the grey water and led to a cost increase for the IGCC Project. She noted her opinion that these reasons demonstrate Duke's gross mismanagement of the disposal of grey water from the IGCC facility.

d. Scott Bayley. Mr. Bayley is founder and Managing Director of Accumyn LLC. Mr. Bayley testified that in his opinion, Duke engaged in project budget manipulation. It provided information to the Commission that lacked transparency with respect to changes in project scope, changes in project design, major changes in project schedule and the cost implications of these changes. As the scope of the IGCC Project and related estimated costs

dramatically increased, Duke altered its budget presentation, making it difficult to track and understand the change in budgeted line items. In fact, Duke's IGCC Project cost estimates were changing monthly. Those cost reports occasionally reflected an aggregate cost decrease suggesting Duke was moving actual costs between budgeted line items. Duke acknowledged that it made fundamental alterations in how its estimates were managed and presented, which Mr. Bayley testified prevented a meaningful tracing of the changed estimates.

H. Joint Intervenor's Phase II Case-in-Chief.

a. David A. Schlissel. Mr. Schlissel testified on behalf of Joint Intervenors about gross mismanagement and concealment from the inception of the IGCC Project. He provided evidence that he maintained showed that Duke had grossly mismanaged its resource planning for the IGCC Project and that DEI had failed to fully disclose, and in fact fraudulently represented to the Commission, the significant risks and uncertainties associated with the construction and operation of the IGCC Project. Mr. Schlissel also directly incorporated by reference his Phase I testimony into his Phase II testimony.

First, Mr. Schlissel explained the standard that he was applying to render an opinion on whether Duke's conduct escalated to the level of "gross mismanagement." He testified that he considered gross mismanagement to be more than "mere mismanagement." Rather, it was a conscious disregard of risks or chronic or repeated mismanagement.

Mr. Schlissel also responded to Duke Witness Ms. Hager's assertion that he was attacking the competence and professionalism of her and of other Duke resource planners. He testified that he was not challenging their competence or professionalism. Rather, he was challenging the actions of the Company's senior management personnel as to: (1) when to rerun the Company's resource planning analyses to reflect changed circumstances; (2) what scenarios to examine as part of the resource planning analyses; (3) the assumptions used in those analyses; and (4) what information about those analyses the Company provided to the Commission. He noted that the Company's then current estimate of approximately $4,700 per kW was approximately 47% higher than its original estimate in 2007.

Mr. Schlissel testified that there was significant evidence available to the Company that should have led the Company to conclude that significant cost increases were inevitable. The evidence included the following: that at the time of the CPCN, the Company knew Edwardsport was a first-of-a-kind IGCC plant; that industry experience beginning around 2000-2003 showed coal plant construction costs were skyrocketing; that potential for cost increases at Edwardsport was high because of the relatively incomplete state of the IGCC Project's engineering at the time; and that the IGCC Project involved a large amount of investment dollars, multiple suppliers, and an extended "fast-track schedule" – all of which exposed the Company to "mega-project" risks and added to cost schedule uncertainty around the IGCC Project.

Mr. Schlissel began by discussing the first mover risks faced by the Company. He testified that while new IGCC designs were being proposed in 2007, the technology was generally considered "unproven," "immature," and "still in its infancy." Mr. Schlissel cited to a 2004 National Association or Regulatory Utility Commissioners ("NARUC") Final Report which presented the results of a survey of a wide range of experts and institutional stakeholders. The reports ranked three financial issues – higher capital costs than a NGCC, doubts regarding

commercial availability of the IGCC, and increased risk due to higher up-front development costs as significant challenges. In addition, the survey identified key technological challenges, primarily the chance of low plant availability, as well as skepticism regarding the technology and a general lack of IGCC operating experience.

Mr. Schlissel testified that at the same time that Duke wanted to move forward with the IGCC Project, there were other large utilities, including Florida Power & Light ("FPL") that had chosen not to pursue IGCC technology. According to Mr. Schlissel, the FPL decision had been based in part on a 2007 Black & Veatch study. Mr. Schlissel also testified that in 2007 there were no comparable IGCC plants in operation at the time and only two smaller plants, which did not use the same technology.

Mr. Schlissel stated that Duke should therefore have expected that Edwardsport would be exposed to higher risks such as increased construction costs and potential operability and reliability problems associated with being a "First Mover." Mr. Schlissel also testified that there were risks associated with the design of the IGCC Project. It involved new design features as compared to Polk IGCC plant and that it was clear at the time that the Edwardsport design would be different from the GE reference plant. In addition, he noted that Company documents stated that the Edwardsport "optimized" design developed by Duke and GE/Bechtel was "quite different" from the Edwardsport reference plant scheme.

Mr. Schlissel then cited a number of sources indicating that there were significant concerns within the industry about first mover risks associated with IGCC technology – concerns that were echoed from within Duke itself. Specifically, Mr. Schlissel cited a 2007 presentation by GE Financial Services regarding the "challenges of investing in the first wave" of IGCC plants. Similarly, Mr. Rogers was quoted from testimony before the North Carolina Utilities Commission in 2006 regarding the risks of IGCC plants in excess of 300 MW. Mr. Schlissel then contrasted Mr. Rogers' testimony in North Carolina with the testimony by Duke witnesses in the Edwardsport CPCN proceeding in which Duke described IGCC as a "proven," "reliable," and "mature."

Mr. Schlissel went on to note that the cost implications of "first mover" risks were, in fact, materializing in Edwardsport as early as 2007 and 2008. Specifically, he cited a presentation by IGCC Project Director Rex Sears at a conference in 2008 in which Mr. Sears identified a number of "First Mover Challenges" that were already complicating the IGCC Project.

Mr. Schlissel also discussed Duke's failure to recognize or account for soaring coal construction costs that the industry was experiencing at the time Duke was conducting its FEED Study and presenting it to the Commission. Specifically, Mr. Schlissel identified Duke's Cliffside coal project which increased in cost by 47% (approximately $1 billion) by the end of 2006 from the approximately $2 billion that Duke was estimating for the IGCC Project in early 2006. In testimony before the North Carolina Commission, Duke stated this was an industry-wide trend, stating: "The costs of new power plants have escalated very rapidly." Indeed, Duke's witness further stated, in 2006, that coal plant construction costs were likely to rise another 40% in the near future.

Mr. Schlissel cited additional sources indicating this was a known, industry-wide phenomenon. As such, he testified Duke should have acknowledged that the Edwardsport Plant would be subject to the same risks.

Mr. Schlissel then discussed risks associated with "mega-projects." He referred to the testimony of Duke's witness Patricia Galloway, who defined mega-projects as very large-capital projects (in excess of $1 billion) of significant public or political interest. She further identified other attributes of mega-projects which add to their complexity – attributes such as an extended construction schedule, a fast-track schedule, and the involvement of multiple suppliers and multiple contractors.

Mr. Schlissel testified that there was no reason for Duke to be unaware that Edwardsport would be subject to the risks that Dr. Galloway associated with a mega-project. Edwardsport's status as a mega-project, as described by Dr. Galloway, added significantly to the cost and schedule uncertainty surrounding Edwardsport.

Mr. Schlissel testified that Duke faced three inter-related risks that were widely recognized at the time that the Company decided to build the IGCC Project: First Mover risk with both financial and technological components because there was no reference plant of the same size with the same IGCC technology in operation, or, indeed, any such reference plant further along in construction than Edwardsport; the risk of skyrocketing plant construction costs caused by industry-wide factors; and the mega-project risks caused by (a) an extended construction duration (b) a fast-track design and construction schedule, and (c) the need to manage and coordinate multiple suppliers and contractors. Mr. Schlissel also testified that it was generally recognized that those risks made new projects vulnerable to dramatic increases in construction costs. Indeed, Mr. Schlissel cited a 2007 editorial in Coal Power Magazine regarding the "IGCC Sticker Shock," as evidence.

Despite those risks, however, Duke did not adopt a contracting strategy to shift as much of those risks to GE/Bechtel and away from the Company and its ratepayers, according to Mr. Schlissel. He testified that GE and Bechtel originally wanted to enter a single Engineering, Procurement, and Construction Management ("EPCM") contract with a lump-sum turnkey ("LSTK") price for Edwardsport, but Duke chose not to utilize that approach, believing the GE/Bechtel proposal was "riddled with conservatism and contingency" and would be too expensive to be viable.

Mr. Schlissel provided documentation that Duke was aware that its chosen contracting approach for Edwardsport would increase cost-related risks that the Company and its ratepayers would bear. Also, a January 30, 2009 audit of Edwardsport by Ernst & Young stated it appeared that Duke was "assuming a significant portion of the risk" that an EPCM contractor would normally be expected to assume.

Although Duke chose not to use an LSTK contract, other utilities have. Mr. Schlissel noted, for example, that AEP affiliate Appalachian Power Company ("APCo") entered into a LSTK price contract with GE/Bechtel for a plant using essentially the same technology. The estimate for that plant was $2.23 billion in 2007.

In fact, according to the West Virginia Public Service Commission order approving that plant, Duke's Edwardsport plant was specifically discussed. The West Virginia Commission noted that the utility in that case disagreed with Duke's contracting approach, stating that "some of the work that Duke Indiana will do itself poses too great a risk to APCo and its customers in terms of potential interference and risk of claims with the contractor." That plant was ultimately cancelled, however, because the Virginia State Corporation refused in April 2008 to require the company's Virginia ratepayers to bear any costs of the plant, citing uncertainties of cost, technology and unknown federal mandates.

Mr. Schlissel testified that, despite these known first-mover risks, Duke refused, at any time prior to August of 2010, to consider in its resource planning analyses the potential for its costs to exceed Duke's then-current estimates. Indeed, Mr. Schlissel noted that this position was even inconsistent with Duke's own practice. Specifically, in analyzing its Cliffside project coal plant in North Carolina, Duke ran and submitted a number of sensitivities that included 20 percent higher construction costs than those in the Company's official cost estimates.

In addition, Mr. Schlissel noted that Duke had been specifically warned about this issue. He testified that both he and the Industrial Group warned the Company in Cause No. 43114 about the potential for higher costs but that the Company refused to do the same modeling for higher costs as it did for Cliffside. In other words, in refusing to consider the potential for higher construction costs in its modeling analyses, Duke was both not accepting the testimony of the intervening parties' experts and also contradicting its own practice in North Carolina.

Moreover, Mr. Schlissel testified that there was additional information suggesting Duke's $1.985 billion FEED Study estimate was inadequate, even back in 2007 when the FEED was being conducted. Specifically, at that time, AEP was proposing to build two IGCC plants, both with price tags in excess of $1.985 billion.

Moreover, there was early, IGCC Project-specific evidence in 2007 showing the IGCC Project's construction costs could rise above $1.985 billion. Mr. Schlissel also presented evidence that the Company knew that GE wanted to increase its costs for Edwardsport in the fall of 2007 as the Commission was deliberating on the CPCN. However, Duke did not inform the Commission of any of this.

Mr. Schlissel testified that the economic analyses that Duke witness Jenner presented in her rebuttal testimony in Cause No. 43114 (using the Company's then-current $1.985 billion cost estimate) showed that in the Base Case Scenario the plan containing 100 percent of the proposed IGCC unit was a mere 0.24 percent lower in present value revenue requirement ("PVRR") than the lowest cost plan without the IGCC unit; and the scenario with CO_2 costs and the plan containing 100 percent of the IGCC Project was only 0.13 percent lower cost than the lowest cost plan without the IGCC unit. Mr. Schlissel testified that given these extremely close PVRR costs, it would be reasonable to expect that the cost of the plans without the IGCC Project would have had lower PVRR in both the Base Case and the CO_2 Scenario if the Company had considered the potential that Edwardsport's construction cost could increase by 20 to 40 percent.

In addition, in its modeling analyses, Duke had assumed that Edwardsport could operate at an approximate 82 percent capacity factor based on an assumed availability for the unit of approximately 84-85 percent and the assumption that Edwardsport would be among the first

units economically committed and dispatched. However, this was not supported by information available to Duke at the time of its analyses in 2007. Specifically, the experiences at both the Polk Station and Wabash River IGCC units through 2006 were significantly below these figures. Despite this experience, Duke never re-evaluated its assumed availability and capacity factors for Edwardsport.

Mr. Schlissel then testified that Duke did not file any analyses with the Commission that considered the potential for any lower availability for Edwardsport until it submitted its recent testimony in March 11, 2011 – or almost four years after Industrial Group witness Mr. Phillips first expressed concern. According to Mr. Schlissel, given the extremely close PVRR costs that Duke reported to the Commission in Cause Nos. 43114 and 43114-S1, it is reasonable to expect that the cost of the plans without the IGCC Project would have had lower PVRR in both the Base Case and the CO_2 Scenario if the Company also had considered the potential that Edwardsport's availability would be less than 85 percent.

Mr. Schlissel also testified that Duke should have anticipated that the cost of the IGCC Project would exceed the Company's $1.985 billion estimate. Based on industry experience, he also recommended that Duke perform a series of sensitivity scenarios in its modeling analyses that would have assumed further increases of 20 percent and 40 percent over its then-current $2.35 billion cost estimate. Mr. Schlissel then testified that, despite having been proven wrong about the accuracy/reasonableness of its $1.985 billion cost estimate in May 2007, Duke again refused to consider in its modeling analyses that there might be further increases beyond its then-current $2.35 billion estimate.

Mr. Schlissel testified that the Company was aware of the continuing construction cost escalation being experienced by other IGCC Projects at the time that it refused to consider the possibility that the cost of building Edwardsport might increase above $2.35 billion. Specifically he noted that Mr. Haviland made a presentation to the Finance and Risk Management Committee of Duke Energy's Board of Directors on February 25, 2008. Mr. Haviland included a number of figures in this presentation that showed the industry trends of increasing costs. He also showed that the cost of the IGCC Project had increased 82 percent just since July 2005.

Mr. Schlissel testified that Duke did not submit another economic analysis of the IGCC Project to the Commission until April 2010 in Cause No. 43114 IGCC-4, at which time the estimated cost of the IGCC Project had increased to $2.88 billion.

As noted above, Mr. Schlissel directly incorporated by reference his Phase I testimony into his Phase II testimony. He stated that the facts and findings he discussed in his June 30, 2011, Phase I Responsive Testimony on Imprudence were relevant and material to the issue of Duke's gross mismanagement of the planning, design, engineering and construction of the IGCC Project.

He testified that of particular importance was evidence that by the early fall of 2009 Duke had substantial evidence that building Edwardsport as an IGCC plant was going to cost significantly more than $2.35 billion. He testified that the Company knew by that time that its 2007 and 2008 statements of confidence to the Commission in its earlier Edwardsport cost estimates had been proven wrong.

Mr. Schlissel also cited to his Phase I testimony that Duke had known that natural gas prices had collapsed by late 2008 and early 2009, thus making the economics of natural gas-fired alternatives significantly more attractive, but that Duke imprudently failed to re-examine the economics of completing an IGCC plant on a timely basis in the fall of 2009 to reflect the much higher costs and risks to which ratepayers were being exposed. He testified that, instead, Duke continued to spend money at a rapid rate between October 2009 and March 2010, turning to-go costs into sunk costs and trying to make the IGCC Project into a self-fulfilling prophecy.

According to Mr. Schlissel, when Duke finally did submit new economic analyses to the Commission in April 2010, the new analyses were biased due to the Company's failure to (a) allow for any further increases in the cost of the IGCC Project and (b) acknowledge that the plant might operate, even in its initial years, at less than the optimal 85 percent availability that Duke had assumed in its earlier economic analyses. He stated that Duke also assumed unreasonably high natural gas prices.

Mr. Schlissel also testified that, in addition to the information he discussed in his June 30, 2011, Phase I Responsive Testimony on Imprudence, there were a number of other documents that revealed that Duke realized in 2008 and early 2009 that there had been significant problems with the original FEED Study, that there were significant problems with the performance of Bechtel and GE, and that the cost of the IGCC Project was escalating. He cited as an example Duke's discussion points for a meeting with GE on July 16, 2008. He also cited a January 2009 report by Ernst & Young ("E&Y") which identified major areas for significant improvement at Edwardsport.

Other evidence showing gross mismanagement included the following: (1) a January 30, 2009 Duke e-mail from Richard Haviland to Jim Turner on the subject of "Edport" where Mr. Haviland stated, "You definitely are not compensating me enough because you need to include hazardous duty pay – Edport may kill me Mike called yesterday with yet another new problem – a significant overrun on the water treatment system Just like the estimate this all goes back to the FEED – something that we have all been relying on"; (2) a February 16, 2009 e-mail from Ian Copeland to Rick Haviland on the subject of "Re: Edport PM" indicating that Duke was talking with Bechtel about replacing its IGCC Project Manager for Edwardsport; (3) a February 20, 2009 e-mail from Rick Haviland to Jim Turner addressing the status of the various Edwardsport environmental permits reported by Mr. Haviland's candid assessment of the wastewater permitting process and DWI Permits noting that the permitting group did not receive or evaluate the grey water as hazardous until June 2008; (4) a February 20, 2009 e-mail from Richard Haviland to Keith Trent and Jim Turner on the subject of "Edport Bevill" which noted that the issue was "very time sensitive" and that "If [Duke] cannot get a Bevill exclusion the schedule for the entire IGCC Project will be impacted because we do not have time remaining to design our way out of this – we have started working on technical alternatives-but lead times will probably not support our schedule"; (5) a May 5, 2009 Duke e-mail from Richard Haviland to Mike Womack, Jeff McNeely, Ron Barnes and Robert Blackwell on the subject of the recent "earnings call" which stated that construction at Edwardsport was not as far along as its reported percentage complete would make it appear; and (6) a heavily redacted May 7, 2009 e-mail from Richard Haviland to Jim Turner on the where Mr. Haviland states, "you are a good guy and someone to respect – we just see things differently and have different motivations – and you have the only vote… I can only vote with my feet[.]"

Mr. Schlissel testified that Duke was imprudent and had grossly mismanaged the IGCC Project. He stated that the Company's "explanation" that it did not know until October 2009 that the Edwardsport IGCC facility that was being built was substantially larger than what had been anticipated was "prima facie evidence of gross mismanagement" for the following reasons: The Company's explanation confirms that IGCC is still a developing technology, something which Duke testified before the North Carolina Utilities Commission but not the Indiana Utility Regulatory Commission.; Duke did not tell the Commission back in Cause Nos. 43114 or 43114 IGCC-1 that Edwardsport was employing a "unique technology" at Edwardsport. Instead, the Company testified to precisely the opposite point – that Edwardsport was merely merging two mature technologies.; The very risks of proceeding as a "first mover" in the development of IGCC technology that Indiana Industrial Group witness Phillips warned about in Cause No. 43114-S1 have come to pass.; Duke did not warn the Commission that the FEED Study, completed in 2007, was "based on a preliminary design with little detailed engineering." Instead, the Company expressed strong support for the results of the FEED Study in multiple proceedings before the Commission, even claiming that GE and Bechtel would be able to build Edwardsport using less piping, cable, conduit runs, and foundations than were called for in their reference plant design.; and Duke compares the current IGCC Project design and cost estimate with the FEED Study but does not explain why it was not aware of the changes in IGCC Project design and the growth in scope until mid-to-fall 2009. He questioned that, if Mr. Haviland's explanation is accepted at face value, why wasn't Duke aware that the scope of the IGCC Project was changing and that the amounts of construction commodities being included in the design and actually being installed in the plant were increasing dramatically? He responded that either Duke was not prudently involved in overseeing the design and construction of the IGCC Project or, as the Company suggests, that perhaps GE and/or Bechtel were hiding design modifications from it.

Mr. Schlissel defined concealment as the act of suppressing, hiding, or remaining silent about an important factor circumstance that one has a duty to disclose. He defined fraud or "fraudulent misrepresentation" as representing to the Commission a past or existing fact that was material to the Commission's decision but was false and was made by someone who knew it was false or made it in reckless ignorance of whether it was false. He testified that since 2007 the Company has concealed critical information from and has fraudulently misrepresented key information to the Commission.

Specifically, Mr. Schlissel identified the following as examples of concealment:

Mr. Schlissel testified that Duke did not tell the Commission in Cause Nos. 43114, 43114 S1 or 43114 IGCC-1 that Edwardsport was employing a "unique technology" at Edwardsport. Instead, the Company testified to precisely the opposite point – that Edwardsport was merely merging two mature technologies.

Mr. Schlissel noted that the Company did not disclose to the Commission in Cause Nos. 43114, 43114 S1 or 43114 IGCC-1 or IGCC-2 the problems it was experiencing with the performance of GE and Bechtel at Edwardsport. Nor did it disclose to the Commission that it had considered replacing Bechtel in 2007 and early 2008.

Mr. Schlissel testified that the Company did not disclose to the Commission in Cause Nos. IGCC-3 or IGCC-4 the problems that it was continuing to experience with the performance

of GE and Bechtel. Duke did not, and has not, informed the Commission regarding Mr. Haviland's observations of Duke's slow response to the grey water issue.

Mr. Schlissel opined that Duke did not disclose to the Commission in Cause Nos. IGCC-3 or IGCC-4 that the Company believed that there were serious flaws in the initial FEED Study for the Edwardsport IGCC Project.

Mr. Schlissel testified that the Company did not acknowledge until March 2011 the potential that the Edwardsport IGCC Project might operate at less than an 85 percent annual availability. In fact, the Company actively dismissed concerns about the IGCC Project's potential operating performance. Even then, when it did assume availability for the IGCC Project of lower than 85 percent, the Company only did so for two limited scenarios and only assumed that the IGCC Project would operate at a 75 percent lower availability for the first 15 months of its service life. The Company has never disclosed to the Commission that it prepared modeling analyses in January 2007 that included sensitivity scenarios in which it was assumed that Edwardsport would operate at annual availabilities of 75, 80, and 90 percent instead of 85 percent.

Mr. Schissel noted that Duke did not disclose to the Commission in Cause No. IGCC-3 in the fall of 2009 that at least one member of its senior management believed that the ultimate cost of building the IGCC Project might be as much as $400 million above its approved $2.35 billion estimate.

Mr. Schlissel alleged that Duke did not disclose to the Commission in Cause Nos. 43114, 43114 S1, IGCC-1, IGCC-2, IGCC-3 or IGCC-4 that the Company was exposed to significant risks as a result of its chosen contracting approach for the IGCC Project.

Mr. Schlissel testified that the Company did not disclose in its testimony to the Commission Cause Nos. 43114 IGCC-4 or IGCC-5 that there was substantial evidence by the summer of 2010 that the cost of building Edwardsport might rise above $2.88 billion.

Mr. Schlissel noted that the Company misrepresented to the Commissionin Cause Nos. 43114 and 43114-S1 the certainty of its $1.985 billion cost estimate and refused to acknowledge the risks and uncertainties associated with that estimate.

In addition, Mr. Schissel argued that the Company had not disclosed to the Commission that at least one member of Duke Energy's Board of Directors, someone with construction experience, had expressed severe criticism of the original FEED Study and GE and Bechtel's earlier disclosures.

Mr. Schlissel concluded by making the following recommendation that the Commission find that Duke has grossly mismanaged the IGCC Project beginning before November 20, 2007 in several respects crucial to its proper planning and regulatory review and approval. Also, Mr. Schlissel concluded that beginning before November 20, 2007 Duke has concealed from and fraudulently misrepresented to the Commission and the other parties critical information concerning the IGCC Project. Consequently, the Company should not be permitted to rely on the Commission's January 7, 2009 Order in Cause No. 43114 IGCC-1 for any recovery through rates of the cost of building the IGCC Project whether that recovery is associated with

completion or cancellation of the IGCC Project. Finally, the Company also shall not be permitted to rely on the Commission's November 20, 2007 Order in Cause Nos. 43114 and 43114 S1 for any recovery through rates of the cost of building the IGCC Project whether that recovery is associated with completion or cancellation of the IGCC Project.

b. Peter Bradford. Mr. Bradford, President of Bradford Brook Associates and adjunct professor of law at Vermont Law School, testified on behalf of Joint Intervenors regarding fraud, concealment and gross mismanagement. He testified that, in his experience in assessing mismanagement by utilities of their relationship with regulatory agencies in their home states, such situations rarely reach the level of mismanagement that has been attained by Duke in Indiana, with firings in both the utility and the Commission coupled with ongoing state and federal investigations into possible illegal activity.

Mr. Bradford defined fraud as "a representation to the Commission of a fact material to the Commission's decision that was false and that was made by someone who knew it was false or who made it in reckless indifference to whether it was false." He defined concealment as "hiding or remaining silent about a material fact or circumstance that a party has a duty to disclose." Finally, he defined gross mismanagement as involving "repeated acts of mismanagement or management conduct so inadequate in light of the potential harm as to constitute recklessness."

Mr. Bradford provided context for his definitions, stating that Indiana has revised its cost recovery legislation to assure more rapid and certain cost recovery for certain types of new power plants. However, there is no reason to believe that the Indiana legislature intended thereby to diminish customer protections. This new regulatory scheme shifted several types of risks to the customers. Examples of those risks shifted to customers include: the risk of loss from cancelled plants; risks of undiscovered imprudence during the course of ongoing review; and disallowances based on excess capacity. Mr. Bradford testified that this scheme provides for protection to customers in the case of fraud, concealment, or gross mismanagement under Indiana Code §§ 8-1-8.5-6.5 and 8-1-8.7-6 and -7, that these protections are the only means by which excess costs falling outside of the agreed upon review can be challenged, and that these terms should be read in a manner that provides fully effective protection for customers. If the term concealment is limited to knowing concealment, then customers will have to pay when information is concealed through inadvertence or incompetence. This would not comply with the legislature's intent to maintain existing levels of customer protection while expediting cost recovery.

Mr. Bradford also opined that that gross mismanagement should encompass a duty of care commensurate with the financial consequences of poor management. The more at risk, the greater financial risk borne by the customer; thus, a standard above that expected from a reasonable manager confronting limited risks should be used when management must manage multibillion dollar customer exposure.

According to Mr. Bradford, the Clean Coal Technology Statutes contain their own protections independent of those contained in Indiana Code ch. 8-1-8.5. The backdrop for these statutes is that clean coal technology in Indiana is desired by the legislature; however, the legislature wants to simultaneously protect customers against fraud, concealment, and gross mismanagement. In light of the failed first mover and large utility projects in the past, especially

nuclear power plants of which nearly half of those undertaken in the U.S. were cancelled, Indiana statutes require new clean coal technology projects to be built without fraud, concealment, or gross mismanagement to protect consumers.

Mr. Bradford testified that, against this backdrop, Duke asserted a high level of confidence to the Commission that it could predict the cost of the IGCC Project, despite the fact that internal e-mails demonstrate Duke had little control over the IGCC Project and Duke had declining confidence in its contractors. Petitioner had a duty under the Powerplant Construction and Clean Coal Technology Statutes to pass these concerns on to the Commission, but instead Duke concealed those concerns.

Mr. Bradford testified that certain Duke conduct with respect to the IGCC Project represents concealment as the term is used in both the Powerplant Construction Act and Clean Coal Technology Act. The statutory bargain of ensuring payment to a utility company for costs expended on a utility project while at the same time protecting customers requires the utility to perform a careful analysis of risks and uncertainties and to fully and completely disclose all pertinent information to the Commission.

According to Mr. Bradford, Duke has at all times controlled the key information as to developments and estimates for the IGCC Project and has engaged in a pervasive pattern of concealing material that has hampered the Commission in discharging its responsibilities. He concluded that, due to the fact that the utility is in control of nearly all of the important information in a proceeding like this, regulators rely on and need information from the utility that is prompt, complete, and accurate. He stated that anything less is concealment.

Mr. Bradford also testified that Petitioner's conduct with respect to the IGCC Project constitutes gross mismanagement because - despite substantial evidence demonstrating that other options were economically better for customers - Duke has continued to insist that the IGCC plant at Edwardsport is the best approach. He testified that this behavior is reckless because other utilities reached conclusions markedly different than those of Duke based on a dramatic transformation in power generation markets from 2007 to 2008. He then testified that the elements which precipitated this change were: (1) the cost of large central generating facilities was rising dramatically; (2) borrowing became more difficult; (3) demand forecasts for electricity had declined sharply across the country in general and Indiana specifically; and (4) natural gas prices collapsed to levels far below those used in Duke's forecasts.

Mr. Bradford testified that Petitioner's relationship with former Chairman Hardy constituted gross mismanagement. He opined that the relationship between Mr. Turner and Chairman Hardy and the conduct relating to the hiring of Michael Reed occurred with reckless disregard for the consequences on the IGCC Project. He noted that these actions resulted in three employees leaving Duke, including the individual with overall managerial responsibility for the IGCC Project. Prior to these hindrances to the IGCC Project, Duke spent substantial senior management time and effort on assuring the increased costs could be charged to customers, rather than spending the time on bringing the costs under control. Duke spending time and resources on seeking to manage regulators rather than the IGCC Project and its costs is gross mismanagement. These relationships have adversely affected the Company in the public eye, in government circles, and among its customers; all these impacts assuredly harmed Duke's ability to manage the IGCC Project by diverting resources to these other problems.

Mr. Bradford testified that, as a former regulator and an expert on utility regulation, he believed it was unnecessary for the Commission to apportion blame among Duke, Bechtel, and GE once it is satisfied fraud, concealment, or gross mismanagement has occurred. Regardless of whether it is the conduct of the utility building the plant or one of its contractors, the Commission should not make customers bear costs which are imprudent or the result of fraud, concealment, or gross mismanagement. Disallowing these costs from rates incentivizes the utility to seek recovery from contractors responsible for cost overruns and mistakes. Thus, the Commission should not allow costs resulting from conduct of the utility or its contractors in rates.

Mr. Bradford stated that the Commission may well have still issued a CPCN had Duke disclosed all of the information concealed throughout the course of the Cause No. 43114 proceedings; though the Commission may have placed a cost cap due to the risks involved on the IGCC Project. He testified that, given the concealment and gross mismanagement which have occurred as far back as the CPCN proceeding, the Commission should now assure its decisions are based on records free of concealment and the effects of gross mismanagement. At a minimum, this would require freezing Edwardsport rate impacts at existing levels until all of the investigations by federal and state officials are concluded and all of the issues related to imprudence, fraud, concealment, or gross mismanagement have been finally resolved. Only then can the Commission reach a reasoned conclusion as to what rates and other conditions it should put in place for Edwardsport.

c. Kerwin Olson. Mr. Olson testified in support of Mr. Bradford and Mr. Schlissel regarding gross mismanagement and concealment by Petitioner, if not outright fraud. The definition of fraud that he used in this context was to represent to the Commission a past or existing fact that is material to a Commission decision and which is false by which the representation is made with the knowledge that it is false or in reckless disregard of whether it is false. He defined concealment as the suppressing, hiding, or failing to disclose of a fact or circumstance material to a Commission decision that the concealing person or party has a duty to disclose to the Commission. He viewed gross mismanagement as being distinguished from 'ordinary mismanagement,' i.e. 'gross mismanagement' is 'extraordinary mismanagement.' In his view, it consists of actions or omissions that create significant risks of harm for a utility and its customers, which are taken on a particular occasion with conscious or knowing disregard of the risks or are repeated on subsequent occasions in light of having been unsuccessful or harmful on prior occasions (i.e., a continuing pattern of mismanagement over a significant period of time).

Mr. Olson testified that there were omissions and actions by Petitioner, generally related to major adverse developments at Edwardsport, which represent gross mismanagement of the Company's regulatory responsibilities and concealment from the Commission, parties, and public of important facts relating to the IGCC Project. He testified further that some of the acts and omissions by Petitioner also represent fraud on the Commission, involving knowing misrepresentations of important facts relating to the IGCC Project.

Mr. Olson documented that the CEO of Duke, Jim Rogers, met with former Commission Chairman David Hardy in April of 2007, prior to the issuance of the CPCN for the IGCC Project, which was only shortly after the FEED Study and initial cost estimate had been filed. He

documented that, in addition to this meeting, at least two other meetings occurred in 2007 between then Chairman Hardy and Duke Officials – one at a follow-up dinner and another at a meeting in August of 2007. He testified that these meetings laid the foundation for later interactions and communications between Duke officials and former Chairman Hardy.

According to Mr. Olson, the failure by Duke to disclose these communications is concealment – both for not disclosing the communication itself and for not disclosing the content thereof. He opined that any information shared with former Chairman Hardy ought to have been disclosed to the full Commission so as to facilitate deliberation over the entire factual basis of the proposed IGCC Project. He further opined that these acts and omissions bring into question the legitimacy of the proceedings.

Mr. Olson documented that, after the CPCN was approved, Petitioner continued to meet and communicate with former Chairman Hardy throughout late 2007 and early 2008. On December 3, 2007, Mr. Turner indicated in an e-mail that he had just discussed the hiring of Mr. Haviland "in the context of the appropriate framework for the Commission's ongoing review of costs on our IGCC Project." Mr. Olson opined that, when combined with the fact that during this time DEI learned that GE wanted a $131 million increase and that GE had informed Duke of the grey water characteristics increase in toxicity, as well as the fact that Duke was considering replacing Bechtel, it is clear that Duke concealed much information from the Commission.

Mr. Olson presented another e-mail in which Mr. Turner forwarded what are likely internal Duke discussions of the CPCN Order to Mr. Haviland so that he may "be armed with this" before a meeting with the Commission that night and the next day. In another Duke e-mail dated March 18, 2008, Mr. Turner told Mr. Rogers that he needed to brief him on, among other things, a conversation with Mr. Hardy regarding Edwardsport. This e-mail occurred one day after Mssrs. Stanley and Turner had met with Mr. Hardy at a conference in Santa Fe, New Mexico, where they informed him that the new cost estimate would be $2.35 billion. Mr. Olson then testified that it was not until over six weeks had passed, on May 1, 2008, that Duke informed the Commission and parties of its increased cost estimate. The Company concealed this information from the Parties and the Commission and should have disclosed this information as soon as it did to Mr. Hardy.

Mr. Olson provided additional evidence that shortly before the Commission approved the modified CPCN, Mr. Turner and Mr. Hardy conducted more communications that were not appropriately placed on the record. The evidence showed that, on November 24, 2008, Mr. Turner commented in an email that he was "curious as to what the handsome erudite Commission chairman's answer would have been" to a question by an analyst as to the expected date of the Commission's ruling on the modified CPCN. On December 22, 2008, Mr. Turner informed Mr. Rogers that he "discussed timing of the Edport order at your event the other night." He said that he and Mr. Hardy agreed that an order over the holiday did not have "great optics," thus an order would likely be issued on January 5th. In addition to these communications being inappropriate, they constitute concealment of the conversations themselves, as well as concealment of the specifics of such conversations which should have been disclosed to the Commission and the parties.

Mr. Olson discussed how, in mid-2009, the Company sought Governor Daniels' help in obtaining a Bevill amendment exception for grey water contaminants from the EPA. Mr. Olson

concluded that, while the Commission and parties knew there was some concern over grey water at Edwardsport, the level of concern was concealed – though this letter makes the concern clear and evident. He concluded further that this is another example of Petitioner seeking to manage the regulatory scheme rather than appropriately focusing its resources on managing the costs of the IGCC Project and finding a solution for the grey water problem.

Mr. Olson documented that, on April 26, 2009, Mr. Haviland relayed to Mr. Womack, via e-mail, the request of Mr. Turner for talking points to be discussed with Mr. Hardy in an effort to achieve an integrated IGCC Project schedule. Mr. Olson claimed that the e-mail demonstrated the pervasive nature of the communications with Mr. Hardy, and the communications regarding the integrated IGCC Project schedule which should have been made a matter of record.

Mr. Olson offered his Exhibits KLO-11 through KLO-14, which detail a series of communications from late 2009 through the summer of 2010. Those exhibits detail a breakfast meeting between Mssrs. Hardy, Rogers, Turner, and Stanley on February 24, 2010, where a new cost estimate was discussed. That was followed by a meeting between Mssrs. Rogers and Turner and Governor Daniels later the same day where problems between Duke and its contractors were discussed. Mr. Olson noted the timing of those meetings was as follows: they occurred the day after a board meeting where the primary discussion was the problems at Edwardsport; they were held a week after a conference call with financial analysts covering the IGCC Project; and they were held after a series of communications with Bechtel and GE, demonstrating a strained and conflicted relationship between Duke and these contractors at Edwardsport – so severe in fact that the Governor either offered or was requested to mediate disputes among Duke, Bechtel, and GE. Mr. Olson concluded that those exhibits demonstrated that Duke officials informed Mr. Hardy of a new $2.88 billion estimate even though neither the Duke board nor its financial analysts had been advised of that fact at that time.

Mr. Olson went on to note that, in fact, it was seven weeks later, on April 16, 2010, when Duke finally informed the Commission formally of its $2.88 billion cost estimate. Both Mssrs. Hardy and Turner recommended nothing be in writing regarding the meeting with Mr. Hardy, and nothing was put in writing regarding that meeting. However, Mr. Rogers did report the meeting with Governor Daniels in writing in Rogers' February Board Letter. Mr. Olson thus concluded that the extent and content of these communications demonstrate that Duke was more interested in expending resources on regulators than on managing the IGCC Project.

According to Mr. Olson, the gravity of the issues with GE and Bechtel were not disclosed to the Commission, but were concealed, despite the fact that Duke sought the Governor's help in mediating a meeting among the three CEOs. He concluded that, after Duke informed Mr. Hardy of its new $2.88 billion cost estimate, it concealed the increase from the Commission for seven weeks. In Mr. Olson's view, the concealment, and perhaps fraud, is made even clearer by the fact that both Mssrs. Hardy and Turner requested the meeting not be reduced to writing.

I. Petitioner's Phase II Evidence.

a. James E. Rogers. Mr. Rogers testified that the decision to explore IGCC technology for Duke's next baseload plant and the decision to pursue the project were sound and made after significant due diligence. He noted that, with regard to "first mover risks," it is true

that Edwardsport represents a "first of a kind at this size" plant. He explained that it is not true, however, that the basic technologies used in an IGCC power plant are "first of a kind." He explained that Duke carefully analyzed available IGCC technology and vendors, and only then concluded that GE and Bechtel possessed a high level of experience and expertise with IGCC technology. It was then that Duke decided to engage the two companies to conduct a "Feasibility Study."

Mr. Rogers stated that due to the complexity and nature of the IGCC Project, the Company (along with the GE and Bechtel) performed a FEED Study to develop the basic engineering design and develop a cost estimate for the IGCC Project. He testified that, contrary to the OUCC and Intervenor witnesses' contentions, the FEED process was completed as intended by the time the FEED Study report was filed with the Commission in April 2007, and it was not until much later that Duke learned that the GE/Bechtel bulk commodity estimates were erroneous. He stated that the OUCC and Intervenor witnesses misunderstood or ignored the fact that detailed engineering and design did not begin until well after the conclusion of the FEED process, and well after these post-FEED changes were made by GE to the basic design and PDPs. Thus, the alleged failure to complete the basic design during the FEED process could not have adversely affected the detailed engineering and design phase, and could not have driven the subsequent cost increases. He stated that it was the thirteen months of intense basic design and engineering work generated from the FEED process that gave Duke a reasonable and legitimate basis for confidence in its IGCC Project cost estimate of $1.985 billion. However, the estimate was never intended to be a "not to exceed" cost estimate, nor did Duke hold it out as such. In March 2007, at the conclusion of the FEED process, Duke worked with GE and Bechtel to develop a more definitive cost estimate that was sufficient to enable Duke to make the decision on whether to go forward with the IGCC Project.

Mr. Rogers testified that Duke had employed a combination of fixed price, cost-reimbursable and incentive contracting pricing in its contracts for the IGCC Project, and it used a combination of an alliance and a multi-prime contract delivery approach. These pricing and contract delivery approaches were widely accepted and used throughout the industry. Although OUCC and Intervenor witnesses criticized Duke for "failing to achieve" an LSTK contract with GE/Bechtel for the IGCC Project, they ignored the fact that GE/Bechtel were unwilling to offer an LSTK contract in 2007. Their testimony also ignored the downsides of LSTK contracting and the benefits of alternative contract approaches.

Mr. Rogers also stated that Duke and its Project Team were highly competent and highly capable of managing large complex construction IGCC Projects, including the IGCC Project. He testified that by early 2008, it became apparent that the IGCC Project would exceed the cost estimate due to an increase in the projected cost of GE- and Bechtel-related work and equipment, a change in market conditions, and miscellaneous adjustments to the FEED Study estimate. The Commission approved of the cost and scheduling information provided by Duke, and approved the progress report then filed in the final order in Cause No. 43114 IGCC-3. Mr. Rogers stated that "[I]t is incongruous to suggest that where the Commission has found the project controls were adequate, there was gross mismanagement or concealment."

As for the grey water issues, Mr. Rogers stated that before completion of the FEED Study, Duke began exploring the feasibility of DWI of grey water, a by-product of the gasification process, as a less costly alternative to a ZLD disposal method. He explained that

Duke considered the information GE provided on this issue to be highly reliable because, as the sole owner of the proprietary gasification processes and technologies, GE had exclusive access to the data and estimating tools needed to provide the most accurate estimate of the grey water characteristics. Duke did not expect GE to modify the grey water characteristics so that it would cause the grey water to be designated as hazardous. However, once Duke learned that the EPA was unlikely to agree that the Bevill Amendment exempted the grey water stream from RCRA regulations, it investigated other technologies and approaches so that it did not exclude the possibility of another less costly option that met the requirements for treatment of hazardous waste streams. By the spring of 2009, Duke determined that the ZLD back-up plan was the best approach to treat the hazardous grey water, and reported these developments to the Commission.

As for disclosure, Mr. Rogers stated that Duke had provided an unprecedented level of information to the Commission and parties about virtually every aspect of the construction and management of this project. Given the ongoing, extensive, and unprecedented level of disclosures Duke had provided, Rogers believed that the OUCC's and Intervenors' allegations of concealment were without merit.

Mr. Rogers testified that, in recommending that Duke only be allowed to include in its rate base the initial cost estimate for the IGCC Project ($1.985 billion), OUCC and Intervenors failed to explain the basis for their recommendation. He noted that Duke had proposed a voluntary hard cap on construction costs of $2.72 billion, plus the actual AFUDC accrued on that amount. Duke had also proposed several rate mitigation measures.

Mr. Rogers further explained that, contrary to the Intervenors' claims, Duke had continuously updated and apprised its Board about the status of and developments concerning the IGCC Project.

b. Douglas Esamann. Mr. Esamann testified that, from the beginning of this IGCC Project, commencing with the FEED Study in 2005 through today, the decision-making related to the IGCC Project was reasonable, taking into account the information known or that should have been known at the times the decisions were made. The only possible exception, which did not rise to the level of gross mismanagement, are the issues related to the disposal of grey water for the IGCC Project. However, Mr. Esamann testified that Duke handled even those issues reasonably and prudently. In short, Mr. Esamann stated that, for all aspects of the IGCC Project, no relevant material information related to IGCC Project controls was concealed from the Commission.

He took issue with the allegations made by the OUCC and Intervenor witnesses, including Messrs. Banta, Schlissel, and Gorman, which he explained were not based on a comprehensive, rigorous review of the IGCC Project documents. Rather, Mr. Esamann testified that those witnesses rely on documents that had been taken out of context, to the exclusion of other relevant documents. Moreover, he explained that the OUCC and Intervenors had not demonstrated that any fraud, concealment, or gross mismanagement had occurred related to the IGCC Project. Even assuming the OUCC and Intervenors had met their burden, however, there was no relation to their recommended disallowance of all incurred costs above $1.985 billion (or above zero), which Mr. Esamann explained is clearly arbitrary and an unduly punitive result.

Regarding issues with GE and Bechtel, neither of which is a party to this proceeding, Mr. Esamann testified that as long as Duke had been prudent in its selection of contractors and its management of them, it would have been unreasonable to disallow cost recovery of incurred costs, as certain Intervenors request, because of actions taken by Duke's contractors. Moreover, he explained that there had been no evidence presented in this proceeding as to what specific decisions or actions taken by GE or Bechtel were "imprudent," much less fraudulent, concealment, or gross mismanagement. The mere fact that the cost estimate of the IGCC Project has increased does not mean the costs are not necessary or that the IGCC Project has not been managed and constructed prudently. Even if the Commission had attempted to determine that certain costs could have been controllable and avoidable due to actions of Duke's contractors, any such amount likely fell within the amount of cost responsibility that the Company had already agreed to accept based on its proposed voluntary hard cap, and thus, no further disallowance would have been appropriate. He noted that Duke continued to examine the potential for claims against GE and/or Bechtel and would pursue those if appropriate and when the time was right after project completion.

Mr. Esamann further explained that, in Phase I, Duke committed to a hard cap on capital construction costs of $2.72 billion, plus the actual AFUDC accrued on that $2.72 billion. Duke agreed to a hard cap that was approximately $104 million below its projected costs in May 2011, notwithstanding the fact that Duke had prudently managed this IGCC Project, and, as such, all costs associated with the IGCC Project were properly recoverable from customers. Mr. Esamann noted that, as of May 31, 2011, over $100 million of cost responsibility was already being borne by Duke. Mr. Esamann pointed out that Dr. Galloway's testimony indicated that some extra costs were potentially attributed to the Alliance's inefficiency, but concluded that the Company was diligent and actively managed GE and Bechtel, and could not have known about the increased quantities until October 2009, when more than 80% of the engineering had been completed. Dr. Galloway quantified the contractors' potentially avoidable inefficiencies at no greater than $99 million, and noted that no further disallowance would be appropriate because the Company's cost exceeded its voluntary hard cap on construction costs at $2.72 billion.

Mr. Esamann also responded to various allegations of Intervenors' explaining why Duke's actions were reasonable. He addressed various ratemaking requests of the OUCC and Intervenor witnesses as well. Finally, Mr. Esamann noted one Intervenor's allegations that Duke somehow benefitted by giving its work to its "affiliate construction personnel," and stated that the Intervenor's allegation was speculative and just plain wrong. Mr. Esamann stated that Duke Energy Business Services, LLC ("DEBS") is the actual employer of many Duke personnel. However it is important to note that DEBS is not a profit making company; instead DEBS provides the services to utility companies "at cost" so that said utility company does not pay more than if the DEB employee was actually employed directly by the utility company. The Commission also has approved DEBS affiliate agreements, and Duke's transactions among affiliates are audited every two years, and there have been no adverse findings to date.

c. Steven D. Fetter. Mr. Fetter concluded that the Commission should decide this case based on the facts and the high legal thresholds of gross mismanagement, fraud, and concealment contained in the Indiana CPCN statute. He explained that these terms have been defined and interpreted by courts, and the Commission should utilize and apply those definitions and interpretations. He explained that while the OUCC and Intervenor witnesses offered their own definitions, those definitions were not consistent with existing legal guidance. He noted

that, absent evidence that Duke engaged in seriously deficient conduct, and absent evidence supporting recovery of $1.985 billion or less, the disallowance of incurred costs proposed by the OUCC and Intervenors would have been arbitrary, unduly punitive, potentially constitutionally infirm, and would have negatively impacted Duke's credit quality.

Mr. Fetter explained that, under the CPCN statute, "gross mismanagement" must be qualitatively different and much worse conduct than "imprudence." Although neither the Commission nor Indiana courts have interpreted the CPCN statute's definition of "gross mismanagement," FERC has found that the Natural Gas Policy Act's standard of "gross mismanagement" should "surpass imprudence." Similarly, in the realm of corporate governance, the term has been defined by courts as recklessly uninformed, acting outside the bounds of reason, with reckless indifference, or a deliberate disregard of stockholders. Mr. Fetter also explained that the term is used in the federal whistleblower statute, and there it had been defined as "such serious errors . . . that a conclusion that the agency erred is not debatable among reasonable people."

Mr. Fetter also reviewed the OUCC and Intervenor witnesses' definition of "concealment," and he noted that, in all of their definitions, the element of intentionality was missing. He explained that this is contrary to Indiana case law, where courts had found that intentionality was always part of the definition. In his view, an inadvertent failure to disclose was not extraordinary enough to be considered concealment. Furthermore, given that there are thousands of facts at issue, unless the Commission made a specific request for information, a party cannot be expected to disclose every fact. As for allegations of concealment or gross mismanagement relating to communications with the former chairman of the Commission, those communications did not constitute either concealment or gross mismanagement within the meaning of the CPCN statute. Mr. Fetter defined "concealment," in the context of this case, as a utility's purposeful or active failure to disclose to regulators (or their agent) a fact that the utility reasonably knew or should have known, where the utility reasonably knew or should have known that fact would have been material to the regulators' decision-making, or where the utility had an explicit duty to disclose that fact to the regulators.

Mr. Fetter also explored OUCC and Intervenor witnesses' definitions of fraud, and found them lacking, as they did not include two essential elements: proximate causation of damages and reliance to one's detriment.

Even assuming a finding of fraud, concealment, or gross mismanagement, Mr. Fetter did not agree with OUCC and Intervenors' conclusion that the Commission should have arbitrarily limited Duke's recovery to the $1.985 billion cost estimate. While sympathetic to the view that the utility rather than its customers is in the best position to monitor IGCC Project contractors, he also suggested that the CPCN statute applies to the actions of the utility, not the actions of a utility's contractor. He further suggested that in a case where the utility had been prudent but the evidence suggested its contractors may have been guilty of fraud, concealment or gross mismanagement, a reasonable course of action may have been to require a sharing of costs resulting from the contractors' deficient actions. In this case, Mr. Fetter concluded that Duke's voluntary hard cap proposal – to absorb all construction costs above $2.72 billion – represented a good faith effort to structure a reasonable sharing arrangement. Finally, while he did not support recovery of imprudent costs based on credit quality concerns, Mr. Fetter noted that arbitrarily limiting Duke's recovery – and absent evidence of fraud, concealment or gross mismanagement

that supports recovery of only $1.985 billion – would result in "adverse credit quality implications" for Duke, which would result in higher financing costs and more restricted market access factors, to the detriment of customer rates and investors' interests.

d. Dr. Patricia D. Galloway. Dr. Galloway testified that fraud means intentional misrepresentation, concealment requires intentional withholding of information by someone who had a duty to disclose, and gross mismanagement requires actions far outside the bounds of reasonable conduct. She concluded that most OUCC and Intervenor witnesses' definitions of these terms were materially inconsistent with recognized standards.

Dr. Galloway explained that Duke did not grossly mismanage the FEED Study or its $1.985 billion cost estimate. Dr. Galloway described the contemporaneous knowledge in the industry regarding IGCC technology and how that compared to what the Company told the Commission. Duke reasonably relied on Bechtel and GE, but conducted its own review, including the use of an independent estimating expert. It acted in accordance with good utility management practices. Dr. Galloway explained that the FEED Study met industry standards and achieved its primary objectives, and that Duke withheld no material information from the Commission. She further testified that the additional engineering work that continued after the FEED Study was completed was not a source of concern because it was consistent with good utility practice. Duke managed the post-FEED activities in a controlled and organized manner, ensuring that detailed design could proceed on a firm foundation.

Dr. Galloway also concluded that Duke's reliance on the Bechtel cost estimate was consistent with industry standards and good utility practice, as was the process for estimating the IGCC Project, including Duke's independent review of the process. Although some of the estimating technology Bechtel used was proprietary, resulting in an estimating process that was not entirely transparent to Duke, Dr. Galloway explained that this was common in the industry, and Duke had the information needed to assess the reliability of the estimate.

With regard to Duke's choice of a non-LSTK contracting, Dr. Galloway testified that this approach was reasonable, consistent with good utility management, and did not constitute gross mismanagement. By the end of the FEED Study, Bechtel and GE were not willing to offer LSTK, and Duke reasonably evaluated its options and chose a mix of multiple contracting methodologies, including lump sum, fixed price, and cost reimbursable. These approaches had been used successfully before on large projects. Dr. Galloway explained that the witnesses who alleged concealment or gross mismanagement did not show that Duke's actions were inconsistent with industry standards and good utility practice. She also explained that those witnesses had similarly failed to show that Duke acted surreptitiously to ensure that there would be no LSTK offer. To the contrary, she testified that Duke did not block any offer of LSTK pricing nor did it conceal information from the Commission. Given market conditions at the time, LSTK pricing was simply not available on the IGCC Project by the end of the FEED process. Duke's decision to adopt other, flexible pricing was consistent with contemporaneous utility standards, and Duke had proper systems and staff in place to manage the IGCC Project. While Bechtel/GE used marketing materials discussing LSTK, there was no evidence they ever offered that approach on the IGCC Project. Dr. Galloway testified that there was no offer of a turnkey approach in 2007, so Duke did not conceal any such offer from the Commission.

Dr. Galloway explained that positions taken or claims made in construction disputes do not constitute evidence of gross mismanagement because they are not contemporaneous, but rather retrospective. The proper question is whether decisions were reasonable at the time made based upon the information available. Dr. Galloway explained the evolution of the division of responsibility between Duke, Bechtel, and GE on the IGCC Project, and concluded that Duke's decisions regarding division of responsibility over the 2007-2010 period were reasonable and prudent, not gross mismanagement. She testified that changes were made at each phase of the project to reduce cost. For example, she pointed to Duke's decision to assume more management when Bechtel's method was proving inefficient.

Duke instituted industry-appropriate project controls as the IGCC Project evolved. The Commission had already approved the IGCC Project's controls, and testimony about purported deficiencies was generally unsupported. Dr. Galloway reviewed the cost, change, schedule, progress, and reporting controls on the IGCC Project, and concluded that each type of control was appropriate and consistent with industry practice.

As for the grey water issues, Dr. Galloway concluded that, with one exception, Duke's management of grey water was prudent and consistent with good utility practice. The exception occurred from December 2007 through June 2008 when Duke did not respond effectively to GE's notice that grey water characterization had changed, so that the grey water became classified as hazardous. While Duke's actions during this time were imprudent, Dr. Galloway testified they were not so far outside the mainstream to be gross mismanagement.

Dr. Galloway testified that no costs incurred for Edwardsport should be disallowed based on such conduct. She concluded that the witnesses who testified in favor of disallowances did not provide evidence of fraud, concealment, or gross mismanagement. She noted that Indiana law allows utilities to recover actual costs incurred in reliance on a CPCN absent fraud, concealment, or gross mismanagement, and that any costs disallowed must be specifically linked to fraud, concealment, or gross mismanagement. She explained that failure to foresee all costs is not fraud, concealment, or gross mismanagement.

e. Janice D. Hager. Ms. Hager testified that Duke had acted reasonably in resource planning in each step of the IGCC Project, and had faithfully provided to the Commission all material information relative to its IRP processes involving the IGCC Project. Ms. Hager explained that Mr. Schlissel was not clear about specific instances of mismanagement. His primary contentions were that Duke grossly mismanaged its resource planning and failed to fully disclose to the Commission the risks and significance of higher construction costs associated with the IGCC Project.

As Ms. Hager explained, the record of past IGCC proceedings demonstrates that Duke diligently kept the Commission and other stakeholders apprised on a timely basis of developments on the IGCC Project, along with resource planning for the IGCC Project related to those developments. She emphasized that after full consideration of the contested evidence in IGCC-1, the Commission determined the revised cost estimate of $2.35 billion was reasonable and declined to impose a cap. Likewise, she explained that Mr. Schlissel's concerns regarding the modeling using higher capital costs were addressed in the CPCN proceeding, where an Industrial Group witness, Mr. Phillips, recommended that the Commission establish a rate

recovery cap on the IGCC Project cost of $1.985 billion. The Commission considered these concerns in its CPCN order, but found the cost estimate reasonable and refused to impose a cap.

With regard to allegations that Duke concealed its analyses, there was no reason for Duke to provide the 2007 modeling runs to the Commission. She explained that the modeling was done for the purpose of designing the IGCC Project at the request of those working on various value engineering ideas, which were designed to optimize the IGCC Project with the goal of reducing the cost.

Ms. Hager testified that Mr. Schlissel's allegations that Duke failed to give appropriate consideration to competing resources, such as energy efficiency and solar energy, in light of the increasing IGCC Project construction costs are incorrect. She explained that Duke gave appropriate consideration to alternative resources when it performed updated economics at each step of the process. These analyses consistently showed that completing the project was in the best interest of customers.

Ms. Hager also took issue with Mr. Schlissel's allegations regarding the inclusion of different sensitivities in the Carolinas and in Indiana. She stated that this did not demonstrate that the IRP analyses in Indiana were grossly mismanaged. She explained that the Cliffside Project and the IGCC Project were conceived before Duke merged with Cinergy and, thus, decisions on sensitivities for IRP analyses were made independently. Following the merger, decisions on sensitivities were made on a case-by-case basis for each project. She stated that Mr. Schlissel inaccurately implied that there was one "right" set of assumptions and sensitivities that any prudent utility would have used in its analysis of generation options. Ms. Hager explained that there was no standard set of assumptions and sensitivities used in IRP analyses.

Ms. Hager noted that the Intervenors had previously mentioned testimony by Duke witnesses in the Cliffside case regarding the state of development and reliability of IGCC technology. This issue, like others raised by Mr. Schlissel, had been heard and taken into account in prior IGCC proceedings. Duke's decision to move forward with the IGCC Project was found to be reasonable in those proceedings, notwithstanding the reasons that Duke Energy Carolinas decided not to implement IGCC technology for its baseload capacity. Ms. Hager stated that these allegations were simply "regurgitated" and cannot be the basis for any finding of gross mismanagement in Duke's resource planning process.

f. John J. Roebel. Mr. Roebel testified that Duke, in general, and the IGCC Project Team in particular, were "highly competent and highly capable of managing large complex construction IGCC Projects, including the IGCC Project." He explained that the primary IGCC Project management individuals were experienced and possessed the necessary knowledge, and that the IGCC Project team was supplemented with outside experts as needed.

He also explained that Duke's decision to use flexible "alliance contracting" approach and to take responsibility for project management under a multi-prime approach was not unreasonable. He testified that there was no single "right" contract approach or delivery methodology for a project. Rather, he noted that there are several approaches (and combinations of approaches), each with its own pros and cons, and several of which may be reasonable depending upon the particular project and the surrounding facts and circumstances. As Mr.

Roebel explained, Duke had found success with alliance and multi-prime contract delivery/project management approaches on other projects.

Mr. Roebel agreed, in part, with Mr. Schlissel's assertion that this is a first of a kind project. As a result, there was no existing, completed reference plant upon which to base the design and construction. Mr. Roebel noted, however, that the essential technology and processes employed at the IGCC Project are not unique. He elaborated that IGCC technology has been used since the early twentieth century, and that the IGCC Project uses two gasification trains, each of which is comparable in size to the gasification trains in use at Polk and Wabash River. Moreover, he stated that other components are also similar to those used on other projects.

As for the cost estimates, Mr. Roebel testified that Duke's assessment of "first of a kind" cost increase risks was not unreasonable because the FEED process was complete, and Duke had retained expert contractors. In addition, he stated that general industry information, information about contemporaneous projects, and GE/Bechtel pronouncements indicated that the cost estimate was reasonable. If anything, he explained that Duke believed that costs would decrease, rather than increase. He also noted that there were first mover benefits as well, including $133 million in tax credits, which were contingent upon completion of the IGCC Project by April 2014.

Mr. Roebel disagreed with OUCC and Intervenors witnesses' criticism of his earlier testimony that Duke had unprecedented access to GE and Bechtel work product as being "misleading." He stated that Duke had unprecedented access to the Alliance companies during a lengthy FEED Study process. Mr. Roebel stated that the March 2007 $1.985 billion estimate was the best cost estimate that Duke had, and the level of detail contained in that estimate far exceeded what Duke had provided to the Commission in other CPCN cases.

g. Dennis M. Zupan. Mr. Zupan, formerly Duke's Senior Project Director for the Edwardsport IGCC Project, addressed OUCC and Intervenor testimony and contentions regarding the FEED Study, the contracting approach for the IGCC Project, and the development of the initial cost estimate.

Mr. Zupan explained that a FEED Study refers to planning and design early in a project's lifecycle, at a time when the ability to influence changes in design is relatively high and the cost to make those changes is relatively low. The FEED Study deliverables to be developed were: (1) a detailed cost basis for the IGCC Project; (2) an execution schedule; (3) a revised IGCC Project Scope Book; (4) the LSTK Price; and (5) an analysis of a flexible contracting approach, as an alternative to the LSTK approach, which established acceptable targets and incentives to reflect different risk-sharing options.

Mr. Zupan noted that the FEED Study was initiated within Duke in the summer of 2005, and with the Alliance in February 2006. Duke entered into a Technical Services Agreement ("TSA"), which governed the FEED Study, with Bechtel and GE at this time. The FEED Study proceeded in three phases. During Phase III, Duke and the Alliance engaged in a Value Engineering Workshop to generate ideas which could significantly reduce the capital cost of the IGCC Project. The FEED Study was completed in March 2007 and filed with the Commission on April 2, 2007. At the completion of the FEED Study, Duke received from the Alliance the IGCC Project Scope Book, approximately 4,000 pages mainly dedicated to a technical

description of the IGCC Project Reference Plant, including the basic design or PDP for the IGCC Project. Duke also received estimated costs from GE and Bechtel for their IGCC Project scopes ("Inside the Battery Limits" or "ISBL"). The FEED Study was submitted to the Commission in April 2007, and all of the Parties to this Cause had access to the actual full FEED Study if they executed a confidentiality agreement with GE and Bechtel.

Mr. Zupan further noted that following submittal of the FEED Study Report, the value engineering proposals that had been adopted were fully incorporated into engineering drawings. In addition, normal quality and consistency checks were performed and various corrections were made. Mr. Zupan testified that Duke entered into a new TSA with GE and Bechtel for post-FEED/preparation for project work. Except for a few, identified items, the FEED deliverables associated with the 2006 TSA had all been completed when the FEED Study Report was filed.

Mr. Zupan testified that in 2007, GE undertook a rigorous process review cycle, although Duke emphasized to GE that it did not want significant process changes at this point. Some of the GE-driven changes that took place by the end of this review cycle produced more substantive changes to the PDP and resulted in anticipated cost changes that Bechtel estimated would increase IGCC Project costs somewhat. GE completed its normal process review cycle in December 2007.

Mr. Zupan noted that detailed design and engineering began in late February 2008, after execution of the definitive contract with GE and roughly contemporaneous with the date of the Term Sheet with Bechtel, which established the EPCM scope of work, including detailed engineering. Detailed design was not (nor was it intended to be) complete at the end of FEED; the FEED design documents were issued for design or estimate, which is the basis upon which estimating is generally done. Mr. Zupan noted that the OUCC and Intervenors argued that not completing the PDP prior to commencing the detailed design and engineering was a major mistake that led to cost overruns. However, Mr. Zupan noted that the PDP was complete at the time the estimate was filed in April 2007 – well before detailed design and engineering began in early 2008.

Mr. Zupan disagreed with the OUCC witnesses' allegations of misleading and vague statements related to the commercial reasonableness of the IGCC Project and its estimated cost, and the use of terms like "detailed" and "final" to describe the schedule and cost estimate. Mr. Zupan testified that Duke believed its cost estimate was reasonable and the language used was accurate in context. Based on what Project Team knew at the conclusion of the FEED Study, it was sufficient for the purpose of determining to go forward with the IGCC Project, and it was still sufficient in January 2008, to move into detailed design and engineering.

Mr. Zupan disagreed with OUCC and Intervenor witnesses who contended that Duke grossly mismanaged the contracting approach for the IGCC Project by unilaterally "rejecting" the LSTK approach in favor of a cost-reimbursable approach. Mr. Zupan testified that it was the Alliance that was unwilling to provide an LSTK price in the FEED Study. As for GE and Bechtel, in late 2006 and 2007, the market changed as a result of a boom in power plant and refinery construction projects, and Bechtel and GE had no need to offer firm pricing proposals to obtain higher fees. Moreover, firm pricing became riskier for the contractor due to inflation, necessitating large contingency fees. For its part, Duke was concerned about an LSTK approach because contractors working under an LSTK contract may have little incentive to focus on

Duke's long-term goals since there would be no guarantee of future business. Duke was also concerned because LSTK meant a loss of control over design, engineering, and construction because IGCC Project owners are contractually obligated not to interfere with contractors. In fact, as Mr. Zupan testified in the CPCN proceeding, Duke had concerns from the beginning about whether LSTK was the best approach, which is why the FEED Study TSA also included an alternative flexible contracting approach.

Mr. Zupan noted that by contrast, an "alliance contracting approach" aligns the interests of the parties toward common goals. Mr. Zupan testified that, under this method, the project owner establishes an incentive sharing fund, which is split between the owner and all contractors according to their achievement of the owner's performance indicators. This form of contract works where both the owner and the contractors can make a contribution to reducing risk and achieving the performance indicators. Where risk is controlled by both the owner and the contractor, aligning management of such risks makes sense. Duke believed an alliance approach was preferable based on its previous successful experience.

Mr. Zupan testified that Duke executive management was kept informed of developments regarding the contracting approach, and Duke disclosed major developments concerning the contracting approach to the Commission, including in the FEED Study Report. The Commission addressed the contracting approach in its November 2007 order in the IGCC CPCN case. In short, the decision to move away from LSTK was a mutual decision, and GE and Bechtel were unwilling to negotiate or offer an LSTK contract.

Mr. Zupan noted that Duke received the first indicative estimate from GE and Bechtel in August 2005. This was calculated without owner's costs, escalation, or AFUDC. Duke received some updates as the IGCC Project progressed, but most were unofficial.

Mr. Zupan testified that Duke analyzed the reasonableness of these estimates and engaged an independent estimator, David Keith, who had significant experience with major projects and with Bechtel's estimating process. In March 2007, Mr. Keith reported that he believed the order of magnitude of hidden contingencies and potential savings in the Alliance estimate was substantial and had been embedded in the Alliance's December 2006 estimate.

Mr. Zupan noted that at a meeting that began on March 19, 2007, near the end of the FEED Study, the Alliance provided a more definitive cost estimate. for their scopes of work. This estimate was not significantly different from the initial December 2006 Alliance estimate. Duke believed the estimate contained significant unwarranted costs.

Mr. Zupan testified that during the meeting, the estimated cost for GE's and Bechtel's work was reduced. With GE's and Bechtel's agreement, Duke made some adjustments to estimated costs for specific items where Duke had recent, applicable experience, but Duke did not change those items where GE and Bechtel had particular expertise (*e.g.*, the gasification island, the power block, or the quantities of commodities). Consistent with the FEED Study and with the input Duke received from its independent estimator, Duke concluded the estimate to be accurate.

Mr. Zupan noted that an estimate of $1.985 billion was developed for the April 2, 2007 FEED Study Report filing. This included a number of additional IGCC Project owner costs and

included escalation and AFUDC. Duke informed the Commission that this estimate was a "more definitive cost estimate," as compared to earlier estimates.

Mr. Zupan disagreed with criticism that the escalation rate was too low because the selection of an escalation rate is a "no-win situation;" no one can accurately predict the future. Moreover, there were never any changes made to "lowball" the estimate, and Mr. Zupan testified that Duke officials never pressured him to artificially reduce the IGCC Project estimate. It was not unusual for Duke to make changes to the input provided by contractors and vendors. At the time the $1.985 billion estimate was presented to the Commission, it was Duke's best estimate of the costs to construct the IGCC. The Commission specifically found the $1.985 billion estimate to be reasonable based on the work that went into the FEED Study Report.

h. W. Michael Womack. Mr. Womack's testimony responded to the direct testimony in Phase II by Messrs. James, Bayley, Schlissel, and Banta. Mr. Womack testified that those witnesses drew numerous conclusions based on erroneous information or erroneous interpretations of correct information.

Mr. Womack first explained that Duke used the "construction management" delivery method for the construction phase of the IGCC Project, which Duke and other companies have previously used successfully. Under this delivery method, design and engineering were provided by third-party contractors. He also testified that Messrs. Bayley and James were incorrect when they stated that the method they believed Duke should have employed would have provided Duke the opportunity to spread risk. That method would not have spread risk because a contractor employing that approach would have required a significant and potentially exorbitant fee. Nonetheless, he noted that Duke did spread a large portion of the risk using a mix of contract approaches. Mr. Womack also stated that the fact that Duke and Bechtel both provided personnel to form the construction management team did not invalidate the IGCC Project management delivery method. Duke needed to play a major role in the management of the IGCC Project to protect its interests. At the same time, it did not want to, and did not, take on responsibilities that it was not equipped to handle. At all times, the project management team had extensive experience in all forms of contract approaches, including the construction management approach. Mr. Womack testified that cost increases did not equate to an incompetent project management team.

As for the organizational structure, the IGCC Project used a blended team of personnel from Duke and Bechtel. As a result, Duke received the benefit of Bechtel's management processes and tools but preserved Duke's knowledge of its own management systems. There were no discrete areas of the IGCC Project work that were strictly Bechtel's responsibility or Duke's responsibility. The shared management approach is not unusual on major projects. Mr. Womack explained that there were disagreements among team members, which is not unusual. However, he noted that Messrs. James and Bayley were incorrect to seize on typical commercial disagreements to claim that the entire organizational structure was dysfunctional. Mr. Womack testified that despite these commercial disagreements, Bechtel and Duke IGCC Project site personnel worked well and effectively using a shared management approach. Mr. Womack explained the difference in horizontal versus vertical contracting strategy, and testified that Duke initially awarded the civil work using a horizontal strategy. However, in 2008, Duke realized that it could gain efficiencies by shifting to a vertical approach because, for instance, benefits could be achieved from the intertwined nature of steel and piping work. This shift to a vertical

strategy allowed specialty work in peripheral areas to be performed by smaller local contractors, thereby allowing the primary specialty contractors to focus solely on critical areas. This shift also avoided the risk of having two or three contractors working in the same area at the same time for sections of the IGCC Project that are highly integrated. Some of the work appropriately remained under the horizontal approach. Bechtel project site personnel participated in the decision to shift toward the vertical contracting approach and agreed with the decision. Messrs. James and Bayley were therefore incorrect to claim that Duke's shift from a horizontal strategy to a vertical strategy negatively impacted the IGCC Project. Rather, the shift benefited the IGCC Project.

As for allegations of concealment, Mr. Womack strongly disputed the allegations that Duke concealed information about the status of the IGCC Project. Duke made a number of semi-annual filings regarding the IGCC Project and any associated issues that Duke believed should be brought to the Commission's attention. He described these filings at length. He further noted that, although Duke did not provide information in its semi-annual update filings on disputes of a commercial nature, it did not raise those issues to avoid detrimentally affecting the IGCC Project. Bringing commercial disputes into the public forum could have caused the parties' positions to harden, which would have made it more difficult to resolve the various issues. In short, he stated that, given the vast amount of information regularly required by the Commission and otherwise provided by Duke, including information involving IGCC Project problems and challenges, as well as Duke's openness in meeting with interested third parties, Duke did not engage in any concealment with regard to the IGCC Project or its projected cost estimates, IGCC Project schedules, unexpected expenses, or budgets. Rather, Duke provided more information to the Commission and the parties than had ever been provided in previous Duke projects reviewed by the Commission.

As for allegations concerning the IGCC Project schedule, Mr. Womack disagreed with the contention that Duke commenced engineering, procurement, and construction on the IGCC Project before developing a fully-integrated master schedule. Duke had a logic-based CPM schedule at the beginning in the IGCC Project and it has continued to build on that schedule.

Mr. Womack also addressed allegations about the overtime budget and environmental permitting, in addition to responding to allegations that Duke unilaterally decreased the cost estimate by $138 million and left the IGCC Project without a contingency as "inaccurate."

Finally, with respect to GE's role in relation to Bechtel, Mr. Womack explained that, contrary to Messrs. Bayley's and James's testimony, it was not true that Duke appointed GE to oversee Bechtel's work product. Mr. Womack stated that this allegation was simply the "parroting" of an untrue claim made by Bechtel's senior management.

i. Richard W. Haviland. Mr. Haviland's testimony addressed the direct testimonies of Intervenor and OUCC witnesses Schlissel, Banta, Olson, James, and Bayley. Mr. Haviland explained that those witnesses misinterpreted and misconstrued several e-mails that Mr. Haviland wrote or received, and his testimony placed them in their proper context and corrected the mistaken conclusions that the Intervenor and OUCC witnesses reached.

In his March 10, 2011 testimony, Mr. Haviland previously testified that the primary drivers that led to the cost estimate increase from $2.35 billion to $2.88 billion were: (1)

increases in bulk commodity quantities; (2) scope changes associated with the grey water disposal system; and (3) worse than expected labor productivity. He explained that Duke took a series of actions to address the determination that the IGCC Project would overrun the $2.35 billion estimate. This included performing a preliminary cost projection using all of the then-available information and concluding that the IGCC Project would likely be at least $100+ million over the approved budget without any remaining contingency. This information was shared with Duke senior executives, who informed the Board of Directors in October 2009. Duke then filed a notice of the cost status with the Commission in November 2009, shortly after learning of the likely increase in the cost estimate. To mitigate the impact of the quantity increases, in the early Fall of 2009, Duke began twice-weekly conference calls with Bechtel's engineers to specifically address areas that were negatively affecting the IGCC Project cost. Mr. Haviland testified that in the second half of 2009, Duke aggressively managed these critical factors, all of which had potential for cost increases to the IGCC Project. By the end of December 2009, the quantity increases had slowed the rate of increase as engineering progress exceeded 90% and, thus, Duke believed it had defined the quantities and scope sufficiently to begin a thorough revised estimate for the IGCC Project to submit to the Commission and the Duke Board of Directors for approval. In the re-estimate, Mr. Haviland explained that Duke made some allowances for even further quantity growth. The $2.88 billion re-estimate was based on end-of-December 2009 cost data and experience, which Mr. Haviland explained was necessary to reasonably prepare a new cost estimate.

Mr. Haviland testified regarding the documents that Mr. Schlissel used to support his contention that Duke should have increased its $2.35 billion cost estimate in 2008 and early 2009. Specifically, he explained that Mr. Schlissel's reliance on those documents was misplaced because Mr. Schlissel made incorrect assumptions about how those documents were created and used. In fact, Mr. Haviland testified that Duke could not have done anything differently to identify the scope and extent of the bulk commodity increases sooner because it was not until the June 2009 progress meeting that the IGCC Project team was made aware of the beginnings of engineering and quantity increases. At the August 2009 progress meeting, which included Bechtel's senior management, Bechtel first communicated more quantity increases that had not previously been identified. Mr. Haviland explained that even as late as September and early October 2009, Duke was unaware of the full extent of the cost or quantity increases or whether Duke would have been able to mitigate some of those increases.

Mr. Haviland also disagreed with Mr. Banta's various allegations about concealment. Mr. Haviland explained that, as with the other witnesses, Mr. Banta had taken documents out of context and distorted them in an effort to support his mistaken hypothesis.

j. Jack L. Stultz. Mr. Stultz testified that the reliability of the IGCC Project was openly debated in the CPCN Case, and the Commission's order in the initial CPCN proceeding directly addressed Edwardsport's reliability. He explained that in the November 20, 2007 Order, the Commission found that the IGCC Project was technically feasible, commercially reasonable, and that it expected the IGCC Project to be a reliable baseload generating station. The Commission's CPCN Order declined to place a capacity factor limit or goal on the IGCC Project.

Mr. Stultz also testified that Mr. Schlissel's testimony failed to recognize and appreciate the difference between availability (an input) and capacity factor (an output). He explained that in the latest IRP modeling runs, when Duke used 85% availability, the capacity factor that was

derived from the base runs was 84%. Duke also did a sensitivity, where it used 75% availability for the first 15 months and 85% availability for the remainder of the plant's life, with a capacity factor of 72% for the 15 months and of 84% for the remainder of the plant's life.

He explained that the expected availability of a generating unit is calculated by taking into account the expected planned outages required for regular maintenance, as well as an estimate of the unplanned and forced outages. He testified that, contrary to Mr. Schlissel's assertion, Duke's assumed availability was reasonable in 2006 and remains reasonable today. This was because the component technologies have a long history of reliable performance, and because Duke has had access to the "lessons learned" from prior DOE demonstration plants. Mr. Stultz further explained that the availability was reasonable because of rigorous training on a simulator that validates process control parameters, an extended 10-month start-up process that would provide opportunities for testing and validating the operations of the IGCC Project, and because the IGCC plant was designed to start-up using alternative fuels for operational and economic flexibility.

Mr. Stultz further testified that additional support for the availability assumptions is available via the Kemper County IGCC Unit's expected availability. Kemper is another IGCC plant being scaled up for the first time, and it has similar estimates for the total plant projected availability. He also cited and discussed several additional documents in the record that support Duke's availability assumptions.

Mr. Stultz concluded his testimony by noting that, while there will be unexpected issues, Duke has positioned itself to achieve high reliability through the experience of other plants, training, extensive reviews and analysis, and inputting flexibility, so that the assumptions as to availability and expected capacity factor are reasonable.

k. Robert J. Burch. Mr. Burch testified that Duke's decisions on grey water treatment and disposal were prudent, and did not amount to gross mismanagement or concealment. Duke's October 2006 decision to explore the feasibility of DWI was informed by its consultants' feasibility assessment of site geology and other factors, the comparative high capital and operating and maintenance costs of the ZLD alternative, and prior work on deep wells at Gibson Station. Duke relied on grey water characteristics provided by GE in 2006 and, as Mr. Burch also explained in his Phase I testimony, GE knew that the data it provided would be used to study the feasibility of DWI and would be included in environmental permit applications. Early in the IGCC Project, as Duke was developing its permitting strategy and considering other options to dispose of grey water that would be less expensive than ZLD, GE told Duke that it did not believe the grey water to be hazardous. The grey water characterization GE provided in April 2006 was fully consistent with Duke's expectations at that time, and until October 2007, GE did not suggest that they had made major modifications that would render the grey water hazardous. As Mr. Burch explained, the GE data was the best and only data available to Duke when it made its October 2006 decision, and he disagreed that Duke should have delayed pursuing a grey water disposal method until receiving final grey water characteristics. That strategy would have required Duke to forego investigating a disposal option that provided customers with substantial cost savings in capital costs and operations and maintenance costs.

Mr. Burch took issue with Ms. Armstrong's testimony, in which Ms. Armstrong claimed that Duke grossly mismanaged grey water disposal by doing nothing for seven months after GE

provided new grey water estimates in October 2007. To the contrary, Duke took immediate action when it received this new information. Mr. Burch also disagreed with Ms. Armstrong's contention that it was not reasonable for Duke to pursue DWI because the Electric Power Research Institute ("EPRI") guidelines advise that there is no standard wastewater stream for IGCC facilities. As Mr. Burch explained in his August 3, 2011 testimony, EPRI's guidelines are highly generalized and do not consider specific IGCC Project needs and other information that guides the decision process. Contrary to Ms. Armstrong's testimony, Mr. Burch found no EPRI guidelines explicitly or implicitly advising a IGCC Project owner not to rely on information provided by the owner of its proprietary gasification processes.

Mr. Burch further testified that there is no factual support for Mr. James' allegations that Duke lacked sufficient information to investigate the feasibility of DWI or ignored evidence of increased hazardous characteristics of grey water. Mr. Burch explained in his Phase I testimony how Duke made its decision to proceed with DWI based on the available information and how Duke immediately responded to the changed grey water characteristics GE provided in October 2007. Mr. Burch showed that Mr. James misinterpreted the communications he relied on to contend that Duke knew that the grey water was hazardous.

Mr. Burch disagreed with Mr. James' claim that Duke should have commenced construction of the test well and then started on basic engineering, rather than completing the tasks simultaneously. While Mr. James stated that Duke should have waited for the final grey water characteristics, Mr. Burch explained that those final characteristics could not have been determined until the plant began gasification operations. Mr. Burch testified that the decisions relating to grey water caused no delays, and Mr. James admitted that he can point to no facts to support his allegation that Duke's gross mismanagement led to "extraordinary unplanned delay." Similarly, Mr. James alleged that the gross mismanagement of the grey water issue caused a cost overrun, but he did not quantify the overrun. Rather, he provided "broad and generalized cost categories."

Mr. Burch also testified that Ms. Armstrong's speculation that removing ZLD caused Duke to expose the IGCC Project to greater delays is unsupportable. In short, Duke's inability to implement the DWI plan did not mean that it grossly mismanaged grey water disposal. Rather, cost increases occurred because the next feasible option, ZLD, was more expensive.

As for allegations of concealment, Mr. Burch disagreed with statements that Duke should have disclosed changed water characteristics before the CPCN order issued on November 20, 2007. Duke relied on the advice of its deep well contractor, Subsurface, which informed the Company that this new information had no impact on DWI plans. He further testified that Duke did not conceal any information from the Commission because it did not become clear that DWI was not feasible until January 2009. Upon learning that the EPA did not agree that the grey water was exempted under the Bevill Amendment, Duke notified the Commission through pre-filed testimony in the next Rider proceeding.

Mr. Hoenig also alleged concealment by claiming that Duke did not inform the Commission about "significant issues" involved with the Edwardsport hydrogeology that made feasibility of DWI "highly questionable," but Mr. Burch explained that Mr. Hoenig presented highly generalized or mistaken views about the adequacy of the Feasibility Assessment. Mr.

Burch further noted that Mr. Hoenig also relied on inappropriate documents and disregarded injection tests indicating that Edwardsport hydrogeology would have been suitable for DWI.

Finally, Mr. Burch argued that Mr. Hoenig mistakenly alleged that Duke intentionally misled the Commission by suggesting that the Gibson Station deep wells were operating on wastewater in the FEED Study report, even though they were not operational at the time. Mr. Burch testified that this was not the message conveyed in the report, and Duke did not intend to convey such a message.

l. Kenneth J. Cooper. Mr. Cooper's testimony addressed Mr. Hoenig's allegations that Duke concealed issues related to the Edwardsport hydrogeology from the Commission. In addition, Mr. Cooper responded to allegations in the expert report from Mr. Bayley and Mr. James, as well as Ms. Armstrong's testimony, that Duke grossly mismanaged grey water disposal components.

Mr. Cooper testified that it was reasonable for Duke to evaluate the feasibility of DWI to manage grey water at the Edwardsport facility. The investigation documented in the 2006 Feasibility Assessment justified plans to pursue the DWI option, and logically led to the next step of drilling a test well to refine reasonable projections and assumptions.

Mr. Cooper did not agree with Mr. Hoenig's assertion that Duke concealed hydrogeologic information from the Commission and did not agree that the information available at the time suggested that the DWI plan was not feasible. Specifically, the initial characterization of the Class I Waste Water Injection Well provided to the Commission in the executive summary dated April 2007 IGCC FEED Study Report is a realistic representation of a deep well alternative available at the early stage of the IGCC Project. The data and analysis available to Duke supported its decision to drill a test well for further evaluation. Furthermore, the injection testing data from the test well refuted Mr. Hoenig's contention that DWI was not feasible.

Similarly, Mr. Cooper did not agree that Duke's decision to pursue DWI was based on insufficient research. The 2006 Feasibility Assessment was typical of a well feasibility report for other confidential injection well projects. Contrary to Mr. Hoenig's testimony, the plan was not unduly "risky" because Duke reasonably requested and received advice from its consultants regarding the evaluation of risks and the potential benefits of the DWI option. Moreover, Mr. Cooper testified that DWI was correctly identified as an option that could have advantages over ZLD.

Finally, Mr. Cooper did not agree with Ms. Armstrong's claim that it was unreasonable for Duke to continue drilling the test well while seeking concurrence from the EPA that the Bevill Amendment applied because the potential benefits of using DWI to manage grey water justified continued collection of the test well data.

m. Richard W. Painter. Mr. Painter testified regarding the allegations by OUCC and Intervenor witnesses regarding alleged communications between Duke and the Commission. He also testified about whether those same events give rise to fraud, concealment, and to a very much lesser degree, gross mismanagement, under the legal standards that he understood to apply to those terms.

J. Industrial Group's Phase II Rebuttal.

a. Michael Banta. Mr. Banta testified that there was substantial evidence that Duke actively pursued an alternative commercial arrangement for the IGCC Project during the period 2005 through the CPCN hearings, and beyond, to the exclusion of pursuing a LSTK approach, and that Duke did not adequately or timely disclose significant, relevant information regarding its actions and considerations in this regard to the Commission or the other parties. Mr. Banta testified that there is substantial evidence for the Commission to find that relevant information was concealed about the availability of a LSTK price. Mr. Banta also testified that there is substantial evidence that Duke empowered a group of its employees and affiliate employees, often the same employees whose careers involved designing, engineering, and constructing projects for Duke, to determine the commercial arrangement and execution strategy for Edwardsport with virtually no documented supervision, during a time in the utility industry when career employees would have reasonably been concerned about job preservation, outsourcing and potential headcount reductions.

Mr. Banta testified that there is substantial evidence to find that Duke's explanations to the Commission regarding the elimination of the LSTK price requirement from the FEED Study and the circumstances surrounding its disappearance simply were not and are not credible.

Mr. Banta testified that, "in the context of something as important as a CPCN proceeding involving a $2 billion power plant and with the long tail that that entails and all of the work that's required up front that used to be done when the books were closed and everybody sought the end result, I think there is a pretty substantial obligation [on the part of Duke] to make sure you [the Commission] have all of the information..."

Mr. Banta concluded that contrary to Duke's assertions, there is substantial evidence that relevant and significant information regarding the actual availability and comparative costs and risks surrounding Duke's choice to pursue its preferred commercial approach and execution strategy, in lieu of a LSTK approach at Edwardsport, was neither timely nor adequately disclosed to the Commission or the other parties. Mr. Banta found substantial evidence that Duke did not adequately or timely disclose the risks and potential costs Duke was proposing to shift to its ratepayers under its alternative approach to a LSTK approach. Mr. Banta concluded that someone at Duke "made the decision... to take most of the risks associated with building the Edwardsport plant out of the estimated cost to be submitted to the Commission, and transferred those costs to consumers." Mr. Banta stated, "In my opinion, the value of that risk shift was never fully or completely analyzed... but more importantly that crucial decision, and the circumstances around it, and any studies or analyses of the cost benefits associated with it were not timely, adequately or candidly presented to the Commission or the other parties."

Mr. Banta concluded that excessive costs, if any, by Duke's subcontractors should not be treated as prudent costs for Duke. Mr. Banta testified that Duke offered no documents or exhibits to establish that the ongoing disputes [with Bechtel and GE] was timely and adequately revealed to the Commission. Mr. Banta also concluded that there is substantial evidence of record that Duke failed to adequately or timely disclose to the Commission or the parties, relevant information about the problems it was experiencing with its contractors, especially Bechtel, both before the CPCN Order and the Order in IGCC-1.

b. William N. D'Onofrio. Mr. D'Onofrio responded to the testimony of Duke witness Painter. Mr. D'Onofrio disagreed entirely with the positions taken by Duke. He explained that the undisclosed communications with the former Chairman were not excused by various theories Duke presented, such as being proper "educational, informational, administrative or procedural communications. To the suggestion of Duke that, given the Commission's varied roles, one could not expect Duke to avoid substantive communications regarding pending matters, Mr. D'Onofrio responded "Yes they can."

Mr. D'Onofrio stated that the concealed communications were relevant to Phase II of this proceeding because the communications related directly to the IGCC Project and the recovery of costs on the IGCC Project. Mr. D'Onofrio also rejected Duke's suggestion that Duke's senior executives making the concealed communications either would not have known about them or had no duty to disclose them.

Mr. D'Onofrio testified that he continued to believe that Duke deliberately engaged in a series of communications designed to advance its interests in the pending proceeding, that Duke had offered no evidence to the contrary, and that Duke presumably did not do so because it had no such evidence. Finally, Mr. D'Onofrio disagreed that Duke's concealed material relevant communications should not impact the results in this proceeding.

c. Michael P. Gorman. Mr. Gorman testified that Duke has failed to provide evidence explaining or justifying the many areas of concealment of significant and relevant information discussed by Industrial Group witnesses.

Mr. Gorman rejected Duke Witness Galloway's suggestion that the Industrial Group must prove a causal connection between acts of concealment and specific costs. Mr. Gorman stated that the question is as between ratepayers and Duke, the party who concealed significant relevant information about costs and risks, who should bear the substantial costs in excess of the original estimate Duke presented with such confidence. Mr. Gorman argued that Witness Galloway failed to understand that Duke's failure to disclose in Cause No. 43114 relevant significant information on costs and risks makes it entirely appropriate that Duke bear those concealed risks and costs now that they have been realized. He stated that another outcome would reward Duke for its concealment and encourage non-disclosure from other utilities seeking relief under this statute.

Mr. Gorman testified that the Commission might have capped Duke's recovery at $1.985 in the original Cause No. 43114 had Duke not concealed significant relevant information at that time, and that it was ironic that the same recommendation was being made now due to that very concealment. He stated this would be a fair and just result given the Commission would be returning Duke to the estimate it espoused such confidence in, while it was concealing significant relevant information.

Mr. Gorman also disputed Witness Galloway's contention that Duke, in future rate proceedings, could elect the greater of the plant's fair value or original cost. Mr. Gorman noted the statute permits the recovery of "actual costs." Given Duke's concealment of significant relevant information, he stated Duke should be limited to actual costs of $1.985 billion.

Finally, Mr. Gorman disagreed with Duke Witness Esamann's testimony that even if Duke concealed significant relevant information, Duke should be entitled to rely on the prior Edwardsport orders. Mr. Gorman stated this seems fundamentally unfair and inconsistent with the statute that takes from Duke certain rights to recover upon a showing of concealment, fraud or gross mismanagement.

d. Dwight R. Hoenig. Mr. Hoenig testified that, after reviewing Duke's supplemental responsive testimony, he again concluded that Duke has acted imprudently with respect to grey water. He explained that Duke has failed to disclose to the Commission and the parties material issues with respect to its grey water treatment in a timely fashion, and that it also failed to disclose the risk it took that the grey water cost estimate (and by extension the entire $1.985 billion estimate) could be inaccurate by well over a hundred million dollars. Mr. Hoenig explained that, although Duke had included $20 million for DWI and $9.3 million for pre-treatment in the original $1.985 billion estimate, its grey water costs now exceed $150 million.

K. OUCC's Phase II Rebuttal.

a. Barbara Smith. Ms. Smith testified that there was gross mismanagement of the FEED Study and budgetary mismanagement. With respect to the FEED Study, and Mr. Rogers's claim that by eliminating the LSTK Duke "optimize[d] the design, engineering and construction", Ms. Smith testified that there is no evidence that the effort had any positive impact on cost or schedule. Ms. Smith stated that a rational business person would not consider investment overruns of 45% an optimally implemented effort.

Ms. Smith responded to Mr. Rogers statement that "Duke concluded it would be more efficient and less costly to undertake the management of the IGCC Project[.]" She also addressed Mr. Rogers statement that "[s]ubsequent changes to the division of responsibility were made with an intent to run the IGCC Project more efficiently and to generate savings for customers." Ms. Smith testified that Duke's claimed intention to be more efficient and less costly to ratepayers failed, and as described in OUCC witness Mr. Alvarez' Phase I testimony, the costs of the IGCC Project management actually increased once Duke took over that responsibility. Ms. Smith stated, therefore, Duke's "intent" and "conclusions" are irrelevant in light of the subsequent cost increases after it took over project management.

Ms. Smith testified that she disagreed with the assessment by Duke witnesses Dr. Patricia Galloway and Mr. W. Michael Womack that Duke's experience in "mega projects" made it qualified to manage a $3 billion, first of its kind construction project. Ms. Smith stated that Duke listed Selective Catalytic Reduction ("SCR") systems and Flue Gas Desulfurization ("FGD") systems as its past project management experience constituting "mega projects." Ms. Smith stated that these projects consist of a grouping of smaller projects, and are neither similar in scope nor include the unique complexities of the IGCC Project. Ms. Smith used the example that the installation of FGD systems involves a retrofit of an existing generation unit with environmental controls, rather than the construction of an entirely new electric generating unit that involves developing technology that is at least several orders of magnitude greater in terms of project management. To state otherwise only shows Duke's lack of "mega project" experience.

Ms. Smith testified that although OUCC Witness Alvarez filed substantial Phase I testimony in regard to the status reports containing budget changes about which Mr. Womack testified, the status reports were not comprehensive or transparent because, as Mr. Womack testified, the $2.35 billion and $2.88 billion budgets were developed differently. The $2.35 billion estimate was created from the top down starting with the $1.985 billion estimate and adding the budget increases. The $2.88 billion estimate was created from the bottom up by recalculating the estimate at the line item level. Ms. Smith stated that the unavoidable consequence of this action was to render it nearly impossible to assess the reasonableness of Petitioner's management and of the costs incurred. Ms. Smith further stated that OUCC personnel, experienced in investigating and evaluating costs, have spent countless hours of analysis, participated in technical conferences and studied numerous responses to discovery, but remained unable to evaluate the exact cost allocations, the IGCC Project cost increases or the appropriateness of either.

Ms. Smith testified that at the time of the initial CPCN proceeding in Cause No. 43114, the OUCC reviewed the $1.985 billion plant cost in the context of expected carbon legislation. The OUCC comparison included carbon and other emission controls for the plant types compared. To be cost beneficial at the $1.95 billion price tag, the OUCC concluded that the technology advantage of pre-combustion emission controls was necessary. Duke now wants ratepayers to be responsible for almost one billion dollars more than the IGCC Project was originally estimated with the benefit of CCS that made the entire IGCC Project cost-effective as compared to the other technologies in the first place. The OUCC still supported this IGCC Project, but emphasized that Duke's mismanagement shifted a substantial additional financial burden away from itself and the Alliance and on to the ratepayers.

With respect to concealment, Ms. Smith testified that the OUCC does not entirely agree with Duke's witness Mr. Painter's definition of concealment on page 5 of his testimony. Ms. Smith stated that Mr. Painter seems to be combining the definition of "fraudulent concealment" which includes the element of intent, with "concealment." Ms. Smith stated that the concealment she discussed in her Phase II testimony is not fraudulent concealment. In fact the OUCC has not raised fraud as an issue in this case and, therefore, is not obligated to prove intent. Ms. Smith further stated that Mr. Painter stated that concealment requires that the fact alleged to have been concealed must be material and "that Duke intended to hide that fact from the Commission." In her view, material facts were concealed from the Commission and the Consumer Parties.

Ms. Smith testified that Mr. Painter gave other misguided interpretations of "concealment." She stated that Mr. Painter was mistaken when he said that "the crux of the complaint in this case is that too much information was communicated to the Commission by Duke, not that Duke sought to conceal anything from the Commission." Ms. Smith stated that, as described in detail by other OUCC witnesses, she believed that material facts were concealed from the Commission (e.g. grey water, FEED Study, budget manipulations, etc).

Ms. Smith also addressed who has the burden of proof of concealment and gross mismanagement. Ms. Smith responded to Duke's statement that it should be allowed full cost recovery because the Consumer Parties did not quantify with sufficient particularity the monetary damage resulting from its alleged concealment and mismanagement. Ms. Smith testified that while the Consumer Parties have the burden to prove concealment and gross mismanagement, they are not required to prove any specific damages resulting from any

particular misconduct. Ms. Smith stated that the statute simply says that Duke is eligible to recover prudently incurred costs unless there is concealment or gross mismanagement. The plain reading of this language is that if there is concealment or gross mismanagement, costs are not recoverable. Ms. Smith testified that she stated in her 43114-4S1 Phase I testimony, that there are no mathematical formulas to assess the damage to the regulatory system caused by Duke's concealment and gross mismanagement. Once the Consumer Parties prove that Duke concealed material facts and grossly mismanaged the IGCC Project, it is Duke's burden to convince the Commission that the statute denying cost recovery should be ignored.

b. Anthony A. Alvarez. Mr. Alvarez testified that he does not agree with Mr. Womack's opinion that Duke has not concealed information for the Commission or the OUCC and Intervenors (hereinafter "Consumer Parties"). Mr. Alvarez opined that the Commission should carefully review Mr. Womack's Petitioner's Confidential Exhibit J-5 submitted with Mr. Womack's Phase I Rebuttal Testimony.

Mr. Alvarez explained that Mr. Womack's testimony demonstrated that Duke knew how important it was to "accurately track and report the cost of the scope", yet Duke failed to maintain and did not provide this information to parties responsible for evaluating the IGCC Project because "it was not necessary or meaningful enough to the IGCC Project team". Mr. Alvarez pointed out that Mr. Womack admitted that "[separating] the cumulative budget transfers from the cumulative escalation and contingency allocations" was not a priority for Duke.

Mr. Alvarez testified that Mr. Womack attempted to clarify the issue of budget transfers but made the explanation of the budget transfer process more complicated and ambiguous. Mr. Alvarez stated that the budget transfers can be extracted through a comparative analysis of two versions of the same $2.35 billion cost estimate—one with, and one without, budget transfers. Mr. Alvarez testified that he did not agree with Mr. Haviland's characterization of Mr. Haviland's own internal emails identifying IGCC Project management competency problems. Mr. Alvarez explained that in his view, Mr. Haviland tried to recant the serious points that Mr. Haviland raised in his emails, all of which went to the very heart of the problems Duke was experiencing in the IGCC Project.

c. Cynthia Armstrong. Ms. Armstrong asserted that it was unreasonable to rely on the grey water estimates that GE provided to Duke in April 2006 because correspondence between Duke staff demonstrate that Duke staff questioned the accuracy of the grey water estimates before these estimates changed in November 2007. She noted that Duke staff indicated several times in interviews with Dr. Galloway that they believed the Reference Plant was being designed based on AEP's planned IGCC plant, and Duke staff was concerned as to how the Reference Plant design would need to be altered to match the Edwardsport site. She noted that the AEP plant would have likely been using different coal (or coal blends) with possibly different constituents. Armstrong also pointed out that Dr. Galloway's notes show complaints from Duke staff that the Alliance did not initially respond in a timely manner to Duke's questions regarding plant design. In some cases, the Alliance either did not respond at all or did not provide full explanations of how it arrived at certain calculations regarding plant design or cost estimates. Amstrong stated that this lack of responsiveness should have raised red flags for Duke. Absent answers to these and other important questions, Ms. Armstrong maintained that it was unreasonable for Duke to proceed with DWI assuming the grey water estimates would not

change, especially since it was so important that the water remained non-hazardous in order for DWI to remain economically favorable compared to the ZLD system. Ms. Armstrong also noted that GE's refused to provide any guarantee for grey water quality in its contract with Duke. Ms. Armstrong stressed that the lack of a guarantee should have made it absolutely clear to Duke that the gray water characteristics could change.

Ms. Armstrong asserted that whether or not GE contemplated NPDES permit levels when it designed the 2006 ZLD system was irrelevant. She stated that GE's ZLD system did not contemplate releasing effluent as the process took wastewater generated by the gasification process, treated the water, and then recycled the resulting water back into the gasification process. Because there is no discharge of wastewater, she stated that no NPDES permit is necessary. She asserted that from an environmental regulatory perspective, there is no need to consider the hazardous constituents in the water because the water is being reused in the IGCC system.

Ms. Armstrong further explained that even though the ZLD system would not have required an NPDES permit, the wastewater treatment exemption ("WWTU") codified at 40 C.F.R. § 264.1(g)(6) would have applied to the system. She explained that an entity must satisfy three specific requirements for the exemption to apply: the facility must be subject to regulation under Section 402 or 307 (b) of the Clean Water Act ("CWA"); the facility must receive an influent wastewater that is considered hazardous under 40 C.F.R. § 261.3; and it must meet the definition of a tank or tank system under 40 C.F.R. § 260.10. Ms. Armstrong testified the NPDES permitting requirements or the 307 (b) pretreatment standard provisions of the CWA only have to apply to the facility to receive the WWTU and that the facility does not have to have an actual permit to qualify for the exemption. Ms. Armstrong showed policy documents from the EPA where the EPA ruled that dry cleaning facilities that have chosen to use an evaporator in an effort to eliminate its discharge to avoid requirements under Sections 402 and 307(b) of the CWA qualify for the WWTU exemption under RCRA. Ms. Armstrong reasoned that was possible that the EPA would consider the GE ZLD system to be eligible for the WWTU exemption even if the facility recycled all of its grey water back into the gasification process. She noted that Duke may have been required to modify its air permit if the GE ZLD system did not meet the definition of a totally-enclosed treatment facility.

Ms. Armstrong reasoned that even if the WWTU exemption did not apply to the original GE ZLD system, the facility may have still been able to avoid regulation under RCRA Subtitle C, if GE recycled all grey water back into the gasification process. Secondary materials that are reclaimed and returned to the original process or processes in which they were generated for reuse are exempt from the definition of "solid waste" under 40 C.F.R. § 261.4(a)(8). Ms. Armstrong explained the four conditions required to meet this exemption and concluded that the recycling of grey water reclaimed by the GE ZLD system would meet all four of these conditions. Ms. Armstrong also noted that spent materials generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by benefication are also exempt from the definition of "solid waste." She explained the six main conditions to meet this exemption and determined that the recycled grey water would also have met the exemption under 40 C.F.R. § 261.4(a)(17).

Ms. Armstrong testified that even if none of the above exemptions would have applied to the GE ZLD system, Duke would not enter into a contract with GE where Duke would assume

all of the environmental liability and costs that would be associated with GE's ZLD design. She reasoned that if the disposal and treatment of the grey water had remained within the Alliance's scope, the contract between the Alliance and Duke would have required GE to ensure that the grey water treatment or discharge complied with the NPDES permit or any other applicable environmental regulations.

Ms. Armstrong disputed Mr. Burch's claim that Petitioner's Exhibit CCC-19 showed that Duke immediately responded to the new grey water estimates. Ms. Armstrong stated that the document in no way exonerates Duke from the claim of gross mismanagement of its grey water disposal system because Duke had its own internal Environmental Health and Services ("EH&S") department that IGCC Project staff could and should have consulted after receiving these updated estimates. She noted that Subsurface is in the business of drilling injection wells for industrial facilities and had a strong business incentive to see that Duke pursued DWI. Ms. Armstrong noted that Mr. Burch did not specifically name who these members from the EH&S department who attended the meeting referenced in Petitioner's Exhibit CCC-19. She noted that if Duke EH&S was informed immediately of the changed grey water estimates in November 2007, these members either did not analyze the regulatory implications of these new estimates, or they weren't aware that these estimates triggered certain RCRA and UIC permitting requirements. She suggested by the tone of Duke employee Mr. Randall Born's reaction to the grey water estimates in his June 2008 email, it was more likely that the IGCC Project team failed to inform and consult with Duke's own internal environmental staff regarding the toxicity of the new grey water estimates until June 2008. This led to inaction to either re-permit the injection wells or to begin the process of determining and installing the appropriate waste water treatment system for at least seven months after receiving the new grey water estimates. Armstrong reiterated that Duke's failure to address the issue that the grey water was hazardous and fell under RCRA regulation for more than seven months rises to the level of gross mismanagement.

While Ms. Armstrong declined to criticize Duke's decision to pursue Bevill Exemption status, she stressed that it was unreasonable for Duke to wait to begin pursuing contingency plans for DWI until it received confirmation from EPA headquarters in January 2009 that the Bevill Amendment would not apply. She noted that the Indiana Department of Environmental Management takes no longer than a year to review a RCRA permit application and to either issue a permit or deny the application. While she acknowledged that it is an extensive process for a permit applicant to prepare a RCRA Part B facility permit, she proclaimed an additional year could have provided enough time for Duke to submit a RCRA TSDF permit application, undergo IDEM review and award of the permit, and the facility would have the permit in time to begin operation of the plant. She reasoned that it was possible that re-permitting the wells, obtaining a RCRA permit, and implementing any corrective actions still would be less expensive than installing and operating the HPD ZLD system, but it is not possible to know this because Duke never conducted this analysis in time for re-permitting the wells and the IGCC facility to remain a viable option.

She concluded that the cost of the HPD ZLD system should not be recoverable from ratepayers because the ZLD system is a part of the cost that should have been included and disclosed to parties in the initial estimate of the IGCC Project.

d. Scott A. Bayley. Mr. Bayley testified that Mr. Womack's claim that Accumyn's review of the job cost ledger would not increase their understanding of the changes in cost

between $2.35 billion and $2.88 billion was troubling and warranted further inquiry by the Commission. Duke's decision to develop the $2.88 billion cost estimate independent of the previous approved budget made it impossible for the Commission or other interested parties to track or analyze the changes in budgeted line items. In Mr. Bayley's opinion, Duke should have shown the reconciliation from $1.985 billion to $2.35 billion to $2.88 billion which would have provided the rationale for and details of each change to the budgeted line items.

Mr. Bayley also testified that Dr. Galloway mischaracterized Accumyn's Report. Contrary to her assertion, Accumyn was not inferring that Duke attempted to hide its desire to take over managerial control of the IGCC Project. To the contrary, a comparison of the $2.35 billion IGCC Project estimate and the $2.88 billion estimate demonstrated that Duke's plan to take control of the IGCC Project was clear. Duke's managed scope between the two estimates increased over 226% from $237 million to $774 million.

Finally, Mr. Bayley rebutted Dr. Galloway's testimony that the IGCC Project had a lower kW cost than Taylorsville or Prairie State. Mr. Bayley found that to be an unpersuasive argument since the Taylorsville IGCC Project was abandoned and the Prairie State project was not an IGCC plant.

e. Wes. R. Blakley. Mr. Blakley responded to Mr. Roger's testimony on rate mitigation and other ratemaking issues. Mr. Blakley criticizes Duke's proposed rate mitigation measures as insufficient and not very creative. Duke's at-the-time proposed $2.72 billion "hard cap" excluded AFUDC and was essentially equivalent to the current cost estimate of $2.88 billion minus $164 million of estimated AFUDC included in the $2.88 billion cost estimate. In other words, Duke was still requesting the $530 million increase while characterizing it as rate mitigation. Mr. Blakley also observed that a major reason for the increase in AFUDC was that Duke's IGCC tracker had been frozen at the level established in IGCC-4. Absent Duke's malfeasance and misconduct, in Mr. Blakley's opinion these accruals would have been reduced. Mr. Blakley was also critical of Duke's proposal to share some future unquantifiable proceeds from concessions won from its contractors. Mr. Blakley characterized this as "speculative relief." Mr. Blakley also recommended that Duke refund the excess millions of dollars its ratepayers had previously paid to Duke as an "incented return" going back to IGCC-1.

f. Robert G. James. Mr. James disagreed with Dr. Galloway's conclusion that the FEED Study was "complete" on April 2, 2007 as required by the Commission's December 13, 2006, Prehearing Conference Order. He testified several key elements of basic engineering or process design work were not complete, including: The basic ZLD system design (Duke directed the Alliance to proceeded with DWI); the contractually-specified LSTK price including the Alliance's guarantees to the Owner and the basic engineering or process design work – several tasks be completed in so-called post-FEED "True Up" phase which terminated on May 7, 2007. Mr. James testified that the "True-Up" was not standard in his experience, and reflected Duke's inability to manage the FEED Study scope of work to completion.

Mr. James disagreed with Mr. Zupan's assertion that the PDP work was also complete at the time the FEED Study was submitted to the Commission. He noted that because work continued for months after, the IGCC Project's entire scope of work could not possibly have been defined during the FEED.

Addressing Duke's Project Delivery Method, Mr. James challenged Dr. Galloway's assertion that Duke had significant management experience based on five SCR units ($630 million, multi-prime contractors, 5-year project) and retrofit installation of three FGD Scrubbers ($500 million, multi-prime contractors, 3.5 year project). He concluded Duke knew or should have known its experience and expertise was far inferior to the Alliance - more suited to an owner's oversight position than overall project manager. He testified that Duke knowingly encouraged a change from the LSTK approach towards its flexible approach to suit its desire for more direct control of the IGCC Project. He concluded Duke's decision to surrender the LTSK deliverable from the Alliance was gross mismanagement as it shifted massive liability on to ratepayers and away from its IGCC Project partners without commercial concessions.

Mr. James testified that Duke grossly mismanaged its Flexible Contracting Approach. Mr. James disputed Mr. Womack's claims that shifting from a 'horizontal" to "vertical" contracting strategy was beneficial. Mr. James described Duke's decision to have GE oversee Bechtel's work product beyond implementation of GE's own process design as "ill-advised and lacking foresight" and misaligned the incentives between the parties. He testified that GE could not be independent when reviewing Bechtel's design work. He concluded that Duke improperly relied on its technology supplier to review Bechtel's design work and failed to manage the review process such that GE was focused only on equipment related to its own deliverables.

"Project Controls Function" as defined by Mr. James is the development, management and execution of the planning, estimating, scheduling and cost engineering tasks for a project. Mr. James testified that a key element of the Project Controls Function is an integrated master schedule, which he described as showing all of a project's activities and durations with the logical relationships between them, with a high level of detail, so activities can be achieved correctly and timely as planned and budgeted. He argued that Duke grossly mismanaged the IGCC Project by failing to have an appropriate integrated master schedule. Mr. James disagreed with Duke witnesses Galloway, Womack and Zupan that Duke managed the IGCC Project controls function reasonably, including scheduled overtime and additional bulk commodities. Mr. James noted that multiple re-baselining, particularly the third, left the project team and other stakeholders without important schedule information and management tools for months at a time and constituted mismanagement.

Mr. James disagreed with both Dr. Galloway and Mr. Burch's testimonies that Duke's decision to abandon ZLD in favor of DWI as the grey water disposal method was reasonable. He disputed Dr. Galloway's claim that GE would not provide additional information as to how it determined the grey water characteristics. He challenged testimony from both Mr. Womack and Mr. Burch that Duke reacted appropriately after GE revised its grey water constituent analysis and resulting hazardous characterization. Mr. James criticized Duke's decision to begin DWI drilling while grey water characteristics were still uncertain. He concluded that Duke's decision to stop the ZLD basic engineering knowing that the characteristics were only estimated, and knowing warnings provided by GE during the Feasibility Study, was gross mismanagement.

L. Joint Intervenor's Phase II Rebuttal.

a. David Schlissel. Mr. Schlissel testified that, despite being faced with these risks, Duke refused to consider the possibility that costs might increase above its then current estimate of $1.95 billion when it presented its economic analysis in Cause No. 43114 in 2007 (the CPCN

proceeding). According to Mr. Schlissel, Duke similarly refused to consider the potential for further cost increases above its revised estimates of $2.35 billion in its modeling in Cause No. 43114 IGCC-1 in 2008 or $2.88 billion in 2010 when the Company sought another increase in Cause No. 43114 IGCC-4S1. Mr. Schlissel concluded that this repeated refusal to consider the potential for further increases in construction costs biased the results of the Company's analyses and withheld vital information from the Commission. Mr. Schlissel also faulted the Company for failing to consider the potential the plant would not operate at the optimal 85 percent availability the Company claimed it would achieve. Mr. Schlissel pointed out that those were facts that needed to be evaluated in light of information that was concealed from the Commission.

Mr. Schlissel also testified that Duke was aware in the spring, summer and early fall that the cost of building Edwardsport was increasing again, and that natural gas prices had collapsed. Duke nonetheless failed to re-examine the economics of completing Edwardsport as an IGCC in light of these changed circumstances. He concluded that individually each of those failures represented imprudent management and that collectively they represented gross mismanagement.

Mr. Schlissel rejected attempts by Dr. Galloway and Ms. Hager to distinguish Edwardsport and Cliffside, stating both projects were exposed to the same commodity and equipment price risk and the same mega-project risks. Indeed, the distinctions between the two were that Edwardsport faced the additional risks of being first-of-a-kind technology risk and having no reference plant. Yet, Duke refused to conduct a higher capital cost scenario analysis for Edwardsport as it had for Cliffside.

Mr. Schlissel noted that, in fact, in a December 2007 CPCN request before the North Carolina Commission, Ms. Hager identified building material availability and cost as one of the key uncertainties. In that proceeding, she sponsored a construction cost sensitivity with CO2 costs where the construction costs were assumed to be 20 percent higher. Likewise, Duke Energy filed an IRP in Kentucky on June 30, 2008, which also included a 20% higher capital cost scenario. Mr. Schlissel contrasted Duke's approach in these two jurisdictions to Duke's approach for Edwardsport.

Mr. Schlissel noted that Dr. Galloway's assessment that the FEED Study was a Class 2 definitive estimate – an assessment with which he disagreed – still only had an accuracy range of -15% to +20%. He stated this shows that Duke should have used a range of capital costs, as he has repeatedly suggested.

Moreover, he noted that a contemporaneous January 2009 report by Ernst and Young said the cost estimate for Edwardsport was not more than a Class 3 and perhaps only a Class 4 estimate as of the Spring of 2008. A Class 3 should have expected accuracy range of -10-20% to +10-30% while a Class 4 cost estimate should have an expected accuracy range of -15-30% to +20-50%, suggesting Duke should have used even a wider range of capital costs in 2007. Mr. Schlissel went on state that, to his knowledge, Duke never disclosed that the original $1.985 billion estimate was Class 2 definitive estimate with an accuracy of -15% to 20% prior to its testimony in this Cause or that Ernst & Young considered the spring 2008 estimate to only be a Class 3 or 4 estimate prior to discovery.

Mr. Schlissel rejected Ms. Hager's claim that the IGCC Project would have been the most economical if Duke had considered an increased capital cost sensitivity, given the information available now regarding the status of the IGCC Project's design development and the accuracy of the past cost estimates. He testified that, given the very close PVRRs of the IGCC unit in the base case and CO2 scenarios and the fact that the Edwardsport option was considerably more capital intensive, it was reasonable to expect that the lowest cost plan without the IGCC would have had a lower PVRR in a high capital cost scenario. Moreover the IGCC Project's first-of-its-kind character exposed it to unique risks. Mr. Schlissel opined it was essentially certain that the comparative PVRRs of the three options the Company evaluated would have been materially different in 2007 had the Company properly run a high capital cost sensitivity case.

Mr. Schlissel acknowledged that Ms. Hager may be correct that the results of a higher capital cost sensitivity might not have changed the minds of Duke's senior management, given their apparent commitment to build Edwardsport, whatever the cost. However, he believed the Commission may have responded differently if the Company had not withheld key information and misled the Commission.

Mr. Schlissel testified that there were five key pieces of information that Duke did not disclose: (1) that the $1.985 billion estimate was not better than a Class 2 definitive estimate and more likely a Class 3 or Class 4 estimate with an accuracy range of perhaps as much as -30% to 50%, (2) that Duke had a serious disagreement with GE and Bechtel about the estimated cost and that Duke had unilaterally reduced the Alliance Company's scope of work below $1.818 billion, (3) that the Company's own consultant had indicated the Alliance's $1.818 billion estimate itself might be inadequate and that there was no definitive basis for the Edwardsport IGCC cost estimate because, in part, it was based on "a substantial amount of factoring that was used to create estimate quantities," (4) that Duke's EPC contractor, Bechtel, had supplied it with specific information in February 2007 which predicted construction commodity and equipment escalation rates that were almost uniformly significantly higher than the 4% assumed in the FEED Study and that represented, in many cases, double digit escalation, and (5) that the Company had doubts about the IGCC Project's competitiveness if the Alliance companies estimate of $1.818 billion should prove to be accurate.

Mr. Schlissel took exception to Mr. Roebel's testimony as to why Duke was confident in its $1.985 billion estimate. He stated it was missing any evidence that Duke had made an honest assessment of the risks and uncertainties of the IGCC Project and instead simply reinforced that Duke was fixated on developing a single point cost estimate that would not show the IGCC Project to be uneconomic. According to Mr. Schlissel, this turned the resource planning upside down. Mr. Schlissel went on to fault Mr. Roebel for not explaining why the Company still focused on a single point cost estimate in 2008 after its earlier estimate was wrong by 18 percent in just one year – a failure he stated was unreasonable.

Mr. Schlissel testified that he was not asking the Commission to apply hindsight, as Ms. Hager claimed. Rather, he wants the Commission to evaluate Duke's decision making based on the information the Company had at the time but disregarded in its own planning and concealed from the other parties and the Commission. He also rejected Ms. Hager's and others' claims that he was making the same arguments he had previously made. In support, Mr. Schlissel stated: (1) that he is presenting the Company's continuing failure to consider real potential increased capital costs as part of a pattern of gross mismanagement; (2) that he has presented significant new

evidence; (3) that the Company's actions regarding the Edwardsport resource planning have not been litigated since Cause No. 43114 IGCC-1; (4) that the Commission has not previously considered the issues of fraud, concealment or gross mismanagement with respect to Edwardsport, and (5) that he believes the Company is trying to use such arguments to try and embarrass the Commission into condoning the Company's conduct by suggesting the Commission has been complicit in overlooking such conduct in past proceedings.

Mr. Schlissel also rejected the contention that his testimony implied there was one "right" set of assumptions – precisely the opposite. He testified that utilities should consider ranges for the key input assumptions to reflect risks and uncertainties. He stated this was especially true given the extreme volatility in coal plant construction costs that were being experienced in the industry since the early 2000s. He stated that reasonable and prudent utilities consider a reasonable range of capital costs for new generating technologies in their resource planning analyses to reflect the potential that the cost of their proposed multi-billion investments would increase significantly, even if those utilities prudently managed those projects. He said this was especially true where, as here, the multi-billion investment involves a new plant design that that has not previously been built or operated anywhere else.

Mr. Schlissel testified that none of the materials presented by Dr. Galloway show any serious disagreement in the industry in the 2004-2007 timeframe that a company choosing to build an IGCC would face first mover risks. Mr. Schlissel acknowledged that some of the reports and articles discussed long term benefits of IGCC technology, but they did not provide any evidence that the hurdles facing IGCC technology had or soon would eliminate the risks and uncertainties of being a first mover on IGCC.

Mr. Schlissel went on to refute Dr. Galloway's assertion that he used only a few industry related documents or quoted only a few words or selected text to support his views of the 2005-2007 time period. He noted how several of the articles, discussing benefits of IGCC technology, never indicated that the first new units like Edwardsport would achieve lower capital costs and that, in fact, the reports agreed with his observations regarding the greatest concerns of IGCC technology.

Mr. Schlissel also objected to Dr. Galloway's use of the GE and Bechtel presentations and papers, which he stated are marketing and vendor materials that were merely making claims – no new IGCC units had been built and there was no actual experience to support those claims. Mr. Schlissel also criticized Dr. Galloway's reliance on a Harvard study, noting that the study identified IGCC-related risks and concerns and, as Dr. Galloway herself testified, the Harvard Study noted that due to a lack of commercial experience with IGCC units, there were not yet well-established cost and performance characteristics or a standardized commercial design, and, consequently, there was considerable variability in IGCC cost estimates.

Mr. Schlissel then went on to identify several instances where Dr. Galloway herself selectively quoted or failed to report articles where those articles were contrary to her point of view. Mr. Schlissel rebutted Dr. Galloway's assertion that he used only a portion of the record in a Wisconsin proceeding that did not represent the understanding of the industry where the utility and its contractor, Burns & McDonnell, had evaluated but rejected building an IGCC unit instead of a pulverized coal power plant. He rebutted her assertion that he failed to mention the February 2007 report of a Joint Study in Wisconsin that she claimed reported that developments

since the Wisconsin PSC's 2003 rejection of IGCC had made IGCC a more attractive option. Mr. Schlissel quoted at length from the Report of the Joint Study, identifying numerous sections that actually supported his positions.

Mr. Schlissel noted that Dr. Galloway claimed at several points in her testimony that Duke had informed the Commission of risks of IGCC technology. However, he stated that Dr. Galloway's repetition of this claim over and over did not make it true. He testified that Dr. Galloway did not cite a single instance in Cause No. 43114 or any of the subsequent Edwardsport dockets in which Duke informed the Commission of the risks and challenges of investing in the first new IGCC unit.

Mr. Schlissel then addressed Ms. Hager's attempts to "explain away" her 2007 testimony before the North Carolina Utilities Commission ("NCUC"), which was inconsistent with her testimony in this case. He stated her explanation was "simply not credible." Specifically, her observation that Mr. Philips discussed the NCUC proceeding in his 2007 Edwardsport testimony held no significance. Rather, Ms. Hager was simply trying to get the Commission to overlook the gross mismanagement and concealment associated with the Company's resource planning for Edwardsport.

Mr. Schlissel stated the Commission is entitled – indeed, obligated – to learn the lessons from the Edwardsport experience even if the Company has not. He argued that: (1) the Company disregarded or concealed much of what it knew about the risks of the IGCC Project; (2) the Company rejected or downplayed the evidence provided by the other parties to define and explain those risks; (3) that those risks have now materialized and in a big way with Edwardsport now projected to cost $5,000 per kW; and, (4) that the Company is again disregarding or concealing much of what it knows and rejecting or downplaying what other parties are saying about how and why those risks materialized.

Mr. Schlissel also rebutted Mr. Rogers' claim that the IGCC Project is simply the "first of its kind at this size," but with basic technologies that are not "first of a kind." Mr. Schlissel stated that Duke has repeatedly misled the Commission with this argument. He stated, "The reality has been, and continues to be, that the IGCC Project has a unique design with new design features and components for which there was no reference plant in 2007 and for which the reference plant design had not been completed at the time when Duke received its CPCN." He likened it to saying "that a new Boeing 747 did not represent a new airplane design in 1970 because the concepts of wings, lift and aircraft propulsion had been around since the Wright Brothers' first biplane flew at the turn of the 20th Century."

Mr. Schlissel went on testify that the Company was aware early on that the Edwardsport design involved new design features. He stated that Duke witnesses had previously acknowledged that the Edwardsport plant is unique and very different from the design of existing IGCC units. In support of his argument, he cited specific testimony by Messrs. Haviland, Roebel, and Stultz. He then argued that the Company knew that it was undertaking a unique project back in 2007 and should have reflected the risk that the cost would increase as the design evolved. According to Mr. Schlissel, instead of forthrightly presenting this information to the Commission, Duke repeatedly reassured the Commission that it was simply merging two mature technologies.

Mr. Schlissel also challenged the accuracy Ms. Hager's statement that the Company ran "sensitivities related to reduced availability upon initial operation." He testified that the Company ran a single and very limited sensitivity with regard to the future availability of the Edwardsport unit – all Duke did was to assume that the Edwardsport's availability during the first 15 months of operation would be 75 percent, instead of 85 percent. He noted that even in that "sensitivity," Edwardsport's availability in all years subsequent to the end of 2013 was assumed to be the same high 85 percent that the Company has used in all of the modeling analyses it has presented to the Commission since 2007. Unsurprisingly, this one, limited sensitivity had only a minor impact on the modeling.

However, he noted the Company actually did examine the impact of lower unit availability in analyses prepared in early 2007. However, Duke never provided them to the Commission, never mentioned them in testimony, and never provided them to the other parties in the Edwardsport dockets.

Mr. Schlissel then commented on the testimony of Mr. Stultz. He testified there is no power plant operating today with the same design as Edwardsport and all of Mr. Stultz's evidence was based on design "improvements" from the existing generation of IGCC units. He concluded that Mr. Stultz assertion that the plant will operate at an average of 85 percent availability is therefore untested. He also argued that the assumption that Edwardsport would operate at an average of 85 percent availability for all years was unreasonable, noting that the Polk Station's availability ranged from 55.3 percent and 79.5 percent between 1998 and 2006 and that Wabash River's ranged from 55.3 percent to 78.7 percent during those same years.

Mr. Schlissel restated that Duke's repeated failure over a number of years to consider that the IGCC Project might not operate at the Company's assumed optimal 85 percent average annual availability constituted gross mismanagement. He noted continued uncertainty as to how well Edwardsport will operate given that there is no actual operating experience or start-up testing experience with a plant with the same design as Edwardsport. Given the actual operating experience of existing IGCC units and the great uncertainty regarding how well Edwardsport will operate, he reiterated that he believed that the Company should have considered a range of potential future operating performance in its economic analyses. Such a reasonable range could have been 75 percent to 85 percent long-term average annual availabilities with a multi-year break-in period during which the operating performance was not that high due to the unexpected problems that new plant designs always seem to experience.

Mr. Schlissel also responded to testimony by Mr. Hager and Mr. Stultz regarding the late January / early February 2007 modeling runs, saying they were important for three reasons: they assumed a range of possible future operating performance, something the Company failed to do in subsequent modeling between 2007 and 2011; it did not disclose the modeling runs; and the fact they were prepared in a very short time showed that Duke could prepare modeling runs in days, instead of months. He also chided the Company for not putting "its money where its mouth is" by making ratepayers assume all the risk that Edwardsport will not run "optimally" and makes ratepayers bear the amounts of additional operating costs.

Mr. Schlissel then rebutted Ms. Hager's explanation of why Duke did not re-examine the economics of Edwardsport in late 2009. He cited the Commission's statement in prior proceedings that a utility has the responsibility to re-examine its construction program in light of

changed circumstances, and that the requirement can only be satisfied if done expeditiously. He concluded that the Company knew of the changes in 2009 but delayed its re-estimation process until late February 2010 (a process not completed until April 2010). By delaying the new economic analyses until late February 2010, Duke converted significant "costs to go" into sunk costs. Even so, the new economic analyses showed that Completing Edwardsport as an IGCC unit was more expensive than completing the plant as a NGCC or cancelling the IGCC Project outright.

Mr. Schlissel stated it was reasonable to expect that the relative PVRR benefits of the cancellation and Complete as NGCC options would have been more significant if the Company had conducted the new economic analyses in the fall of 2009. He noted Ms. Hager's testimony that continuing progress on the IGCC Project shifts costs from "costs to go" to "sunk costs," thereby reducing the PVRR of the Complete as IGCC scenarios as time passes. Mr. Schlissel also explained there were other changed circumstances, such as the collapse of gas prices, that would have impacted a revised economic analysis.

Mr. Schlissel responded to Mr. Hager's testimony that she did not use revised or lower gas prices in the April 2009 analysis because the 2010 fundamental forecast was not approved by Duke senior management until May of 2010. He contrasted this 18 month delay in Indiana with the fact that Duke Carolinas had used a range of gas prices in its September 2009 IRP. Mr. Schlissel concluded that this failure represents not only gross mismanagement but concealment in the Company's resource planning. He said his conclusion is not directed at Ms. Hager or any of her subordinates but instead placed the responsibility for the failure rests squarely with Duke's top management. He opined that there was simply no legitimate reason or credible explanation for the Company's decision to delay until the spring of 2010 a revised economic analysis including both significantly higher capital costs and significantly lower natural gas costs.

Next, Mr. Schlissel responded to Mr. Haviland's contention that Mr. Schlissel had misconstrued certain emails from Mr. Haviland obtained in discovery. Mr. Schlissel said he simply looked at the "clear and plain language" in the emails.

Mr. Schlissel also refuted several statements in Mr. Haviland's Phase II testimony. Specifically, first, contrary to Mr. Haviland's assertion, Mr. Schlissel was not claiming Duke somehow "concealed" from the Commission "well-known" cost escalation trends in the industry. Rather, Mr. Schlissel was saying Duke failed to consider those trends in its analyses. Second, he noted Mr. Haviland acknowledged that Duke realize in September-October of 2009 that it could not meet the then-current $2.35 billion estimate, yet Duke delayed both a new cost estimate and economic analyses. Third, he noted that Mr. Haviland failed to explain how Duke could have been unaware of significant quantity increases on the IGCC Project for so long, given that Duke had 140 direct and contract employees fully dedicated to Edwardsport.

b. Peter Bradford. Mr. Bradford took issue with Mr. Painter's assertion that the contacts between Messrs. Rogers, Turner, and Hardy posed no problems because the subject matter was not yet before the Commission. He stated this was factually wrong. In addition, he noted that Mr. Painter's narrow reading would negate any effect of the rule. Under such a reading, a party could conduct any sort of discussion with a decision-maker in order to create a favorable, unrebutted record so long as it was done prior to the actual filing of the petition or pleading. Mr. Bradford found that this would eliminate other parties' opportunities to contest

such a record. He noted that Mr. Turner made clear in his deposition on August 23, 2011, that this meeting was replete with discussion of topics that were or would inevitably be contested in the Edwardsport proceedings.

Next, Mr. Bradford addressed Duke witnesses' contentions that improper communications are remedied by disclosure and an opportunity by the parties for comment. He stated that this may be the remedy in some standalone communication situations; however, this is not the case where the Commission finds that the record is so tainted that it cannot cure the error by normal remedies. He testified that furthermore, the improper meetings, hirings, calls, and e-mails and the lengths to which Duke went to maintain close personal contact and relationships with Commission staff and the former Chairman is inconsistent with the Commission's quasi-judicial function. These contacts and relationships took time that should have been devoted to managing the IGCC Project, thus contributing to Duke's gross mismanagement of the IGCC Project.

Mr. Bradford rebutted Ms. Galloway's contention that the "duty to disclose" is limited to information specifically requested by the Commission or a party. Not only did the Commission demand broad categories of accurate information that it was not given, but the duty to disclose covers any facts that contradict material information previously provided to the Commission in any proceeding related to the IGCC Project by Duke or its witnesses. The Commission made this clear as it demanded, in the CPCN and subsequent proceedings, that Petitioner produce information on categories which included "any additional issues relevant to the proceeding."

Mr. Bradford rebutted Mr. Fetter in three areas. First, concealment as the term is used in the relevant statutes need not be intentional. The Powerplant Construction and Clean Coal Technology Statutes are intended to reduce substantially the uncertainties associated with after-the-fact prudence reviews. The new system replaces the old with regular reviews during construction, which give greater assurance of rapid recovery for prudent investments. These more frequent reviews were not intended to increase the likelihood that imprudent costs could be recouped from customers. To ensure the prudence of the costs recovered, the Commission must rely on information provided by the utility. Failure by the utility to provide such information can result in the Commission finding costs prudent when complete information would have led to the opposite conclusion. This is true whether or not the concealment is intentional. Rates cannot be just and reasonable if they include imprudent expenditures, even if resulting from unintentional concealment. The costs must be prudent to be recovered, regardless of whether or not information was concealed at all, intentionally, and/or recklessly – prudence is the requirement.

Second, Mr. Bradford rebutted Mr. Fetter's contention that Joint Intervenors' witnesses use the term "gross mismanagement" synonymously with mere imprudence. The acts which occurred in the course of the Edwardsport proceeding are repeated and reckless. The acts by Duke led to the loss of key personnel, distractions of senior management for an extended period of time, and destruction of Duke's public standing and credibility. This all points to gross mismanagement the likes of which Mr. Bradford has rarely seen in his forty years of experience.

Third, Mr. Bradford rebutted Mr. Fetter's contention that utility customers would be worse off as a result of costs disallowed for concealment or gross mismanagement. There is no quantitative support for this contention by Mr. Fetter. Furthermore, Mr. Bradford doubts that the risk of a down rating is more costly to customers than paying the substantial costs arising at

Edwardsport from concealment or gross mismanagement. Mr. Bradford, based on experience and research, testified that it is far more likely that customers and the state's economy will be harmed by approving unjustified costs overruns than standing firm for the principle that customers pay only the just and reasonable costs of providing utility service. This in turn will spur better utility management, especially in the choice of which projects utilities will pursue in the future and their efforts to control costs. This will also protect industrial customers from paying higher rates, which would negatively impact productivity, competitiveness, and job creation. Most importantly, this will protect individual customers who have no other recourse, while promoting faith in the Commission.

c. Kerwin Olson. Mr. Olson testified that Mr. Painter in his responsive testimony ignored the issues of fairness and the appearance of partiality. He noted that Mssrs. Rogers, Turner, and Reed all had special access to former Chairman Hardy which was not afforded to Joint Intervenors or other parties. Mr. Olson opined that fairness and impartiality is the cornerstone of the public's confidence in the regulatory process. He testified that Citizens Action Coalition members, the public at large, the press, and even the Governor all share this view. He testified further that there is a strong public sentiment that the process throughout the Edwardsport IGCC Project has been partial and patently unfair, as Duke sought and received special access to former Chairman Hardy. He stated that the Governor's summary discharge of Mr. Hardy and the statement from the Governor's office attest to the fact that he expects more of the regulatory process than what has occurred in this case. Mr. Olson believes the Governor's words and actions indicate that he expects those before the Commission and the Commissioners to avoid special access, special treatment, and the appearance of partiality.

Mr. Olson also rejected Mr. Painter's opinion that the e-mail dated December 3, 2007, was not related to a pending or disputed matter. Mr. Olson pointed out that the e-mail indicates that Mr. Turner spoke of the hiring of Mr. Haviland specifically "in the context of the appropriate framework for the Commission's ongoing review of costs" for the Edwardsport IGCC Project. This did relate to a disputed issue as the cost increases have been and continue to be contested.

Mr. Olson also rejected Mr. Painter's suggestion that the conversation surrounding the timing of an order in KLO-7 was a procedural issue, and not related to a dispute. Mr. Olson pointed out that the order being discussed was in Cause No. 43114 IGCC-1, which was a contested case about a cost estimate increase from $1.985 billion to $2.35 billion. Further, as the email indicates, Mr. Turner and Mr. Hardy "agreed a holiday order didn't have great optics." Mr. Olson noted that this implies that Mr. Hardy also disclosed what the ruling would be – this is well in excess of a procedural conversation. Again, this communication was related to a disputed issue – the cost estimate was contested in IGCC-1 when this communication took place. Mr. Olson testified that the integrated master schedule was an important contested issue, despite Mr. Painter's testimony to the contrary. Mr. Olson testified that the integrated master schedule was at issue in Cause No. 43114 IGCC-3, so much so that Commissioner Ziegner had a lengthy exchange with Petitioner Witness Womack on the issue.

Mr. Olson also rejected Mr. Painter's characterization of the February 24, 2010, breakfast meeting between Mssrs. Turner, Rogers, and Reed with Mr. Hardy as a heads-up meeting that was procedural in nature. He stated that this was a factually incorrect position. He supported this conclusion by referring to Mr. Turner in his deposition, where he stated that Mr. Rogers at

the meeting discussed ways to mitigate the rate impact to consumers. Specifically, Mr. Turner said he thought CWIP, deferred taxes, reducing amounts requested, a cost cap, and actions against vendors may have all been discussed with then Commissioner Hardy. Mr. Olson found it incorrect to say these items were a mere heads-up on procedural or informal information.

7. **Settlement Agreement.**

A. Settlement Agreement Terms.

a. Hard Cost Cap. Provision 2 of the Settlement Agreement sets a "Hard Cost Cap" for the IGCC Project of $2.595 billion, plus applicable AFUDC accruing on and after July 1, 2012 (the "Additional AFUDC"). The $2.595 billion Hard Cost Cap consists of an estimated $2.319 billion in direct construction costs and $276 million in estimated retail AFUDC on such direct costs as of June 30, 2012.[3] Under this provision, subject only to a force majeure situation as defined in the Settlement Agreement, Duke may not recover from retail electric customers any IGCC Project construction costs above the amounts included in the Hard Cost Cap. Duke may, however, seek recovery of legitimate post-in-service operation and maintenance costs as defined in the Settlement Agreement.

After July 1, 2012, AFUDC will accrue if and to the extent that the Hard Cost Cap IGCC Project costs are not yet reflected in the IGCC Riders and thus are not receiving "construction work in progress" ("CWIP") ratemaking treatment. The Settlement Agreement also provides that in the event that (and to the extent that) the Hard Cost Cap IGCC Project costs are not receiving CWIP ratemaking treatment as of December 1, 2012, from that date forward, Duke should only be authorized to accrue and add 85% of such accrued AFUDC to the IGCC Project cost.

The Settling Parties have agreed that the construction costs included in the Hard Cost Cap (plus any Additional AFUDC) are reasonable and necessary and should not be further reduced below that amount because of any issues relating to imprudence, fraud, concealment, or gross mismanagement, or concerning ex parte communications, improper conduct, undue influence, appearances of impropriety, or related issues.

b. IGCC Rider Implementation. Provision 3 of the Settlement Agreement outlines a methodology for "restarting" IGCC Rider proceedings that have been frozen during the pendency of this proceeding. The last IGCC Rider update approved by the Commission became effective in late July 2010 (on an interim basis) pursuant to the Commission's Order in IGCC 4. The Settling Parties agreed that, upon approval of the Settlement, the IGCC Rider should be "restarted" immediately to consider the prudence of Construction Costs up to the level of the Hard Cost Cap (plus any Additional AFUDC).

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[3] At the time of the Settlement, in April 2012, Duke estimated that the Construction Costs component of the Hard Cost Cap would be approximately $2.319 billion and the AFUDC component would be $276 million. In his rebuttal testimony, Mr. Freeman explained that the Company had agreed upon the Hard Cost Cap of $2.595 billion and based on actual AFUDC rates through the end of May that equated to a Construction Costs component of $2.322 billion and an AFUDC component of $273 million. Pet. Ex. MMM-S at 9:3-4 and fn.2 (Freeman Reb.). For sake of simplicity, we will generally refer to the $2.319 billion estimate of Construction Costs as the parties did in pre-filed testimony.

The Settlement Agreement provides that, if the Settlement is approved prior to the approval of the IGCC-8 CWIP Rider proceeding, then CWIP recovery shall begin on Construction Cost amounts approved through the IGCC-6 CWIP Rider (which are less than the Hard Cost Cap), and recovery of CWIP for Construction Cost amounts over the IGCC-6 CWIP Rider amount (up to the Hard Cost Cap plus Additional AFUDC) should begin upon approval of the IGCC-7 and IGCC-8 CWIP Rider proceedings.

This "Rider restart" methodology takes into account the uncertainty of the precise in-service completion date for the IGCC Project and, as a consequence, results in the Company's retail rates increasing incrementally over time rather than all at once. Specifically, the Settling Parties agreed that the Company's proposed tariffs in IGCC 9 (filed on June 8, 2012) do not include projections of post-in-service operating costs (*e.g.*, estimated depreciation, O&M, and property tax expenses (other than operating costs for items that have been included in previous IGCC Rider filings)). Rather, the Settlement envisions that post-in-service IGCC Project costs will be included in the Company's filing in IGCC-10, which is expected to be filed in November 2012. The Settlement Agreement contemplates that Duke will defer the actual depreciation and O&M costs (and property tax expenses) incurred for all months from the In-Service Operational Date until such costs are included in the Company's rates, which is consistent with previously authorized deferred accounting treatment granted for the IGCC Project by the Commission. Finally, the Settlement provides that Duke should be authorized to recover deferred expenses (without carrying costs) over a three-year period either through future IGCC Rider proceedings or through inclusion in base retail electric rates.

c. Retail Electric Rate Case Moratorium. Under provision 4 of the Settlement Agreement, except in the case of an emergency, Duke agrees that it will not file for an increase in its retail electric base rates prior to March 2013, and that no increase to its base rates will be implemented prior to April 1, 2014. This base rate case moratorium applies only to retail electric base rate cases, and not to any other requests by Duke for accounting deferrals, creation of regulatory assets or liabilities, or creation of new or modification of existing retail rate riders.

This provision also states that, in the Company's next retail base rate case, the Non- Duke Settling Parties agree not to oppose any request by Duke to zero-out the IGCC Rider and include the IGCC Plant (up to the Hard Cost Cap IGCC Project costs, plus Additional AFUDC), O&M, depreciation, and property taxes in base rates, consistent with past practice for capital riders. However, the Non-Duke Settling Parties may challenge the reasonableness of specific amounts of O&M, depreciation, and property taxes to be included in base rates.

d. Updated Depreciation Rates (for all plant except IGCC). Provision 5.A of the Settlement Agreement provides for the update of Duke's depreciation rates for non-IGCC production, transmission, distribution, and general plant and equipment (except for certain pollution control property/clean coal technology projects, as discussed in item (5)). The proposed change in depreciation rates will initially benefit retail customers by approximately $35 million annually. The Settling Parties have agreed to these new depreciation rates, including the negative net salvage values. The depreciation rate changes will be made effective upon approval of the Settlement, and retail electric customers will begin receiving the approximately $35 million annual reduction in rates, via the IGCC Rider, beginning with the first full calendar month after the date of this Order. Upon the implementation of new retail base rates that reflect

any new depreciation rates (as discussed below), this benefit will be superseded by those new depreciation rates.

To ensure realization of this updated depreciation rate benefit for customers for the near-term, the Settlement Agreement further provides that, if the Company files for an increase in its base retail electric rates prior to the end of 2013, it will request the continued application and approval of the depreciation rates approved in the depreciation study presented in this Cause. The Settlement Agreement permits Duke, however, to propose updates to these depreciation rates in the event of material changes in law, regulation, or accounting rules, or material changes to the Duke system as defined in the Settlement Agreement.

The Settling Parties have agreed not to oppose or present evidence regarding the depreciation rates and net salvage values provided in the Settlement Agreement in any Duke retail rate case filed prior to 2014, except that the Non-Duke Settling Parties may present testimony challenging any updates the Company proposed. Duke reserves the right to file new depreciation rates for any retail rate case filed after 2013, and the Non- Duke Settling Parties retain the right to object to such new, post-2013 proposed depreciation rates and net salvage values.

e. Move to Non-Accelerated Depreciation Rates for Certain Pollution Control Property/Clean Coal Technology IGCC Projects. Provision 5.B of the Settlement Agreement provides for a change in depreciation rates, moving from accelerated depreciation to normal depreciation , for certain qualified pollution control and clean coal technology projects that have previously been approved for accelerated depreciation. With respect to this change in depreciation, the Settlement Agreement provides that Duke's retail rates will not be changed to reflect this accounting adjustment to depreciation rates until the effective date of an Order in the next-filed retail electric base rate case. At the time of the Company's next rate case, Duke will propose to include in its revenue requirement a depreciation expense that reflects the change from accelerated to normal lives for such qualified pollution control equipment, resulting in an estimated $32 million decrease in annual retail depreciation expense and revenue requirements.

f. Prospective Termination of the Deferred Tax/Capital Structure Incentive. Provision 6 of the Settlement Agreement provides that Duke will prospectively include, consistent with traditional Indiana ratemaking, deferred taxes in the capital structure used in its IGCC Rider, beginning with the effective date of the rider approved by an Order restarting the IGCC Rider. This termination of the deferred tax incentive will benefit customers by approximately $22 million initially. This provision also sets out the Settling Parties' agreement that any "bonus depreciation" treatment applicable to the IGCC Project costs included in retail rates will be accorded normal ratemaking treatment, i.e., any deferred taxes created by such bonus depreciation associated with the Hard Cost Cap amount will be reflected in Duke's capital-related rate riders and base rate case filings on an actual basis.

g. Potential Recoveries from Vendors/Contractors; Intellectual Property Benefits. Provision 7.A of the Settlement Agreement recognizes that Duke may have valid causes of action against Bechtel, GE, or other IGCC Project vendors or contractors with respect to the IGCC Project. In light of this Settlement, Duke will bear all costs associated with pursuing any such causes of action, and in turn, will be entitled to retain any amounts received from Bechtel, GE, or other IGCC Project vendors or contractors associated with the cost and quantity

estimates, design, construction, start-up, testing, etc. of the IGCC Project, whether such benefit stems from agreement, arbitration, mediation, litigation, settlement, or otherwise. The Settling Parties agree not to affirmatively oppose or undermine in any way Duke's pursuit of claims against GE, Bechtel, or other IGCC Project vendors or contractors. Provision 7.B states that Duke shall retain any intellectual property benefits related to the IGCC Project.

h. Government Funding and Tax Incentives; IGCC Project Byproducts. Provision 8 of the Settlement Agreement confirms that retail electric customers will receive 100% of the applicable retail jurisdictional share of any IGCC Project-specific funding received from federal, state, or local governmental authorities, such as incentive tax credits and property tax credits. In addition, the Settlement confirms that retail electric customers will receive 100% of the applicable retail jurisdictional share of any net byproduct or co-product revenues from the IGCC Project.

i. Attorney Fees and Reimbursements; Other Funding Commitments. The Settlement Agreement contains a number of funding commitments to be made by Duke out of shareholder funds. These funding commitments include: (1) a total of approximately $13.5 million to be paid to the Non- Duke Settling Parties or their attorneys, for attorney fees and litigation expenses; (2) a contribution of $2 million to the Indiana Utility Ratepayer Trust; (3) a contribution of $3.5 million to the Indiana Low Income Home Energy Assistance Program ("LIHEAP") fund, to be made over a 5-year period and to be used for Duke retail customers; and (4) a contribution of $1 million to establish a fund to effect the collaborative development of a yet-to-be-determined clean energy initiative by the OUCC and Duke, and to be administered by a suitable third party for the benefit of Duke retail customers.

j. Other Provisions. Provision 10 of the Settlement Agreement sets forth the understanding of the Settling Parties with respect to certain additional issues. In provision 10.A, the Settling Parties agree that any subject-to-refund designations or similar language in the IGCC 4 Order, and any subsequent IGCC Rider orders approved prior to this Order, should be removed once this Settlement is effective. In provision 10.B, the Settling Parties agree that the evidence submitted in support of the Settlement Agreement, along with the evidence previously submitted in this proceeding, together constitute substantial evidence to support the Settlement and provide a sufficient evidentiary basis upon which the Commission can make any findings of fact and conclusions of law necessary for the approval of the Settlement Agreement. Provision 10.C sets forth the Settling Parties' understanding that the Settlement Agreement represents a complete, interrelated package that is intended to resolve all issues related to the IGCC Project Construction Costs (and associated AFUDC) including without limitation, all issues that were addressed or could have been addressed in Phase I and Phase II of this proceeding. The Settling Parties agree to oppose or not support any attempt to initiate new proceedings before the Commission related to such issues. Further, in provision 10.D, the Settling Parties commit to support the provisions of the Settlement Agreement in good faith before the Commission and, if necessary, before appellate courts, in related proceedings, and on remand or reconsideration before this Commission.

B. Settling Parties' Evidence.

a. Douglas F. Essamann. Mr. Esamann noted that the record in this proceeding is extensive, and there is a wide spectrum of outcomes represented in the parties' filed and litigated

positions. In Phase I of this proceeding, the parties filed positions that ranged from recommending no increased recovery to the previously-approved $2.35 billion cost estimate for the IGCC Project, to permitting recovery up to the Company's recommended increase in the approved cost estimate to $2.72 billion plus associated AFUDC (or approximately $3 billion). In Phase II, the parties filed positions that ranged from proposals to reduce the $2.35 billion approved cost estimate to the original cost estimate of $1.985 billion or even lower, to the Company's position that no reductions to the approved IGCC Project cost should be made. The Settling Parties noted the previously-approved $2.35 billion IGCC Project cost estimate consisted of $2.225 billion in direct construction costs and $125 million in AFUDC costs (estimated at that point in time and assuming ongoing CWIP treatment). By comparison, the Hard Cost Cap consists of approximately $2.319 billion in direct construction costs and an estimated $276 million in AFUDC (as of June 30, 2012) – an increase of $94 million in direct construction costs.

Mr. Esamann testified that the Company strongly believes that its actions with respect to the IGCC Project have been reasonable and prudent and do not constitute gross mismanagement, concealment, or fraud. Accordingly, the Company believes that the record in this proceeding supports approval of a new IGCC Project cost estimate up to $2.72 billion in direct construction costs plus applicable AFUDC -- approximately $3 billion in total – as reasonable, necessary, and prudently incurred. In contrast, the Settlement Agreement provides for a modified IGCC Project cost for ratemaking and CPCN purposes of significantly less – approximately $2.319 billion in direct construction costs plus associated AFUDC to June 30, 2012, up to a Hard Cost Cap of $2.595 billion (plus post-June 2012 AFUDC per the Settlement Agreement's terms).

Under the Settlement Agreement, the Company and its shareholders will bear a significant portion of the cost of the IGCC Project. Specifically, Duke will absorb the Construction Costs above the Hard Cost Cap plus Additional AFUDC, an estimated impairment of nearly $700 million. Mr. Esamann further confirmed that Duke will segregate the Hard Cost Cap costs (plus any Additional AFUDC) from the "unrecoverable" costs on its books and records. In particular, the Hard Cost Cap (and Additional AFUDC) costs will be accounted for "above-the-line," and the "unrecoverable" or "impairment" costs (*i.e.*, amounts above the Hard Cost Cap and Additional AFUDC for which the Company's shareholders are responsible) will be accounted for "below-the-line," so that in future rate proceedings, the impairment costs will not be included in the Company's utility plant in service or rate base or cost of service for ratemaking purposes. Depreciation associated with the impairment costs will also be excluded from the utility cost of service for ratemaking. Similarly, the Company will segregate the tax benefits and detriments associated with the impairment costs, and will separately account for, on a below-the-line basis, the tax impacts associated with the impairment. Additionally, the deferred tax assets and the deferred tax liabilities (including the portion of bonus depreciation attributable to the impairment costs) will be excluded from the capitalization structure for purposes of calculating the rate of return.

Mr. Esamann further testified that, even if one does not accept the Company's analysis of the record, the Hard Cost Cap – reflecting an increase of $94 million in construction costs over the approved IGCC Project cost estimate, in comparison to Duke's proposal of an approximately $500 million increase – is nevertheless supported by substantial evidence in the record. Thus, although in the Company's view, there is no persuasive evidence of imprudence, gross mismanagement, concealment or fraud in the record, if the Commission were to conclude that

some Company actions fall into one of these categories, the impact of any such imprudence, gross mismanagement, concealment, or fraud, would be more than covered by the numerous financial concessions in the Settlement Agreement.

Mr. Esamann described the testimony the Company presented in Phases I and II that addressed both the reasonableness of the increased IGCC Project costs and the evidence showing that the Company was not guilty of imprudence, gross mismanagement, concealment, or fraud. Mr. Esamann specifically referenced the Company's testimony about (1) the need to alter the approach for disposing of grey water from deep-well injection ("DWI") to zero liquid discharge ("ZLD"), (2) the significant unanticipated increases in bulk commodity quantities, (3) increased labor productivity costs largely associated with the bulk commodity quantity increases, and (4) additional AFUDC accrued due to delays in the CWIP proceedings. He further reiterated the significant benefits that the Settlement Agreement achieves. Mr. Esamann explained that the Settlement reflects the Settling Parties' agreement that construction costs up to the amount of the Hard Cost Cap are reasonable, prudent, and necessary and should be recovered, but that the Commission, not the Settling Parties, will decide in the IGCC-5, 6, 7, and 8 Rider proceedings whether those costs should in fact be recovered. Mr. Esamann and Mr. Womack further responded that the drivers of the cost increase that were the focus of earlier testimony in this proceeding were back-end loaded so a pro rata or S-curve approach to calculating a disallowance is not appropriate. Mr. Esamann emphasized that the Company would not have entered into a settlement that resulted in an impairment of greater than the approximately $700 million agreed to in the Settlement. Mr. Esamann challenged Mr. Ralph Smith's and Mr. Schlissel's argument that the Hard Cost Cap is actually a firm floor. Mr. Esamann testified that the Hard Cost Cap, if approved, will constitute the new CPCN cost estimate. The Commission will decide in IGCC-5, 6, 7, and 8 whether actual incurred IGCC Project costs up to the Hard Cost Cap are prudent and should be recovered.

Mr. Esamann further stated that the Hard Cost Cap does not "ignore" CWIP recovery to date, which is calculated based on earlier incurred costs substantially below the Hard Cost Cap. Mr. Esamann responded that under the Settlement Agreement, any party retains all its rights under Indiana law to make arguments and to seek relief relating to post-in-service operating performance of the IGCC Project.

Mr. Esamann explained that the IGCC Rider restart methodology ensures implementation of the IGCC Rider in an orderly manner, providing for a stepped-in increase for customers and, thus, a rate impact that is more gradual and moderated.

Mr. Esamann testified that, like the Hard Cost Cap, the rate case moratorium was a significant concession by the Company. Duke's base rates were last changed in 2004, based on 2002 and 2003 financial data. As the Company's fuel adjustment clause ("FAC") filings indicate, the Company's earnings are consistently below its authorized return, and a rate case filing has been on the Company's horizon for some time. The Company estimates that its current revenue requirements need to be increased in order for the Company to earn a reasonable return on its current utility plant in service. Recent FAC filings indicate that the Company's actual annual net operating income has been below the approved net operating income by over $100 million for the last five FAC filings. The flip side of this, of course, is that this rate case moratorium provides a real benefit to customers because it will delay a rate increase filing and will delay increases in Duke's base retail electric rates for nearly two years.

Mr. Esamann testified that, under this provision, customers will realize the benefit of a depreciation rate change credit amounting to approximately $35 million annually, with a commitment to keep this in place at least through any retail base rates filed prior to 2014. Mr. Esamann noted that the proposed move from accelerated to non-accelerated depreciation for certain qualified pollution control property/clean coal technology will provide a near-term cash flow and earnings benefit to the Company and is beneficial to credit quality, but will also result in an additional reduction in depreciation expense in rates at the time of the next rate case, estimated to result in an approximately $32 million annual reduction in revenue requirements for the benefit of customers.

Mr. Esamann explained that the inclusion of deferred taxes in the capital structure used in the Company's IGCC Rider will initially benefit retail customers by initially approximately $22 million annually. Bonus tax depreciation could further reduce the rate impact of the IGCC Project by approximately 0.7% in the near term. Mr. Esamann responded that the Commission's orders did not treat the deferred tax treatment as a cost-control incentive, and he referenced the relevant portions of the Commission's CPCN and IGCC-1 Orders as support. He further explained that although the Commission's IGCC-1 Order ties the deferred tax incentive to the original cost estimate, it did not eliminate the incentive or require a refund of what had already been collected when the Company presented its increased $2.35 billion estimate. Mr. Esamann testified that the $6.5 million in funding commitments under the Settlement Agreement for LIHEAP, the Indiana Ratepayer Trust, and a new Duke/OUCC clean energy initiative will benefit customers.

Mr. Esamann stated that the EPA's greenhouse gas regulations do not apply to Edwardsport, and although the EPA could establish new CO_2 emission standards in the future, they would likely apply to Edwardsport only if any modifications are made to the IGCC Plant. He further explained that the Commission's CPCN Order required the Company to initiate a proceeding "regarding further study and potential implementation of partial CO_2 capture at the IGCC Project and further study and potential implementation of CO_2 sequestration and for enhanced oil recovery." The Company complied with the Commission's requirements and filed its Carbon Capture FEED Study Report with the Commission on June 24, 2011. The Company's request for approval of and cost recovery associated with the study of carbon storage is currently pending before the Commission in Cause No. 43653. Mr. Esamann believes that it would not be appropriate to modify the CPCNs at this late stage without the necessary evidence and cost analyses that are required to assess the reasonableness of adding CO_2 mitigation. He stressed, however, that Duke has not abandoned its plans to install CCS at Edwardsport. Mr. Esamann testified that the Company included alternative resource plans similar to the one identified by Mr. Kanfer in its IRP analysis and determined that such a plan would actually be more costly for customers. He further explained the additional factors that Duke considered in its IRP analyses related to minimizing environmental effects. Mr. Esamann responded that, although the Settlement Agreement does not specifically address this issue, all parties retain the right under the Settlement Agreement to present arguments and seek relief concerning the post-in-service operating performance of the IGCC Project.

b. Kent K. Freeman. Mr. Freeman explained that the Settlement Agreement's breakdown of the Hard Cost Cap into direct construction and AFUDC components was necessary for accounting reasons but that the Settling Parties reached an agreement as to an

overall IGCC Project cost cap and impairment amount, not direct cost and AFUDC components. Mr. Freeman modeled the cost estimate implications of altering how the costs are deemed to have been occurred, such as on a pro rata basis. Even if a pro rata approach were appropriate, based on his analysis, using a pro rata method changes the AFUDC/direct cost mix, but the change is not substantial.

Mr. Freeman explained that the IGCC Rider specifically allows the Company to recover construction costs prior to startup testing, commissioning, and in-service status, and that AFUDC is accrued only to the extent that the construction expenditures are not yet receiving CWIP ratemaking treatment. AFUDC accrual ceases once the expenditures begin receiving CWIP ratemaking treatment. Mr. Freeman also testified that the Settlement Agreement reflects the Settling Parties' agreement that direct costs and AFUDC up to the Hard Cost Cap are reasonable, that CWIP and/or AFUDC on such amounts are likewise reasonable, and that the amount of IGCC Project costs receiving CWIP ratemaking treatment to date is approximately $963 million on a total Company basis or approximately $887 million on a retail jurisdictional basis, which is well below the Hard Cost Cap of $2.595 billion. Mr. Freeman stated that if the Company did not receive CWIP, AFUDC would continue to accrue under traditional Indiana ratemaking principles until the next rate case, so customers would end up paying additional financing costs. Mr. Freeman responded that Mr. Ralph Smith's analysis ignores that, whether through CWIP, AFUDC accruals, or inclusion in rate base, utility plant investments earn a return/recovery of costs to finance the capital investments. He further explained that the impact of the Settlement Agreement Hard Cost Cap is only about a 6% increase in CWIP recovery over what would have occurred with the previously-approved $2.35 billion cost estimate. Mr. Freeman further explained the rider implementation proposal in detail and quantified the estimated rate impact of the Rider proceedings by rate group.

c. W. Michael Womack. Mr. Womack explained why the in-service date should not be tied to GE's NPI – the NPI is not a test to determine operational status, but rather is a GE contractual provision intended to validate GE's design criteria for multiple pieces of equipment in multiple scenarios, some likely and some not. The IGCC Project will, in fact, be dispatched into the Midwest Independent Transmission System Operator ("MISO") markets long before GE finishes its NPI testing.

Mr. Womack further responded that Duke is proceeding with due diligence and speed to complete the IGCC Project and place it in-service for the benefit of customers. But the Company is also proceeding carefully to ensure that all necessary testing and validation is done prior to putting the project in-service. The Company expects that the IGCC Project should be in-service by the first quarter of 2013 and has no reason to believe that the IGCC Project will not be in-service by the end of 2013. Because of this timing, the Company does not expect customers to incur negative impacts related to the tax incentives identified by Mr. Ralph Smith.

d. Danny Wiles. Mr. Wiles explained that the in-service criteria are generally consistent with, and indeed slightly more stringent than, traditional practices concerning in-service determinations for major new projects – practices that have been used by utilities across the country for many years.

e. Michael P. Gorman. Mr. Gorman testified that, in Phase I of this proceeding, he was of the view that Duke's request to modify its certificate to increase its cost estimate from

$2.35 billion to $2.88 billion should be denied because the increased costs were unreasonable, unnecessary, and imprudent. In Phase II, Mr. Gorman expressed the view that the Commission should deny Duke any recovery in excess of the $1.985 billion estimate due to concealment of significant relevant information and failure to timely disclose that information.

Nevertheless, in his Settlement testimony, Mr. Gorman explained that, given the wide ranging differences in the parties' positions and the substantial uncertainty and litigation/regulatory risk faced by the parties, the Settlement Agreement acceptably resolves the highly complex technical issues presented in the case. He stated that the Settlement Agreement represents a balanced outcome for customers of the disputed issues and will result in rates that are reasonable.

Mr. Gorman further testified that the $2.319 billion construction cost cap allows Duke only $94 million more than the $2.225 billion in construction costs already approved. Of the $775 million increase in construction costs since the Commission approved the estimate in the IGCC 1 Order, Duke will bear $681 million or almost 88% of the cost increase. Further, because of the Hard Cost Cap, the Company alone bears the risk of any future cost increases, not customers. Finally, Mr. Gorman testified that the approximately $700 million in construction costs to be absorbed by Duke will result in substantial savings to customers in the long term. Because Duke would have recovered not only the $700 million through depreciation but also a return on that amount, Mr. Gorman estimated that, over 30 years, customers will save approximately $1.7 billion in rate reductions.

With respect to the AFUDC component of the Hard Cost Cap, Mr. Gorman testified that the increase in direct costs of $94 million had very little impact on the amount of AFUDC. The amount of AFUDC accrued on the already-approved $2.225 billion in direct costs is about $268 million. More specifically, the AFUDC component of the Hard Cost Cap represents only approximately $8 million more than the AFUDC as of June 30, 2012 on the direct costs approved in IGCC-1. Mr. Gorman further testified that treating the Hard Cost Cap as the fair value of the IGCC Project will prevent the Company from seeking, in the future, a substantial increase in the IGCC Project's revenue requirement.

Mr. Gorman stated that the Hard Cost Cap, along with the CWIP provisions, are clearly defined economic conditions of the Settlement Agreement , and modification of either would distort the compromise achieved by the Settling Parties. Because of the Hard Cost Cap, customers will not pay costs that are properly categorized as construction costs even if such costs are incurred after the IGCC Project is declared in-service. Moreover, the Non-Settling Parties have the right to dispute the categorization or prudence of costs, as well as costs related to IGCC Plant operations.

Mr. Gorman also testified that this graduated approach to implementing the rate increase provides some relief to customers, as opposed to implementing the increase all at once.

f. Wes R. Blakley. Mr. Blakley noted the benefits of the modified depreciation rates in their supporting testimony. In particular, both Mr. Blakley observed that, normally, depreciation rates are only changed in base rate case proceedings, but customers will realize certain benefits from updated depreciation rates immediately upon approval of the Settlement Agreement. Mr. Blakley testified that it was reasonable for the Settlement Agreement to make

the change to treatment for deferred taxes on a prospective basis only. OUCC witness Wes Blakley testified that the Hard Cost Cap will result in a reduction to the annual revenue requirement paid by Duke customers. Specifically, he testified that the $700 million reduction in construction investment results in a reduced revenue requirement of $48.9 million on an annual basis, or approximately $73.4 million annually in year one on a grossed-up basis. Mr. Blakley also testified that additional savings in depreciation expenses are attributable to the Hard Cost Cap. Assuming a 30-year depreciation period, a $23.3 million reduction in the IGCC Project's annual revenue requirement can be calculated for depreciation, resulting in a reduced revenue requirement of approximately $96.7 million on an annual basis. Over thirty years, the reduced revenue requirements will result in approximately $1.5 to $2 billion in savings for customers.

g. Barbara A. Smith. Ms. Smith stated that the Settlement Agreement addresses the concerns raised by the OUCC in this proceeding regarding potential imprudence and gross mismanagement. She explained that, although the OUCC stands by its previous testimony, the Settlement Agreement puts the OUCC's claims to rest by providing substantial benefits to customers. Ms. Barbara Smith noted that the amount of the Hard Cost Cap resulted from extensive arms-length negotiations. Although the Settling Parties did not attempt to agree as to precisely what individual costs were prudently incurred, by setting the Hard Cost Cap at a level higher than Duke's currently approved IGCC Project costs, the Settlement Agreement reflects the fact that there are certain legitimate cost escalations that have occurred and may continue to occur in the future. The Hard Cost Cap is an amount that the Settling Parties agreed was reasonable, supported by the evidence of record and will provide certainty, with regard to costs, for the remainder of the life of the IGCC Project. The Settling Parties responded that the Settlement is in fact supported by the evidence. Ms. Barbara Smith further explained that the Non-Duke Settling parties believe that a $2.595 billion Hard Cost Cap – which results in a more than $700 million shareholder impairment – is reasonable and in the public interest. Ms. Barbara Smith explained that, given the evidence submitted in this proceeding, there is a range of reasonable outcomes, and $2.595 billion is within that range. Ms. Barbara Smith agreed that the rate case moratorium provides tangible benefits to customers. Although the OUCC does not necessarily place the same value as Duke does on the moratorium, the OUCC agrees that a two-year rate case moratorium will result in lower rates than customers might otherwise pay without this limitation. Ms. Barbara Smith responded to Mr. Olson's claim that the procedural schedule did not provide the Joint Intervenors adequate time to prepare their case. She testified that Duke filed its request for CPCNs for the IGCC Project in September 2006, and that since that time, there have been extensive proceedings, including discovery and public evidentiary hearings, in which OUCC and Joint Intervenors have participated.

C. Non-Settling Parties' Evidence.

a. Kerwin Olson. Mr. Olson argued that Edwardsport is an illegitimate power plant that should not have been approved during the CPCN proceeding and that Duke should not be permitted to rely on the CPCN or the IGCC-1 Orders. In his view, allowing the Company to recover $610 million dollars above the originally approved $1.985 billion cost estimate is a reward, not a penalty, and thereby does not constitute a significant disallowance. He recommended revocation of the IGCC Project's CPCNs, rescission of the CPCN and IGCC 1 Orders, and zero cost recovery for the IGCC Project.

The Joint Intervenors did not object to this provision in their initial pre-filed testimony, although, in supplemental testimony, Mr. Olson urged the Commission to scrutinize these provisions. Additionally, at the evidentiary hearing on July 16, 2012, the Joint Intervenors moved to dismiss these Settlement proceedings on the grounds that insufficient evidence had been offered to support the reasonableness of the attorney fees to be paid by Duke shareholders to the Non-Duke Settling Parties.

Joint Intervenors submitted no testimony or evidence opposing the remaining substantive provisions of the Settlement Agreement concerning Duke's claims against IGCC Project vendors or contractors, Duke's retention of intellectual property benefits, and customers' receipt of 100% of the applicable retail jurisdictional share of IGCC Project-specific funding such as incentive tax credits and property tax credits.

Mr. Olson testified that the Commission should reject the Settlement as a whole because it does not address Duke's alleged corruption of the regulatory process. He expressed concern that, if approved, all allegations against the Company concerning imprudence, fraud, concealment and gross mismanagement would "just 'go away.'" He also testified that the Commission should immediately open a Phase III investigation into whether improper communications, undue influence, conflicts of interest or other misconduct impacted the regulatory oversight of the IGCC Project, caused administrative due process violations, or constituted fraud on the tribunal. He believes it is "incomprehensible" that the Commission has not granted the Joint Intervenors' prior requests to initiate a Phase III investigation concerning such issues, particularly considering that the Commission has dismissed and reversed other cases based on the same events that would be the subject matter of a Phase III investigation. Mr. Olson also expressed concern that the Settlement Agreement purports to resolve all issues concerning ex parte communications, improper conduct, and undue influence with respect to the IGCC Project even though the Commission has never investigated such issues.

In supplemental testimony, Mr. Olson testified that Duke's course of conduct regarding a change in leadership and related events arising from the Company's merger with Progress Energy shows a pattern of Duke corporate misconduct under the leadership of its CEO, Mr. Rogers. He contends that Mr. Rogers' testimony highlights the Company's employment of "loophole lawyering," and that it is therefore critical for the Commission to closely review and scrutinize the fine print in the Settlement in order to find and properly evaluate the "devil in the details." He believes that a pattern of Duke corporate misconduct under Mr. Rogers' leadership is further exemplified by the allegations of concealment, ex parte communications, improper conduct, undue influence, conflicts of interest, and other misconduct that have been previously raised in this proceeding. He argued that a repudiation of past misconduct regarding regulatory review of the IGCC Project, and a concrete commitment by the Company that any such misconduct will not be repeated should be an essential part of any settlement in this proceeding.

The Company's witnesses did not specifically address Mr. Olson's allegations in the settlement phase of this proceeding on the grounds that (1) the Commission has, on numerous occasions, denied Joint Intervenors' attempts to include allegations of ex parte communications, improper communications, conflicts of interest, undue influence, etc., in this proceeding, (2) Duke had previously addressed such concerns, and (3) Mr. Olson's allegations are beyond the scope of the Settlement Agreement testimony.

Mr. Olson further testified that the procedural schedule approved by the Commission for consideration of the Settlement Agreement did not give the Joint Intervenors adequate time to complete their review and analyze the impact of the Settlement terms. He stated that the expedited procedural schedule hurt the Joint Intervenors' ability to prepare their case, and that in establishing the accelerated schedule, the Commission ignored the Joint Intervenors' previously filed verified statements explaining that they reasonably required up to and including July 27, 2012, to prepare their case. Mr. Ralph Smith stated more specifically that he needed more time to prepare his testimony due to the complexity of the accounting, tax, and ratemaking issues implicated by the Settlement, as well as his previous commitments to other clients. Mr. Schlissel echoed similar sentiments, stating that he had insufficient time to explore all issues raised in his testimony in greater detail and to coordinate his testimony with that of Mr. Ralph Smith.

b. Ralph C. Smith. Mr. Ralph Smith testified that the Settling Parties have failed to explain why the IGCC Project cost estimate of $2.595 billion (plus any additional AFUDC) is reasonable compared to the cost of alternative generation. In addition, he testified that the Settling Parties' rationale that the $2.595 billion cost estimate falls within the range of prior estimates supported by various parties in the proceeding is not sufficient to show that $2.595 billion is the appropriate number compared to other numbers that fall within the same ranges.

Even if there were substantial evidence demonstrating that these "first" costs are reasonable, Mr. Ralph Smith testified that such direct costs and related financing costs should be distributed pro rata or over an "S-curve" characteristic of major construction projects over the full time determined to be reasonably required to complete the IGCC Project.

Mr. Ralph Smith further argued that the Settlement creates a "matching" problem with respect to costs reviewed compared to costs to be recovered. He explained that the costs reviewed on the record in IGCC 4S1 extend only to the Company's $2.039 billion total investment through September 30, 2010, which is $556 million less than the $2.595 billion Hard Cost Cap. He testified that the $2.039 billion investment through September 30, 2010 is precisely the amount that the Non-Duke parties challenged when they presented evidence relating to imprudence, gross mismanagement, and concealment during Phases I and II of this proceeding. Under the Settlement, however, the Company will be able to recover the $2.039 billion investment that the Non-Duke parties challenged during Phases I and II, plus an additional $556 million.

Mr. Ralph Smith did not object to the Company's proposal to eliminate the deferred tax incentive prospectively, but argued that the Commission should also terminate the incentive on a retroactive basis. He contended that the Commission approved the deferred tax incentive to motivate the Company to contain IGCC Project costs within the original $1.985 billion cost estimate, and that the Company has known since at least May 2008 that the purpose of the deferred tax incentive would not be achieved. For these reasons, he recommended that the Commission eliminate the incentive, and that the deferred tax incentive collected in rates as a result of the IGCC 4 Order be refunded to customers. He further argued that any amount of AFUDC accrued and recovered by the Company through rates as a result of the deferred tax incentive should be credited back to customers, although he was not sure whether the deferred tax incentive actually affected AFUDC accruals.

c. David A. Schlissel. Mr. Schlissel agreed that the Hard Cost Cap does not provide for sufficient disallowances and that the Commission should not modify the CPCNs to include a higher approved cost estimate. He stated that Mr. Olson's proposal is one way that the Commission could limit cost recovery for the IGCC Project, but he also proposed two alternatives: (1) the Commission could hold Duke to its original cost estimate and preclude the Company from charging customers for any costs above $1.815 billion in direct construction costs plus financing charges accrued over a 47-month schedule, and rescind only the IGCC 1 Order (thereby keeping the CPCN Order and the IGCC Project's CPCNs in full effect); or (2) the Commission could hold the Company to its revised cost estimate and preclude it from charging customers for any costs above $2.35 billion (thereby keeping the CPCN Order, the IGCC 1 Order, and the IGCC Project's CPCNs in full effect but declining to modify the CPCNs with an even higher cost estimate).

Mr. Schlissel further argued that the Settling Parties have not provided sufficient evidence to show that the $2.595 billion Hard Cost Cap is just and reasonable and in the public interest. Specifically, Mr. Schlissel testified that the record evidence shows that $2.595 billion is significantly higher than the reasonable and prudent costs that should be added to rate base when the IGCC Project goes into service. He referred to his testimony from Phase I and Phase II of this proceeding as evidence that the Company imprudently and grossly mismanaged the IGCC Project, and contends that the IGCC Project's cost overruns are a product of such gross mismanagement and mismanagement.

According to Mr. Schlissel, the Settling Parties are effectively requesting the Commission to find that all of the first $2.319 billion in direct costs incurred and all of the first $276 million in AFUDC accrued on the IGCC Project are reasonable, but there is no evidence demonstrating that these "first" costs were not affected by the Company's "gross mismanagement or mismanagement" of the IGCC Project, or by the improper conduct of the Company's contractors or subcontractors.

Mr. Schlissel also took issue with the Hard Cost Cap because they contend that it is actually a "firm floor" that assures the Company of cost recovery through rates for the first $2.319 billion of direct costs and associated AFUDC incurred on the IGCC Project, while also allowing the Company to recover additional revenues above the cost cap, *e.g.*, AFUDC accruals, CWIP, and potential post-in-service O&M costs. Specifically, Mr. Schlissel objected to the fact that the in-service criteria together with the rate treatment being requested by the Company in IGCC-8 allows the entire $2.595 billion to be placed into rates as CWIP before the IGCC Project is "substantially" completed, or before the gasification island produces any syngas. He stated that although the Company is currently forecasting an in-service date in late 2012, several factors have already led to the delay of the IGCC Project's in-service date. Also, the Company's current forecast for substantial completion of the IGCC Project is the first quarter of 2013, but there is evidence that the Company has considered pushing that date past the first quarter of 2013. Mr. Schlissel contends that, given the problems that have already been experienced during start-up and testing and considering the potential for further problems down the line, it is conceivable that "the Company would be accruing AFUDC and collecting revenues from its customers related to the $2.595 billion in CWIP-related revenues for perhaps 6 to 9 months (or longer) before the IGCC Project is in commercial operation. These costs are above the so-called 'hard cost cap' in the proposed Settlement Agreement." Mr. Schlissel testified that this could result in an additional $30 to $35 million in AFUDC accrued after June 30, 2012 being included in rates as

CWIP before the IGCC Project is even operational.. Similarly, Mr. Ralph Smith testified that the $2.595 billion provided for in the Settlement is not the total cost to customers to complete the IGCC Project, but rather, reflects an amount of direct costs and AFUDC accruals as of June 30, 2012, and customers will be responsible for additional AFUDC and CWIP-related charges after June 30, 2012. Mr. Ralph Smith further testified that customers will continue to pay financing costs during the remaining construction period as a result of CWIP-related financing charges and that, if the Settlement Agreement is approved, the amount of CWIP-related financing charges resulting from the Settlement Agreement could exceed $655 million. He said that such an amount "would appear" to be over and above the hard cost cap.

Mr. Schlissel also objected to the in-service date and in-service criteria set forth in the Settlement Agreement, contending that these provisions do not adequately protect customers from additional costs. He argued that the in-service criteria are vague as to how long and at what power levels the IGCC Project must operate on both natural gas and syngas before it may be deemed in-service, and that the IGCC Project could thereby be declared in service even if it has only operated for short periods of time on either natural gas or syngas and/or at only low power levels on either fuel. He also contends that the in-service criteria allow the Company to deem the IGCC Project in-service before all of the relevant testing and commissioning activities have been completed, and that customers could be responsible for additional costs if the plant is shut down or de-rated for extended periods of time to fix problems that should have been detected through additional testing and commissioning activities. Mr. Schlissel further argued that the in-service criteria do not protect customers from additional costs resulting from future delays in the final completion of start-up, testing, commissioning and GE New Product Introduction ("NPI") activities, or delays resulting from problems identified after the IGCC Project is declared in-service that may stem from the Company's alleged mismanagement or gross mismanagement of the IGCC Project, or the mismanagement of its contractors or subcontractors. He points to Mr. Womack's testimony in IGCC 9 to suggest that the Company may be mismanaging the start-up, testing, validation and commissioning program at Edwardsport, although he acknowledged that he did not explore this issue in detail. Mr. Schlissel also pointed to his Phase I and Phase II testimony as evidence that the Company mismanaged or grossly mismanaged aspects of the IGCC Project.

Mr. Schlissel contends that the Company has accelerated its projected in-service date ahead of the IGCC Project's completion date, and that it may be imprudently rushing start-up, testing and commissioning activities in order to "rush Edwardsport into rates as quickly as it can." To ensure that customers are adequately protected from having to pay certain repair costs resulting from the IGCC Project being deemed in-service "too soon," Mr. Schlissel recommended that the Commission adopt alternative in-service criteria for the IGCC Project, specifically: (1) the startup testing, commissioning, validation and GE NPI programs shall be fully and successfully completed, including a successful uninterrupted run of at least 100 hours on syngas during which power is furnished to the grid at levels between 95 percent and 100 percent of the plant's rated power; (2) the plant and associated transmission facilities shall have been tested and found capable of supplying to Duke's customers their full share of its rated power; (3) the plant shall have demonstrated full compliance with all air permit requirements; and (4) the plant shall be supplying electricity to the grid with the output scheduled by the appropriate load dispatcher. Mr. Schlissel acknowledged, however, that he did not explore the issue of whether the Company has accelerated its projected in-service date to "rush" the IGCC Project into rates in detail. Mr. Ralph Smith also testified that the IGCC Project's in-service date

has important implications for accounting, tax, and ratemaking purposes. In particular, Mr. Ralph Smith suggested that the IGCC Project's eligibility for various tax incentives may be adversely affected if the in-service date is delayed.

Mr. Schlissel also objected to the Settlement Agreement – as he has previously in this subdocket, in the CPCN proceeding, and in earlier IGCC Rider proceedings – because there is no provision that protects customers against a possibility that Edwardsport will not operate at or near its projected availability and capacity factors. Further, Mr. Stultz explained in Phases I and II of the proceeding why guarantees of this nature are not necessary or reasonable.

Additionally, Mr. Schlissel objected to the Settlement claiming that the Company has requested the Commission to approve the Settlement without making any findings on evidence of imprudence, fraud, concealment and/or gross mismanagement or mismanagement, and that any such ruling would make it difficult for any Non-Duke party to prove that post in-service costs were the result of Duke's gross mismanagement or mismanagement of the IGCC Project or that of the Company's contractors. In response, Ms. Barbara Smith testified that, although the Settling Parties did not come to a common conclusion regarding imprudence, concealment, fraud, and gross mismanagement, to the extent such activities occurred, the Settling Parties agree that the transfer of responsibility for $700 million in costs from customers to the Company's shareholders is sufficient to address any imprudence, concealment, fraud, or gross mismanagement that may have occurred.

d. Nachy Kanfer. Mr. Kanfer testified that the Commission should reject or modify the Settlement because it does not provide for CO_2 mitigation. He contends that, because Duke has opted not to pursue carbon capture and sequestration ("CCS") technology at the present time, and given the amount of CO_2 emissions that Edwardsport will produce for at least 30 years, there should be an alternative method of CO_2 mitigation for the IGCC Project. Although Mr. Kanfer recognized that there are no current regulations or legislation in place that set CO_2 limits for Edwardsport, he asserted that "[t]here is little doubt that a federal carbon management regime – whatever form it ultimately takes – would pose additional cost on carbon-intensive facilities such as Edwardsport IGCC." He opined that there are foreseeable business and financial risks that: (1) CO_2 permit limits will be set for the IGCC Project within the next 20 years, and (2) there will be civil penalties for global damages claimed to result from the IGCC Project's CO_2 emissions. He also stated that the Commission's resource planning rules require the Commission to evaluate and address these types of business and financial risks to Duke and its customers, as well as changes in federal and state energy and environmental policies.

Because the Company has asked the Commission to modify the IGCC Project's CPCNs with respect to the cost estimate, Mr. Kanfer believes that this is also an appropriate time for the Commission to modify the CPCNs to impose CO_2 mitigation requirements. He recommended that the Commission require the Company to mitigate approximately 2 million tons of CO_2 emissions per year over the course of the IGCC Project's projected 30-year operating life. He explained that the Commission could achieve this result by requiring Duke to retire more old coal plants, with retirements occurring sooner than currently planned, and that the retired coal-fired capacity and energy be replaced by significant increases in end-use efficiency and renewable generation, including distributed renewable generation.

8. **Statutory Framework.** The Petition filed in this matter is governed by several Indiana Code provisions that must be examined together by the Commission in reaching a determination as to whether the Settlement Agreement is in the public interest. An overview of the statutory provisions is set forth as follows:

A. Utility Powerplant Construction. Under Indiana Code § 8-1-8.5-2, a public utility may not begin construction, purchase, or lease of any facility for the generation of electricity without first obtaining a CPCN from the Commission.

Under Indiana Code § 8-1-8.5-5, an application for a CPCN may only be granted after a hearing, and if the Commission has: (1) made a finding as to the best estimate of construction, purchase, or lease costs based on the evidence of record; (2) made a finding that either such construction, purchase, or lease will be consistent with the Commission's plan for expansion of electric generation capacity, or that the construction, purchase, or lease will be consistent with a utility specific proposal as to the future needs for electricity to serve the people of the state or the area served by the utility; (3) made a finding that the public convenience and necessity require or will require the construction, purchase or lease of the facility; and (4) made a finding that the facility, if it is a coal-consuming facility, utilizes Indiana coal or is justified, because of economic considerations or governmental requirements, in using non-Indiana coal.[4]

Once the Commission has granted a CPCN for a project, the utility may either submit to ongoing review of the construction of the project by the Commission, or may defer review of the project construction until the utility's next base rate case. With regard to the ongoing review process, Indiana Code § 8-1-8.5-6 provides that:

> (a) . . . the commission shall, at the request of the public utility, maintain an ongoing review of such construction as it proceeds. The applicant shall submit each year during construction, or at such other periods as the commission and the public utility mutually agree, a progress report and any revisions in the cost estimates for the construction.
>
> (b) If the commission approves the construction and the cost of the portion of the facility under review, the certificate shall remain in full force and effect.
>
> (c) If the commission disapproves of all or part of the construction or cost of the portion of the facility under review, the commission may modify or revoke the certificate.

Under Indiana Code § 8-1-8.5-6.5, absent a finding of fraud, concealment or gross mismanagement, a utility that has requested ongoing review is entitled, for subsequent ratemaking purposes, to recovery of actual costs, which have been incurred in reliance on a CPCN and any modifications, approved by the Commission.

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[4] We recognize that in *General Motors Corp. v. Indianapolis Power & Light Co.,* 654 N.E.2d 752 (Ind. Ct. App. 1995), the Court of Appeals declared that a portion of Indiana Code § 8-1-2-6.6 relating to Indiana coal violates the Commerce Clause of the United States Constitution. The Court severed the unconstitutional provision from the remainder of the statute which was held to be valid and effective.

B. Clean Coal Technology. Indiana Code § 8-1-8.7-1 defines "clean coal technology" as a technology: (1) that is used in a new or existing electric generating facility and directly or indirectly reduces airborne emissions of sulfur or nitrogen based pollutants associated with the combustion or use of coal; and (2) that either: (A) is not in general commercial use at the same or greater scale in new or existing facilities in the United States as of January 1, 1989; or (B) has been selected by the United States Department of Energy for funding under its Innovative Clean Coal Technology program and is finally approved for such funding on or after January 1, 1989.

Pursuant to Indiana Code § 8-1-8.7-3, "a public utility may not use clean coal technology at a new or existing electric generating facility without first applying for and obtaining from the commission a certificate that states that public convenience and necessity will be served by the use of clean coal technology."

When determining whether to grant a certificate under Indiana Code § 8-1-8.7-3, the Commission shall examine the following factors:

> (1) The costs for constructing, implementing, and using clean coal technology compared to the costs for conventional emission reduction facilities.
>
> (2) Whether a clean coal technology project will also extend the useful life of an existing electric generating facility and the value of that extension.
>
> (3) The potential reduction of sulfur and nitrogen based pollutants achieved by the proposed clean coal technology system.
>
> (4) The potential reduction of sulfur and nitrogen based pollutants that can be achieved by conventional pollution control equipment.
>
> (5) Federal sulfur and nitrogen based pollutant emission standards.
>
> (6) The likelihood of success of the proposed project.
>
> (7) The cost and feasibility of the retirement of an existing electric generating facility.
>
> (8) The dispatching priority for the facility utilizing clean coal technology, considering direct fuel costs, revenues and expenses of the utility, and environmental factors associated with byproducts resulting from the utilization of the clean coal technology.
>
> (9) Any other factors the commission considers relevant, including whether the construction, implementation, and use of clean coal technology is in the public's interest.

Under Indiana Code § 8-1-8.7-4, as a condition for receiving the certificate an applicant must file an estimate of the cost of constructing the clean coal technology. Furthermore, a certificate shall only be granted if the Commission has: (1) made a finding that the public convenience and necessity will be served by the construction, implementation and use of the clean coal technology; (2) approved the estimated costs; (3) made a finding that the facility where the clean coal technology is employed: (A) utilizes and will continue to utilize Indiana coal as its primary fuel source; or (B) is justified, because of economic considerations or governmental requirements, in utilizing non-Indiana coal;[5] after the technology is in place; and (4) made a finding on each of the factors described in Indiana Code § 8-1-8.7-3(b), including the dispatching priority of the facility to this utility.

Indiana Code § 8-1-8.7-7 states that the Commission shall at the request of the public utility maintain an ongoing review of that construction as the construction proceeds. The applicant shall submit each year during construction or at other times as the Commission and the public utility mutually agree a progress report and any revisions in the cost estimates for the construction.

If the Commission approves the construction and the cost of the part of the clean coal technology system under ongoing review, the approval forecloses subsequent challenges to the inclusion of that part of the clean coal technology system in the public utility's rate base on the basis of excessive cost, inadequate quality control, or inability to employ the technology. Indiana Code § 8-1-8.7-7(c). However, "the utility may recover [certain costs] over a reasonable period of time through rates, absent fraud, concealment, or gross mismanagement." Indiana Code § 8-1-8.7-7(d).

9. Commission Discussion and Findings.

A. Continuing Need for the IGCC Project. Since the Commission issued the CPCN Order, the Joint Intervenors have repeatedly questioned the continuing need for the IGCC Project principally due to the current economic recession, citing Indiana 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.

The Company has repeatedly countered the Joint Intervenors' arguments with evidence that the reduction in load caused by the state of the economy is temporary and that load demand will resume its upward trend once the economic downturn passes. The evidence provided by the Company describes several trends in leading economic indicators which, while not dispositive,

[5] *See supra* note 3.

are significant in forecasting the direction of the economy. The Company has provided several witnesses who argue that the trends point to a recovering economy and therefore, an economy which will eventually need additional energy. Furthermore, Janice Hager testified that Duke's 2009 Integrated Resource Plan ("IRP") and updated model runs for this proceeding "have consistently shown that the Company has a continuing need for the IGCC plant's baseload capacity."

We continue to find testimony provided by the Company to be 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. Furthermore, the Company has provided substantial evidence of its overall need for baseload capacity. Based on the evidence presented in this matter, we conclude that the Company has demonstrated that the IGCC Project is still needed by the Company for baseload capacity and that the public convenience and necessity continues to require the construction and completion of the IGCC Project.

B. Ongoing Review Progress Reports for IGCC-4, 5 and 6. The information presented by Mr. Womack and other Duke Witnesses came under heavy scrutiny in Phase I of this proceeding. The Non-Duke Parties and the Commission questioned the witnesses at length regarding many different topics, but most significant was the questioning regarding contractor driven costs and grey water disposal issues. These issues will be addressed below. For purposes of the ongoing review, the Company has satisfied the information reporting requirements to the Commission as specified in our Orders in Cause Nos. 43114 IGCC-1 and 43114 IGCC-2. Therefore, we approve the ongoing review progress reports for IGCC-4, 5 and 6.

C. Cost Estimate Increase. In Phase I, Duke sought to increase the cost estimate for the IGCC Project from $2.35 billion to $2.88 billion. Duke argued that the cost increase at issue was driven by issues related to the disposal of grey water; the increase in required bulk commodity quantities stemming from underestimations by the contractor; and lower than anticipated labor productivity (and therefore higher labor costs), largely driven by changes in scale and scope between the FEED Study and final engineering. The OUCC, Industrial Group and the Joint Intervenors argued that the requested cost increase was not prudent and recommended that the Commission deny Duke's request to modify the estimate from $2.35 billion because the increased costs sought were unreasonable, unnecessary, and imprudent.

Indiana Code §§ 8-1-8.5-6.5 and 8-1-8.7-8 preclude a utility from including in its rate base costs in excess of the estimate found by the Commission as the basis for the CPCN unless shown by the utility in construction of that facility to be "necessary and prudent." Based on the construction of the CPCN statutes, we apply a similar review standard as part of the ongoing review in Indiana Code §§ 8-1-8.5-6(a) and 8-1-8.7-7(b), as related to the cost estimate.

Thus, a company must demonstrate that its new cost estimate is necessary in order to complete the project and the incurrence of such costs is prudent. Garner's Dictionary of Legal Usage (3rd Edition) defines "necessary" in its more common form as essential. A component which is essential for the operation of a plant would be a necessary component, and thus would result in a necessary cost. Black's Law Dictionary (5th Edition) defines "prudency" as:

> Carefulness, precaution, attentiveness, and good judgment, as applied to action or conduct. That degree of care required by the exigencies or circumstances under which it is to be exercised.

Consequently, prudency is a standard by which a utility's conduct or actions are evaluated. *Duke Energy Indiana, Inc.*, Cause No. 38707 FAC 76 S1, 2009 Ind. PUC Lexis 400 (IURC October 21, 2009). It is the degree of care required by the circumstances under which the action or conduct is to be exercised and judged by what is known, or could have reasonably been known, at the time of the conduct. In other words, whether an action will be considered prudent depends on whether the action would be considered reasonable by a person with similar skills and knowledge under similar circumstances. It is a term often used interchangeably with what is considered "reasonable" under the circumstances. The Commission must determine whether decisions were made in a reasonable manner in light of the conditions or circumstances that were known or reasonably should have been known when the decision was made. *New England Power Co., 31 FERC* ¶ 61,047 at 61,084 (1985), *aff'd sub nom., Violet v. FERC,* 800 F.2d 280 (1st Cir. 1986). Duke bears the burden of proving the cost estimate is reasonable and necessary. However, Duke's conduct is presumed to be prudent unless the Non-Duke Parties present evidence that raises a question about Duke's actions. *Petition of Indiana Michigan Power Co. for Authority to Increase its Rates and Charges for Elec. Serv.*, Cause No. 39314, 1993 Ind. PUC Lexis 460, *11-12 (IURC November 12, 1993).

The efficient application of the Commission's oversight role is not served well by exhaustive discussion of every decision or action by the Company involving the IGCC Project. Instead, the Commission will focus its discussion on the decisions and actions of the Company which had the most significant impact on the cost increase of the IGCC Project. Accordingly, we address the two primary drivers of the cost increase at issue in Phase I, the unexpected growth in commodity quantities[6] and the choice of a disposal system for grey water.

a. Contractor Driven Costs. The Industrial Group, OUCC and Joint Intervenors argued that Duke's failure to properly manage its contractors led to the unexpected commodity quantity growth, and the increased costs of the IGCC Project. In response, Duke acknowledged that the commodity quantities reported by Bechtel began increasing over the budgeted quantities starting approximately May 2009. However, Duke argues that it could not have reasonably been aware of the magnitude of the increases until October 2009. The eventual large increases that came to light in October 2009 became known as the "October surprise."

Dr. Galloway testified that GE and Bechtel are experts in the IGCC design process and mega-project power industry and were responsible for estimating and reporting to Duke the work being performed. Dr. Galloway stated further that although Duke prudently managed GE and Bechtel, some avoidable and controllable costs may have been incurred because of these contractors' performance, but Duke should not be responsible for those costs. Additionally, Dr. Galloway stated that Duke had no reason to anticipate that GE or Bechtel would perform in a manner inconsistent with prudent utility practice.

[6] The third driver, lower than expected labor productivity, was driven primarily by commodity quantity growth, so for purposes of the following discussion labor productivity is considered a subset of commodity quantity growth.

Duke witnesses imply that noteworthy problems with its primary contractors began with the "October surprise." However, that assertion does not comport with the evidence presented in Phase I of this proceeding. As early as April 2007, Duke was investigating alternatives to using the GE/Bechtel Alliance to move forward with the IGCC Project. In fact, evidence shows that by December 2007, Duke was considering replacing Bechtel with another major contractor. By July 2008, Duke was communicating to GE that Duke considered GE's performance on the IGCC Project a 3 or 5 out of 10. Further, Duke was telling Bechtel that Bechtel's performance was 5 out of 10. Thus, Duke was expressing dissatisfaction with GE and Bechtel well before October 2009. Therefore, it seems reasonable that Duke would have taken steps to ensure that the information it was receiving from its contractors was accurate, complete, timely and reliable.

However, the evidence of record shows that Duke placed faith in its contractors and that the sufficiency of the contract and its terms that support that faith remain an outstanding question. Now, Duke contends that it should be able to seek recovery of these imprudent costs caused by its contractors, from its retail customers. However, we do not find it reasonable for ratepayers to pay for the imprudent actions of Duke's contractors that a prudent contract would have placed on such contractors. Duke had an obligation to prudently manage its contractors and the terms of the contractual arrangements are a component of the means to accomplish such management. Furthermore, as Richard W. Haviland, Senior Vice President of Construction and Major Projects for Duke stated in his testimony, "[o]ne of our roles as owner on the Project was to hold GE and Bechtel accountable for performance of their [respective] scopes of work."

Duke effectively asked this Commission to charge the ratepayers for the commodity driven cost overruns and then allow it to pursue litigation of the contract terms with its primary contractors, pledging to provide compensation to the ratepayers once such litigation was complete. However, Duke was unwilling to sufficiently define its litigation strategy or even estimate the likely financial outcome of any litigation. The evidence of record in this proceeding does not support that Duke fulfilled its responsibility to hold its primary contractors accountable through the terms of its contract with them or the management of such terms. Therefore, Duke has not met its burden of showing that the management of its contractors was prudent.

b. Grey Water Issues. The Industrial Group, OUCC and Joint Intervenors also argued that Duke mishandled the process of selecting a solution for the treatment and disposal of grey water. The initial FEED Study presented the option of utilizing the zero liquid discharge ("ZLD") method of disposal of grey water. However, in 2006, Duke chose to pursue a method called DWI instead. In 2006, Subsurface Technology, a Duke contractor, informed Duke that the DWI option was reasonable and substantially less costly than the ZLD option. However, in November 2007, GE revised its estimates of the composition of the grey water and informed Duke that its contents would be deemed hazardous under the Resource Conservation and Recovery Act ("RCRA"). The IGCC Project Management team did not immediately pass the revised grey water information onto senior Duke Management. Instead, it spent several months looking at the implications of the revised GE estimate. Duke's own witness on prudency, Dr. Galloway, testified that the decision to stay with DWI after GE revised the composition estimate instead of promptly moving to ZLD was imprudent. The decision to continue with the DWI option after receiving the revised GE estimate was indicative of poor management. Further, the costs Duke incurred to pursue DWI after GE informed Duke would likely be hazardous were unreasonable.

Therefore, based on the evidence of record, the Commission finds that the evidence in Phase I supports a finding that Duke's decision to continue with the DWI option after learning that the grey water would likely be hazardous was imprudent and that with regard to the management and control of its contractors, GE and Bechtel, Duke has not met its burden to show the prudency of the entire revised $2.88 billion cost estimate. As discussed below, the Settlement Agreement establishes a cost estimate for the IGCC Project's modified CPCN that lies within the range of prudent and necessary cost estimates supported by substantial evidence of the parties.

D. Fraud, Concealment, and Gross Mismanagement. In Phase II, the OUCC, Industrial Group and the Joint Intervenors accused Duke of fraud, concealment and gross mismanagement. Additionally, the Non-Duke Parties recommended that the Commission should limit Duke's recovery to the original $1.985 billion cost estimate, or less. Duke responded by denying the Non-Duke Parties' accusations of fraud, concealment and gross mismanagement.

The Commission has approved prior cost estimates up to $2.35 billion as reasonable and necessary. Indiana Code § 8-1-8.5-6.5 states that "[a]bsent fraud, concealment, or gross mismanagement, a utility shall recover through rates the actual costs the utility has incurred in reliance on a certificate issued under this chapter...." Thus, once the Commission has reviewed and accepted Duke's cost expenditures as prudent, those costs are not subject to further scrutiny under the prudence standard. Rather, the costs that the Commission has already scrutinized and determined were prudent may only be disallowed if evidence shows fraud, concealment, or gross mismanagement.

Neither the General Assembly nor the Courts have defined fraud, concealment, or gross mismanagement in the context of powerplant construction; and we have not previously addressed this issue. Thus, we may look to non-utility related definitions. Under Indiana law to prove fraud, there must be evidence of "a material representation of past or existing fact, which representation is false, made with knowledge or reckless ignorance of its falsity, which causes reliance to the detriment of the person relying upon it." *First Nat'l Bank of New Castle v. Acra*, 462 N.E.2d 1345, 1348 (Ind. Ct. App. 1984). Black's Law Dictionary defines concealment as "[t]he act of refraining from disclosure." In insurance law, concealment "implies an intention to withhold or secrete information so that the one entitled to be informed will remain in ignorance." *Indiana Insurance Co. v. Knoll et al.*, 236 N.E.2d 63, 70 (Ind. Ct. App. 1968). The OUCC witnesses defined "gross mismanagement" as "a set of circumstances resulting from management ineptitude or oversight that severely hampers accomplishment of project goals." Duke argued that to establish "gross mismanagement", the Non-Duke Parties "must show that Duke Energy Indiana acted with a knowing or reckless disregard of adverse consequences and that its conduct was so outside the bounds of reasonable management as not to be debatable." However, in order to establish gross mismanagement, there must be more than just evidence of imprudence. A useful analogy can be found in negligence law. For example, "companies engaged in the generation and distribution of electricity have a duty to exercise reasonable care to keep distribution and transmission lines safely insulated in places where the general public may come into contact with them." *NIPSCO v. Sharp*, 790 N.E.2d 462 (Ind. 2003) (quoting *NIPSCO v. E. Chicago Sanitary Dist.*, 590 N.E.2d 1067, 1072 (Ind. Ct. App. 1992)). In order to prove gross negligence, a party would have to show that a utility "breached its duty to exercise reasonable care to keep its transmission lines safely insulated in places where the general public may come into contract with them by engaging in a conscious, voluntary act or omission in

reckless disregard of the consequences." *Id.* at 466. Thus, a showing of gross negligence requires a different level of conduct than negligence. Likewise, gross mismanagement requires a different level of conduct than mere imprudence.

In Phase II, relying on both the Phase I and the Phase II records, the Non-Duke Parties presented testimony and evidence alleging that:

- Duke concealed or grossly mismanaged its consideration of "first mover" risks and thereby understated the possibility of cost and schedule overruns;
- The Company grossly mismanaged the FEED Study and the development of the initial cost estimate or concealed the extent to which that Study and estimate were still incomplete or had been modified;
- The Company concealed its consideration of and preference for certain contracting approaches and delivery methodologies for the IGCC Project – including the alleged availability of a lump-sum, turnkey engineering and construction execution contract – and the associated risks of the contracting approach that it adopted and that the Company grossly mismanaged the chosen contracting approach and delivery methodology;
- The Company grossly mismanaged the IGCC Project's organization and controls by beginning the project with inadequate schedule and cost measurement tools and by repeatedly modifying the IGCC Project's management organization;
- The Company grossly mismanaged its analysis of the need for the IGCC Project by delaying IRP studies and using unreasonable assumptions for those studies;
- The Company concealed IGCC Project-related information from the Commission that would have disclosed cost overruns, schedule delays, and evolving management problems;
- The Company fraudulently misrepresented certain project risks to the Commission, and certain communications between the Company and former-Chairman Hardy constituted fraud on the Commission;
- The Company's cost reports to the Commission concealed cost increases and misrepresented the Company's gross mismanagement of essential project cost controls; and
- Duke failed to timely inform the Commission and the Parties, and thus concealed information about issues associated with the feasibility of its DWI plan and with the chemical composition of its grey water.

In response, Duke presented substantial testimony and evidence that it contends demonstrates that:

- The Company reasonably: (a) assessed first-mover risks based on the information known in the industry at the time through the preparation of an in-depth FEED Study, and its disclosures to the Commission were consistent with the knowledge in the industry at the

time, (b) recognized that the IGCC Project was not a first-of-a-kind technology, but that it was the first time the technology was being used at this scale, and (c) took steps to mitigate the risks associated with the IGCC Project, including through the preparation of an in-depth FEED Study, as well as the contracting structure it adopted;

- The Company acted reasonably in preparing and relying on the FEED Study and cost estimate by: (a) achieving the objectives of the FEED Study and completing the study before completing the cost estimate, (b) contracting with two world-renowned experts to develop the FEED Study and cost estimate, and reasonably overseeing those experts' work, including conducting its own internal review of the cost estimate using an outside estimating expert, (c) reasonably relying on a reference plant and the FEED Study for the development of the cost estimate, (d) completing a reasonable amount of design and engineering work before completing the estimate, (e) properly commencing construction before the engineering work was complete, and (f) informing the Commission and other parties with information the Company deemed relevant and requested by the Commission, as well as responding to discovery requests and other requests for information throughout prior proceedings concerning the IGCC Project;

- The Company reasonably performed its analyses of the need for the IGCC Project by: (a) using reasonable and reliable assumptions in its IRP analysis, (b) reasonably opting not to use high-capital cost sensitivities when detailed cost estimates had been undertaken, (c) reasonably identifying when the project could no longer be completed under the approved estimate, and (d) completing an updated cost estimate and IRP analyses in a timely manner;

- The Company reasonably assessed the pros and cons of different contracting approaches and delivery methods and acted reasonably in executing its contracts with GE and Bechtel by: (a) engaging in extensive negotiations with Bechtel and GE, (b) achieving concessions from Bechtel, (c) entering into the best contract available in light of contemporaneous market conditions, (d) maintaining an industry-standard flexible contracting approach that could be reassessed as the needs of the IGCC Project evolved, and (e) timely informing the Commission of its selected contracting approach and delivery method;

- The Company instituted reasonable project management and project controls by: (a) placing experienced managers on the IGCC Project based on the needs of each phase of the IGCC Project, (b) implementing reasonable project controls as needed for each phase of the IGCC Project, (c) reasonably overseeing and challenging its contractors, and (d) providing the Commission with information regarding the major issues as they developed on the IGCC Project;

- The Company: (a) reported extensively to the Commission through its twice-yearly progress reports, which includes issues associated with the feasibility of its DWI plan and with the chemical composition of its grey water, (b) accurately and comprehensively described the status of the IGCC Project's costs and schedule in regular reports to the Commission, and (c) reasonably and appropriately evolved IGCC Project reports so that they would meet changing IGCC Project needs to assure adequate cost and schedule controls;

- The Company's contacts with former-Chairman Hardy did not relate to issues that were pending with the Commission, and the communications did not divulge information that was not being shared with intervenors or the OUCC; and

- That conduct in Phase I was prudent, and therefore could not constitute gross mismanagement.

The Non-Duke Parties have the burden of proving fraud, concealment and gross mismanagement. We find that, on the basis of the competing evidence presented in Phase II of this proceeding, the Non-Duke Parties have not met their burden of proof with regard to fraud, concealment or gross mismanagement. Furthermore, while certain Non-Duke witnesses used the word "fraud" to describe the Company's behavior, the Non-Duke Parties did not attempt to prove the elements of fraud. While the planning and construction of the IGCC Project has been less than ideal, the evidence offered by the Non-Duke Parties does not reach the level of gross mismanagement. Additionally, allegations of concealment fail because the evidence shows that the Company did not seek to hide information. In fact, the evidence of record shows that the Company has provided the Commission and parties with a significant amount of information about the IGCC Project, beginning with the CPCN case, and throughout the IGCC ongoing review filings at subsequent six-month intervals.

Notwithstanding the above conclusions' on the IGCC Project itself, Duke's management of the regulatory process warrants discussion. Throughout this proceeding, the IGCC Project has been called a mega-project. According to Dr. Galloway, "mega-projects are generally defined within the industry as very large-capital investment projects (costing more than $1 billion USD) that attract a high level of public attention or political interest because of substantial direct and indirect impact on the community, environment, and companies that undertake such projects." Further, Dr. Galloway testified that one examines and analyzes the management of a typical construction project differently than a mega-project. However, Duke approached the regulatory process relating to the IGCC Project as if it was seeking regulatory approval of a typical construction project. For example, in the ongoing review proceedings, Duke's witnesses provided a high level overview of the progress of the IGCC Project. This may be appropriate for a typical construction project, but the sheer quantity of data in this proceeding amplified the informational asymmetry advantage of the utility. Thus, the regulatory playing field was unreasonably skewed against the Non-Duke Parties. If the Non-Duke Parties wanted to fill in the details they had to examine thousands of pages of documents provided by the Company. It would seem a reasonable expectation of the Non-Duke Parties to be able to rely on the Company to provide the relevant information and specifically identify key issues or matters about the IGCC Project in the testimony in the ongoing review proceedings.

Therefore, it was important for Duke to present all relevant information available on a timely basis so that the Non-Duke Parties could pursue reasonable discovery in their efforts for an informed outcome. Duke failed to reasonably assist the regulatory process by keeping the Non-Duke Parties properly informed in the ongoing review proceedings. The failure to keep the Parties informed of the details of major events such as the Company's involvement in eliminating the LSTK and the quality of the cost estimate coming out of the FEED Study played a significant role in contributing to regulatory inefficiency which brought the regulatory process to a grinding halt.

The regulatory bargain that is embodied in the CPCN statutes provides for a distribution of the company's project risk to its ratepayers in exchange for the company's reasonable management for the planning and provision of service. The efficient application of this risk transfer depends heavily on the ability of the ratepayer's advocates to understand the project's risks and rewards. The mega-project nature of the IGCC Project put the Non-Duke Parties in a position where they had to rely excessively on Duke to provide a reasonably complete picture of what was happening with the IGCC Project.[7] However, Duke elected to filter the information it provided in a manner that did not paint a detailed picture of the hurdles and issues it was facing as the IGCC Project advanced, and as a result, unreasonably hindered the ability of the Non-Duke Parties to present an informed case.

E. Standard for Commission Review of Settlement Agreements. Settlements presented to the Commission are not ordinary contracts between private parties. *United States Gypsum, Inc. v. Indiana Gas Co.*, 735 N.E.2d 790, 803 (Ind. 2000). Any settlement agreement that is approved by the Commission "loses its status as a strictly private contract and takes on a public interest gloss." *Id.* (quoting *Citizens Action Coalition v. PSI Energy, Inc.*, 664 N.E.2d 401, 406 (Ind. Ct. App. 1996)). Thus, the Commission "may not accept a settlement merely because the private parties are satisfied; rather [the Commission] must consider whether the public interest will be served by accepting the settlement." *Citizens Action Coalition*, 664 N.E.2d at 406. Furthermore, any Commission decision, ruling or order - including the approval of a settlement - must be supported by specific findings of fact and sufficient evidence. *United States Gypsum*, 735 N.E.2d at 795 (citing *Citizens Action Coalition v. Public Service Co.*, 582 N.E.2d 330, 331 (Ind. 1991)).

We have previously discussed our policy with respect to settlements:

> Indiana law strongly favors settlement as a means of resolving contested proceedings. *See, e.g., Manns v. State Department of Highways*, 541 N.E.2d 929, 932 (Ind. 1989); *Klebes* v. *Forest Lake Corp.*, 607 N.E.2d 978, 982 (Ind. Ct. App. 1993); *Harding* v. *State*, 603 N.E.2d 176, 179 (Ind. Ct. App. 1992). A settlement agreement "may be adopted as a resolution *on the merits* if [the Commission] makes an independent finding supported by 'substantial evidence on the record as a whole' that the proposal will establish 'just and reasonable' rates." *Mobil Oil Corp.* v. *FPC*, 417 U.S. 283, 314 (1974) (emphasis in original).

See, e.g., Indianapolis Power & Light Co., Cause No. 39938, at 7 (IURC 8/24/95); *Commission Investigation of Northern Ind. Pub. Serv. Co.*, Cause No. 41746, at 23 (IURC 9/23/02). This policy is consistent with expressions to the same effect by the Supreme Court of Indiana. *See, e.g., Mendenhall v. Skinner & Broadbent Co.*, 728 N.E.2d 140, 145 (Ind. 2000) ("The policy of the law generally is to discourage litigation and encourage negotiation and settlement of disputes.") (citation omitted); *In re Assignment of Courtrooms, Judge's Offices and Other Facilities of St. Joseph Superior Court*, 715 N.E.2d 372, 376 (Ind. 1999) ("Without question, state judicial policy strongly favors settlement of disputes over litigation.") (citations omitted). Furthermore, we are mindful regarding a settlement which has been entered into by

[7] The Commission notes that it would expect a utility to provide an appropriately complete picture of what is happening in any project for which it has filed a CPCN or progress report.

representatives of all customer classes, including the OUCC (who represents all ratepayers), even though there may be some intervenor or group of intervenors who opposes it. *American Suburban Utils.,* Cause No. 41254, at 4-5 (IURC 4/14/99). The Commission has carefully analyzed the evidence, including the evidence presented in Phase I and Phase II of the proceeding, and the proposed Settlement Agreement to evaluate whether the proposed outcome is reasonable and in the public interest.

F. Evaluation of the Reasonableness of the Proposed Settlement and Whether It Serves the Public Interest. In Phase II, Ms. Smith testified that "[Duke's] conduct did not lend itself to easy quantification." Ms. Smith testified further that there is no mathematical formula for calculating the damage done. On April 30, 2012, Duke, Nucor, the Industrial Group and the OUCC (the "Settling Parties") submitted a Settlement Agreement which proposes to resolve all of the remaining issues in this proceeding. The Settlement Agreement attempts to set a price that is to be borne by Duke Shareholders for Duke's actions at approximately $700 million of capital investment under the conditions known at the conclusion of the hearing. Significantly, the risk of additional capital cost increases will also be borne exclusively by Duke Shareholders.

Furthermore, Duke agreed to a number of measures that will mitigate the rate increases for its customers due to the IGCC Project, including: (1) a rider restart methodology that will result in graduated rate increases, (2) lower depreciation rates on the remainder of the Duke's Indiana system (excluding qualified pollution control projects discussed below), (3) termination of the deferred tax incentive previously authorized for the IGCC Project, (4) a rate case moratorium, and (5) use of normal, straight-line depreciation for clean coal technology qualified pollution control projects that currently are being depreciated on an accelerated basis (which will be implemented for ratemaking purposes with the Company's next retail rate case order).

The Settlement Agreement, compared to Duke's proposal before it entered into the Settlement Agreement, provides for a significant decrease in construction costs that will be charged to customers for the benefits of over 600 MWs of new clean coal technology baseload capacity, a solution that lies within the range of reasonableness of a complex set of facts. It also provides additional rate mitigation provisions and funding provisions that will provide benefits to customers beyond the scope of the matters set for hearing in this Cause. The Non-Settling Parties argue that the Settlement Agreement requires the Commission to prejudge the prudence of costs for which it has not received evidence. However, the Settling Parties are not asking the Commission to prejudge the prudence (or imprudence) of costs above the Hard Cost Cap plus additional AFUDC. Rather, the Company has agreed that it will not seek reimbursement for any costs above that amount, and thus the Commission does not have to determine the prudence of those costs. Furthermore, certain other terms of the Settlement Agreement merely present the positions the Settling Parties agreed to present in future cases. These terms do not bind future findings that the Commission will make when such evidence is before it for judgment. Therefore, based on all the evidence presented and for the reasons set out herein, we find that the Settlement Agreement, subject to the modifications below, produces a fair, just, and reasonable result that balances the interests of the various stakeholders and the overall public interest, and results in just and reasonable rates. Furthermore, the hard cap and resulting approximately $700 million capital investment disallowance is a price that lies within the range of pre-settlement litigation positions of the Settling Parties for Duke's project management shortcomings.

a. Hard Cost Cap. The Settling Parties have agreed that IGCC Project construction costs for ratemaking purposes are subject to a Hard Cost Cap of $2.595 billion as of June 30, 2012 for all Indiana ratemaking purposes. The Hard Cost Cap reflects $2.319 billion in direct IGCC Project costs, plus the end of June 2012 AFUDC amount of $276 million. The Settlement Agreement defines specific terms that provide for the types of costs that are to be included as costs that are subject to the Hard Cost Cap. Further, the Settling Parties request that the CPCNs be modified to reflect the approved IGCC Project cost estimate equal to the hard cost cap plus additional AFUDC as defined in the Settlement Agreement.

In Phase I of this proceeding, the Parties' filed positions varied from recommending no increase to the previously-approved $2.35 billion cost estimate for this IGCC Project, to the Company's recommendation that we increase the approved cost estimate to $2.72 billion plus associated AFUDC (or approximately $3 billion). In Phase II, the Parties' filed positions varied from proposals to reduce the $2.35 billion approved cost estimate to the original cost estimate of $1.985 billion or even lower, to the Company's position that no reductions to the approved IGCC Project cost should be made. Notably, the previously-approved $2.35 billion IGCC Project cost estimate consisted of $2.225 billion in direct construction costs and $125 million in AFUDC costs. In comparison, the Hard Cost Cap consists of approximately $2.319 billion in direct construction costs, and approximately $276 million in AFUDC (as of June 30, 2012) – an increase of $94 million in direct construction costs over the previously approved IGCC Project cost estimate of $2.35 billion.

The Settlement Agreement permits recovery of only approximately $94 million in direct construction costs above the previously approved amount of $2.225 billion, and requires Duke to shoulder at least $700 million in costs. This reduction in the amount of the requested approved cost estimate falls within the proposed ranges that could be supported by the evidentiary record, and will provide Indiana customers with a complete IGCC facility at just and reasonable rates. We find that the Hard Cost Cap in the Settlement Agreement is supported by substantial evidence of record. Therefore, the CPCNs shall be modified to reflect the hard cost cap plus AFUDC as defined in the Settlement Agreement.

b. IGCC Rider Implementation. The Settling Parties have agreed to allow CWIP recovery to begin immediately on and up to the Hard Cost Cap IGCC Project costs. Furthermore, the Settling Parties agreed that the amount to go into effect would be determined by the approval of IGCC Riders 6, 7 and 8. The Non-Settling Parties did not take issue with the implementation timing of the IGCC Rider. We find the proposed rider restart methodology to be reasonable. We further note that the implementation of the IGCC Rider also provides a rate mitigation aspect in that it defers the collection of allowable post-in-service project depreciation or O&M costs that would likely be included in the IGCC Rider 9 rates for later recovery. The collection of this deferred amount would occur over a three-year period. The Commission has not made any findings relating to the IGCC Rider 9 as the Commission has yet to hear evidence in that proceeding.

c. Retail Electric Rate Case Moratorium. The Company has agreed to not file a base rate case prior to March 2013, nor implement one before April 2014. Furthermore, the Non-Company Settling Parties have agreed to not oppose a request to zero-out the IGCC Rider at the time of the base rate case, but may challenge the amount of O&M, depreciation, and property taxes to be included in base rates. The Non-Settling Parties did not take issue with Duke's

decision to agree to a retail electric rate case moratorium. The Settling Parties agreed to this term, but it does not require Commission approval.

d. Updated Depreciation Rates. The Company agrees to update its production, transmission, distribution and general plant and equipment depreciation rates. Further, a $35 million annual retail rate credit related to this change will flow through the IGCC Rider and end upon implementation of new base rates. There was no testimony objecting to the proposed depreciation rates submitted in any phase of this proceeding. We find the proposed depreciation rates are supported by substantial evidence of record.

e. Deferred Taxes. The Non-Settling Parties take issue with the Settlement Agreement's treatment of the deferred tax incentive granted to the Company for the IGCC Project. The Non-Settling Parties contend that the Commission has no legal authority to conclude that deferred taxes should be excluded as a zero cost component of the capital structure used to calculate the cash rate of return. We granted the deferred tax treatment as an incentive to undertake the IGCC Project and to maintain credit quality, consistent with Indiana law[8] which contemplates the authorization of financial incentives for projects. When the Company presented its $2.350 billion estimate for approval in IGCC-1, we declined to extend the deferred tax treatment beyond the initially approved $1.985 billion estimate because we didn't find it appropriate to grant incentives for cost overruns.[9] Notably, the rates approved in IGCC-4 were made subject to refund pending the outcome of this proceeding. In effect, the incentive treatment has continued in the extended interim period and Duke has continued to charge rates since IGCC Rider 4 which provide incremental revenue as a result of the incentive treatment on the base $1.985 billion investment amount. Accordingly, based on the evidence of record in this proceeding, we find it is unwarranted to allow Duke to retain collected incremental revenue related to an incentive for cost control that at least in part was driven by the delays derived from the IGCC Project's cost overruns. Based on evidence submitted in IGCC-4 (Exhibit JI-CX-33-S), this action would effectively refund approximately $28 million to ratepayers.[10] In recognition of the totality of the bargain encompassed by the Settlement Agreement and the fact that it contains terms that are designed at least in part to address the near-term cash flow needs of the Company,[11] we do not find it wise to confound those terms of the Settlement Agreement. Accordingly, we find that Duke shall determine and record the amount of incremental revenue resulting from the application of the deferred tax treatment incentive since IGCC Rider 4 rates were implemented as a regulatory liability that is to be netted against the regulatory asset created by the IGCC Rider 9 rate mitigation effort.[12]

f. Potential Recoveries from Vendors/Contracts; Intellectual Property Benefits. The Settling Parties have agreed that the Company should retain any claims it is successful in garnering. The Non-Settling Parties did not take issue with this term of the Settlement Agreement. However, we cannot fully ignore that there may be an outcome in which the

[8] Indiana Code § 8-1-8.8-11(a)(5).

[9] *Duke Energy Indiana, Inc.*, Cause No. 43114 IGCC 1, 2009 Ind. PUC LEXIS 2, at *60-61 (IURC January 7, 2009).

[10] JI-CX-33-S presents the 6-month revenue requirement resulting from the incentive treatment as $5.861470 million/6 months. The IGCC-4 rates have been in effect since August 2010.

[11] Settlement Agreement Term 5.B.

[12] Settlement Agreement Term 3.

Company successfully litigates claims from its vendors that exceed the IGCC Project costs absorbed by Duke's shareholders. We find that such an outcome would make this term of the Settlement Agreement unreasonable and clearly not in the public interest. Accordingly, we find that this term should be modified such that if the Company recovers more than the IGCC Project costs absorbed by Duke's shareholders, the Company shall return any surplus recovery to ratepayers. Until the completion of the construction litigation, Duke shall file a semi-annual report on its efforts.

g. Government Funding and Tax Incentives; IGCC Project Byproducts. The Settling Parties have agreed that retail customers will receive 100% of IGCC Project specific tax incentives and 100% of net byproducts or co-product revenues. The Non-Settling Parties did not object to this term of the Settlement Agreement.

h. Attorneys' Fees and Reimbursements; Other Funding Commitments. The sums provided for in provision 9 of the Settlement Agreement are to be paid by Duke from shareholders' funds, and therefore represent financial commitments to be borne solely by the Company, separate and apart from the rate and regulatory provisions in the Settlement Agreement. The Non-Settling Parties object to this term of the Settlement Agreement and argue that it is not supported by the record evidence in this proceeding. The Non-Settling Parties did not provide any evidence that the Settlement Agreement negotiations were conducted in bad faith or were corrupted in any way by Duke's shareholders' payment of attorney fees and costs. Furthermore, as we noted above, the outcome of the Settlement Agreement is within the reasonable range of the Settling Parties pre-settlement litigation positions. Accordingly, we do not find credible evidence to suggest that the value of the Settlement Agreement as discussed above has been compromised by the shareholder payments included in this term. The Settling Parties agreed to this term, but it does not require Commission approval.

i. Joint Intervenors Request to Create Phase III. Throughout this proceeding Joint Intervenors have maintained its position that the Commission open a subdocket to take evidence with respect to ex parte communications, improper conduct, and undue influence as they relate to the regulatory oversight of the IGCC Project. However, the Commission has stated repeatedly that it is not the appropriate venue for the investigation or view of these particular issues. *See Cause No. 43114 IGCC 4S1, Commission Docket Entry March 23, 2012.*

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

1. The IGCC Project remains needed, and it is in the public interest for the IGCC Project to be completed.

2. Duke's ongoing progress review reports presented in Cause Nos. 43114 IGCC-4, 5 and 6 are hereby approved.

3. The interim and subject to refund provisions of our interim order in Cause No. 43114 IGCC-4 shall be removed consistent with the implementation of the Settlement Agreement and this Order.

4. The Settlement Agreement is hereby approved subject to the modifications herein.

5. The CPCNs for the IGCC Project are modified as set forth herein.

6. Duke is directed to modify its tariffs consistent with the findings herein and file copies with the Commission's Electricity Division as a component of its tariff filing in the first applicable IGCC Rider.

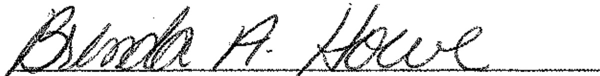
7. Duke shall file a semi-annual report on the status of construction litigation, and a final report within 30 days after conclusion of the litigation.

8. This Order shall be effective on an after the date of its approval.

ATTERHOLT, BENNETT, LANDIS, MAYS AND ZIEGNER CONCUR:

APPROVED: DEC 27 2012

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



Brenda A. Howe
Secretary to the Commission

Exhibit A

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; (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 APPLICABLE RELATED COSTS THROUGH ITS INTEGRATED COAL GASIFICATION COMBINED CYCLE GENERATING FACILITY COST RECOVERY ADJUSTMENT, STANDARD CONTRACT RIDER NO. 61 PURSUANT TO IND. CODE §§8-1-8.8-11 AND -12; (3) ESTABLISHMENT A SUBDOCKET PROCEEDING TO REVIEW THE COST ESTIMATE FOR THE IGCC PROJECT; AND (4) APPROVAL OF A REQUEST TO UPDATE ITS DEPRECIATION RATES FOR PRODUCTION, TRANSMISSION, DISTRIBUTION AND GENERAL PLANT AND EQUIPMENT	) CAUSE NO. 43114-IGCC4S1

Settlement Agreement
IURC Cause No. 43114-IGCC4S1 Phase I and Phase II

1. **Introduction.**

This Settlement Agreement ("Settlement") is entered into by and between Duke Energy Indiana, Inc. (and its successors), the Indiana Office of the Utility Consumer Counselor ("OUCC"), the Duke Energy Indiana Industrial Group,[1] and Nucor Steel-Indiana (collectively the "Settling Parties"). The Settling Parties agree that this Settlement resolves all disputes, claims, and issues in Indiana Utility Regulatory Commission ("IURC") Cause No. 43114-IGCC4S1, Phases I and II, and all issues relating to the construction costs and allowance for funds used during construction ("AFUDC") costs associated with the Edwardsport IGCC Project

[1] Consisting of Buzzi Unicem USA, Chrysler Group, LLC, Lehigh Cement Company, Marathon Petroleum Company, LLC, Rochester Metal Products Corporation, and USG Corporation.

("Project" or "IGCC Project"). The Settling Parties desire to fully settle all disputes, claims, and issues among them arising out of or relating to these proceedings and the construction of the Project, now and in the future,[2] and do so, among other reasons, to avoid the continued time and expense of further proceedings and the inherent uncertainties and potential outcomes associated with such proceedings. The Settling Parties agree, solely for purposes of this Settlement, that the Construction Costs included in the Hard Cost Cap (plus Additional AFUDC) (as such terms are defined below) are reasonable and necessary and should not be reduced because of any claims of imprudence, fraud, concealment, or gross mismanagement, or related claims. The Settling Parties agree that the record in this proceeding includes substantial evidence that this Settlement is reasonable and will result in just and reasonable rates for Duke Energy Indiana's customers. The Settling Parties further agree that this Settlement is a reasonable compromise and that each Settling Party that filed testimony previously in this Cause will file testimony with the IURC in support of this Settlement, and in such testimony, each such party will explain to the IURC how, in that Settling Party's view, the Settlement is just and reasonable and in the public interest, based on substantial evidence of record.

The Settling Parties agree to work together to achieve approval of this Settlement by July 1, 2012.

2. <u>Hard Cost Cap</u>.

A. The Settling Parties agree that the Construction Costs (defined later in this Section 2) of the Project shall be subject to a "Hard Cost Cap" of $2.595 billion as of June 30, 2012,[3] for all Indiana ratemaking purposes (base rate cases and rider proceedings) ("the Hard Cost Cap Project Costs").

B. The Settling Parties agree that, until the Hard Cost Cap Project Costs are fully reflected in Duke Energy Indiana's electric rates, Duke Energy Indiana shall be allowed to accrue and recover actual AFUDC (or post-in-service AFUDC, whichever is applicable) on the portion of the $2.595 billion that has not been reflected in such rates. From and after July 1, 2012, Duke Energy Indiana shall recover actual AFUDC on the Hard Cost Cap Project Costs as follows: until November 30, 2012, 100% of the AFUDC and thereafter, 85% of the AFUDC incurred after such date ("the Additional AFUDC"). Retail AFUDC on the Hard Cost Cap Project Costs is currently accruing at approximately $9 million per month. There will be no cost recovery from retail electric customers above the retail amounts included in the $2.595 billion Hard Cost Cap, other than the Additional AFUDC as provided for above, and any force majeure events as defined below.

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[2] Except as specifically provided for in this Settlement.

[3] Reflecting approximately $2.319 billion in direct costs on a total Company basis and approximately $276 million in retail jurisdictional (only) AFUDC as of June 30, 2012. The retail jurisdictional portion of these direct costs is approximately $2.129 billion.

C. The Settling Parties agree that, except for ongoing additions, replacements, and maintenance capital expenditures made separate and apart from and not included in Construction Costs, in future retail electric base rate cases and riders, the portion of revenue requirements attributable to a return on the Project shall equal the original cost of the Project, defined as the Hard Cost Cap Project Costs, including the Additional AFUDC as provided for above, less accumulated depreciation, multiplied by Duke Energy Indiana's authorized weighted cost of capital calculated on an original cost basis.

D. The Settling Parties agree that the IURC should modify the Certificates of Public Convenience and Necessity ("CPCNs") for the IGCC Project to reflect an approved Project cost estimate equal to the Hard Cost Cap Project Costs ($2.595 billion as of June 30, 2012) plus Additional AFUDC that accrues on that amount on and after July 1, 2012, as described above. Other than as set forth in this Settlement, the Non-Duke Settling Parties agree that they will seek no further rate or regulatory "penalties" relative to the construction and overall final Construction Costs of the Project (plus AFUDC as allowed above); however, the non-Duke Settling Parties shall retain all rights under Indiana law to make arguments and seek relief concerning post-in-service operating performance of the Project.

E. "Construction Costs" of the Project shall be defined in accordance with usual utility practices and in accordance with FERC guidelines and includes all costs required to achieve "final completion," as that term is defined in the December 20, 2007 contract between Duke Energy Indiana and GE (see Attachment A), such as engineering, materials, construction and equipment purchases, capitalized AFUDC (through June 30, 2012), and all start-up and testing, validation and commissioning costs, and costs of repairs and modifications identified during start-up, testing, validation and commissioning and all such costs required whether actually disbursed or only obligated during such period, as well as any costs subsequently incurred to pay claims disallowed or unpaid during such period; except that: "Construction Costs" of the Project and the Hard Cost Cap shall not include normal operating and maintenance ("O&M") expenditures on the Project, which, according to FERC guidelines, begin after the "In-Service Operational Date" and shall not include subsequent ongoing capital spent on the Project for normal capitalized repairs or maintenance expenditures or additional plant and equipment necessary for the continued operation of the Project after the "In-Service Operational Date", unless identified during start-up, testing, validation and commissioning as being necessary to reach "final completion", nor does the cap apply to orders of the Commission approving cost recovery related to carbon capture and storage (including study costs) involving the Project.

F. "In-Service Operational Date" means the first date by which the Project has both (1) been declared in-service in accordance with FERC guidelines as the earlier of the date the asset is placed in operation or is ready for service; and (2) has operated on both natural gas and syngas; provided however that the In-Service Operational Date shall not be prior to September 24, 2012.

G. The Hard Cost Cap Project Costs and Additional AFUDC may only be increased due to an increase in prudently incurred construction costs for the Project caused by a force majeure event beyond the control and without the fault or negligence of Duke Energy Indiana or its suppliers or contractors involved in the Project, such as, by way of example, the following: acts of God, the public enemy, or any governmental or military entity.

3. **IGCC Rider Implementation.**

In recognition of some uncertainty as to the actual In-Service Operational Date of the Project and in effort to restart the IGCC Rider in a reasonable manner, the Settling Parties agree as follows:

As part of the approval of this Settlement, the IGCC Construction Work In Progress ("CWIP") Rider (Standard Contract Rider No. 61) will be approved to allow CWIP recovery to begin immediately on and up to the Hard Cost Cap Project Costs, and any Additional AFUDC as provided for in Section 2. In the event this Settlement is approved prior to approval of the IGCC-8 CWIP Rider proceeding, then CWIP recovery shall begin on Construction Costs amounts approved through the IGCC-6 CWIP Rider (which are less than the Hard Cost Cap), and recovery of CWIP for Construction Costs amounts over the IGCC-6 CWIP Rider amount (up to the Hard Cost Cap Project Costs and Additional AFUDC) will begin upon approval of the IGCC-8 CWIP Rider proceeding (expected in the September/October 2012 timeframe).

The Settling Parties agree that in IGCC-9 (to be filed in approximately May 2012), Duke Energy Indiana's proposed tariffs will not include costs of post-in-service Project depreciation or O&M costs (or property taxes) for inclusion in the IGCC-9 Rider (other than operating costs for items that have been included in previous Rider filings). Thus, the IGCC-9 filing will reflect financing costs (CWIP), but no post-in-service depreciation or O&M costs (or property taxes). Rather, in IGCC-10 (to be filed in approximately November 2012), Duke Energy Indiana will begin recovering post-in-service Project depreciation and O&M costs (and property tax expenses) on a projected basis for a six-month period. Duke Energy Indiana will defer the actual depreciation and O&M costs (and property tax expenses) incurred for all months from the In-Service Operational Date until the effective date of IGCC-10 rates. At the time of the next IGCC Rider filing (or general base rate case filing) after the filing of IGCC-10, Duke Energy Indiana will recover the deferred amount (without carrying costs) over a three-year period either through the IGCC Rider or through inclusion in base retail electric rates.

4. **Retail Electric Rate Case Moratorium.**

Except in the case of an emergency pursuant to Ind. Code § 8-1-8-113, Duke Energy Indiana agrees that it will not file for an increase in its basic rates and charges for retail electric service prior to March 2013, and that no increase to its basic rates and charges for retail electric service as a result of a final order in a retail electric base rate case filing shall be implemented

prior to April 1, 2014. This base rate case moratorium applies only to retail electric base rate cases, and not to other requests by Duke Energy Indiana for accounting deferrals, creation of regulatory assets or liabilities, or creation of new or modification of existing retail rate riders.

The non-Duke Settling Parties agree not to oppose any request by Duke Energy Indiana to zero-out the IGCC Rider and include the IGCC plant (up to the Hard Cost Cap Project Costs, plus Additional AFUDC as permitted by this Settlement), O&M, depreciation, and property taxes in base rates at the time of its next retail electric base rate case, consistent with past practice for capital riders; provided, however, that the Settling Parties may challenge the specific amounts of O&M, depreciation, and property taxes to be included in base rates.

5. Updated Depreciation Rates (plant except IGCC).

A. Plant Other Than IGCC. Duke Energy Indiana agrees to update its non-IGCC depreciation rates for production, transmission, distribution and general plant and equipment as submitted in Cause No. 43114-IGCC4S1 proceeding. The Settling Parties agree not to challenge these new depreciation rates including the negative net salvage values. If the IURC approves this Settlement, the depreciation rate changes as referenced in Petitioner's Exhibits UU, VV, and WW, including sub-exhibits, in IURC Cause No. 43114-IGCC4S1, will be made effective and retail electric customers will begin receiving the approximately $35 million retail jurisdictional annual credit for these depreciation rate changes through the IGCC Rider beginning the first full calendar month after the date of the order in Cause No. 43114-IGCC4S1, and ending upon the implementation of new retail base rates that reflect new depreciation rates, as discussed below.

Duke Energy Indiana agrees that, if it files for an increase in its base retail electric rates prior to the end of 2013, Duke Energy Indiana will request the continued application and approval of the depreciation rates approved in the depreciation study presented in Cause No. 43114-IGCC4S1; provided, however, that in such base rate case, Duke Energy Indiana shall have the right to propose updates to these depreciation rates and its depreciation study for any material changes in law, regulation, or accounting rules, or material changes to the Duke Energy Indiana system, including but not limited to, impacts from any decisions to accelerate the retirement of any generating assets, new environmental rules, new plant additions (including the IGCC Project), and the accelerated depreciation change as addressed below.

The Settling Parties agree not to oppose or present evidence regarding appropriate depreciation rates or net salvage values in any such Duke Energy Indiana retail electric base rate case filed prior to 2014, except as may be necessary to challenge any updates proposed by Duke Energy Indiana. Duke Energy Indiana reserves the right to file new depreciation rates for any retail electric base rate case filed after 2013, and the non-Duke Settling Parties retain the right to object to such new, post-2013 proposed depreciation rates and net salvage values.

B. Qualified Pollution Control Property Subject to Accelerated Depreciation. The Settling Parties agree that as of the first calendar month after the date of an Order approving this Settlement, Duke Energy Indiana may adjust its depreciation rates to reflect the use of normal, straight line depreciation lives for the qualified pollution control equipment, which rates are currently approved on an accelerated basis. Duke Energy Indiana's retail rates will not be changed to reflect this accounting adjustment to depreciation rates until the effective date of an order in the next-filed retail electric base rate case. At that time, revenue requirements will be modified to reflect the change from accelerated to normal lives for such qualified pollution control equipment, resulting in an estimated $32 million decrease in annual retail depreciation expense.

6. Deferred Taxes.

Duke Energy Indiana agrees to include, consistent with traditional Indiana ratemaking, deferred taxes in the capital structure used in its IGCC Rider, on a prospective basis, beginning with the effective date of the rider approved by an IURC Order that restarts the IGCC Rider. The Settling Parties agree that any bonus depreciation treatment applicable to the IGCC Project will be accorded normal ratemaking treatment, *i.e.,* any deferred taxes created by such bonus depreciation will be reflected in Duke Energy Indiana's capital-related rate riders and base rate case filings on an actual basis.

7. Potential Recoveries from Vendors/Contractors; Intellectual Property Benefits.

A. The Settling Parties recognize and agree that Duke Energy Indiana may have rights, claims and valid causes of action against Bechtel, GE, or other Project vendors or contractors with respect to the Project, and agree that in light of this Settlement, Duke Energy Indiana shall be entitled to retain any and all benefit from any amounts received from Bechtel, GE, or other Project vendors or contractors associated with the cost and quantity estimates, design, construction, start-up, testing, etc. of the Project, whether such benefit stems from agreement, arbitration, mediation, litigation, settlement, etc., and Duke Energy Indiana agrees to bear all costs associated with pursuing said causes of action. The Settling Parties agree not to affirmatively oppose or undermine in any way Duke Energy Indiana's pursuit of claims against GE, Bechtel, or other Project vendors or contractors.

B. Duke Energy Indiana shall retain any intellectual property benefits related to the IGCC Project.

8. Government Funding and Tax Incentives; Project Byproducts.

Retail electric customers will receive 100% of the applicable retail jurisdictional share of any Project-specific funding received from federal, state, or local governmental authorities, such as incentive tax credits and property tax credits.

Retail electric customers will receive 100% of the applicable retail jurisdictional share of any net byproduct or co-product revenues from the Project.

9. Attorneys' Fees and Reimbursements; Other Funding Commitments.

Duke Energy Indiana agrees to make the following payments, out of shareholders' funds, for attorneys' fees, litigation expenses, and other funding commitments, within 30 days of an IURC order (or as otherwise specified below) approving this Settlement (unless this Settlement is voided in its entirety pursuant to section 10 below):

A. A payment to the attorneys representing the Duke Energy Indiana Industrial Group of attorneys' fees in the amount of $11.7 million and of expenses in the amount of $600,000 for this Cause No. 43114-IGCC4S1, with implementation details in a separate Attorneys Fees and Expenses Implementation Agreement.

B. A payment to Nucor Steel-Indiana of between $800,000 and $1 million for certain fees and expenses incurred for this Cause No. 43114-IGCC4S1, with implementation details in a separate Attorneys Fees and Expenses Implementation Agreement.

C. A payment to the OUCC, not to exceed a total of $300,000, for reimbursement of certain outside litigation expenses related to this Cause No. 43114-IGCC4S1.

D. A contribution of $2 million to the Indiana Utility Ratepayer Trust.

E. A contribution of $3.5 million to the Indiana Low Income Home Energy Assistance Program ("LIHEAP") fund, to be funded over a five-year period and to be used solely for Duke Energy Indiana retail customers (*i.e.*, the Helping Hand Fund).[4]

F. A contribution of $1 million to establish a fund to effect the collaborative development of a clean energy initiative by the OUCC and Duke Energy Indiana, and to be administered by a suitable third party for the benefit of Duke Energy Indiana retail customers. The OUCC and Duke Energy Indiana acknowledge that this contribution may take longer than 30 days to set up and fund.

10. Other.

A. The Settling Parties agree that any subject to refund designations or similar language in the order in Cause No. 43114-IGCC-4 and any subsequent IGCC Rider orders approved prior to the date of an IURC order in this docket should be removed once this Settlement is effective.

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[4] For the LIHEAP contributions the first $700,000 installment shall be made within 30 days of an IURC order approving this Settlement, with the four remaining $700,000 installments to be made in 2013, 2014, 2015 and 2016.

B. The Settling Parties agree that the evidence to be submitted in support of this Settlement, along with the evidence of record previously submitted in this Cause, together constitute substantial evidence to support this Settlement and provide a sufficient evidentiary basis upon which the Commission can make any findings of fact and conclusions of law necessary for the approval of this Settlement, as filed. The Settling Parties shall prepare and file with the Commission as soon as reasonably possible, testimony and proposed order(s) in support of and consistent with this Settlement.

C. This Settlement is a complete, interrelated package that is intended to resolve all issues related to the IGCC Project Construction Costs (and associated AFUDC) including without limitation, all issues that were addressed or could have been addressed in Phase I and Phase II of Cause No. 43114-IGCC4S1, including but not limited to all claims of imprudence, fraud, concealment and gross mismanagement, as well as all issues concerning ex parte communications, improper conduct, undue influence, appearances of impropriety, or related issues. The Settling Parties agree to oppose or not support any attempt to create additional proceedings or phases of IURC proceedings to further examine the IGCC Project Construction Costs, associated AFUDC, fraud, concealment, gross mismanagement or ex parte communications, improper conduct, undue influence, appearances of impropriety, or related issues.

D. (1) The Settling Parties will not appeal or seek rehearing, reconsideration or a stay of a Final Order approving this Settlement in its entirety or without change or condition(s) unacceptable to any adversely affected Party (or related orders to the extent such orders are specifically implementing the provisions of this Settlement).

(2) The Settling Parties agree to support in good faith the terms of this Settlement before the IURC and further agree not to take any positions adverse to or inconsistent with the Settlement or any adverse positions against each other with respect to the Settlement or the subject matters herein, before any appellate courts, and if necessary, on rehearing, reconsideration, or remand before the IURC.

(3) The Settling Parties also agree to support or not oppose this Settlement in the event of any request for a stay by a person not a party to this Settlement or if this Settlement is the subject matter of any other state proceeding.

(4) The Settling Parties shall remain bound by the terms of this Settlement Agreement and shall continue to support all the terms of the Settlement on appeal, remand, reconsideration, etc., even if the IURC rejects the Settlement. However, in the event that the Settlement is rejected by the IURC and such rejection is ultimately upheld on rehearing, reconsideration, and/or appeal, at the point when all such proceedings and appeals are complete, this Settlement Agreement shall become void and of no further effect (except for provisions which have already been fully implemented or which are explicitly stated herein to survive termination/voiding).

(5) If the IURC approves the Settlement in its entirety, or approves the Settlement with modifications that are not unacceptable to affected Settling Parties, and such

IURC approval is ultimately vacated or reversed on appeal, the Settling Parties agree to support the terms of this Settlement in any remand proceedings before the IURC (as well as any subsequent appeals) to the extent possible under applicable law. In such situation, the Settling Parties agree not to take any positions adverse to or inconsistent with the Settlement or any adverse positions against each other with respect to the Settlement or the subject matters herein, on remand before the IURC. To the extent that the IURC and/or appellate courts ultimately and finally reject this Settlement, any provisions of this Settlement that remain to be implemented will then become void and of no further effect, unless explicitly stated herein.

E. The positions taken by the Settling Parties in this Settlement shall not be deemed to be admissions by any of the Settling Parties and shall not be used as precedent, except as necessary to implement the terms of this Settlement. This provision shall survive termination/voiding of this Agreement.

F. The Settling Parties will support this Settlement before the Commission and request that the Commission expeditiously accept and approve the Settlement. As stated above, this Settlement is a complete, interrelated package, and the Settling Parties believe that it should be accepted in its entirety without modification or further condition(s) that may be unacceptable to any Settling Party.

G. The Settling Parties will jointly move for leave to re-open the record in this Cause and to file this Settlement and testimony in support of this Settlement. Such testimony in support will be offered into evidence without objection by any Settling Party and the Settling Parties hereby waive cross-examination of each others' witnesses. The Settling Parties propose to submit this Settlement and evidence conditionally, and if the Commission fails to approve this Settlement in its entirety without any change or with condition(s) unacceptable to any adversely affected Settling Party, the Settlement and supporting evidence may be withdrawn and the Commission will continue to proceed to decision in this Cause, without regard to the filing of this Settlement.

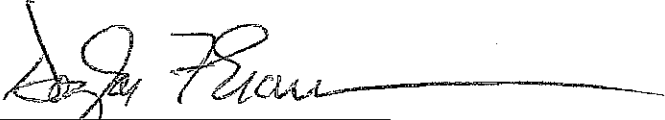
H. The communications and discussions during the negotiations and conferences and any materials produced and exchanged concerning this Settlement all relate to offers of settlement and shall be privileged and confidential, without prejudice to the position of any Settling Party, and are not to be used in any manner in connection with any other proceeding or otherwise. This provision shall survive termination/voiding of this Agreement.

I. The undersigned Settling Parties have represented and agreed that they are fully authorized to execute the Settlement on behalf of their designated clients, and their successors and assigns, who will be bound thereby.

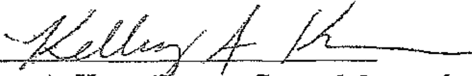
J. The provisions of this Settlement shall be enforceable by any Settling Party before the Commission and thereafter in any state court of competent jurisdiction as necessary.

K. This Settlement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

ACCEPTED AND AGREED TO THIS 30th DAY of APRIL 2012:

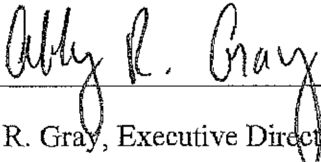


Douglas F Esamann, President
Duke Energy Indiana



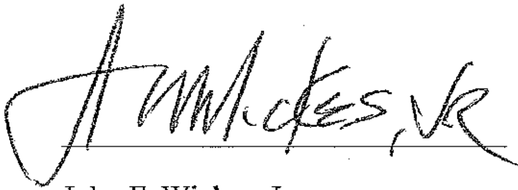
Kelley A. Karn, Deputy General Counsel
Attorney for Duke Energy Indiana

A. David Stippler, Consumer Counselor
Indiana Office of Utility Consumer Counselor

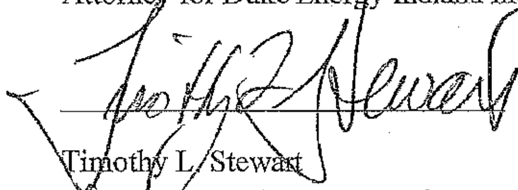


Abby R. Gray, Executive Director Legal Operations
Indiana Office of Utility Consumer Counselor

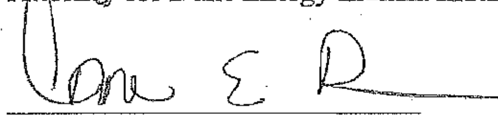
Randall C. Helmen, Chief Deputy Consumer Counselor
Indiana Office of Utility Consumer Counselor



John F. Wickes, Jr.
Attorney for Duke Energy Indiana Industrial Group



Timothy L. Stewart
Attorney for Duke Energy Indiana Industrial Group



Anne E. Becker
Attorney for Nucor Steel-Indiana

"**Final Completion**" shall be deemed to have occurred upon the satisfaction of all of the following conditions:

(a) Substantial Completion shall have occurred;

(b) the performance of the Work shall be one hundred percent (100%) complete (other than Work that by its nature cannot be completed until after Final Completion (e.g., warranty Work)), including the Punch List Work and delivery of all Documentation that the Seller is required to deliver to the Buyer pursuant to this Contract;

(c) either (i) the Equipment shall have satisfied all Performance Guarantees or (ii) the Seller shall have paid to the Buyer all liquidated damages for failure to satisfy the LD Performance Guarantees as required by Section 2.9;

(d) there shall exist no Event of Default and no event which, with the passage of time or the giving of notice or both, would be an Event of Default; and

(e) the Seller shall have delivered to the Buyer a certificate signed by the Seller certifying that all of the preceding conditions in this Section have been satisfied.

"**Substantial Completion**" shall be deemed to have occurred upon the satisfaction of all of the following conditions:

(a) Delivery of all GEP Equipment shall have occurred;

(b) the performance of the Work shall be complete (other than Work that by its nature cannot be completed until after Substantial Completion (e.g., warranty Work)), with the exception of the Punch List;

(c) the Facility shall have satisfied the Minimum Performance Guarantees and the Make-Right Performance Guarantees;

(d) the Seller shall have delivered to the Buyer all Documentation that the Seller is required to deliver to the Buyer pursuant to this Contract, with the exception of the Punch List;

(e) the Seller shall have provided all training required by Exhibit S, with the exception of the Punch List; and

(f) the Seller shall have delivered to the Buyer a certificate signed by the Seller certifying that all of the preceding conditions in this Section have been satisfied.