

# Duane Arnold Energy Center



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## Safety Information

**Built in a low-risk seismic zone:** Duane Arnold is not located on an ocean and is in a very seismically stable area.

**Constructed to withstand earthquakes:** Despite the low risk from seismic events, the plant is designed to withstand earthquakes and other natural events stronger than ever recorded in the region.

**Protected from flooding:** The plant is elevated 20 feet above river level to protect against flooding.

- » During 2008's historic 500-year flood, the Cedar River crested 14 feet below the plant's design flood level
- » During this event, DAEC was able to continue safe and reliable operations

**Seven-day power supply:** Safety and cooling systems can be powered for seven days without requiring any offsite power or additional fuel.

**Designed with multiple safety systems:** The Nuclear Regulatory Commission has mandated several structural improvements over time, enhancing Duane Arnold's ability to deal with significant events:

- » Four offsite power lines power the site's cooling system
- » Two diesel generators onsite can run for seven days without additional fuel
- » Multiple steam-driven cooling pumps are available to power cooling systems (do not require external power)
- » Back-up batteries for all critical cooling and control room systems are stored onsite
- » External cooling options (i.e. injection and fire pumps) are pre-staged onsite; can use river water for cooling

**Highly trained plant operators:** For one full week out of every six weeks, plant operators must prove their ability to safely operate the plant in a variety of worst-case scenarios that include earthquakes, severe storms, flooding, loss-of-power, and loss of reactor core cooling.

## General Information

The Duane Arnold Energy Center (DAEC) is located in Palo, Iowa, approximately 9 miles northwest of Cedar Rapids. It is bordered by cornfields of neighboring farms and the banks of the Cedar River.

- » **Workforce**  
600 during normal operations; nearly 1,500 during outage operations.
- » **Salaries**  
Approximately \$85 million annually.
- » **Property taxes paid**  
Approximately \$3 million annually.
- » **Construction Permit granted**  
June 1970
- » **Full power operating license**  
February 1974
- » **Commercial operation**  
February 1975

## System Information

PRIMARY SYSTEM	
Reactor Type	One General Electric Boiling Water Reactor with a net electrical output of 615 MWe
Reactor Core	368 fuel assemblies
Reactor Vessel	67' high; 15' wide
Reactor Design	General Electric Mark 1
SECONDARY SYSTEM	
Turbine/Generator	General Electric
Cooling Towers	Mechanical draft type — 2 towers, 12 cells each, makeup water from Cedar River

For More Information:

- [www.nei.org](http://www.nei.org)
- [www.nrc.gov](http://www.nrc.gov)
- [www.radiationanswers.org](http://www.radiationanswers.org)
- [www.epa.gov](http://www.epa.gov)
- [www.NextEraEnergyResources.com](http://www.NextEraEnergyResources.com)