



ALLIANT ENERGY.

IES Utilities Inc.  
Duane Arnold Energy Center  
3277 DAEC Road  
Palo, IA 52324-9785

Office: 319.851.7611  
Fax: 319.851.7986  
www.alliant-energy.com

September 11, 2000

NG-00-1556

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Washington, DC 20555-0001

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Operating License: DPR-49  
August 2000 Monthly Operating Report  
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for August 2000. The report has been prepared in accordance with the guidelines of NRC Generic Letter 97-02: Revised Contents Of The Monthly Operating Report, and distribution has been made in accordance with DAEC Technical Specifications, Section 5.6.4.

Very truly yours,

Richard L. Anderson  
Plant Manager-Nuclear

RLA/RBW

Enclosures

IE24

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cc:

Mr. James E. Dyer  
Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

Ms. Lisa Stump  
Iowa State Utilities Board  
Lucas State Office Building  
Des Moines, IA 50319

Ms. Barbara Lewis  
McGraw-Hill, Inc.  
1200 G Street NW, Suite 1100  
Washington, DC 20005

Dr. William A. Jacobs, Jr.  
GDS Associates, Inc.  
1850 Parkway Place, Suite 720  
Marietta, GA 30068-8237

Mr. Dennis Murdock  
Central Iowa Power Cooperative  
Box 2517  
Cedar Rapids, IA 52406

Mr. Dale Arends  
Corn Belt Power Cooperative  
1300 13th Street North  
Humboldt, IA 50548

Document Control Desk  
INPO Records Center  
700 Galleria Parkway  
Atlanta, GA 30339-5957

Mr. Al Gutterman  
Morgan, Lewis, Bockius  
1800 M St. NW  
Washington, DC 20036-5859

Ms. Brenda Mozafari  
Project Manager  
1 White Flint North  
Mail Stop O-8H2  
11555 Rockville Pike  
Rockville, MD 20852

DOCU

NRC Resident Inspector

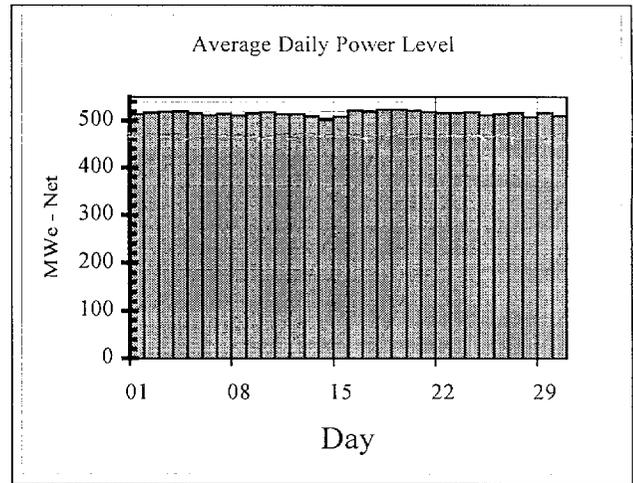
CTS Project

## OPERATING DATA REPORT

DOCKET NO: 50-331  
 DATE: 09/11/2000  
 Unit: Duane Arnold Energy Center  
 COMPLETED BY: Richard Woodward  
 TELEPHONE: (319) 851-7318

### OPERATING STATUS

1. Unit Name: Duane Arnold Energy Center
2. Reporting Period: August 2000
3. Licensed Thermal Power ( $MW_{th}$ ): 1658
4. Nameplate Rating (Gross  $MW_e$  DER): 565.7 (Turbine)
5. Design Electrical Rating (Net  $MW_e$  DER): 538
6. Maximum Dependable Capacity (Gross  $MW_e$  MDC): 550
7. Maximum Dependable Capacity (Net  $MW_e$  MDC): 520
8. If Changes Occur in Capacity Ratings (Items Number 3 through 7) since the last report, Give Reasons: Not Applicable
9. Power Level to Which Restricted, If Any (Net  $MW_e$ ): N/A
10. Reasons for Restrictions, If Any: N/A



		August-00	2000	Cumulative
11.	Hours in Reporting Period	744.0	5,855.0	224,255.0
12.	Number of Hours Reactor Was Critical	744.0	5,714.6	175,452.0
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator On-Line	744.0	5,625.4	171,521.2
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,232,002.5	9,268,110.5	247,658,475.5
17.	Gross Electrical Energy Generated (MWH)	406,004.0	3,107,762.0	83,035,623.6
18.	Net Electrical Energy Generated (MWH)	383,199.4	2,936,061.3	77,995,345.4
19.	Unit Service Factor	100.0%	96.1%	76.5%
20.	Unit Availability Factor	100.0%	96.1%	76.5%
21.	Unit Capacity Factor (Using MDC Net)	99.0%	96.4%	73.1%
22.	Unit Capacity Factor (Using DER Net)	95.7%	93.2%	69.9%
23.	Unit Forced Outage Rate	0.0%	3.9%	8.9%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): None
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

AVERAGE DAILY UNIT POWER LEVEL

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MONTH August 2000

Day	Average Daily Power Level (MWe-Net)
1	514.3
2	517.0
3	519.5
4	520.2
5	516.0
6	512.0
7	515.2
8	510.9
9	516.0
10	517.9
11	514.6
12	514.3
13	509.4
14	501.8
15	508.6
16	521.5
17	520.1
18	523.5
19	523.8
20	521.3
21	519.4
22	516.8
23	517.1
24	518.9
25	512.5
26	515.0
27	516.9
28	508.5
29	516.3
30	510.3
31	497.0

## REFUELING INFORMATION

DOCKET NO: 50-331  
 DATE: 09/11/2000  
 Unit: Duane Arnold Energy Center  
 COMPLETED BY: Richard Woodward  
 TELEPHONE: (319) 851-7318

1. **Name of facility.** Duane Arnold Energy Center
2. **Scheduled date for next refueling shutdown.** Spring, 2001
3. **Scheduled date for restart following refueling.** Summer, 2001
4. **Will refueling or resumption of operation thereafter require a technical specification change or other license amendment?**
  - a. Safety Limit MCPR change
  - b. Standby Liquid Control - Sodium Pentaborate Concentration change
5. **Scheduled date(s) for submitting proposed licensing action and supporting information.**
  - a. January 2001
  - b. September 2000
6. **Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures.** GE 14 fuel design, Maximum Extended Load Line Limit Analysis (MELLA).

7. **Current fuel assemblies inventory**

	Number of Fuel Assemblies	Projected date of last refueling that can be discharged (after allowing margin for maintenance of continuous full-core discharge capability)
Installed into reactor core	368	N/A
Discharged from core to Spent Fuel Storage Pool	1776	N/A
Installed Capacity of Spent Fuel Storage Pool	2411	2001
Licensed Capacity of Spent Fuel Storage Pool (with reracking)	2829	2007
Licensed Capacity of Spent Fuel Storage Pool and Cask Pool (with reracking)	3152	2011

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UNIT SHUTDOWNS AND POWER REDUCTIONS							
REPORT MONTH: August 2000							
(There were no power reductions > 20% during the month.)							
No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause

1 - F: Forced S: Scheduled	2 - Reason A-Equipment Failure (Explain) B-Maintenance or Test C-Refueling D-Regulatory Restriction E-Operator Training & License Examination F-Administrative G-Operational Error (Explain) H-Other (Explain)	3 - Method: 1-Manual 2-Manual Scram 3-Automatic Scram 4-Continued 5-Reduced Load 9-Other (Explain)
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Monthly Operational Overview for August 2000

At the beginning of the month the DAEC had operated 33 days since its most recent shutdown and startup. DAEC operated nearly continuously at full licensed thermal power except for several hot-weather-related 1% - 2% power reductions for maintenance of condenser vacuum. Also, following load-line adjustment on August 28<sup>th</sup>, power was reduced ½ % percent for seven hours to maintain margin to the MAPRAT thermal limit.

<b>Allocation of Production &amp; Losses: August 2000</b>	<b>Electrical Output MWe</b>	<b>Capacity Factor % of 571 MWe (Target Output)</b>	<b>Full Power Equivalent Hours (FPHeq)</b>
<b>Capacity Losses:</b>			
High Condenser Back Pressure Vacuum Alarm: 08/06 11:40 - 15:30, 08/13 17:30 - 22:00, 08/14 11:30 - 20:50, 08/15 12:30 - 17:00, 08/28 19:10 - 22:10, 08/30 16:30 - 22:00, 08/31 11:10 - 24:00	0.51	0.09%	0.66
Control Rod Adjustment: 08/28 00:30 - 01:30	0.01	0.00%	0.01
Maintain Margin to MAPRAT Thermal Limit 08/28 02:30 - 09:30	0.02	0.00%	0.03
Maintain Margin to 1658 MWth Limit	0.17	0.03%	0.22
<b>Efficiency Losses:</b>			
Circ Water System Flow Limitation	3.00	0.53%	3.94
Cooling Tower Low Flow condition	4.30	0.75%	5.58
Steam Cycle Isolation Valve Losses: BV-1	2.30	0.40%	2.98
Other steam cycle isolation losses	0.60	0.11%	0.82
Unidentified Losses	2.39	0.42%	3.12
<b>Average Weather Losses:</b>	<u>+12.00</u>	<u>+2.10%</u>	<u>+15.62</u>
<b>Total On-line Losses:</b>	<b>25.30</b>	<b>4.43%</b>	<b>32.98</b>
<b>Off-Line Losses:</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>
<b>Electric Generation:</b>			
Plant House Loads (while on-line)	30.66	5.37%	39.92
<b>Net Electric Output</b>	<b>+515.04</b>	<b>+90.20%</b>	<b>+671.10</b>
<b>Gross Electric Generation</b>	<b>545.70</b>	<b>95.57%</b>	<b>711.02</b>
<b>Target Electric Output, Total %, Total # of clock-hours</b>	<b>571.00</b>	<b>100.00%</b>	<b>744.00</b>

(There were no Licensee Event Reports submitted for August 2000.)

Licensing Action Summary:

Plant Availability:	100.0%	Unplanned Auto Scrams (while critical) this month:	0
Number of reportable events:	0	Unplanned Auto Scrams (while critical) last 12 months:	2
		Main Steam Safety and Relief Valve Challenges this month:	0