STATE OF IOWA

DEPARTMENT OF COMMERCE

UTILITIES BOARD

IN RE: INTERSTATE POWER AND LIGHT COMPANY	DOCKET NO. RPU-2021-0003

ORDER ADDRESSING RECONSIDERATION AND REHEARING

PROCEDURAL BACKGROUND

On December 29, 2022, the Utilities Board (Board) issued an order in Docket No. RPU-2021-0003 that granted in part and denied in part a request for reconsideration or rehearing filed by Interstate Power and Light Company (IPL). IPL requested the Board reconsider its November 9, 2022 order denying advance ratemaking principles for a proposed 475-megawatt (MW) solar and battery energy storage system (BESS) project. In the December 29, 2022 order, the Board granted reconsideration of the Duane Arnold I and II solar generation facilities. The order denied reconsideration of an additional 200 MW of solar facilities and the BESS. Also in the December 29, 2022 order, the Board directed IPL to file additional evidence within 30 days that included the information described in Ordering Clause 2. Responses to the additional evidence were to be filed within 20 days of the filing by IPL.

On January 30, 2023, IPL filed additional evidence in response to the December 29, 2022 order. The additional evidence included a response and the prepared testimony and exhibits of IPL witnesses Ben Lipari, Neil E. Michek, and Erin M. Carroll. Also on January 30, 2023, IPL filed a petition for judicial review in the Polk County District Court of the November 9, 2022 and December 29, 2022 orders. (*Interstate*

Power and Light Co. v. Iowa Util. Bd., Polk County District Court, Case No. CVCV065011.)

On February 7, 2023, the Large Energy Group (LEG) and the Iowa Business Energy Coalition (IBEC) filed a joint motion to strike the response and testimony and exhibits filed by IPL on January 30, 2023 or, in the alternative, to require IPL to refile its response consistent with the December 29, 2022 order. On February 8, 2023, the Office of Consumer Advocate (OCA), a division of the Iowa Department of Justice, filed an objection in part to IPL's January 30, 2023 response.

On February 9, 2023, the Board issued an order shortening the time for IPL to respond to the motion to strike and extending the time for other parties to respond to IPL's January 30, 2023 response. On February 13, 2023, IPL filed its response to the February 9, 2023 order.

On February 21, 2023, the Board issued an order staying its review of the reconsideration of Duane Arnold I and II, the review of the joint motion to strike and objection, and the date for other parties to file responses to IPL's January 30, 2023 response. The Board stayed its review pending a decision by the District Court regarding the Board's jurisdiction to proceed with reconsideration.

On March 23, 2023, the Polk County District Court issued a ruling that ordered "that judicial review of the 200 MW project and the BESS Project shall proceed" and "that the Court confirms that the Board retains jurisdiction and legal authority to reconsider and/or rehear advance ratemaking principles for the Duane [Arnold] I and II projects and the Court directs the Board to proceed to final agency action on such requests." (*Interstate Power and Light Co. v. Iowa Util. Bd.*, Polk County District Court, Case No. CVCV065011.)

On March 31, 2023, the Board issued an order lifting the stay established in the February 21, 2023 order. In the order, the Board denied the motion filed by LEG and IBEC to strike testimony, overruled the objection by OCA, and set a date for those parties to file responses to IPL's January 30, 2023 response and testimony.

On April 19, 2023, LEG filed a response to IPL's January 30, 2023 filing. Then, on April 20, 2023, OCA and IBEC filed responses to IPL's January 30, 2023 filing.

IPL JANUARY 30, 2023 FILING

The January 30, 2023 rehearing testimony and exhibits are in response to the Board's request for additional information from IPL in response to six questions to allow IPL to provide the required support for meeting the statutory requirements of Iowa Code § 476.53. Included in the response were revised advance ratemaking principles reflecting the additional information. The response also included information about the additional 200 MW and BESS, which will not be addressed in this order based upon the ruling of the Polk County District Court.

IPL witness testimony provides analyses of the Duane Arnold I and II projects; however, it did not include an updated Clean Energy Blueprint (Blueprint), which is IPL's integrated resource plan. The testimony of IPL witnesses in response to the Board questions is summarized below.

A. Summary of Rehearing Prefiled Testimony

Q.1 An updated economic analysis based upon updated costs and market prices.

Mr. Michek's analysis shows the levelized cost per accredited MW for Duane Arnold I and II, excluding the additional 200 MW and the BESS, is lower than Midcontinent Independent System Operator, Inc. (MISO), market purchases and the

levelized costs for a Simple Cycle Combustion Turbine (SCCT) energy purchase and energy and capacity purchase. (IPL Michek Rehearing, pp. 2-4.) Mr. Michek's updated economic analysis segregates the information and provides an independent analysis for each of the projects. Mr. Michek updated the structure of the exhibits to include calculations of the cost-per-unit of accredited capacity for each project. (*Id.* at 6.) Mr. Michek states that it is important to note that while the added capacity is clearly a benefit to customers and is the primary basis for IPL's decision to move forward with the projects, due to the structure of the MISO capacity market, the capacity value is not a direct financial benefit to customers that would appear on customer bills. (*Id.* at 8.) Instead, the capacity value reflects the avoided cost of acquiring more costly resources if IPL does not pursue these projects. (*Id.*)

Mr. Michek states the economic analyses are consistent with prior economic analyses in this proceeding and confirm that Duane Arnold I and II are reasonable. (*Id.* at 9.) Specifically, as with prior economic analyses in this proceeding, the economic analyses provided with Mr. Michek's testimony provides the analysis of the projected annual revenue requirements of the projects over the projected useful life of the assets in accordance with the Board's rules for advance ratemaking principles and continues to show that the projects are reasonable when compared to other feasible alternative sources of supply. (*Id.*) Mr. Michek states that these analyses confirm the conclusions of IPL's Blueprint. (*Id.* at 9-10.)

Q.2 An analysis of cost-per-unit of accredited capacity.

Mr. Michek's analysis compares ownership of Duane Arnold I and II to a power purchase agreement (PPA). The analysis shows that ownership would cost less than a PPA with buyout based on the net book value and a PPA with a buyout based upon fair

market value. (IPL Michek Rehearing, pp. 3-4.) According to Mr. Michek, the cost per megawatt-hour (MWh) and cost per MW (whether nameplate or accredited) are simply measures used for comparison, and the projects should be evaluated for both energy and capacity benefits. (*Id.* at 12.)

Mr. Michek states that Duane Arnold I and II provide environmental benefits compared to the generic SCCT used in establishing cost of new entry (CONE). (*Id.*) He provides an example that shows while an SCCT may have a lower cost for capacity purposes, generation of energy from an SCCT would be relatively costly for IPL's customers. (*Id.*) Mr. Michek states that while a wind generator will have a higher net capacity factor and produce relatively more MWh than solar, wind generators' accredited capacity ratings in the MISO market are approximately one-third or less than that of solar. (*Id.*) According to Mr. Michek, this is particularly true for the summer peak season, and wind has less predictability during summer than solar. (*Id.*) According to Mr. Michek, the proposed projects provide both energy and capacity with a relatively greater emphasis on the summer peak capacity that IPL, and the overall MISO market, needs over the long-term. (*Id.* at 12-13.) In addition, solar is complementary to IPL's existing wind generation fleet. (*Id.* at 13.)

Q.3 An economic analysis of IPL building and owning a natural gas simple cycle combustion turbine, including the cost-per-unit of accredited capacity.

IPL witness Carroll conducted a levelized cost of energy (LCOE) analysis, which calculates the cost, including, for example, capital costs and operations and maintenance (O&M) costs, of using an SCCT to meet capacity needs. (IPL Carroll Rehearing, p. 4.) In addition to O&M costs, the SCCT costs include the cost of generation equipment, network upgrade and interconnection costs, the annual capital

costs of natural gas infrastructure to the site, and the demand charge cost to ensure natural gas delivery. (*Id.* at 5.) Ms. Carroll's sensitivity analysis includes variations of the SCCT capacity factor from 4% to 15% and a plus-or-minus 20% of the SCCT variable O&M costs to show the impact of volatile natural gas prices. (*Id.* at 6.)

Ms. Carroll's analysis shows that if the capacity factor of the SCCT is below 10%, the projects, on an LCOE basis, are less costly than building and owning a new SCCT. (*Id.*) Ms. Carroll states that variations in gas prices less than 20% do not change the analysis to require a higher capacity factor than the 10%. (*Id.*) Based upon her analysis, Ms. Carroll states that building and owning a hypothetical SCCT is not a feasible alternative to the Duane Arnold I and II projects. (*Id.*)

Ms. Carroll states that an SCCT is not more cost effective than the projects for several reasons. First, Ms. Carroll states an SCCT would require natural gas infrastructure to be placed in service and maintained, at IPL's cost, to operate the SCCT. (*Id.* at 7.) Ms. Carroll states that the infrastructure needed for the SCCT does not currently exist, and the permitting and construction timeline is not realistic to meet the dates when the capacity is required to be available. (*Id.* at 3, 7.) Next, Ms. Carroll asserts owning and operating an SCCT would require IPL to purchase natural gas for the operation of the facility and natural gas prices are subject to significant volatility, which is avoided with renewable energy facilities like Duane Arnold I and II. (*Id.* at 6-7.) Third, Ms. Carroll states even assuming volatile fuel costs were not an issue, the SCCT will have significantly higher variable O&M costs than the projects. (*Id.* at 7-8.) Finally, Ms. Carroll states that while an SCCT can provide capacity, it does not have the same beneficial environmental attributes as Duane Arnold I and II, such as renewable energy certificates, lack of emissions, and minimal water consumption. (*Id.* at 8.)

Q.4 Availability and pricing of a power purchase agreement with NextEra Energy Resources, LLC (NextEra), for generation from the Duane Arnold Solar facilities.

Mr. Lipari states that IPL requested that NextEra offer a PPA for the energy and capacity from Duane Arnold I and II that would allow IPL to evaluate a PPA compared to IPL ownership. (IPL Lipari Rehearing, pp. 14-15.) Mr. Lipari states that IPL has already negotiated specific benefits in the Build-Transfer Agreement, the Purchase Sale Agreement, and the O&M Agreement more favorable to IPL than the PPA offered by NextEra. (*Id.* at 15.) NextEra offered a price that is higher than the projected cost of acquiring the projects, which demonstrates, according to Mr. Lipari, that IPL owning the Duane Arnold projects is more cost effective for customers than executing a PPA for the energy and capacity. (*Id.*; *see also* IPL Michek Rehearing Exhibits 2, 3, 4.)

Mr. Lipari states that the long-term benefits of ownership, which a NextEra PPA does not offer, include the option to repower the Duane Arnold projects, to continue operating the projects when the assets have been fully depreciated, and to take advantage of future technological developments and cost reductions throughout the life of the projects. (IPL Lipari Rehearing, pp. 16-17.) Mr. Lipari explains that IPL's ownership of Duane Arnold I and II would provide benefits to the local community and would allow IPL to have more control over development, design, equipment supply, siting, and O&M decisions. (*Id.* at 17.) Mr. Lipari states that under the Inflation Reduction Act of 2022 (IRA), IPL would have the ability to monetize the federal tax credits. (*Id.*) In addition, Mr. Lipari states that long-term ownership of the projects is better for IPL's financial health than entering into a PPA because PPAs can be considered as debt equivalents by financial rating agencies and could negatively impact IPL's credit metrics. (*Id.* at 18.)

Mr. Lipari states that while NextEra provided a term sheet that contained terms and conditions that would be reflected in a PPA, NextEra did not provide the form PPA contract that IPL requested. (*Id.* at 19.) Mr. Lipari notes that NextEra's proposal was not consistent with key terms requested by IPL. (*Id.*)

In its January 30, 2023 response, Mr. Lipari also states that the Build-Transfer Agreement for Duane Arnold Solar II requires that NextEra pay liquidated damages for each day that substantial completion beyond December 15, 2024, is delayed. (IPL Lipari Rehearing, p. 21.) Under the proposed PPA, NextEra proposed an in-service date later than December 15, 2024, and the PPA includes other provisions regarding commercial operations that are less favorable to IPL than the contracts it currently has with NextEra. (*Id.*) According to Mr. Lipari, because NextEra did not provide a form PPA, IPL is not able to fully compare the terms and conditions of a PPA to IPL ownership. (*Id.* at 22.)

Q.5 An economic analysis of available power purchase agreements from sources of electric supply other than solar that IPL could enter into to meet the capacity needs both in and outside of Iowa.

Ms. Carroll states that IPL conducted an economic analysis in the form of an all-source request for proposals (RFP) for proposed PPAs to assess the market for feasible alternatives to Duane Arnold I and II. (IPL Carroll Rehearing, p. 8.) The RFP requested proposals for PPAs, in increments of 25 MW of accredited capacity, for a total of no more than 250 MW with pricing and terms and conditions, from sources of electric supply other than solar generation. (*Id.*) For example, IPL defined the bidding parameters to be consistent with existing project timelines, capacity needs, and performance. (*Id.* at 9.) In defining the bidding parameters, IPL's primary objective was to ensure that any PPA proposal received provided benefits that would be afforded to

IPL's customers that are similar to traditional utility ownership of the proposed projects. (*Id.*)

Ms. Carroll states that IPL received two proposals, a wind project and a gas turbine project; however, neither project met the minimum bid requirements. (*Id.* at 10.) Ms. Carroll states that the wind PPA could not provide the certainty or capacity that IPL needs, nor could it meet the timeline that IPL needs. (*Id.*) Ms. Carroll states that the gas turbine PPA also did not meet IPL's minimum requirements. (*Id.*)

According to Ms. Carroll, it is not possible to compare the RFP results to the cost of the projects because the PPAs are incomplete. (*Id.* at 11.) Ms. Carroll states that the two proposed PPAs were for generation facilities located outside of Iowa, which means that, unlike the Duane Arnold projects, the bids would not yield the same economic development benefits for Iowans. (*Id.*) Ms. Carroll states that the results of the RFP support a finding that the proposed projects are reasonable when compared to feasible alternatives. (*Id.*) Ms. Carroll states that Duane Arnold I and II meet the required capacity at a fair market price point, meet the time frame that the capacity is required (the end of 2024 or first quarter of 2025), and provide economic development benefits to local communities and to the state of Iowa as a whole. (*Id.*)

Mr. Michek states that the results of the RFP support a finding that the proposed projects are reasonable when compared to other feasible alternative sources of supply. (IPL Michek Rehearing, p. 13.)

Q.6 An analysis of the Inflation Reduction Act with regard to the potential impacts the Act will have on the electric market and other sources of supply.

Ms. Carroll states that the IRA established enhanced tax incentives by extending and expanding the federal investment tax credits (ITCs) and production tax credits

(PTCs) for renewable energy technologies, including wind, solar, and stand-alone energy storage. (IPL Carroll Rehearing, p. 12.) Ms. Carroll states that the IRA reinstated PTCs for solar energy facilities, which were last eligible for PTCs if a facility was placed in-service prior to 2006. (*Id.*) The tax credits within the IRA have almost immediately impacted the energy market by driving savings for renewable energy projects. (*Id.*)

According to Ms. Carroll, in the near term (e.g., the next three years), the IRA is expected to increase demand for renewable energy development sites, equipment, and labor. (*Id.* at 13.) Contributing to this increasing demand is the fact that renewable energy developers that previously placed projects on hold due to the uncertainty around tax credit expirations are now proceeding with these projects and announcing new projects. (*Id.*) Ms. Carroll states that supply chain issues will continue to hinder the solar industry, and the requirements for maximizing PTCs and ITCs established by the IRA, such as prevailing wage requirements, will prevent cost decreases in the near term. (*Id.* at 16.)

Ms. Carroll states that the IRA also has additional opportunities for solar facilities to increase PTCs and ITCs (i.e., bonus credits). (*Id.* at 13.) The additional opportunities could come from locating the project in an "energy community" and meeting a threshold percentage of manufactured products that are components of the facility produced domestically. (*Id.*) Ms. Carroll states that notwithstanding the IRA's enactment and its goal of easing supply chain bottlenecks for renewable projects, demand still exceeds the current supply of renewable energy components, which tends to result in higher project costs and longer lead times for component manufacturing and delivery. (*Id.* at 15.) Ms. Carroll does not anticipate any meaningful cost reductions for

solar projects in the next few years, and, if anything, IPL would expect costs to potentially increase. (*Id.* at 15-16.)

According to Ms. Carroll, IPL intends to leverage the tax benefits provided by the IRA to reduce the customer cost of the projects. (*Id.* at 4.) The PTCs now available to solar projects will reduce the cost of the solar projects by approximately $157 million on a net present value revenue requirement basis. (*Id.*) Ms. Carroll states that it is important to emphasize that apart from the tax credits, capital cost savings for renewable energy projects, including solar, have not yet materialized under the IRA and are not likely to appear within the next three years. (*Id.* at 17.) Capital costs are instead driven by increased costs in solar modules due to demand exceeding supply and increased costs of labor to meet tax credit requirements, all of which are partly attributable to the enactment of the IRA. (*Id.*) Ms. Carroll states that IPL believes that it is likely that renewable energy project costs will increase in the near term, rather than decrease, and that if IPL is forced to forgo the projects, IPL's customers will face potentially higher costs for other solar projects in the near term. (*Id.* at 19.)

OCA AND INTERVENORS' RESPONSES

The responses to IPL's January 30, 2023 filing are summarized below.

A. LEG

In its April 19, 2023 filing, LEG addressed IPL's responses to the additional information required by the Board's December 29, 2022 order. In its response to the information providing an updated economic analysis, LEG argues that IPL's reduced cost cap is due to the removal of the BESS from the analysis and there is not an overall change projected for Duane Arnold I and II. LEG argues that the information regarding

construction costs of the Creston and Wever solar projects is not relevant to the costs of Duane Arnold I and II. LEG states that the relevant information for Duane Arnold I and II is the reasonableness of price increases allowed under the contracts between IPL and NextEra. LEG points out that IPL did not provide an independent evaluation study of the reasonableness of the cost of Duane Arnold I and II or independent market price studies of the cost of other solar projects in the upper Midwest that are comparable to Duane Arnold I and II.

LEG states in response to the information regarding the cost-per-unit of accredited capacity that IPL only based its analysis on the annual and summer season MISO Planning Reserve Auction and the analysis should have been based upon all four seasons. LEG argues that based upon MISO's seasonal construct, which shows that solar projects provide essentially no accredited capacity in the winter, IPL interruptible customers will end up subsidizing Duane Arnold I and II. According to LEG, the subsidization occurs because interruptible retail customers can be curtailed at any time as a dispatchable resource; however, the solar projects cannot be curtailed. LEG argues that Duane Arnold I and II, based upon MISO's seasonal construct, will not replace the capacity provided throughout the year required because of the retirement of the Lansing power plant and termination of the Duane Arnold Energy Center PPA.

LEG argues that the analysis performed by IPL of the cost of an SCCT as compared to Duane Arnold I and II is seriously flawed. LEG states that IPL uses a baseline capacity of the combined turbine used in MISO determining the 2023/2024 Cost of New Entry. LEG argues that the combustion turbine used in IPL's analysis overstates costs including the cost for natural gas infrastructure. LEG points out that the Board asked for an analysis on a cost-per-unit of accredited capacity and not a

combination of energy and capacity as provided by IPL. According to LEG, an analysis as requested by the Board would show that an SCCT would be the lowest cost alternative when compared to solar projects.

LEG states that an SCCT is only operated a few hours per year when needed for capacity and would not be economically dispatched as an energy generation resource. LEG argues that the inclusion of uneconomic energy generation in IPL's analysis for comparison with Duane Arnold I and II distorts the results of the analysis. LEG argues that IPL has not provided any evidence that IPL is in need of additional energy or that economic energy purchases will not be available in the MISO market.

With regard to the information addressing a comparison of ownership of Duane Arnold I and II with a PPA with NextEra, LEG states that IPL has not provided any records or other information showing that it considered an actual PPA at the time it entered into and agreed to develop Duane Arnold I and II. LEG states this lack of comparison shows that ownership was the only alternative considered by IPL. LEG states that IPL now recognizes that IPL could buy the projects and obtain ownership. LEG states that IPL has not claimed a loss of long-term ownership benefits in relation to the numerous PPAs that it has entered already into with NextEra.

LEG argues that IPL used the wrong Iowa corporate tax rate in its comparison of ownership with a PPA. LEG points out that IPL used an 8.4% tax rate and that the tax rate will be reduced to 5.5% over the long term. In addition, LEG argues that there is no support for the discounted transferability costs of PTCs different from the discount assumed by IPL for ITCs. According to LEG, the PPA option is the lowest cost option and it provides greater stability for ratepayers. The greater stability occurs because the PTCs end in ten years, and a PPA would avoid possible rate shock when that occurs.

LEG states with regard to the information about available PPAs from sources of supply other than solar that the Board's order did not require IPL to issue an RFP, and because IPL did not provide the RFP, it is not possible to determine whether the bid parameters were unnecessarily restrictive. LEG argues that IPL contradicts the Blueprint by including a bid parameter that capacity is required by December 31, 2024. LEG states that IPL has not indicated whether it reached out to neighboring utilities regarding bilateral transactions for capacity purchases and no economic analysis of PPAs was provided.

LEG states that IPL failed to provide sufficient evidence for the Board to grant advance ratemaking principles. LEG states that IPL appears to place all of its planning resources into Duane Arnold I and II and the additional 200 MW solar projects and BESS that are before the District Court. LEG argues that the Board should not allow IPL's lack of planning to influence the Board's decision to approve advance ratemaking principles.

B. OCA

OCA states that it does not have a position on whether the information provided by IPL on January 30, 2023, is adequate to remedy the multiple deficiencies the Board described in the November 9 and December 29, 2022 orders. OCA offers observations on IPL's evaluation of IPL's non-solar PPAs and IPL's evaluation of a PPA from NextEra.

OCA points out that the bidding parameters included a requirement that any facility offered in response to IPL's RFP was required to achieve commercial operation by December 31, 2024. OCA states that only two entities submitted bids and neither complied with the bidding requirements. OCA states that the IPL's RFP process

demonstrates the inherent problem with trying to provide an after-the-fact justification for the reasonableness of the projects IPL selected long ago. OCA contends that the fact IPL received only two non-conforming bids does not show that Duane Arnold I and II are reasonable, but that IPL's RFP process was not reasonable. OCA argues that IPL should have conducted the RFP during the planning process and not after reconsideration.

OCA discusses the instructions for a PPA provided by IPL to NextEra. The instructions are confidential and are IPL's response to a data request attached to OCA's April 20, 2023 filing. OCA states that the data request response does not provide clarity regarding the instructions to NextEra. OCA suggests the Board consider the data request response when deciding whether the information provided on January 30, 2023 meets the statutory requirements.

OCA states that ownership of the projects by IPL comes with significantly greater risk to ratepayers with the accuracy of IPL's assumptions regarding capacity factors, PTC generation, and PTC monetization. OCA states that its Consumer Protection Plan (CPP) was designed to mitigate some of the risk to ratepayers. OCA argues that its proposed CPP is an appropriate and needed mechanism to ensure a reasonable balancing of risk between IPL and ratepayers.

C. IBEC

IBEC states that its positions have not changed from those stated in its post-hearing brief filed September 21, 2022. IBEC states that it is supportive of advance ratemaking principles for Duane Arnold I and II; however, IBEC has concerns with the RFP process used after-the-fact to support Duane Arnold I and II. IBEC states that it opposes several of the advance ratemaking principles proposed by IPL. IBEC states it

supports reasonable customer protections to protect against overreliance on projections for its capacity and projected caps, and the proposed ROE of 11.4%.

IBEC contends that the RFP results should be given little weight because of the unusual bidding requirements that skewed the bids. IBEC supports a CPP to protect customers against an IPL revenue shortfall. IBEC states that it supports the CPP proposed by OCA witness Blake Kruger that approves a sharing equally between IPL and ratepayers of any revenue loss. IBEC states that as more renewable projects become standard in Iowa, utilities cautiously project the capacity potential and resulting revenue for these non-dispatchable projects when seeking advance ratemaking principles.

IBEC supports its proposed ROE of 9.35% and supports a cost cap of $1,821/kW. IBEC argues that any cost cap should be a “hard” cost cap with costs in excess of the cap not recoverable except after a prudence review. IBEC supports the advance ratemaking principle addressing Allowance for Funds Used During Construction (AFUDC). IBEC supports an advance ratemaking principle that provides all benefits from Duane Arnold I and II flow through the Energy Adjustment Clause (EAC) once received and not after the projects are included in rates.

BOARD DISCUSSION

The Board summarized its findings in the November 9, 2022 order regarding the lack of evidence provided by IPL that it had not met the statutory requirements in Iowa Code § 476.53(3)(c)(2) as follows:

> The Board understands that a decision had to be made about replacing the loss of baseload capacity; however, the costs and economics of owning the facilities require IPL to ensure that the other alternative sources were fully analyzed.

> The Board finds that because IPL did not consider fixed PPAs, with or without an ownership option, did not issue an RFP to determine what alternatives the market offers, did not consider any other alternatives that may be available, and due to the significant changes in the market that result from the IRA, weigh against IPL meeting the statutory requirement. The Board considers it necessary for a utility to meet the statutory requirement to analyze feasible alternatives and the Board finds that under the circumstances in this case IPL did not meet this statutory requirement.

In the December 29, 2022 order, the Board granted reconsideration of its denial of advance ratemaking principles for Duane Arnold I and II on a stand-alone basis. In the December 29, 2022 order, the Board stated that where the cost of proposed generation facilities will result in increased rates to ratepayers, the utility is required to show a need for the facility and that the proposed facilities are reasonable when compared to other feasible sources of supply to meet that need, and IPL did not provide the required evidence regarding reasonable comparisons. The Board found that IPL had shown a need for the capacity associated with Duane Arnold I and II but had not met the requirements of comparisons to feasible alternative sources of supply.

The Board granted reconsideration of the finding that IPL had failed to provide the required consideration of feasible alternative sources of supply for Duane Arnold I and II to allow IPL to provide additional evidence. The Board stated there is no question IPL needs additional capacity and the two facilities have generating certificates approved by the Board. (*See* Docket Nos. GCU-2021-0002 and GCU-2021-0003.) In addition, the cost of the facilities is set by contract and the availability of the existing interconnection with the transmission grid is known. The Board requested additional information from IPL in response to six questions in order to allow IPL to provide the required support for meeting the statutory requirement.

In the January 30, 2023 rehearing testimony, Mr. Lipari contends that the Board's denial of advance ratemaking principles for the Duane Arnold projects has delayed construction, which risks the viability of the projects and IPL's ability to serve its customers. (IPL Lipari Rehearing, p. 26.) As stated in both the November 9 and December 29, 2022 orders, the issues presented to the Board in this docket are whether to approve advance ratemaking principles for the proposed Duane Arnold projects that lock in cost recovery decisions that cannot be reviewed in a subsequent rate case. The Board has granted NextEra generating certificates for Duane Arnold I and II, and NextEra can begin construction on those facilities at any time. Whether IPL needs the advance ratemaking principles to begin construction is a business decision for IPL to consider. The Board finds that the argument that the denial of advance ratemaking principles will delay the projects is not convincing. Construction of Duane Arnold I and II could begin at any time, and IPL could file a future test year general rate increase case for recovery of costs once it has determined the costs that are to be recovered.

The additional information provided by IPL in response to the December 29, 2022 order includes additional analysis to show that IPL met the statutory requirement in Iowa Code § 476.53(3)(c)(2). IPL provided information about an RFP it issued, a PPA that it discussed with NextEra, information about the impact of the IRA, and analyses about the costs of the Creston and Wever solar projects that provide comparative market information for the Duane Arnold I and II projects.

One issue that the Board finds particularly troubling is the ability of IPL to issue an RFP and request a PPA after the November 9, 2022 order when it did not include these options prior to filing its application. This also applies to the analysis of the IRA's

impact. The Board based its November 9, 2022 decision that IPL had not met the statutory requirements in Iowa Code § 476.53(3)(c)(2) in significant part on the basis of IPL having not done its due diligence by investigating feasible alternative sources of supply prior to the Board's final order. The Board found that IPL could have issued an RFP, negotiated with NextEra for a PPA, and updated its proposal based upon the IRA. IPL witnesses Lipari, Michek, and Carroll have now testified to the results of updated analyses. Whether RFPs or PPAs would have shown the same results as those conducted by IPL on rehearing is an open question. Regardless, the Board has allowed IPL to update its support for meeting the statutory requirements and will consider that information.

The Board finds that the information about the Creston and Wever solar facilities is not particularly relevant to consideration of Duane Arnold I and II, except that it does show that IPL could have gone through the same competitive bidding process for Duane Arnold I and II that it went through for Creston and Wever. In addition, IPL chose to move forward with Creston and Wever without requesting advance ratemaking principles, and only in its January 30, 2023 filing did IPL identify those projects as the additional 200 MW of solar projects included in the application in this docket.

After reviewing the information filed by IPL on January 30, 2023, and the responses filed by LEG, OCA, and IBEC, the Board finds that IPL has provided sufficient information in response to the January 30, 2023 order to meet the statutory requirement in Iowa Code § 476.53(3)(c)(2) for Duane Arnold I and II. The Iowa Supreme Court in the *NextEra* decision stated that the plain language of the section does not require the utility to demonstrate it has performed the comparison required in Iowa Code § 476.53(3)(c)(2) prior to filing its application, only that the evidence is

available for Board consideration before a final determination is made. *NextEra Energy Res. LLC v. Iowa Util. Bd.*, 815 N.W.2d 30, 42 (Iowa 2012). The Supreme Court did not specifically address how late in the proceeding a utility could file the comparison, but filing the comparison in response to an order granting reconsideration appears to be consistent with the decision of the Supreme Court. In addition, Board rules at 199 Iowa Administrative Code (IAC) 7.27(1) provide that the Board can consider facts arising after the order granting reconsideration.

The information filed by IPL in response to the December 29, 2022 order shows that ownership of Duane Arnold I and II is reasonable when compared to other feasible sources of supply. Construction and ownership of Duane Arnold I and II takes advantage of low interconnection and transmission network upgrade costs associated with having both of the Duane Arnold projects in the same location. In addition, Duane Arnold II takes advantage of existing interconnection with the electric grid. The updated IRA analysis shows that IPL will benefit from the IRA increased tax benefits that will result in reduced costs to customers. Finally, granting advance ratemaking principles for Duane Arnold I and II will allow IPL to proceed with construction of the projects within IPL's requested time frame.

LEG, OCA, and IBEC have pointed out deficiencies in the RFP parameters and the PPA requirements sent to NextEra. The Board also recognized these deficiencies. Based upon its review, the Board has found that those deficiencies do not outweigh the fact that IPL has gone through an RFP process and has sought a PPA from NextEra as required by the Board. In future advance ratemaking proceedings, whether an RFP was issued for the same type of generation and other feasible sources of energy and sought relevant PPAs will be required as part of the evidence presented to the Board.

The Board finds that it has addressed the issues raised by LEG, OCA, and IBEC regarding the advance ratemaking principles proposed by IPL in the January 30, 2023 filing in the advance ratemaking principles approved in this order. The advance ratemaking principles are discussed in the next section. The Board is not approving a CPP because the approved advance ratemaking principles provide protection for ratepayers to accomplish the same

Based upon its finding that IPL has met the statutory requirements for considering feasible alternative sources of supply, the Board will address the advance ratemaking principles proposed by IPL in its January 30, 2023 filing.

ADVANCE RATEMAKING PRINCIPLES

Initially, IPL requested eight advance ratemaking principles; however, after the enactment of the IRA, IPL has determined that it is no longer requesting Ratemaking Principle Number 7, which was a request for use of a tax equity partnership. The IRA, with enactment of section 6418 of the Internal Revenue Code, made it possible for the transferability of tax credits to unrelated third parties; making the tax equity partnership no longer necessary.

The Board will address the remaining seven advance ratemaking principles requested by IPL below.

A. Cost of Equity

The proposed advance ratemaking principle is as follows:

> The allowed rate of return on common equity capital on the portion of the actual Project costs incurred by IPL under Ratemaking Principle No. 3 (Cost Cap) that are included in Iowa electric rate base, shall be 11.40 percent.

The Board began its consideration of the appropriate return on equity (ROE) to be allowed for Duane Arnold I and II with the ROE of 9.5% approved for IPL in Docket No. RPU-2019-0001, IPL's last general electric rate case. The Board has then considered whether current market conditions that would support a higher ROE are indicative of future market conditions and result in a higher ROE than approved in Docket No. RPU-2019-0001. The evidence shows that over the last 15 years, ROEs approved for rate-regulated utilities have trended downward, which is contrary to current market pressures. (*See* Figure CCW-1 on page 5 of IBEC witness Christopher Walters Direct.)

Another issue addressed by the parties is whether there should be premiums included in the ROE approved for advance ratemaking to provide an incentive for construction of renewable generation facilities and to reflect the inherent risks of setting an ROE for the life of the facilities. OCA witness Munoz applies a premium of 50 basis points to his recommended ROE of 9.75%. Mr. Munoz testifies that his proposed premium is consistent with past advance ratemaking principles cases he has testified in. IPL witness Dr. Bente Villadsen recommends a total premium of approximately 100 basis points over the average of her models' findings. IBEC witness Walters does not recommend a premium but recommends, if the Board chooses to apply a premium, the premium should be between 50 and 75 basis points based on the yield premiums of long- and short-term U.S. Treasury bonds.

Although premiums have been approved in setting the ROEs in prior advance ratemaking principle proceedings, the Board does not consider either premium to be necessary for construction of Duane Arnold I and II. The Board finds that an incentive is not required for IPL to construct the two solar facilities because those facilities are

needed to address IPL's capacity shortfall and were recommended in the Blueprint. Historical ROEs have trended down and any premium would be speculative and could require ratepayers to pay rates that are not supported by future conditions. Additionally, current market conditions appear to be requiring a higher ROE. Rather than set an ROE that may be too high or too low throughout the life of the assets, and that does not reflect the market conditions presented in evidence in the next rate case, the Board finds that the ROE for Duane Arnold I and II is best set based upon the evidence regarding market conditions for all IPL assets as determined in each future rate case. IPL is not required to request advance ratemaking principles, and an ROE set as an advance ratemaking principle is only necessary if the Board finds that premiums are needed to provide an incentive for IPL to construct the facilities. The Board has found that premiums are not reasonable for the ROE for Duane Arnold I and II. Based upon this analysis, the Board is not including an ROE advance ratemaking principle in Attachment A.

B. Depreciable Life

IPL proposes an advance ratemaking principle to set the depreciable life of the solar projects. The advance ratemaking principle establishes a depreciable life for the solar projects of 30 years. The advance ratemaking principle proposed in the January 30, 2023 response also sets a depreciable life for the BESS, which will not be considered as part of this order. The advance ratemaking principle also provides that IPL shall be permitted to revise the depreciable life and, in addition to recovery of the costs of removal, the depreciable life can be revised based upon an independent expert study and Board approval.

The Board has approved similar advance ratemaking principles in prior advance ratemaking dockets and finds that the depreciable life of 30 years for Duane Arnold I and II is reasonable. The Board also finds it reasonable to allow for a revision of the depreciable life that is proposed by an independent expert and is subject to Board approval in a contested case proceeding.

C. Cost Cap

IPL proposes a Cost Cap advance ratemaking principle in its January 30, 2023 response that includes a cost cap for Duane Arnold I and II, a cost cap on a cumulative basis for 400 MW, and a cost cap on a cumulative basis on 400 MW and the BESS. (IPL Lipari Rehearing, pp. 9-14.) The Board will only consider the cost cap for Duane Arnold I and II.

The advance ratemaking principle allows IPL to include AFUDC, other deferred carrying costs, all transaction costs, and all costs of transmission network upgrades, upgrades required as a result of MISO studies, generator tie lines, transmission interconnection, and any other appurtenant facilities associated with Duane Arnold I and II, regardless of whether the facilities are owned by IPL or some other entity. Costs below the cost cap are presumed prudent and IPL will only recover actual costs if the costs are below the cost cap. IPL will be required to establish the prudence of all costs above the cost cap in a general rate case proceeding.

In its application and the initial testimony of its witnesses, IPL proposed a cost cap of $1,575/kilowatt (kW) for the project as a whole. (*E.g.*, *Interstate Power and Light Co.*, "Application for Advance Ratemaking Principles, Waiver of Reorganization Requirements, and Limited Waiver of Energy Adjustment Clause Requirements," Docket No. RPU-2021-0003, p. 23 (Nov. 2, 2021).) In his rebuttal testimony, Mr. Lipari

testified that IPL proposed a cost cap of $1,934/kW to reflect the increased costs for the projects. (IPL Lipari Rebuttal, pp. 4, 7, 9.) In the January 30, 2023 filing, IPL proposes a cost cap of $1,821/kW for Duane Arnold I and II. (*Interstate Power and Light Co.*, "Interstate Power and Light Company's Response to Order Addressing Motion for Reconsideration or Rehearing," Docket No. RPU-2021-0003, p. 8 (Jan. 30, 2023).) Mr. Lipari states that the revised cost cap is significantly lower than proposed in his rebuttal testimony because of IPL's diligent efforts to manage customer costs of the projects and updated estimates as the projects near construction. (IPL Lipari Rehearing, p. 10.) Mr. Lipari states the Duane Arnold I and II cost cap is based upon project costs presented by NextEra, the status of Duane Arnold II as a generator replacement project, and the low interconnection costs associated with Duane Arnold I. (*Id.* at 10-11.)

The Board recognizes that the cost caps proposed by IPL that include Duane Arnold I and II are based upon IPL's economic analysis at the time they are filed. As shown by IPL's latest cost cap, the costs associated with construction of Duane Arnold I and II will fluctuate until actual costs are identified. A cost cap advance ratemaking principle is designed to reduce risk and provide a level of certainty for recovery of costs without the necessity of going through a prudence review for those costs.

The advance ratemaking principle is not a hard cap, and IPL may request recovery of any actual costs in excess of the cost cap in its next general rate case. Because IPL is allowed to seek recovery of actual costs in its next general rate case and due to the costs fluctuating until actuals are finally determined, the Board finds it is more reasonable to set a cost cap for Duane Arnold I and II based on the original cost cap proposed by IPL.

D. Cancellation Cost Recovery

IPL proposes the same cancellation cost advance ratemaking principle as has been proposed in previous dockets.

> If IPL cancels construction of any aspect of the Projects for good cause, IPL's prudently incurred and unreimbursed costs shall be deferred until IPL's next electric rate case and amortized over a period not exceeding ten years from the date on which the amortization expense is included in rates.

The Board has approved similar cancellation cost recovery advance ratemaking principles in prior dockets and finds that the cancellation cost recovery advance ratemaking principle filed in the January 30, 2023 response is reasonable. The Board will approve the proposed cancellation cost recovery advance ratemaking principle.

E. Treatment of AFUDC and Carrying Costs on Investment During Construction

IPL proposes an advance ratemaking principle for treatment of AFUDC, carrying costs on the AFUDC accrued, and the carrying costs rate that will be allowed. The advance ratemaking principle is as follows:

> IPL shall accrue AFUDC on all construction costs of the Projects recorded to Construction Work in Progress.
>
> IPL shall accrue carrying costs on those amounts in FERC Account 182.3 (Other Regulatory Assets) using the pre-tax weighted average cost of capital.
>
> The AFUDC rate and pre-tax weighted average cost of capital shall be calculated based upon IPL's currently authorized Return on Equity.

OCA witness Kruger recommended that this principle include language stating that IPL shall calculate the AFUDC rate in accordance with the Uniform System of Accounts (USoA). (OCA Kruger Direct, pp. 15-17.) At the hearing, IPL witness Michek testified that IPL is required to comply with the USoA. (Tr. 159-162.)

The Board has approved similar advance ratemaking principles in prior dockets and finds that the proposed accrual of AFUDC associated with Duane Arnold I and II recorded to Construction Work in Progress (CWIP) is reasonable. It is reasonable to allow for construction costs to be recovered from ratepayers and to allow IPL to recover carrying costs on the AFUDC accrued. Setting the carrying charge at the pre-tax weighted average cost of capital calculated based upon IPL's currently authorized return on equity is also reasonable. Thus, the Board will approve the AFUDC and carrying costs on investment during construction advance ratemaking principle. The Board does not find it necessary to revise the principle to include the requirement to follow the USoA, but reminds IPL of its commitment to follow USoA guidelines when determining the AFUDC rate to apply to CWIP.

F. Environmental Attributes

IPL proposes an advance ratemaking principle that addresses the environmental attributes associated with the Iowa jurisdictional portion of any revenues from the sale of renewable energy credits and carbon credits generated by the projects. The principle provides that the credits will be recorded above-the-line and customers will receive the full value of any renewable energy credits, carbon credits, and environmental emission allowances generated, except those required for regulatory requirements. The proposed advance ratemaking principle provides that any environmental attributes will not flow to customers until the projects are being recovered in rates, consistent with the advance ratemaking principle that addresses the matching principle.

The Board is not convinced that this ratemaking principle properly reflects the appropriate timing of when benefits from environmental attributes should flow to customers. Under the advance ratemaking principles as proposed by IPL, customers

will pay rates that include AFUDC and a carrying charge on AFUDC, and will not receive any net distribution benefits until after the Board approves rates in the next general rate case.

As proposed, there may be a gap between when Duane Arnold I and II go into service and begin receiving environmental attributes and when ratepayers receive the benefits of those attributes. The Board finds that it is more reasonable for ratepayers to begin receiving the benefits of the environmental attributes when Duane Arnold I and II go into service. Ratepayers will pay the costs of Duane Arnold I and II when they are in rates, including AFUDC and carrying charges on AFUDC. Allowing ratepayers to begin receiving benefits through the EAC, Renewable Energy Rider, or other cost recovery mechanisms after Duane Arnold I and II go in service provides a better balance and better timing for ratepayers. The Board will modify the Environmental Attributes ratemaking principle to accomplish this requirement by striking "Subject to Ratemaking Principle No. 8 (Matching Principle)" from the principle and inserting "After Duane Arnold Solar I and II are placed in-service."

G. Matching Principle; Jurisdictional Allocations

IPL proposed an advance ratemaking principle that excludes each month from the EAC, the Renewable Energy Rider, and any other cost recovery mechanism, the retail share of net cash distributions benefits from Duane Arnold I and II. The Matching Principle; Jurisdictional Allocations advance ratemaking principle provides as follows: "Until the Projects are being recovered in IPL's rates, each month 100 percent of the Iowa retail share of net cash distributions benefits from the Projects shall be excluded from IPL's Energy Adjustment Clause (EAC), the Renewable Energy Rider, or any other cost recovery mechanism."

IPL's prior advance ratemaking dockets did not include a similar principle. (*See* Docket Nos. RPU-2016-0005 and RPU-2017-0002.) In written testimony in this docket, OCA, LEG, and IBEC objected to this principle. OCA witness Kruger argued that customers should receive the benefits because the risk of the projects fall on the customers. (OCA Kruger Direct, p. 21.) Mr. Kruger also stated that IPL does receive a return on its projects prior to the projects being recovered through rates by accumulating AFUDC on the balances included in CWIP. (*Id.* at 22-23.) At the hearing, IPL witness Michek testified that IPL is now requesting a matching advance ratemaking principle because IPL was looking for ways through advance ratemaking principles to help delay IPL's next rate case. By having the matching principle in place, it would provide IPL additional flexibility. (Tr. 193-194.)

The Board will deny this principle because IPL has not proposed this principle in past advance ratemaking dockets and ratepayers should receive the benefits of Duane Arnold I and II once those projects are in-service, even if that occurs before those projects are included in rates. Ratepayers pay AFUDC on the projects and they should receive any benefits from the projects once benefits are received by IPL. Additionally, IPL can choose when to file its next rate case to recover the cost of the projects in rates and IPL will recover its AFUDC costs on its investment.

BOARD DECISION

The Board has found on reconsideration of its November 9, 2022 order that with the information presented by IPL in the response and rehearing testimony filed on January 30, 2023, IPL has met the minimum statutory requirements for being granted advance ratemaking principles. Iowa Code § 476.53 requires the Board to grant

advance ratemaking principles when the Board finds that a utility has met the minimum statutory requirements in Iowa Code § 476.53. In this order, the Board is approving ratemaking principles that will apply to Duane Arnold I and II. The approved advance ratemaking principles discussed above are based upon the advance ratemaking principles proposed by IPL in its January 30, 2023 response. The Board has set out the approved advance ratemaking principles in Attachment A to this order, and incorporated into this order by reference. This is the final order of the Board regarding advance ratemaking treatment for Duane Arnold I and II.

REQUESTS FOR WAIVERS

In its application, IPL requested a waiver of Iowa Code § 476.77 that requires a utility to file for Board review of a proposed reorganization. IPL requested the waiver to accommodate the proposal to use a tax equity partnership to help finance the projects. Because IPL is no longer requesting an advance ratemaking principle for a tax equity partnership, the waiver request of Iowa Code § 476.77 is moot.

IPL also requested a limited waiver of Board rules regarding the EAC in 199 IAC 20.9, including 199 IAC 20.9(2), and IPL's Rider EAC that otherwise would apply to the revenues from the sale of energy generated by the projects prior to the date those projects are included in IPL rates. The advance ratemaking principle that would have implemented the waiver is not being approved by the Board; therefore, the Board will deny the request for a limited waiver of the EAC rules.

ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. Interstate Power and Light Company has met the minimum statutory requirements in Iowa Code § 476.53(3)(c)(2) for approval of advance ratemaking principles.

2. The Utilities Board approves the advance ratemaking principles described in Attachment A to this order, and incorporated into this order by reference.

3. Interstate Power and Light Company shall file a pleading stating whether it accepts the advance ratemaking principles approved in Attachment A within 30 days of the date of this order.

4. Interstate Power and Light Company's request for limited waiver of 199 Iowa Administrative Code 20.9, specifically 199 Iowa Administrative Code 20.9(2), is denied.

UTILITIES BOARD

Geri Huser Date: 2023.04.27 13:00:13 -05'00'

Richard Lozier Date: 2023.04.26 15:30:44 -05'00'

ATTEST:

Kerrilyn Russ 2023.04.27 13:33:50 -05'00'

Joshua Byrnes Date: 2023.04.26 15:05:35 -05'00'

Dated at Des Moines, Iowa, this 27th day of April, 2023.

ATTACHMENT A
RPU-2021-0003

APPROVED ADVANCE RATEMAKING PRINCIPLES

Ratemaking Principle	Description
Depreciable Life	The depreciable life of the Projects (Duane Arnold Solar I and II) for ratemaking purposes shall be 30 years. IPL shall be permitted to revise each depreciable life above, in addition to recovery costs of removal in the event an independent depreciation expert provides support for a different useful life and a change in depreciable life is approved by the Board in a contested rate case proceeding.
Cost Cap	IPL shall be permitted to include in rates the actual costs of the Projects of up to $1,575/kW on a cumulative basis for Duane Arnold Solar I and II; inclusive of Allowance for Funds Used During Construction (AFUDC), other deferred carrying costs, all transaction costs, and all costs of transmission network upgrades, upgrades required as a result of Midcontinent Independent System Operator studies, generator tie lines, transmission interconnection and any other appurtenant facilities associated with the foregoing, whether owned by IPL or any other entity, without the need to establish prudence or reasonableness. In the event that actual costs are lower than the projected costs, rates shall recover only actual costs. In the event actual costs exceed the cost cap, IPL shall be required to establish the prudence and reasonableness of any excess before it can be included in rates. IPL shall only be permitted to recover from customers those actual costs of the Projects incurred by IPL.
Cancellation Cost Recovery	If IPL cancels construction of any aspect of the Projects for good cause, IPL's prudently incurred and unreimbursed costs shall be deferred until IPL's next electric rate case and amortized over a period not exceeding ten years from the date on which the amortization expense is included in rates.

ATTACHMENT A
RPU-2021-0003

Treatment of AFUDC and Carrying Costs on Investment During Construction	IPL shall accrue AFUDC on all construction costs of the Projects recorded to Construction Work in Progress. IPL shall accrue carrying costs on those amounts in FERC Account 182.3 (Other Regulatory Assets) using the pre-tax weighted average cost of capital. The AFUDC rate and pre-tax weighted average cost of capital shall be calculated based upon IPL's currently authorized Return on Equity.
Environmental Attributes	After Duane Arnold Solar I and II are placed in-service, the Iowa jurisdictional portion of any revenues from the sale of renewable energy credits and carbon credits generated by the Projects shall be recorded above-the-line by IPL. IPL's customers shall be entitled to the full value of any renewable energy credits, carbon credits, and environmental emission allowances generated, except those needed for compliance with applicable regulatory requirements and those associated with investment included in IPL's Iowa jurisdictional rate base (Environmental Attributes). IPL shall use commercially reasonable efforts to maximize the value of customer Environmental Attributes associated with the Projects.