

STATE OF IOWA  
DEPARTMENT OF COMMERCE  
UTILITIES BOARD

IN RE:  DUANE ARNOLD SOLAR, LLC; DUANE ARNOLD SOLAR II, LLC	DOCKET NOS. GCU-2021-0002, GCU-2021-0003
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**ORDER GRANTING REQUEST FOR WAIVERS AND APPLICATION  
FOR A CERTIFICATE OF PUBLIC CONVENIENCE, USE AND NECESSITY  
UNDER IOWA CODE CHAPTER 476A**

**BACKGROUND**

On April 5, 2021, Duane Arnold Solar, LLC (Duane Arnold Solar I), filed with the Utilities Board (Board) a Request for Waiver, identified as Docket No. GCU-2021-0002. Also on April 5, 2021, Duane Arnold Solar II, LLC (Duane Arnold Solar II), filed with the Board an identical waiver request, identified as Docket No. GCU-2021-0003. In their requests, Duane Arnold Solar I and Duane Arnold Solar II (collectively, the Applicants) state that the separate project companies propose to develop electrically distinct solar generation projects at and around the Duane Arnold nuclear station near Palo, Linn County, Iowa. The Applicants requested the Board waive the provisions in Board rule 199 Iowa Administrative Code (IAC) 24.7 that require a generating certificate applicant hold an informational meeting. The Applicants asserted the purpose of holding an informational meeting has been met through their public outreach activities.

On May 14, 2021, the Board issued an order denying the Applicants' request to waive the informational meeting. The Board determined that any undue hardship

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suffered by the Applicants was outweighed by the public interest in holding an informational meeting. The Board did, however, waive the requirement that the informational meeting be held not less than 30 days prior to the filing of their generating certificate applications.

On November 2, 2021, the Applicants filed with the Board applications and exhibits for a certificate of public convenience, use and necessity pursuant to Iowa Code chapter 476A. Duane Arnold Solar I requested a generating certificate for a proposed 50 megawatt (MW) alternating current solar photovoltaic electric generating facility. Duane Arnold Solar II requested a generating certificate for a proposed 150 MW alternating current solar photovoltaic electric generating facility and a 75 MW (300 MWh) battery energy storage system (BESS). With their applications, each Applicant filed a request to waive portions of Iowa Code §§ 476A.4 and 476A.5 and Board rules 199 IAC 24.6, 24.8, and 24.9, which provide, among other things, the requirement for a hearing.

Also on November 2, 2021, each Applicant filed a request to hold a joint public informational meeting. On November 12, 2021, the Board issued a letter scheduling the informational meeting and directing the Applicants to file certain information prior to the informational meeting, including a copy of the informational meeting presentation, the names of the company presenters, and proof of published notice. The Applicants filed the requested information. The informational meeting was held at 6 p.m. Tuesday, December 14, 2021, at the Hawkeye Downs Expo Center in Cedar Rapids, Iowa. A transcript of the informational meeting was uploaded into the Board's electronic filing system (EFS) on January 12, 2022. On January 28, 2022, the Applicants filed

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supplemental information in response to certain questions posed during the informational meeting.

On November 22, 2021, the Office of Consumer Advocate (OCA), a division of the Iowa Department of Justice, filed a response to the applications. With respect to the Applicants' request to waive the hearing, OCA stated the Board should defer ruling on the waiver request until after the informational meeting occurred and the public was afforded an opportunity to submit objections and comments. OCA recommended the Board establish a limited procedural schedule that included deadlines for requesting intervention and filing comments.

On December 10 and 14, 2021, the Board issued initial review orders, as required by subrule 24.5(1), in Docket Nos. GCU-2021-0002 and GCU-2021-0003, respectively. Subrule 24.5(1) provides that upon the filing of an application for a generating certificate, the Board must "make an initial review thereof to determine if it is in substantial compliance" with the governing statutes and rules. In each order, the Board identified additional information that the Applicants were required to file to create a substantially complete application.

On January 10, 2022, the Applicants filed the additional information requested by the Board's December 10 and 14, 2021 orders. On February 14, 2022, the Applicants filed amended applications and exhibits.

On March 18, 2022, the Board issued an order finding the applications to be substantially complete and accepted the applications pursuant to subrule 24.5(3). With respect to the Applicants' request to waive the hearings, the Board found OCA's November 22, 2021 recommendation to be reasonable and, consequently, stated the

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Board would defer consideration of the Applicants' waiver requests until the public had an opportunity to file for intervention and file comments or objections. The Board set April 7, 2022, as the deadline to submit comments or objections and April 14, 2022, as the deadline to file requests to intervene.

Requests to intervene have been filed in both dockets by the Environmental Law & Policy Center and Iowa Environmental Council, the Linn Clean Energy District, and Interstate Power and Light Company (IPL). On April 1, 2022, the Board granted each intervention request.

Through April 2022, more than 350 comments have been filed in the above-captioned dockets in support of or objecting to the Applicants' proposed projects. On April 14, 2022, OCA filed a response to the comments. OCA noted that several commenters, including adjacent landowners, raised issues relating to land values and whether the construction of a utility-scale solar plant is a reasonable use of agricultural land. Replying to these types of concerns, OCA stated that the Iowa Legislature considered, but did not act, on a bill that would have restricted the construction of utility-scale solar facilities on agricultural lands and, absent such a statutory restriction, concluded that the use of privately owned agricultural land obtained entirely through voluntary easements is reasonable. While recognizing the concerns raised by these commenters, OCA opined that the Applicants' submitted information appeared to demonstrate that the proposed projects are consistent with reasonable land use and with the reasonable use of air, land, and water resources. Finally, with respect to the Applicants' request to waive the hearing, OCA stated the Applicants filed sufficient

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information to permit the Board to analyze the proposed projects under the relevant statutory and regulatory factors without conducting a contested case proceeding.

On April 14, 2022, the Applicants filed a response to the comments and supplemental information concerning the proposed 161 kV Gen-Tie Line<sup>1</sup> and the Midcontinent Independent System Operator, Inc. (MISO), study process for the projects. With respect to the Gen-Tie Line, the Applicants stated the proposed projects will share the collector station and the 0.55-mile, 161 kV Gen-Tie Line, which will interconnect the Duane Arnold 161 kV substation with the projects. With respect to the MISO activities, the Applicants stated:

On March 31, 2022, Duane Arnold Solar II filed an updated interconnection request with MISO to reflect the shared facilities. Duane Arnold Solar II has withdrawn replacement interconnection queues R1006 (350 MW Solar), R1007 (60 MW BESS), and R1012 (15 MW BESS) and been assigned queues R1020 (200 MW solar and 75 MW BESS). MISO considers the interconnection request a re-submission of the withdrawn replacement interconnection queues. The March 31 filing re-organizes the interconnection requests into a single request. MISO will expedite the replacement interconnection process, given that the finished studies of R1006, R1007, and R1012 have shown no adverse impact on the transmission system, consistent with 199 IAC 24.4(1)(h).

The Applicants further state that the Large Generator Interconnection Agreement was modified to reflect the shared facilities and that the agreement is expected to be executed during the fourth quarter of 2022, depending upon the needs of the 90-day facility study, which is currently being discussed by the interconnection customer, transmission owner, and MISO. The Applicants' responses to comments will be discussed in greater detail below.

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<sup>1</sup> A Gen-Tie Line is a line that connects generation resources to the transmission grid. Heidi Werntz, *Let's Make a Deal: Negotiated Rates for Merchant Transmission*, 28 Pace Env'tl. L. Rev. 421, 477 (2011).

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## DESCRIPTION OF PROJECTS

The Applicants state that they each are wholly owned, indirect subsidiaries of NextEra Energy Resources, LLC (NEER), which is an affiliate of NextEra Energy, Inc. The Applicants state that as of the date their amended applications were filed, NEER owns and operates 11 renewable generation projects in Iowa with approximately 1,200 MW of generating capacity. According to the Applicants, the majority of the energy generated by NEER's Iowa projects is purchased by Iowa investor-owned utilities, rural electric cooperatives, and municipal utilities.

The Applicants state that both companies will develop, design, permit, and construct their respective project and, upon the projects' completion, IPL will purchase 100 percent of the projects' ownership. Thus, following closing and transfer of the generating certificates, both projects will be owned by IPL.

Duane Arnold Solar I requests a generating certificate for a proposed 50 MW alternating current photovoltaic solar generating facility located in Linn County. This proposed project will be located on 316 acres of agricultural land located within an 857-acre project site. Duane Arnold Solar II requests a generating certificate for a proposed 150 MW alternating current photovoltaic solar generating facility and proposed 75 MW BESS located in Linn County. This proposed project will be located on approximately 815 acres located within a 1,780-acre project site.

With respect to the proposed solar generating facilities, Duane Arnold Solar I anticipates its project will include approximately 2,050 single-axis, horizontal tracker mounting systems with between 120,000 and 129,000 solar panels. Duane Arnold Solar II anticipates its project will include approximately 5,200 single-axis, horizontal

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tracker mounting systems with between 370,000 and 380,000 solar panels. The panels will convert sunlight to electric current as the tracking system follows the sun during the day. The Applicants anticipate the panels will be located at least 15 feet from the project fence line, and the fence line setback ranges from 50 feet to 80 feet from any non-participating landowner property and at least 300 feet from any non-participating landowner dwelling. The Applicants propose using underground 34.56 kV collector circuits, which eliminates interference with above-ground infrastructure and would not have a shading impact on the panels.

With respect to the BESS, Duane Arnold Solar II states the project will consist of 96 containers with space for an additional 48 battery containers for use in the future as the capacity of the original batteries diminishes over time. The BESS's total proposed footprint is approximately 2.75 acres. Duane Arnold Solar II states that the combined power from its proposed 150 MW solar generating facility and 75 MW BESS would not increase beyond 225 MW as the batteries will serve to complement the solar facility by smoothing, shifting, and firming the solar generation.

The Applicants state the primary materials used for the projects will be steel, aluminum, copper, and glass, and that the projects will not result in the creation of a significant amount of waste once constructed.

### **REQUESTS FOR WAIVER**

The Applicants request the Board waive certain portions of Iowa Code § 476A.4 concerning the hearing scheduling and notices, and Iowa Code § 476A.5, which

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concerns the hearing proceedings. The Applicants also request the Board waive the following administrative rules:

- **Rule 24.6**, which requires the issuance of a procedural schedule, including a hearing, once the Board accepts an application.
- **Rule 24.8**, which sets forth the hearing procedures.
- **Rule 24.9**, which provides the option for separate hearings on separate issues.

In support of their request, the Applicants state that no party or regulatory agency has opposed their waiver request and note that OCA specifically asserted that the docket contained sufficient information to allow the Board to analyze the proposed project without conducting a contested case. The Applicants further state that the proposed projects will be sited on land acquired through 100 percent voluntary easements and that the power of eminent domain is not being sought. The Applicants further contend that the Board has provided ample opportunities for interested persons to learn about the proposed projects and to file comments. Consequently, the Applicants conclude that granting their waiver requests would not prejudice the substantial legal rights of any person and that the equal protection of the public interest has been afforded by means other than a hearing.

Iowa Code § 476A.15 provides the Board with the authority to waive any of the requirements of Iowa Code chapter 476A “if it determines that the public interest will not be adversely affected . . . .” Similarly, rule 24.15 provides that the Board may waive any provision of chapter 24 “if it determines that the public interest would not be adversely affected . . . .” In determining whether the waiver would adversely affect the public interest, the Board may consider the purpose and type of facility, whether the facility is

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for the applicant's own needs, the facility's effect on existing transmission systems, and any other relevant factors. *Id.*

A. *Public Interest.* With respect to the public interest, rule 24.15 provides several factors the Board may consider when determining whether the issuance of a waiver will adversely affect the public interest. The Board is to consider the purpose of the facility, the type of facility, how the produced energy is used, and the effects of the facility on the existing transmission system. Additionally, because the waiver concerns the hearing requirement, the Board must consider whether a hearing would assist in its consideration of whether to issue a generating certificate.

Iowa Code § 476A.6 provides that the Board "shall"<sup>2</sup> issue a generating certificate if the Board finds the following elements: (1) the facility's services and operations are consistent with the legislative intent expressed in § 476.53 and the state's economic development policies and will not be detrimental to the provision of adequate and reliable electric service; (2) the applicant is willing to construct, operate, and maintain the facility pursuant to the provisions that are included in the certificate and Iowa Code chapter 476A, subchapter I; and (3) the construction, operation, and maintenance of the facility will be consistent with reasonable land use and environmental policies. In determining whether the "consistent with reasonable land use and environmental policies" factor is met, the Board may consider whether any adverse impacts caused by the construction, operation, and maintenance of the facility

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<sup>2</sup> According to Iowa Code § 4.1(30)(a), as used in the Iowa Code, the term "shall" imposes a duty. The Iowa Supreme Court has further "interpreted the term 'shall' in a statute to create a mandatory duty, not discretion." *State v. Klawonn*, 609 N.W.2d 515, 521-22 (Iowa 2000).

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are reduced to a reasonably acceptable level, whether the proposed site represents a reasonable choice, and whether the proposed facility complies with local zoning requirements. 199 IAC 24.10(2)(b). If these elements are established, a generating certificate **shall be issued** to the applicant . . . .” Iowa Code § 476A.6 (emphasis added).

Having reviewed the extensive information filed by the Applicants and the numerous comments filed in opposition to and in support of the proposed projects, the Board does not consider a hearing to be necessary to assist in its consideration of the § 476A.6 factors. The Board has provided numerous comment opportunities and, in response, as of the date of this order, more than 350 comments and objections have been filed. As correctly observed by OCA, many of the objections and comments raised concerns that are not germane to the factors set forth by Iowa law that the Board must consider.

For example, many commenters expressed opposition to the use of eminent domain and the use of high-quality farmland for non-farming purposes. During the 2022 Iowa Legislative Session, Iowa lawmakers considered legislation that would have prevented the installation of utility-scale solar energy facilities on agricultural land unless each of the following findings was met: (1) the agricultural land had an average corn suitability rating (CSR) of 65 or lower, (2) the solar energy facility is not less than one-half mile distance from another utility-scale solar facility, and (3) the solar energy facility is not less than 1,250 feet from the nearest residence. (Senate File 2321.) However, this legislation was not enacted, and no commenter or objector has presented the Board with any law that prohibits a landowner from voluntarily agreeing to an easement for the

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construction and operation of a utility-scale solar facility on that landowner's own property — even if that property has a high CSR.

The Applicants have not sought the power of eminent domain and all landowners approved and consented to the use of their land for the proposed projects.

Under Iowa Code § 476A.15 and 199 IAC 24.15, the Board finds that the public interest will not be adversely affected by waiving the hearing requirements contained in §§ 476A.4 and 476A.5 and Board rules 24.6, 24.8, and 24.9. The Board provided numerous opportunities for the public and interested persons to submit comments and objections regarding the proposed projects, numerous comments and objections have been filed, and the Board has reviewed and considered the same.

*B. Rule 1.3.* Next, the Board considers the Applicants' waiver requests under the four criteria enumerated within rule 1.3. The first criterion requires the Applicants to establish that application of the rules would pose an undue hardship. The Applicants contend that requiring a hearing in this matter would cause delays in procurement and construction that are unnecessary given the extensive material and information they filed and given the amount of public comment opportunities. This delay, according to the Applicants, would cause them hardship that is unwarranted, given no party has objected to waiver of the hearing and given they have obtained all necessary easements.

The second rule 1.3 element concerns whether the waiver would prejudice the substantial legal rights of another person. On this point, it is important to note that the Applicants have not sought eminent domain and all landowners whose land will be used for the proposed project have agreed to the use of their land. Further, the Board

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allowed for the submission of objections and comments. The Applicants and the Board also held an informational meeting so that interested persons could obtain additional information about the project. The Applicants' informational meeting presentation materials and a transcript of the informational meeting have been filed in these dockets. Given the number of opportunities that have been provided for interested persons to learn about these proposed projects and to file comments and other documents in support of or against the proposed project, the Board finds that granting the waiver of the hearing would not prejudice the substantial legal rights of other persons.

Third, the Board finds the provisions for which waivers are requested are not mandated by law. While Iowa Code §§ 476A.4 and 476A.5 normally require a hearing prior to the issuance of a generating certificate, the Legislature delegated authority to the Board to waive the hearing requirement. See Iowa Code § 476A.15. The Board has found that the public interest will not be adversely affected by waiver of the hearing requirements in §§ 476A.4 and 476A.5. This element of rule 1.3 has been met.

Finally, the Board must examine whether the substantially equal protection of public health, safety, and welfare may be afforded by means other than through a hearing. The Board has previously found that the reasons for holding a generating certificate hearing include providing the affected public and regulatory agencies an opportunity to submit information to the Board and allowing the facility to present information from which the Board may apply the § 476A.6 decision criteria. See *In re Holliday Creek Solar, LLC*, Docket No. GCU-2020-0001, "Order Granting Petition for Intervention, Request for Waivers, and Application for a Certificate of Public Convenience, Use and Necessity under Iowa Code chapter 476A," p. 12 (Feb. 3, 2021).

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Because the Board has provided other opportunities for the public to present information for the Board's consideration, the Board finds that the equal protection of public health, safety, and welfare will be afforded by means other than through a hearing.

As noted above, through the informational meeting and public filings in the above-captioned dockets, individuals affected by or simply interested in the proposed projects have been afforded the opportunity to receive information regarding the projects and to file comments and objections with the Board. Further, the Applicants are not seeking the power of eminent domain, having secured all necessary land agreements for the projects. Given the extensive and encompassing material filed by the Applicants, the parties, and the public, the Board finds the dockets contain sufficient information to allow the Board to analyze the proposed projects under the § 476A.6 factors. For these reasons, the Board finds the Applicants sufficiently supported their requests under rules 1.3 and 24.15 to waive the statutory provisions and rules relating to the hearing. Because the Board is waiving the hearing, a procedural schedule is unnecessary and the Board will waive those requirements. Therefore, the Board will grant the Applicants' requests to waive Iowa Code §§ 476A.4 and 476A.5 and Board rules 24.6, 24.8, and 24.9.

### **APPLICATION FOR GENERATING CERTIFICATE**

In relevant part, § 476A.2(1) provides "a person shall not commence to construct a facility except as provided in section 476A.9 unless a certificate has been issued by the board." Duane Arnold Solar I requests the Board issue it a generating certificate to

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construct a proposed 50 MW solar facility, and Duane Arnold Solar II requests the Board issue it a generating certificate to construct a proposed 150 MW solar facility and a 75 MW BESS. According to § 476A.6, the Board shall issue a generating certificate if the Board finds all of the following:

(1) The services and operations resulting from the construction of the facility are consistent with legislative intent as expressed in section 476.53 and the economic development policy of the state as expressed in Title I, subtitle 5, and will not be detrimental to the provision of adequate and reliable electric service.

(2) The applicant is willing to construct, maintain, and operate the facility pursuant to the provisions of the certificate and this subchapter.

(3) The construction, maintenance, and operation of the facility will be consistent with reasonable land use and environmental policies and consonant with reasonable utilization of air, land, and water resources, considering available technology and the economics of available alternatives.

In the interest of clarity, each will be discussed in turn.

1. *Legislative Intent/Economic Development/Adequate and Reliable Service.*

The Board finds that the Applicants' proposed solar and BESS projects are consistent with multiple statutory provisions expressing legislative intent and policies of this state. In § 476.53(1), the Legislature unequivocally expressed its intent to encourage electric generating facilities. Specifically, this statute provides that "[i]t is the intent of the general assembly to attract the development of electric power generating and transmission facilities within the state in sufficient quantity to ensure reliable electric service to Iowa consumers and provide economic benefits to the state." This statutory provision also states that it is the Legislature's intent for lower carbon-emitting electric

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generating facilities “to facilitate the transition to a carbon-constrained environment.”

The Applicants’ proposed projects are consistent with both of these state policy goals.

Additionally, Iowa Code § 476.41 provides that “[i]t is the policy of this state to encourage the development of alternative energy production facilities . . . in order to conserve our finite and expensive energy resources and to provide for their most efficient use.” Solar facilities fall within the definition of “alternative energy production facilities.” Therefore, the Applicants’ proposed facilities are consistent with the expressed state policy objectives in § 476.41.

The Applicants submitted information suggesting the proposed projects will also provide long-term and short-term economic benefits to Linn County and the state. In support of its application, Duane Arnold Solar I filed an economic analysis performed by Dr. David G. Loomis, a Professor of Economics at Illinois State University. Dr. Loomis opined that during the construction of the facility and the life of the project, the following jobs will be created:

- Between 101 and 123 new local jobs will be created for Linn County
- Between 216 and 265 new jobs will be created for the state of Iowa
- Between 4.0 and 4.3 long-term, full-time equivalent positions will be created for Linn County
- Between 5.1 and 5.6 long-term, full-time equivalent positions will be created for the state of Iowa

Dr. Loomis further opined that the aforementioned new jobs will result in the following earning benefits:

- Between \$6.7 million and \$8.2 million in new construction earnings for Linn County

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- Between \$12.7 million and \$15.6 million in new construction earnings for the state of Iowa
- Between \$6.8 million and \$7.3 million in new long-term earnings over the life of the project for Linn County
- Between \$8.3 million and \$9.1 million in new long-term earnings over the life of the project for the state of Iowa

Dr. Loomis anticipates the following output benefits<sup>3</sup>:

- Between \$14.9 million and \$18.2 million in new local output during construction for Linn County
- Between \$29.1 million and \$35.6 million in new output during construction for the state of Iowa
- Between \$19.5 million and \$21.2 million in new long-term output over the life of the project for Linn County
- Between \$25.1 million and \$28.0 million in new long-term output over the life of the project for the state of Iowa

Finally, Dr. Loomis anticipates between \$1.77 million and \$1.78 million in property taxes in total for all taxing districts over the life of the Duane Arnold Solar I project.

Duane Arnold Solar II filed a similar economic analysis in support of its application. With respect to the Duane Arnold Solar II project, Dr. Loomis opined that during the construction of the facility and the life of the project, the following jobs will be created:

- Between 321 and 374 new local jobs will be created for Linn County
- Between 687 and 800 new jobs will be created for the state of Iowa
- Between 10.1 and 11.2 long-term, full-time equivalent positions will be created for Linn County

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<sup>3</sup> As the Applicants explain, the “earnings” calculation only considers salary and benefits to the workers while “output” also considers landowner lease payments, tax revenue, and other benefits to the local and state economies.

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- Between 14.6 and 16.4 long-term, full-time equivalent positions will be created for the state of Iowa

Dr. Loomis further opined that the aforementioned new jobs will result in the following earning benefits:

- Between \$21.7 million and \$25.4 million in new construction earnings for Linn County
- Between \$41.0 million and \$47.9 million in new construction earnings for the state of Iowa
- Between \$16.7 million and \$18.5 million in new long-term earnings over the life of the project for Linn County
- Between \$22.9 million and \$25.9 million in new long-term earnings over the life of the project for the state of Iowa

Dr. Loomis anticipates the following output benefits:

- Between \$47.3 million and \$55.1 million in new local output during construction for Linn County
- Between \$92.4 million and \$107.6 million in new output during construction for the state of Iowa
- Between \$54.4 million and \$60.4 million in new long-term output over the life of the project for Linn County
- Between \$78.8 and \$89.2 million in new long-term output over the life of the project for the state of Iowa

Dr. Loomis anticipates between \$5.39 million and \$5.42 million in property taxes in total for all taxing districts over the life of the project.

Finally, in their April 14, 2022 supplemental filing, the Applicants explained that the projects will share a collector substation and a proposed 161 kV Gen-Tie Line. The Applicants state the projects will interconnect with the Duane Arnold 161 kV substation

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via the shared 161 kV Gen-Tie Line and will have no adverse impact on the transmission system.

Because the Applicants' proposed projects are consistent with legislative intent and the economic development policies of this state, and will not be detrimental to the provision of adequate and reliable electric service, the Board finds the first § 476A.6 decision criterion is established.

2. *Construction, Operation, and Maintenance.*

The second factor requires the Board to examine whether the Applicants will construct, maintain, and operate the facility pursuant to the provisions of the certificate and Iowa Code chapter 476A. As a condition of the generating certificate, the Applicants will be required to comply with all provisions of the certificate and of Iowa Code chapter 476A, subchapter I, in the construction, maintenance, and operation<sup>4</sup> of the facility. Therefore, the Board finds the second § 476A.6 factor is established.

3. *Land Use and Environmental Policies.*

The final factor requires the Board to determine whether the “construction, maintenance, and operation of the facility will be consistent with reasonable land use and environmental policies and consonant with reasonable utilization of air, land, and water resources, considering available technology and the economics of available alternatives.” In considering this factor, the Board also considers whether the adverse impacts of the proposed facility have been reduced to a reasonable level, whether the

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<sup>4</sup> In their applications, the Applicants expressed their intent to sell their respective projects to IPL upon the completion of the projects; however, any such certificate transfer requires Board approval and would require the receiving party to “agree to comply with the terms of the certificate including any amendments to the certificate.” Iowa Admin. Code. r. 199—24.12(3).

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site represents a reasonable choice among available options, and whether the proposed facility complies with local zoning and other requirements. 199 IAC 24.10(2)(b). The Board will address the factors most relevant to this matter.

*a. Site Selection.*

As noted above, several objectors raised concern with the site selection process and locating the site on productive farmland.

The Applicants identify the existing transmission and injection capacity as significant factors that weighed in favor of the proposed site. Further, using approximately five years of on-site measurement data and 24 years of satellite data, the Applicants concluded the site was suitable for solar development. Other factors considered by the Applicants in determining site location included the willingness of landowners to enter into voluntary easements and that geotechnical studies and topographical surveys revealed no issues with the land that would preclude construction. The Applicants further considered environmental factors, including potential impacts to animals, wetlands, waterways, trees, and critical habitats.

Pursuant to rule 24.10(2)(b)(2), the pertinent inquiry is whether the proposed site selected “represents a reasonable choice among available alternatives.” The Applicants’ proposed site location decisions are based on reasoned and rational grounds, and, consequently, constitutes a reasonable choice.

*b. Adverse Impacts.*

Several commenters raised potential concerns about the construction, maintenance, and operation of the proposed projects. These potential adverse impacts include glare, sound, damage to drainage tiles, and loss of land value.

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With respect to glare, Duane Arnold Solar I conducted a glare study, which was attached to its application as Revised Exhibit T. Given the rest angle the project will use for all solar arrays, the report concluded that “there is not predicted glare from the Project at any flight path, the Eastern Iowa Airport control tower, or non-participating residences or public roads located within 2,000 feet of the project” (Duane Arnold Solar I Application, Revised Ex. T, p. 1). Duane Arnold Solar II attached its glare study to its application as Revised Exhibit S. According to the report, at the solar array rest angle that will be used for that project, no non-participating land owner will be affected by glare and there is no predicted glare from the project flight path, the Eastern Iowa Airport control tower, or public roads within 2,000 feet of the project. (Duane Arnold Solar II Application, Revised Ex. S, p. 1).

Concerning potential sound impacts, Duane Arnold Solar I conducted a sound study, which was attached to its application as Revised Exhibit O, and Duane Arnold Solar II conducted a sound study, which was attached to its application as Revised Exhibit N. According to these studies, solar generating facilities only emit sound from the inverters during daytime hours; when the sun is not shining on the solar panels, the inverters do not produce any operational sounds. Further, the Applicants state the proposed projects will utilize extremely low-impact generation technology with very little sound impact. During operational times, the Applicants anticipate a sound range from 31 to 39 dBA at homes near the Duane Arnold Solar I project and a sound range from 24 to 47 dBA at homes near the Duane Arnold Solar II project. By way of comparison, the Applicants state that sounds at these levels are comparable to the sound levels inside a library or from a soft whisper at three feet.

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Concerns have also been expressed regarding potential impacts the projects may have on existing drain tiles. In response, the Applicants state that the county does not have any drain tile records and that the landowners also do not have any maps or records identifying the location of existing tile systems. The Applicants assert that they will seek to locate any existing tile systems by first reviewing aerial photography and meeting with landowners. The Applicants state that if existing tile systems cannot be accurately determined through these efforts, they will attempt to physically locate.

Once the tile systems have been located, the Applicants state that major tile channels will be avoided during construction to the extent possible. If impacts to major channels are unavoidable, the Applicants state they will reroute the tile line. The Applicants further state they will repair or replace any damaged tile.

Several commenters expressed concern that the projects will adversely affect property values. For example, an entity referred to as the Longview Estates Homeowners Association (LEHA) filed a copy of a letter it submitted to the Linn County Board of Supervisors. To the letter, LEHA attached a document titled "Property Value Study," which appears to be a letter signed by a real estate appraiser from Paris, Kentucky, and addressed to Kentucky state Senator Paul Hornback, regarding the approval of solar facilities in the state of Kentucky. The "Property Value Study" does not mention the projects subject of this proceeding and provides no analysis or opinion on the issue of whether the Applicants' proposed project will adversely affect property values.

Duane Arnold Solar I attached to its application a market impact analysis as Exhibit N, and Duane Arnold Solar II attached a similar report to its application as

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Exhibit M. The analyses were prepared by Michael MaRous, who states he has appraised more than \$15 billion worth of primarily investment-grade real estate in more than 25 states. Mr. MaRous holds a professional certification as a real estate appraiser in several states, including Iowa. The analyses concluded as follows:

As a result of the market impact analysis undertaken, the conclusion made is that there is no market data indicating the project will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, market data from Iowa, specifically, also supports the conclusion that the project will not have a negative impact on rural residential or agricultural property values in the surrounding area. For agricultural properties that host photovoltaic panels, the additional income from the solar lease may increase the value and marketability of those properties.

(Duane Arnold Solar I Application, Ex. N, pp. 2-3; Duane Arnold Solar II Application, Ex. M, pp. 2-3.) The conclusions expressed in the analyses were based on a number of facts and factors, including a survey of county assessors in seven counties within Iowa in which solar farms are located which “determined that there was no market evidence to support a negative impact upon residential property values as a result of the development of and the proximity to a solar farm, and that there were no reductions in assessed valuations.” *Id.* Similar county assessor surveys were undertaken with the same results in the following states: six counties in Illinois, 11 counties in Wisconsin, nine counties in Indiana, five counties in North Carolina, and 13 counties in Maryland. *Id.*

Based on the evidence filed in the dockets, the Applicants demonstrated that any adverse impacts attendant to the construction, maintenance, and operation of the projects have been reduced to a reasonable, acceptable level.

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*c. Environmental Considerations.*

With their applications, the Applicants provided biological habitat assessments. (Duane Arnold Solar I Application, Ex. Q; Duane Arnold Solar II Application, Ex. P). The Applicants state that the projects are proposed to be sited primarily in cultivated cropland areas to minimize, if not entirely avoid, impacts to environmental resources. With respect to the threatened animal and plant species identified that have the potential of occurring in the project areas, the Applicants state the proposed projects are not anticipated to impact these species.

In response to commenter concerns regarding the potential impact to bald eagles, the Applicants state the United States Fish and Wildlife Services recommends a buffer of at least 660 feet (200 meters) between any bald eagle active or alternative nests. The Applicants state that pursuant to surveys conducted in 2022, all eagle nests remain at least 1,000 feet from all project fence lines.

Duane Arnold Solar I states that the Iowa Department of Natural Resources (IDNR) performed an environmental review, which did not indicate the known presence of state threatened, endangered, or special concern species in the project area. Duane Arnold Solar II states the IDNR environmental review identified one occurrence of an ornate box turtle near the project area (within one mile). IDNR recommended a number of measures to minimize potential impacts on the ornate box turtle, including checking for suitable habitat in the project area prior to construction, conducting pre-construction surveys 30 days prior to any soil-disturbance activities in areas with potential habitat, mowing (six inches or less) as needed through construction to enhance turtle observation, conducting a daily visual at the beginning of each workday of all areas to

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be disturbed that day, and having heightened awareness of turtles crossing roads between the months of April and September. Duane Arnold Solar II states it will implement IDNR's recommendations.

Concerns have also been raised regarding project decommissioning. With their amended applications, Duane Arnold Solar I filed its Decommissioning Plan as Revised Exhibit S, and Duane Arnold Solar II filed its Decommissioning Plan as Revised Exhibit R. The Applicants state that when the projects cease operation, the project facilities will be dismantled and the site will be restored to its pre-construction condition. To the extent possible, the Applicants will recondition, resource, or recycle project equipment (e.g., solar panels typically consist of glass, polymer, aluminum, copper, and semiconductor materials that can be recycled). The Applicants state their decommissioning activities will include the following:

- All above-ground equipment will be dismantled and removed
- All above-ground cabling and posts will be removed
- All concrete pads and foundations will be broken up and removed
- Any septic tank will be pumped out, broken up, removed, and backfilled with clean soil
- Underground utilities will be removed or abandoned
- Soil compaction within and contiguous to the facilities, including all internal and external access roads, will be remedied

With respect to the Gen-Tie Line and the collector substation, the Applicants state that decommissioning would occur in the following four stages: (1) dismantling/demolishing all above-ground structures, (2) removal of concrete

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foundations, (3) excavation and removal of soil and broken concrete from the site, and (4) surface contouring to return the disturbed areas to pre-construction conditions.

With respect to the BESS, Duane Arnold Solar II states that all batteries will be removed and recycled and each of the containers will be removed and either refurbished or recycled. All underground cables and duct banks will be removed to a depth of four feet, and all concrete foundations will be removed and replaced with soil.

The Applicants further state that to return the land to its agricultural use, following decommissioning, the Applicants will till the land to break up new vegetation growth, which the Applicants contend will enhance topsoil conditions. The Applicants anticipate the soil condition will be the same, if not better, than it was before the projects.

Finally, with their applications, the Applicants provided emission analyses. (Duane Arnold Solar I Application, Ex. H; Duane Arnold Solar II Application, Ex. I.) As compared to an equivalent coal-fired facility and an equivalent natural gas facility, the Applicants stated that over a 30-year operation, the Duane Arnold Solar I project would reduce CO<sub>2</sub> emissions by approximately 3.14 million metric tons and 1.355 million metric tons, respectively, and the Duane Arnold Solar II project would reduce CO<sub>2</sub> emissions by approximately 9.49 million metric tons and 4.1 million metric tons, respectively. (Duane Arnold Solar I Application, Ex. H, p. 3; Duane Arnold Solar II Application, Ex. I, p. 3.)

As noted above, the final factor the Board must consider under Iowa Code § 476A.6 is whether the “construction, maintenance, and operation of the facility will be consistent with reasonable land use and environmental policies and consonant with reasonable utilization of air, land, and water resources, considering available technology

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and the economics of available alternatives.” In its April 14, 2022 response, OCA states that the proposed projects appear to meet this standard, and the Board agrees.

*d. Local Zoning.*

Finally, 199 IAC 24.10(2)(b)(3) permits the Board to consider whether the proposed projects are compliant with local zoning requirements. Here, Linn County has enacted a comprehensive “utility scale solar installations” ordinance to “encourage utility scale photovoltaic solar installations.” Code of Ordinances of Linn County § 107-117(h)(1). The ordinance requires applicants to submit a major site plan for county review and approval of the utility-scale installation and requires that the area for the utility-scale solar installation be rezoned to the Renewable Energy Overlay Zoning District. *Id.* at § 107-117(h)(2). With respect to site and structure requirements, the ordinance covers the following requirements: setbacks, screening, utility connections, grading, glare minimization, appurtenant structures, floodplain considerations, signage, and fencing and security. *Id.* at § 107-117(h)(4). The ordinance sets requirements to avoid and mitigate damage to public infrastructure (*i.e.*, roads, existing road conditions, and drainage systems). *Id.* at § 107-117(h)(5). The ordinance requires applicants to have “a plan for the operation and maintenance of the solar installation, which shall include measures for maintaining safe access to the installation, stormwater and erosion controls, as well as general procedures for operation and maintenance of the installation.” *Id.* at § 107-117(h)(6). An applicant must also have a decommissioning plan “that describes the anticipated life of the utility scale solar installation; the anticipated manner in which the project will be decommissioned, including plans to recycle components; the anticipated site restoration actions; the estimated

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decommissioning costs in current dollars; and the method for ensuring that funds will be available for decommissioning and restoration.” *Id.* at § 107-117(h)(7). Required restoration activities include restoration of the pre-construction surface grade and soil profile and the revegetation of restored soil areas with “crops, native seed mixes, native tree species, [and] plant species suitable to the area . . . .” *Id.* at § 107-117(h)(7)(c). The ordinance further provides that following a continuous one-year period in which no electricity is generated, or if substantial action on the project is discontinued for a one-year period, the permit holder has one year in which to complete the decommissioning of the installation. *Id.* at § 107-117(h)(7)(d).

The Linn County review and approval process is multi-stepped, with reviews being conducted by the Linn County Technical Review Committee, Linn County Planning and Development staff, and the Linn County Planning and Zoning Commission before being presented to the Linn County Board of Supervisors.

<https://www.linncountyiowa.gov/1525/Utility-Scale-Solar> (last visited on May 18, 2022).

At the initial stage, the Technical Review Committee will review the solar project application for conformance with the ordinance, the county’s comprehensive plan, and other applicable regulations and standards at a public meeting to which the applicant and surrounding landowners are provided notice. *Id.* Following the meeting, Linn County Planning and Development staff are required to prepare a report of the committee’s findings and, if applicable, any recommended conditions for approval. *Id.*

At the next step, the Linn County Planning and Zoning Commission will consider the Technical Review Committee’s recommendations and will consider the application during at least one public meeting. *Id.* The applicant and surrounding landowners are

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to be provided notice of the public meeting and are invited to attend. *Id.* Attending members of the public are permitted to make comments and ask questions, all of which will be entered into the public record. *Id.* In making its decision, the Linn County Planning and Zoning Committee must make findings of facts and conclusion of law regarding whether the application is consistent with the county's comprehensive plan and the ordinance. *Id.*

At the final stage, consideration of the application by the Linn County Board of Supervisors must occur at three public meetings. *Id.* The Board of Supervisors' decision to approve or deny will be based on the standards of review set forth in the ordinance, taking into consideration the recommendations of the Technical Review Committee, the Planning and Zoning Commission, and public comments received. *Id.*

The Board of Supervisors will also consider general rezoning standards, including:

- Whether the proposed project is detrimental to existing agricultural uses
- Whether the proposed project will degrade significant environmental, ecological, or natural resources
- Whether the proposed project achieves densities and uses in agricultural areas, critical natural resources areas, rural residential development areas, and urban service areas as designated in the county's comprehensive plan
- Whether the proposed plan is consistent with the goals, objectives, and strategies of the county's comprehensive plan

*Id.* On February 28, 2022, the Applicants filed a notice in the Board's EFS indicating that they filed their respective permit applications with Linn County on February 24, 2022. Copies of Duane Arnold Solar I's application documents may be viewed at the following Linn County website:

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<https://www.linncountyiowa.gov/1645/Duane-Arnold-Solar-I-LLC> (last visited May 23, 2022). Copies of Duane Arnold Solar II's application documents may be viewed at the following Linn County website: <https://www.linncountyiowa.gov/1646/Duane-Arnold-Solar-II-LLC> (last visited May 23, 2022). In their amended applications, the Applicants assert that the projects "will be constructed in compliance with the [Linn County utility solar ordinance] and with any conditions that may attach to the Linn County zoning permit." (Duane Arnold Solar I Amended Application, p. 16; Duane Arnold Solar II Application, p. 18).

The Applicants also listed other potential regulatory approvals and permits needed for the projects and are working through the processes to obtain such approvals and permits. The approvals may change based upon the project's final design.

*e. Conclusion.*

Based on the discussion above and review of the information provided by the Applicants, the Board finds the proposed facilities meet the third Iowa Code § 476A.6 factor subject to additional conditions discussed below.

If a certificate is issued by the Board to an applicant for a facility, then, under Iowa Code § 476A.8, "a regulatory agency, city or county shall not require any further approval, permit or license for the construction of the facility." The Board recognizes that without the required zoning and other local permits, the project cannot be constructed. The Board will grant the Applicants' applications for certificates of public convenience, use and necessity with the following conditions:

1. The Board will require the Applicants to file final design plans with the Board as soon as they exist. If any portion of the project is ultimately sited in a floodplain, the Applicants shall file with the Board a report identifying

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any additional regulatory permits required, along with copies of any such permits, and a report analyzing flood risks, with a proposed flood mitigation plan. The Applicants shall not construct in a floodplain until the affected entity has obtained any necessary floodplain permits. As this requirement is established herein by the Board, the Applicants may not rely on Iowa Code § 476A.8 to negate the requirement to obtain any required floodplain development permits.

2. The Board will require the Applicants to obtain all necessary zoning approvals and other permits. Neither Applicant shall begin construction until that applicant has obtained all necessary permits. The Applicants shall file all permits obtained in their respective docket. As this requirement is established herein by the Board, neither Applicant may rely on Iowa Code § 476A.8 to negate the requirement to obtain authorizations from other state, city, or county regulatory agencies.
3. The Board will require that the Applicants file status reports every six months until project completion, with updates on its progress in obtaining the necessary permits and construction progress.
4. If construction of a project is not completed within two years from the date the generation certificate is issued, the certificate will expire, and the affected Applicant will need to submit a new application to the Board if it wants to continue to develop the project.

Accordingly, the Board will not issue a certificate to either applicant until the applicant has filed, and the Board has accepted, the final unappealable decision from the Linn County Board of Supervisors approving that applicant's request under the county's utility-scale solar installation ordinance.

Based on the information provided, the Board finds the Applicants presented sufficient information to establish the third § 476A.6 element, subject to compliance with the additional filing requirements. The construction, operation, and maintenance of the facility will be consistent with reasonable land use and environmental policies and consonant with the reasonable use of air, land, and water resources.

## **CONCLUSION**

Having found that the criteria in § 476A.6 are met, the Board will approve the Applicants' applications for certificates of public convenience, use and necessity. An applicant's certificate will not be issued until that applicant has filed, and the Board has accepted, the final unappealable decision from the Linn County Board of Supervisors in response to that applicant's request under the county's utility-scale solar installation ordinance. Duane Arnold Solar I's certificate will be limited to the 50 MW solar generating facility described in this order, and Duane Arnold Solar II's certificate will be limited to the 150 MW solar generating facility and the 75 MW battery energy storage system described in this order. Any increases to total generating capacity or the addition of a storage facility will require the applicant to file for an amendment to the certificate. Additionally, a transfer of the facility to another entity will require Board approval in accordance with Iowa Code § 476A.7(2).

## **ORDERING CLAUSES**

### **IT IS THEREFORE ORDERED:**

1. The February 14, 2022 amended request for waivers filed by Duane Arnold Solar, LLC, and the February 14, 2022 amended request for waivers filed by Duane Arnold Solar II, LLC, relating to a hearing and full procedural schedule are granted.
2. Pursuant to Iowa Code chapter 476A, the amended application for a certificate of public convenience, use and necessity filed by Duane Arnold Solar, LLC, is granted. The certificate will be issued when Duane Arnold Solar, LLC, has filed, and the

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Utilities Board has accepted, the final unappealable decision from the Linn County Board of Supervisors approving Duane Arnold Solar, LLC's, request under the county's utility-scale solar installation ordinance.

3. Pursuant to Iowa Code chapter 476A, the application for a certificate of public convenience, use and necessity filed by Duane Arnold Solar II, LLC, is granted. The certificate will be issued when Duane Arnold Solar II, LLC, has filed, and the Utilities Board has accepted, the final unappealable decision from the Linn County Board of Supervisors approving Duane Arnold Solar II, LLC's, request under the county's utility-scale solar installation ordinance.

4. Prior to starting construction on their respective projects, Duane Arnold Solar, LLC, and Duane Arnold Solar II, LLC, shall file a report describing each project's final design, including whether portions of the projects are sited in floodplain areas; identifying the additional regulatory permits obtained due to the floodplain, if any; and analyzing the flood risks to the project with proposed flood mitigation plan.

5. In addition to the rezoning decision identified in Ordering Clauses 2 and 3, Duane Arnold Solar, LLC, and Duane Arnold Solar II, LLC, shall acquire and maintain all other necessary zoning and other permits. Neither Duane Arnold Solar, LLC, nor Duane Arnold Solar II, LLC, may rely on the issuance of the Certificate of Public Convenience, Use and Necessity and Iowa Code § 476A.8 to avoid obtaining authorizations from other state, city, or county regulatory agencies or zoning authorities as those requirements arise from this Order. Neither Duane Arnold Solar, LLC, nor Duane Arnold Solar II, LLC, shall begin construction until the respective company has obtained all necessary permits. For all permits obtained, Duane Arnold Solar, LLC, and

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Duane Arnold Solar II, LLC, shall file the permits with the Utilities Board in their respective docket within ten days of receipt of such permits.

6. Within 180 days of the date of this order, Duane Arnold Solar, LLC, and Duane Arnold Solar II, LLC, shall file a status report in their respective docket regarding progress toward completion of the project. Each company shall submit additional status reports at least every 180 days thereafter until its project is complete.

7. If construction of either project is not completed within two years of the date of issuance of the certificate, that certificate will expire and Duane Arnold Solar, LLC, or Duane Arnold Solar II, LLC, will be required to submit a new petition with the Utilities Board if it wants to continue to develop its project.

**UTILITIES BOARD**

**Geri Huser** Date: 2022.07.22  
10:10:21 -05'00'

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**Richard Lozier** Date: 2022.07.20  
15:46:08 -05'00'

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ATTEST:

**Kerrilyn Russ** Digitally signed by Kerrilyn Russ  
Date: 2022.07.26 10:05:53  
-05'00'

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**Josh Byrnes** Date: 2022.07.20  
12:38:29 -05'00'

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Dated at Des Moines, Iowa, this 26th day of July, 2022.