DUKE POWER COMPANY
AMENDMENT NO. 69
APPLICATION FOR LICENSES
DOCKET NOS. 50-369, -370

McGUIRE NUCLEAR STATION
LICENSE APPLICATION
GENERAL INFORMATION

October 1, 1982

CHANGES AND CORRECTIONS:

Remove and insert pages in your License Application Book in accordance with the following tabulations:

Remove these pages:	Insert these pages:
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BEFORE THE

20 | UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-369 and 50-370

In the Matter of

DUKE POWER COMPANY

APPLICATION FOR LICENSES

Duke Power Company (hereinafter sometimes referred to as "Applicant") hereby makes application, pursuant to the provisions of the Atomic Energy

20 | Act of 1954, as amended, and the Nuclear Regulatory Commission's Rules and Regulations thereunder, for the necessary licenses to own, use and operate the utilization facilities hereinafter described as an integral part of a nuclear electric generating station to be located in Mecklenburg County, North Carolina, and to be known as the "William B. McGuire Nuclear Station".

This application has been combined for two proposed generating units pursuant to the provisions of 10 CFR 50.31. It consists of the following four parts: (a) the general information required by 10 CFR 50.33, which is set out herein; (b) the technical information and safety analysis report required by 10 CFR 50.34, which is set out in a separate document entitled, "Duke Power Company, McGuire Nuclear Station, Units 1 & 2, Final Safety Analysis Report", forwarded herewith and made a part hereof; (c) selected material filed by Westinghouse Electric Corporation and the Applicant independent of this application but made a part hereof where specifically referenced in Applicant's

Final Safety Analysis Report; and (d) "Applicant's Environmental Report -- Operating License Stage" as required by 10 CFR 50, Appendix D.

GENERAL INFORMATION

a. Name of Applicant

Duke Power Company

b. Address of Applicant

69 | P. O. Box 33189
Charlotte, North Carolina 28242

c. Description of Business or Occupation of Applicant

Applicant is primarily engaged as a public utility in the production, transmission and sale of electric energy in the central portion of North Carolina and the western portion of South Carolina, comprising the area in both states known as the Piedmont Carolinas. Its service area covers approximately 20,000 square miles and has an estimated population of about
69 | 4,000,000.

Applicant serves more than a million customers and is the principal supplier of electric energy in 44 of 56 counties located in its service area. It supplies electric service directly to retail customers in 216 cities, towns and unincorporated communities. It also sells power at wholesale to approximately 55 major wholesale customers, primarily municipal electric systems and rural electric cooperative systems.

Applicant's electric revenues for 1981 totaled $1,908,454,000 of which 26.0% was derived from residential sales, 39.0% from industrial
69 | sales, 18.0% from commercial sales and 17.0% from other energy sales and other sources. In the five-year period from 1977 through 1981, Applicant experienced a growth in annual gross electric revenues of 51%. The average kwh sales per residential customer increased from 12,462 to 13,861 kwh during this period.

The total installed capacity of Applicant's electric utility plant as of December 31, 1981 was 13,234,000 kWe, consisting of eight conventional steam electric stations with a capacity of 7,423,000 kWe, four nuclear steam electric stations with a capacity of 3,760,000 kWe, twenty-five conventional hydroelectric plants with a capacity of 842,000 kWe, a four unit pumped storage hydroelectric station with a capacity of 610,000 kWe, and twenty-eight independent combustion turbine and diesel generator peaking units with a capacity of 599,000 kWe. Of the total generating capacity, approximately 80% of the steam electric capacity, 60% of the hydroelectric capacity and 100% of the independent combustion turbine and diesel generator peaking units have been installed within the past twenty years. The maximum integrated net demand on Applicant's system to date was 11,145,000 kWe on January 11, 1982.

As of December 31, 1981 Applicant's net electric plant totaled $5,998,307,000. For the five-year period preceding 1982, gross property additions totaled $4,000,000,000 and property retirements totaled $800,000,000.

Applicant presently has three nuclear units under construction and four nuclear units operating. This includes the McGuire Nuclear Station Unit 1 which was placed in commercial operation in 1981. Applicant has received an extension of the construction permit for McGuire Nuclear Station Unit 2, from the NRC with June 30, 1983 as the latest completion date. McGuire Nuclear Station's two units will each have a capability of 1,180,000 kWe. Applicant also has received construction permits for the Catawba Nuclear Station from the NRC. The Catawba Nuclear Station is designed for two units of 1,153,000 kWe capability each, with Unit 1 scheduled for operation in 1984 and Unit 2 in 1985. Completion of Applicant's Cherokee Nuclear Station has been deferred indefinitely. All required state and federal permits and licenses have been obtained for the construction of Bad Creek Hydroelectric Station, a 4-unit,

1,000,000 kWe pumped storage facility in Oconee County, South Carolina. Site preparation work began in July 1981.

69 Projected construction and nuclear fuel costs for the period 1982 through 1984 are $2.02 billion and $514 million, respectively.

Applicant's transmission lines consist of approximately 10,600 circuit miles of various voltages and types of structures, of which approximately 7,500 miles are lines carrying 100,000 volts or more. Distribution lines consist of approximately 45,100 miles of wood pole lines and 1,000 miles of underground lines.

The Company's transmission system is part of the interconnected grid extending over a large part of the central and eastern portion of the nation. In 1970, Applicant, Virginia Electric and Power Company, Carolina Power and Light Company and South Carolina Electric and Gas Company formed the Virginia-Carolinas Reliability Group (VACAR), one of several groups within the Southeastern Electric Reliability Council which provides for coordinated planning for reliability among bulk power supply systems in the Southeast. In 1971, VACAR was expanded to include Southeastern Power Administration, South Carolina Public Service Authority and Yadkin, Inc., all of which have generating facilities in the VACAR service area.

d. Organization and Management of Applicant

Applicant is a corporation organized and existing under the laws of the State of North Carolina, and its principal office is located in Charlotte, North Carolina at the address stated above. It is domesticated and authorized to transact business as a public utility in the State of South Carolina.

All of Applicant's principal officers and its directors are citizens of the United States. Their names and addresses are as follow:

DIRECTORS

	Name	Address
	Naomi G. Albanese	Greensboro, North Carolina
	Douglas W. Booth	Charlotte, North Carolina
69	Thomas H. Davis	Winston-Salem, North Carolina
	Robert C. Edwards	Clemson, South Carolina
69	John L. Fraley	Cherryville, North Carolina
	Alester G. Furman III	Greenville, South Carolina
	William H. Grigg	Charlotte, North Carolina
69	Paul H. Henson	Kansas City, Missouri
	George H. Herbert	Durham, North Carolina
	John D. Hicks	Charlotte, North Carolina
	William S. Lee	Charlotte, North Carolina
	Buck Mickel	Greenville, South Carolina
69	Reece A. Overcash, Jr.	Dallas, Texas
	Warren H. Owen	Charlotte, North Carolina
	Marceo A. Sloan	Durham, North Carolina
	Austin C. Thies	Charlotte, North Carolina
33	William L. Watkins	Anderson, South Carolina

PRINCIPAL OFFICERS

	W. S. Lee, Chairman of the Board and Chief Executive Officer	Charlotte, North Carolina
	D. W. Booth, President and Chief Operating Officer	Charlotte, North Carolina
69	W. H. Grigg, Executive Vice President, Finance Administration	Charlotte, North Carolina
	A. C. Thies, Executive Vice President, Power Operations	Charlotte, North Carolina
	W. H. Owen, Executive Vice President, Engineering and Construction	Charlotte, North Carolina

	John D. Hicks, Senior Vice President, Public Affairs	Charlotte, North Carolina
	Frank A. Jenkins, Senior Vice President, Transmission and Distribution	Charlotte, North Carolina
	Steve C. Griffith, Jr., Senior Vice President, General Counsel	Charlotte, North Carolina
69	Donald H. Denton, Jr., Senior Vice President, Marketing and Rates	Charlotte, North Carolina
	Henry L. Cranford, Senior Vice President, Division Operations	Charlotte, North Carolina
	John F. Lomax, Vice President, Western Division	Hickory, North Carolina
	Thomas C. Berry, Vice President, Southern Division	Greenville, South Carolina
	L. C. Dail, Vice President, Design Engineering	Charlotte, North Carolina
	Robert L. Dick, Vice President, Construction	Charlotte, North Carolina
	George W. Ferguson, Jr., Vice President and Deputy General Counsel, Governmental Affairs	Charlotte, North Carolina
	M. Thomas Hatley, Jr., Vice President, Rates	Charlotte, North Carolina
69	E. N. Hedgepeth, Jr., Vice President, Distribution	Charlotte, North Carolina
	Samuel T. Lattimore, Vice President, Finance Administration	Charlotte, North Carolina
	R. W. Bostian, Vice President, Production Support	Charlotte, North Carolina
	H. B. Tucker, Vice President, Nuclear Production	Charlotte, North Carolina
	Joe S. Major, Jr., Vice President, Personnel	Charlotte, North Carolina
	Joseph G. Mann, Vice President, Northern Division	Winston-Salem, North Carolina

	Paul H. Mann, Jr., Vice President, Operation	Charlotte, North Carolina
	Dwight B. Moore, Vice President, Central Division	Charlotte, North Carolina
	William O. Parker, Vice President, Fossil Production	Charlotte, North Carolina
	Paul G. Martin, Jr., Vice President, Eastern Division	Charlotte, North Carolina
	J. Kenneth Clark, Vice President, Corporate Communications	Charlotte, North Carolina
69	E. Bruce Shuler, Vice President, Transmission	Charlotte, North Carolina
	George E. Stubbins, Vice President, Information Systems	Charlotte, North Carolina
	Fred E. West, Jr., Vice President, Charlotte Division	Charlotte, North Carolina
	William R. Stimart, Vice President, Regulatory Affairs	Charlotte, North Carolina
	James W. White, Vice President, General Services	Charlotte, North Carolina
	Lewis F. Camp, Jr., Secretary and Associate General Counsel	Charlotte, North Carolina
	Richard J. Osborne, Treasurer	Charlotte, North Carolina

Applicant is not owned, controlled or dominated by any alien, and foreign corporation, or any foreign government. It is making this application in its own behalf and not as agent or representative of any other person.

e. Class and Period of License Applied for and Use to Which Facilities Will Be Put

The license hereby applied for is a Class 103 operating license as defined by 10 CFR 50.22. It is requested for a period of forty (40) years. Applicant further requests such additional source, special nuclear, and by-product material licenses as may be necessary or appropriate to the acquisition, construction, possession, and operation of the licensed facilities.

The facilities will be used as a part of Applicant's electric utility plant for the generation of electric energy. They will include two pressurized water reactors to be known as "William B. McGuire Nuclear Station Units 1 and 2". It is expected that each unit will be capable of an output of 3425 mwt (including 14 mwt contribution from reactor coolant pumps) corresponding to a net electrical capability of about 1180 mwe. All physics and core thermal hydraulics information in the attached Final Safety Analysis Report is based upon the reference core design of 3411 MWT. Site parameters, Containment, Engineered Safety

Features, and the hypothetical accidents are evaluated for a core output of 3579 MWT. The Westinghouse Electric Corporation will supply the design and fabrication for the first core for each of the two nuclear generating units.

f. Financial Qualifications of Applicant

The financial qualifications of Applicant to engage in the proposed activities are evidenced by the financial statements, attached hereto as Exhibit I, and as updated by the financial data contained in its annual report to shareholders for the year 1981, copies of which were transmitted to the NRC pursuant to 10 CFR 50.71 by a letter from Mr. Hal B. Tucker dated August 31, 1982.

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Consistent with Applicant's prior practice with all types of generating stations, the William B. McGuire Nuclear Station will be designed and constructed by Applicant's personnel in its established engineering and construction departments. The Nuclear Steam Supply System (including reactor, primary loops and steam generators, miscellaneous systems, instrumentation and controls, technical assistance in erection of the Nuclear Steam Supply System, and supporting technical services) for each unit, as well as initial fuel requirements, will be supplied by the Westinghouse Electric Corporation.

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Construction of the William B. McGuire Nuclear Station will be financed as an integral part of Applicant's total construction program. It is estimated 69 that approximately 30% of the funds required for the construction program will be obtained from retained earnings, provisions for depreciation, 69 and other internal sources, and approximately 70% through short-term borrowings and the issuance and sale of securities.

The types of securities which may be issued in the future cannot now be determined. It is anticipated, however, that both debt and equity securities will be issued periodically in such proportions as indicated by securities market conditions at the times of sales and consistent with the maintenance of desirable capitalization ratios. Applicant's most recent bond issues have been 33 rated A. Through an arrangement with over eighty banks in its service area, Applicant is able to borrow on a short-term basis at the prime commercial interest rate. Applicant also sells commercial paper to obtain funds on a short-term basis.

The estimated annual costs for the first five full years of operation for McGuire Nuclear Station are as follow:

$ 324,192,000	Fixed Charges
31,224,000	Operation and Maintenance
69 86,830,000	Fuel Costs
2,360,000	Insurance

The estimated cost of shutting down the station, if and when it may become 69 necessary, is $12,000,000. The estimated annual cost to maintain the facility in a safe shutdown condition is $200,000. This estimate is based on the reactor (with fuel removed) and its associated nuclear service systems remaining essentially in place and being isolated by fencing which would be monitored periodically by guards. The secondary side of the station would be salvaged. The funds necessary to operate and shut down the facility will be derived from the electrical operating revenues derived from system-wide operation.

Applicant will obtain all required and appropriate property and liability insurance for the William B. McGuire Nuclear Station and its fuel and will advise the Commission accordingly.

g. Deleted

h. Site Location and Completion Dates

The William B. McGuire Nuclear Station site is located on the shore of Lake Norman which is impounded by Applicant's Cowan Ford Dam completed in 1963. The dam, lake, and hydroelectric station are covered by Federal Power Commission license #2232 granted to the Applicant in 1958 for the Catawba-Wateree Project. That license specifically covers the cooling water intake facility built in 1961 in anticipation of the future development of the McGuire site for a thermal station, and also covers the use of Lake Norman waters for this cooling purpose. In addition, three other thermal station sites are provided for around Lake Norman, including the 2,025,000 kW Marshall Steam Station completed in 1970 plus two future sites.

McGuire Nuclear Station Unit 1 was placed in commercial operation in December of 1981. Construction permit for McGuire Nuclear Station Unit 2, CPPR-84, has recently had the latest completion date for Unit 2 extended from December 31, 1980 to June 30, 1983. 69

i. Regulatory Agencies and Area Newspapers

The applicant is located in the Piedmont section of North and South Carolina. The following regulatory agencies have jurisdiction over the rates and services that would be incident to the McGuire Nuclear Station:

The Public Service Commission of South Carolina
Owen Building
1321 Lady Street
P. O. Drawer 11649
Columbia, South Carolina 29211

North Carolina Utilities Commission
P.O. Box 991
Raleigh, North Carolina 27602

69 | Federal Energy Regulatory Commission
Washington, D. C. 20426

The following are the news publications which circulate in the area of McGuire Nuclear Station and will be sufficient to give reasonable notice of this application to any municipalities, private utilities, public bodies, and cooperatives which might have a potential interest in the station:

MOORESVILLE TRIBUNE
P. O. Box 300
Mooresville, North Carolina 28115
(Iredell County)

MECKLENBURG GAZETTE
P. O. Box 548
Davidson, North Carolina 28036
(Mecklenburg County)

CONCORD DAILY TRIBUNE
P. O. Box 608
Concord, North Carolina 28205
(Cabarras County)

KANNAPOLIS DAILY INDEPENDENT
P. O. Box 147
Kannapolis, North Carolina 28081
(Cabarras County)

CHARLOTTE NEWS
69 | Knight Publishing Company
600 South Tryon Street
Charlotte, North Carolina 28201
(Mecklenburg County)

CHARLOTTE OBSERVER
69 | Knight Publishing Company
600 South Tryon Street
Charlotte, North Carolina 28201
(Mecklenburg County)

CHARLOTTE EAST
1401 East 7th Street
Charlotte, North Carolina 28204
(Mecklenburg County)

CHARLOTTE WEEKLY
1420 East 7th Street
Charlotte, North Carolina 28204
(Mecklenburg County)

LINCOLN TIMES-NEWS
P. O. Box 40
Lincolnton, North Carolina 28092
(Lincoln County)

j. Restricted Data

An agreement limiting access to restricted data as required by 10 CFR 50.37 is attached hereto as Exhibit IV. This application in the form submitted does not contain restricted data or other defense information.

It is requested that all COMMUNICATIONS pertaining to this application be sent to:

69 Mr. Hal B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

IN WITNESS WHEREOF, Duke Power Company has caused its name to be hereunto

69 signed by Hal B. Tucker, its Vice President, this 1st day of October, 1982.

DUKE POWER COMPANY

69 Notary Public

By: Hal B. Tucker
Hal B. Tucker, Vice President

69 My Commission Expires:

September 21, 1984

EVALUATION OF THE EFFECTS OF POSTULATED
PIPE FAILURES OUTSIDE CONTAINMENT
FOR
McGUIRE NUCLEAR STATION

October 1, 1982

CHANGES AND CORRECTIONS:

Remove and insert pages in accordance with the following tabulations:

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