

July 10, 2001

NG-01-0853

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  
June 2001 Monthly Operating Report  
File: A-118d

Please find enclosed the Duane Arnold Energy Center Monthly Operating Report for June 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

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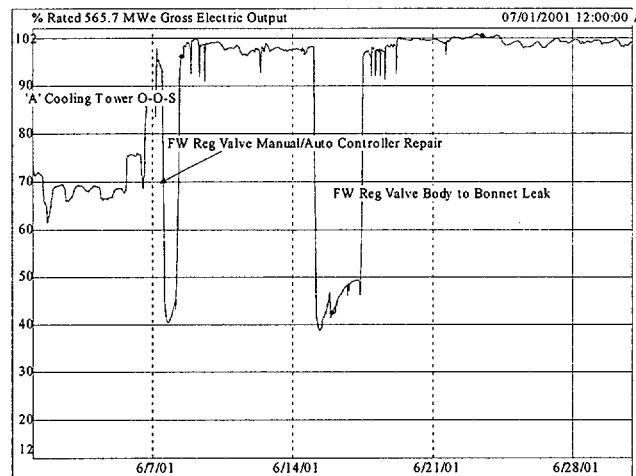
CTS Project

## OPERATING DATA REPORT

DOCKET NO: 50-331  
 DATE: 07/10/2001  
 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: June 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



		Jun-01	2001	Cumulative
11.	Hours in Reporting Period	720.0	4,343.0	231,527.0
12.	Number of Hours Reactor Was Critical	720.0	3,357.1	181,738.1
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator On-Line	720.0	3,278.0	177,728.2
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,068,988.8	5,179,087.0	257,607,589.7
17.	Gross Electrical Energy Generated (MWH)	355,370.0	1,733,606.0	86,378,053.6
18.	Net Electrical Energy Generated (MWH)	334,683.1	1,635,781.1	81,150,771.2
19.	Unit Service Factor	100.0%	75.5%	76.8%
20.	Unit Availability Factor	100.0%	75.5%	76.8%
21.	Unit Capacity Factor (Using MDC Net)	89.4%	72.4%	73.6%
22.	Unit Capacity Factor (Using DER Net)	86.4%	70.0%	70.4%
23.	Unit Forced Outage Rate	0.0%	0.0%	8.6%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of each): N/A
25. If Shutdown at End of Report Period, Estimated Date of Startup: N/A

# AVERAGE DAILY UNIT POWER LEVEL

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MONTH June 2001

Day	Average Daily Power Level (MWe-Net)
1	361.8
2	360.9
3	364.6
4	359.5
5	372.7
6	418.2
7	365.0
8	435.7
9	527.2
10	526.3
11	518.3
12	520.2
13	520.1
14	520.4
15	256.9
16	241.0
17	393.2
18	518.5
19	531.0
20	531.7
21	529.6
22	533.7
23	536.7
24	532.0
25	526.5
26	526.0
27	531.6
28	528.7
29	530.3
30	526.7
31	N/a

## REFUELING INFORMATION

DOCKET NO: 50-331  
DATE: 07/10/2001  
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. Spring 2003
3. Scheduled date for restart following refueling. Spring 2003
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. N/A
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	
Discharged from core to Spent Fuel Storage Pool	1912	
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: June 2001							
No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	Cause
4	06/01/01	S	0 (43.57 full- power-hours equivalent)	C	4		Ramp-up to full power following Refueling Outage held for Continuation of "A" Cooling Tower Repair
5	06/07/01	F	0 (11.02 full- power-hours equivalent)	B	5		Repair Feedwater Regulating Valve Manual/Auto Controller
6	06/15/01	F	0 (31.72 full- power-hours equivalent)	B	5		Repair Body-to-Bonnet leak on Feedwater Regulating Valve

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 June 2001

The DAEC began the month of June four days into Fuel Operating Cycle 18, which had begun May 27<sup>th</sup>. Power was limited to 70% until June 6<sup>th</sup> while maintenance continued on the out-of-service cells in the 'A' Cooling Tower.

On June 7<sup>th</sup> at 05:20, feedwater flow fluctuations were observed as reactor power approached 99%. Reactor power was reduced, and feedwater flow stabilized when power reached 96%. Later, power was further reduced to approximately 49% to take the 'A' feed pump out-of-service for repair of the 'A' feedwater regulating valve manual/auto controller. Following the repair, full power was achieved at 23:30 on June 8<sup>th</sup>.

On June 15, at 01:59, power was again reduced to 50% and the 'A' reactor feed pump again removed from service to support repairs on a body-to-bonnet steam leak on the "A" reactor feed pump recirculation valve. Following the repair, the 'A' feed pump was returned to service and the 'B' feed pump taken out of service during replacement of degraded internal valve parts on PSV-1613. On June 17<sup>th</sup>, reactor power was then raised to 97%, and over the course of the afternoon reactor power increased to 100%. Between June 17<sup>th</sup> and 19<sup>th</sup>, five control rod changes were performed to adjust load-line. One additional load-line adjustment occurred June 21<sup>st</sup>. The plant operated at full power through the end of the month.

Allocation of Production & Losses: June 2001			
	Electrical Output MWe	Capacity Factor % of 571 MWe (Target Output)	Full Power Equivalent Hours (FPHeq)
<b>Capacity Losses:</b>			
Cooling Tower Cells O-O-S 06/01-07	34.55	6.05%	43.57
CV 1579 FW Reg Valve Controller 06/07-08 & 06/15-17 Body to Bonnet Leak	33.51	5.87%	42.26
Rod Adjustments: 06/08, 09, 12, 18, 19, & 21	0.33	0.06%	0.42
Maintain Margin to 1658 MWth Limit	0.20	0.03%	0.25
<b>Efficiency Losses:</b>			
Circ Water System Flow Limitation	0.00	0.00%	0.00
Cooling Tower Low Flow condition	3.09	0.54%	3.89
Steam Cycle Isolation Valve Losses: BV-1	0.00	0.00%	0.00
Other steam cycle isolation losses	0.00	0.00%	0.00
Unidentified Losses	- 0.02	0.00%	0.00
<b>Average Weather Losses:</b>	5.77	1.01%	7.24
<b>Total On-line Losses:</b>	77.43	13.56%	97.63
<b>Off-Line Losses:</b>	0.00	0.00%	0.00
<b>Electric Generation:</b>			
Plant House Loads (while on-line)	28.72	5.03%	36.23
<b>Net Electric Output</b>	<b>+464.85</b>	<b>+81.41%</b>	<b>+586.14</b>
<b>Gross Electric Generation</b>	<b>493.57</b>	<b>86.44%</b>	<b>622.37</b>
<b>Target Electric Output, Total %, Total # of clock-hours</b>	<b>571.00</b>	<b>100.00%</b>	<b>720.00</b>

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