STATE OF IOWA

DEPARTMENT OF COMMERCE

UTILITIES BOARD

IN RE: INTERSTATE POWER AND LIGHT COMPANY	DOCKET NOS. GCU-2012-0001 RPU-2012-0003

PROPOSED DECISION AND ORDER

(Issued November 8, 2013)

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I. INTRODUCTION AND PROCEDURAL HISTORY

On November 14, 2012, Interstate Power and Light Company (IPL) filed with the Utilities Board (Board) an application pursuant to Iowa Code chapter 476A for a generating facility certificate to construct and operate a nominal 600 MW natural gas-fired, combined-cycle electric generating unit. The proposed facility is called the

Marshalltown Generating Station (MGS) and is to be located in Marshalltown, Marshall County, Iowa. IPL held an informational meeting as required by 199 IAC 24.7 on October 4, 2012. The generation facility certificate docket is identified as Docket No. GCU-2012-0001.

Also on November 14, 2012, IPL filed a request pursuant to Iowa Code § 476.53 for advance ratemaking principles that would apply to the MGS. Among other things, IPL requested a return on equity (ROE) of 11.25 percent for MGS and a cost cap of $700 million, which includes MGS facility costs, transmission interconnection costs (but not transmission system upgrade costs), and owner's costs. The advance ratemaking principles docket is identified as Docket No. RPU-2012-0003.

Iowa Code § 476.53(3)"d" provides that "The applicable ratemaking principles shall be determined in a contested case proceeding, which proceeding may be combined with the proceeding for issuance of a [generation] certificate conducted pursuant to chapter 476A." Generally, these two proceedings have not been combined because the utility has chosen to file for a generation certificate first, then file for ratemaking principles for the facility after the certification proceeding is concluded, but that approach is not required.

Because IPL filed for both ratemaking principles and a generating facility certificate at the same time, the Board in an order issued December 26, 2012, consolidated the two dockets for purposes of hearing and procedural schedule

because there is sufficient commonality in the two dockets to justify consolidation. The Board in the December 26, 2012, order also said that to avoid confusion about whether testimony and exhibits in one docket are part of the evidentiary record in the other docket, the evidentiary records would be consolidated and all evidence filed in the generation siting docket will be considered part of the evidentiary record in the ratemaking principles docket, and vice versa. The December 26, 2012, order also accepted the filings, required IPL to file additional information, set a procedural schedule, and set an intervention deadline.

Copies of the Board's December 26, 2012, order were served on various regulatory agencies and owners and lessees of record as required by Iowa Code § 476A.4(2)"c," as listed in IPL's application. In accordance with 199 IAC 24.6(1)"b," IPL published notice of the hearing in a newspaper of general circulation in Marshall County once each week for two consecutive weeks.

In addition to the Consumer Advocate Division of the Department of Justice (Consumer Advocate or OCA), the Environmental Law and Policy Center & Iowa Environmental Council (Environmental Intervenors), the Iowa Consumers Coalition (ICC), the Large Energy Group (LEG), Central Iowa Power Cooperative (CIPCO), and Corn Belt Power Cooperative (Corn Belt) intervened in the dockets.

On January 25, 2013, IPL filed its responses to the Board's December 26, 2012, order requiring additional information. On February 14, 2013, Consumer

Advocate, LEG, and ICC filed direct testimony and exhibits and the Environmental Intervenors filed exhibits. On March 28, 2013, IPL filed rebuttal testimony.

The Board issued an order on March 29, 2013, directing IPL to respond to a list of questions within 20 days. IPL filed responses to that order on April 18, 2013.

On April 29, 2013, IPL and Consumer Advocate filed a proposed Settlement Agreement (Settlement or Settlement Agreement) resolving all issues that were contested between IPL and Consumer Advocate in both dockets. The remaining parties are not signatories to the proposed Settlement Agreement.

On April 30, 2013, LEG filed supplemental direct testimony and exhibits and on May 6, 2013, LEG filed its Objection to Proposed Settlement. On May 8, 2013, ICC filed testimony and exhibits addressing the proposed Settlement.

Pursuant to Iowa Code § 17A.11(1)"b" and 199 IAC 7.3, the Board on May 17, 2013, assigned the two consolidated dockets to the Board's Chair, Elizabeth S. Jacobs, to preside over as presiding officer. Among other things, the Board directed the presiding officer to preside over the contested case hearing and issue a proposed decision, including ruling on the proposed Settlement Agreement.

Pursuant to Iowa Code § 476A.4(4), a consolidated hearing in the two dockets was held on May 21, 2013, in Marshalltown, Iowa. All parties had an opportunity to file post-hearing initial and reply briefs.

On May 29, 2013, LEG filed post-hearing exhibits, identified as Exhibits 208 through 211. The exhibits were accompanied by a cover pleading. IPL filed a

motion to strike a portion of the cover pleading and an objection to the exhibits on June 13, 2013. On June 20 LEG filed a response. On June 26, 2013, the presiding officer issued a decision denying the motion to strike and overruling the objection to the exhibits.

During the hearing on the consolidated dockets, there was discussion of a complaint filed by IPL against ITC Midwest LLC (ITC Midwest) at the Federal Energy Regulatory Commission (FERC) pursuant to section 206 of the Federal Power Act. The complaint relates to ITC Midwest's policy of reimbursing generator interconnection customers 100 percent of their interconnection upgrade costs. FERC ruled on the complaint on July 18, 2013, in FERC Docket No. EL12-104-000 (144 FERC ¶ 61,052), directing the Midcontinent Independent System Operator, Inc. (MISO), on behalf of ITC Midwest, to revise Attachment FF of the MISO tariff to cause MISO's policy for reimbursing generator interconnection customers for transmission network upgrade costs in the ITC Midwest zone to conform to the generator interconnection cost recovery provisions applicable to most other MISO pricing zones, in which such customers may receive up to 10 percent reimbursement for those costs.

On July 24 and September 12, 2013, the Board issued orders requiring IPL to provide additional information regarding the potential impacts of the FERC ruling on the proposed MGS facility, particularly impacts on transmission network upgrade

costs and potential tax consequences. IPL provided the requested information and other parties were given an opportunity to respond.

II. SUMMARY OF THE PARTIES' POSITIONS

A brief summary of the parties' positions is useful at the outset before examining the Settlement Agreement and contested issues, in order to provide context.

IPL said that in these consolidated proceedings it is asking the Board to grant it a generating certificate and advance ratemaking principles for the construction of a nominal 600 MW combined-cycle natural gas fired electric generation facility in Marshalltown. IPL stated that it did not believe any of the parties opposed the issuance of a generation certificate but some parties opposed certain ratemaking principles contained in the Settlement Agreement. Consumer Advocate, the other party to the Settlement Agreement, stated that IPL meets the standards for issuance of a generating certificate and that the ratemaking principles agreed to by IPL and Consumer Advocate in the Settlement Agreement are supported by the record, reasonable, and in the public interest.

ICC argued that 10 percent is the appropriate ROE for MGS, not 11 percent as specified in the Settlement Agreement. ICC maintained that new transmission cost data demonstrates that there are reasonable alternatives to MGS that are geographically remote but available at lower cost. ICC said the Board should consider supervising a new request for proposals (RFP) process to consider these

alternatives, as well as MGS, in light of the new market data if IPL chooses not to accept an ROE based on the current cost of capital, i.e., 10 percent.

LEG said that IPL's request for advance ratemaking principles and siting application should both be denied, complaining that IPL's RFP process (used by IPL to determine whether MGS would be a reasonable power source) was flawed because IPL limited the scope of potential alternative sources of capacity and energy supply and improperly excluded some potential alternative sources. LEG argued that after IPL received the bids, IPL skewed the results by adding a Point-To-Point (PTP) transmission charge to the short list of bidders and underestimated the transmission upgrade and interconnection charges for the proposed MGS. This increased the cost of the alternatives and artificially reduced the cost of MGS, according to LEG. Because the RFP itself was flawed and the results were skewed to favor MGS, LEG concluded that IPL failed to demonstrate that MGS is a reasonable alternative when compared with other feasible alternative sources of supply as required by Iowa Code chapter 476A. Contrary to IPL's assertion, LEG said it did object to the Board granting a generating certificate for MGS.

CIPCO and Corn Belt said that the concerns which gave rise to their intervention have been addressed and that they support approval of IPL's siting application. CIPCO and Corn Belt also said that they have no concerns with the advance ratemaking principles as set forth in the Settlement Agreement.

The Environmental Intervenors said that consideration should be given to newer turbine designs that are specifically intended to integrate with renewable energy. The Environmental Intervenors said that these designs offer faster ramping,[1] better efficiency while ramping, and more operational flexibility than previous or conventional combined-cycle natural gas-fired turbine designs.

III. SUMMARY OF SETTLEMENT

On April 29, 2013, IPL and Consumer Advocate filed a proposed Settlement Agreement and motion to approve the Settlement Agreement. The Settlement Agreement resolved all issues between IPL and Consumer Advocate in both the GCU and RPU dockets. No other parties to the proceeding signed the Settlement Agreement, although Corn Belt and CIPCO filed a statement on June 13, 2013, indicating that they did object to the granting of IPL's application for a generating facility certificate or IPL's request for ratemaking principles, as modified by the proposed Settlement Agreement.

The Settlement Agreement provided that Consumer Advocate supports IPL's request for approval. IPL and Consumer Advocate's Settlement Agreement provides as follows:

A. Siting Application and Associated Agreements: Consumer Advocate supports IPL's request for approval of its generating siting application for MGS.

[1] "Ramping" is the ability of an electric turbine generator to increase or decrease output in response to varying conditions on the transmission grid.

B. Ratemaking Principles Conditions Precedent: Consumer Advocate acknowledges that IPL's Ratemaking Principles Application demonstrates IPL has met the conditions precedent set forth in § 476.53 for the Board's issuance of ratemaking principles for MGS. IPL and Consumer Advocate agree that IPL has a Board-approved energy efficiency plan in effect, IPL considered other sources of long-term electric supply, and MGS is a reasonable alternative when compared to other feasible alternative sources of supply.

C. Plant Retirement: Consumer Advocate recommended that the existing plant retirement schedule be reviewed and evaluated prior to the retirement of any plants to determine whether it is more economical to continue operating them than to retire them. IPL agreed to this review and evaluation prior to retirement of any plants.

D. Ratemaking Principles: Consumer Advocate accepts the ratemaking principles that were modified in the Settlement Agreement (described below) and also accepts the remaining ratemaking principles as they were initially proposed by IPL. The changes to the ratemaking principles as originally proposed are:

1. Ratemaking Principle No. 1 – Return on Equity (ROE): IPL requested an 11.25 percent ROE, and Consumer Advocate recommended an 11.0 percent ROE. The Settlement Agreement accepts Consumer Advocate’s recommended 11.0 percent ROE. This ROE will not apply to the allowance for funds used during construction (AFUDC) calculation, as discussed in Ratemaking Principle No. 7.

2. Ratemaking Principle No. 2 – Double Leverage: IPL asked that no double leverage adjustment be applied to MGS, and the Consumer Advocate recommended the application of a double leverage adjustment. The Settlement Agreement provides that the issue of double leverage will be addressed at a later date in the context of a rate case or other proceeding.

3. Ratemaking Principle No. 7 – Allowance for Funds Used During Construction (AFUDC): IPL proposed calculating AFUDC using an 11.25 percent ROE. The Consumer Advocate recommended using the 10 percent ROE approved by the Board in IPL's most recent rate proceeding. The Settlement Agreement provides that AFUDC will be calculated using an ROE of 10.3 percent.

On May 6, 2013, LEG filed its objection to the Settlement Agreement stating that it objects to Ratemaking Principle No. 5 (Cost Cap) and Ratemaking Principle No. 6 (Transmission Upgrades). On May 8, 2013, ICC filed its settlement testimony and exhibits discussing Ratemaking Principle No. 1 (Return on Equity) and Ratemaking Principle No. 2 (Double Leverage).

Rule 199 IAC 7.18 provides that a settlement will not be approved unless it is "reasonable in light of the whole record, consistent with law, and in the public interest." This is the standard applied when reviewing a proposed settlement.

IV. GENERATION CERTIFICATE DECISION CRITERIA

A. Introduction

Iowa Code § 476A.6 provides that a generating certificate shall be issued if all of the following findings are made:

> 1. The services and operations resulting from the construction of the facility are consistent with legislative intent as expressed in section 476.53 and the economic development policy of the state as expressed in Title I, subtitle 5, and will not be detrimental to the provision of adequate and reliable electric service.
> 2. The applicant is willing to construct, maintain, and operate the facility pursuant to the provisions of the certificate and this subchapter.
> 3. The construction, maintenance, and operation of the facility will be consistent with reasonable land use and environmental policies and consonant with reasonable utilization of air, land, and water resources, considering available technology and economics of available alternatives.

Chapter 199 IAC 24 provides additional explanation of the three statutory criteria. For example, with respect to whether the facility will be detrimental to the provision of adequate and reliable electric service, the determination includes "whether the existing transmission network has the capability to reliably support the additional generation interconnection to the network." 199 IAC 24.10(2)"a."

B. Decision Criteria

1. The Facility will not be Detrimental to Adequate and Reliable Service

This decision criterion covers several subissues. These include a requirement that the services and operations resulting from the proposed facility must be

consistent with the legislative intent expressed in Iowa Code § 476.53, which is to attract generation and transmission development in Iowa to ensure reliable electric service and to provide economic benefits; the facility must also be consistent with the economic development policy of the state as expressed in Title I, subtitle 5. Furthermore, the addition of the facility must not be detrimental to the provision of adequate and reliable electric service and the existing transmission network must have the capability to reliably support the proposed new generation.

A portion of the first decision criterion is closely related to one of the two conditions precedent that a utility must satisfy before it can receive ratemaking principles: that the proposed generation is a reasonable alternative to other sources of supply. In a generation siting proceeding, the Board determines whether there is a need for the proposed facility; if there is no need for the facility, then its addition would be detrimental to the provision of adequate service to IPL's customers.

The Board has previously addressed the question of whether a new facility is needed in ratemaking principles proceedings involving wind facilities. Because these wind facilities were configured such that less than 25 MW was connected to a single gathering line, no generating certificate was required, so the need for the facilities was addressed exclusively in the ratemaking principles docket. If a facility does not contribute towards meeting the needs of Iowa consumers, it is not eligible for ratemaking principles treatment. The Board has also addressed the meaning of this

statement in a previous ratemaking principles proceeding for a wind facility with a nameplate capacity of up to 554 MW. The Board said:

> While MidAmerican has not demonstrated an immediate need for the wind facility (or any other generation facility) in the sense that it will be unable to meet customers' demand in 2007-2009 without the facility, the Board does not believe a determination of need requires a showing that the lights will go out if the facility is not built. That would not be a prudent planning criterion. (MidAmerican Energy Company, "Order Approving Stipulation and Agreement," Docket No. RPU-05-4 (4/18/2006), p. 6).

The presiding officer concludes that “need” is similarly defined in a gas-fired generation siting proceeding. In the generation siting proceeding, the presiding officer will determine whether IPL has a need for additional generation; in the ratemaking principles portion of the order, the presiding officer will determine whether MGS is a reasonable alternative to meet the projected need.

a. Legislative Intent

This subissue is uncontested, and the proposed MGS is consistent with the legislative intent in § 476.53 as referenced in § 476A.6(1). MGS will contribute to IPL’s ability to provide reliable service to its electric customers. IPL is projected to have a capacity deficiency of over 300 MW beginning in 2017, and IPL’s Electric Generation Expansion Analysis System (EGEAS) results demonstrate that MGS is a favorable resource to add to IPL’s generation mix. (Tr. 61-62). MGS also addresses IPL’s fuel diversity, reliability of fuel supplies, and volatility of fuel costs; the EGEAS analysis sensitivity runs (ranging to a 30 percent increase in coal and natural gas

prices to a 30 percent decrease) all show MGS to be a useful resource addition. (Tr. 698-99). MGS will further provide IPL flexibility in meeting current and future environmental standards, particularly with respect to decisions about whether to retire some older coal plants, switch fuels at those plants, or operate those plants differently. (Tr. 841-48). MGS will utilize the best available control technology to meet or exceed federal and state air emission standards and will likely supplant other, higher-carbon-emitting generation. (Tr. 21).

b. Economic Development

This subissue is also uncontested. Approximately 250-350 jobs will be created during MGS's construction period and 15-20 full-time employees will be required when MGS is operational. IPL said it would spend approximately $1 to $1.5 million each year in the local region and state on non-fuel goods and services necessary to operate MGS. MGS will also contribute approximately $1.7 million of annual tax revenues, assuming an MGS capacity factor of 25 percent. (Tr. 20). The construction, operation, and maintenance of MGS will contribute to economic development in Iowa.

c. Provision of Reliable Service

IPL maintained that without MGS, IPL will be capacity deficient beginning in 2017. IPL said that without MGS it would need approximately 346 planning reserve credits (PRCs) from MISO in 2017 and about 617 PRCs in 2024 to meet its projected load growth and limit its dependence on purchased power; under the MISO tariff, one

PRC equals one MW of unforced capacity from a resource for a given month during a planning year. (Tr. 21, 678). IPL said that it performed sensitivity analyses to determine IPL's capacity needs if existing generating units are retired earlier than the current projected retirement date and that under these scenarios MGS provides flexibility to meet customer needs. (Tr. 21, 700-701). IPL argued that after consideration of possible planning scenarios and consistent with its 2012 integrated resource plan, MGS is the best resource to add to IPL's generation mix. (Tr. 703-04). In its reply brief, IPL argued that neither ICC nor LEG raised any issues that should result in denial of IPL's application for a generating certificate for MGS.

ICC did not directly address this decision criterion for a generating certificate. However, ICC argued that if IPL were to decline to pursue MGS with an ROE deemed reasonable by ICC (10 percent), then the Board should consider supervising a new RFP process for IPL to obtain additional supply. This argument will be addressed in the ratemaking principles section of this order.

LEG maintained that IPL's RFP process was flawed, which will be addressed in detail in the ratemaking principles section of this order. Because of the flawed RFP process, LEG said, IPL failed to show that MGS is a reasonable alternative for supply and both the siting certificate and ratemaking principles application should be denied. LEG did not argue that IPL does not need additional supply but that its selection of the supply source (MGS) was flawed.

In prior siting proceedings, the Board considered the need for the facility as an important factor when determining that the facility will not be detrimental to the provision of adequate and reliable service. IPL's need for a new electric supply is not contested by any of the parties in this proceeding. IPL's decision to add supply appropriately began with a comparison of IPL's load forecast with its net generating capacity plus reserve requirements, followed by the development of a resource plan that ultimately determines the type of generation (or purchase power agreement) that is reasonable as a new supply addition. The EGEAS model is a modular generation expansion software package that is used by utility system planners to develop and evaluate integrated resource plans (IRPs), avoided costs, and plant-life expansion plans. In this proceeding, IPL used the EGEAS model to develop the resource plan that supports the need for, and the choice of, the proposed unit. As noted earlier, this siting criterion is similar to part of one of the conditions precedent for advance ratemaking principles that must be satisfied before ratemaking principles can be granted: the proposed facility must be reasonable when compared to other feasible sources of supply. Implicit in this condition is that there must be a need for additional supply.

IPL conducts an IRP study every two years and updates it on an as-needed basis. IPL's IRP begins with the load forecast and is used to determine how much capacity is required to serve load and meet the reserve requirements. (Tr. 672). IPL modeled two plans using EGEAS with different retirement dates for some of its older

plants. IPL's EGEAS analysis shows a slight capacity shortfall beginning in 2016 with a significant increase in the shortfall in 2017. Earlier than planned retirement of some of IPL's older generating units would accelerate the need for additional resources to serve IPL's customers. MGS is consistent with IPL's strategic plan and MGS would enhance IPL's ability to meet its obligation to provide reliable service to its customers. (Tr. 51).

d. Transmission

i. Introduction

IPL conducted a transmission impact study in September 2011 titled "IPL Combined Cycle Generator Screening Study" (Screening Study) to evaluate possible sites for a 600 MW combined-cycle plant. (Bauer Exhibit___(RDB-1), Schedule D). IPL also contacted MISO to conduct a System Planning and Analysis (SPA) study to determine specific transmission requirements for MGS. MISO issued its draft SPA study results on April 24, 2013, showing that $235.85 million in transmission upgrades would be needed for interconnection of MGS. (Generator Interconnection System Planning and Analysis System Impact study, J233 Draft Report, Exhibit___(RJL-1), Schedule D). LEG and ICC use the SPA study transmission cost estimate to support their objections to MGS as a supply option.

ii. Parties' Positions

IPL noted that the results of the preliminary MISO SPA study are not binding, but were generally in line with IPL's expectations. IPL said that the SPA study calls

for a new 345 kV transmission line from MGS to Morgan Valley (SW Cedar Rapids) and that IPL had assumed this upgrade would be required in its internal studies. (Tr. 205). IPL said that the costs of transmission network upgrades needed for MGS are not included in IPL's cost cap ratemaking principle (which will be discussed in detail in the ratemaking principles section of this order). (Tr. 154).

IPL said that other minor rebuilds of existing facilities, including a rebuild of the Morgan Valley-Tiffin line by MidAmerican, were not identified in IPL's internal studies but are indicated by the MISO SPA. IPL stated that MISO's preliminary estimate for network upgrades is $245.65 million, more than IPL's forecast of $100 million for MGS-related upgrades that was included in the EGEAS analysis. (Tr. 205).

IPL argued that the preliminary MISO study estimate of $245.65 million includes upgrades that will not ultimately be required by MISO because the MISO study estimate contains projects that will be required for both off-peak and on-peak conditions; IPL requested that the MISO study contain both. However, IPL said that a number of projects would not have been identified if the study only considered on-peak conditions and an off-peak study is not required as part of the MISO interconnection study process for MGS. IPL maintained that some projects listed in the MISO study likely will not be identified in the MISO Definitive Planning Phase (DPP) Study, and, if they are identified in the study, the costs of those projects will

either be shared with other generators or resolved prior to MGS entering DPP because those constraints have been identified in prior studies. (Tr. 206).

IPL said that Bauer Exhibit ___(RDB-3), Schedule C, provides estimates of project costs that should not be part of the MGS network upgrades. The exhibit removes costs associated with the off-peak study ($55.45 million) and the costs that may be shared with other generators or may not appear in an on-peak study ($29.50 million). (Tr. 208). With these subtractions, IPL said, the exhibit shows general network upgrade costs of $160.70 million. IPL said the MGS upgrade costs could increase to as much as $190.2 million if certain conditions are met. (Tr. 209). IPL said it would enter the MISO DPP study in the July 2013 cycle to gain a better understanding of required network upgrades and will file any completed studies with the Board. (Tr. 163, 211).

IPL said that testimony at hearing showed that the preliminary MISO estimates are generic in nature and use high estimates for per mile costs. (Tr. 240-43). IPL noted that its cost estimates, for the same facilities were based on expected transmission costs associated with the terrain. MISO's generic cost of $2 million per mile is double the cost used by IPL of $1 million per mile for conventional rural overhead transmission construction. IPL pointed out that this difference in per mile construction estimates accounts for the majority of the difference between IPL's and MISO's estimates because the line in question will be about 65 miles long.

LEG argued that the transmission upgrade costs are a moving target with no cost cap. LEG noted that IPL witness Bauer's direct testimony in Docket No. RPU-2012-0003 estimated the IPL costs of transmission network upgrades as $76.8 million, plus an additional $20 million in substation interconnection costs. (Tr. 159). LEG pointed out that Mr. Bauer also stated that if the plan selected by MISO has a higher cost, then the economics of MGS are going to be less favorable, although probably not of such magnitude that it would diminish the reasonableness of MGS. (Tr. 160). LEG said that the MISO estimates for transmission costs are over three times higher than the amount included in IPL's initial filings and in Mr. Bauer's direct testimony. (Tr. 215; Exhibit___(RJL-1), Schedule D).

LEG noted that even though IPL requested the MISO study to help IPL make an informed decision, IPL disregarded the results of the study and chose its own numbers for an estimate of transmission costs. (Tr. 239). LEG pointed out that IPL witness Bauer in his rebuttal testimony stated that the estimated costs equal $160 million, later testified that those costs could be $190.2 million, and ultimately admitted that IPL does not know the amount of transmission upgrade costs. (Tr. 242-243). LEG said the transmission upgrade estimates increase with each new study and that it is not clear what the ultimate cost to ratepayers will be.

ICC said that the recent MISO information indicates that MGS may not be as economically attractive as first believed. Based on the new MISO information, ICC said that the MGS network upgrades are now estimated to cost approximately

$235.85 million as compared to IPL witness Bauer's initial estimate of $76.8 million, exclusive of substation interconnection costs. ICC stated that it was concerned about the continued cost escalation of MGS network upgrades.

iii. Presiding Officer Discussion

Rule 199 IAC 24.10(2)"a" provides that the transmission network be examined as part of the first siting criterion. When significant new generation is added, typically some transmission upgrades are required. IPL must show that the existing transmission network has or will have the capacity to reliably support the proposed additional generation interconnection to the network.

The record demonstrates that additional transmission infrastructure will be needed to support the operation of MGS. (Tr. 22). The question that has not been resolved is how much transmission infrastructure will be required because only the preliminary studies have been completed. IPL pledged to work with MISO and IPL's transmission provider, ITC Midwest LLC (ITC Midwest), to build the transmission infrastructure needed to support MGS. The transmission upgrades necessary for MGS will also enhance the overall reliability of the transmission system by the addition of new facilities and the replacement of older, lower capacity facilities. These new facilities should allow additional generating resources, such as wind facilities, to be built and interconnect to the grid without additional major transmission upgrades. (Tr. 23).

IPL's preliminary Screening Study considered four possible sites which had the most potential to accommodate a new natural gas-fired, combined-cycle unit with a nominal capacity of 600 MW. IPL looked at sites with existing transmission line corridors that could be upgraded. The Marshalltown site required the least amount of transmission on new right-of-way. The Screening Study included a load flow analysis to determine any system impacts under a First Contingency Incremental Transfer Capacity (FCITC) evaluation. The FCITC projects the reliability of the transmission system if various contingencies were to occur, in order to assess how robust and reliable the system is. IPL identified the transmission enforcement plans that would be considered to support additional generation and studied how they would affect system reliability. The Screening Study indicated that overall, the Marshalltown site was the preferred choice. (IPL GCU Application, pages 1-29, 1-30).

IPL's plan to build a 345 kV line from Marshalltown to a new Morgan Valley substation is reasonable. This plan uses an existing transmission line corridor, although it may require some additional easement width and upgrades to existing easements. This plan also takes advantage of transmission upgrades that already have been made and will be made in the Marshalltown area. ITC Midwest, for example, is planning to add a new 345/161 kV station at Morgan Valley. (IPL's RPU Application, p. 4-37).

The SPA study indicates that when the projects found in the preliminary off-peak study and projects that may be either shared with another customer or that may not appear in an on-peak study are eliminated, the estimated cost for MGS network upgrades is $160.7 million. If MGS has cost responsibility for projects that are identified as either shared or that may not appear in an on-peak study, the upgrade costs could be as much as $190.2 million. (Tr. 209). IPL said it would begin the DPP study after the decision in these dockets because MISO requires a $2 to $3 million deposit for the DPP.

Current transmission upgrade estimates are higher than IPL's original estimate, which assumed that the planned transmission will be constructed, owned, and operated by ITC Midwest, that IPL would not have capital investment in the project, and the capital investment made by ITC Midwest will be collected from IPL under the ITC Midwest Attachment O revenue requirement. In its initial filing IPL converted the estimated ITC Midwest capital investment of $100 million into an annual ITC Midwest revenue requirement of approximately $13 million. This number was modeled as a fixed operation and maintenance cost in IPL's EGEAS analysis. (Tr. 156-159). One of the most significant differences in IPL's and MISO's costs estimates are MISO's use of $2 million per mile as the cost for a 345 kV transmission line versus IPL's use of a $1 million per mile estimate. IPL's estimate appears to be more reasonable, given the rural terrain and use of existing right-of-way for most of the MGS to Morgan Valley 345 kV line.

The evidence shows that IPL is committed to upgrading the existing transmission network to support MGS interconnection and meets the requirements of 199 IAC 24.10(2)"a." Since the transmission upgrade costs contribute to the overall revenue requirements for the project, are specific to the site selected, and affect the determination of a reasonable alternative, this issue will also be discussed in the ratemaking principles section of the order when reasonableness of the selected supply source is discussed. Projected transmission costs will also be discussed as they relate to arguments raised about the cost cap.

Consistent with prior proceedings, IPL will be required to file transmission related studies (such as final SPA and DPP studies) associated with MGS with the Board as they become available.

It is not surprising that IPL does not know the final costs for the MGS network upgrades at this stage of the project, as final upgrade costs for any generation project are unknown at this stage of development. For example, in many advance ratemaking principles dockets, the Board has ordered the utility to provide ongoing updates on transmission network upgrade processes. Such reports were required in IPL's Emery Generating Station ratemaking principles case, Docket No. RPU-02-6; MidAmerican's ratemaking principles request for certain wind projects, Docket No. RPU-04-3; and IPL's Whispering Willows East wind project ratemaking principles case, Docket No. RPU-07-7. There is nothing novel about transmission costs being estimates and not finalized, but the apparent continuing upward trend of the

estimates causes some concern, and as mentioned previously will be discussed in more detail in the ratemaking principles portion of the order.

2. Willingness to Construct and Maintain the Facility

The second generating certificate decision criterion is whether "[t]he applicant is willing to construct, maintain, and operate the facility pursuant to provisions of the certificate." Iowa Code § 476A.6(2). IPL pledged to construct, maintain, and operate MGS pursuant to and consistent with any siting certificate the Board might issue. (Tr. 24). No party contested this criterion, and in the Settlement Agreement Consumer Advocate said it supported IPL's request for support of its siting application. The evidence demonstrates IPL's willingness to construct, maintain, and operate MGS pursuant to the provisions of a Board siting certificate.

3. Consistent with Land Use and Environmental Policies

The third and final generating certificate criterion deals with land use and environmental impacts, with the question being whether the construction, operation, and maintenance of MGS will be consistent with "reasonable land use and environmental policies and consonant with reasonable utilization of air, land, and water resources, considering available technology and the economics of available alternatives." Iowa Code § 476A.6(3). IPL pledged to meet or exceed all state and federal environmental requirements. (Tr. 24-25, 798-801, 813-14). No other party specifically addressed this issue.

IPL addressed several environmental concerns. IPL said construction activities are being designed to avoid any permanent impacts to wetlands. IPL noted that the Marshalltown Water Pollution Control Plant has informed IPL that it can meet the additional waste water requirements for MGS and MGS will meet or exceed all water discharge standards. (Tr. 799, 821, 826-28).

IPL said emissions at MGS will be minimized utilizing best available control technology and that it will apply for the necessary air quality permit and other permits that are issued by the Iowa Department of Natural Resources (IDNR). (Tr. 805-06). The Environmental Intervenors filed exhibits suggesting that IPL should consider advanced combined-cycle turbines that are designed to maximize integration of renewable energy. IPL said that its process for final turbine selection does not preclude bidders from proposing these technologies and that the technology IPL ultimately selects will integrate with Iowa's existing renewable resources and enhance the ability of existing and future renewable resources to operate. (Tr. 636-40). IPL pointed out that the environmental impacts of a natural gas plant are significantly less than a coal plant.

The selection of the Marshalltown site has not been specifically contested, although LEG addressed the transmission upgrade costs associated with the site. MGS, if approved, will be built on a 60-acre site adjacent to Sutherland Generating Station units 1 and 3 and Marshalltown combustion turbine units 1, 2, and 3. IPL said it is working to comply with all zoning requirements and noted that Marshalltown

community support was an important factor in the site selection process. IPL hired Burns & McDonnell (B&M) to conduct a site selection study and IPL selected Marshalltown from among the three preferred sites.

Marshalltown is a reasonable choice for the proposed gas plant because, among other things, it is a brownfield site which IPL already owns, the MGS site is next to existing generation (which reduces the environmental impact), the major 345 kV transmission line that might be required can be built on existing right-of-way, and average locational marginal prices for electricity are high at the MGS location. While MGS is located 13.6 miles from the nearest gas pipeline, the evidence showed that a new pipeline to service MGS could also be utilized to accommodate future growth in natural gas load in Marshalltown. (Tr. 151). Also, an additional pipeline could result in lower gas prices for IPL's area customers. These are economic and non-economic factors that support the selection of the Marshalltown site for MGS.

C. Issuance of Certificate

While the presiding officer has determined that the three decision criteria in Iowa Code chapter 476A have been satisfied, a generating certificate cannot be issued until IPL has obtained all appropriate pre-construction permits. Iowa Code § 476A.5(1). Therefore, only a conditional finding of compliance can be made. A certificate for the generating unit will not be issued until IPL notifies the Executive Secretary of the Utilities Board that all appropriate pre-construction permits have been issued by applicable local, state, and federal agencies or authorities. No

additional hearing is required and the actual generating certificate will be issued subsequent to this notification. Advance site preparation work, however, can commence immediately with the issuance of this decision. See Iowa Code § 476A.9.

IPL will be required to file semi-annual reports updating its progress on obtaining the necessary regulatory approvals along with construction progress, both for MGS and any necessary transmission upgrades. The reports are to include detailed information regarding completed transmission work, including interconnection details and Marshalltown area electric network modifications related to the project. The first report will be required on or before March 3, 2014, and subsequent reports are to be filed every six months thereafter. The final report will be due three months after all aspects of the work subject to the cost cap are completed.

V. RATEMAKING PRINCIPLES-CONDITIONS PRECEDENT

Before determining applicable ratemaking principles for MGS, two findings must be made, pursuant to Iowa Code § 476.53(3)"c." These are conditions precedent to a determination of ratemaking principles, because if the findings are not made, the utility cannot receive ratemaking principles. First, the public utility must have in effect a Board-approved energy efficiency plan. Second, the utility must demonstrate that it has considered other sources for long-term supply and that the facility is reasonable when compared to other feasible alternative sources of supply.

IPL and Consumer Advocate agreed in the Settlement Agreement that these conditions were satisfied. LEG and ICC argued that IPL did not meet the second condition.

A. Energy Efficiency Plan

With respect to the first condition precedent, IPL has in effect a Board-approved energy efficiency plan. IPL's current energy efficiency plan, identified as Docket No. EEP-08-1, was approved by the Board on June 24, 2009. IPL has pending before the Board a new energy efficiency plan proceeding, identified as Docket No. EEP-2012-001, which is for the years 2014 through 2018.

IPL has a Board-approved energy efficiency plan and the Board has issued no orders finding that IPL is not in compliance with any Board orders in its EEP docket. The first condition precedent is satisfied.

B. Reasonableness of the Facility

The second condition precedent is whether the utility has considered other long-term sources of supply and shown that the facility is reasonable when compared to other feasible supply sources. Iowa Code § 476.53(4)"c"(2). In making this determination, the undersigned must look at the need for the facility, that is, whether the facility is a reasonable alternative to meet one of the statute's goals, "to attract the development of electric power generating ... facilities within the state in sufficient quantity to ensure reliable electric service to Iowa consumers ... ." The need for the facility was addressed in the siting portion of this proposed decision but

will also be addressed here. The reasonableness of the facility when compared to other feasible supply sources will then be addressed.

1. Need

In ratemaking principles proceedings, the Board has typically considered whether there are underlying needs and reasons to add generation to a utility's generation resource portfolio other than the basic energy and capacity needs. Public policy and noncost factors also play a role in determining need for a proposed generation project. For example, promotion of Iowa's economic development and energy policies, fuel diversity, and compliance with environmental regulations are factors the Board has considered in a ratemaking principles proceeding when determining need. See, MidAmerican Energy Company, "Final Decision and Order," Docket No. RPU-2009-0003, (12/14/2009), pp. 17-19.

As discussed in the generation certificate portion of the proposed decision, IPL has established a need for new supply, and MGS provides identifiable benefits with respect to such things as environmental compliance, fuel diversity, balance between owned generation and purchased power, and furtherance of Iowa's economic development and energy policies. The question becomes whether MGS is reasonable when compared to other feasible alternatives.

2. Reasonable Alternative

a. Introduction

The issue of whether a proposed facility is reasonable was first addressed in Docket No. RPU-01-9. In its final order, the Board said:

> The ratemaking principles statute does not refer to "least-cost" alternatives. Instead, Iowa Code § 476.53(3)"c"(2) only requires that the "rate-regulated public utility has demonstrated to the board that it has considered other sources for long-term electric supply and that the facility or lease is reasonable when compared to other feasible alternative sources of supply." (Emphasis added). In a ratemaking principles proceeding, the Board does not have to conduct the least-cost analysis formerly required in a siting proceeding involving a public utility. The proposed facility need only be reasonable when compared to other alternative sources of supply.
>
> While cost remains a factor, elimination of the least-cost requirement is consistent with the intent of the ratemaking principles statute, which is to attract electric power generating facilities to this state. Elimination of the least-cost requirement now allows non-cost factors to play a role in the Board's decision that a public utility has satisfied this requirement as a condition precedent to receiving ratemaking principles. These non-cost factors, such as security and reliability, could in some cases be determinative. (MidAmerican Energy Company, Docket No. RPU-01-9, "Order," (5/9/2002), p. 6).

With respect to the reasonableness of the facility, IPL argued that its robust RFP process appropriately resulted in the decision to select MGS. LEG said that the RFP process employed by IPL was faulty because IPL used a transmission cost adder for non-IPL zone bids. LEG and ICC maintained that MISO and PJM capacity auction results establish that the transmission cost adder used by IPL is unnecessary. Both LEG and ICC also argued that based on the revised transmission cost estimates, MGS is not a reasonable alternative; this issue was addressed in the

generating siting portion of the order. The issues raised by the parties with respect to reasonableness will now be addressed. After the parties' positions on the various issues raised are summarized, the undersigned will address the reasonableness standard and whether this condition precedent has been satisfied such that ratemaking principles may be established.

b. IPL's RFP Process

IPL said that its process to consider a resource addition began when IPL considered its future resource options in light of the 2014 expiration date of the power purchase agreement with NextEra Energy Duane Arnold, LLC (NextEra/DAEC) and other factors such as environmental issues and the age and condition of IPL's older peaking and steam generation assets. (Tr. 40-42, 46-48, 50-57, 763-779, 839-851). IPL said that it initiated two parallel processes to decide the next resource addition to meet the needs of its customers. The first path was the development of a design basis document and preliminary engineering to construct a combined-cycle combustion turbine (CCCT) (referred to as the "Reference Plant") and the second path was an RFP for third-party supplies of capacity and energy, including proposals for power purchase agreements, the purchase of existing assets, or the development of a new facility by another party. IPL said the goal of the two processes was to evaluate a broad range of available long-term supply options in order to effectively meet IPL's pending short position for energy. (Tr. 52-53).

For the Reference Plant, IPL stated that it employed B&M to provide a proposal for a CCCT, including a cost estimate. IPL noted that the B&M cost estimate for the Reference Plant was $598 million, excluding owner's costs. (Tr. 43). IPL said it also retained HDR Engineering, Inc., to measure the reasonableness of the B&M proposal. IPL explained that HDR performed this task by preparing both a "shadow estimate" and a market analysis. (Tr. 53-54, 650-651). IPL said it used these three means (B&M proposal, HDR shadow estimate, and HDR's market analysis) to estimate the cost to build the Reference Plant, which produced estimates in a narrow range, allowing IPL able to analyze the Reference Plant costs with confidence. IPL stated that the cost estimate for the "Reference Plant," with the addition of owner's costs, was used to develop IPL's proposed cost cap (Principle No. 5) for MGS. (Tr. 54, 652-653).

IPL said that it issued an RFP in January 2012 with the primary objective of identifying available alternatives to meet IPL's resource needs through a competitive process. IPL noted that the intended and realized result of the RFP process was to enable IPL to make a well-informed decision that minimized risks and maximized benefits for its customers. (Tr. 54-55, 165-169). IPL said that the ten entities which responded to the RFP offered 29 alternatives. IPL noted that its consultant, Concentric Energy Advisors (Concentric), ensured a transparent and open RFP process and evaluated all of the RFP responses through a high-level screening analysis to create a short list of proposals. (Tr. 55, 166).

IPL said it analyzed the short list prepared by Concentric to determine the best proposals. IPL's EGEAS review indicated that the proposal and alternatives from NextEra/DAEC were ultimately superior to the submissions of the other RFP respondents, resulting in IPL entering into a new purchase power agreement with NextEra for its share of the DAEC output. (Tr. 56, 59, 71-72, 168-170). IPL also used the cost estimate developed for the Reference Plant as a gauge to test the reasonableness of the RFP responses. (Tr. 56-57).

Once IPL selected the NextEra purchase agreement as one part of its future power supply, IPL said it considered other RFP short list bidders as alternatives to MGS. IPL stated that its analysis of the remaining RFP bids demonstrated that MGS was more cost-effective than the RFP short list bids while providing other benefits such as a positive economic impact on the state of Iowa as well as furthering Iowa's public policy to encourage the development of in-state generating resources rather than resources from outside the state. (Tr. 57, 170-171).

IPL noted that its EGEAS modeling was updated to include the new power purchase agreement with NextEra. IPL said that EGEAS was then allowed to create an optimized reference case which selected a 600 MW natural gas-fired, combined-cycle generation plant in 2017. (Tr. 170)[2]. IPL stated that it then compared the results of the reference case to other EGEAS runs that modeled the four short list

[2] IPL ran 22 sensitivity runs and in all 22 sensitivity cases for IPL's integrated resource plan, EGEAS optimally selected a nominal 600 MW combined cycle generating unit in 2017. (IPL RPU Application, p. 2-8).

bidder alternatives, and the results demonstrated that MGS was lower in cost than the four short list bidder alternatives.

Consumer Advocate said that the testimony of IPL witnesses Bauer and Aller described the various sources of long-term supply that IPL considered before ultimately concluding that MGS is the most desirable and reasonable option when compared to the other feasible alternative sources of supply, thereby satisfying Iowa Code Section 476.53(3)(c)(2). Consumer Advocate noted that numerous other IPL witnesses provided supporting facts in their testimony and exhibits and that IPL's RFP process was designed so that proposals from market participants could be compared to the self-build MGS option and that the cost estimate for the Reference Plant developed by B&M was confirmed by HDR, a second engineering, construction, and consulting firm independent of B&M. Also, Consumer Advocate said that another outside entity, Concentric, was retained to ensure that the RFP was well-developed, competitive, and fair. (Tr. 165-66).

LEG maintained that IPL's RFP was flawed from the start because of the requirement that bidders include transmission to deliver to the Alliant West Load Zone (LRZ 3). LEG argued that a new RFP should be conducted because the flaws in the RFP likely deterred potential bidders, reducing the options that could be considered.

LEG said that the RFP's requirement that there be delivery to LRZ3 was not required by MISO either at the time of the RFP or under MISO's new construct. LEG

said that none of the bidders were willing to add this duplicative transmission to their bids because they already had delivery into the MISO transmission system since IPL had MISO Network Integration Transmission Service (NITS) transmission service for its load; with NITS transmission service for IPL's load, there would be no further transmission charges. (Tr. 249).

LEG also took issue with the RFP because it required bidders to provide energy by June 1, 2016, even though IPL would not need energy until 2017. LEG argued that some potential bidders likely could have met a 2017 deadline but may have not been able to meet a 2016 deadline. In addition, LEG said that the RFP was narrow and specific and required that the bidder provide a physical facility as opposed to a power purchase agreement. (Tr. 957). Because IPL did not consider sites on MidAmerican Energy Company's (MidAmerican) transmission system and in MISO capacity deliverability zone 3, the scope of potential bidders was limited. (Tr. 263). LEG concluded that the only way to correct the RFP's flaws is to issue a new RFP.

ICC argued that MGS should be pursued only if the ROE is reasonable (10 percent). If IPL does not accept this ROE, ICC agreed that a new RFP should be conducted, with the Board supervising the process.

In reply to LEG and ICC, IPL said that both parties argue that ratemaking principles should not be approved and a new RFP initiated because of the

uncertainties associated with transmission upgrade costs. IPL argued that this uncertainty argument is misguided for two reasons.

First, IPL said that LEG and ICC exaggerate the importance of the uncertainty of the necessary upgrade costs included in the SPA study. IPL pointed out that the MISO SPA study is non-binding, was developed based on needs beyond MGS (Tr. 206), and uses a rule of thumb cost per mile estimate that is higher than IPL's projected cost of construction. IPL said its forecast is location-specific and consistent with similarly-situated facilities. (Tr. 241-42). Even with the higher MISO per mile cost estimate, IPL noted MGS is still a reasonable resource.

Second, IPL said that LEG and ICC argue that a new RFP is needed to ensure that IPL is appropriately choosing a supply resource which would alleviate some uncertainty regarding cost. IPL maintained that a new RFP would lead to additional cost uncertainty. IPL stated that it managed an extensive RFP during the first half of 2012 that eventually led to the new power purchase agreement for DAEC and that RFP was the foundation for IPL's determination that MGS is a reasonable long-term resource for its customers. If IPL's process was flawed, IPL wondered how LEG could draw any conclusions about the RFP alternatives, such as that there were others who would have bid.

IPL pointed out that LEG argues in pre-filed testimony that some of the responses to IPL's 2012 RFP were superior to the MGS (Tr. 946), but at the hearing (Tr. 957-958) and in its brief LEG now suggests that other alternatives may become

available under another RFP. IPL maintained that there is no foundation for the argument that another RFP would lead to more certainty than IPL's MGS proposal. IPL asked this question: if, as LEG contends, the 2012 RFP could not produce a clearly superior alternative to MGS, how can the Board expect another RFP to produce such a result?

IPL noted that Iowa Code § 476.53 does not require that a utility conduct an RFP or competitive bidding process to demonstrate that a new resource is reasonable when compared to alternative sources of supply. In Docket No. RPU-2009-0003, a ratemaking proceeding involving MidAmerican, the Board specifically held that:

> In arguing that a competitive bidding process is required, NextEra and Iberdrola imply that MidAmerican must demonstrate that its facility is the least cost alternative. That implication is incorrect. The standard is that the facility is reasonable, not least cost. Reasonable can be taken to mean not unreasonable when compared to other feasible alternatives, which implies a certain degree of latitude. This is the comparison the statute requires, not a determination of the least cost alternative. MidAmerican Energy Company, Docket No. RPU-2009-0003, "Final Decision and Order," (12/14/2009), p. 23.

IPL argued that by conducting an RFP, IPL has gone above and beyond what is required to demonstrate reasonableness and that LEG's and ICC's positions ignore the standards the Board has established for demonstrating reasonableness in order to qualify for advance ratemaking principles.

IPL also argued that the suggestion that IPL's 2012 RFP unfairly disadvantaged out-of-state resources ignores Iowa public policy as expressed in Iowa Code § 476.53. As noted in IPL's initial brief (pp. 27-28), the Board most recently addressed the statutory intent of Iowa Code § 476.53 in its January 31, 2013, order in the DAEC docket. IPL said that LEG or ICC have not offered anything in their post-hearing briefs to show how another RFP would lead to a solution for IPL's customers' needs that serves Iowa's public policy outlined in Iowa Code § 476.53; in fact, an additional RFP would create additional uncertainty and postpone the selection of a reasonable long-term solution to satisfy IPL's customers' needs. IPL said that LEG or ICC did not challenge customers' need for additional resources.

In its reply, LEG again argued the RFP was flawed in the ways LEG pointed out in its initial brief. Because LEG maintained that these flaws in the RFP likely prevented some possible sources from submitting bids, the RFP did not consider all feasible alternate sources of energy supply, thereby skewing the RFP's results. LEG claimed that the only way to cure these defects and insure that all potential bidders are included in the results and analysis is to require IPL to conduct a new RFP under the supervision of the Board.

c. Transmission Costs

IPL said its analysis of the short list bidder alternatives considered MISO's new capacity zone construct. IPL noted that the MISO capacity zone construct

attempts to ensure that any capacity located outside of a utility's load zone can not be counted towards its MISO Module E (Resource Adequacy) capacity requirement without either firm transmission service or a Zonal Delivery Charge from the Capacity Zone in which the generating facility is located to the Capacity Zone in which the utility's load is located. (Tr. 171-172). IPL said that each of the four short list bidders' facilities is located in a different MISO capacity zone than IPL's load. Therefore, IPL said that it considered the cost of Point-to-Point (PTP) transmission service as part of its EGEAS analysis of the RFP short list bidders. Also, IPL noted that there could be capital costs for transmission network upgrades associated with any of these alternatives that will not be known until a request for transmission service is made with MISO. IPL said it did not assume any potential capital investment that might be required for any of the short list bidders in its EGEAS analysis.

IPL also said it considered a number of non-economic factors: compliance with environmental regulations; economic development; location; fuel diversity for IPL; operational considerations; and security and reliability. IPL maintained that the result of IPL's non-economic factor analysis made MGS an even better alternative than the short list bids. (Tr. 172-173). With the consideration of not only the cost of the facility, but also the cost of firm PTP transmission service to put the market alternatives on a like-for-like basis with the MGS, IPL concluded that MGS was not just a reasonable alternative, but the best alternative. IPL noted that the location of

MGS also further contributes to the security and reliability of the electric system in Iowa by installing a new generating resource. (Tr. 173).

IPL acknowledged LEG witness Latham's claims that IPL has improperly applied a PTP transmission cost risk adder to out-of-state generating resources and that this transmission cost risk adder biases the results in favor of the MGS when compared to other generating alternatives offered in response to IPL's RFP. IPL said that Dr. Latham raised substantially the same issue in a prior docket involving IPL's purchase power contract for energy produced by Iowa's only nuclear plant, Duane Arnold Energy Center (DAEC). IPL quoted from the Board's order in that docket addressing PTP transmission:

> IPL's transmission adder appropriately recognizes that bids for generation supplies located outside of the Alliant West load zone (up to several states away) present transmission risks to IPL and its customers, compared to DAEC generation as a resource, which is located within the Alliant West load zone. Interstate Power and Light Company, Docket Nos. SPU-2005-0015, TF-2012-0577, "Order," (1/31/2013), p. 18.

IPL said that the RFP results and analyses used in this docket are the same as those used in the DAEC dockets. IPL noted it also used the same RFP results and analyses for considering out-of-state sources of supply. (Tr. 183). As such, IPL argued that the Board's finding in the DAEC docket that IPL appropriately recognized out-of-state transmission cost risks is applicable to MGS because Dr. Latham presented nothing in this docket to demonstrate that the conclusion by the Board in the DAEC docket was in error.

IPL noted that LEG provided information on the MISO 2013-2014 Plan Year Planning Resource Auction (PRA) and the preliminary MISO SPA thermal study results for the MGS. IPL claimed that the inference of Dr. Latham's testimony is that these data points are adverse to IPL's requests regarding MGS.

IPL disagreed with Dr. Latham's analysis and said that if it were to select an unspecified "preferred" alternative, to avoid either a Zonal Delivery Charge or PTP transmission service charges, IPL would have to sell the purchased capacity into the MISO capacity auction in the zone (LRZ 2 or 7) and purchase the same amount in LRZ 3. IPL said it agreed with Dr. Latham that there is no price separation between the MISO LRZs in the 2013-2014 Plan Year. However, IPL said that this does not mean that there will be no capacity price separation between MISO LRZs in future PRA auctions and this uncertainty is the reason why IPL applied a PTP transmission cost adder.

IPL argued that the Wood Mackenzie (WM) capacity cost forecast data provided by IPL is the only forecast data in the record and this data shows that there may be significant price separation beginning in 2015 through 2031 between MISO LRZ 3 (Iowa) and MISO LRZs 2 and 7; three short list bidders were located in LRZ 7 and one was located in LRZ 2. IPL said that the LRZ 3 capacity cost forecast is high as compared to LRZ 2 or 7. (Tr. 201). Under LEG witness Latham's approach, IPL would be selling low in LRZ 2 or 7 and buying high in LRZ 3. IPL's short bid analysis tried to quantify such risks. (Tr. 200). IPL said that the WM forecast shows that if

IPL procures capacity from a non-MISO LRZ 3 resource, transmission cost risk needs to be recognized. (Tr. 202).

IPL conducted an EGEAS analysis comparing MGS with short list bidders based on the WM capacity cost forecast using LEG witness Latham's capacity sale and purchase approach. IPL said that the WM forecast supports the conclusion that MGS is a reasonable alternative. (Tr. 203-204). IPL said that even with $200 million of assumed transmission costs, the analysis shows MGS has a lower net present value revenue requirement than any of the four short list bidders.

Consumer Advocate said that IPL witness Ross provided load forecasts that show IPL's demand is growing at the rate of about one percent per year, or 30 MW per year, through 2027. (Tr. 754). At the same time demand is growing, Consumer Advocate pointed out, IPL's generating fleet is aging and many of IPL's generating plants will need to be retired in the near future. Consumer Advocate maintained that continued reliance on these older plants poses a significant risk of failure and cost to IPL and its customers and that current plant conditions and refurbishment costs would not support long-term operation of these plants. (Tr. 767, 775, 789, 790). Because of this, Consumer Advocate agreed that IPL's retirement plant assumptions were reasonable for planning purposes, but also agreed that a separate cost-benefit analysis should be performed before any particular plant is actually retired. (Tr. 928, 790).

Consumer Advocate pointed out that using EGEAS, IPL witness Kitchen evaluated the cost of meeting IPL's capacity and energy projections using various resource alternatives, including short-term and long-term power purchase agreements, simple cycle gas turbines, combined-cycle gas turbines, coal technologies, nuclear, and renewable resources. (Tr. 691). Consumer Advocate said that the EGEAS is designed to choose the most economic resources and that IPL's EGEAS analysis included a base case as well as a variety of sensitivity cases, such as various prices for coal, natural gas, wind, and CO_2. (Tr. 702-704). Consumer Advocate said that in virtually every case, EGEAS picked a nominal 600 MW combined-cycle unit (i.e., a plant like MGS) as the optimal way to satisfy IPL's needs beginning in 2017. (Tr. 703-705). Thus, Consumer Advocate said that when considering the alternatives and sensitivity cases, Mr. Kitchen concluded that MGS is a reasonable option. (Tr. 710).

Consumer Advocate said that IPL witness Bauer also compared the EGEAS results under various scenarios for MGS and the four short list bidders. (Tr. 212). For MGS, Consumer Advocate said that two scenarios were presented. The first assumed $100 million in transmission network upgrades and the second assumed $200 million in transmission upgrades (based on estimates set forth in the preliminary MISO SPA study), which IPL witness Bauer testified are overstated. (Tr. 209-212).

Consumer Advocate stated that IPL's analysis reflected the risk associated with the distant location of the alternative generation resources using the cost of PTP transmission service. (Tr. 212, 223). Consumer Advocate concluded that IPL's risk concerns are supported by the forecasts of annual capacity prices from WM, which indicate that there may be significant price separation between the MISO zone for IPL (LRZ 3) and the out-of-state zones where the RFP generation resources are located (LRZ 2 and LRZ 7) during the period 2015 through 2031. (Tr. 201; Exhibit RDB-3, Confidential Schedule A). Additionally, Consumer Advocate noted that the four short list bidders were given the opportunity to guarantee delivery to the Iowa MISO Zone LRZ3 as part of their RFP price and they all declined. (Tr. 223). Consumer Advocate argued that this further supports IPL's position that a price separation risk exists and needs to be taken into account.

While LEG witness Latham criticized both Mr. Bauer's reliance on PTP transmission costs and the WM forecasts to estimate the cost impacts of the price separation risk, Consumer Advocate said that he provided no reliable evidence to support his criticism, relying on the fact that there was no price separation in the most recent MISO capacity auction and the unsupported implication that the current capacity auction results would continue throughout the life of the short list RFP proposals. (Tr. 952, 960-961). Consumer Advocate said that because of the anticipated future retirements of numerous generating units on the MISO system

(estimated to be 12 to 16 GW of capacity, in total) future capacity auction results could reasonably be expected to be different than they are at present.

Consumer Advocate said that Dr. Latham's claims that the short list RFP proposals pose no price separation risk to IPL and its customers are not credible and should be rejected and that when the price separation risk is reflected in the cost of the four short list RFP proposals, the net present value revenue requirement (NPVRR) of MGS (assuming $200 million in transmission upgrades) is significantly less than it is for the four short list RFP proposals under all but one scenario. In that scenario, Consumer Advocate said that the difference in the NPVRR is less than $60 million—a small fraction of the NPVRR of the various bids. (Tr. 212). Consumer Advocate concluded that when the total cost of MGS is compared to the likely total cost of the various short list proposals, the proposed MGS facility is reasonable and satisfies the statutory criteria set forth in Iowa Code Section 476.53(3)(c)(2).

LEG argued that with IPL's PTP transmission adder the difference in NPVRR was over $500 million in most cases. LEG said that at the hearing, IPL witness Bauer conceded that there is no PTP adder for resources outside of LRZ 3 and that although Mr. Bauer tried to assert that a PTP charge can apply as a hedge in zonal delivery charges, that would apply in the case where IPL had filed a Fixed Resource Adequacy Plan (FRAP) and IPL has not done so. (Tr. 224). LEG concluded that there is no justification for using a PTP charge or a zonal delivery charge.

LEG maintained at hearing that Mr. Bauer changed his story and stated that a Zonal Differential Adder needed to be added to those bids instead of a PTP or zonal delivery charge (ZDC) and that this new adder was based upon the possibility of differences in clearing prices between the zones. (Tr. 203). LEG said that there are at least three problems with this approach. First, IPL did not use this method in its initial filings. Second, IPL has referred to no authority that requires such an adder. Third, MISO has completed its capacity auction and there was no transmission constraint between LRZs and there were no ZDCs in MISO. Because the MISO PRA results showed that there are no differences in clearing prices between zones, LEG said that Mr. Bauer changed his story and now asserted that the WM study conducted months before the auction provided justification for the adder. LEG said that IPL has not provided the data or the study itself so other parties to the proceeding have no way to conduct an independent analysis of the WM study. Also, LEG said the WM study presents only one of the multiple scenarios, the no-carbon capacity scenario, and IPL has not looked at other scenarios and the WM projections are at odds with the PJM capacity auction results.

LEG argued that the evidence shows that MISO began a Transmission Expansion Plan that will increase capabilities in LRZ 3, meaning that congestion and constraints will be even less likely within LRZ 3 in the future. (Tr. 230, 232). LEG said this transmission expansion also means there will be less likelihood of ZDCs in the future.

When viewed in light of the more accurate network transmission upgrade costs and the bids without the improper adder, LEG concluded that MGS has not been shown to be a reasonable alternative because the results of the IPL study are skewed and invalid. When corrected for the actual transmission upgrade costs and the removal of the improper adders, LEG said that it becomes apparent that MGS will cost over one billion dollars and is not a reasonable alternative compared to other feasible alternative sources of supply. Contrary to IPL witness Bauer's testimony, LEG said that network upgrade costs are of significant magnitude, three times Bauer's estimate, and impact the reasonableness of the MGS to a significant degree, making the NPVR of MGS about $200 million more than other bids. (Tr. 972).

In its reply brief, IPL noted that LEG reargues its position from the DAEC docket (SPU-2005-0015, TF-2012-0577) and that IPL's transmission risk assessment was based upon the new local MISO LRZ construct. IPL said that the Board's finding in the DAEC docket that IPL appropriately recognized out-of-state transmission cost risks is applicable to the MGS dockets. IPL said LEG presented no evidence or argument that demonstrates the Board's prior conclusion was in error.

IPL found it curious that at this stage of the proceedings LEG challenges the basis of WM's MISO LRZ capacity costs forecasts. IPL noted it has consistently used WM forecasts over the years in its EGEAS analysis. (Tr. 200-201). IPL argued

that LEG has presented no basis for the Board to pick and choose which WM forecasts are appropriate to use in IPL's EGEAS analysis and that WM's MISO and PJM capacity market forecasts are in line with the MISO and PJM auction results. IPL said that the combination of both the higher network upgrade costs from the MISO SPA study, and the impact of the WM MISO LRZ capacity price forecasts, does not change the conclusion that the MGS is a reasonable alternative for IPL's customers and consistent with Iowa public policy.

In its reply brief, LEG said that IPL has not presented credible evidence that there will, in fact, be any charges based upon differences in capacity auction prices between the zones and that IPL used an incorrect and improperly low estimate for network upgrades for MGS. LEG said that IPL witness Bauer acknowledged that if the plan selected by MISO had a higher cost, then the "economics of the MGS are going to be less favorable." In its initial brief, LEG pointed out that IPL characterizes these results as MISO's "preliminary generic estimated cost" and states that this amount "will not ultimately be required for MGS," but IPL admits that it requested the MISO study "in order to be conservative and ensure MGS was still a reasonable option."

However, LEG said that when IPL was presented with the results of the study, showing that the MGS is not, in fact, a reasonable option, IPL chose to disregard the results of the study it requested for that very purpose. Notwithstanding the fact that IPL already had the MISO SPA results, LEG said that Mr. Bauer again used $100

million as the estimate for network upgrades required for the MGS. (Tr. 203). LEG noted that later, in Mr. Bauer's supplemental rebuttal testimony, he again chooses to disregard the MISO SPA results, coming up with his own numbers of $160.7 million (or possibly $190.2 million) for network upgrades.

i. PJM Auction

At the hearing, LEG said it would file late-filed exhibits with PJM auction results. LEG filed the additional exhibits on May 29, 2013, and IPL filed a motion to strike on June 3, 2012. The Board issued an order on June 26, 2013, denying IPL's motion to strike and overruling IPL's objection to the exhibits.

LEG's exhibits cover the PJM Reliability Pricing Model (RPM) Base Residual Auction Results for the years 2015-2016 and 2016-2017. (LEG Exhibits 208, 209, 210, 211). LEG said that these PJM auction results show a trend, starting in 2014-2015, of a continuing reduction in auction prices driven largely by flat demand growth and an increase in supply from substantial amounts of new entry offers, uprates from repowering existing resources to natural gas, increased imports, and withdrawn deactivations. (Exhibit 208, p. 2). LEG said these results are also informative as they show the trend out through 2017, as opposed to MISO auction results which only show results through 2014. LEG maintained these exhibits contradict trends shown in WM report offered by IPL.

IPL maintained the exhibits were not useful in this proceeding because of the difference in planning years as well as differences in the PJM and MISO markets.

Also, IPL said the data supports its contention that there are risks associated with capacity prices over time. (Exhibit 208, pp. 2, 16). While IPL acknowledged that the actual forecasted prices in WM vary from the PJM auction results, WM does show a general downward trend in PJM capacity prices from 2014 thru 2016, and then begins an upward trajectory in 2017. Also, IPL noted that LEG did not mention the significant price separation between PJM zones and that this range is from $59.37 per MW-day to $219.00 per MW-day.

d. Application of Reasonable Standard

IPL maintained that none of the parties challenged IPL's claim that it considered other sources of long-term electric supply. IPL said that LEG is the only party that has challenged IPL's claim that MGS is reasonable when compared to other feasible alternative sources of supply. However, IPL noted that LEG has not gone so far as to claim that MGS is not reasonable when compared to other feasible alternative sources of supply, which is the statutory standard; instead, LEG has only argued that MGS is not the preferred alternative.

IPL said that LEG witness Latham claims that IPL's 2012 RFP process:

> …significantly biased the results in favor of MGS through unreasonable adjustments for transmission costs of power delivery from alternative electric power sources and, as a result, the MGS is not the preferred alternative for IPL in this case… (Tr. 938).

IPL argued that Dr. Latham's testimony does not describe how his "preferred" alternative approach addresses the Board's application of the conditions precedent

requirements under Iowa Code § 476.53(3)"c" and that it appears Dr. Latham is suggesting a new "preferred" alternative standard that is equivalent to a "least-cost" alternative approach. IPL noted that the Board has previously rejected such a standard:

> The ratemaking principles statute does not refer to "least-cost" alternatives. Instead, Iowa Code § 476.53(3)"c"(2) only requires that the "rate-regulated public utility has demonstrated to the board that it has considered other sources for long-term electric supply and that the facility or lease is reasonable when compared to other feasible alternative sources of supply." (Emphasis added). In a ratemaking principles proceeding, the Board does not have to conduct the least-cost analysis formerly required in a siting proceeding involving a public utility. The proposed facility need only be reasonable when compared to other alternative sources of supply.
>
> While cost remains a factor, elimination of the least-cost requirement is consistent with the intent of the ratemaking principles statute, which is to attract electric power generating facilities to this state. Elimination of the least cost requirement now allows non-cost factors to play a role in the Board's decision that a public utility has satisfied this requirement as a condition precedent to receiving ratemaking principles. These non-cost factors, such as security and reliability, could in some cases be determinative. MidAmerican Energy Company, Docket No. RPU-01-9, “Order,” (5/29/2002), p. 6.

IPL said that the Board has consistently applied the "reasonable when compared to other feasible alternative sources of supply" standard in advance ratemaking principles proceedings, citing Docket Nos. RPU-08-1 and RPU-2009-0003 as

examples. IPL quoted from the Board's order in Docket No. RPU-2009-0003 explaining that the appropriate standard

> is that the facility is reasonable, not least cost. Reasonable can be taken to mean not unreasonable when compared to other feasible alternatives, which implies a certain degree of latitude. This is the comparison the statute requires, not a determination of the least cost alternative. MidAmerican Energy Company, Docket No. RPU-2009-0003, (12/14/2009), p. 23.

IPL said that its EGEAS modeling supports IPL's belief that the MGS will be the lowest cost, reasonable alternative for IPL's customers (Tr. 703-10) and the legal arguments used by IPL are intended to emphasize that the applicable standard is a "reasonable" standard, and not, as Dr. Latham appears to suggest, a "preferred" or "least cost" standard. IPL pointed out that while Dr. Latham claims that each offer of the RFP short list bidders is economically superior to MGS, he did not identify his "preferred" alternative. (Tr. 79, 82). At the hearing, IPL noted that Dr. Latham even suggested that other, hypothetical alternatives that did not respond to IPL's RFP may ultimately prove to be the "preferred alternative." (Tr. 957).

IPL emphasized that all of the short list bidders' assets are located outside of Iowa. IPL noted that the Board in its orders has emphasized not only the reasonableness standard but the statutory intent of Iowa Code § 476.53, "which is to attract electric power generating facilities to this state." IPL said that LEG has ignored this portion of the statute when arguing for an out-of-state alternative.

ICC said that alternatives to MGS are available and the Board should not be concerned that IPL may abandon the MGS Project if the Board does not accept the above-market ROE requested by IPL. ICC argued that the results of the recent MISO capacity auction demonstrate that reasonable alternatives exist that are not precluded by geographic location and that a resource located outside IPL's zone could reach IPL without having to pay additional transmission charges, incur transmission congestion charges, or face other costs to hedge against transmission constraints. ICC said that this puts non-MGS resources on an equal footing with MGS, at least with respect to transmission and congestion costs.

ICC noted that recent PJM data shows a continuing downward trend in auction prices until at least 2017, supporting ICC's position that a reasonable and lower cost alternative to MGS may exist. ICC said it is not suggesting that the Board must require IPL to adopt the least cost alternative supply source, though certainly IPL should endeavor to secure the lowest cost supplies for its customers. As recommended by ICC witness Gorman, ICC said that if IPL declines to pursue the MGS Project with a reasonable ROE, then the Board should consider supervising a new RFP process.

ICC said that public policy initiatives, such as promoting the development of in-state generation in accordance with Iowa Code § 476.53, are an important consideration in ratemaking proceedings before the Board, but the facts and circumstances of a particular case must also be considered and weighed against the

policy implications of any generation project. While ICC noted that the Board has rejected a “least cost” standard, costs cannot be ignored. ICC argued that at some point, an expensive in-state generating facility with an above-market ROE crosses the threshold and "tips the scales" against the project.

Consumer Advocate noted that LEG argued in its initial brief that IPL has not demonstrated that MGS is reasonable when compared to other feasible alternative sources of supply and, as a result, LEG argues that IPL's request for advance ratemaking principles should be denied. Consumer Advocate disagreed and said that the evidence in the record supports a finding that IPL has considered other sources of long-term electric supply and that the proposed MGS facility is reasonable when compared to other feasible alternative sources of supply as required by Iowa Code § 476.53(3)“c” (2013).

LEG argued that the MGS cost to ratepayers is too great when considering it is likely to have only a 15 percent capacity factor and cost $1.1 billion. (Tr. 111). LEG noted that the expected impact on IPL’s revenue requirement is at least $141 million per year for an overall revenue increase of at least 10.2 percent, depending on transmission network upgrades. (Tr. 113-14). LEG pointed out that IPL witness Aller testified that IPL used a 50 percent capacity factor as a screening tool for evaluating short list alternatives to the MGS and that he didn't know if a 15 percent capacity factor screening tool would place MGS farther down the list of alternative power supplies. (Tr. 116). LEG said that Mr. Aller agreed that MGS will be similar to

the IPL Emery Generating Station combined-cycle natural gas plant and that IPL witness Bauer testified at hearing IPL assumed a 50 percent capacity factor, but that the capacity factor could instead be as low as 15 percent. (Tr. 251). LEG said that IPL FERC Form 1 data shows that the average capacity factor for Emery for 2008 through 2012 was 12.8 percent. LEG said that MGS is not a reasonable option when compared to other feasible sources of supply.

e. Presiding Officer Discussion

After reviewing the evidence, the undersigned finds that the most reasonable estimate of transmission cost upgrades is up to $190 million, which is the uppermost figure provided by IPL after it made corrections to the SPA study results (such as subtracting the cost of projects found in the off-peak study). IPL then conducted a sensitivity analysis with its EGEAS model using $200 million for transmission costs. The results of this analysis show that MGS is a reasonable alternative when compared to the short list bidders. With network upgrade costs of $200 million, MGS would result in a lower NPVRR ($14,223 million) than the most favorable of the short list bidders with the PTP adder ($14,493 million). Without the PTP adder the NPVRR for the lowest cost bidder was $13,978.6 million, still putting MGS within a range of reasonableness, particularly when non-cost factors such as reliability improvements and increased access to the grid for future renewable generation projects are considered. The analysis of whether an alternative is reasonable is not

limited to a consideration of cost factors; non-cost factors can play a significant role in the selection of a generation resource.

LEG witness Latham argues that IPL's inclusion of PTP transmission charges in the RFP process biased the results in favor of MGS. Similar arguments were raised and rejected in Docket No. SPU-2005-0015, which involved consideration of the DAEC purchase power agreement. Similar to its arguments in the SPU proceeding, LEG argues that the addition of a transmission charge to the analysis of bids located outside IPL's LRZ was unnecessary because IPL already had NITS.

In its January 31, 2013, order, in Docket No. SPU-2005-0015, the Board found that since generating resources that are located outside the IPL local resource zone may be subject to either a ZDC or a requirement that they procure PTP transmission service to ensure deliverability, it was appropriate for IPL to include an estimate for these cost risks in its evaluation of the various bids. While these charges may not be incurred currently, the studies presented demonstrate that such charges may be incurred in 2017 and after. The presiding officer believes that inclusion of the PTP costs was appropriate to factor in the risk of future transmission charges that might be incurred to get power delivered to IPL’s load zone.

It is important to note that the bidders themselves were not willing to assume the risk of future transmission charges. IPL witness Bauer testified that at the time of the RFP solicitation, IPL specified that power be delivered on a non-curtailable, firm

basis to the IPL zone within the MISO footprint or be financially adjusted so as to hold IPL harmless for delivery to an alternative location. (Tr. 166-67).

In other words, IPL requested that bidders deliver the power to the IPL zone. The bidders declined to do so. (Tr. 223). Mr. Bauer also testified that future auction results will determine if there is capacity price separation between MISO LRZs, but those results are not known today with any certainty. That lack of certainty is the reason that IPL applied a PTP transmission cost risk adder for generation located outside of the IPL zone. (Tr. 200). It was reasonable for IPL (and ultimately its ratepayers) to decline to assume a transmission risk that the bidders were unwilling to take. Further, the fact is that in NPVRR terms, MGS is a little less than 2 percent less costly than the lowest of the short list bids with the transmission cost adder. If the adder is not included, MGS is a little less than 2 percent more expensive than the least-cost of these alternatives. In this case, on these facts, that is enough to show MGS is within the range of reasonableness, particularly when non-cost benefits are considered.

Both LEG and ICC recommend that IPL conduct a new RFP process to choose a new alternative. Iowa law does not require a competitive bidding process to select a new resource option. In its RFP, IPL considered other feasible sources of long term electric supply. The evidence in this docket indicates that the RFP process used by IPL produced credible and usable bids. There is no guarantee that a new

RFP process will produce better options and could in fact result in increased costs because of the delay that would result.

IPL's EGEAS analysis demonstrates the MGS is a reasonable economic choice. Additionally, there are other non-economic factors that support the conclusion that MGS is a reasonable option. The evidence presented by LEG and ICC does not show that the selection of MGS is unreasonable.

VI. RATEMAKING PRINCIPLES

A. Return on Equity

IPL originally proposed an 11.25 percent ROE for MGS. Consumer Advocate in its initial testimony recommended an 11 percent ROE. The Settlement Agreement provides for an 11 percent return. ICC opposed an 11 percent return and, instead, proposed a 10 percent ROE.

IPL and Consumer Advocate witnesses both believe it is important to determine the appropriate ROE for the life of the MGS project in order for IPL to be able to attract sufficient capital not only during the construction phase but for the life of the project. (Tr. 317). In other words, both IPL and Consumer Advocate believe that the Board should consider the possibility of changing market conditions over the projected life of the plant. ICC focused on current market data and market costs going out three to five years in determining its recommended ROE and suggested that if IPL does not want to lock in a 10 percent ROE as part of the advance

ratemaking principles, it can choose instead to have MGS be subject to the ROE established in future rate proceedings.

IPL noted that Iowa Code § 476.53(1) encourages rate-regulated utilities to build generation in Iowa and that the ROE is set for the life of the plant. IPL pointed out that the approved ROE would not go into effect until after IPL files a general rate case after MGS is placed in-service in 2017. (Tr. 300). IPL said that when looking at the recommendations of IPL, Consumer Advocate, and ICC, as well as prior ratemaking principle dockets, the ICC recommendation is an outlier. (IPL Initial Brief, p. 39). IPL had concerns with ICC limiting its ROE analysis to capital market projections looking only three to five years into the future and pointed out what it viewed as other flaws in ICC's analysis, such as ignoring a regional group of proxy companies (Tr. 338), the failure to recognize adjustments IPL's witness made to data concerning Duke Energy Corporation and Ameren Corporation (Tr. 502), and use of a 26-year time frame for risk premium analysis rather than a 38-year time frame. (Tr. 373, 519).

Consumer Advocate said that ICC's 10 percent ROE proposal was consistent with traditional ratemaking principles applied in a general rate case, where ROE is re-set in each rate proceeding. Under those conditions it is reasonable to use a shorter term as the basis of the analysis. However, Consumer Advocate pointed out that the ROE determined in an advance ratemaking principles proceeding is for the life of the plant and that ICC's recommended ROE does not reflect the likelihood of

changing market conditions over the life of MGS. Consumer Advocate stated that Iowa Code § 476.53(3)“b” provides that in determining applicable ratemaking principles, the Board is not limited to traditional ratemaking principles or traditional cost recovery mechanisms.

ICC argued that its 10 percent ROE recommendation appropriately balances the interests of ratepayers and shareholders and that ICC used various ROE models to develop its recommendation. ICC argued that there were several flaws in IPL’s analysis, including use of an exaggerated projected utility bond yield, use of a flotation cost adjustment, and use of inflated market premiums. (Tr. 489).

The key difference in the analyses presented by IPL, Consumer Advocate, and ICC is that IPL and Consumer Advocate recognize that ROE will be fixed for the life of MGS and factor that into their analyses, while ICC focuses on determining an ROE based on current capital markets and projection of capital markets going out only three to five years. ICC presents a traditional ratemaking approach, which is not persuasive in a ratemaking principles proceeding where ROE is being set for the life of the plant and the presiding officer is not bound by traditional ratemaking mechanisms or methods. IPL and Consumer Advocate present a forward-looking approach that recognizes the ROE established here will not change for the life of MGS.

The adjustments made by IPL and Consumer Advocate to reflect future conditions are more appropriate than adjustments for only a three-to five-year period,

especially when the plant will likely be in service for 35 years or more. IPL, Consumer Advocate, and ICC all recognize that we are in a time of historically low capital markets and future years will likely see an increase in capital costs. ICC's analysis might very well be persuasive if this docket involved an IPL general rate proceeding, where an ROE is set that applies only until the next rate case. However, with capital markets at historic lows (Tr. 321), an 11 percent ROE for MGS reflects the intent of the ratemaking principles statute, recognizes that this ROE is being set for the life of the plant, and balances the interests of ratepayers and shareholders over the project's life. The ROE agreed to by IPL and Consumer Advocate is reasonable and supported by the evidence.

B. Double Leverage

In its original proposal, IPL asked that no double leverage adjustment be applied to the investment in MGS. Consumer Advocate argued that double leverage should be recognized in IPL's capital structure. ICC proposed that IPL's common equity ratio be capped at 50 percent unless it is demonstrated that IPL would need additional equity to protect its investment grade bond rating. (Tr. 587, 498-99. 612-18, 924-25). In the Settlement Agreement, IPL and Consumer Advocate withdrew their respective positions on double leverage and agreed that the issue could be addressed in a future rate case or other appropriate proceeding.

Because Consumer Advocate withdrew its position on double leverage and agreed to leave that issue to a future proceeding, ICC said that a different approach

was needed so that ratepayers are not exposed to an excessive build-up of common equity and that a 50 percent common equity limit would accomplish that purpose. If IPL needs a higher equity ratio, ICC argued, IPL should be required to provide adequate justification to show the higher ratio is needed.

Consumer Advocate said that ICC's alternative might not be unreasonable but that any capital structure concerns can be addressed in future rate proceedings. IPL noted that the Board can determine in a future proceeding whether to apply double leverage and that capital structure can be an issue in any rate proceeding conducted pursuant to Iowa Code § 476.6(3).

The undersigned finds that it is reasonable to determine both capital structure and whether a double leverage adjustment should apply in future rate proceedings, rather than in this ratemaking principles proceeding. Those future proceedings will be sufficient to protect ratepayers from any unnecessary build-up of common equity while allowing consideration of all of the relevant financial conditions at the relevant time.

C. Mitigation of Regulatory Lag

The mitigation of regulatory lag principle proposed by IPL was not changed by the Settlement Agreement and was not opposed by any party. Because it has not been opposed, and no concerns or issues have been identified, the undersigned find the principle is reasonable. The principle contains two parts.

The first part is almost identical to principles approved in previous IPL ratemaking principles dockets (Docket No. RPU-07-8, Docket No. RPU-08-1) and would allow IPL to immediately begin recovering certain predefined costs in temporary or final rates, in the first rate case after MGS is in-service. All other costs would be subject to prudence review prior to recovery. This principle has been justified as necessary to ensure that the financial health of the utility is not endangered by a lag in cost recovery for MGS.

The second part sets the depreciable life for MGS at 35 years. However, this would only apply to the first temporary or final rates after MGS is placed in-service and would be subject to revision in subsequent rate cases.

Because of discussion that follows subsequently regarding the cost cap and transmission upgrades for MGS, the reference in this principle to ratemaking principle number 6 will be deleted.

D. Cost Cap—Prudence

The principle proposed by IPL was unchanged by the Settlement Agreement and was unopposed. The principle provides that IPL shall be permitted to include in rates the actual costs of MGS, up to the amount of the cost cap, without establishing the reasonableness and prudence of those costs. IPL would have to establish the reasonableness and prudence of any investment in MGS above the cost cap (as defined in ratemaking principle number 5) before it could recover those costs. This principle does not set the amount of the cost cap but only states that costs up to the

cap can be recovered without any further showing of prudence or reasonableness. The cost cap itself is set by ratemaking principle number 5. This unopposed ratemaking principle is reasonable and will be accepted; it is consistent with the very purpose of Iowa Code § 476.53.

E. Cost Cap

This ratemaking principle as originally proposed by IPL was unchanged in the Settlement between IPL and Consumer Advocate:

> The cost cap amount shall be $700 million, including the facility, transmission interconnection costs, and owner's costs, for a facility with nominal capacity of 600 MW, plus or minus 5 percent. The amount above is exclusive of its transmission provider's delivery systems network upgrades, as defined in Ratemaking Principle No. 6, and AFUDC.

IPL is requesting a cost cap of $700 million, which includes EPC contract costs and Owner's Costs, for a facility with a capacity of 600 MW, plus or minus five percent. The proposed cost cap does not include transmission costs or AFUDC. No party objected to the cost cap per se, but there were objections to the transmission costs, which will be discussed below under ratemaking principle 6.

IPL said it was requesting a cost cap in part due to the time span between the time when IPL files an advance ratemaking request with the Board and when the actual contract is signed to construct the MGS. IPL said there is a high level of demand for natural gas-fired generation construction and costs could become volatile. IPL said that if the plant is ultimately built for less than the cost cap, those

savings will be realized by ratepayers since IPL would not be allowed to include in rates more costs than were actually incurred.

IPL said its RFP requested fixed price proposals for the entire project and these fixed prices will be the basis for an EPC contract. IPL has not chosen a vendor but has received bids from seven EPC contractors. IPL said the EPC model has several advantages, such as shifting the risk for the entire project to one entity, the ceiling price of the project is fixed, communications flow through one entity, and performance incentives and penalties provide significant downside risks to the EPC contractor for non-performance.

The $700 million cost cap for the facility, transmission interconnection costs, and owner's costs is unreasonable because, as discussed below, the presiding officer finds that the cost cap as proposed does not include transmission upgrade costs and AFUDC costs, significant costs that should be part of the overall cost cap for the project. Without an overall cap, the presiding officer is concerned that there may be insufficient incentives to control overall project costs; rather, there is a concern that the focus would be on costs that are subject to the cap, such as EPC, owner's costs, and transmission interconnection costs, while other costs might not receive the attention they should. Also, as discussed earlier in the generating siting section and discussed further below, there have been divergent estimates of transmission capital costs related to the construction of MGS at the Marshalltown site. Based on the evidence in this proceeding, it is reasonable to set an overall cost

cap for MGS and not exclude certain aspects of the project. The cost cap principle will be modified to include AFUDC and transmission upgrade costs as part of an overall cost cap, addressed in more detail in the discussion below regarding ratemaking principle number 6.

F. Transmission Upgrades

The transmission ratemaking principle agreed to by IPL and Consumer Advocate provides as follows:

> Should IPL become responsible for reimbursing its transmission provider for the capital costs associated with transmission network upgrades under revised MISO Schedule FF (or replacement schedule) at the time of the network upgrades, IPL shall be entitled to recover those capital costs charged to IPL by its transmission provider under FERC-approved tariffs.

In other words, pursuant to this principle IPL would be entitled to recover capital costs charged to IPL by its transmission provider for any network upgrades through FERC-approved tariffs and those costs for transmission network upgrades required by MISO are not part of any cost cap. (The cost cap under ratemaking principle 5 does include the electric transmission interconnection facilities required to interconnect with the ITC Midwest substation, including the generator step-up transformers.)

LEG specifically objected to this ratemaking principle, arguing that if transmission upgrade costs are simply passed through to ratepayers IPL will have no incentive to manage, control, or minimize these costs. LEG argued that IPL has

underestimated these costs and that the transmission estimates have increased significantly since IPL's original estimates.

As indicated in the earlier discussion regarding transmission costs, the presiding officer is concerned with the continued escalation of the transmission cost estimates during the course of this proceeding. While it is understood that final estimates will not be available until MISO completes its final study and final design is completed for the transmission upgrades, IPL appears to have substantially underestimated those costs in its initial estimate.

During the hearing there was discussion of a complaint filed by IPL against ITC Midwest at FERC pursuant to section 206 of the Federal Power Act. The complaint relates to ITC Midwest's policy of reimbursing generator interconnection customers 100 percent of their interconnection upgrade costs. FERC ruled on the complaint on July 18, 2013, in FERC Docket No. EL12-104-000 (144 FERC ¶ 61,052), directing MISO, on behalf of ITC Midwest, to revise Attachment FF of the MISO tariff to conform to MISO's policy for reimbursing generator interconnection customers for network upgrade costs in the ITC Midwest zone to match the generator interconnection cost recovery provisions applicable to most other MISO pricing zones, in which such customers may only receive up to 10 percent reimbursement for those costs.

In response to the Board's request for additional information regarding this order, IPL said that before FERC's order, transmission upgrade costs would have

become part of ITC Midwest's rate base and subsequently would have become part of ITC Midwest's revenue requirement and charged to ITC Midwest's customers, including IPL, each year. With the FERC order, most of the transmission system upgrade costs related to MGS will now become part of IPL's rate base and billed to customers as part of the revenue requirement established in periodic IPL rate cases in the retail jurisdictions its serves, including Iowa. Approximately 9 percent of the MGS transmission upgrade costs would be allocated across the MISO footprint.

IPL's transmission upgrade estimates started at $100 million. IPL's current maximum estimate is $190.2 million. IPL's explanation of why the MISO SPA study estimate was substantially higher is reasonable, particularly with respect to transmission cost per mile used in the respective estimates and the potential network sharing of some required upgrades, but there is evidence to suggest that IPL did not develop its original estimate as carefully as it should have, given the potential magnitude of the transmission upgrade costs.

Given the conflicting estimates, it is not reasonable to approve the settlement without modifying it to include a cost cap with transmission upgrade costs and AFUDC costs. Because of the FERC ruling on IPL's complaint, it is clear that IPL's investment in network transmission upgrades will result in an asset that will be part of IPL's Iowa retail rate base and subject to Board ratemaking authority. Therefore, the presiding officer will set an overall cost cap for MGS of $920 million, which will include all transmission upgrade costs and AFUDC costs. The presiding officer is

selecting an overall cost cap to give IPL flexibility and incentive to minimize overall project costs and not be at risk if one portion of the project exceeds an individual cap while other portions of the project are under their respective individual caps. The record indicates that this overall cost cap is reasonable, given that it appears that costs for construction for MGS itself should be under the cap, leaving IPL some additional funds if other MGS costs exceed original estimates.

In addition, there was testimony that IPL might receive refunds of some of the network upgrade costs from other interconnecting generators. If refunds are received, these will be required to be returned to ratepayers in a manner to be determined by the Board, should those refunds occur.

If overall project costs exceed the amount of the cap, IPL is not without remedy to recover all or a portion of those costs. IPL can recover costs that exceed the cap by establishing the reasonableness and prudence of those costs in a future docket.

Ratemaking principle number 6 will be deleted with this decision. Ratemaking principle number 5 will be rewritten as follows:

> The cost cap amount shall be $920 million, including the facility, transmission interconnection costs, the transmission provider’s delivery systems network upgrades, AFUDC, and owner's costs, for a facility with nominal capacity of 600 MW, plus or minus 5 percent. Transmission provider's delivery systems network upgrades are defined as capital costs associated with transmission network upgrades under revised MISO Schedule FF (or replacement schedule) at the time of the network upgrades that IPL is responsible for reimbursing

> to its transmission service provider. IPL will be required to return to ratepayers any future refunds received due to other interconnecting generators, in a manner approved by the Board.

G. Treatment of AFUDC

IPL originally proposed that the return used for allowance for funds used during construction (AFUDC) be the same as the ROE for the MGS project. However, the Settlement Agreement provides an ROE of 10.3 percent will be used in calculating AFUDC rates for MGS. This reflects a compromise between the 11.25 percent proposed by IPL and the 10 percent proposed by Consumer Advocate, which reflected Consumer Advocate's belief that AFUDC should reflect IPL's current ROE as determined in a general rate proceeding. There were no objections to this principle and it will be approved.

H. Cancellation Cost Recovery

The cancellation cost recovery principle is similar to the one approved by the Board in the ratemaking principles docket involving IPL's proposed Marshalltown coal plant, Docket No. RPU-08-1. IPL elected not to build the plant and the Board allowed IPL to recover cancellation costs pursuant to the approved ratemaking principle in a subsequent rate proceeding. Interstate Power and Light Company, "Final Decision and Order," Docket No. RPU-2009-0002, pp. 18-23.

The principle was uncontested in this proceeding and was unchanged by the Settlement Agreement. The principle provides that if the project is cancelled for good cause, prudently incurred costs as determined by the Board are amortized over

a period of not more than five years, with recovery commencing no later than final rates in IPL's first rate proceeding after cancellation. The principle allows the Board to determine the prudence of the costs and good cause in a contested proceeding. The principle is consistent with prior cancellation principles and will be approved.

With the modifications contained in this order regarding an overall cost cap, the Settlement Agreement is reasonable, consistent with law, and in the public interest. Several provisions were uncontested, and the ROE agreed to in the Settlement Agreement is reasonable for the reasons set forth in this order.

VII. FINDINGS OF FACT

1. IPL has established a need for additional electric supply sources, using both cost and non-cost factors.

2. It is reasonable to find that the services and operations resulting from MGS will attract generation and transmission development in Iowa to ensure reliable electric service and to provide economic benefits.

3. With the required upgrades, it is reasonable to find that the existing transmission network has the capacity to reliably support MGS.

4. IPL has demonstrated that it is willing to construct, maintain, and operate MGS pursuant to the provisions of the certificate and Iowa Code chapter 476A.

5. It is reasonable to find that the construction, maintenance, and operation of MGS will be consistent with reasonable land use and environmental

policies and consonant with reasonable utilization of air, land, and water resources, considering available technology and economics of available alternatives.

6. IPL has in effect a Board-approved energy efficiency plan.

7. It is reasonable to find that IPL has established a need, using both cost and non-cost factors, for additional electric supply and that MGS is a reasonable source of electric supply when compared to other feasible alternative sources of supply.

8. It is unreasonable to require IPL to begin a new RFP process for additional electric supply.

9. It is reasonable to include a transmission cost adder when evaluating bids for electric supply from sources outside IPL's service territory.

10. It is reasonable to set an 11 percent return on equity for MGS.

11. It is reasonable to determine both IPL's capital structure and whether a double leverage adjustment should apply to IPL in future rate proceedings and not in these dockets.

12. It is reasonable to allow IPL to recover MGS costs covered by a cost cap, up to the amount of the cap, without any additional showing of prudence or reasonableness.

13. It is unreasonable to adopt a cost cap that does not include transmission upgrade costs and AFUDC.

14. It is reasonable to adopt an overall cost cap, including the MGS facility, transmission interconnection costs, transmission upgrade costs, AFUDC, and owner's costs, of $920 million.

15. It is reasonable to apply the principle contained in the Settlement Agreement related to Mitigation of Regulatory Lag and depreciation (Principle number 3) to the overall cost cap referenced in finding of fact N, although the reference in ratemaking principle number 3 to ratemaking principle number 6 is deleted because ratemaking principle number 6 is eliminated.

16. The ratemaking principle contained in the Proposed Settlement related to transmission upgrade costs is unreasonable.

17. It is reasonable to adopt a 10.3 percent ROE for AFUDC costs for MGS.

18. It is reasonable to approve the cancellation cost recovery principle contained in the Settlement Agreement.

VIII. CONCLUSION OF LAW

The Board has jurisdiction of the parties and subject matter in these proceedings, pursuant to Iowa Code chapter 476 and 476A (2013).

IX. ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. Pursuant to Iowa Code chapter 476A (2013), Interstate Power and Light Company's application to construct and operate a generating facility is granted, subject to final pre-construction permits being issued. A certificate will be issued once IPL notifies the Board that final pre-construction permits have been issued.

2. The Utilities Board retains jurisdiction of the subject matter in Docket No. GCU-2012-0001 to the extent provided in Iowa Code chapter 476A.

3. Advance ratemaking principles for Marshalltown Generating Station are awarded to IPL as detailed in the body of this order. IPL shall notify the Board within 30 days of receipt of this order whether it accepts the advance ratemaking principles awarded in this proceeding. This time will be extended if IPL seeks rehearing of this proposed order or appeals this proposed order to the Board.

4. The Settlement filed by Consumer Advocate and IPL on April 29, 2013, is approved, subject to the modifications set out in this order, including a modification of the cost cap principle to include transmission upgrades and AFUDC in an overall cost cap and deletion of the principle contained in the Settlement Agreement relating to transmission upgrades.

5. IPL shall promptly file with the Board copies of all transmission-related studies associated with MGS, including but not limited to the final SPA and DPP studies, associated with MGS as they become available.

6. IPL shall file a status report on MGS on or before March 3, 2014, and every six months thereafter, with the final report due three months after all aspects of the project subject to the overall cost cap are completed. At a minimum, the report shall provide updates on the information identified in the body of this order.

7. Motions and objections not previously granted or sustained are denied or overruled. Any argument in the briefs not specifically addressed in this order is either rejected as not supported by the evidence or as not being of sufficient persuasiveness to warrant comments.

8. This proposed decision and order will become the final order of the Board unless the Board moves to review it or a party files an appeal to the Board within 15 days of its issuance. 199 IAC 7.26(2).

UTILITIES BOARD

/s/ Elizabeth S. Jacobs
Elizabeth S. Jacobs
Presiding Officer

ATTEST:

/s/ Judi K. Cooper
Executive Secretary, Deputy

Dated at Des Moines, Iowa, this 8th day of November 2013.