

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Central Nebraska Public Power and Irrigation District

Project No. 1417-104

## ORDER AMENDING LICENSE UNDER ARTICLE 2

(Issued August 27, 2001)

On July 12, 2001, Central Nebraska Public Power and Irrigation District (Central), licensee for the Kingsley Project, FERC No. 1417, filed an application to amend its license. Central requests approval to rehabilitate five of the six existing turbine-generator units of the project that have been operating since late 1930s. The Kingsley Project is located on the North Platte, and Platte Rivers in Nebraska.

## BACKGROUND

The Kingsley Project consists of a powerhouse (Kingsley Hydro) with a 50-MW unit located at Kingsley Dam's abutment, and three powerhouses on the Supply Canal, Jeffery Hydro containing two-turbine generators units with combined nameplate capacity of 18 MW, Johnson No. 1 Hydro containing two turbine-generator units with a combined nameplate capacity of 18 MW, and Johnson No. 2 Hydro containing a single turbine-generator with a nameplate capacity of 18 MW.<sup>1</sup> The existing turbine-generator units were installed in the late 1930s, and according to Central normal wear and tear over the last 65 years of constant use has resulted in increased maintenance costs and greater risks of unplanned outages.

The proposed rehabilitation of the turbine-generator units include rewinding the generators and replacing turbine runners, wicket gates, upgrade excitation system and main power transformers. The proposed modifications would result in no changes in the quantity of water used for hydropower generation, except minor changes in return flows may occur in some circumstances. The project's installed capacity would increase by about 8 percent from 104 MW to 112.3 MW because of technical improvements in materials and equipment design since the existing units were installed.

Central notified the U.S. Fish and Wildlife Service (FWS) and Nebraska State Historic Preservation Office (SHPO) of its plans to rehabilitate the turbine-generator units. In a letter dated July 10, 2001, FWS informed Central it has no concerns with the

Project No. 1417-104

-2-

proposed rehabilitation and upgrade of existing turbine-generator units and stated that they may result in positive impacts on the environment and recreation because of increased operational flexibility.

According to Central, it had preliminary discussions with SHPO pursuant to Central's approved Cultural Resources Management Plan (CRMP) regarding the equipment upgrades and they are working together to develop a suitable recordation plan addressing the proposed rehabilitation activities. Under the CRMP, Central is required to report annually to the Commission CRMP-related activities.

Central plans to carry out the replacement/rehabilitation of one-turbine generator set at the Jeffery and Johnson No. 1 Hydros, and the unit at Johnson No. 2 in the fall of 2001 because of low water conditions. The remaining two units at Jeffery and Johnson No. 1 will be rehabilitated in fall 2002.

## REVIEW

Staff reviewed Central's proposal to rehabilitate the turbine-generator units at the Kingsley project, and found it be beneficial by helping to meet the growing power needs of the Midwest. The proposed modifications will increase the total average annual energy generation at the Jeffery, Johnson No. 1 and Johnson No. 2 by about 5 percent from 255 GWh to 268 GWh, provide reliable energy, and thereby reduce the chances for blackouts. Staff concludes that the replacement/rehabilitation of turbine-generator units will help alleviate energy shortages by increasing the generating efficiency and reliability of the project.

Article 201 of the license requires the licensee to pay the United States the following annual charge, effective as of the first day of the month in which this license is issued, for the purposes of reimbursing the United States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 105,900 kilowatts. The proposed modifications to the turbine-generator units, will increase the installed capacity by about 8,300 kilowatts. According to Central, the exact capacities of the new units will not be known until the rehabilitated turbine-generator units are installed and tested. Therefore, Central should keep an accurate record of the beginning and on-line dates for each unit rehabilitation and file that information along with the project description and change in installed capacity after each phase of the rehabilitation. Annual charges for the project will be revised in accordance with the Commission's regulations after receiving the information on rehabilitation.

<sup>1</sup> 84 FERC ¶ 61,079 Order Issuing New License, issued July 29, 1998.

The Director Orders:

(A) The license for the Kingsley Project is amended as provided by this order effective the day this order is issued.

(B) Cental's request to rehabilitate and modify turbine-generator units at Jeffery, Johnson No. 1, and Johnson No. 2 Hydros is approved.

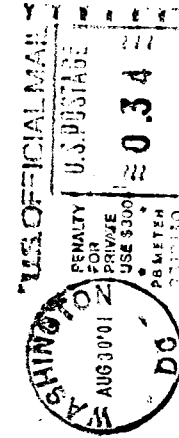
(C) Central shall coordinate the rehabilitation and modification activities with the Commission's Chicago Regional Office.

(D) Central shall keep track of the beginning and on-line dates for each unit modification. Within 30 days of the completion of the each phase of the rehabilitation, Central shall file with the Commission, commencement and completion dates, and description of the modification and exact installed capacities of the units.

(E) This order constitutes final agency action. Requests for rehearing by the commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. §385.713.



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