

April 10, 2001

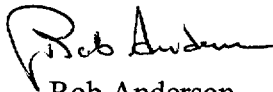
NG-01-0471

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Operating License: DPR-49  
March 2001 Monthly Operating Report  
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for March 2001. 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,



Rob Anderson  
Plant Manager-Nuclear

RA/RBW

Enclosures

IE24

April 10, 2001

NG-01-0471

Page 2 of 2

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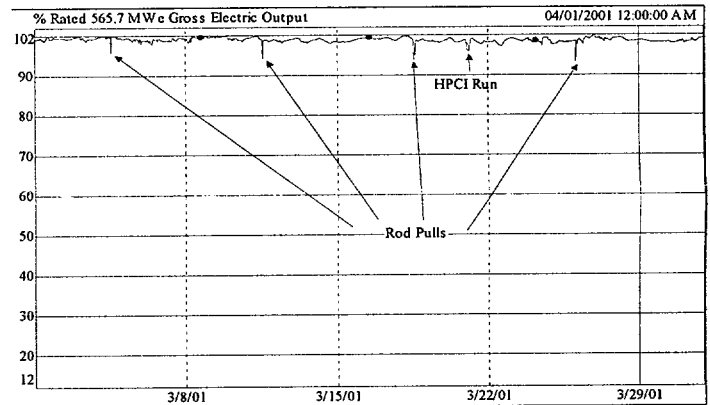
CTS Project

## OPERATING DATA REPORT

DOCKET NO: 50-331  
 DATE: 04/10/2001  
 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: March 2001
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



	Mar-01	2001	Cumulative
11. Hours in Reporting Period	744.0	2,160.0	229,344.0
12. Number of Hours Reactor Was Critical	744.0	2,160.0	180,541.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	744.0	2,160.0	176,610.2
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,232,259.1	3,541,578.7	255,970,081.4
17. Gross Electrical Energy Generated (MWH)	415,721.0	1,196,644.0	85,841,091.6
18. Net Electrical Energy Generated (MWH)	392,651.9	1,130,251.3	80,645,241.4
19. Unit Service Factor	100.0%	100.0%	77.0%
20. Unit Availability Factor	100.0%	100.0%	77.0%
21. Unit Capacity Factor (Using MDC Net)	101.5%	100.6%	73.8%
22. Unit Capacity Factor (Using DER Net)	98.1%	97.3%	70.7%
23. Unit Forced Outage Rate	0.0%	0.0%	8.7%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): Refueling Outage 17, April 13, 2001, 40 days
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

# AVERAGE DAILY UNIT POWER LEVEL

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MONTH March 2001

Day	Average Daily Power Level (MWe-Net)
1	529.3
2	530.0
3	530.8
4	532.6
5	534.0
6	523.2
7	528.8
8	530.7
9	532.0
10	528.5
11	530.1
12	526.0
13	528.0
14	525.7
15	525.5
16	530.2
17	528.9
18	528.8
19	525.8
20	526.0
21	522.4
22	526.3
23	525.3
24	526.1
25	525.2
26	526.6
27	529.2
28	527.1
29	526.9
30	524.3
31	526.1

## REFUELING INFORMATION

DOCKET NO: 50-331  
DATE: 04/10/2001  
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. April 13, 2001
3. Scheduled date for restart following refueling. Spring, 2001
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? No
5. Scheduled date(s) for submitting proposed licensing action and supporting information. N/A
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
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)
In receiving for Reload 17	136	
Installed into reactor core	368	
Discharged from core to Spent Fuel Storage Pool	1776	
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: March 2001

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 March 2001

The DAEC operated at 99% (gross electric) capacity factor during March. The only departures from full licensed thermal power were to perform

- control rod adjustments on the 4<sup>th</sup>, 11<sup>th</sup>, 18<sup>th</sup>, and 26<sup>th</sup>,
- a High Pressure Coolant Injection (HPCI) surveillance on the 20<sup>th</sup>,
- maintenance on the Plant Process Computer the 5<sup>th</sup>.

The total of these capacity losses amounted to less than 1 full-power-hour. Efficiency losses (those occurring at full-licensed limited thermal power operation) in the cooling tower/circ water system and in the steam cycle accounted for approximately 16 full-power-hours. Seasonal weather-related gains reduced efficiency losses by 1 MWe. At the end of the month DAEC had operated 276 days since its most recent start-up.

Allocation of Production & Losses: March 2001	Electrical Output MWe	Capacity Factor % of 571 MWe (Target Output)	Full Power Equivalent Hours (FPeq)
<b>Capacity Losses:</b>			
PPC O-O-S for maintenance: 03/05 12:21 - 13:21	0.02	0.00%	0.02
HPCI Run 03/20 23:27 - 03/21 04:17	0.04	0.01%	0.05
Rod Adjustments: 03/04 12:63 - 13:33, 03/11 13:00 - 13:39, 03/18 12:54 - 14:48, 03/26 02:00 - 02:47	0.09	0.02%	0.12
Maintain Margin to 1658 MWth Limit	0.43	0.08%	0.56
<b>Efficiency Losses:</b>			
Circ Water System Flow Limitation	2.38	0.42%	3.12
Cooling Tower Low Flow condition	9.09	1.59%	11.83
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	- 1.70	- 0.31%	- 2.21
<b>Average (Cold) Weather (GAINS):</b>	(0.97)	(0.17%)	(1.29)
<b>Total On-line Losses:</b>	<b>12.28</b>	<b>2.15%</b>	<b>16.00</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)	30.95	5.42%	40.34
Net Electric Output	<b>+527.78</b>	<b>+92.43%</b>	<b>+687.66</b>
<b>Gross Electric Generation</b>	<b>558.72</b>	<b>97.85%</b>	<b>728.00</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.)

#### 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:	1
		Main Steam Safety and Relief Valve Challenges this month:	0