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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Arkansas Electric Cooperative Corporation) Project No. 3033-001
Riceland Electric Cooperative, Inc.)
C&L Electric Cooperative, Inc.)

ORDER ISSUING LICENSE (MAJOR)

(Issued August 10, 1983)

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

On April 19, 1982, Arkansas Electric Cooperative Corporation, Riceland Electric Cooperative, Inc., and C&L Electric Cooperative, Inc. (Applicants) filed an application for a license, under Part I of the Federal Power Act (Act), for Dam No. 2 Hydropower Project No. 3033-001. The project would utilize the water power potential of an existing U.S. Army Corps of Engineers (Corps) dam. ^{1/} The project would be located on the Arkansas River at Dam No. 2 about 15 miles southwest of Dumas, in Desha and Arkansas Counties, Arkansas. The Arkansas River was declared to be a navigable waterway of the United States in 1923 when the Carpenter-Remmel Project No. 271 was first licensed.

The Corps' Lock and Dam No. 2 consists of overflow and non-overflow embankment sections and a gated spillway 1,130 feet in length with a maximum height of 54 feet. The spillway is controlled by sixteen 30-foot-high by 60-foot-wide conventional Taintor gates. The non-overflow embankment is 3,150 feet in length with a crest elevation at 180 feet mean sea level (msl). Dam No. 2 creates a reservoir with a normal surface area of 10,560 acres at 162 feet msl.

1/ Authority to act on this matter is delegated to the Director, Office of Electric Power Regulation, under §375.308 of the Commission's regulations, 18 C.F.R. §375.308 (1982), FERC Statutes and Regulations ¶30,238. This order may be appealed to the Commission by any party within 30 days of its issuance pursuant to Rule 1902, 18 C.F.R. §385.1902, FERC Statutes and Regulations ¶29,052, 47 Fed. Reg. 19014 (1982). Filing an appeal and final Commission action on that appeal are prerequisites for filing an application for rehearing as provided in Section 313(a) of the Act. Filing an appeal does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically directed by the Commission.

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The new project facilities would consist of a powerhouse, a headrace channel, a tailrace channel, three turbines each with a rated capacity of 40 MW, and a 230-kV transmission line approximately 11.5 miles long. The project would be operated as run-of-river. The project is more fully described in Ordering Paragraph (B).

Public Notice

Notice of the application has been published and comments have been received from interested Federal, State and local agencies. No protest has been received and no agency has objected to issuance of the license. The Arkansas Public Service Commission was granted intervention. It wanted to be informed regarding the proceeding. Significant comments are also discussed below.

Compliance with Federal Statutes

The U.S. Fish and Wildlife Service (FWS) and the Arkansas Game and Fish Commission (AGFC) informed the Applicants that the proposed project would have no significant impact on federally listed threatened or endangered species.

Four historical sites are known to be located in the project area; none are eligible for the National Register of Historic Places. These sites include a twentieth century tenant house site with no structure remaining, located within the 100-foot-wide transmission line corridor. No archeological sites are known to exist in the project impact areas. The Applicants received a water quality certificate on November 4, 1981, from the Arkansas Department of Pollution Control and Ecology.

Historical and Archeological Resources

The U.S. Department of the Interior (Interior) recommended that the application be supplemented to: (1) describe the results of an archeological survey; (2) include the comments of the SHPO on the survey; and (3) describe any necessary mitigation measures. The Applicants, in consultation with the National Park Service, the Arkansas State Archeologist, and the Arkansas State Historic Preservation Officer, have agreed to conduct, prior to any construction, an archeological survey of all areas that would be affected by the proposed project, and subsurface tests in impact areas in which soils and topography suggest the possibility of buried sites.

It is concluded that measures should be undertaken to inventory and protect archeological sites within the project impact areas. Undiscovered historic sites may also be present in these areas, and requirements to inventory and protect these sites are also being included. Special Article 50 will safeguard any cultural resources at the project.

Recreational Development

Interior recommended that the Applicants conduct an analysis to determine if there is a need for additional recreational facilities and be responsible not only for the cost of relocation of part of Pendleton Bend Park, but for developing additional recreation facilities if a demonstrated need exists. The Applicants have proposed in their recreational report to replace in kind the park facilities that would be disrupted by the Applicants' project.

The Report on Recreational Resources provides for the existing recreational needs for the project and is approved herein. License Article 17 provides for future additional recreation development, if there is a demonstrated need.

Land Management and Aesthetics

The transmission line would be routed the shortest distance feasible through bottomland hardwoods and avoid, wherever feasible, the small stands of trees scattered throughout the agricultural fields. The Corps recommended that in order to minimize any adverse impacts, the transmission corridor route selection, clearing design, and maintenance plan should be prepared by a team which includes a wildlife biologist and a landscape architect.

Article 33 requires, among other things, that transmission corridors be designed, constructed, and maintained in accordance with the Commission's guidelines and other recognized guidelines which would, in turn, provide for wildlife and visual protection as recommended by the Corps.

Environmental Impacts

Approval of this application would not result in any significant adverse long-term environmental impacts. Construction activities would produce some temporary adverse impacts, such as dust and noise from vehicles and machinery, a small amount of turbidity and sedimentation in the Arkansas River at the powerhouse site, and the disturbance of some vegetation in the transmission line corridor. Applicants' proposed mitigative measures should ensure that these impacts are relatively minor in scope and temporary in duration.

On the basis of the record and the Staff's independent analysis, ~~it~~ is concluded that issuance of a license for the project, as conditioned, would not constitute a major Federal action significantly affecting the quality of the human environment.

Safety, Comprehensive Development, Economic Feasibility and Annual Charges

The proposed project will include a headrace channel, powerhouse and tailrace channel. Operation of the project would not alter the river flow regime or the Corps' current operating procedures.

In response to comments submitted by the Corps, Article 43 is included requiring the Licensees to evaluate the adequacy of the powerhouse location prior to preparation of plans and specifications. Other recommended articles require that final design and construction be reviewed and approved by the Corps (Articles 40 and 44), an independent board of consultants (Article 49) and the Commission staff (Article 39). It is concluded that the project will be safe and adequate upon compliance with the license articles.

The project would have an installed capacity of 120,000 kW and generate an estimated average 340,000,000 kWh of energy annually. 2/ Power generated by the project would be utilized by the Applicants. The project is economically feasible based on the estimated cost of producing an equivalent amount of energy from a coal-fired steam electric plant.

Section 10(e) of the Act 3/ requires the Commission to fix a reasonable annual charge to be paid to the United States for the use of a government dam. The Commission issued on March 31, 1983, a proposed rulemaking, RM 83-13-000, reassessing comprehensively the subject of suitable annual charges for use of government dams and other facilities, for the purpose of making recommendations to the Commission for any appropriate changes in its policies and regulations. Consequently, a final determination on the annual charges for the use of these Federal facilities will be reserved. Article 42 provides for a future determination of the annual charge.

The project will make good use of the flow and fall of the Arkansas River, and is not in conflict with any planned or authorized development. It will be best adapted to the comprehensive development of the Arkansas River for beneficial public uses under present conditions, upon compliance with the terms and conditions of the license.

2/ Equivalent energy production using fossil fuels would consume 558,000 barrels of oil or 157,400 tons of coal.

3/ 16 U.S.C. §803(e).

It is ordered that:

(A) This license is issued to the Arkansas Electric Cooperative Corporation, the Riceland Electric Cooperative, Inc., and the C&L Electric Cooperative, Inc. (Licensees), under Part I of the Federal Power Act (Act), for a period of 50 years, effective the first day of the month in which this order is issued, for construction, operation and maintenance of the Lock and Dam No. 2 Hydropower Project No. 3033, located on the Arkansas River, a navigable waterway of the United States, in Desha and Arkansas Counties, Arkansas. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The Lock and Dam No. 2 Hydropower Project No. 3033 consists of:

(1) all lands, to the extent of the Licensees' interests in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by certain exhibits that form part of the application for license and that are designated and described as:

<u>Exhibit</u>	<u>FERC No. 3033-</u>	<u>Showing</u>
G, Sheet 1	6	Location Map
G, Sheet 2	7	Project Boundary Map
G, Sheet 3	8	Transmission Corridor

(2) project works consisting of: (1) a reinforced concrete powerhouse, 190 feet wide by 250 feet long, located 500 feet downstream from the centerline of the dam and containing three horizontal shaft 40.0-MW turbine/generator units operating under a maximum power head of 44.5 feet; (2) headrace and tailrace channels; (3) the 6.9-kV generator leads; (4) the three main step-up transformers; (5) a 230-kV transmission line 11.5 miles long; and (6) appurtenant mechanical and electrical facilities and equipment.

The location, nature, and character of these project works are generally shown and described by the exhibits cited above and more specifically shown and described by certain other exhibits that also form a part of the application for license and that are designated as:

<u>Exhibit A, Section</u>	<u>Title</u>
Sheet 3	Turbine Generation
Sheet 4	Transmission Line
Sheet 5	Additional Mechanical and Electric Equipment

Exhibit E - Pages E-33 through E-36, Titled Report on Recreational Resources, filed April 19, 1982.

<u>Exhibit A, Section</u>	<u>FERC No. 3033-</u>	<u>Title</u>
Sheet 1	1	Site Plan
Sheet 2	2	Powerhouse Section
Sheet 3	3	Powerhouse Plan
Sheet 4	4	Powerhouse Plan
Sheet 5	5	Channel Profile & Section

(3) all of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, E, F and G, designated in ordering paragraph (B) above, are approved and made a part of the license.

(D) This license is also subject to Article 1 through 37, except Article 20, set forth in Form L-6 (revised October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters and Lands of the United States", attached to and made a part of this license. The license is also subject to the following additional articles:

Article 38. The Licensees shall commence construction of the proposed project within 2 years of the date of issuance of the license and, in good faith and with due diligence, shall complete construction within 5 years from the date of issuance of the license.

Article 39. The Licensees shall file with the Commission's Regional Engineer and the Director, Office of Electric Power Regulation, and the Corps of Engineers one copy each of the final contract drawings, specifications and final design report for pertinent features of the project, such as intake structure, at least 60 days prior to start of construction. The Director, Office of Electric Power Regulation, may require changes in the plans and specifications to assure a safe and adequate project.

Article 40. The Licensees shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the Licensee shall file with the Commission's Regional Engineer, Director, Office of Electric Power Regulation, and the Corps of Engineers one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 41. The Licensees shall have no claim under this license against the United States arising from the effect of any changes made in the operation or reservoir levels at Dam No. 2.

Article 42. The Licensees shall pay the United States for the following annual charges effective the first day of the month in which this license is issued:

(a) For the purpose of reimbursing the United States for the cost of Administration of Part I of the Act, a reasonable annual charge as determined by the Commission in accordance with the provisions of its regulations, in effect from time to time. The authorized installed capacity for such purposes is 160,000 horsepower.

(b) For the purpose of recompensing the United States for utilization of surplus water or water power from the Government dam, an amount to be hereafter determined by the Commission.

Article 43. The Licensees shall consult with the Corps of Engineers concerning the type and extent of geological investigations, material tests and model tests needed to determine the best location for the powerhouse. Based on the results of these investigations, the Licensees shall prepare a report evaluating the feasibility of constructing the powerhouse either at the proposed location or an alternative location. Copies of the Report shall be submitted to the Little Rock District of the Corps of Engineers Fort Worth Regional Office, and Director, Office of Electric Power Regulation. Contract drawings and specifications shall not be prepared until the powerhouse location has been accepted by the Corps and approved by the Director, Office of Electric Power Regulation.

Article 44. The design and construction of those facilities that would be an integral part of, or that could affect the structural integrity or operation of Dam No. 2 shall be done in consultation with and subject to the review and approval of the Corps' District Engineer, Little Rock, Arkansas.

Article 45. The Licensees shall enter into an agreement to coordinate their plans with the U.S. Army Corps of Engineers (Corps) for access to and site activities on lands and property administered by Corps so that the authorized purposes, including operation of the Federal facilities, are protected. In general, the agreement shall not be redundant with the Commission's requirements contained in this license and shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under which studies and construction will be conducted. The agreement shall be mainly composed of the following items: (1) Reasonable arrangements for access to the Corps site to conduct studies and construction activities, such access rights to be conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations; (2) charges to be paid by the Licensees to the Corps (a) for technical studies by the Corps that relate solely to the structural integrity or operation of the Corps dam, and (c) for construction cost that may be incurred by the Corps for the specific and sole purpose of accommodating the installation of power facilities at the existing Corps dam; and (3) charges to be paid by Licensees to the Corps for copies of reports, drawings and similar data based on printing and mailing costs, provided that charges shall not be assessed for information, services, or relationships that would normally be provided to the public. Should the Licensees and the Corps fail to reach an agreement, the Licensees shall refer the matter to the Commission for resolution.

Article 46. The Licensees shall within 90 days of completion of construction file in accordance with the Commission's rules and regulations revised Exhibits A and F to describe and show the project as-built.

Article 47. The construction, operation and maintenance of the project works that, in the judgment of the U.S. Corps of Engineers, Little Rock District, may affect the structural integrity or operation of the Corps' project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation or maintenance deficiencies or difficulties detected by the Corps inspection will be immediately reported to the Regional Engineer. Upon review, the Regional Engineer will refer the matter to the Licensees for appropriate action. The Corps inspector will report to the Regional Engineer the need to stop construction, operation or maintenance while awaiting resolution

of construction, operation or maintenance deficiencies or difficulties if such deficiency or difficult would affect the structural integrity of the Corps project. In cases when construction, operation or maintenance practice or deficiency may result in an emergency situation causing imminent danger to the structural integrity and safety of the Corps project, the Corps inspector has the authority to stop construction, operation or maintenance while awaiting the resolution of the problem.

Article 48. The Licensees shall, prior to commencement of operation, enter into a memorandum of agreement with U.S. Corps of Engineer, Little Rock District describing the mode of hydropower operation acceptable to the Corps. The Regional Engineer shall be invited to attend meetings regarding the agreement. The memorandum of agreement shall be subject to revision of mutual consent of the Corps and the Licensees as experience is gained by actual project operation. Should the Corps fail to reach an agreement with the Licensees, the matter will be referred to the Director, Office of Electric Power Regulation, for resolution. Copies of the signed memorandum between the Corps and the Licensees and any revision thereof shall be furnished to the Director, Office of Electric Power Regulation, and the Regional Engineer.

Article 49. The Licensees shall retain a Board of three or more qualified, independent, engineering consultants to review the design, specifications, and construction of the project for safety and adequacy. The names and qualifications of the Board members shall be submitted to the Director, Office of Electric Power Regulation (OEPR), for approval, with a copy to the Commission's Regional Engineer. Among other things, the Board shall assess the geology of the project site and surroundings; the design, specifications, and construction of the powerhouse, power channel, embankment, pile foundation and electrical and mechanical equipment, and emergency power supply; instrumentation; and construction procedures and progress. The Licensees shall furnish to the Board, with a copy to the Regional Engineer and two copies to the Director, OEPR, prior to each meeting, allowing sufficient time for review, documentation showing details and analyses of design and construction features to be discussed, significant events in design and construction that have occurred since the last Board of Consultants meeting, drawings, questions to be asked, a list of items for discussion, an agenda, and a statement indicating the specific level of review to be performed by the Board. Within 30 days after each Board of Consultants meeting, the Licensees shall submit to the Commission copies of the Board's report and a statement of intent to comply with the Board's recommendations, or a statement identifying a plan to resolve the issue(s). In the event of noncompliance, the Licensees shall provide detailed reasons for not doing so. The Board's

review comments for each portion of the project shall be submitted prior to or simultaneously with the submission of the corresponding Exhibit F final design drawings and design memoranda. The Licensees shall also submit a final report of the Board upon completion of the project. The final report shall contain a statement indicating the Board's opinion with respect to the construction, safety, and adequacy of the project structure(s).

Article 50. The Licensees shall, prior to the commencement of any construction or development at the project, consult with the Arkansas State Historic Preservation Officer (SHPO) and the Arkansas State Archeologist (ASA) to design and carry out a survey to identify, describe, and assess the significance of archeological and historical resources within the project impact areas. The survey shall be conducted in a manner satisfactory to the SHPO and the ASA, and each site or property identified during the survey shall be conducted in a manner satisfactory to the SHPO and the ASA, and each site or property identified during the survey shall be evaluated according to the National Register of Historic Places' eligibility criteria. Following the completion of the survey, the Licensees shall file a report with the Commission, the SHPO, and the ASA describing the nature and extent of the work performed, summarizing the findings and eligibility evaluations related to archeological and historical resources, and recommending measures for the protection of any significant sites or properties. If the survey identifies significant archeological or historical resources that will be adversely affected by project construction or operation, the Licensees shall cooperate with the SHPO and the ASA to develop an appropriate mitigation plan. Prior to the execution of any mitigation work, the Licensees shall file for Commission approval a plan detailing the extent of the mitigation work to be accomplished, and the amount of funding the Licensees propose to make available for such work. If any previously unrecorded archeological or historical sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensees shall consult with the SHPO and the ASA to develop and execute a mitigation plan for the protection of significant sites and shall inform the Commission of these activities.

The Licensees shall provide funds in a reasonable amount for any archeological and historical work as required. If the Licensees and the SHPO and the ASA cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require the Licensees to conduct, at their own expense, any such work found necessary.

Article 51. (a) In accordance with the provisions of this article, the Licensees shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensees may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensees shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and to ensure compliance with the covenants of the instrument of conveyance for any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensees for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensees may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensees shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensees shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensees shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensees may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to

the payment of a reasonable fee to cover the Licensees' costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensees may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensees shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensees may convey fee titles to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters for which all necessary Federal and State water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands

under this paragraph (d), the Licensees must file a letter to the Director, Office of Electric Power Regulation, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, require the Licensees to file an application for prior approval, the Licensees may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the Licensees shall consult with Federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensees shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensees to take reasonable remedial action to correct any violation of the terms and conditions of this article for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from

the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

Article 52. The Licensees shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 53. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the Licensees' long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their

respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

(E) The Licensees' failure to file a petition appealing this order to the Commission shall constitute acceptance of this license. In acknowledgment of acceptance of this order and its terms and conditions, it shall be signed by the Licensees and returned to the Commission within 60 days from the date this order is issued.

Lawrence R. Anderson
Director, Office of Electric
Power Regulation

Project No. 3033-001

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this Order, the Arkansas Electric Cooperative Corporation, this ____ day of _____, 19____, has caused its corporate name to be signed hereto by _____, its _____ Secretary, pursuant to a resolution of its Board of Directors duly adopted on the ____ day of _____, 19____, a certified copy of the record of which is attached hereto.

By _____
President

Attest:

Secretary

(Executed in quadruplicate)

Project No. 3033-001

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this Order, the Riceland Electric Cooperative, Inc., this ____ day of _____, 19____, has caused its corporate name to be signed hereto by _____, its _____ Secretary, pursuant to a resolution of its Board of Directors duly adopted on the ____ day of _____, 19____, a certified copy of the record of which is attached hereto.

By _____
President

Attest:

Secretary

(Executed in quadruplicate)

Project No. 3033-001

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this Order, C&L Electric Cooperative, Inc., this ____ day of _____, 19____, has caused its corporate name to be signed hereto by _____, its _____ Secretary, pursuant to a resolution of its Board of Directors duly adopted on the ____ day of _____, 19____, a certified copy of the record of which is attached hereto.

By _____
President

Attest:

Secretary

(Executed in quadruplicate)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED
MAJOR PROJECT AFFECTING NAVIGABLE WATERS
AND LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the

project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber

so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 27. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 28. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 29. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 30. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 31. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 32. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 33. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the trans-

mission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 34. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 35. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 36. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license; for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 37. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.