

# Appendix E3: Unit Design Data – Nuclear (Voluntary Reporting)

**Note:** The NERC Board of Trustees approved the *GADS Task Force Report* ([dated July 20, 2011](#))<sup>1</sup>, which states that design data collection outside the required nine fields is solely voluntary. However, the GADS staff encourages that reporters report and update GADS design data frequently. This action can be completed by sending in this form to [gads@nerc.net](mailto:gads@nerc.net). GADS staff encourages using the software for design entry and updating.

## Instructions

Submit the data in this section once during the life of each nuclear unit. If a major change is made to a unit which significantly changes its characteristics, then resubmit this section with updated information.

For coded entries, enter a (9) to indicate an alternative other than those specified. Whenever you enter a (9), write the column number and the answer on the reverse side of the form.

When submitting an original copy of the form, make sure that it is legible.

Unit Name

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Location of Unit (State)

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Energy Information Administration (EIA) Number

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Regional Entity

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Subregion

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Date Reporter

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Telephone Number

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Date

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## General Data

	Col No.	Column Information
<hr/>	01	Utility Identification Number
<hr/>	04	Unit Identification Number
<hr/>	07	Card code
<hr/>	09	Columns 09 through 12 are blank
<hr/>	13	Year unit first paralleled for load
<hr/>	17	Month unit first paralleled for load
<hr/>	19	Day unit first paralleled for load

<sup>1</sup> [http://www.nerc.com/pa/RAPA/gads/MandatoryGADS/Revised\\_Final\\_Draft\\_GADSTF\\_Recommendation\\_Report.pdf](http://www.nerc.com/pa/RAPA/gads/MandatoryGADS/Revised_Final_Draft_GADSTF_Recommendation_Report.pdf)

**Nuclear Reactor Data**

Col No.	Column Information
	Manufacturer – (1) Westinghouse; (2) General Electric (3) Babcock and Wilcox; (4) Combustion Engineering; (5) General Atomics; (9) Other
21	Other
22	Type – (1) Pressurized (light) water (PWR); (2) Boiling (light) water (BWR); (3) CANDU; (9) Other
23	Nameplate capacity in MW
27	Outlet temperature in °F at nameplate capacity
31	Outlet pressure in PSIG at nameplate capacity
35	Reactor flow in thousands of pounds per hour at nameplate capacity
42	Secondary loop flow in thousands of pounds per hour at nameplate capacity, if applicable
49	Number of primary loop or recirculating pumps
50	Primary loop or recirculating pump manufacturer – (1) Westinghouse; (2) Worthington; (3) Byron-Jackson; (4) Ingersoll-Rand; (9) Other
51	Primary loop or recirculating pump type drives – (1) Motor variable speed; (2) Motor constant speed; (9) Other
52	Steam generator manufacturer, if applicable – (1) Westinghouse; (2) Combustion Engineering; (3) Babcock and Wilcox; (4) Foster Wheeler; (9) Other
53	Type of control rod drive – (1) Magnetic jack; (2) Hydraulic water; (3) Rack and pin; (9) Other
54	Control rod configuration – (1) Cruciform; (2) Rod cluster; (9) Other
55	Enter (1) if chemical shim is used
56	Initial weight of uranium in thousands of pounds
60	Highest initial enrichment to one-tenth %
62	Fuel type – (1) U-235 oxide; (9) Other
63	Fuel cladding material – (1) Zirconium; (2) Stainless steel; (9) Other
64	Containment type – (1) Dry; (2) Pressure suppression; (9) Other

**Architect/Engineering Data**

Col No.	Column Information
65	Architect/Engineer – (1) All A/E work inhouse; (2) Burns & Roe; (3) Black & Veatch; (4) Bechtel; (5) Brown & Root; (6) Durham & Richardson; (7) Ebasco Services; (8) Gibbs & Hill; (9) Gilbert

**Architect/Engineering Data**

Col No.	Column Information
	Associates; (10) Offshore Power Systems; (11) Ralph M Parsons; (12) Pioneer Services & Engineering; (13) Sargent & Lundy; (14) Stone & Webster; (15) United Engineers & Constructors; (99) Other
67	Columns 67 through 80 are blank

**Steam Turbine Data**

Col No.	Column Information
01	Utility Identification Number
04	Unit Identification Number
07	Card code
09	Columns 09 through 12 are blank
14	Manufacturer (see table of Manufacturers) Type – (1) Single cylinder; (2) Tandem compound; (3) Cross Compound; (4) Triple compound; (9) Other
16	Enter (1) if more than 50% of turbine is outdoors
17	Total nameplate capacity in MW
18	Main steam pressure in PSIG, full load at throttle
22	Main steam temperature in °F, full load at throttle
26	First reheat temperature in °F, if applicable
30	Second reheat temperature in °F, if applicable
34	Back pressure to nearest one-tenth inch of Hg for nameplate capacity and design water temperature
38	

**Condenser Data**

Col No.	Column Information
40	Manufacturer – (1) Foster Wheeler; (2) Ingersoll-Rand; (3) Westinghouse; (4) Yuba; (5) Worthington; (6) C. H. Wheeler; (9) Other
41	Passes – (1) Single; (2) Double
42	Number of shells Tube material – (1) Arsenical Admiralty; (2) Arsenical Aluminum Brass; (3) Stainless Steel; (4) Cupro-Nickel; (5) Aluminum Bronze; (6) Arsenical Phosphorized Copper; (9) Other
43	

44	Type cooling water – (1) Fresh; (2) Salt
45	Cooling water origin – (1) River; (2) Lake; (3) Ocean or bay; (4) Cooling tower
46	Number of condensate pumps
47	Condensate pump manufacturer – (1) Worthington; (2) Allis Chalmers; (3) Byron-Jackson; (4) DeLaval; (5) Ingersoll-Rand; (6) Fairbanks-Morse; (7) Pacific Pump; (9) Other
48	Number of circulating water pumps
49	Circulating water pump manufacturer – (1) Worthington; (2) Allis Chalmers; (3) Ingersoll-Rand; (4) Westinghouse; (5) Foster Wheeler; (9) Other

**Auxiliaries Data**

Col No.	Column Information
50	Number of secondary loop or single loop feed pumps required for normal operation at full load
51	Number of spare feed pumps which are approximately the same size as one normally used pump
52	Number of spare or startup feed pumps which are smaller than one normally used pump
53	Normal feed pump manufacturer – (1) Worthington; (2) DeLaval; (3) Ingersoll-Rand; (4) Byron-Jackson; (5) Pacific Pump; (9) Other
54	Normal feed pump type drive – (1) Motor; (2) Steam; (3) Shaft; (4) Motor gear; (5) Steam gear; (6) Shaft gear; (9) Other
55	Normal feed pump, enter (1) if hydraulic coupling(s) used
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65	Columns 65 through 80 are blank

Generator Data		
Col No.	Column Information	
01	Utility Identification Number	
04	Unit Identification Number	
07	Card code	
09	Columns 09 through 12 are blank	
14	Manufacturer – (see table of Manufacturers, page E-2)	
16	Type – (1) Three-phase, 60-cycle; (9) Other	
17	Nameplate voltage to nearest one-tenth KV	
21	Nameplate capability MVA, first shaft	
25	Speed in RPM, first shaft	
29	Nameplate capability MVA, second shaft if any	
33	Speed in RPM, second shaft if any	
37	Nameplate capability MVA, third shaft if any	
41	Speed in RPM, third shaft if any	
45	Nameplate power factor in percent	
47	Cooling medium, stator/rotor – (1) Air/air; (2) Hydrogen/ hydrogen; (3) Oil/hydrogen; (4) Water/hydrogen; (9) Other	
48	Cooling method, stator/rotor – (1) Intercooled/intercooled; (2) Conventional/conventional; (3) Intercooled/conventional; (9) Other	
49	Hydrogen pressure in PSIG at nameplate MVA, if applicable	
51	Number of exciters required by the unit for normal operation at rated output	
52	Type normal exciters - (1) Rotating DC generator; (2) Rotating alternator rectifier; (3) Static; (9) Other	
53	Type drive for normal exciters, if rotating – (1) Shaft direct; (2) Shaft gear; (3) Motor; (9) Other	
54	Number of spare exciters available to the unit	
55	Enter (1) if more than 50% of generator is outdoors	
56	Name of Unit (Columns 55-80)	