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DEPARTMENT OF COMMERCE  
BEFORE THE IOWA UTILITIES BOARD

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IOWA UTILITIES BOARD

IN RE:

INTERSTATE POWER AND LIGHT  
COMPANY

DOCKET NO. GCU-07-1

**PUBLIC**

REPLY BRIEF OF THE OFFICE OF CONSUMER ADVOCATE

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## **I. INTRODUCTION.**

The Office of Consumer Advocate (OCA) anticipated certain of Interstate Power and Light Company's (IPL) and the Rural Electric Cooperatives' (Cooperatives) arguments in the OCA's Initial Brief filed February 11, 2008 and fully addressed them. The OCA Reply Brief will address IPL's and the Cooperatives' arguments which could not have been in whole or in part fully anticipated.

## **II. IPL'S LEGAL ARGUMENTS CONCERNING IOWA CODE § 476A.6 ARE FUNDAMENTALLY AND FATALY FLAWED.**

IPL contends that "the legislative intent in the current statutory structures for the issuance of a generation facility siting certificate is clear and unambiguous."<sup>1</sup> (IPL Init. Br. p. 10). Nevertheless, IPL proceeds to engage in an analysis of Iowa Code § 476A.6 that gives meaning to certain statutory provisions while effectively eliminating other provisions governing IPL's siting application. IPL purports to rely on Iowa case law holding that all portions of the statute should be considered together, "without attributing undue importance to any single or isolated provision." However, IPL's interpretation of 476A.6, which would nullify certain provisions of 476A.6, is not supported by this case law and violates long standing principles of statutory interpretation.

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<sup>1</sup> Courts will resort to the rules of statutory construction *only* when the terms of a statute are ambiguous. *State v. Widerien*, 709 N.W.2d 538, 541 (Iowa 2006). When the language of a statute is clear and unambiguous, amendments to the statute are not considered by courts in determining the statute's meaning. *Sutherland Statutory Construction*, § 71:7 "Economic and Commercial Matters" p. 180 (2007 Cumulative Supp.).

The essence of IPL's legal position on Iowa Code §§ 476A.6(1), 476.53(2), and 476A.6(3) is buried in a largely irrelevant and lengthy footnote. (IPL Initial Brief, p. 13, Footnote 2). It states:

Rather, it is clear from the wording of Iowa Code § 476.53 that "cost-effective," particularly when compared to Iowa Code § 476A.6(3) which requires an examination of the "economics of available alternatives" when examining environmentally protective technology, refers to implementation of and compliance with state environmental policies as expressed in the statute . . .

This, quite frankly, is an absurd legal position. It reads Iowa Code § 476.53(2) "cost-effective" requirement and Iowa Code § 476A.6(3) "considering available technology and the economics of available alternatives" completely out of Iowa Code §§ 476.53(2) and 476A.6(3). IPL also completely ignores the underlying nature of the fundamental certificate it seeks in this proceeding where that certificate is defined as "a certificate of *public convenience, use and necessity* issued pursuant to section 476A.6." Iowa Code § 476A.1(3). The implementation of each of these statutory provisions by the Board will directly impact and affect the rates and services provided by IPL to its captive ratepayers over which the Board has primary jurisdiction.

Finally, IPL's legal position directly conflicts with cardinal principles of statutory construction. As the Supreme Court of Iowa has stated in *Civil Serv. Com'n v. Iowa Civ. Rights Com'n*, 522 N.W.2d 82, 86 (Iowa 1994):

[6] We will not construe a statute to make any part of it superfluous unless no other construction is reasonably possible. *Iowa Auto Dealers Ass'n v. Iowa Dep't of Revenue*, 310 N.W.2d 760, 765 (Iowa 1981). Moreover, "the legislature will be presumed to have inserted every part in a

statute for a purpose and to have intended that every part shall be carried into effect.” *State v. Jennie Coulter Day Nursery*, 218 N.W.2d 579, 582 (Iowa 1974). Here, the legislature must have intended section 400.8(1) to function as an independent rule and not as a supplement to section 601A.6 or section 400.17. There is simply no other way to give meaning to all of section 400.8(1).

IPL’s legal position is entirely inconsistent with, and antithetical to, these fundamental principles of statutory construction of the Supreme Court of Iowa.

IPL’s interpretation of § 476A.6 is erroneously influenced by a claimed “legislative intent to separate” Iowa Code § 476A.6 and Iowa Code § 476.53(3)”c”. (Init. Br. pp. 10-11). The thrust of IPL’s argument is, again, found in a footnote:

Because, as stated later in this section, the legislature specifically separated certification from ratemaking criteria, an argument that “cost-effective” relates to an inquiry whether the facility meets the statutory reasonableness standard of a ratemaking principles examination would serve to inappropriately re-join the two statutes, contrary to the clearly expressed legislative intent. (IPL Init. Br. p. 13)

Clearly, however, the legislature did *not* intend to sever the requirements of these statutes. Indeed, the legislature specifically incorporated by reference the legislative intent embodied and defined in section 476.53 as a 476A.6 siting decision criterion. A siting application by a rate-regulated utility under section 476A.6 necessarily gives rise to the standards governing ratemaking principles. The Board “*shall* specify in advance . . . the ratemaking principles that will apply . . . whenever a rate-regulated public utility . . . [f]iles an application pursuant to section 476A.3 to construct in Iowa a baseload electric power generating facility . . .” Iowa Code § 476.53(4)(a)(1). The order “setting forth the applicable ratemaking principles shall be issued prior to the commencement of

construction . . . of the facility . . . .” Iowa Code § 476.53(4)(e). There is no argument to “re-join” the two statutes. They are already joined by their express provisions. The legislature permits the consolidation of siting and ratemaking principles applications by rate-regulated utilities. Iowa Code § 476.53. The legislature did not intend or design these statutes in a manner to provide advantage by pursuing these matters separately.

Section 476.53(2) establishes legislative intent with regard to the development of electric power generating facilities, specifying that such facilities “shall be implemented in a manner that is *cost-effective* and compatible with the environmental policies of the state, as expressed in Title XI.” IPL concludes that this “cost-effective” standard is consistent with Iowa Code § 476A.6(3) and should be evaluated under the standards set forth in § 476A.6(3). (IPL Init. Br. p. 13). Section 476A.6(3) requires IPL to show that the construction, maintenance, and operation of SGS Unit 4 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.” IPL argues that its application must be granted if IPL shows that SGS Unit 4 “1) is consistent with reasonable land use; 2) is consistent with environmental policies expressed by statute; and 3) economically complies with other requisite permitting requirements.” (IPL Init. Br. p. 17). IPL’s interpretation departs in at least two significant ways from the terms of § 476A.6(3). First, IPL’s interpretation would inappropriately limit the Board’s consideration of environmental policies to those “expressed by statute.” Second, IPL would preclude the Board’s consideration of

whether SGS Unit 4 is consistent with environmental policies considering available technology and the economics of available alternatives.

IPL's restrictive interpretation of "environmental policies" finds no support in either Board precedent or IPL's own practice. In approving ratemaking principles for previous wind generation projects, the Board has relied on Iowa Governors' stated goals for encouraging renewable resources. *MidAmerican Energy Co.*, Docket No. RPU-03-1, "Order Approving Stipulation and Agreement," p. 5 (IUB, Oct. 17, 2003); *MidAmerican Energy Co.*, Docket No. RPU-05-4, "Order Approving Stipulation and Agreement," pp. 8-9 (IUB, Apr. 18, 2006). Likewise, in its ratemaking principles application for wind, IPL identified Iowa's *policy* to encourage more renewable generation in Iowa as being evidenced by numerous actions taken and statements made by Iowa Governor Culver, Former Iowa Governor Vilsack and the Iowa General Assembly.<sup>2</sup> In considering environmental policies, it would be unreasonable (particularly given the consensus about likelihood future GHG emissions regulations) for the Board to ignore the Plan for Energy Independence recently issued by the Iowa Office of Energy Independence, the January 2008 report of the Iowa Climate Change Advisory Council (Ex. 134), the Midwest Governors' Accord on Greenhouse Gas Reduction and Platform (Ex. 16, Sch. D; Ex.133), and Governor Culver's expressed desire to further encourage renewable energy development (Ex. 125).

IPL asserts that all of the considered factors expressed in Iowa Code § 476A.6(3) are also addressed by other regulatory agencies. (IPL Init. Br. p. 17). This is incorrect.

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<sup>2</sup> *Interstate Power and Light Co.*, IUB Docket No. RPU-07-5, Testimony of Kim Zuhlke, pp. 5-6 (Sept. 28, 2007)).

Only the Board considers available technology and the economics of available alternatives to SGS Unit 4 and the impacts of such alternatives, in light of environmental policies, on IPL's ratepayers. IPL eventually seems to acknowledge this point:

This does not mean that the Board is strictly prohibited from any examination of [476A standards]. However, the Board does appear to be limited to examining these specific factors with direct relevance to its jurisdictional authority over the rates and services of public utilities. [Iowa Code § 476.1.]

\* \* \*

Bearing that in mind, IPL avers that the factors set forth in criterion 3 found in Iowa Code § 476A.6(3) must be examined from the perspective of the regulation of rates and services by a public utility, and not the broadened concerns presented by the other parties to this proceeding.

(IPL Init. Br. p. 18)

OCA's testimony and analysis has addressed the factors set forth in § 476A.6(3) in a manner directly relevant to the Board's jurisdictional authority over the rates and services of IPL. Despite IPL's protests against the Board's consideration of need and reasonableness, IPL purports to have "demonstrated through its direct and rebuttal cases that SGS Unit 4 is not only needed . . . but is also the most reasonable and economic resource option available to IPL to serve this load." (IPL Init. Br. pp. 14, 27). Thus, through its own testimony and evidence IPL has elected to litigate and invited the parties' and Board's analysis of issues concerning cost-effectiveness, need and reasonableness of SGS Unit 4.

Contrary to IPL's argument (IPL Init. Br. pp. 15-16), the Board's prior precedents do not support the excision of the "cost-effective" standard from Iowa Code §§ 476.53(2)

and 476A.6(3). While the Board is bound to consider the legislative intent expressed in Iowa Code § 476.53 in deciding generation siting applications (Iowa Code § 476A.6(1)), prior siting applications arising under §476A.6, as amended by H.F. 577, were not contested or opposed. *MidAmerican Energy Co.*, Docket No. GCU-01-1, Final Decision and Order (IUB, Mar. 8, 2002); *Entergy Power Generation Corporation, Hawkeye Generating, L.L.C.*, Docket No. GCU-01-2, Final Decision and Order (IUB, June 17, 2002); *Interstate Power and Light Co.*, Docket No. GCU-02-2, Final Decision and Order (Sept. 13, 2002); and *MidAmerican Energy Co.*, Docket No. GCU-02-1, Final Decision and Order (IUB, Jan. 23, 2003). The legislative intent specified in § 476.53(2) was not contested or opposed in these cases, and the Board's decisions in these dockets do not specifically address the requirements of this section.

IPL argues that the Board's August 16, 2007 Order Accepting Filing, Requiring Additional Information, Setting Procedural Schedule, and Setting Intervention Deadline confirms its view that the Board has no basis for concern about the reasonableness and need for SGS Unit 4. (IPL Init. Br. p. 15). IPL contends that the Board would likely, at the time of that order, have asked for additional information to more specifically address need or reasonableness if it were evaluating these factors. This argument assumes that the Board would be dissatisfied with IPL's direct case in which it purports to have demonstrated in great detail the need for and reasonableness of SGS Unit 4 (IPL Init. Br. pp. 14, 27). Further, the Board did ask for additional information concerning the issues of need and reasonableness that IPL chose to litigate. (Aug. 16, 2007 Order at p. 3, par. 7).

Unfortunately, because of IPL's absurd legal position, IPL's Initial Brief is largely irrelevant to the genuine and relevant issues which exist in this proceeding as evidenced by the OCA's and the Coalition's Initial Briefs. The OCA will therefore address in the remainder of this Reply Brief the few genuine and relevant issues addressed in IPL's Initial Brief not already addressed in the OCA's Initial Brief.<sup>3</sup>

**III. IPL'S RELIANCE ON AN OUTDATED, EXPIRED, AND SUPERCEDED PIECE OF FEDERAL LEGISLATION UPON WHICH TO BASE ITS CO<sub>2</sub> PRICES IS FUNDAMENTALLY AND FATALY FLAWED.**

IPL, in its Initial Brief, pp. 43-45, attempts to minimize its exclusive reliance on an outdated, expired, and superceded piece of federal legislation in developing its CO<sub>2</sub> prices for IPL's EGEAS modeling in this proceeding. Much of the erroneous nature of IPL's position was fully addressed in the OCA's Initial Brief, pp. 16-20. Suffice it to say that IPL has with the sole exception of the 2003 S B S139 completely ignored and failed to consider the following CO<sub>2</sub> regulation pieces of legislation introduced in prior and current United States Congresses in IPL's EGEAS modeling.

**Table 1. Summary of Mandatory Emissions Targets in Proposals Discussed in Congress**

Proposed National Policy	Title or Description	Year Proposed	Emission Targets	Sectors Covered
McCain Lieberman S.139	Climate Stewardship Act	2003	Cap at 2000 levels 2010-2015. Cap at 1990 levels beyond 2015.	Economy-wide, large emitting sources
McCain Lieberman SA 2028	Climate Stewardship Act	2003	Cap at 2000 levels	Economy-wide, large emitting sources
McCain Lieberman S 1151	Climate Stewardship and Innovation Act	2005	Cap at 2000 levels	Economy-wide, large emitting sources

<sup>3</sup> The Cooperatives take a similar legal position to that taken by IPL. Cooperatives' Initial Brief, pp. 2-7.

National Commission on Energy Policy (basis for Bingaman-Domenici legislative work)	Greenhouse Gas Intensity Reduction Goals	2005	Reduce GHG intensity by 2.4%/yr 2010-2019 and by 2.8%/yr 2020-2025. Safety-valve on allowance price	Economy-wide, large emitting sources
Jeffords S. 150	Multi-pollutant legislation	2005	2.050 billion tons beginning 2010	Existing and new fossil-fuel fired electric generating plants > 15 MW
Carper S. 843	Clean Air Planning Act	2005	2006 levels (2.655 billion tons CO <sub>2</sub> ) starting in 2009, 2001 levels (2.454 billion tons CO <sub>2</sub> ) starting in 2013.	Existing and new fossil-fuel fired, nuclear, and renewable electric generating plants > 25 MW
Feinstein	Strong Economy and Climate Protection Act	2006	Stabilize emissions through 2010; 0.5% cut per year from 2011-15; 1% cut per year from 2016-2020. Total goal would be 7.25% below current levels.	Economy-wide, large emitting sources
Rep. Udall - Rep. Petri	Keep America Competitive Global Warming Policy Act	2006	Establishes prospective baseline for greenhouse gas emissions, with safety valve.	Energy and energy-intensive industries
Carper S.2724	Clean Air Planning Act	2006	2006 levels by 2010, 2001 levels by 2015	Existing and new fossil-fuel fired, nuclear, and renewable electric generating plants > 25 MW
Kerry and Snowe S.4039	Global Warming Reduction Act	2006	No later than 2010, begin to reduce U.S. emissions to 65% below 2000 levels by 2050	Not specified
Waxman H.R. 5642	Safe Climate Act	2006	2010 – not to exceed 2009 level, annual reduction of 2% per year until 2020, annual reduction of 5% thereafter	Not specified
Jeffords S. 3698	Global Warming Pollution Reduction Act	2006	1990 levels by 2020, 80% below 1990 levels by 2050	Economy-wide
Feinstein- Carper S.317	Electric Utility Cap & Trade Act	2007	2006 level by 2011, 2001 level by 2015, 1%/year reduction from 2016-2019, 1.5%/year reduction starting in 2020	Electricity sector

Kerry-Snowe	Global Warming Reduction Act	2007	2010 level from 2010-2019, 1990 level from 2020-2029, 2.5%/year reductions from 2020-2029, 3.5%/year reduction from 2030-2050, 65% below 2000 level in 2050	Economy-wide
McCain-Lieberman S.280	Climate Stewardship and Innovation Act	2007	2004 level in 2012, 1990 level in 2020, 20% below 1990 level in 2030, 60% below 1990 level in 2050	Economy-wide
Sanders-Boxer S.309	Global Warming Pollution Reduction Act	2007	2%/year reduction from 2010 to 2020, 1990 level in 2020, 27% below 1990 level in 2030, 53% below 1990 level in 2040, 80% below 1990 level in 2050	Economy-wide
Olver, et al HR 620	Climate Stewardship Act	2007	Cap at 2006 level by 2012, 1%/year reduction from 2013-2020, 3%/year reduction from 2021-2030, 5%/year reduction from 2031-2050, equivalent to 70% below 1990 level by 2050	US national
Bingaman-Specter S.1766	Low Carbon Economy Act	2007	2012 levels in 2012, 2006 levels in 2020, 1990 levels by 2030. President may set further goals >60% below 2006 levels by 2050 contingent upon international effort	Economy-wide

(Tr. 983-85).

**IV. IPL’S CRITICISM OF THE OCA’S USE OF ADDITIONAL COST EFFECTIVE ECONOMIC UNITS, WHAT IPL REFERS TO AS SUPERFLUOUS UNITS, IN ITS EGEAS ANALYSIS IGNORES THE COST EFFECTIVENESS OF USING SUCH ADDITIONAL ECONOMIC UNITS.**

IPL, in its Initial Brief, pp. 46-47, criticizes the OCA for evaluating additional cost effective economic units in its EGEAS modeling. The OCA, in its Initial Brief, pp. 14-15 addressed this subject matter. OCA witness Drunsic fully explained the fallacy of IPL’s position:

IPL did not conduct their capacity expansion modeling appropriately. The Company unnecessarily and unreasonably constrained the EGEAS model and this prevented the model from generating the least cost plan in scenarios which included CO<sub>2</sub> prices.

The capacity expansion modeling presented conducted by IPL in support of its Application is not a comprehensive economic analysis of the issue. The Company's capacity expansion modeling consisted of three flawed runs that only looked at a narrow range of sensitivities. As I will discuss, had IPL conducted its analysis properly, it would have identified a least-cost resource plan which is quite different from the one that it has presented to this Board. This alternative least cost plan would have led to lower costs for consumers and would have reduced the environmental impact of electricity generation in the state of Iowa. My conclusions are based on the large number of EGEAS model runs that OCA conducted with my support, in which some of the methodological flaws we have identified have been corrected. These new runs produced lower-cost plans than the runs filed by the company and show that SGS Unit 4 is not part of a least cost generation expansion plan. (Tr. 674-5).

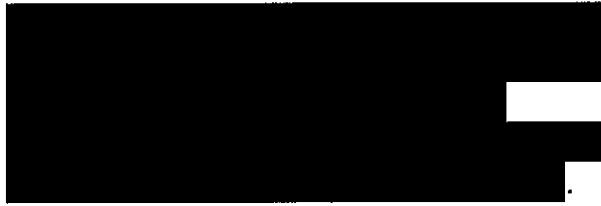
\* \* \*

Q. Does the documentation for the EGEAS model include any warnings about this sort of effect [using a small number of EGEAS runs such as IPL has done]?

A.

[REDACTED]

[REDACTED]



(Tr. 681-2).

The Board has previously recognized in an advance ratemaking proceeding the complete validity of Mr. Drunsic's economic unit approach in *MidAmerican Energy Company*, IUB Docket No. RPU-05-4, April 18, 2006 Order Approving Stipulation and Agreement, p. 6. The Board stated in part:

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 prudent planning criterion. MidAmerican has shown that the proposed facility is projected to benefit both the present and future needs of MidAmerican's customers in several ways and the proposed facility is a feasible and reasonable way to attain these benefits.

**V. IPL'S INFLATED NATURAL GAS PRICES USED IN ITS EGEAS ANALYSIS IS FUNDAMENTALLY AND FATALY FLAWED.**

IPL, in its Initial Brief, pp. 52-54 wholly fails to justify in any manner its inflated natural gas prices used in its EGEAS analysis. Much of this was established in the OCA's Initial Brief, pp. 21-23. All of the studies relied upon to support Mr. Friedman's inflated natural gas prices were completely biased and manipulated by fossil fuel industries who attempt to show there is no adverse CO<sub>2</sub> effects on the environment and that global warming does not exist. OCA Initial Brief, pp. 21-22.

IPL, in its Initial Brief, pp. 53-4, takes the results of Dr. Shi's EGEAS modeling and a selective partial and misleading portion of Mr. Schlissel's direct testimony completely out of context. The actual evidentiary record states as follows:

Q. Is it possible that natural gas demand could be higher due to CO<sub>2</sub> emission regulations and, as a result, natural gas prices can be expected to be higher than otherwise would be the case?

A. Yes. However, the effect is very complicated and will depend on a number of factors such as how much new natural gas capacity is built as a result of the higher coal-plant operating costs due to the CO<sub>2</sub> emission allowance prices, how much additional DSM and renewable alternatives become economic and are added to the U.S. system, the levels and prices of any incremental natural gas imports, and changes in the dispatching of the electric system. Thus, it is very difficult to determine, at this time, the degree to which natural gas prices might be affected due to CO<sub>2</sub> emission regulations.

Q. Did you ask the OCA to rerun the EGEAS model to reflect some increases in natural gas prices as a result of federal regulation of greenhouse gas emissions?

A. Yes. To illustrate the possible impact of higher natural gas prices as a result of federal regulation of greenhouse gas emissions, the OCA reran the EGEAS model to reflect a ten percent increase in natural gas prices in scenarios with the IPL high CO<sub>2</sub> and the Synapse high CO<sub>2</sub> price forecast. As shown in Table 7 above, the model still did not add SGS Unit 4 in 2013 even with the increased natural gas prices. In the scenario with IPL's high CO<sub>2</sub> prices, the model added a 350 MW coal unit in 2019. No coal plant was selected in the scenario with Synapse's high CO<sub>2</sub> price forecast and the 10 percent higher natural gas prices.

(Tr. 1040-41).

Moreover, as OCA witness Schlissel stated on cross examination:

Q. (By Ms. La Seur) And did you do the same for increased costs for natural gas?

A. (By Mr. Schlissel) The answer there is a bit more complicated. We did run a scenario where we increased natural gas prices by 10 percent, so that certainly affected the alternatives, the gas-fired alternatives, to SGS Unit 4, so in fact Mr. Kitchen is wrong. We did consider the impact of both.

Q. And when you say you ran scenarios, are these EGEAS scenarios?

A. Yes. I'm sorry. Yes. Mr. Drunsic and I talked – we had meetings of the Synapse team, that I mentioned in my testimony, roughly every week, and then Mr. Drunsic spoke to Dr. Shi about running the scenarios.

Q. And in these scenarios with increased costs assigned to wind and natural gas, did the EGEAS model select SGS 4?

A. Well, sorry. I closed up my testimony. If you look on page 77 of my testimony, as just a sensitivity and something which we believed is extremely conservative, we increased natural gas prices by 10 percent. That's the third row from the bottom of the table. We didn't believe that with the IPL load, the CO<sub>2</sub> costs, that there's no way that those low costs

would affect natural gas prices either way, and in that case—so we didn't run it. We ran EGEAS to increase natural gas prices.

Then we ran the IPL high CO<sub>2</sub> costs, it delayed the coal plant by six years, even with a 10 percent increase in natural gas prices.

Then we ran the Synapse high CO<sub>2</sub> costs, the coal plant was not selected, and again this reflects the change in the number of superfluous units, which is a terrible name, from two to 10.

*Q.* And in running these models, did you also take into account other risks associated with higher capital costs for wind and higher costs for natural gas?

*A.* We did--you can see other scenarios in this same table. We didn't have time to run all of the scenarios we would have liked. We could have run a number of multiple scenarios.

I mean ideally what you would do is, you know, look at the range that each key input assumption could vary, and you might change your model, you know, change, say, gas prices by 10 percent, as a hypothetical, so you would look at plus 10 percent and you would look at minus 10 percent.

(Tr. 1106-8).

## **VI. THE BOARD SHOULD NOT RELY ON IPL'S INCOMPLETE AND FLAWED RESOURCE PLANNING ANALYSIS**

A complete and comprehensive integrated resource planning analysis will consider many factors noticeably absent from the three EGEAS scenario runs submitted by IPL. Such an analysis will evaluate, among other things, the impact of variations in load growth, rising construction costs for supply resource alternatives, variations in fuel costs, optimal DSM investment, opportunities to capture the efficiencies of strategic combined heat and power (CHP) development, robust CO<sub>2</sub> risk analysis, and the undisputed benefits of maintaining a diverse supply resource portfolio. (Tr. 971). IPL's EGEAS

runs do not consider these important elements. IPL is in the process of developing such a plan to be completed in July 2008 that will address these critical considerations and be subject to the thorough review of regulatory bodies in Minnesota. (Tr. 620; Ex. 105, Sch. M). There is time to consider this more complete analysis while IPL pursues more environmentally sound resource alternatives. (OCA Init Br., sections IV and VIII ; Tr. 1037-38). This approach also offers the distinct advantage of allowing IPL the opportunity to take advantage of more complete information, through the passage of time, concerning CO<sub>2</sub> regulation and technological advancements that are uniformly anticipated as a response to a future in which CO<sub>2</sub> emissions are regulated.

- A. *The imprecision in IPL's load forecasting substantially diminishes the reliability and usefulness of this analysis as well as the value of DSM in integrated resource planning; this imprecision does not make the forecast conservative as IPL suggests.*

IPL acknowledges that its load forecast adjustment to recognize gains and losses of large customers includes an ethanol plant that is yet to begin construction. (IPL Init. Br. p. 29). IPL further acknowledges that its load forecast data includes consideration of projects that will not contribute to electric load growth in its Iowa service territory. (IPL Init Br. p. 29). IPL suggests that its forecast should be accepted as reasonable because it only includes a portion of these projects and therefore recognizes that some of these projects are irrelevant to IPL's load, and others may never come to fruition. The validity of this argument is lacking in support. (Ex. 105, Sch. J). IPL's position also ignores the possibility that ethanol and biodiesel projects that do come to fruition will elect

interruptible rates or self-generation options and thus not figure into IPL's resource planning requirements. (OCA Init. Br. pp. 36-37).

While IPL doesn't mind including yet-to-materialize growth in its load forecast adjustment, it is troubled by introducing a more accurate measure of DSM to its load forecast analysis. (IPL Init. Br. at 33). Incorporating DSM as an independent variable in its load forecasting analysis would allow IPL to strategically integrate, plan for and achieve cost-effective DSM through its energy resource plan. (OCA Init. Br. 25-27). IPL's resource planning process, however, does not evaluate the alternative of expanded DSM in Iowa as a means of reducing its projected load growth. (OCA Init. Br. pp. 24-31). IPL describes the means by which it ensures accurate results from its EGEAS modeling:

In particular, the EGEAS modeling requires the following inputs: 1) IPL's load forecast; 2) IPL's required reserve margin; and 3) *the costs and operating characteristics of available capacity and energy resources, including demand side management (DSM)*. The end result is an expansion plan that meets the objective function of EGEAS while also meeting IPL's system capacity and energy requirements.

(IPL Init. Br. p. 27) (emphasis added).

OCA would certainly agree about the need to specifically model the cost and operating characteristics of DSM in order to assure accurate long-term planning objectives, as OCA did. Such practice is common among states and jurisdictions exhibiting leadership in DSM. (Tr. 1177). However, IPL did *not* input the cost of DSM in EGEAS or consider varying levels of DSM in its EGEAS analysis relied on to support SGS Unit 4. (Tr. 1193,

1178). IPL offers no record support for its proposition with respect to above-quoted DSM inputs.

The lack of precision in IPL's treatment of load forecasting prevents it from evaluating DSM on a level playing field with other resource alternatives. IPL's "method" of incorporating existing levels of DSM makes it difficult to accurately extract the impacts of DSM in its load forecast and thus serves to invite IPL's complaints of double counting. While OCA disputes that it has double counted DSM, OCA fully addressed this claim in its Initial Brief, pp. 60-65 and explained that OCA witness Parker's overarching point – that by expanding its DSM investment IPL can defer the need for SGS Unit 4 at a lower overall cost to customers – remains valid. The grounds for Mr. Parker's testimony that IPL could significantly expand its DSM efforts at reasonable cost are also addressed extensively in OCA's Initial Brief, pp. 32-37, 62-64.

The lack of precision in IPL's forecast methodology renders IPL's analysis unreliable for purposes of supporting the planned SGS Unit 4.

**B. *IPL's Reserve Margin Assumption is Excessive***

The principal reason for IPL's use of an 18 percent planning reserve margin is that "IPL has consistently used the 18 percent reserve margin in its calculations, and saw no need to vary from this figure at the present time." It is readily apparent that IPL does not want to vary from the upper limits of acceptable planning reserve margins because this, in combination with other suspect assumptions (e.g., a 10 percent capacity reserve for new wind, limited wind availability, imprecise load forecasting methods, ignorance of expanded DSM), is the only way IPL can hope to establish need for SGS Unit 4.

Actually, there are good and compelling reasons that IPL should use a lower reserve margin in the EGEAS model submitted in connection with SGS Unit 4. First, IPL uses a 15 percent reserve margin for internal planning purposes. (OCA Init. Br. pp. 43-44). If a 15 percent reserve margin is deemed appropriate by the utility having the obligation to provide adequate and reliable service, it should be utilized in the utility's regulatory filings as well. IPL purports to rely on MAIN Guide #6 Generation Reliability Study for its planning reserve margin. IPL ignores the Reserve Margin Working Group's "best estimate of the required reserve margin is approximately 15%" and, instead reaches for the upper end of this Group's approved 15-18 percent range, which reflects a 1 percent reduction from the previously approved range. (Ex. 9 (RDB-2, Sch. E, p. 17)). IPL makes no corresponding downward adjustment.

The merits and reasonableness of OCA's use of a 15 percent planning reserve margin is more fully addressed in its Initial Brief, pp. 41-44. These arguments will not be repeated except to the extent needed to bring clarity to IPL's assertions on this issue.

In support of its 18 percent planning reserve margin, IPL cites the "dangerously low 6.2 percent" reserve margin anticipated in the Midwest Reliability Organization in 2016. (IPL Init. Br. 39). IPL bids its generation resources into the Midwest ISO (Tr. 310), so the benefits of an overly generous planning reserve do not accrue solely to IPL's ratepayers. In fact, this is precisely what the Wisconsin PUC is investigating:

18 Percent Reserve Margin – At the *Energy 2012* public hearings there was broad support for an analysis of the 18 percent reserve margin. The Commission will open a docket to review the 18 percent planning reserve margin to see if the requirement best serves Wisconsin given the

implementation of the Day 2 Market and other developments focused on better pooling of generation resources regionally. The docket will also analyze whether other states within the MISO footprint with lower reserve planning margins are “leaning” on Wisconsin to make up the difference. The Commission will look to see if reliability can be maintained for Wisconsin customers at a lower reserve margin and help to lower costs.

Ex. 9 (RDB-2, Sch. D, p. 11). While asserting that the Wisconsin PSC has affirmed an 18 percent reserve margin, IPL completely ignores the investigation and concerns identified above that are associated with a utility planning to the upper limits of a reserve margin range. IPL’s choice to abide by an 18 percent planning reserve margin, while perhaps necessary if IPL has any hope of showing need for SGS Unit 4, is a costly choice for IPL’s consumers and deserves more thorough investigation and consideration.

***C. IPL’s Wind Capacity Credit is Unreasonably Low and Unsupported***

IPL continues to mischaracterize the foundation for OCA witness Fagan’s capacity credit determinations and to misstate the capacity credit attributed to wind by OCA. (IPL Init. Br. 37). Mr. Fagan understands well the difference between capacity factor and capacity credit. He considered the actual annual capacity factors of IPL’s modern wind facilities *and their resulting capacity credit levels* (which do take into account the capacity factors of wind throughout the year including less windy summer periods) to arrive at his conclusion that 20 percent to 25 percent is a far more reasonable capacity credit assumption for future wind additions. (Tr. 733-38, 742, 805-811, 816-17). IPL’s planned Buffalo Creek wind generation development, the subject of IUB Docket No. RPU-07-5, has a higher expected annual capacity factor than any of IPL’s modern wind

farms. (Tr. 736). It is, therefore, eminently reasonable to conclude, as Mr. Fagan did, that the accredited capacity level of future wind generators will compare favorably to IPL's modern existing wind resources. Mr. Fagan also considered that recent wind additions by MidAmerican Energy Company, which utilized a 20 percent capacity credit. (Tr. 738). IPL and MidAmerican are under the same Midwest Reliability Organization. (Tr. 826). Mr. Fagan's capacity credit conclusions are well supported.

IPL modeled new wind capacity at 10 percent in the EGEAS runs used to support SGS Unit 4. (Tr. 735). IPL continues to argue "that a 10 percent capacity credit for new wind is reasonable and consistent with IPL's experience with existing wind resources with similar production capabilities." (Br. at 37). IPL ignores the views of its witness Mr. Bauer, who finds that a reasonable planning assumption for the new planned Buffalo Creek site would be in the range of other similar wind farms such as Flying Cloud and Hancock. (Ex. 120, DR. 223). The wind-plant-specific annualized capacity reserve metric as modeled by IPL in EGEAS for Flying Cloud and Hancock is 18.39 percent and 11.9 percent, respectively. (Ex. 120, DR 222). While Mr. Bauer's view is conservative in light of expected capacity factor at Buffalo Creek and the enhanced capacity resulting from modern wind generation technology (Tr. 749-50, 809), OCA utilized an extremely conservative 15 percent capacity reserve assumption for new wind modeled in its EGEAS analysis that is fully consistent with the views of IPL witness Bauer. (Tr. 809, 1037: Third Scenario: (1) Increased amount of available new wind from a maximum of 800 MW to 1400 MW by 2022, and (2) increased new wind capacity credit from 10 percent to 15 percent)).

Finally, IPL minimizes the impact of its decision to rely on an unreasonably low capacity credit for future wind additions by evaluating only its planned addition of 200 MW of wind by 2013. This analysis is flawed because it is predicated on IPL's decision to needlessly and unreasonably limit the amount of wind resources that could be selected by EGEAS such that wind would provide less than 10 percent of IPL's retail energy needs in 2022 in IPL's EGEAS reference case. When a more reasonable capacity credit of 20 percent to 25 percent is utilized and EGEAS is allowed to select wind up to an amount that would allow IPL to meet a 20 percent to 25 percent renewable portfolio standard, the adverse and material impact of IPL's flawed capacity credit assumption is readily apparent.

(OCA Init. Br. pp. 38-40).

***D. IPL's revised EGEAS analysis imposes dubious cost assumptions, while retaining the unreasonably low capacity reserve, which biases the model against selecting wind in IPL's CO<sub>2</sub> scenarios.***

IPL criticizes OCA witness Fagan for assuming it would be reasonable for IPL to plan to add new generation at a level that would enable IPL to achieve a renewable portfolio standard (RPS) of 20 percent in 2022. (IPL Init. Br. p. 51). In a November 2007 document prepared for its investors concerning the prospect of a 20 percent national RPS, Alliant's President and upper level management communicated that IPL would require "an additional 1,100 MW of wind . . . over and above what is currently planned" and that "Alliant's service territory is well positioned for siting of additional wind resources." (Ex. 122, p. 37). There is absolutely no mention of the limitations on equipment supply and transmission impediments that IPL now claims make it "highly

unlikely” that it could install over 1,000 MW of new wind beyond what is included in IPL’s base plan. (IPL Init. Br. at 51). While the foregoing demonstrates IPL’s current claims to be lacking in credibility, OCA’s Initial Brief, pp. 22, 67-72 also fully addresses the significant weaknesses in IPL’s wind cost escalation factors that were employed in IPL’s revised EGEAS analyses.

IPL implies that OCA has not considered the potential for increasing wind costs in its analysis. This is not accurate. The wind cost increases that IPL claims to have experienced have occurred in the absence of national RPS or CO<sub>2</sub> emissions reduction requirements. OCA accepted IPL’s undocumented and substantially increased wind prices in OCA’s EGEAS analysis. In contrast to IPL’s method of selectively increasing the cost components of alternative resources that would defer or eliminate the need for SGS Unit 4 (Tr. 584-89), OCA’s EGEAS analysis uniformly considers rising capital cost scenarios for all supply side resources by evaluating the impact of 20 percent higher and 40 percent higher power plant capital costs. (Tr. 1105-1155). IPL’s analysis ignores that cost increases for supply resources have occurred independent of actual CO<sub>2</sub> regulations.

**VII. THE ENORMOUS COST AND ENVIRONMENTAL RISKS POSED BY SGS UNIT 4 DO NOT ADVANCE AND MAY JEOPARDIZE ECONOMIC DEVELOPMENT IN IOWA.**

To support its economic development claims, IPL relies on the analysis and opinion of Professor Otto. (IPL Init. Br. 20-23). Professor Otto asserts that IPL’s base load capacity needs to expand at least at the rate of growth in the Iowa economy. (Tr. 185-86). To be cost-effective, base load must generally operate whenever it is available. Professor Otto’s conclusion that base load investment should match IPL’s load

growth would effectively displace IPL's consideration of expanded wind generation and DSM investment. This conclusion is at odds with Iowa policy (e.g., Iowa Code §§ 473.3, 476.41, Exhs.16, Sch. D, Exhs. 125, 133, 134, 135; S.F. 485, Plan for Energy Independence issued by Iowa Office of Energy Independence (Dec. 2007)) and fails to consider the cost, risk mitigating, and economic development attributes of wind and DSM as well as other non-base load supply resources that IPL purports to consider in its long-term planning. Professor Otto's analysis is predicated on the erroneous assumption that base load generation is the only means by which electric load can be reliably met. (Tr. 186, 191-92).

Professor Otto's analysis relies on the assumed the load growth determined by IPL as well as IPL's assertion that SGS Unit 4 is cost-effective. Professor Otto undertakes no independent analysis of these conclusions, and does not consider the impact of increasing electric rates associated with the addition of a base load coal plant. (Tr. 188). IPL does not even know the expected cost or resulting rate impacts of SGS Unit 4. (OCA Init. Br. Section IV). Professor Otto acknowledged that higher utility rates are adverse to economic development objectives. (Tr. 187).

IPL did not evaluate the cost-effectiveness of meeting its energy and demand needs through expanded investment in DSM. IPL did not fully or accurately evaluate the cost-effectiveness of meeting its energy and demand needs through expanded wind generation. Rather, as described above, IPL unreasonably limited the amount of wind that EGEAS could select and attributed an unreasonably low capacity credit to new wind. Consequently, IPL's economic development expert did not have the opportunity to

evaluate the merits of these alternatives to SGS Unit 4. OCA witnesses did evaluate the economic development, risk attributes and cost-effectiveness of expanded DSM and wind investment and concluded, based on these factors, that DSM and wind should be the first resources considered by IPL for meeting future energy and demand needs of IPL's customers. (Tr. 747-48, 797-98, 802-03, 966-67, 1039-40, 1105-18, 1142, 1171, 1194-1201).

A strategy in which IPL would first pursue expanded investment in DSM and wind to meet and reduce IPL's load growth will better meet all of Iowa's legislative policies set forth in Iowa Code § 476.53 while minimizing cost risks to IPL's ratepayers. (Tr. 747-48, 797-98, 802-03, 966-67, 1039-40, 1105-18, 1142, 1171, 1194-1201).

Contrary to IPL's arguments (IPL Init. Br. p. 24), DSM and wind generation resources are effective means by which to meet the long-term energy needs of IPL's customers. The Board's decisions in recent ratemaking principles decisions on new wind generation buttress this conclusion. Fuel diversity is more important than ever.<sup>4</sup> Despite the Board's expressed desire to consider fuel and generation supply diversity considerations in generation siting cases,<sup>5</sup> IPL all but ignores the negative impact on generation supply diversity posed by SGS Unit 4. (Tr. 1026-30, Ex. 122, p. 6).

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<sup>4</sup> *MidAmerican Energy Co.*, Docket No. RPU-05-4, Order Approving Stipulation and Agreement, pp. 7-8. (IUB, Apr. 18, 2006).

<sup>5</sup> *Inquiry into Fossil Fuel Generation Efficiency*, Docket No. NOI-07-1, "Order Adopting PURPA Standard 12 and Initiating Inquiry into PURPA Standard 13, Fossil Fuel Generation Efficiency" pp. 2-4 (May 1, 2007) (finding that generation siting and other proceedings will allow the Board to consider the purposes of PURPA Standard 12 to minimize utility dependence on one fuel source and ensure that electric energy sold to consumers is generated using a diverse range of fuels and technologies, including renewable technologies).

IPL purports to have considered numerous supply-side alternatives in its resource planning process and EGEAS modeling. (Init. Br. p. 39). However, immediately preceding this, IPL asserts that if SGS Unit 4 is not allowed to be built, IPL “will be forced to buy capacity and energy within a region that is projected to be capacity constrained . . . The worst case scenario is that capacity will not be available at any price, severely impacting the reliability of IPL’s system.” The fear and manipulation game in which IPL is engaged is readily apparent when one considers IPL’s intended plans for replacing the base load Duane Arnold Energy Center (DAEC), which IPL sold in 2006. IPL rejected the assumption that DAEC would be replaced by a coal plant. Rather, IPL witnesses Kitchen and Ahler asserted that DAEC would most likely be replaced, if necessary, by a market based PPA. (Tr.611-12). IPL witness Friedman characterized the wholesale market as very efficient, allowing for the creative packaging of purchased energy blocks matched to capacity derived from newly constructed low capital cost combustion turbines as a viable solution for sourcing a portion of a utility’s portfolio. (Tr.1643-44).


IPL’s manipulation and scare tactics must be rejected as both incredible and directly undermined by its positions in recent cases.

## **CONCLUSION**

For each of the reasons, and upon each of the grounds, set forth in the OCA’s Initial and Reply Briefs, the Board should deny IPL’s Application to Construct SGS Unit 4.

Respectively Submitted,

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the foregoing document has been served upon all parties of record in this proceeding in accordance with the rules of the Iowa Utilities Board on February 25, 2008.

