Duane Arnold Energy Center

Subsequent License Renewal Environmental Report Pre-Submittal Meeting

October 21, 2026

NEXTera ENERGY
DUANE ARNOLD

Agenda

- Opening Remarks & Introductions
- Background: Overview of the Duane Arnold Energy Center
- Subsequent License Renewal (SLR) Environmental Report (ER) Discussion
- Lessons Learned
- Scheduling and Closing Remarks

Opening Remarks & Introductions

NextEra Energy Duane Arnold

Mike Davis
Licensing Project Manager

Mike Casey
Environmental Radiation Protection Manager

Kaitlyn Watkins
Environmental Services Manager

ENERCON

Jennifer Meek
Environmental Licensing
Lead and Manager

Stacy Burgess
Environmental Licensing
Senior Manager

Overview of Duane Arnold Energy Center

- Duane Arnold Energy Center (DAEC) was designed as a single-unit boiling water reactor (BWR).
- DAEC shut down in 2020 due to market conditions. Restart is planned for Q1 2029.
- The current rated core thermal power is 1,912 MWt, producing a gross electrical output of approximately 610 MWe.
- No refurbishment associated with the SLR is expected.

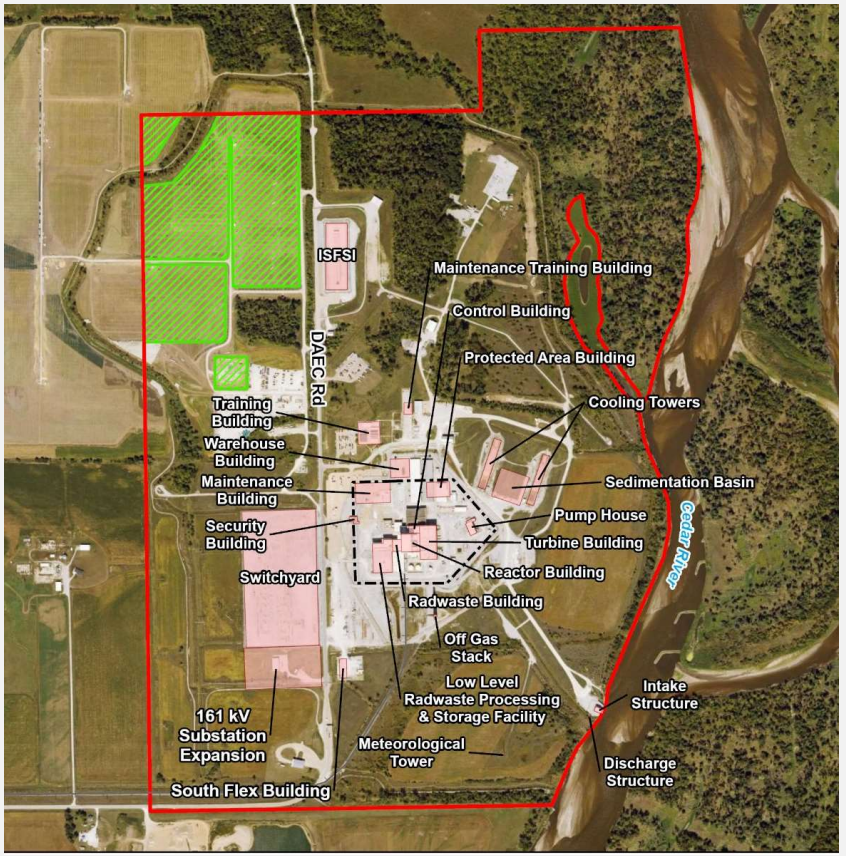


	Operating License	Renewed License	Current License	SLR
DAEC	1974	2014	2034	2054

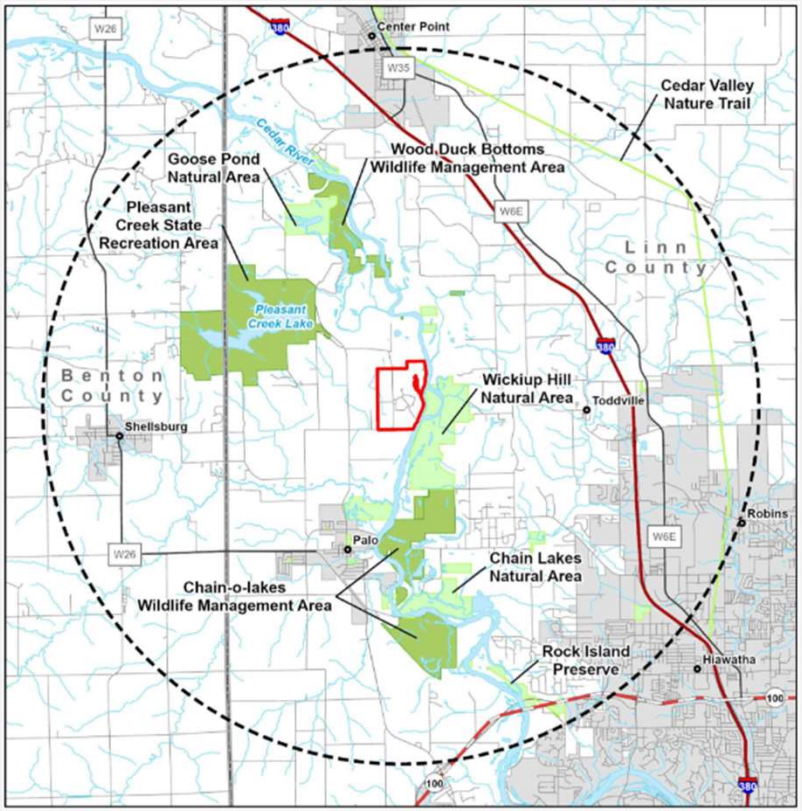
Overview of Duane Arnold Energy Center

- **Property within the site boundary comprises approximately 500 acres.**
- **The plant's exclusion area boundary is defined by the site property line, which is about 2,000 feet from the reactor center point at its nearest point.**
- **DAEC is bounded by a 6-mile low population zone consistent with NRC siting regulations.**





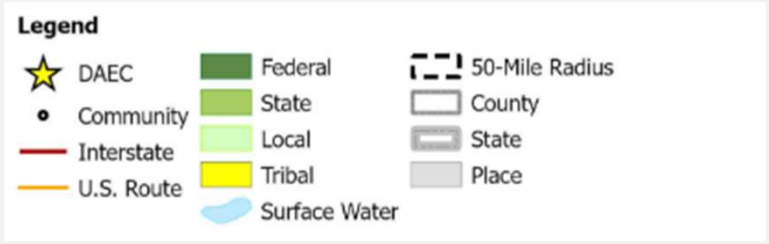
Overview: 6-Mile Vicinity



Legend

- Community
- Local Road
- County Road
- Interstate
- State Highway
- U.S. Route
- Surface Water
- State
- Local
- DAEC Site Boundary
- 6-Mile Radius
- County
- Place

Overview: 50-Mile Region





Environmental Report Discussion



Environmental Report Discussion

- **Regulatory Basis**
- **NUREG-1437, Revision 2 (2024)**
  - Generic Environmental Impact Statement for License Renewal of Nuclear Plants.
- **NUREG-1555, Supplement 1, Revision 2 (2024)**
  - Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan, Operating License Renewal.
- **Regulatory Guide 4.2, Supplement 1, Revision 2 (2024)**
  - Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications.

- **New and Significant Information Assessment**
- **Category 1 Issues**
  - Of the 59 Category 1 issues identified by the NRC in 10 CFR 51, Subpart A, Appendix B, Table B-1, 53 were determined to be applicable to DAEC, and 6 were determined to be non-applicable.
- **New and Significant Emerging Issues**
  - No new and significant emerging issues applicable to the continued operation of DAEC were identified.
- **Severe Accident Mitigation Analyses (SAMAs)**
  - No new SAMAs were found that were significant or potentially cost beneficial

Environmental Report Discussion

- **Major Permits/Authorizations**
  - National Pollutant Discharge Elimination System (NPDES) Permit
  - Clean Water Act (CWA) Section 401 Water Quality Certification
  - Iowa Department of Natural Resources (DNR) Sovereign Lands Construction Permit
  - DAEC is outside of a Coastal Management Zone
- **Consultations and Public Communications**
  - Consultations with agencies and Native American tribes are in progress
  - All responses received will be included in the SLR ER

Environmental Report Discussion

- **Surface and Groundwater**
  - The Cedar River will provide the cooling and service water for DAEC.
  - Potable, sanitary, and demineralized water for the plant will be supplied from four onsite water supply wells set in the bedrock aquifer.
- **Cooling Water System**
  - Cooling water will be provided by two mechanical draft cooling towers with multiple intake pumps, a reinforced concrete intake structure, and various features used to control debris.
- **Alternative Analysis**
  - Natural Gas Combined Cycle
  - Renewables Combination
  - Discrete Onshore Wind
  - Conventional Nuclear
  - Small Modular Reactor
- **Independent Spent Fuel Storage Installation (ISFSI)**
  - The spent fuel pool has sufficient capacity to store spent nuclear fuel through the Subsequent Period of Extended Operation (SPEO).
  - ISFSI holds 60 dry storage casks
  - No plans for ISFSI expansion, but there is sufficient space for expansion

Environmental Report Discussion

Essential Fish Habitat

- No essential fish habitat areas occur in the DAEC action area

Habitat Areas of Concern

- No habitat areas of particular concern occur in the DAEC action area

Critical Habitat

- No final or proposed critical habitat occurs within DAEC's 6-mile radius

Threatened and Endangered Species

- There are six federally listed threatened and endangered or candidate species that potentially occur within the 6-mile radius of DAEC, three of which potentially occur within DAEC's action area

Environmental Report Discussion

- **Onsite Cultural Resource Surveys and Investigations**
  - There are three known archaeological sites within the DAEC boundary. There are an additional four sites located within 1,000 feet of the site boundary. None of them have been determined to be eligible for listing on the National Register of Historic Places (NRHP).
  - There are no anticipated ground disturbing refurbishment or replacement activities during the SPEO.

- **Cultural Resources within the Vicinity**
  - There are 104 known aboveground cultural resources, and 295 archaeological sites within the 6-mile radius of DAEC.
  - Of these, 3 of the aboveground and 2 of the archaeological sites are listed on the NRHP, and 21 more of the above ground and 4 of the archaeological sites have been determined to be eligible for listing.

Environmental Report Lessons Learned

- **Incorporate lessons learned from previously submitted ERs into the DAEC SLR ER:**
  - Early Coordination with Agencies
  - Alternatives Analysis
- **Review and incorporate applicable information into the DAEC SLR ER based on previous NRC LR/SLR ER (as well as the DAEC ER prepared for the restart) Requests for Additional Information (RAIs) and Requests for Confirmation of Information (RCIs).**
- **Allocate sufficient time to test Information Technology (IT) resources and for the NRC to access the portal in support of the SLR ER audit.**

NEDA is on track to submit the DAEC SLR Application (SLRA) in February 2027

- **NEDA will submit a high-quality application which will support efficient staff reviews.**

  - ✓ **Highly knowledgeable team with significant SLR experience**
  - ✓ **Participation in industry working groups and meetings**
  - ✓ **Monitoring on-going applicant processes**
  - ✓ **Reviews of recent applicant RAIs, RCIs, and supplements**

DAEC's SLRA will be consistent with NRC requirements for SLRA, industry practices, and recent precedent


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