

Unit Design Data

Hydro or Pumped Storage (Voluntary Reporting)

(Note: The NERC Board of Trustees approved the GADS Task Force report ([dated July 20, 2011](#))¹, 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. GADS staff encourages using the software for design entry and updating.

Instructions

Submit the data in this section once during the life of each pumped storage or hydro 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:

Location of unit (State):

Energy Information Administration (EIA) Number:

Regional Entity:

Sub region:

Data reporter:

Telephone number:

Date:

GENERAL DATA

Col. No.

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01 Utility identification number

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04 Unit identification number

5	1
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07 Card code

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09 These columns are blank

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13 Year unit first in service (see page II-1)

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17 Month unit first in service

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19 Day unit first in service

HYDRO TURBINE/PUMP DATA

21 Hydro or Pumped Storage – (1) Hydro; (2) Pump/turbine; (3) Pump

22 Turbine/Pump manufacturer – (0) Allis Chalmers; (1) Pelton; (2) S. Morgan Smith; (3) Newport News; (4) Worthington; (5) Dobie; (6) I.P. Morris; (7) W.S. Morgan; (8) B.L. Hamilton; (9) Other;

23 Turbine/Pump impulse type – (1) Horizontal; (2) Vertical; (9) Other

24 Turbine/Pump reaction type – (1) Francis; (2) Kaplan – adjustable blade propeller; (3) Fix blade propeller; (4) Pump/turbine; (9) Other

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25 Turbine rated head to nearest foot

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29 Turbine rated speed to nearest RPM

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32 Turbine rating in horsepower to nearest 100 hp

<input type="checkbox"/>	38	Turbine runner, type – (1) Single; (2) Twin; (3) Triplex; (4) Double discharge; (9) Other
<input type="checkbox"/> <input type="checkbox"/>	39	Number of buckets/blades per runner
<input type="checkbox"/>	41	Governor type – (1) Gate shaft; (2) Actuator; (3) Cabinet type; (4) Electric; (5) Electro hydraulic, speed sensing; (6) Electronic hydraulic, speed sensing; (7) Mechanical, speed sensing; (9) Other
<input type="checkbox"/>	42	Turbine bearing type – (1) Water lubricated; (2) Oil lubricated; (9) Other
<input type="checkbox"/>	43	Thrust bearing location – (1) Above generator; (2) Below generator
<input type="checkbox"/>	43	Guide bearing, location - (1) Above generator; (2) Below generator
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	45	Columns 45 through 80 are blank

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	01	Utility identification number
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	04	Unit identification number
<input type="checkbox"/> 5 <input type="checkbox"/> 2	07	Card code
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	09	Columns 9 through 17 are blank
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	18	Nameplate rating of unit (MVA times power factor)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	22	Columns 22 through 80 are blank

HYDRO TURBINE/PUMP DATA (Continued)

GENERATOR DATA

<input type="text"/> <input type="text"/> <input type="text"/>	01	Utility identification number
<input type="text"/> <input type="text"/> <input type="text"/>	04	Unit identification number
<input type="text" value="5"/> <input type="text" value="3"/>	07	Card code
<input style="background-color: #cccccc; width: 20px; height: 15px; display: inline-block; margin-right: 5px;" type="text"/> <input style="width: 10px; height: 15px; display: inline-block; margin-right: 5px;" type="text"/> <input style="background-color: #cccccc; width: 20px; height: 15px; display: inline-block;" type="text"/>	09	Columns 09 through 13 are blank
<input type="text"/> <input type="text"/>	14	Generator Manufacturer – (See Table of Manufacturers Codes)
<input type="text"/>	16	Generator type – (1) Three-phase, 60 cycle; (2) other
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	17	Nameplate voltage to nearest one-tenth KV
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	21	Nameplate capability MVA, first shaft
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	25	Speed in RPM, first shaft
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	29	Nameplate capability MVA, second shaft if any
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	33	Speed in RPM, second shaft if any
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	37	Nameplate capability MVA, third shaft in any
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	41	Speed in RPM, third shaft in any

45 Nameplate power factor in percent

47 Cooling medium, stator/rotor – (1) Air/air; (2) Hydrogen/hydrogen; (3) Oil/hydrogen; (4) Water/Hydrogen; (5) Air/water; (9) Other

48 Cooling method stator/rotor – (1) Intercooled/intercooled; (2) Conventional/conventional; (3) Inner cooled/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 the generator is outdoors.

56 Name of Unit (Columns 56 through 80)

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¹ http://www.nerc.com/pa/RAPA/gads/MandatoryGADS/Revised_Final_Draft_GADSTF_Recommendation_Report.pdf