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STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF DUKE ENERGY INDIANA,)
INC. SEEKING (1) APPROVAL OF AN ONGOING)
REVIEW PROGRESS REPORT PURSUANT TO IND.)
CODE §§8-1-8.5 AND 8-1-8.7; AND (2) AUTHORITY)
TO REFLECT COSTS INCURRED FOR THE)
EDWARDSPORT INTEGRATED GASIFICATION)
COMBINED CYCLE GENERATING FACILITY)
("IGCC PROJECT") PROPERTY UNDER)
CONSTRUCTION IN ITS RATES AND AUTHORITY)
TO RECOVER APPLICABLE RELATED COSTS)
AND CREDITS 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)

CAUSE NO. 43114 IGCC 10

APPROVED: SEP 11 2013

ORDER OF THE COMMISSION

Presiding Officers:
David E. Ziegner, Commissioner
David E. Veleta, Administrative Law Judge

On November 20, 2012, Duke Energy Indiana, Inc. ("Duke", "Petitioner" or "Company") filed its Verified Petition with the Indiana Utility Regulatory Commission ("Commission") in this Cause. In its Petition, Duke requested: (1) approval of the Company's updated ongoing progress report for the Edwardsport IGCC Project ("IGCC Project"); and (2) authority to reflect costs incurred with respect to the construction of the IGCC Project through September 30, 2012, and other related costs and credits and applicable reconciliation amounts and credits, in its retail electric rates through Petitioner's Integrated Coal Gasification Combined Cycle Generating Facility Cost Recovery Adjustment, Standard Contract Rider No. 61 ("Rider 61" or "IGCC Rider").

Pursuant to notice as required by law, proof of which was incorporated into the record by reference and placed in the official files of the Commission, an evidentiary hearing was held in this Cause on June 4, 2013, at 9:30 a.m. in Room 222 of the PNC Center, 101 West Washington Street, Indianapolis, Indiana. At the hearing, Duke, the Sierra Club, Citizens Action Coalition of Indiana, Save the Valley, and Valley Watch (the latter four collectively referred to as "Joint Intervenors"), and the Indiana Office of Utility Consumer Counselor ("OUCC") appeared and participated. No members of the general public were present or sought to testify.

At the evidentiary hearing, Petitioner presented the testimony and exhibits of W. Michael Womack, General Manager, Edwardsport IGCC Project; Jack L. Stultz, General Manager II, Regulated Fossil Stations; and Diana L. Douglas, Director of Rates for Duke Energy Indiana. The testimony and exhibits offered by the Petitioner were admitted into evidence without objection. The OUCC presented the testimony of Mr. Wes R. Blakley, Senior Utility Analyst, which was admitted into evidence without objection. Joint Intervenors presented the testimony of Mr. David A. Schlissel, President of Schlissel Technical Consulting, Inc. Mr. Schlissel's testimony was admitted into evidence over objection; and Mr. Ralph Smith, Senior Regulatory Consultant at Larkin & Associates, PLLC was admitted into evidence without objection.

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*.¹ The Commission has not conducted any Executive Sessions in the IGCC-10 proceeding. Furthermore, with the issuance of this Order, any further discussion of this matter in the IGCC-10 proceeding is unnecessary.

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

1. **Notice and Jurisdiction.** Proper notice of the hearing in this Cause was given as required by law. Duke is a public utility as that term is defined in Indiana Code § 8-1-2-1. In its November 2007 Order in Cause Nos. 43114 and 43114-S1 ("CPCN Order"), the Commission issued certificates of public convenience and necessity ("CPCN") and clean coal technology. Under Indiana Code chs. 8-1-8.5, 8.7 and 8.8, the Commission has jurisdiction to approve ongoing review progress reports and associated cost recovery of a public utility's capital investment. Accordingly, the Commission has jurisdiction over Duke and the subject matter of this proceeding.

2. **Petitioner's Characteristics.** Duke 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 780,000 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. **Relief Requested.** In its Verified Petition, Duke requested: (1) approval of an ongoing review progress report pursuant to Indiana Code §§ 8-1-8.5-6 and 8-1-8.7-7; and (2)

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).

authority to add to the valuation of its utility property for ratemaking purposes the actual IGCC Project costs incurred through September 30, 2012, and authority to recover the financing costs and its other applicable related costs and credits through its IGCC Rider and such reconciliation of charges or credits to actual amounts as are applicable.

4. **Prior Proceedings.** In its CPCN Order, the Commission issued a CPCN and clean coal technology authorizing Petitioner to construct the 630 megawatt IGCC plant in Knox County, Indiana near the location of the Company's existing Edwardsport generation station. The CPCN Order approved Petitioner's estimated construction cost for the IGCC Project of \$1.985 billion and Petitioner's proposed IGCC Rider, which provides for the timely recovery of costs incurred in connection with the IGCC Project. The Commission also directed Petitioner to file semi-annual IGCC Rider and ongoing review progress report proceedings.

On May 1, 2008, Petitioner filed its first semi-annual IGCC Rider and ongoing review progress report proceeding related to the 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 ("IGCC-1 Order"), in which it approved Petitioner's revised construction cost estimate for the IGCC Project of \$2.350 billion and its ongoing review progress report. In the IGCC-1 Order, the Commission also approved the timely recovery of construction and operating costs through the IGCC Rider reflecting actual expenditures through February 28, 2008. Finally, the Commission approved the Company's request for authority to undertake studies related to carbon capture at the IGCC Project and cost recovery for such studies.

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

On November 24, 2009, Petitioner filed its fourth semi-annual IGCC Rider and ongoing review progress report proceeding, designated as Cause No. 43114 IGCC-4. In that proceeding, Petitioner requested approval of: (1) the Company's updated ongoing progress report for the IGCC Project; (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through September 30, 2009, and for certain other applicable related costs; and (3) the

establishment of a subdocket proceeding to provide a further review of the cost estimate for the IGCC Project. On July 28, 2010, the Commission issued an interim order in Cause No. 43114 IGCC-4 (“IGCC-4 Order”) in which it approved the requested relief on an interim and subject to refund basis, pending the outcome of the Subdocket. On December 27, 2012, the Commission issued an Order in Cause No. 43114 IGCC-4S1 (“IGCC-4S1 Order”) approving the IGCC-4 ongoing progress review report, removing the interim and subject to refund provisions of the IGCC-4 Order and approving with modifications a proposed Settlement Agreement.

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. In that proceeding, Petitioner requested approval of: (1) the Company’s updated ongoing progress report for the IGCC Project; (2) recovery under the IGCC Rider of the additional actual costs of the IGCC Project through March 31, 2010, and for certain other applicable related costs. On December 27, 2012 the Commission issued an Order in Cause No. 43114 IGCC-5 approving the costs and rates reflected in Duke’s exhibits, including the actual IGCC Project costs incurred through March 31, 2010, but declined to authorize the implementation of the proposed IGCC-5 Rider 61 rates. The IGCC-4S1 Order approved the IGCC-5 ongoing progress review report.

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 December 27, 2012 the Commission issued an Order in Cause No. 43114 IGCC-6 which approved as reasonable the costs and rates reflected in Duke’s exhibits, including the actual IGCC Project costs incurred through September 30, 2010, but declined to authorize the implementation of the proposed IGCC-6 Rider 61 rates. The IGCC-4S1 Order approved the IGCC-6 ongoing progress review report.

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 December 27, 2012 the Commission issued an Order in Cause No. 43114 IGCC-7 which approved the ongoing review progress report for the IGCC Project, approved as reasonable the costs and rates reflected in Duke’s exhibits, including the actual IGCC Project costs incurred through March 31, 2011, but found the implementation of the proposed IGCC-7 rates to be unnecessary.

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 certain other applicable related costs; and (3) approval of depreciation rates for the IGCC Project. On December 27, 2012 the Commission issued an Order in Cause No. 43114 IGCC-8 (“IGCC-8 Order”) which approved the ongoing review progress report for the IGCC Project, and approved as reasonable the costs and rates reflected in Duke’s exhibits, including the actual IGCC Project costs incurred through September 30, 2011.

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 April 3, 2013 the Commission issued an Order in Cause No. 43114 IGCC-9 ("IGCC-9 Order") which approved the ongoing review progress report for the IGCC Project, and approved as reasonable the costs and rates reflected in Duke's exhibits, including the actual IGCC Project costs incurred through March 31, 2012.

5. Summary of Evidence.

A. Petitioner's Testimony. Mr. Womack testified that, as of the end of October 2012, the engineering, procurement, and construction work of the IGCC Project was complete with the exception of the last 1% electrical heat tracing and the last 2% of punch list items. The pre-commissioning start-up was complete with all 214 operating systems under the care, custody, and control of the Duke operations group.

Mr. Womack stated that the primary activities at the site in the power block were the commissioning and initial operation of the steam turbine and generator. He stated that steam diluent systems were placed into service for each gas turbine, which allows more efficient NOx removal when the turbines are operating on natural gas. In September, General Electric ("GE") began the removal of the combustion turbine/generator ("CTG") 1 temporary rotor used for New Product Introduction ("NPI") Phase 2 testing and has begun installing the second temporary instrumented rotor, which will be used to complete the NPI Phase 5 testing.

Mr. Womack testified that, in the gasification island, the preoperational commissioning was completed. He stated that in October and November 2012, significant progress in the initial operation of the gasification process areas of the plant was made, for example on October 25, 2012, the train 1 gasifier was operated for approximately 3 hours during which syngas was created and burned in the flare; on October 30, 2012, the train 1 gasifier operated for approximately 9 hours and during this time, the syngas produced in the gasifier was combusted in CTG 2 for approximately 4 hours; and on November 1, 2012, the train 1 gasifier successfully operated for approximately 48 hours and for most of that time syngas was burned in CTG 2. The longest operation of the train 1 gasifier occurred from November 9 to November 14, 2012 during which time the gasifier operated at levels in excess of 85% capacity with all syngas burning in CTG 2 and with the steam turbine in operation. Total gross generation during this period occasionally exceeded 300 MW. The gasifier was shut down early on November 14, 2012, after having completed a critical stage of the NPI Phase 3 testing – the "fouling" of Radiant Syngas Cooler ("RSC").² Mr. Womack explained that with the mandatory post-fouling inspections complete, NPI Phase 3 and 4 testing will resume in early December, followed by the Phase 5 validation of the CTG 1 rotor on syngas.

Mr. Womack provided an update on the status of the IGCC Project's schedule and cost. He stated that the IGCC Project has continued to experience challenges similar to what he described in

² "Fouling" the RSC involves operating the gasifier with a specially designed fuel injection nozzle, which produces significantly more slag ("molten ash") than is produced during normal gasifier operation. The slag adheres to the RSC tubes creating a protective insulation. "Fouling" is performed with the gasifier running at less than full capacity. Until the "fouling" is complete, full capacity operation is not allowed by GE's operating procedures.

his IGCC-9 testimony. He explained that the challenges have delayed the IGCC Project's in-service and substantial completion dates and have added cost to the IGCC Project. He explained that because of the difficulty of forecasting the NPI testing activities, the IGCC Project team, in conjunction with GE, has developed a range of dates, calling them the "best achievable" schedule, the "expected case" schedule, and the "late case" schedule. The "best achievable" schedule has an in-service date of early March 2013 with the Substantial Completion date in early June 2013, the "expected case" schedule projects an in-service date of late May 2013 and a substantial completion date of late September 2013, and the "late case" schedule has an in-service date of late July 2013 and the substantial completion date of late November 2013. He further stated that these schedule expectations match GE's expectations and that the remaining activities are GE-led activities.

Mr. Womack discussed the cost estimate and the process of revising the IGCC Project's "Estimate at Completion." He said that the most challenging aspects of the cost estimate were 1) to accurately capture the range of overhead costs associated with the revised IGCC Project schedule, and 2) to accurately estimate the range of net operating revenue and fuel cost associated with operating the IGCC Project during the NPI testing period. The revised estimate was a range of costs, which was presented to the Duke Energy Board of Directors at its October 2012 meeting. The low end of the range is \$3.110 billion, representing the "best achievable" estimate; the "expected case" estimate of \$3.154 billion; and the "late case" estimate of \$3.231 billion.³ The Board approved the "expected case" budget estimate of \$3.154 billion, which included direct costs of \$3.012 billion, \$37 million of contingency, and \$105 million for net operating costs during the NPI testing period from April 2012 to the projected "expected case" in-service date of May 29, 2013. He also explained that the Board was informed, based on current assumptions, that the estimated AFUDC is approximately \$400 million, and the estimated net AFUDC on the Settlement Agreement hard cap cost is approximately \$320 million.⁴ The actual AFUDC amounts will vary depending on many factors, including the timing of the IGCC-8 order.⁵

Next, Mr. Womack explained that the root cause of both the schedule extension and cost increase is time and cost necessary to correct deficiencies inherent at this point in the IGCC Project, which were discovered during the testing and commissioning of the IGCC Project. He testified that these deficiencies increase the cost in a few ways: the direct cost of making the modifications and repairs has increased; the extended schedule drives increased overhead costs for staff, support contractors, equipment, insurance, and taxes because these costs continue to be capitalized to the IGCC Project until it is declared in-service; and the delay the IGCC Project experienced this year kept the power block portion of the plant from running on natural gas during the summer months when revenue potential was expected to be the greatest.

³ These estimates are without AFUDC.

⁴ On December 27, 2012, the Commission issued its Order on December 27, 2012 approving the Settlement Agreement (containing a hard cap of \$2.595 billion) with two modifications (removing the deferred tax incentive going back to IGCC-4 and requiring the Company to refund to customers any surplus should Duke Energy Indiana recover more dollars in vendor litigation than shareholders have absorbed under the settlement).

⁵ On December 27, 2012, the Commission issued its Order in IGCC-8 approving the IGCC Project review progress report and finding that the IGCC Project costs incurred through September 30, 2011 are reasonable.

Mr. Womack testified on the recent IGCC Project accomplishments. He explained that the IGCC Project is achieving successes on a daily basis, for example: completion of GE's Safety Systems testing; smooth operation of the gasification systems; efficient installation and removal of the slurry feed injector; IGCC Project work was performed safely during this period; all operating systems of the IGCC Project are under the care, custody, and control of the operations group; the entire power block, including combustion turbines and steam turbine, have operated for several months with virtually no problems; the air separation unit ("ASU") has run well and has run extensively; the train 1 gasifier ran on coal slurry for over 3 hours on October 25, 2012; and the train 1 gasifier ran for approximately 9 hours on October 30, 2012, including 4 hours during which the syngas produced in the gasifier was used as fuel in CTG 2, and that the IGCC Project team has proved to be well equipped to handle the challenges posed.

Mr. Womack next discussed issues that have occurred on the IGCC Project. He explained that the ASU issues discussed in his IGCC-9 testimony have been resolved and that the ASU is running reliably. He stated that the air compressors and the ASU are under warranty and that the vendor is paying or reimbursing the Company for the direct costs of these permanent fixes.

Mr. Womack explained that in the second half of June, the IGCC Project team and GE's on-site technical advisors were attempting to complete the commissioning and initial operation of the steam turbine. Prior to sending steam to the steam turbine, the IGCC Project team and GE's on-site technical advisors attempted to commission the steam diluent system. After several days of testing, GE concluded that the steam injection control valves they had designed and supplied were not adequate. New valve components were received and have been successfully installed and tested.

Mr. Womack also described the "water hammer" event that occurred on June 26, 2012. He explained that CTG 1 and CTG 2 had been running on the evening of June 25th and both were shutdown pursuant to the shutdown procedures, which included closing the bypass valve to the condenser. Hours later, CTG 2 was restarted and after about 3 hours, after stabilizing operations and building pressure, the bypass valve was opened to send steam from the heat recovery steam generator ("HRSG") to the condenser. While the bypass valve was closed, the steam trapped in the cold reheat line condensed into water. This water normally drains out of the pipe through automated drain valves; however the drains did not open on this occasion. When the bypass valve was reopened, high energy steam reentered the cold reheat piping causing the water in the pipe to be pushed forward rapidly only to be stopped suddenly when it collided with a closed valve near the steam turbine. As a result, pipe supports, pipe hangers, and valves were damaged and had to be repaired or replaced. The alignment of the steam turbine was also affected. In order to correct this issue, the cold reheat and hot reheat piping had to be cut loose from the steam turbine, the turbine loads redistributed, the pipes realigned, and the pipes reattached. This event caused a 5 to 6 week delay in commissioning the steam turbine and all downstream work activities. These delays also extended to the gasification island because steam, feed water, nitrogen, and other services needed to conduct commissioning activities were not readily available. Mr. Womack explained that the steam turbine and steam diluent systems were successfully commissioned in mid-August and ran for approximately 704 out of the possible 720 hours of September.

Mr. Womack testified that the issues in the gasification area that he reported on in his IGCC-9 testimony have been successfully resolved, including the coal mill bearing alignment issue and the opening and closing time on 54 critical pneumatically activated valves. He continued, explaining that problems of a similar nature have continued to surface and that some equipment has

experienced early component failure at a higher rate than expected. This in turn causes a delay in testing and commissioning the equipment while parts are waited on and necessary repairs are completed.

Mr. Womack explained that there have been several new issues that have required more extensive analysis and rework; for example, the unusual current fluctuation in the coal grinding mill drive motors, which resulted in lost time of one week of testing, and a broken pinion shaft in mill #1.

Mr. Womack next stated that the unexpected vibration in the 3rd stage buckets of the combustion turbines as discussed in his IGCC-9 testimony has not been resolved completely. GE has been successful in mitigating the effect of the problem by adjusting several operating conditions and equipment parameters during a trip event. GE has developed a design modification to the shape of the buckets and expects this to resolve the issue completely. GE is simulating and testing the solution and if successful, will implement the permanent changes. Mr. Womack explained that until the proposed fix is proven in testing, temperature restrictions, operating load restrictions, and additional inspection restrictions will continue to apply to the operation of the CTGs.

Next, Mr. Womack explained that none of the issues that the IGCC Project team has resolved or is working to resolve will have long term effects on the performance and reliability of the plant and that the IGCC Project team continues to make use of the testing and commissioning time to identify and resolve issues before the plant becomes operational.

Mr. Womack testified that the problems being experienced with the IGCC Project are typical and that the start-up of any large complex construction project will have some issues and problems, but the IGCC Project has had more issues and problems than other projects that he has been involved with, which is why methodically working through each issue and preventing negative impacts on future operations is and will remain the focus of the entire IGCC Project team.

Finally, Mr. Womack presented the Commission with additional IGCC Project information, as requested by the Commission in its IGCC-1 and IGCC-2 Orders. This information requested by the Commission was outlined by Mr. Womack and contained in Petitioner's Exhibit A-3 and Petitioner's Confidential Exhibit A-3. As noted in Mr. Womack's IGCC-8 testimony, much of this information pertained to the design and construction phases of the IGCC Project, which are now essentially complete and accordingly, Mr. Womack provided only that information that focused on pre-commissioning, commissioning, and operations issues and status.

Mr. Stultz noted that as the construction phase of the IGCC Project wraps up, an increased focus on updating the Commission as to start-up, testing and validation activities is appropriate. He also provided an update on the forecasted operating and maintenance ("O&M") budget for the IGCC Project.

Mr. Stultz testified that as of October 1, 2012, all systems necessary to operate the IGCC Project have been turned over from the IGCC Project's Testing and Start-up Team to his Operations and Maintenance team, meaning that the Operations and Maintenance staff have "care, custody, and control" of the entire IGCC Project and every system within the IGCC Project. This means that the IGCC Project is ready to operate safely and can move into the full plant commissioning phase and into GE's NPI testing program. This also means that all activities on the site fall under the

management of the Operations and Maintenance group rather than the IGCC Project group and that work practices and safety precautions have changed to meet the risk associated with an operating plant.

Mr. Stultz provided an update on the status of GE's NPI validation process for the IGCC Project, stating that NPI validation of the combustion turbines running on natural gas was completed in spring of 2012, as mentioned in his IGCC-9 testimony, and that NPI testing recently resumed now that the gasification island is in operation. He stated that at the time of filing of his testimony, GE had made substantial progress with NPI Phase 3 testing.

Mr. Stultz explained that since both combustion turbines have technical releases from GE, Duke has been operating the turbines. He stated that Duke received the technical releases from GE to operate the combustion turbines on natural gas on May 14, 2012 and has been running the combustion turbines on natural gas for commissioning purposes (while also putting energy on the grid). He also testified that the steam turbine was synchronized for the first time on August 8th and has operated, as testing would allow, reliably since that time. The costs associated with this operation (and associated revenues from selling energy into Midwest Independent Transmission System Operator ("MISO")) will be charged/credited to the capital budget of the IGCC Project.⁶

Mr. Stultz testified that the Company has begun operating the gasification island with the first light off of train 1 gasifier occurring on October 25, 2012, with the first syngas being produced on October 30th. Since then, train 1 gasifier has completed a required "fouling" run with operating hours exceeding 150 hours, with the ultimately produced electricity being placed into MISO. He explained that the production of the quantity and quality of syngas in these early runs is an example of the quality of construction and commissioning and of the training and preparation of the Operations and Maintenance team.

Mr. Stultz described the training that the Company did to prepare for first light off of the gasifiers. In mid-2010, operations training began, which consisted mainly of drawing review and manufacturer instruction book reading and discussion. Next, personnel and material were used to present and discuss the technical operations requirements of major equipment in the plant. During this same time, the simulator also became available for training of control room operators and gasification technicians. Early in 2011, GE conducted a multi-week intensive training course for all operations/engineering personnel. Next, equipment and system specific training continued in preparation for start-up. When the construction schedule extended into 2012, the operations team conducted a second classroom refresher training session for gasification. He explained that as part of final preparations, a "knowledge check" and interviews were held to determine the level of operating knowledge within the operations group. An intense program was developed by site management, GE personnel, site process engineering and other subject matter experts for all systems in gasification and gas clean-up which daily included classroom training, site walk down focus on the specific classroom topic for the day, and writing, reviewing, and finalizing plan operating procedures related to the daily classroom activity. At the end of each week, operators were individually tested and scored, and any score that indicated a need for additional training resulted in a discussion between the operators and supervisor, a refresher course, and retest. Mr.

⁶ Effective April 26, 2013, the Midwest Independent Transmission System Operator changed its name to Midcontinent Independent System Operator, Inc.

Stultz stated that at the end of the gasification training sessions, he felt that the Company had a knowledgeable workforce prepared to start the gasification systems, that the subsequent start-up has been as good as or better than expected, and that the successful training program resulted in a very successful first fire of the gasifiers.

Mr. Stultz described the extensive outreach efforts to the community to make them aware of the syngas production: over 3,000 invitations were sent out for the meeting prior to gasification light off; an update newsletter is sent to residents and local leadership updating the status of the plant and planned activities; a citizens advisory panel was formed with community representation that meets monthly and receives updates on the IGCC Project, discusses community issues relating to the IGCC Project, discusses appropriate communications to the community and the relationship between the community and the IGCC Project; a phone number has also been set up for the community to use for questions and comments; and prior to gasification first fire, a local media release was done.

Mr. Stultz next testified with regard to the role of the Joint Test Group. The Joint Test Group performs the testing plans approved by the Joint Validation Review Board and has the responsibility of developing an execution plan for each of the approved final test plans.

Mr. Stultz explained that prior to first fire of the gasification systems, a thorough review was performed of the IGCC Project organizational structure, its functionality, and of the personnel in those positions. This resulted in an adjustment to O&M headcount from 120 to nearly 140 employees. These changes have worked out well and contributed to the successful first fire.

Mr. Stultz described in detail the preparations that the Company is undertaking for the plant to become operational. He stated that there are numerous on-going activities, including employee training, field assistance of start-up efforts, walkdowns confirming that the IGCC Project construction matches the IGCC Project drawings, development of budgets, safety procedures, operating procedures, and general administration needs. Also, operating shifts are being supplemented for short term assistance in start-up activities. The Company has ordered and received the majority of spare parts required to be maintained in inventory to support the reliable operation of the IGCC Project.

Mr. Stultz testified on the importance of multiple walk downs and why they are an important part of commissioning the IGCC Project. He explained that the first walk down was done when construction transferred the IGCC Project to start-up and commissioning and it identified incomplete or needed changes that would need to be done by the construction team to allow completion of the start-up and commissioning work. The second walk down was conducted as part of the process to transfer systems and equipment from start-up and commissioning to the Operations and Maintenance group. The final and most intense walk down by the Operations and Maintenance personnel is to verify that the plant is built to an exact match of the piping and instrument diagrams. This effort is undertaken to make sure the Company knows precisely how the IGCC Project is built because any future activities that require drawings require a complete and exact knowledge of the plant – it is the starting point for Operations and Maintenance personnel to begin the long term operation of the plant.

Mr. Stultz discussed that Management of Change is a process that ensures any change made to the plant is formally requested, evaluated by multiple personnel for safety, environmental,

operability and process management and approved for execution. He also explained that Process Safety Management is an Occupational Safety and Health Administration (“OSHA”) mandated program for any facility that processes toxic chemicals above certain threshold quantities defined by OSHA to ensure that all facilities handling any material deemed toxic in large quantities are managed and operated in a manner that reduces the risk of a catastrophic failure to an acceptable level. At the IGCC facility, hydrogen sulfide is the chemical that triggers this program.

Next, Mr. Stultz explained that the Company is performing such extensive testing and commissioning of the Edwardsport IGCC Project because the level of investment and complexity dictates a diligent review, documentation of results, and verification of plant operations in differing configurations. He states that contracts also define performance standards that require testing in operation. Real world testing under a variety of load scenarios, weather and other conditions reduce unexpected outcomes and provide clear and pointed direction for validation of plant systems and the plant as a whole. In Mr. Stultz’s view, all this adds to the Company’s confidence that the plant will perform in commercial operation as expected.

With regard to environmental permitting, Mr. Stultz explained that the appeal of the air permit remains pending before the Indiana Office of Environmental Adjudication and that the parties are pursuing mediation. The Indiana Department of Environmental Management (“IDEM”) has not yet issued the final Title V renewal permit⁷ as the agency is making additional changes to the Technical Support document, which has not been finalized; however, authorization received under previous permits remain effective for Duke to complete construction and to undertake start-up and commercial operation of the IGCC Station.

Mr. Stultz explained that once the IGCC Project begins commercial operation, the Company will incur normal O&M expenses for the plant, which include a combination of fixed and variable costs. Fixed costs include full time Duke Energy employee labor costs and costs associated with air permit testing, National Pollutant Discharge Elimination System (“NPDES”) sampling and reporting, and variable costs such as operation costs for the plant. He explained that the chemicals that are consumed during operation of the IGCC Project are considered variable, as well as equipment maintenance and contractor costs. Overhead and allocations are also O&M budget expense items. He explained that these O&M expenses will vary depending on the timing of maintenance cycles, unexpected costs, operating characteristics and operating time of the IGCC Project. Forecasted O&M expenses will be trued-up once actual costs are known, and customers will pay only the actual O&M incurred for the IGCC Project. Mr. Stultz provided detail as to what the current O&M budget includes in operating the IGCC Project and has provided that to Ms. Douglas.

Mr. Stultz concluded his direct testimony by reporting that the coal handling system has been receiving truck and train deliveries and has performed as expected. He stated that the Company reports on compliance activities about permit compliance to IDEM on a regular basis.

Ms. Douglas testified on behalf of the Company with respect to ratemaking issues. She explained that the purpose of her testimony was to explain the Company’s request for timely recovery of costs in connection with the Company’s IGCC Project, including construction work in progress (“CWIP”) ratemaking treatment for retail jurisdictional IGCC Project expenditures. Ms.

⁷ The Title V operating permit renewal was issued April 3, 2013.

Douglas explained that she developed rates and presented exhibits reflecting the terms of the April 30, 2012 Settlement Agreement (“2012 Settlement”) as approved in the IGCC 4S1 Subdocket.

On behalf of Duke, Ms. Douglas requested that the Commission approve the following: (1) the value of the IGCC Project upon which the Company is requesting authorization to earn a return; (2) the amount of Duke’s expenditures for the IGCC facility incurred through September 30, 2012; (3) recovery of incremental fees and expenses of Black & Veatch incurred by the Company from April through September 2012; (4) recovery of the estimated operating expenses net of the applicable prorated amount of an annual credit of \$5,756,000 approved in the CPCN Order, and property tax expense that are expected to be incurred from June through September 2013; (5) reconciliation of actual depreciation incurred from April through September 2012 to the estimated depreciation amount included in IGCC-8 on the portion of the IGCC Project that has been placed into service; (6) recovery of estimated depreciation expense from April through September 2013 on the portion of the IGCC Project that has been placed in-service (certain IGCC Project-related transmission facilities); (7) recovery of the estimated depreciation expected to be incurred from June through September 2013 on the production portion of the IGCC Project; (8) inclusion of a credit for the retail portion of one-half of the Indiana Coal Gasification Technology Investment Tax Credit, \$15 million on an annual basis (“State Tax Credit”); (9) reconciliation of revenue requirements for operating expenses pending approval for recovery in IGCC-8 to actual collections from April through September 2012; (10) the inclusion of a credit to retail customers in Rider 61 to reflect the jurisdictional impact of a proposed change in depreciation rates for in-service plant, which is part of the 2012 settlement; (11) a voluntary credit to HLF customers to correct for a clerical error in the development of IGCC-4 rates; and (12) adjustment of Petitioner’s retail electric rates, via Rider 61 to reflect the revenue effect of such investment and cost recovery. Ms. Douglas also requested on behalf of the Company that the Commission approve a change in the language for Rider 61 to reflect the use of Commission-approved depreciation rates for the IGCC plant rather than tying depreciation rates for the plant to a 30-year life.

Ms. Douglas described Petitioner’s Exhibit C-1, Duke’s Rider 61, of which the Company is requesting approval. Petitioner’s Rider 61 includes definitions of the components of the formula used to develop the IGCC Revenue Adjustment Factors, a formulaic representation of the calculations used in developing the factors, revenue adjustment factors by retail rate group, a listing of retail allocation factors (based on the allocation factors approved in the Company’s last general retail electric base rate case), and the billing cycle kWh and/or non-coincident peak demands used to develop the proposed IGCC Cost Recovery Adjustment. Petitioner’s Exhibit C-1 also reflects the proposed change in the Rider 61 language to reflect the use of Commission-approved depreciation rates for the IGCC plant rather than tying depreciation rates to the original estimated 30-year life of the plant.

Her testimony also explained Petitioner’s Exhibit C-2, which includes the schedules that develop and support the IGCC-10 revenue adjustment factors. She explained that this exhibit sets forth schedules for the IGCC Project and includes data consistent with the requirements of 170 IAC 4-6-12 and the 43114, 43114-S1 and 43114 IGCC-1 Orders; actual in-service dates for the in-service portion of the IGCC Project; total expenditures for the IGCC Project as of September 30, 2012; IGCC Project expenditures applicable to wholesale jurisdictional customers; retail IGCC facility investment as of September 30, 2012; the amount of retail allowance for funds used during construction (“AFUDC”) included in the cost of the IGCC Project as of September 30, 2012; and the total amount of AFUDC included in the IGCC Project.

Ms. Douglas also explained the proposed ratemaking treatment for the costs of four IGCC Project-related transmission projects, which are in-service and were included in the \$2.35 billion approved IGCC Project estimate. Ms. Douglas explained that for the two transmission projects that qualify as part of MISO's transmission expansion plan and are recognized by the MISO as Regional Expansion and Criteria Benefit ("RECB") projects, the Company will first seek cost recovery for such projects pursuant to its Rider No. 68 and the MISO's Schedule 26, consistent with the Commission's June 25, 2008 Order in Cause No. 42736-RTO-14. If and to the extent that costs for an IGCC-related transmission project are not eligible for recovery through Rider No. 68 and Schedule 26, then the Company will seek cost recovery for such project (or portion of a project) through the IGCC Rider. The projects are in-service, and the Company expects a 50% reimbursement for such RECB projects; therefore, the Company has included 50% of the value of the projects in its IGCC Project valuation for CWIP ratemaking purposes (representing the 50% of the projects that are not expected to receive MISO RECB reimbursement). Accordingly, Page 1 of Petitioner's Exhibit C-2 shows the expenditures for the two RECB projects, including the reduction in IGCC Project expenses by the 50% amount for which the Company expects to be reimbursed by MISO through the RECB process.

Ms. Douglas continued her testimony stating that Page 2 of Petitioner's Exhibit C-2 shows the amount of accumulated depreciation as of September 30, 2012, applicable to the IGCC Project investment. Currently, the only portions of the IGCC Project that have been placed in-service and are being depreciated are the four transmission projects. The jurisdictional accumulated depreciation applicable to the jurisdictional IGCC Project investment as of September 30, 2012, was approximately \$653,902, which reflects the reduction due to the anticipated 50% MISO RECB reimbursement amount.

Ms. Douglas' Exhibit C-2, page 3 developed the jurisdictional revenue requirement. The retail jurisdictional portion of the total construction costs exceeded the retail jurisdictional portion of the \$2.595 billion June 30, 2012 Hard Cost Cap amount; therefore, the Company limited the amount of IGCC Project investment on which a return will be earned in its calculations. Ms. Douglas explained that the retail jurisdictional portion of the \$2.595 billion June 30, 2012 Hard Cost Cap amount was \$2,404,075,000. She stated that the Additional AFUDC (as per the terms of the 2012 Settlement) related to the Hard Cost Cap amount accrued from July through September 2012 was \$27,741,000. The total of the retail jurisdictional Hard Cost Cap plus Additional AFUDC as of September 30, 2012 was \$2,431,816,000, which is a reduction of \$659,545,000 from the total retail jurisdictional CWIP investment as of September 30, 2012. The six-month jurisdictional revenue requirement for return on investment as of September 2012 was \$122,291,000. This is a \$12,000 increase from the amount proposed in IGCC-9 reflecting the terms of the 2012 Settlement.

Ms. Douglas next discussed how the revenue conversion factors are determined. She stated that these rates have not been adjusted to reflect the provisions of the American Jobs Creation Act of 2004 because the Company will not be allowed to take the deduction in 2013 due to its expected tax position after reflecting bonus depreciation for the IGCC plant.

Ms. Douglas explained the calculation of the jurisdictional revenue requirement applicable to IGCC Project-related operating expenses, including depreciation expense. Ms. Douglas described why depreciation expense was separated into two components when converting the expense to revenue requirements. These operating expenses included: expenses incurred by the Company

from April through September 2012 for services from Black & Veatch; estimated retail portion of operating expenses and property tax expenses from April through September 2013; reconciliation of the actual retail jurisdictional depreciation expenses from April through September 2012; estimated retail jurisdictional depreciation expense from April through September 2013 for the transmission projects already in-service; the estimated retail depreciation expense expected to be incurred from June through September 2013 on the production portion of the IGCC Project estimated to go in-service in late May 2013; and the inclusion of the State Tax Credit.

Ms. Douglas' testified that the fees and expenses incurred by the Company from April through September 2012, for services by Black & Veatch for IGCC Project oversight totaled \$189,655.

Ms. Douglas stated that the Company forecasts a total of the retail jurisdictional operating expenses and the retail jurisdictional property taxes in the amount of \$18,300,113 for the period April through September 2013. She also explained that the actual retail jurisdictional depreciation expense during the April through September 2012 period totaled \$119,527. This amount was reconciled with the estimated amount of depreciation for the same period that was included in IGCC-8 and the variance of (\$60) was included in this filing. Ms. Douglas testified that the estimated retail jurisdictional depreciation expense for the April through September 2013 forecast period was \$34,045,763.

In addition, Ms. Douglas explained that the Company will be eligible to receive the benefit of the State Tax Credit in the amount of \$15 million on an annual basis once the IGCC Project is in-service. Since the plant is expected to be in-service during the time these proposed rates will be in effect, a credit of \$6,884,250 has been included (one-half of the annual State Tax Credit).

Ms. Douglas then explained that the result of converting all of the IGCC Project-related operating expenses to revenue requirements was the inclusion of \$47,973,546 in the calculation of the billing factors for this rider.

Petitioner's Confidential Exhibit C-2, p. 5 detailed the support for the retail jurisdictional amount of forecasted depreciation expense and other expenses included in the revenue requirements calculation on page 4 of exhibit C-2. She again noted that the depreciation amount was reduced by 50% of the depreciation associated with the two RECB transmission projects for which reimbursement will be received from MISO. She continued explaining that the depreciation expense for the remainder of the plant investment included for ratemaking was calculated beginning in June 2013 using the weighted average depreciation rate of 4.20% in the IGCC depreciation study supported by Mr. Spanos in the IGCC-8 proceeding. The estimates for the other operating expenses and property taxes were also included beginning in June 2013. The property tax estimate reflects 100% of the June through September 2013 benefit forecasted to be received once the plant is in-service for accounting purposes for the Knox County property tax abatement and the thirty-year reimbursement due to designation of the IGCC Project as a Tax Increment Financing District. In addition, as approved by the Commission in the CPCN Order, a monthly credit of 1/12th of an annual amount of \$5,756,000 was included beginning in June 2013 to reduce the forecasted operating expenses.

Ms. Douglas explained that she had reconciled the retail jurisdictional revenue requirements pending approval for recovery in IGCC-8 applicable to operating expenses, to actual collections

through retail rates received from April through September 2012. This reconciliation resulted in an over collection of \$55,642, which was included in the calculation of the billing factors for this rider.

Page 7 of Petitioner's Exhibit C-2 shows the calculation of the IGCC Revenue Adjustment Factors, by jurisdictional rate group. Also included is a voluntary credit adjustment by the Company to revenue requirements in the amount of \$663,420, which reduces the proposed rate for HLF customers to correct for a tracker administration clerical error. This error affected the rates that were proposed, approved and billed to HLF customers under IGCC-4 rates beginning in July 2010. The error stemmed from the use of an incorrect value for the kW billing determinants used to establish the rates approved in the IGCC-4 Order. The billing determinant used was understated, which caused the IGCC-4 factor to be overstated. Accordingly, the Company is providing the HLF customer class with a voluntary credit for the amount of the difference between what they were billed under IGCC-4 rates from April through September 2012 and what they would have been billed had the error not occurred. Ms. Douglas stated that the kW billing determinants for HLF have been computed correcting for this error in this proceeding.

Ms. Douglas discussed the derivation of the Company's weighted average cost of capital as of September 30, 2012, as shown on Petitioner's Exhibit C-2, p. 8. Ms. Douglas stated that the weighted average cost of capital has been calculated consistent with the Commission's administrative rules, the Commission's CPCN Order, the IGCC-1 Order, and the 2012 Settlement to prospectively discontinue the deferred income tax incentive for the IGCC Project and include deferred income taxes in the capital structure.

Ms. Douglas also summarized AFUDC rates for the period April through September 2012 which were used in determining the amounts of AFUDC included in the value of the Company's IGCC facility through September 30, 2012.

Ms. Douglas next explained when CWIP ratemaking treatment for the IGCC Project will cease. She stated that consistent with 170 IAC 4-6-22 and in accordance with the Commission's CPCN Order, the IGCC Project will be deemed to be under construction, and Duke will continue to receive revenues through Rider 61, until the Commission determines that this Project is used and useful in a proceeding that involves the establishment or investigation of Duke's retail electric base rates and charges.

According to Ms. Douglas, the total adjusted revenue requirement for this filing, consistent with the 2012 Settlement provisions and reflecting inclusion of the State Tax Credit, is \$151,957,984.

Ms. Douglas also stated that the impact of the proposed IGCC Project ratemaking treatment, under the terms of the 2012 Settlement and assuming approval of the IGCC-9 proposed factor,⁸ on the monthly bill of a typical residential customer using 1,000 kilowatt-hours would be an increase of \$4.55, or approximately 5.5%, from the base bill plus the IGCC-9 factor then being billed to customers.

Ms. Douglas concluded her testimony by discussing the accounting treatment for costs incurred and revenues generated during testing before the plant will be declared in-service and the

⁸ On April 3, 2013, the Commission approved the rate factor in the IGCC-9 proceeding.

accounting treatment for these expenses and revenues as discussed by Mr. Stultz. She explained that the Federal Energy Regulatory Commission (“FERC”) Uniform System of Accounts provides for the inclusion in the cost of constructed plant the necessary costs of testing or running a plant or parts thereof during a test period prior to such plant becoming ready for or placed in-service. She explained that these costs and revenues will be charged to the IGCC Project until the plant is declared in-service for accounting purposes, after which time they will be accounted for as O&M expenses or revenues as appropriate.

B. OUCG’s Testimony. OUCG witness Wes R. Blakley, Senior Utility Analyst, testified concerning the IGCC-10 Rider rates contained in Ms. Douglas’ testimony. Mr. Blakley described the rate mitigation measures included in the 2012 Settlement. He discussed that this is the first IGCC tracker to request operating expenses and depreciation on the production plant. He explained that the effect on residential customer rates (IGCC-9 vs. IGCC-10) using 1,000 kWh is up from \$8.12 to \$12.67. He explained that the increase can be attributed to the production start of the plant with the addition of the associated depreciation expenses and estimated operation and maintenance expenses.

Mr. Blakley also confirmed that the figures used in the calculation of the Company’s IGCC-10 adjustments factors, including the rate mitigations per the 2012 Settlement are supported by the testimony, exhibits, and workpapers filed by the Petitioner.

Anthony A. Alvarez, Utility Analyst for the OUCG provided an overview of the IGCC O&M budget along with his concerns and recommendations. He explained that the Edwardsport IGCC Generating Station will incur normal O&M expenses once commercial operations begin, but that some of the O&M expense items will be unique to the physical and operational distinction of the IGCC plant. He said that identifying and understanding the O&M budget and forecast expense items is critical since these expenses flow through the IGCC Rider, and ratepayers ultimately pay these expenses. Mr. Alvarez listed certain O&M budget account items that he thought were ambiguous and recommended that the Company provide detailed explanations of the expenses in these accounts and adopt prescriptive and informative budget account descriptions.

C. Joint Intervenors’ Testimony. Joint Intervenors’ witness David A. Schlissel, President of Schlissel Technical Consulting, Inc. testified that notwithstanding the Commission’s approval of the 2012 Settlement, there continue to be technical problems (caused by human errors and equipment failures), schedule delays, and related costs affecting the IGCC Project which pose significant risks to ratepayers and are likely to continue to manifest themselves beyond this IGCC review period both in additional schedule delays and related costs, and in reliability issues and costs once the IGCC Project is declared in-service.

Mr. Schlissel explained that the IGCC Project delays from the original schedule have been substantial and that the IGCC Project was originally scheduled to be completed for the 2011 summer peak. He stated that the most recent projection is a May 2013 expected in-service date with an expected substantial completion date in late September 2013.

Mr. Schlissel testified that portions of the Monthly Progress Reports for March and September 2012 show significant incremental delays in the in-service and substantial completion dates for the IGCC Project. In Mr. Schlissel’s opinion, he believes that the 80 days or 2.6 months of the incremental delay is unreasonable given that the delays are technical problems associated with

human errors, equipment failures, or a combination of the two, which are within the control of the Company and/or its contractors.

Next, Mr. Schlissel explained that he does not believe that the previous increase in quantities and the cascade effect resulting from it had any effect on the incremental schedule delays during the current IGCC-10 period.

Mr. Schlissel referenced an October 2012 presentation to the Duke Energy Transaction Review Committee and to the Duke Energy Board of Directors, as well as to Mr. Womack's testimony describing the specific technical problems that Mr. Schlissel felt resulted in the incremental schedule delays.

Mr. Schlissel mentioned the delay between first fire of the combustion turbines and light off of the gasifiers for the IGCC Project and maintained that this was approximately 125 days or 4.2 months longer than originally scheduled and 114 days or 3.8 months happened during the IGCC-10 review period.

Mr. Schlissel testified that the water hammer event was the most important contributing factor in the 2.6 month delay in the IGCC Project because it essentially stalled progress on the critical path to IGCC Project completion, a period of 5 weeks or 35 days. Plus, there was an additional week's delay due to downstream implications of the event. Moreover, by taking both combustion turbines offline for a period in late June and all of July, it prevented the Company from realizing significant generation revenues it had previously anticipated would help offset IGCC Project costs. Mr. Schlissel stated that he did not dispute the description of the water hammer event in Mr. Womack's testimony, but supplemented Mr. Womack's description of the event in his testimony with information from GE's July 2012 Monthly Report. Mr. Schlissel also discussed the root cause analysis performed by the Company following the water hammer event.

Mr. Schlissel explained that the next most significant technical problem causing incremental schedule delays were critical valve failures that required replacement, rework or repair, which range from steam injection control valves, lock hopper valves, and oxygen and nitrogen valves, all of which are critical to operation of either the Gasification Process or Power Block.

Mr. Schlissel provided more detail regarding the oxygen valve problem expanding on Mr. Womack's discussion of the issue with information provided in GE's August 2012 Monthly Report. He stated that the failure of the oxygen valves as well as the nitrogen valve failures account for two to three weeks of the incremental schedule delay. Mr. Schlissel also expressed his safety concerns related to oxygen leaks resulting from valve failures.

Mr. Schlissel quoted Mr. Womack's testimony on the steam injection control valve problem. He further discussed the lock hopper valve problem as he read it from the June and July 2012 GE Monthly Reports. Mr. Schlissel testified that the Company had not performed a root cause analysis of these critical valve issues.

Mr. Schlissel also discussed that the flushing of the acid gas removal piping system was another technical problem that added four weeks to the schedule delay. He stated that Mr. Womack did not discuss this issue in his testimony, but that his source of information on this problem was taken from the May and July GE Monthly Reports and that it appeared that this system had to be

reengineered and reconfigured, but that the issues were resolved by July 2012 to permit further commissioning and testing of the gasification process. He further stated that a root cause analysis of this issue was not performed.

Mr. Schlissel again quoted Mr. Womack's testimony identifying a variety of miscellaneous equipment problems and stated that the Company did not perform any root cause analyses of these various issues.

Mr. Schlissel testified that the overall characterization of the technical problems causing the incremental delays were either human errors or equipment problems within the control of the Company and its contractors. Mr. Schlissel then listed several factors of why he believes that technical problems will continue to lead to additional schedule delays and costs in completing the IGCC Project. The listed factors are: since Petitioner began start-up, testing, and commissioning, the IGCC Project has repeatedly experienced an unusually large number of technical problems, which have resulted in schedule delays and associated costs, that are separate from the commodities increase; the Company's identification of technical problems as "unexpected" and "more than usual"; GE concerns in their monthly reports during the IGCC-10 review periods of varying levels of significance regarding the quality and progress of Duke's startup and commissioning activities; the period between first fire and light off was approximately 18 weeks or 4.2 months longer than planned; the "water hammer event" effectively shut down the power block for five weeks and extended the IGCC Project schedule by six weeks, and confirmed GE's concerns and prior predictions that light off would not occur prior to and likely some time after October 1, 2012; and Duke implemented a variety of temporary solutions, which have been designed to avoid further delays with the knowledge that they may well not be adequate for sustained operation of the IGCC Project once it has been declared in-service.

Mr. Schlissel recommended that the Commission initiate an independent investigation conducted by Black & Veatch of the equipment and technology related risks based on the fact that the ongoing review proceedings are retrospective in outlook, where the proposed investigation would be prospective in outlook, focus on the analysis and mitigation of risks as well as particular equipment and technology risk. He continued that the Commission needs to act now to ensure that the Company's promise that the IGCC Project will operate at an average 85 percent availability will not go unfulfilled and that ratepayers are protected. He further recommended that the report of the proposed investigation be made a matter of record and considered a Staff Report of the Commission.

Mr. Schlissel concluded his testimony by recommending that the Commission disallow for ratemaking purposes the costs of delay associated with 80 days of unreasonable delays in completion of the IGCC Project and initiate an independent investigation into the future reliability of the IGCC Project once it is declared in-service.

Ralph Smith, Senior Regulatory Consultant at Larkin & Associates, referenced a 1992 order from the Illinois Commerce Commission as guidance for the Commission on the treatment of costs due to delay on a utility construction project. He opined that this Illinois order should put to rest any question as to the Commission's legal authority to identify, quantify and disallow financing costs attributable to unreasonable delay.

Mr. Smith explained that Joint Intervenors are defining the costs of delay to be the incremental costs attributable to the 78 days or 2.6 months of unreasonable delay which the Company is proposing to recover from customers through rates. He explained that there are additional financing costs (both CWIP and AFUDC) that are incurred due to delays of placing the IGCC Project into service.

Mr. Smith testified that financing costs are higher as construction costs increase and the period for construction is extended. He indicated that the amount of non-finance construction costs was addressed in the Hard Cost Cap that was contained in the 2012 Settlement, however AFUDC continues to accrue as the IGCC Project is delayed. He explained that the Company is seeking additional financing costs on CWIP during the construction period which has been extended due to delays.

Mr. Smith testified that the Company requested a revenue requirement for financing costs/return on investment of \$122.291 million, which includes a six-month return on investment of \$82.416 million. He explained that Duke's calculation starts with the retail portion of the hard cost cap at June 30, 2012 of \$2.404 billion, adding AFUDC for July 2012 through September 2012 of \$27.741 million on the retail portion of the Hard Cost Cap, and subtracting \$654,000 of retail accumulated depreciation as of September 30, 2012 to total \$2.431 billion of net retail IGCC investment as of September 30, 2012. He further stated that the Company applied a debt rate of return of 2.15%, equity rate of return of 4.63%, and overall rate of return of 6.78% to derive \$164,833 million for its claimed annual return on investment.

Mr. Smith stated that in order to compute the proposed disallowance for unreasonable costs of delay, he used the CWIP related financing costs of approximately \$20.38 million per month, based on the amount for jurisdictional revenue requirements shown on Petitioner's Exhibit C-2. He explained that the amount of CWIP related financing costs which Joint Intervenors would classify as costs of delay and should not be allowable for ratemaking purposes is \$52,998,000 (\$20.38 million/month x 2.6 months of delays as calculated by Mr. Schlissel).

Mr. Smith stated that he has two issues with the AFUDC accruals - the rate used by the Company to accrue AFUDC is excessive because it fails to recognize non-investor supplied capital and that Petitioner continues to accrue AFUDC during periods of incremental delay. He explained that the Company is not claiming the entire amount of AFUDC accrued during this IGCC-10 period, but only on the retail portion of the Hard Cost Cap for the period July through September 2012.

Mr. Smith recommended that the Commission disallow 2.6 months of AFUDC accruals, which equals \$24.04 million.

Mr. Smith next discussed AFUDC and CWIP, the differences between them, and that there should be consistency between the calculations for both. He stated that the Company proposed a rate of return for CWIP of 6.78%, and AFUDC for July and August 2012 of 7.26% and 7.38% for September 2012. He explained that the Joint Intervenors were challenging the rates the Company used to compute AFUDC from July through September 2012 and the method in which AFUDC was computed. Mr. Smith repeated Ms. Douglas' testimony explaining the difference in the calculations is because deferred income taxes are not included when calculating AFUDC rates due to the plant that is under construction and has not yet been placed in-service will not generally generate

cumulative deferred income tax balances. He continued that this method of calculation was relied upon by the Commission in its IGCC-9 Order.

Mr. Smith testified that the Company included accumulated deferred income taxes and accumulated deferred investment tax credits to compute the CWIP financing rate, but did not include them when computing the AFUDC financing rate. He opined that this situation is parallel to the deferred tax incentive situation in which the Commission in its IGCC 4S1 Order ordered the Company to hold ratepayers monies it had collected for later return. He continued that the Commission should order Petitioner to recompute AFUDC in the period July 1, 2012 forward using AFUDC rates which incorporate deferred income taxes and consistent with the rates used for CWIP financing costs.

Mr. Smith continued his testimony stating that the rate of return used to compute AFUDC is inconsistent (and higher) than the rate used to compute CWIP and cites to Florida as the proper model for AFUDC calculation. Mr. Smith stated that the Commission should order Petitioner to recalculate all IGCC Project AFUDC accruals from April 1 through September 30, 2012 using an AFUDC rate that is no higher than the actual cost of capital for the Project. According to Mr. Smith's estimate, this would result in a \$264,000 reduction in AFUDC when also assuming an adjustment to AFUDC for unreasonable delay.

Next, Mr. Smith discussed his concern that the Company has not returned to ratepayers the deferred tax incentive as ordered by the Commission in the IGCC 4S1 Order. He stated that he was advised by counsel that interest must be provided on these funds at the statutory interest rate of 8% and that such interest must be accrued from the date of collection through the date such funds are refunded or credited to customers. He opined that the longer the Company holds onto these funds, ratepayers are being subjected to additional financing costs. Mr. Smith testified that Joint Intervenors request that the Commission order the Company to refund in this proceeding the deferred tax incentive, with interest.

Mr. Smith explained that the Company would be claiming federal bonus tax depreciation on the portion of the IGCC Project that was placed into service for federal income tax purposes in 2012 and that if the Company has a net operating loss for federal income tax purposes in 2012, which it has indicated that it might, this loss could limit the tax benefits realized by the Company in 2012 from claiming the 2012 bonus tax depreciation.

Mr. Smith stated that it doesn't appear in the Company's calculation of its claimed revenue requirement that the Accumulated Deferred Income Taxes ("ADIT") resulting from a portion of the IGCC Project being in-service for federal income tax purposes has been reflected. He recommends that the Commission order the Company to account for and reflect the federal ADIT benefit that results from declaring portions of the IGCC Project in-service for federal income tax purposes.

Mr. Smith summarized his testimony stating that the Commission should: disallow amounts of AFUDC and CWIP related financing charges equivalent to 78 days due to unreasonable delay; direct the Company to calculate its rate of return for AFUDC purposes using a capital structure that includes accumulated deferred income taxes as a zero cost item (as well as other non-investor sources of capital); direct the Company to accrue simple interest at 8% from the date of collection on the \$31 million deferred tax incentive revenues collected from July 29, 2010 through December 2012; direct the Company to refund or apply the \$31 million deferred tax incentive revenues

collected against the revenue requirement in this proceeding rather than waiting until IGCC-12 to return the money; and require Petitioner to account for and reflect the federal ADIT benefit occurring in this period.

D. Petitioner's Rebuttal Testimony. Mr. Womack responded to Mr. Schlissel's testimony with regard to the alleged 78 day unreasonable delay. He states he does not dispute that the IGCC Project has had delays, but does dispute that the delays referred to by Mr. Schlissel are unreasonable or caused by imprudence. He explains that as start-up, validation and commissioning activities have progressed, design and construction issues have been uncovered along the way as he has described openly in his testimony. Mr. Womack explained that the ongoing IGCC Project testing and validation are exactly the types of activities the IGCC Project should be undertaking during the start-up period and that all of these actions have been taken with an eye toward long-term reliability and availability of the IGCC Project once it is in-service.

Mr. Womack testified that Mr. Schlissel is generally accurate that the causes of the schedule delays are due to technical problems associated with human errors and/or equipment failures, but that he made several factual errors. For example, the oxygen leaks were not external leaks, but were internal leaks into piping systems and at no time did oxygen leak into the surrounding environment where it could have ignited coal dust or other items. In addition, the flushing of the Acid Gas Removal piping system and GE's description of a problem with an inlet valve are two separate non-related issues. He explained that the flushing delay was caused by an overly optimistic estimate of how long it would take to clean the piping system. Mr. Womack stated that the inlet valve problem did not contribute to the change in the in-service date and that he did not mention it in his direct testimony because he mistakenly assumed the explanation would be self evident.

Mr. Womack disagreed with Mr. Schlissel's contention that the delays experienced were not a result of the commodities increase. He explained that the quantities of some commodities do impact the testing and start-up durations. For example an increase in quantity of the Acid Gas Removal piping system results in an increase in the length of the piping system which increases the volume of the system, and impacts the flow velocities. In addition, having 28,000 valves rather than 9,000 increases the probability of valve problems.

Mr. Womack stated that the technical problems list contained within the October 2012 board presentation are typical when commissioning large complex construction projects and that only the water hammer event would he consider to be contributed to in some part by human error. He said that simply having an increase in commodities means there is more equipment which can have problems and in no way demonstrates unreasonableness or imprudence. The Company has consistently identified and remedied the issues encountered in a timely, safe and reasonable manner.

Mr. Womack disputed Mr. Schlissel's statement that certain valve repairs are unreasonable. He explained that the potential for problems with these valves was foreseen and a reasonable plan to mitigate the risk was put into place. The 46 control valves were subjected to extensive testing in the factory, but actual on-site conditions revealed the need for the manufacturers to modify them. He explained that this delay was a relatively minor commissioning issue.

Mr. Womack addressed Mr. Schlissel's criticism for not conducting a root cause analysis of the valve problems. He explained that a root cause analysis is a time consuming process used

where the cause is not apparent or the risk of a repeat issue is great and certainty is needed to identify the root cause and all contributing factors. In this situation, the cause was readily identifiable and the risk of repeating the problem was small once corrected. Mr. Womack also testified that the extended time for flushing the acid gas removal system did not necessitate a root cause analysis because the reasons of the issue were clearly understood.

Mr. Womack provided an update on the water hammer event stating that the piping, valves, hangers and steam turbine shell were all corrected in July 2012. He also explained that the inadequate and missing procedures mentioned in the root cause analysis report have been prepared and the operators trained.

Mr. Womack opined that the modifications to the IGCC Project schedule between April and September 2012 were not unreasonable or imprudent, but displays the Company's focus on quality, intensive commissioning and validation. The delays were not caused by issues known or reasonably knowable to the Company and issues were addressed during start-up and commissioning and that in his opinion, the Company acted reasonably and prudently.

Mr. Womack addressed Mr. Schlissel's statement that the Company implemented a variety of temporary or indeterminate solutions which were designed to avoid further delays in the start-up, testing and commissioning phase knowing that they may not be adequate for sustained operation of the IGCC Project. He explained that this allegation has no basis in fact or evidence. Temporary fixes were merely put in place to allow testing and commissioning activities to proceed.

Mr. Womack next addressed the references Mr. Schlissel makes to several GE monthly progress reports in which GE expresses concerns regarding the quality and progress of Duke Energy's start-up and commissioning activities. As Mr. Womack testified in his IGCC-9 rebuttal, GE reiterates what Duke believes are inaccurate or misleading statements. He stated his opinion that GE was using the monthly reports to position itself for a potential commercial dispute regarding the IGCC Project and that the reports cited by Mr. Schlissel are not consistently reliable nor do they contain accurate, unbiased descriptions of activities and events on the IGCC Project and should not be relied upon by the Commission for decision-making.

Concluding his rebuttal testimony, Mr. Womack provided an update on the expected in-service date for the IGCC Project stating that the IGCC Project could not be declared in-service until after the rotor outage, which involved GE's NPI testing, was concluded and at the time of the filing of his rebuttal testimony, they were coming out of that outage.

Mr. Stultz provided rebuttal testimony in response to Mr. Schlissel's testimony that start-up and commissioning activities have any negative bearing on future reliability of the IGCC Project and to respond to his suggestion that the Commission retain Black and Veatch to independently investigate the equipment and technology risks at the IGCC Project.

Mr. Stultz testified that the IGCC Project Team found and resolved many technical and other issues during the start-up and testing period, which is the precise reason that the Company had such an extended period of time to operate the plant during the start-up and testing period. He explained that GE has a very specific validation process, which requires extensive testing and review to ensure the equipment meets the design criteria established prior to substantial completion. He explained that there will be unexpected or unidentified issues as the IGCC Project begins operations and that

the size and complexity of the IGCC Project continues to be an important part of any discussion about technical issues and corrective actions taken. He opined that there will likely be issues for a period of time after the IGCC Project is in-service, but that he believes the Company has taken all reasonable steps to best position the IGCC Project for reliable performance.

Mr. Stultz described that in his experience every major project should expect to find and resolve numerous engineering, design, and construction issues and that the larger and more complex the project, the more potential for equipment and systems to have issues.

Mr. Stultz next addressed Mr. Schlissel's characterization that the issues uncovered and resolved during the commissioning process were unexpected. He explained that unexpected issues are normal and part of the commissioning of every project of this size and complexity, but that the important point is that no issues have been found that could not be or have not been corrected by equipment modifications or procedural changes.

Next, Mr. Stultz discussed the new operating procedures that were implemented as a result of the water hammer event. He explained that potential causal factors identified the need to develop a configuration control procedure to reinforce the requirement to use the IGCC Project procedures and guidelines, to increase training on the IGCC Project procedures and guidelines, as well as conduct a complete review of control logic of system piping and instrument diagrams. He explained that prior to this event, the Company believed its training to have been thorough and adequate, but that through the review of the root cause analysis findings, various lessons learned were used to help IGCC Project operations, maintenance and engineering staff in reviewing, changing or modifying operating and maintenance practices that will ultimately reduce risk during operation.

Mr. Stultz responded to Mr. Schlissel's statement that the Company implemented a variety of temporary or indeterminate solutions with the knowledge that they may be a temporary or inadequate resolution of the technical issues encountered during commissioning. He stated that the Operations team has been involved in every step of the start-up and commissioning process because they are the ultimate owners and operators of the IGCC Project and take their role as owner and operator very seriously over the long-term. Mr. Stultz stated that taking short cuts that could impact the future reliable operations of the IGCC Project is inappropriate and has not occurred on his watch.

Mr. Stultz testified that he does not believe the Commission should initiate a separate and independent investigation of the equipment and technology related risks to the plant's reliability at this time because no evidence has been presented (nor does it exist) that suggest the Commission should initiate such an investigation. He testified that the IGCC Project is subject to ongoing ratemaking proceedings that will continue after commercial operation of the IGCC Project and that any issues or concerns with the operations can be reviewed in future IGCC Rider proceedings or future fuel clause proceedings.

Mr. Stultz reiterated his testimony from the IGCC 4S1 proceeding that he expects the IGCC Project to achieve overall availability of 85% or higher over its long-term operation on syngas and that he expects the availability of the IGCC Project to be lower during the first 15 months of commercial operation as the team continues to gain experience operating the IGCC Project.

Ms. Douglas provided rebuttal testimony disagreeing with Mr. Smith's recommendations that the Commission disallow for ratemaking purposes, as costs of unreasonable delay, amounts of AFUDC and CWIP related financing charges. She explained that Mr. Smith's recommendation for disallowances is based on Mr. Schlissel's calculation of the impact of incremental delay that he characterizes as unreasonable. The starting point for Mr. Schlissel's measurements is a projected in-service date of December 4, 2012, and a projected substantial completion date of February 19, 2013, both of which are well after the September 30, 2012 cutoff date used in this proceeding. For the April through September 2012 period for this proceeding, it was projected that the IGCC Project would not be in-service for accounting purposes, and therefore AFUDC would be incurred through the six month period. In fact, if the projected in-service date had not been revised, exactly the same amount of AFUDC would have been accrued on the project as has been included in the September 30, 2012 investment balance that was used for developing the proposed rates. The revenue requirements associated with the CWIP return on that balance would also be exactly the same. Even if there were unreasonable delays, it would be incorrect to adjust the IGCC-10 rates because no incremental cost related to the alleged unreasonable delays was included in the development of the IGCC-10 rates and rates would have been the same, with or without the changes to the schedule.

Ms. Douglas responded to Mr. Smith's reiteration of Mr. Kerwin Olson's IGCC-9 concern with the Company's method for calculating AFUDC rates. Ms. Douglas explained that Petitioner calculates its AFUDC rate in accordance with the FERC Uniform System of Accounts, which has been adopted by the Commission for use by Indiana electric utilities, and that FERC rules and guidance were put in place to ensure consistency between utilities as to the method of calculating AFUDC. She explained that the Company's calculation does not include accumulated deferred income taxes because it is not one of the elements specified to be included in the calculation by FERC and because, unlike Florida, the Commission has not adopted a modified AFUDC calculation including such elements for use in Indiana. Ms. Douglas cited page 19 of the Commission's IGCC-9 Order wherein the Commission found that "the Company's calculation of AFUDC rates to be applied to IGCC investment is correct."

Ms. Douglas provided additional comments in response to Mr. Smith's testimony on this issue stating that the Company computed its rate of return in accordance with prior Commission orders in all prior IGCC proceedings, as well as in the current IGCC-10 proceeding. The Commission approved the deferred income tax incentive ratemaking treatment in Cause Nos. 43114/43114-S1 and modified it in Cause No. 43114 IGCC-1, and the Company's use of it for ratemaking in IGCC-4 was in accordance with those Orders. The AFUDC calculation applied by the Company follows FERC rules and is not project-specific, and was in no way modified by the Commission or Company to provide an incentive for the IGCC Project. The Company does not believe modification of the calculation is appropriate.

Ms. Douglas expressed her concerns with Mr. Smith's calculation of the disallowance related to the AFUDC. She explained that by using the September 30, 2012 cost of capital for AFUDC accruals for July through September, Mr. Smith overstated the amount of deferred income taxes related to the depreciation associated with the portion of plant declared in-service for income tax purposes in 2012 that would have been included in the monthly AFUDC rate calculations. This is because the calculation of the current month AFUDC rate is based upon the prior month's balances and costs. She continued that Mr. Smith's recommendation that the regulatory costs of capital at the end of the cutoff period for the tracker be used for monthly AFUDC accruals to the project is administratively cumbersome as the correct amounts can only be determined after the fact.

Ms. Douglas also responded to Mr. Smith's recommendation related to the use of the regulatory cost of capital instead of the AFUDC rate for calculation of deferred financing costs for the IGCC Project noting that the current methodology does not always result in AFUDC rates that are higher than the regulatory cost of capital, citing that, as shown on Petitioner's Exhibit C-2, page 9, the AFUDC rate used in April 2012 was less than the cost of capital from Petitioner's Exhibits C-2, page 8.

Next, Ms. Douglas rebutted Mr. Smith's recommendation regarding the future operating expense offset of the incremental deferred tax incentive ordered by the Commission in its IGCC 4S1 Order. She explained that the Company's plan to net the regulatory liability for the referenced incremental deferred income tax incentive amount against operating expenses to be deferred in a regulatory asset account from the time the plant is in-service until IGCC-10 rates are effective and to include the amortization of the net amount in the development of revenue requirements and rates in IGCC-12 is entirely consistent with the Commission's intent as expressed in the IGCC 4S1 Order. She continued that the Company cannot begin deferring operating expenses into the regulatory asset account until the plant is in-service for accounting purposes and that the plant was not in-service during the time periods for the IGCC-9 or IGCC-10 proceedings, thus there have been no operating expenses deferred to net against the regulatory liability for either of these time periods.

Ms. Douglas responded to Mr. Smith's assertion that interest must be provided on the regulatory liability amount stating that the IGCC 4S1 Order did not require the Company to compute interest in determining the amount of the regulatory liability created for the incremental deferred income tax incentive revenues collected via IGCC-4 rates. The \$28 million estimate presented by the Joint Intervenors in that proceeding referred to by the Commission does not include interest, nor did the Commission allow the Company to calculate and receive interest on the deferred operating expenses to be included in the regulatory asset. Ms. Douglas also noted that that the 8% interest rate proposed by Mr. Smith would not be reasonable given the current interest rate environment.

Ms. Douglas explained that the Company reflected deferred income taxes related to tax depreciation for the portion of the plant declared in-service in 2012 for income tax purposes in its development of revenue requirements.

Ms. Douglas stated that it is not necessary to offset the net retail IGCC investment by the amount of IGCC specific deferred taxes in order to provide customers with the benefit of the deferred taxes resulting from the tax depreciation to be claimed in 2012 because the Company has included deferred income taxes in the capital structure in accordance with the Commission's IGCC 4S1 Order, and it would be a duplication to also adjust the net investment.

Ms. Douglas next responded to certain concerns by Mr. Alvarez relating to budget descriptions used for certain O&M expenses included in the forecast. She apologized for any confusion and stated that going forward, the Company will provide an informative summary of both forecasted and actual O&M costs using consistent categorizations in future IGCC filings.

Ms. Douglas concluded her rebuttal testimony stating that other than the items she rebutted from Mr. Smith's testimony, Mr. Smith does not question the accuracy of the Company's rate

calculations presented in Petitioner's Exhibits C-1 through C-4 nor does he state that the rates proposed in Petitioner's Exhibits C-1 through C-4 were not computed in accordance with the Commission's Orders. She also stated that neither Mr. Alvarez nor Mr. Blakley questioned the accuracy of the Company's rate calculations and that Mr. Blakley testified that the figures used in the Company's IGCC-10 revenue requirement and adjustment factors are supported by the Company's testimony, exhibits, and workpapers.

6. Commission Discussion and Findings.

A. Ongoing Review Progress Report for IGCC-10. Mr. Womack testified concerning the IGCC Project progress report. He explained the IGCC Project's recent accomplishments as well as various issues and challenges the IGCC Project has experienced. Mr. Stultz discussed the start-up, testing and commissioning activities that have been and will be occurring at the IGCC Project and provided an update on the operations of the IGCC Project. Mr. Stultz also provided updated information on the forecasted O&M budget for the IGCC Project. Both Mr. Womack and Mr. Stultz explained that the IGCC Project has encountered delays in testing and commissioning due to issues that have been uncovered during testing and subsequently corrected. The water hammer event in particular was discussed at length during the evidentiary hearing. Further, Mr. Stultz discussed the procedures in place at the time of the water hammer event which did not function as intended. He also discussed the corrective actions that have been implemented as a result of the lessons learned by the incident. Mr. Womack also explained that the quantities increase of some commodities have impacted the testing and start-up durations. Thus, the facts explored in previous IGCC proceedings relating to the increased commodity quantities continue to have an impact on the IGCC Project through the ongoing review period of this proceeding. However, Joint Intervenors suggest that the events of the review period have driven project schedule delays which have added cost and as such they request disallowance of AFUDC and CWIP financing costs due to delays.

The ongoing review of the IGCC Project that has encompassed this and nine previous semi-annual filings as well as the extensive record in IGCC-4S1 highlights the complexity of the generation technology selected by the Company. Therefore, based on the evidence we find that the Company's action during the review period do not rise to the level of imprudence and as such we do not accept the invitation to disallow financing costs as suggested by Joint Intervenors. We further find that the Company has adequately satisfied the information reporting requirements to the Commission for purposes of these review proceedings as specified in the IGCC-1 and IGCC-2 Orders and subsequently amended in the IGCC-8 Order. Accordingly, we approve the ongoing progress report for IGCC-10.

Lastly, the Joint Intervenors request the commencement of an independent investigation to assess the future reliability of the plant. As noted above, the generation technology choice brings complexities that are fully appreciated by this Commission. We are not convinced that an investigation at this juncture adds value beyond the oversight already afforded in these proceedings. Accordingly, we decline the Joint Intervenors request.

B. Ratemaking Issues. Joint Intervenors contend that the Company's calculation of AFUDC is incorrect, and assert that because the Company treated a portion of the plant as in-service for income tax purposes during this review period, that Indiana's traditional AFUDC methodology should not be used for this project. Ms. Douglas explained that Petitioner calculated

its AFUDC rates in conformance with FERC's general instructions for the computation of AFUDC rates (found in the Code of Federal Regulations), which this Commission has adopted for use by Indiana electric utilities, and that the Company's calculation does not include accumulated deferred income taxes because it is not one of the elements specified to be included in the calculation by FERC. As we found in the IGCC-9 proceeding, we continue to agree with Ms. Douglas that excluding deferred income taxes from the calculation of AFUDC rates is in accordance with the FERC instructions we have adopted for use by Indiana electric utilities and, therefore, is in accordance with this Commission's rules. We also disagree with Joint Intervenors that having different in-service dates for income tax and accounting or regulatory purposes in this instance is sufficient justification for a change in AFUDC rate methodology. Utilities often keep separate books and records for tax and accounting or regulatory purposes for a variety of valid reasons. We therefore find the Company's calculation of AFUDC rates to be applied to IGCC investment in this proceeding is correct.

As to Joint Intervenors' request to require the Company to provide a credit to customers in this proceeding related to the deferred tax incentive and to include interest on such credit, we note that in the IGCC-4S1 Order, Duke was directed to net the deferred income tax incentive regulatory liability against the regulatory asset created by the IGCC-9 rate mitigation effort. That rate mitigation effort sought to avoid depreciation and O&M costs from being included in the rates proposed for IGCC-9 by deferring any such costs being included for recovery until the next IGCC rider filing after IGCC-10. We note that the rates proposed in this filing include forecasted depreciation and O&M costs. In effect, the IGCC-9 rate mitigation effort did not impact the rates proposed in IGCC-10 and the language of the 2012 Settlement suggests that IGCC-11 would be the time when the recovery of the IGCC-9 rate mitigation effort would commence. Accordingly, it would be appropriate to include the regulatory liability and offsetting IGCC-9 rate mitigation asset, to the extent there is one, in the development of revenue requirements and rates in IGCC-11.

Ms. Douglas testified as to the updated IGCC Rider and the associated calculations and assumptions contained in that Rider. Joint Intervenors did not present evidence of any miscalculations or propose any alternative calculations other than related to the issues we have already addressed above. The OUCC found the figures used in the calculation of the Rider to be supported by the exhibits of the Company. Based on our review of the evidence presented on this issue, we find that Duke's IGCC Rider, as sponsored by the testimony of Ms. Douglas, accurately reflects the net retail jurisdictional IGCC Project investment as of September 30, 2012 and applicable expenses and that the proposed IGCC-10 Rider is accurately calculated and accurately incorporates the provisions of the 2012 Settlement. Ms. Douglas also sponsored Petitioner's Exhibit C-4 which shows the impact of the proposed IGCC Project ratemaking treatment. The monthly bill of a residential customer using 1,000 kilowatt-hours will increase by \$4.55 or approximately 5.5% with implementation of this factor.

7. Petitioner's Request for Confidential Treatment. On November 30, 2012, Petitioner filed a "Motion for Protection of Confidential and Proprietary Information" ("Motion") in this Cause. In its Motion, Duke requested that certain details of various pricing and operating characteristic information for the IGCC Project (*e.g.* project cost estimates, details of forecasted operations and maintenance expenses of the IGCC Project, the detailed project schedules, operations staffing and training schedules, safety training, test and startup plans and procedures, quality control information, commodity curves), confidential information provided to Duke by its two primary contractors, GE and Bechtel Power Corporation ("Bechtel"), and

confidential information provided to Duke by other IGCC contractors and vendors, be treated as confidential and a trade secret and not subject to public disclosure (collectively referred to as "Confidential Information"). In support of its Motion, the Petitioner included sworn Affidavits supporting the Petitioner's request for confidential treatment from W. Michael Womack and from GE and Bechtel representatives.

In a January 8, 2013 Docket Entry, the Presiding Officers made preliminary findings that the Confidential Information should be subject to confidential treatment. Pursuant to Indiana Code § 5-14-3-4(a)(4), we find that the Confidential Information submitted in this Cause is a "trade secret" and should continue to be held as confidential by the Commission.

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

1. The ongoing review progress report for the IGCC Project is hereby approved by the Commission based on the evidence of record.

2. The costs as reflected in the exhibits and testimony of Ms. Douglas and consistent with our findings above, including the actual IGCC Project costs incurred through September 30, 2012 (up to the Hard Cost Cap plus Additional AFUDC), are reasonable and are hereby approved. Rider 61 shall go into effect for all bills rendered after the filing of the proposed Rider 61 with the Commission's Electricity Division.

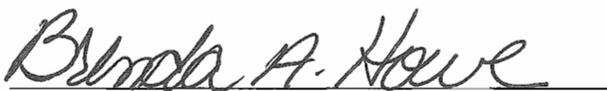
3. Petitioner's Confidential Exhibits and Joint Intervenors' Confidential Cross-Examination Exhibits containing information discussed in Finding Paragraph No. 7 above and presented in this proceeding are found to be confidential and a trade secret, excepted from public access, and will continue to be held as confidential by the Commission.

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

ATTERHOLT, BENNETT, LANDIS, MAYS AND ZIEGNER CONCUR:

APPROVED: **SEP 11 2013**

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


Brenda Howe
Secretary to the Commission