

UNION ELECTRIC COMPANY
1901 GRATIOT STREET - ST. LOUIS

November 15, 1978

MAILING ADDRESS:
P. O. BOX 149
ST. LOUIS, MO. 63166

Mr. R. Michael Jenkins, Secretary
Missouri Public Service Commission
P.O. Box 360
Jefferson City, Missouri 65102

Dear Mr. Jenkins:

Enclosed for filing with the Commission are an original and nine conformed copies of Union Electric Company's "Application for permission and authority to construct, operate and maintain two combustion turbine generating units in the State of Missouri."

Please acknowledge receipt of this Application.

Very truly yours,

Michael F. Barnes

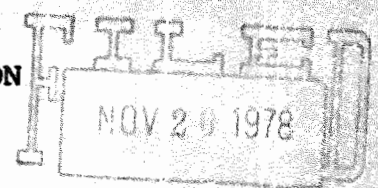
Michael F. Barnes
Attorney

MFB:cuh
Encl.

RECEIVED
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PUBLIC SERVICE COMMISSION

FILED
NOV 20 1978
PUBLIC SERVICE COMMISSION

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI



PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
UNION ELECTRIC COMPANY for permission)
and authority to construct, operate)
and maintain two combustion turbine)
generating units in the State of)
Missouri)

Case No. EA-79-119

APPLICATION

COMES NOW Union Electric Company (hereinafter referred to as "Applicant"), and in support of its Application for permission and authority under Section 393.170 RSMo 1969, to construct, operate and maintain two combustion turbine generating units in the State of Missouri, respectfully represents and states as follows:

1. Applicant is a corporation duly organized and existing under and by virtue of the laws of the State of Missouri, with its general business office at 1901 Gratiot Street, St. Louis, Missouri 63166. Applicant is engaged in rendering electric service in eastern and central Missouri, and steam heating service in a portion of downtown St. Louis as a public utility subject to the jurisdiction of this Commission. It also is engaged in rendering electric service in portions of Illinois and gas service in Alton, Illinois, and vicinity, as a public utility subject to the jurisdiction of the Illinois Commerce Commission, as well as electric service in southeastern Iowa as a public utility subject to the jurisdiction of the Iowa State Commerce Commission.

2. Communications in regard to this Application should be addressed to Michael F. Barnes, Attorney for Applicant, 1901 Gratiot Street, P.O. Box 149, St. Louis, Missouri 63166.

3. Applicant proposes to construct, operate and maintain two combustion turbine generating units (hereinafter referred to as the "Meramec Turbine Units"), on a site at the east central portion of Applicant's Meramec Power Plant property and northwest of the power plant proper, which site is within Applicant's certified service area. The Meramec Power Plant, constructed pursuant to authority granted by this Commission in Case No. 11,925, is located at 8200 Fine Road, at the confluence of the Mississippi and Meramec Rivers, in St. Louis County, Missouri. The location of the Meramec Power Plant site in St. Louis County is shown on the map attached hereto, marked Exhibit 1, and made a part hereof. The location and relationship of the proposed generating units with generating and transmission facilities of Applicant (both existing and proposed) is shown on the map attached hereto, marked Exhibit 2, and made a part hereof. The description of the tract of land upon which the proposed Meramec Turbine Units will be constructed is attached hereto, marked Exhibit 3, and made a part hereof.

4. One combustion turbine unit, constructed pursuant to authority granted by this Commission in Case No. 17,805, is now in operation at the Meramec Power Plant. The two proposed Meramec Turbine Units will be constructed near the existing combustion turbine generating unit.

5. The two Meramec Turbine Units will be oil-fired peaking units, each with a maximum peak summer capacity rating of 51 megawatts and a base load summer rating of 48 megawatts. The Meramec Turbine Units' major parts consist of two gas generators and two axial flow turbines which drive a

single tandem connected air cooled generator, an exciter which supplies electric current used to produce a magnetic field in the generator, and two air motors for initial starting. Applicant proposes to begin commercial operation of the two units in May 1980.

6. The construction, operation and maintenance of the two Meramec Turbine Units will provide Applicant with additional generating capacity for use during peak demand periods or in emergency situations. The two proposed Meramec Turbine Units will give Applicant a more reliable system with improved operability, thereby providing Applicant's customers with safe, reliable and economical electric service.

7. The demands upon Applicant for electric service have grown over the years and further growth is forecasted for the future. The all-time native system net integrated hour peak demand on Applicant's system of 5476 megawatts was experienced on July 19, 1977. Applicant estimates on the basis of the most recent forecast available that such peak demand will increase to 5990 megawatts in 1980, the year when the two proposed Meramec Turbine Units will go into service. Adjusting this figure for purchases and sales of firm power, the peak demand is estimated at 5767 megawatts in 1980. Applicant considers it prudent to plan for a reserve margin of about eighteen percent above the expected adjusted peak demand, a portion of which will be provided by power purchases.

At the present time, Applicant's total generating capacity, allowing for estimated environmentally forced plant deratings, is 5833 megawatts. Applicant's generating capacity will increase by 210 megawatts in 1979 when boilers 7 and 8 of Applicant's Venice Plant are returned to service.

A further generating capacity increase of 102 megawatts is scheduled in 1980, when the two proposed Meramec Turbine Units commence operation. Additional power required to meet demand plus reserve requirements in the near future will be purchased from other utilities.

8. The two proposed Meramec Turbine Units will be interconnected through transmission facilities of Applicant to all other of Applicant's power plants and will be connected to other utility systems through intersystem connections in order that the electric energy to be generated can be utilized economically to the greatest advantage of the consuming public.

9. The installation of the two proposed Meramec Turbine Units will provide the Applicant with additional black-start capability. The black-start capability of these units will enable them to be started and brought on-line even when no external power is available, such as during a system-wide blackout. Such capability will greatly enhance the reliability of the Applicant's electrical system with regard to severe system or area-wide emergency situations.

10. The construction of each Meramec Turbine Unit will cost approximately \$7,988,000. Applicant proposes to finance the construction of the two proposed units out of the funds available in its treasury, a portion of which may be obtained from new financing. The amount and nature of any new financing will be submitted to this Commission for approval.

11. The construction, operation and maintenance of the two proposed Meramec Turbine Units will serve the public convenience and necessity by providing additional capacity to

Applicant's system during periods of high demand and a supply of electricity during emergencies.

WHEREFORE, Applicant prays:

1. That an order be issued by the Commission granting to Union Electric Company permission and authority to construct, operate and maintain, at the location hereinabove described, the two proposed Meramec Turbine Units.

2. That the Commission make such other order or orders as it may deem just and proper.

Dated at St. Louis, Missouri, this 13th day of November 1978.

UNION ELECTRIC COMPANY

By

Henry C. Colteryahn

Henry C. Colteryahn
Vice President

Michael F. Barnes

Michael F. Barnes


William E. Jaudes

William E. Jaudes

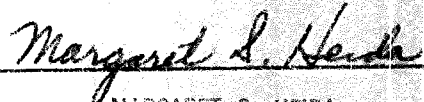
Attorneys for Applicant
P.O. Box 149
St. Louis, Missouri 63166
(314) 621-3222

STATE OF MISSOURI)
) SS
CITY OF ST. LOUIS)

Henry C. Colteryahn, of lawful age, being duly sworn, deposes and says: that he is a Vice President of Union Electric Company, the corporation described in the foregoing Application; that he is duly authorized to and did sign said Application as such Vice President; that he has knowledge of the facts stated in the foregoing Application; and for and on behalf of said corporation states that such facts are true to the best of his knowledge and belief.


Henry C. Colteryahn
Vice President

Subscribed and sworn to before me this 13th day of
November, 1978.


MARGARET S. HEIDA
NOTARY PUBLIC--STATE OF MISSOURI
ST. LOUIS COUNTY
MY COMMISSION EXPIRES JANUARY 2, 1982



UNION ELECTRIC SYSTEM
LOCATION OF MERAMEC PLANT
COMBUSTION TURBINE UNITS 3&4

DESCRIPTION OF SITE
MERAMEC COMBUSTION TURBINE
GENERATING UNITS NOS. 3 AND 4

A tract of land in U.S. Surveys 50 and 3051, Township 42 North, Range 6 East, St. Louis County, Missouri, described as follows, to wit:

Beginning at the point of intersection of the Northeastern line of Fine Road, now vacated, and the eastern line of Tract "D", a tract of 3.09 acres, as shown on the plat recorded December 1, 1937 in Plat Book 33 at Page 47 of the St. Louis County Recorder's Office which plat is according to a survey made by Elbring Surveying Company, revised as of October 4, 1937; thence from said point of beginning South $66^{\circ} 38'$ West 601.22 feet to a point; thence North $23^{\circ} 22'$ West 8.45 feet to the point of beginning of the tract described herein; thence South $66^{\circ} 38'$ West 700 feet to a point; thence South $23^{\circ} 22'$ East 700 feet to a point; thence North $66^{\circ} 38'$ East 700 feet to a point; thence North $23^{\circ} 22'$ West 700 feet to the point of beginning, containing 11.249 acres, more or less.

November 20, 1978

Mr. Michael F. Barnes
Attorney at Law
Union Electric Company
P. O. Box 149
St. Louis, Missouri 63166

Re: Case No. EA-79-119

Dear Mr. Barnes:

We acknowledge receipt of your letter dated November 15, 1978, enclosing the original and nine copies of the application of Union Electric Company for permission to construct, operate and maintain two combustion turbine generating units.

The application has been filed in this office today as Case No. EA-79-119 and called to the attention of the Commission.

You will be informed, when further action is taken in this matter.

Sincerely,

R. Michael Jenkins
Secretary

RMJ/jf