

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Alcoa Power Generating, Inc.

Project No. 2197-073

NOTICE OF APPLICATION READY FOR  
ENVIRONMENTAL ANALYSIS AND SOLICITING COMMENTS,  
RECOMMENDATIONS, TERMS AND CONDITIONS, AND PRESCRIPTIONS

(March 13, 2007)

Take notice that the following hydroelectric application has been filed with the Commission and is available for public inspection.

- a. Type of Application: New Major License
- b. Project No.: 2197-073
- c. Date filed: April 25, 2006
- d. Applicant: Alcoa Power Generating, Inc.
- e. Name of Project: Yadkin Hydroelectric Project
- f. Location: On the Yadkin River, in Davidson, Davie, Montgomery, Rowan, and Stanly Counties, North Carolina. The project does not occupy any federal lands
- g. Filed Pursuant to: Federal Power Act 16 U.S.C. §§791 (a) - 825(r)
- h. Applicant Contact: Mr. Gene Ellis, Licensing and Property Manager, Alcoa Power Generating, Inc., Yadkin Division, P.O. Box 576, North Carolina Highway 740, Badin, North Carolina 28009-0576; Telephone (704) 422-5606
- i. FERC Contact: Lee Emery, (202) 502-8379; or [lee.emery@ferc.gov](mailto:lee.emery@ferc.gov)
- j. The deadline for filing comments, recommendations, terms and conditions, and prescriptions is 60 days from the issuance of this notice; reply comments are due 105 days from the issuance date of this notice.

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All documents (original and eight copies) should be filed with: Philis J. Posey, Acting Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426.

The Commission's Rules of Practice require all intervenors filing documents with the Commission to serve a copy of that document on each person on the official service list for the project. Further, if an intervenor files comments or documents with the Commission relating to the merits of an issue that may affect the responsibilities of a particular resource agency, they must also serve a copy of the document on that resource agency.

Comments, recommendations, terms and conditions, and prescriptions may be filed electronically via the Internet in lieu of paper. The Commission strongly encourages electronic filings. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's web site (<http://www.ferc.gov>) under the "e-Filing" link.

k. This application has been accepted and is ready for environmental analysis at this time.

l. Project description: The existing Yadkin River Hydroelectric Project consists of four developments: High Rock, Tuckertown, Narrows, and Falls. The four developments are located on a 38-mile reach of the Yadkin River 60 miles northeast of Charlotte in central North Carolina. The High Rock development is the most upstream, with the Tuckertown, Narrows, and Falls developments 8.7, 16.5, and 19.0 miles downstream from the High Rock development, respectively. The four Yadkin developments have a combined installed capacity of 210 megawatts (MW). The project produces an average annual generation of 844,306 megawatt-hours (MWh).

The High Rock development includes the following constructed facilities: (1) a 936-foot-long, 101-foot-maximum height concrete gravity dam with (i) a 58-foot-long westerly non-overflow section, (ii) a 550-foot-long gated spillway with ten 45-foot-wide, 30-foot-high Stoney gates, and (iii) a 178-foot-long, 125-foot-high powerhouse integral with the dam containing three vertical Francis turbine-generating units with a total electric output of 32.2 MW; (2) a 14,400-acre reservoir at 623.9 feet US Geological Survey (USGS) normal pool elevation, with 217,400 acre-feet of storage capacity; and (3) appurtenant facilities. Alcoa proposes to refurbish and upgrade all three generating units, install new aeration technology to increase dissolved oxygen concentration and enhance water quality in the High Rock tailwater, and revise the operating guide curve for the reservoir.

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The Tuckertown development includes the following constructed facilities: (1) a 1,370-foot-long, 76-foot-maximum height concrete gravity dam with (i) a 45-foot-long rock filled section, (ii) a 178-foot-long right non-overflow section, (iii) a 481-foot-long gated spillway section with eleven 35-foot-wide by 38-foot-high Tainter gates, (iv) a 20-foot-long middle non-overflow section, (v) a 204-foot-long, 115-foot-high powerhouse integral with the dam containing three Kaplan turbine-generating units with a total electric output of 38 MW, (vi) a 100-foot-long left non-overflow section and (vii) a 342-foot-long rock filled section; (2) a 2,560-acre reservoir at 564.7 feet USGS normal pool elevation, with 6,700 acre-feet of storage capacity; and (3) appurtenant facilities. Alcoa proposes to refurbish and upgrade all three generating units and install new aeration technology to increase dissolved oxygen concentration and enhance water quality in the Tuckertown development tailwater.

The Narrows development includes the following constructed facilities: (1) a 1,144-foot-long, 201-foot-maximum height concrete gravity dam with (i) a 366-foot-long non-overflow section, (ii) a 640-foot-long gated main spillway with twenty-two 25-foot wide by 12-foot-high Tainter gates, (iii) a 6-foot-long by 17-foot-high trash gate, (iv) a 128-foot-long intake structure with four 20-foot by 20-foot openings each with two vertical lift gates, (v) a 6-foot-long by 17-foot-high trash gate, (vi) a 431-foot-long bypass spillway with ten 33-foot-wide by 28-foot-high Stoney gates and (vii) a 90-foot-long non-overflow section; (2) a 5,355-acre reservoir at a normal pool elevation of 509.8 feet USGS with 129,100 acre-feet of storage capacity; (3) four 15-foot-diameter steel plate penstocks; (4) a 213-foot-long by 80-foot-wide reinforced concrete and brick powerhouse located 280 feet downstream of the dam and containing four vertical Francis turbine-generators with a total installed capacity of 108 MW; (5) a 13.2-kV transmission line approximately 1.9 miles long connecting the Narrows development with Alcoa's Badin Works; and (6) appurtenant facilities. Alcoa proposes to refurbish and upgrade generating units 1 and 3 and install new aeration technology to increase dissolved oxygen concentration and enhance water quality in the Narrows Development tailwater.

The Falls Development includes the following constructed facilities: (1) a 748-foot-long, 112-foot-maximum height concrete gravity dam consisting of: (i) a 189-foot-long, 130-foot-high powerhouse integral with the dam containing one vertical Francis turbine-generator and two Allis Chalmers vertical Propeller turbine-generators with a total installed capacity of 31 MW, (ii) a 14-foot-wide by 19-foot-high trash gate section, (iii) a 440-foot-long gated spillway with ten 33-foot-wide by 34-foot-high Stoney gates, (iv) a 71-foot-long Tainter gates section with one 25-foot-wide by 19-foot-high and a 25-foot-wide by 14-foot-high gate, and (v) a 34-foot-long non-overflow section; (2) a 204-acre reservoir at normal full pool elevation of 332.8 feet USGS, with 760 acre-feet of storage capacity; (3) a 100-kV transmission line approximately 2.7 miles long connecting the Falls development with Alcoa's Badin Works; and (4) appurtenant facilities. Alcoa

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proposes to refurbish and upgrade all three generating units and plans to install new aeration technology to increase dissolved oxygen concentration and enhance water quality in the Falls Development tailwater provided it will be deemed necessary in the future.

Alcoa proposes to continue operating the High Rock development in a store-and-release mode, and the Tuckertown, Narrows, and Falls developments in a run-of-river mode. The High Rock development provides storage for the downstream three developments. The Narrows development also provides some storage during low flow conditions and emergencies. The current average maximum annual drawdown for High Rock Reservoir is 12 to 15 feet, with drawdowns of 5 feet or less typical during the summer months. At the other developments, the maximum annual drawdown is 3 to 4 feet, with an average daily drawdown of up to 1 to 2 feet. Alcoa currently releases a weekly average minimum flow of 900 cfs from the Falls Development but has proposed to increase this minimum flow. Several other proposed modifications to the project include: (1) revising the operating guide curve for High Rock reservoir; (2) building 10 new campsites and improving portage trails and access to existing recreation sites; and (3) creating a new swimming beach.

m. A copy of the application is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's website at <http://www.ferc.gov> using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at [FERCOnlineSupport@ferc.gov](mailto:FERCOnlineSupport@ferc.gov) or toll-free at 1-866-208-3676, or for TTY, (202) 502-8659. A copy is also available for inspection and reproduction at the address in item h above.

All filings must: (1) bear in all capital letters the title "COMMENTS", "REPLY COMMENTS", "RECOMMENDATIONS," "TERMS AND CONDITIONS," or "PRESCRIPTIONS;" (2) set forth in the heading the name of the applicant and the project number of the application to which the filing responds; (3) furnish the name, address, and telephone number of the person submitting the filing; and (4) otherwise comply with the requirements of 18 CFR 385.2001 through 385.2005. All comments, recommendations, terms and conditions or prescriptions must set forth their evidentiary basis and otherwise comply with the requirements of 18 CFR 4.34(b). Agencies may obtain copies of the application directly from the applicant. Each filing must be accompanied by proof of service on all persons listed on the service list prepared by the Commission in this proceeding, in accordance with 18 CFR 4.34(b), and 385.2010.

You may also register online at <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

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n. A license applicant must file no later than 60 days following the date of issuance of this notice: (1) a copy of the water quality certification; (2) a copy of the request for certification, including proof of the date on which the certifying agency received the request; or (3) evidence of waiver of water quality certification.

Philis J. Posey  
Acting Secretary