

CHAPTER 2 - REPORTS ON HYDROELECTRIC POWER GENERATION STATISTICS

2-1. Purpose. This chapter establishes guidance for reporting USACE hydroelectric power statistics, including the availability, failure and usage rates of generating equipment; power generating equipment failures and generation interruptions; monthly power plant generation; and in-service data at multiple-purpose projects having hydroelectric power.

2-2. Background.

a. This pamphlet provides guidance for implementing the following hydropower statistical and informational reporting requirements to Congress and other designated recipients, as defined in ER 1130-2-510, Chapter 2, Reports on Hydroelectric Power Generation Statistics, and for coordinating the operation of the Corps of Engineers hydroelectric generating facilities with the power marketing agencies. Reporting requirements include:

- (1) general hydroelectric power generation equipment operational and cost data;
- (2) the availability, failure and usage rates of generating equipment at multiple-purpose projects having hydroelectric power;
- (3) power generating equipment failures and generation interruptions; and
- (4) the in-service dates for hydroelectric generating units and reporting the monthly power plant generation on the Department of Energy Form EIA-759.

b. Section 5 of the Act of December 22, 1944 (PL 534, 78th Congress) provides that electric power and energy generated at reservoir projects under the control of the Department of the Army and in the opinion of the Secretary of the Army not required in the operation of such projects shall be delivered to the Secretary of Interior for transmittal and disposal in a manner to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles.

c. Section 302 of the Department of Energy Organization Act (PL 95-91) transfer all functions of the Secretary of Interior under Section 5 of the 1944 Act to the Secretary of Energy together with all other functions of the Secretary of Interior, and officers and components of the Department of the Interior, with respect to Southeastern Power Administration; the Southwestern Power Administration; the Alaska Power Administration; the Bonneville Power Administration; Western Area Power Administration; and the power marketing functions of the Bureau of Reclamation.

2-3. Guidance.

a. Congressional Reports. Section 937, Reports on Hydropower Statistics, PL 99-662, Water Resources Development Act of 1986, states that the Secretary of the Army shall provide to the Committee on Public Works and Transportation of the House of Representatives and the Committee on Environment and Public Works of the Senate, a statistical report on each water resources project constructed by the Army Corps of Engineers which generates electricity. (See Appendix A.)

(1) The report shall specify:

- (a) Amount of electricity generated;
- (b) Revenues received by the United States from the sale of electricity;
- (c) Costs of construction, operation, and maintenance allocated to power; and
- (d) Balance owed to the US Treasury by the Power Marketing Administration.

(2) Submission Dates. The report is due to the Congress by the 15th of January each year. The field operating activities will submit to CECW-OM their data by 15 December each year.

b. Service Rates for Generating Equipment.

(1) Each year, on a fiscal year basis, districts having multi-purpose projects with hydropower will determine and report the rates listed below for each hydroelectric project. These rates will be composite for each project, based on the total main unit hours in each category for all units at the project, and computed as indicated in Appendix B.

- In-service operating rate.
- Standby rate.
- Availability rate.
- Generator forced outage rate.
- Non-generator forced outage rate.
- Generator delayed forced outage rate.
- Generator scheduled outage rate.
- Non-generator scheduled outage rate.
- Planned modification outage rate.
- Non-generator delayed forced outage rate.

(2) Service Rate Reports.

(a) Each MSC shall furnish annual reports to HQUSACE (CECW-OM) by 15 February (RCS CECW-0-34) for the previous fiscal year utilizing the Lotus 1-2-3 format provided as ENG Form 4338-E (AUG 89), illustrated in Appendix C. The reports shall be submitted using a diskette or electronic mail.

(b) The additional information shown in Appendix D shall be furnished as a MSC summary report along with an individual summary report for each district having hydroelectric power facilities.

c. Equipment Failure and Generation Interruption Reports.

(1) Project Managers shall report all power generating equipment failures and generation interruptions anticipated to cost in excess of \$50,000, or require more than five working days to return equipment to service, to CECW-OM immediately by telephone, facsimile machine (FAX),

or electronic mail (E-mail) and then also in writing. Reports shall be made as soon as possible; however, reports must be furnished before the end of the next regular business day. A sample of the required information is provided as Appendix E.

(2) When requested by CECW-OM, a detailed narrative report shall be prepared and forwarded to CECW-OM as soon as all pertinent information and data on the failure or interruption are available. The report shall present the information and data in such a manner as to facilitate review and evaluation by CECW-OM and other elements of the HQUSACE. These reports are required for review and evaluation for determining what changes are needed in guide specifications, operating and maintenance procedures, or personnel training, to reduce power production interruptions.

(3) Written Report. When requested, a detailed narrative report will be prepared and forwarded to CECW-OM as soon as all pertinent information and data on the failure or interruption are available. The report will include, but not be limited to, the following information as applicable: Name of the project; actual time of day and date of occurrence; identity of equipment or procedure causing the interruption; unit(s) involved; megawatts of project generation shutdown; megawatts of load passing through the project switchyard before interruption; megawatts of switchyard load interrupted; actual or estimated length of time required to return the failed equipment to service; the actual cause of failure or interruption; and any deficiencies found in design, construction, operation or maintenance. The report will also include a description of all actions, interim and final, needed to restore equipment to service, and recommendations for changes in design, construction, protective equipment, operational and maintenance practices and procedures that will reduce the possibility of recurrence. Supporting data, such as single line diagrams, sketches, schematic wiring diagrams, and photographs will be included when such information will clarify the cause of the interruption and assist in determining the best corrective action. The report will present the information and data in such a manner as to facilitate review and evaluation by CECW-OM and other elements of the HQUSACE.

d. Monthly Power Plant (DOE FORM EIA-759) and In-Service Data Reports for Hydroelectric Generating Units.

(1) The Commander, U.S. Army Corps of Engineers (USACE) is required to keep the Chairman, Federal Energy Regulatory Commission, informed of the current installed hydroelectric generating capacity at USACE projects.

(a) This includes installation of new generators and changes in the existing generating capacity due to rewinding of the generator stator, or any other reason. Within five business day after occurrence of the in-service date, the Commander, USACE, will be notified, Attention: CECW-OM, of the name of the project and the nameplate rating in kilowatts of each unit as it is placed in service. The information may be transmitted by telecopy, electronic mail or any other suitable method. The in-service date of a unit is defined as the date when the generator is first brought to rated terminal voltage and synchronized to the transmission system.

(b) For new generators, the date when the generator is initially placed in service, as defined above. For existing generators, the date is when the generator is again placed in operation after a change in capacity. Units declared in service, which subsequently develop trouble requiring modifications that may delay normal generation, will continue to be considered in service, unless otherwise specifically approved by the Commander, USACE. The in-service

date information will agree with the date reported to the Power Marketing Administration and Federal Energy Regulatory Commission.

(c) In service data, for stator rewinds, turbine replacements, or similar work that does not change the nameplate rating of the unit, will be reported only to CECW-OM.

(2) Monthly power Plant Report - Form EIA-759 (OMB No. 1905-0129 and RCS FERC-1001). Each month Energy Information Administration (EIA) of the Department of Energy furnishes USACE field offices with copies of Form EIA-759 for the monthly generation report. This form shall be completed and submitted directly to EIA by the tenth of the following month. In determining net generation, the power used for operation of locks, fishways, flood control, or functions other than power will be included. Power for the operation of the powerhouse and generating equipment only will be deducted from gross generation in computing net generation. A copy of completed Form EIA-759 will be forwarded to CECW-OM for information concurrent with sending the original to the Energy Information Administration. A sample copy of this form is provided as Appendix F.

e. Reports for Power Marketing Agencies.

(1) The Corps is responsible for operating the hydroelectric projects and providing information affecting cost and availability of power to the Power Marketing Agencies. Marketing the power declared excess to the need of the projects and recovering Federal investment are the responsibilities of the Power Marketing Agencies.

(2) Specific Requirements.

(a) Continuing. Prompt written notification will be provided to the appropriate power marketing agency each time a change in power operation or condition which could substantially affect costs or power availability is anticipated.

(b) Annually, when no changes in power operations or costs are expected for the succeeding 12 month period, the marketing agency will be notified of that fact in writing.

(3) MSC Responsibility. The MSCs directly responsible for communicating with the marketing agency will develop reporting procedures in coordination with that agency. This responsibility may be delegated to the District Commander.