Appendix E5: 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	
Subregion	
Date Reporter	
Telephone Number	
Date	

General Data

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

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

Hydro Turbine/Pump Data

	Col No.	Column Information
	01	Utility Identification Number
	04	Unit Identification Number
	07	Card code
	09	Columns 09 through 12 are blank
	18	Nameplate rating of unit (MVA times power factor)
	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
	25	Turbine rated head to nearest foot
	29	Turbine rated speed to nearest RPM
	32	Turbine rating in horsepower to nearest 100 hp
	38	Turbine runner, type – (1) Single; (2) Twin; (3) Triplex; (4) Double discharge; (9) Other
	39	Number of buckets/blades per runner
	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
	42	Turbine bearing type – (1) Water lubricated; (2) Oil lubricated; (9) Other
	43	Thrust bearing location – (1) Above generator; (2) Below generator
	44	Guide bearing, location - (1) Above generator; (2) Below generator
	45	Columns 45 through 80 are blank

Generator Data

	Col No.	Column Information
	01	Utility Identification Number
	04	Unit Identification Number
	07	Card code

Generator Data

	Col No.	Column Information
	09	Columns 09 through 13 are blank
	14	Generator Manufacturer – (See Table of Manufacturers Codes)
	16	Generator Type – (1) Three-phase, 60-cycle; (2) 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)