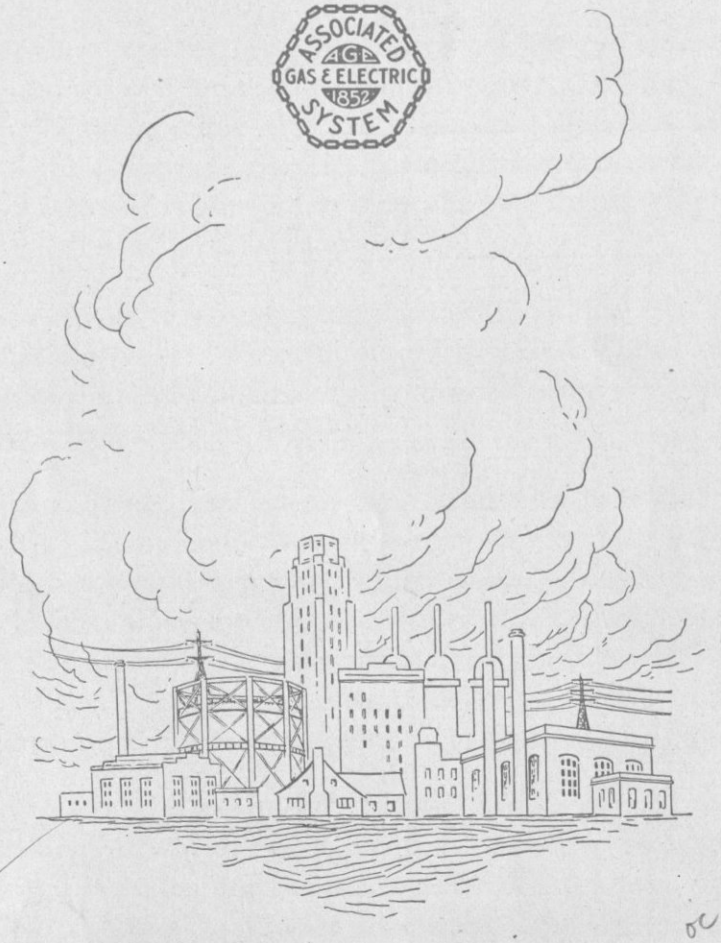
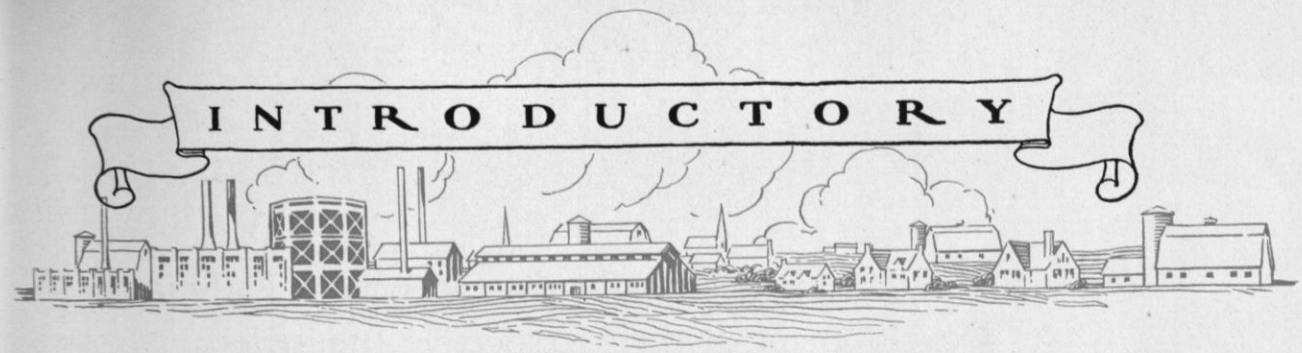
ASSOCIATED GAS AND ELECTRIC SYSTEM

PROPERTIES



ASSOCIATED GAS AND ELECTRIC SYSTEM
61 BROADWAY, NEW YORK



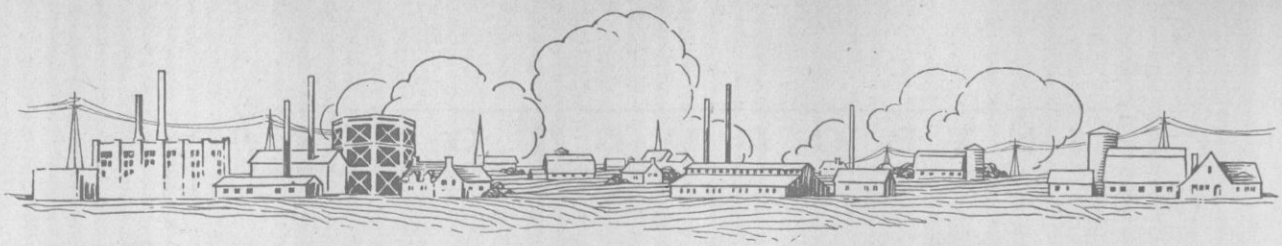
THERE was much controversy in the early days of the electric industry regarding the respective merits of electricity and gas. One champion of electricity wrote in 1889, "The electric light is a pure, healthy light, which, if no other were used and the smoke of our fires was self-consuming, would leave our cities almost as fresh and bracing as a Highland Hill."

During the same year the president of a large metropolitan gas company who could see but little immediate prospect for the new industry, said, "While I do not feel that the electric light is a serious competitor with gas, it has some special uses and advantages; and my idea is that if the citizens of our city for any reason, even an imaginary one, desire that character of light, it is but just to them that we should supply it in the best possible shape and at the lowest possible rates."

Thomas Edison's early views regarding the relationship of the two industries have come the closest to fulfillment. He wrote in an old notebook, "Gas will be manufactured less for lighting as the result of electrical competition and more for heating, thus enlarging its market and increasing its income."

Instead of realizing the competition feared, both industries have had a growth, the one for light and power, the other for heating, unforeseen in that early year. The gas company president further voiced a policy, which in its subsequent application, has brought about the widespread development of these two industries, under managements in many cases responsible for both. The Associated Gas and Electric System represents such a combination of services. Beginning in 1852 in the service of gas, it includes numerous electric lighting companies which had their origin in the pioneer days of the electric industry.

The policy of centralized operation of diversified properties has been successfully followed by the Associated System for the past quarter of a century. Today, the properties stretch from Nova Scotia to Florida and from Cape Cod to the Philippines. over 1,425,000 customers are served with electricity, gas, or other utility services in 26 states, the Maritime Provinces of Canada and the Philippine Islands.



Associated System Properties Began Operations Early in the Development of their Respective Industries

MANY operating properties now a part of the Associated System first began serving the public in the early days of their respective industries. At the time the first gas companies started operations, illumination by gas was a novelty. When service was begun by the Ithaca (New York) Gas Light Company in 1852, the Ithaca Journal published the following item:

> "... *The residences and stores of our citizens were lighted up with gas on Saturday evening last, for the first time. Notwithstanding the disadvantages of pipes filled with foul air and the difficulties attendant upon the first manufacture and introduction of an article of this kind, a good light was produced, and the quality has since improved. The Company we trust will receive a proper remuneration for the outlays made by them in our village.*"

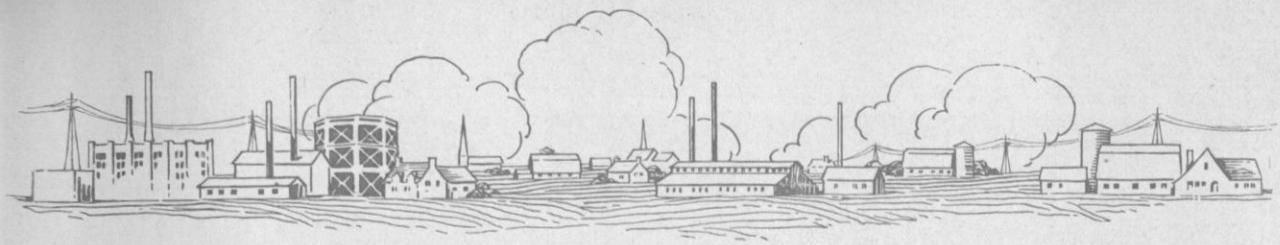
Several of the electric properties began operating within a few years after Edison's Pearl Street station sold the first electric power to its customers in 1882. These early gas and electric companies now combine the advantages of long experience and modern equipment to bring efficient public service to customers throughout the Associated System.

Early Gas Companies

Rochester Gas Light Company ..... 1848 Rochester, N. Y.	Elmira Gas Light Company ..... 1852 Elmira, N. Y.
Worcester Gas Light Company ..... 1849 Worcester, Mass.	Dansville Gas Light Company ..... 1856 Dansville, N. Y.
New Bedford Gas Light Company .... 1850 New Bedford, Mass.	Johnstown Water and Gas Company ... 1856 Johnstown, Pa.
Easton Gas Works ..... 1850 Easton, Pa.	N. B. Rice ..... 1859 Corning, N. Y.
Ithaca Gas Light Company ..... 1852 Ithaca, N. Y.	Owensboro Gas Light Company ..... 1860 Owensboro, Ky.
Cambridge Gas Light Company ..... 1852 Cambridge, Mass.	Solomon Gas Light Company ..... 1863 Bowling Green, Ky.

Early Electric Properties

Brush Electric Light Company ..... 1881 Rochester, N. Y.	Richmond Electric Light & Power Co. ... 1887 Staten Island, N. Y.
Reading Electric Light & Power Co. ... 1883 Reading, Pa.	Patchogue Electric Light Company. .... 1887 Patchogue, N. Y.
New Bedford Electric Light Company .. 1883 New Bedford, Mass.	Edison Electric Illuminating Co. ..... 1888 Easton, Pa.
Brush-Swan Electric Company ..... 1884 Binghamton, N. Y.	Brush-Swan Electric Company ..... 1888 Ithaca, N. Y.
Johnstown Electric Light Company ... 1885 Johnstown, Pa.	Plattsburgh Gas and Electric Company. . 1889 Plattsburgh, N. Y.
American Illuminating Company .... 1886 Hornell, N. Y.	



Plants, Personnel and Policy

THROUGH additions and normal growth the total assets and earnings were in 1930 more than three times what they were at the close of 1928.

At Columbia, S. C. on the Saluda River a hydro-electric project is nearing completion. This development includes the largest earth dam ever constructed for hydro-electric purposes and the largest artificial lake in the world. Its ultimate capacity will be 200,000 Kw. Another new development is located at Botocan in the foothills near Manila, Philippine Islands, where a 16,000 Kw. station will be completed in 1931.

The first unit of the Gilbert Station at Holland, N. J. is now in operation and will be added to until the station reaches its ultimate capacity of 220,000 Kw. A part of this plant's output will be used by the Delaware, Lackawanna and Western Railroad, in connection with electrification of its lines.

The large steam and hydro-electric stations, gas plants, water works and ice plants pictured on the following pages are necessarily only a small part of the total physical equipment which brings service to more than 1,425,000 Associated Customers in 2,500 communities.

16,000 EMPLOYEES

NINE of the important operating units of the Associated System average 62 years of successful operation. It is only natural that many employees have spent years with these properties, developing with them into seasoned servants of the public.

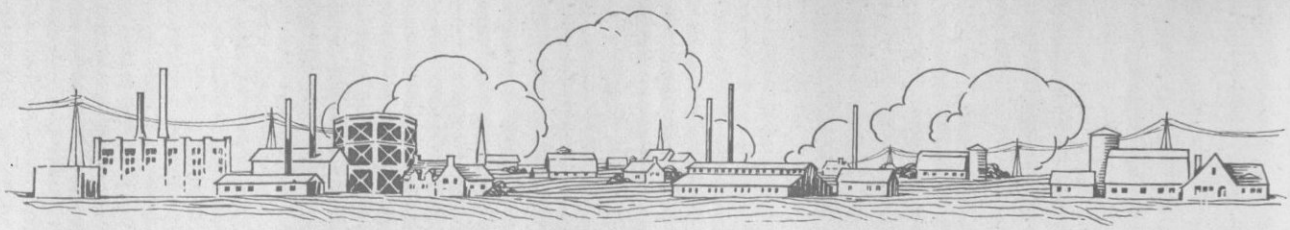
Whether an employee is a central-station operator, a meter reader, a clerk or lineman, he or she realizes that a courteous contact with the public is essential and that service is the aim of effort.

The loyalty of the employees has been ably demonstrated by their diligence in the line of duty and further by the fact that over 85.3% have invested in the securities of the System.

33 CHIEF EXECUTIVES AVERAGE 24 YEARS UTILITY SERVICE

GIVEN up-to-date plants, equipment and faithful employees it remains for the executives properly to co-ordinate the two so that a high degree of efficiency may be attained. Associated System executives by virtue of their wide experience and training are well fitted to deal with problems whether they arise in the main offices or in the field.

Of the 33 chief executives all have had over ten years of service with their companies, while fifteen have served over twenty-five years. Seven have served over thirty years.



Progressive Policies Govern Financial and Commercial Activities

THREADED through the entire Associated System is the progressive policy of the management. Each employee and executive is imbued with this policy and each plant reflects its influence.

The financial structure of the System is rapidly being simplified. Underlying issues of operating company securities are being retired while new financing is being done through the securities of the holding company, thus minimizing the secured debt and providing an adequate equity for the senior securities.

New Business

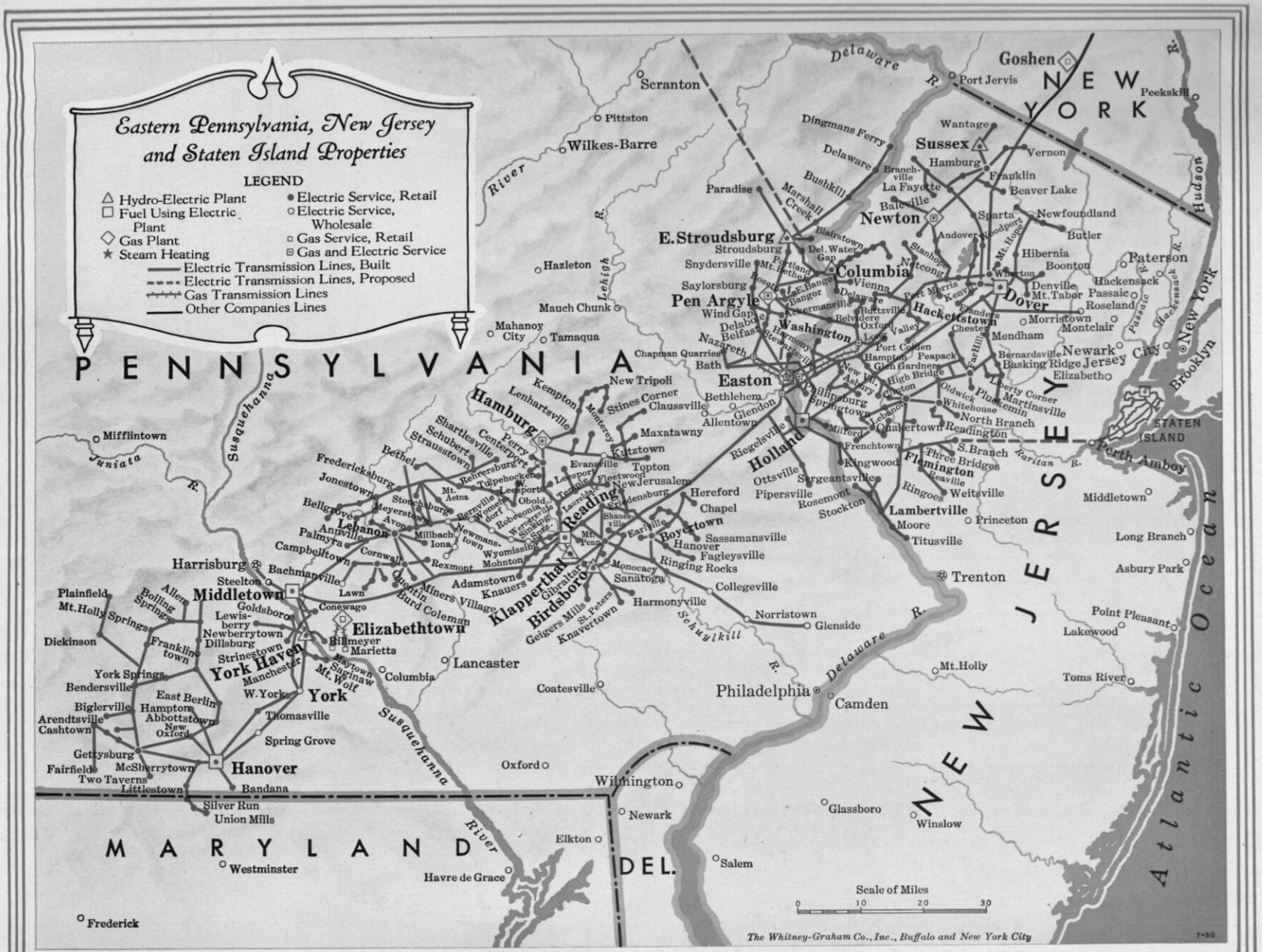
ALMOST important phase in the "growth" period of an industry is the development of new business. In many cases a heavier load can be carried by plants with little additional expense. It is to the advantage of customer and utility alike to increase this load to a maximum, thus getting the most good from the invested capital. The Associated System centralized its new business activities and now maintains 179 appliance stores for the sale of all gas and electric appliances. During a recent six weeks campaign this department mustered all employees in a System-wide drive in the sale of automatic refrigeration. A new record was set for the entire industry—13,791 automatic refrigerators were sold by employees in the six weeks period—more than were sold in the entire United States during 1922.

The Industrial Development Department has a two-fold function, that of assisting expanding industries in the territories served, and of aiding new businesses to determine the advantages of location in Associated territories.

In many properties low energy rates in combination with a moderate service charge have been introduced and have effected a considerable saving for residential customers desiring to make a wide use of their services.

Advantages of Group Management

THE advantages of group supervision of geographically diversified properties are well recognized. Substantial savings are effected in connection with purchase, financing, new construction, engineering, blanket insurance and new business activities. Under the impetus of group management, operating properties of the Associated System have made progress which as independent companies, they would have been unable to achieve by themselves.


Eastern Pennsylvania, New Jersey and Staten Island Properties
LEGEND
Hydro-Electric Plant
Fuel Using Electric Plant
Gas Plant
Steam Heating
Electric Service, Retail
Electric Service, Wholesale
Gas Service, Retail
Gas and Electric Service
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Gas Transmission Lines
Other Companies Lines
PENNSYLVANIA
NEW YORK
NEW JERSEY
MARYLAND
DEL.
STATEN ISLAND
Atlantic Ocean
Delaware R.
Susquehanna River
Lehigh R.
Schuylkill R.
Raritan R.
Hudson R.
Passaic R.
Hackensack R.
Scranton
Pittston
Wilkes-Barre
Hazleton
Mauch Chunk
Mahanoy City
Tamaqua
Paradise
Goshen
Port Jervis
Peekskill
Wantage
Sussex
Vernon
Hamburg
Franklin
Beaver Lake
Dingmans Ferry
Delaware
Bushkill
Marshall Creek
Branchville
La Fayette
Newton
Sparta
Newfoundland
Andover
Butler
E. Stroudsburg
Stroudsburg
Del. Water Gap
Hibernia
Boonton
Paterson
Snydersville
Columbia
Vienna
Whartons
Hackensack
Saylorsburg
Pen Argyle
Wind Gap
Bangor
Delaware
Port Morris
Kenvil
Denville
Mt. Tabor
Passaic
Dover
Roseland
Belvidere
Oxford
Valley
Hackettstown
Morristown
Montclair
Washington
Chester
Mendham
Port Colden
Hampton
Peapack
Glen Gardner
Bernardsville
Basking Ridge
Newark
Jersey City
Elizabeth
Brooklyn
New York
Chapman Quarries
Bath
Easton
Bethlehem
High Bridge
Clinton
Oldwick
Liberty Corner
Martinsville
Whitehouse
North Branch
Readington
Lebanon
Glendon
Allentown
Phillipsburg
Riegelsville
Holland
Milford
Frenchtown
Quakertown
S. Branch
Three Bridges
Flemington
Ringoes
Perth Amboy
Kingwood
Ottsville
Sergeantsville
Pipersville
Rosemont
Stockton
Lambertville
Moore
Princeton
Middletown
Weitsville
Titusville
Long Branch
Asbury Park
Trenton
Point Pleasant
Lakewood
Toms River
Mt. Holly
Camden
Philadelphia
Glassboro
Winslow
Salem
Elkton
Havre de Grace
Westminster
Frederick
Oxford
Wilmington
Newark
Coatesville
Lancaster
Columbia
Harrisburg
Middletown
Elizabethtown
York Haven
York
Hanover
Mifflintown
Juniata R.
Susquehanna
Hamburg
New Tripoli
Kempton
Lenhartsville
Stines Corner
Claussville
Maxatawny
Kutztown
Topton
Evansville
Fleetwood
New Jerusalem
Hereford
Chapel
Boyertown
Sassamansville
Hanover
Fagleysville
Ringing Rocks
Collegeville
Harmonyville
Norristown
Glenside
Reading
Lebanon
Annville
Palmyra
Campbelltown
Cornwall
Bachmanville
Steelton
Plainfield
Mt. Holly Springs
Dickinson
Boiling Springs
Allen
Goldsboro
Lewisberry
Newberrytown
Dillsburg
Franklintown
Strinestown
Conewago
Bilmeyer
Marietta
York Springs
Bendersville
Biglerville
Arendtsville
Cashtown
East Berlin
Hampton
Abbottstown
New Oxford
W. York
Manchester
Maytown
Saginaw
Mt. Wolf
Thomasville
Spring Grove
Gettysburg
Fairfield
McSherrytown
Two Taverns
Littlestown
Bandana
Silver Run
Union Mills
Frederick
Mt. Aetna
Bernville
Womelsdorf
Robesonia
Shoemakersville
Sinking Spring
Wyomissing
Mohnton
Shaneville
Mt. Penn
Laurelton
Temple
Leesport
Obold
Tulpehocken
Rehrersburg
Strausstown
Schubert
Shartlesville
Centerport
Perry
Bethel
Frederickaburg
Jonestown
Bellegrove
Meyerstown
Avon
Stouchsburg
Millbach
Iona
Newmanstown
Rexmont
Cornwall
Lawn
Quentin
Miners Village
Burd Coleman
Adamstown
Knauers
Klapperthal
Gibraltar
Birdsboro
Geigers Mills
St. Peters
Knavertown
Monocacy
Sanatoga
Earlville
Shanesville
Evansville
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Glenside
Schuylkill R.
Delaware R.
Lancaster
Columbia
Coatesville
Philadelphia
Camden
Mt. Holly
Toms River
Lakewood
Point Pleasant
Asbury Park
Long Branch
Middletown
Princeton
Trenton
Lambertville
Moore
Titusville
Stockton
Rosemont
Ringoes
Flemington
Three Bridges
Beaville
Weitsville
S. Branch
Ottsville
Sergeantsville
Pipersville
Kingwood
Frenchtown
Quakertown
Milford
Riegelsville
Holland
Phillipsburg
Springtown
Lopatcong
Glendon
Allentown
Bethlehem
Clinton
High Bridge
Oldwick
Whitehouse
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York Springs
Bendersville
Biglerville
Arendtsville
Cashtown
East Berlin
Hampton
Abbottstown
New Oxford
W. York
Manchester
Maytown
Saginaw
Mt. Wolf
Thomasville
Spring Grove
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Fairfield
McSherrytown
Two Taverns
Littlestown
Bandana
Silver Run
Union Mills
Frederick
Westminster
Havre de Grace
Elkton
Oxford
Wilmington
Newark
Glassboro
Winslow
Salem
DEL.
Scale of Miles
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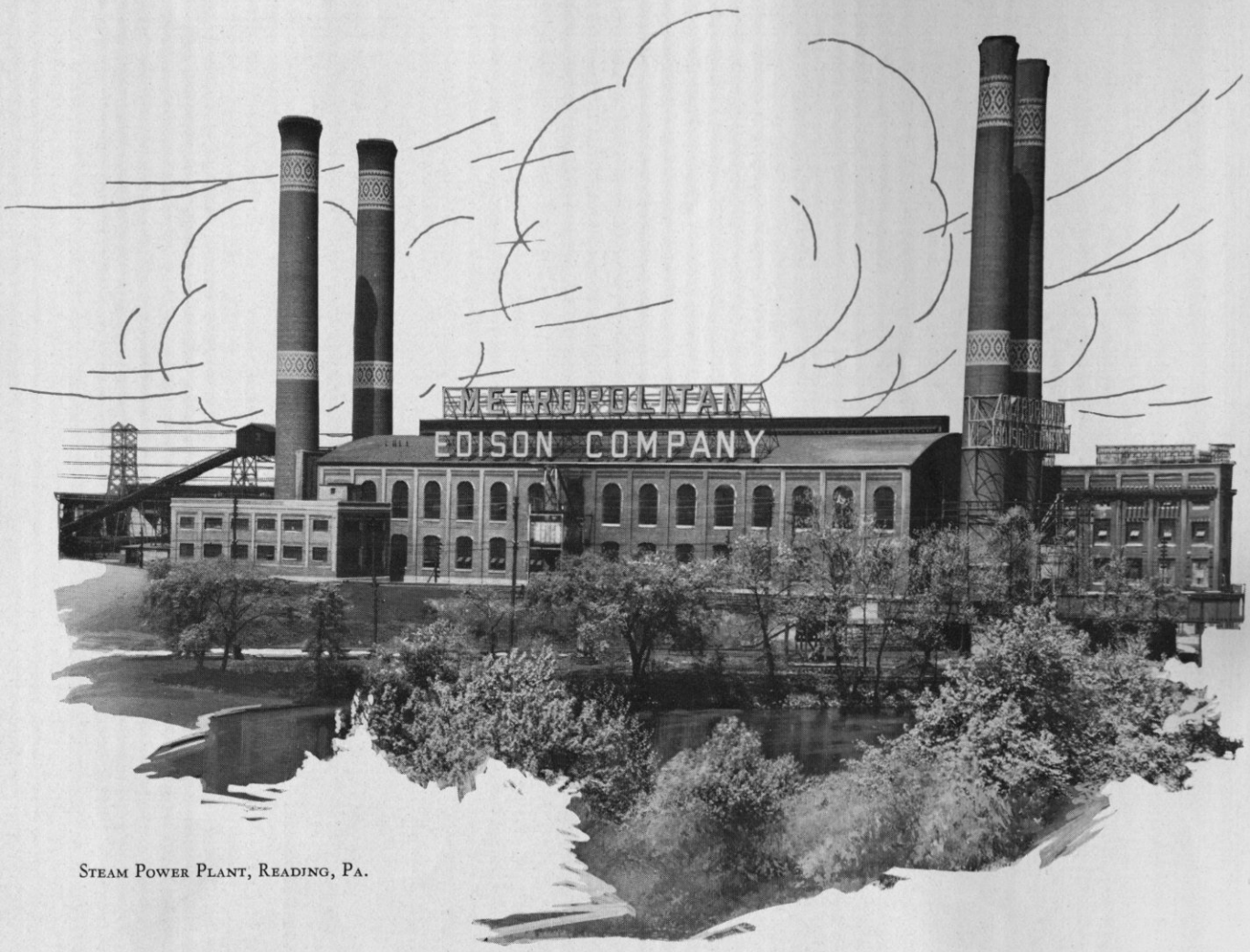
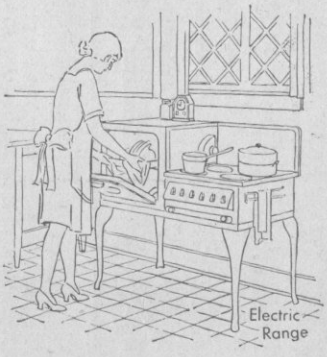
The Whitney-Graham Co., Inc., Buffalo and New York City
7-30

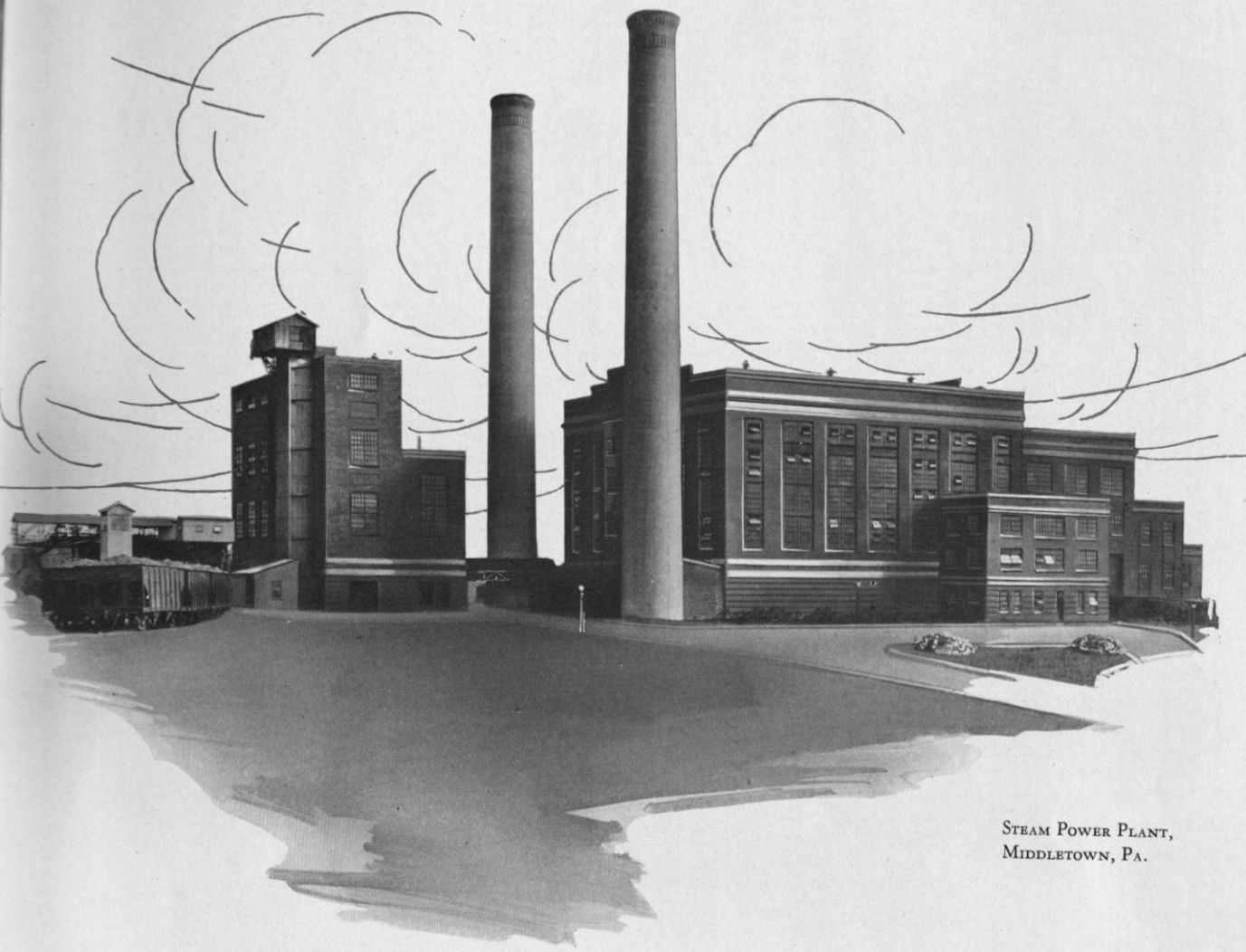


Steam Power Plant, Reading, Pa.



Metropolitan Edison—
Reading Group

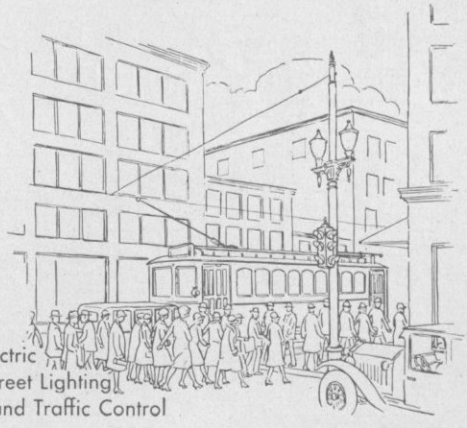
Reading, pennsylvania, the third largest manufacturing city in Pennsylvania, is the center of operations for this group. The territory is remarkable for its diversity of activities. It includes many of the major industrial activities such as textiles, iron and steel, cement, lime and the rich agricultural sections of Berks and Lebanon counties.



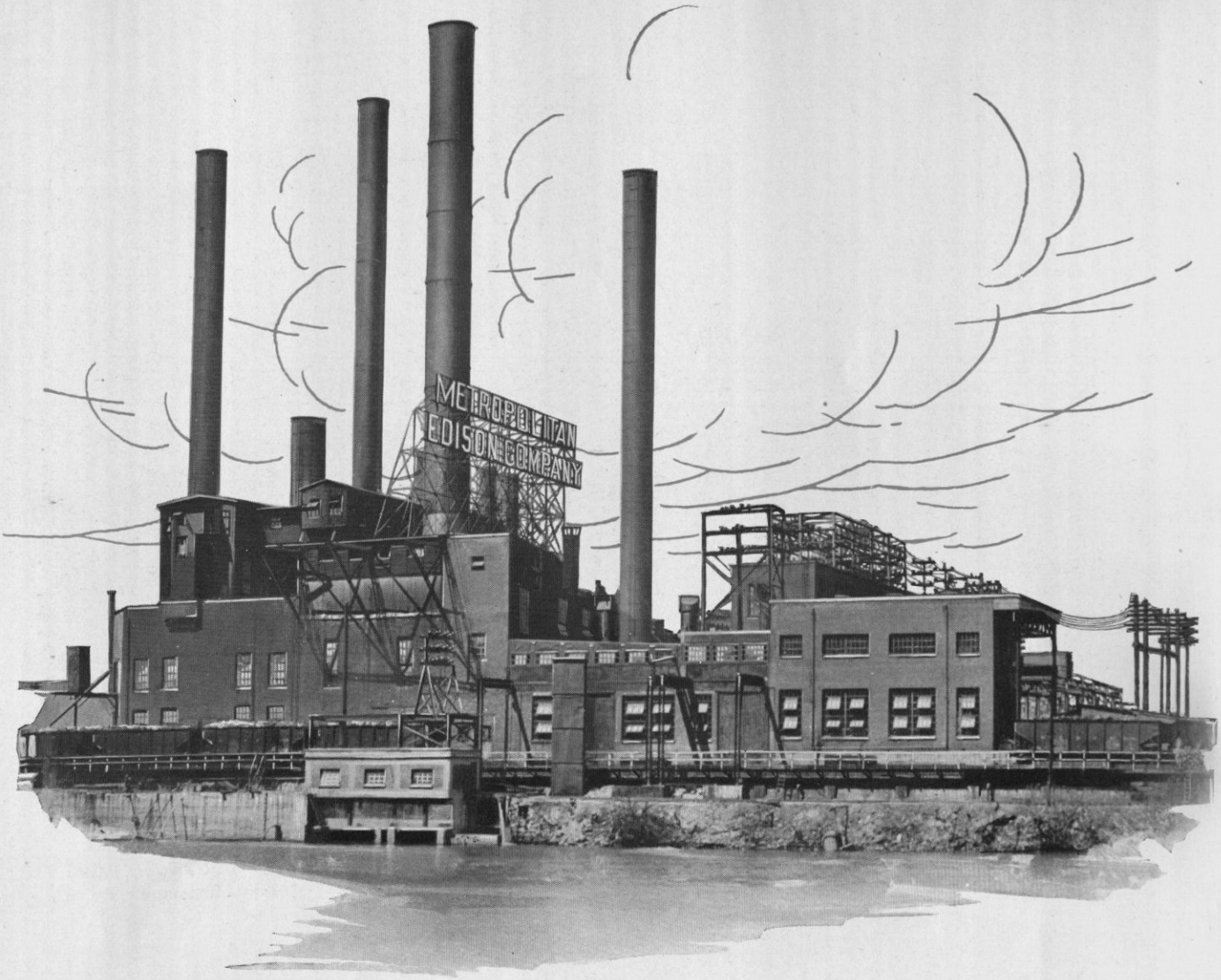
Steam Power Plant,
Middletown, Pa.

There are 79,000 customers in the group—353 cities and towns with a total population of over 500,000 are served.

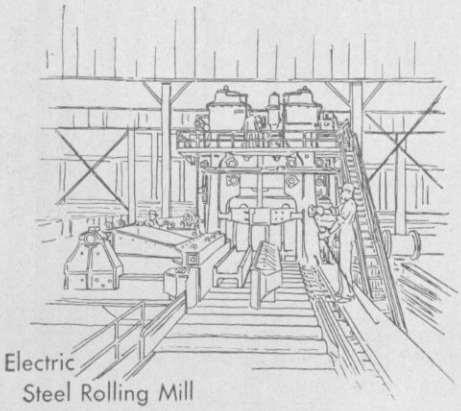
There are over 980 miles of distribution lines and 639 miles of high tension transmission lines. The gas plants have a 24-hour generating capacity of 690,000 cubic feet.



Electric
Street Lighting
and Traffic Control



Steam Power Plant, Easton, Pa.



Electric
Steel Rolling Mill

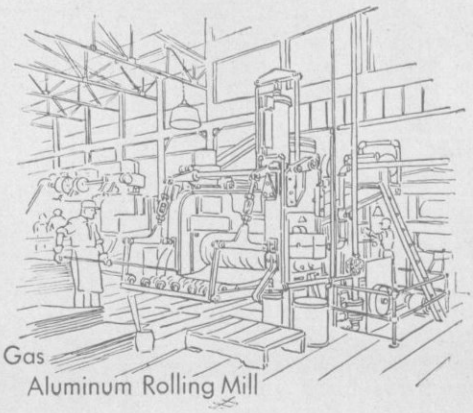
Reading Group—continued

The properties are interconnected by high tension transmission lines with other large power systems and are strategically located for railroad electrification and industrial expansion. The power plants at West Reading, Easton and Middletown, provide 130,000 Kw. of the group's total generating capacity of 188,800 Kw.

Gas Plant, Easton, Pa.

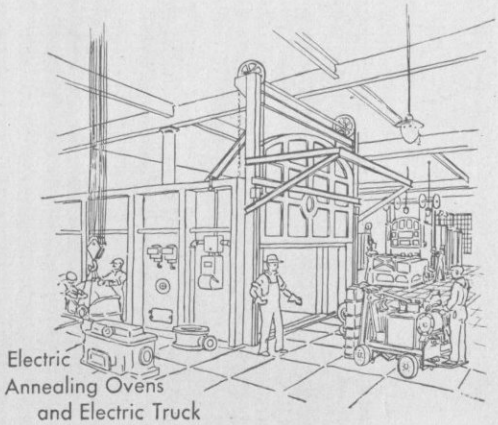
Easton—New Jersey Group

In a large territory centering about Easton, Pennsylvania, including Nazareth, Bangor, Bath, Stroudsburg and other Pennsylvania towns and over one-fourth of the State of New Jersey, the Associated System serves nearly 80,000 customers. Power demands in this area are steady and constant as a result of the cement and diversified industries; residential demands are growing rapidly and steam sales are increasing.



Gas
Aluminum Rolling Mill

Steam Power Plant, Holland, N. J.



Electric Annealing Ovens and Electric Truck

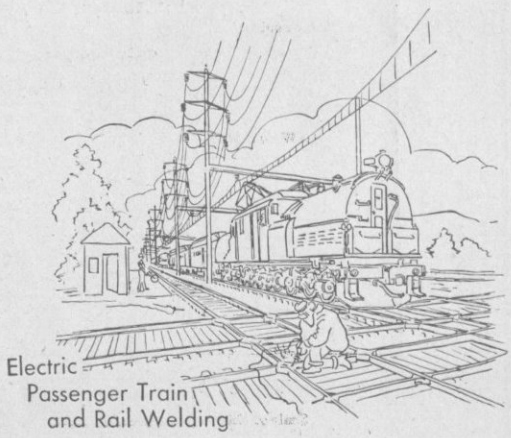
Easton—New Jersey Group—continued

At Holland, New Jersey, there was completed in 1930 the Gilbert Station, one of the first all-high pressure electric generating stations in the country with initial capacity of 55,000 Kw. The station is designed for 220,000 Kw. ultimate capacity. The Delaware, Lackawanna and Western Railroad will become an important customer of the Gilbert Plant as its program of electrification develops.

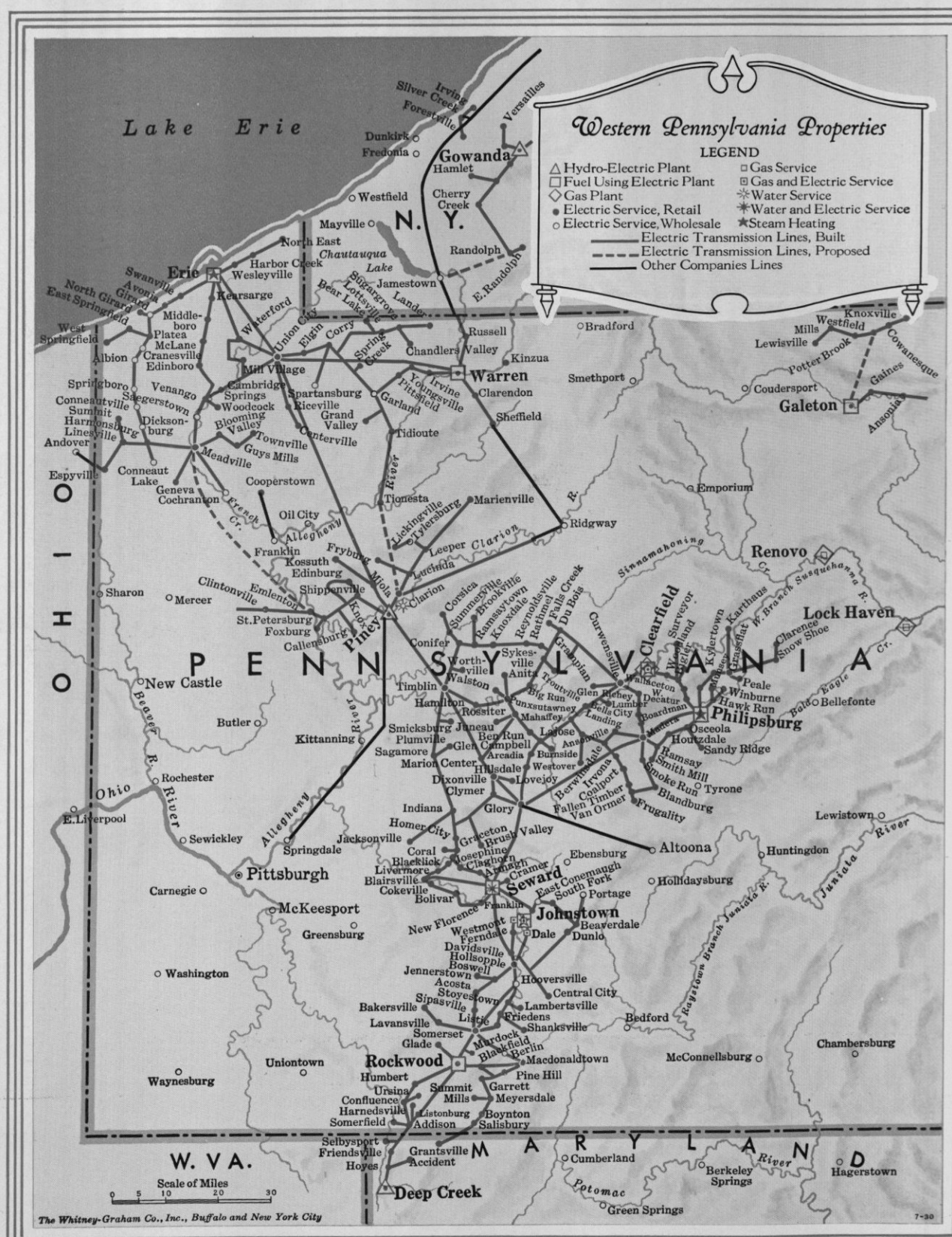
HYDRO-ELECTRIC POWER PLANT,
YORK HAVEN, PA.

The Gilbert Station is connected by high tension transmission lines with large generating stations at Middletown and York Haven on the Susquehanna River, Reading on the Schuylkill River and other smaller stations.

If furnishing current only for lighting, the Gilbert Station has a present capacity sufficient to illuminate 200,000 six-room homes.



Electric
Passenger Train
and Rail Welding

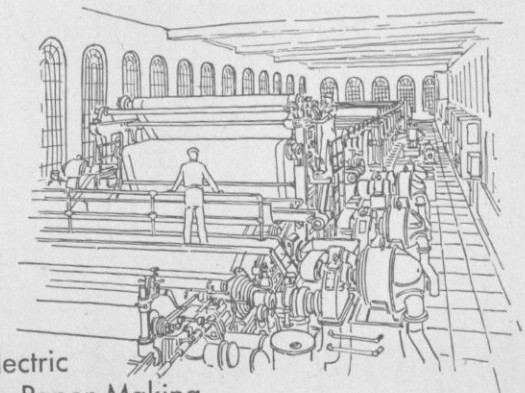

Western Pennsylvania Properties
LEGEND
Hydro-Electric Plant
Fuel Using Electric Plant
Gas Plant
Electric Service, Retail
Electric Service, Wholesale
Gas Service
Gas and Electric Service
Water Service
Water and Electric Service
Steam Heating
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Other Companies Lines
Lake Erie
OHIO
PENNSYLVANIA
N. Y.
W. VA.
MARYLAND
Erie
Gowanda
Warren
Galeton
Clearfield
Philipsburg
Lock Haven
Renovo
Pittsburgh
Johnstown
Altoona
Rockwood
Seward
Deep Creek
Scale of Miles
0 5 10 20 30
The Whitney-Graham Co., Inc., Buffalo and New York City
7-30

Steam Power Plant, Erie, Pa.

Western Pennsylvania Group

One hundred thirty thousand customers are served in West Pennsylvania communities including among others Johnstown, Erie, Clearfield and Warren. Johnstown is a center of the large coal, steel and glass industries. Erie is an important center in the manufacture of machinery, paper and electrical equipment as well as a terminus for large iron ore commerce on the Great Lakes.

In addition to electric and gas service, steam for



Electric
Paper Making

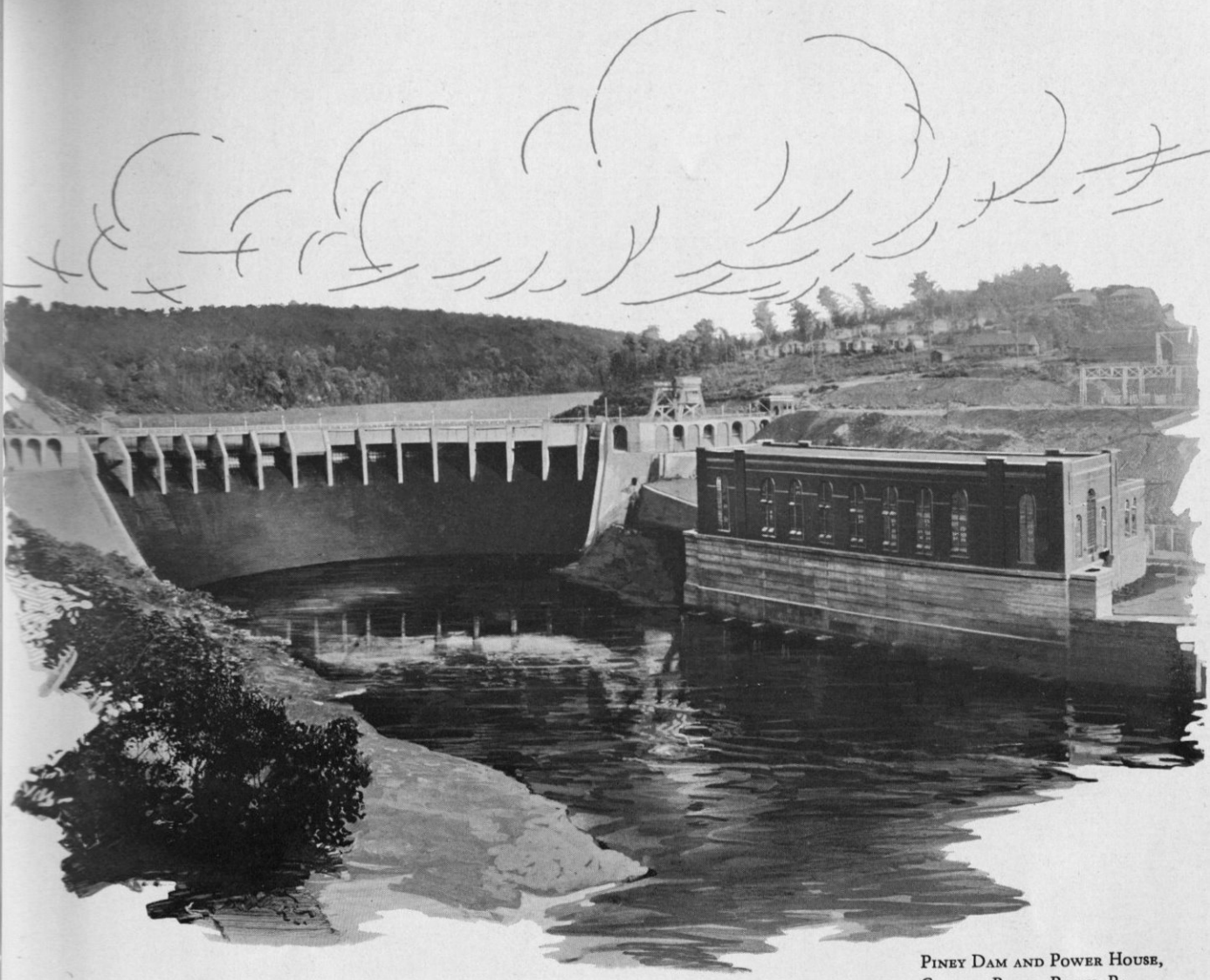
Steam Power Plant, Seward, Pa.

heating is supplied to Johnstown, Erie, Clearfield and Philipsburg.

The 350 communities served in this territory extend from Erie on Lake Erie to Deep Creek in Maryland. This is an area of more than 8,000 square miles with a population of about 875,000.

Outstanding power facilities are the Piney hydro-electric development on the Clarion River, with a capacity of 16,000 H.P.; the steam power plant at Erie, and the steam power plant at Seward, gener-

Electric Radio



Piney Dam and Power House,
Clarion River, Piney, Pa.

ating 40,000 Kw. The Seward plant located on the Conemaugh River about 10 miles from Johnstown is situated at the mouth of a coal mine, one of four owned by the Associated System in this area.

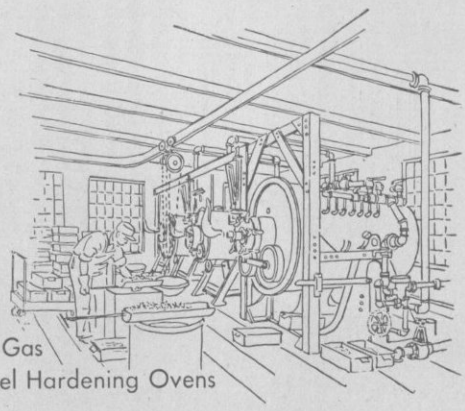
Gas Utilities Group

Nearly 66,000 customers in 52 communities in Pennsylvania, Ohio, Indiana, Illinois, Kentucky and South Dakota are served by the Gas Utilities properties. Ashtabula and Conneaut, Ohio, two of the largest ore ports in the world, are

Electric Reading Lamp

Gas Plant,
Richmond, Indiana

supplied with gas by these Associated companies. In Ashtabula alone, there are 75 miles of gas mains. Sioux Falls in the heart of the South Dakota agricultural region and the manufacturing centers of Bloomington, Illinois and Terre Haute, Indiana, are also served by this group.



Gas
Steel Hardening Ovens

Western New York State Group

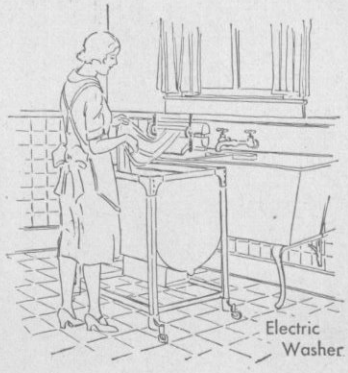
Rochester, third industrial city in New York State, is the center of operations for the Western New York State Group. Lockport, Canandaigua,

HYDRO-ELECTRIC PLANT, ROCHESTER, N. Y.

Depew, Lancaster and East Aurora are among the other more important communities in this territory.

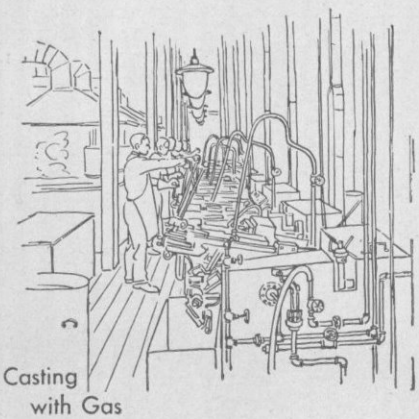
Adequate shipping facilities, labor and power supply have made this area the center for a variety of industrial enterprises. Cameras, films, lenses and safety signals are a few of the products with world-wide distribution from Rochester.

Through new construction and interconnection with other companies lines, the Associated System properties are in a position to offer an adequate



Electric Washer

Gas Plant, Rochester, N. Y.



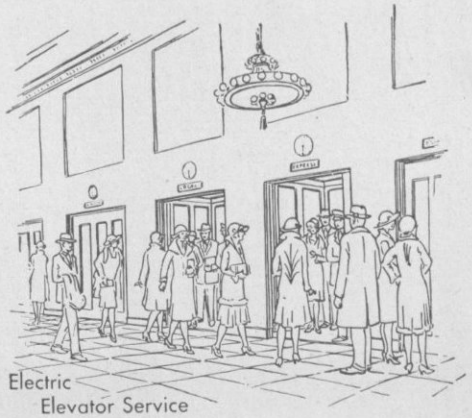
Die Casting with Gas

supply of electricity and gas. A new five million cubic foot gas holder and a new battery of Kopper's coke ovens were completed at Rochester in 1929 to provide for the increased use of gas in industry. In the section centering around Depew and Lancaster natural gas is available at an attractive rate. Steam is supplied to customers in Lockport and Rochester. The System has 142,000 electric customers and 111,000 gas customers in this group.

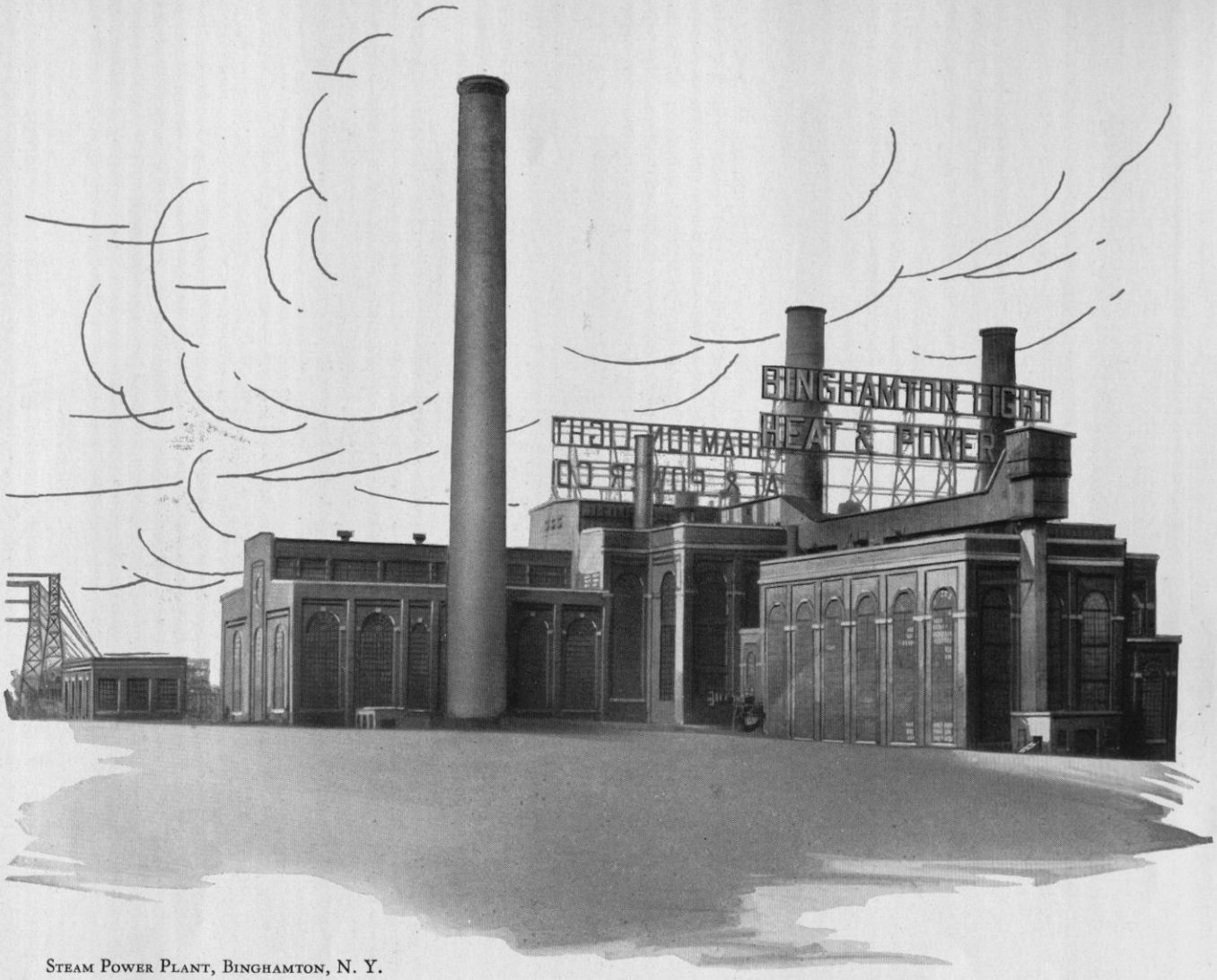
Steam Power Plant in Center-Rear;
Gas Plant in Foreground, Rochester, N. Y.

Southern New York and Northern Pennsylvania Group

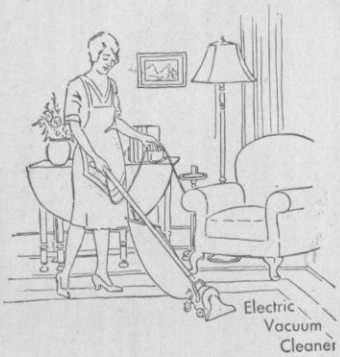
The Associated System's largest electric power customer, The Endicott-Johnson Shoe Company, is located in this territory. Their factories are supplied with power at Binghamton, Johnson City and Endicott. Industrial activity, however, is not limited to the manufacture of shoes. The automobile industry at Elmira, railroad repair shops, textile plants and dairy farms make a diversified demand for electric light and power.



Electric
Elevator Service



Steam Power Plant, Binghamton, N. Y.



Southern New York and
Northern Pennsylvania Group—continued

In the area centering about the important communities of Binghamton, Johnson City, Endicott, Elmira, Corning and Hornell 100,000 electric customers and 15,300 gas customers are served by the Associated System.

Central New York State Group

Agriculture, dairying, tourist trade and various industrial activities give the Central New York State Group a wide diversity of enterprises. This

Gas Plant, Ithaca, N. Y.

diversity makes for stability as indicated by the sale of electricity and gas by the Associated System in this territory.

In addition to the importance of the section in furnishing dairy and food supplies for the metropolitan area, it is developing fast industrially due to its strategic transportation facilities.

The Associated System serves 108,000 customers; 75,000 with electricity and over 32,000 with gas in the territory centering about Ithaca, home of Cornell University, Auburn, Geneva, Liberty, Norwich, Seneca Falls, Oneonta and Walton.

Gas Water Heating

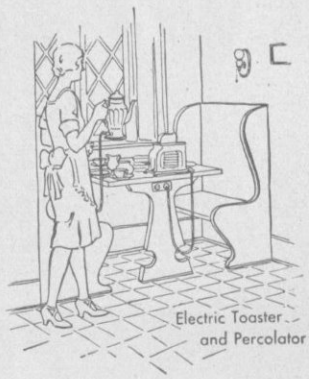
Steam Power Plant, Elmira, N. Y

Eastern New York State Group

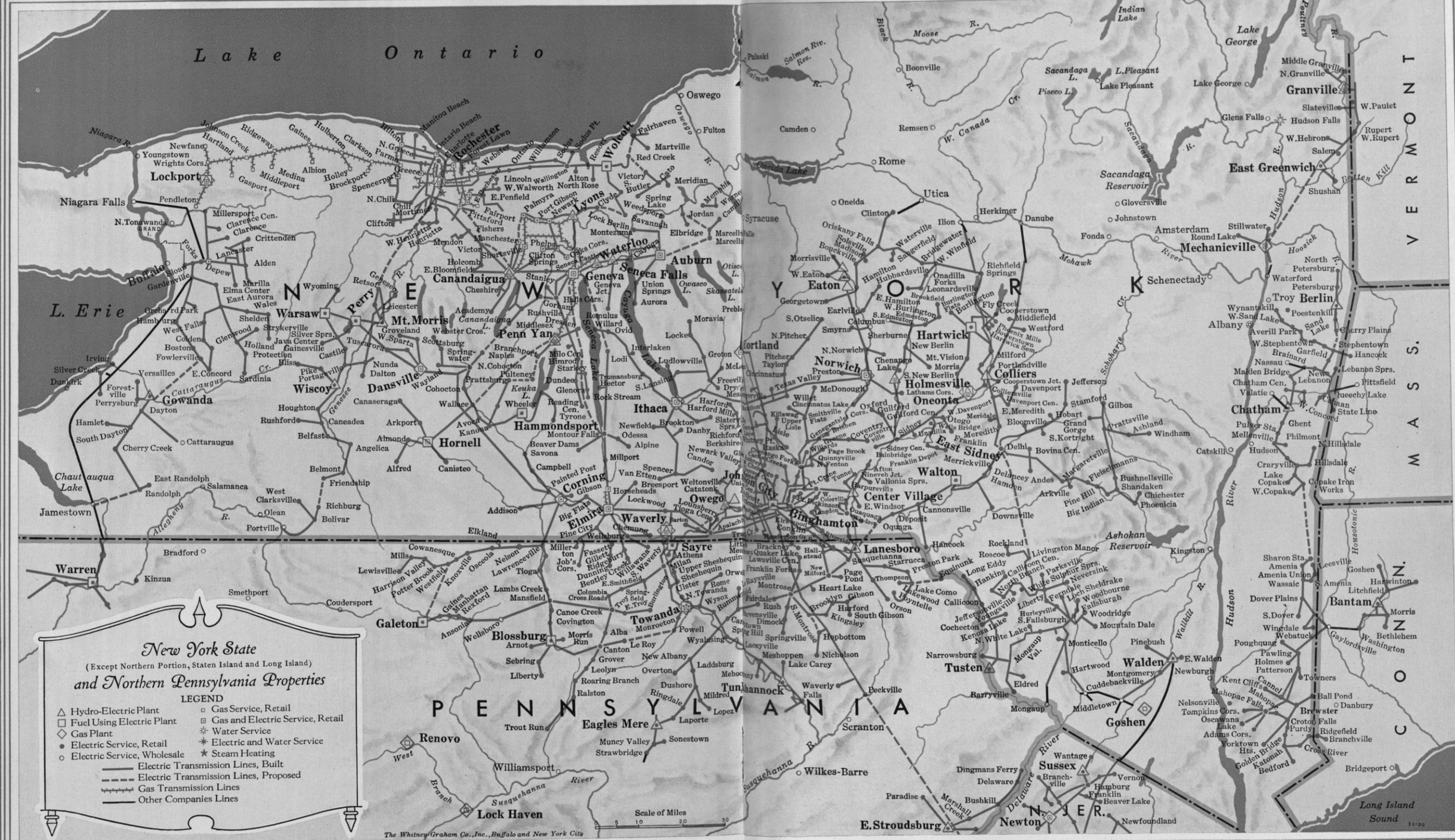
Electric Kitchen Aid

The Eastern New York State Group includes territory along the eastern boundary of New York State from Canada on the north almost to the Atlantic Ocean on the south. The Associated System serves 35,000 customers in this territory most of which is in New York, but extends over into Vermont, Massachusetts and Connecticut at various points.

The northernmost part of the territory is in the rugged Adirondack country, while the southernmost part is the agricultural Harlem Valley with its rich farms and beautiful estates. This section although boasting of few industrial enterprises, can look forward to an extensive growth in tourist trade and increased residential demand for electric service.



Electric Toaster and Percolator



New York State

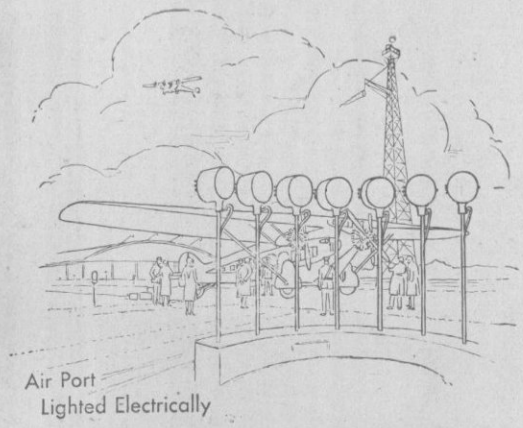
(Except Northern Portion, Staten Island and Long Island)

and Northern Pennsylvania Properties

LEGEND

- △ Hydro-Electric Plant
- □ Fuel Using Electric Plant
- ◇ Gas Plant
- • Electric Service, Retail
- ○ Electric Service, Wholesale
- ▫ Gas Service, Retail
- ⊡ Gas and Electric Service, Retail
- ✲ Water Service
- ✳ Electric and Water Service
- ★ Steam Heating
- ——— Electric Transmission Lines, Built
- – – – Electric Transmission Lines, Proposed
- ——— Gas Transmission Lines
- ——— Other Companies Lines

Steam Power Plant, Staten Island, N. Y.



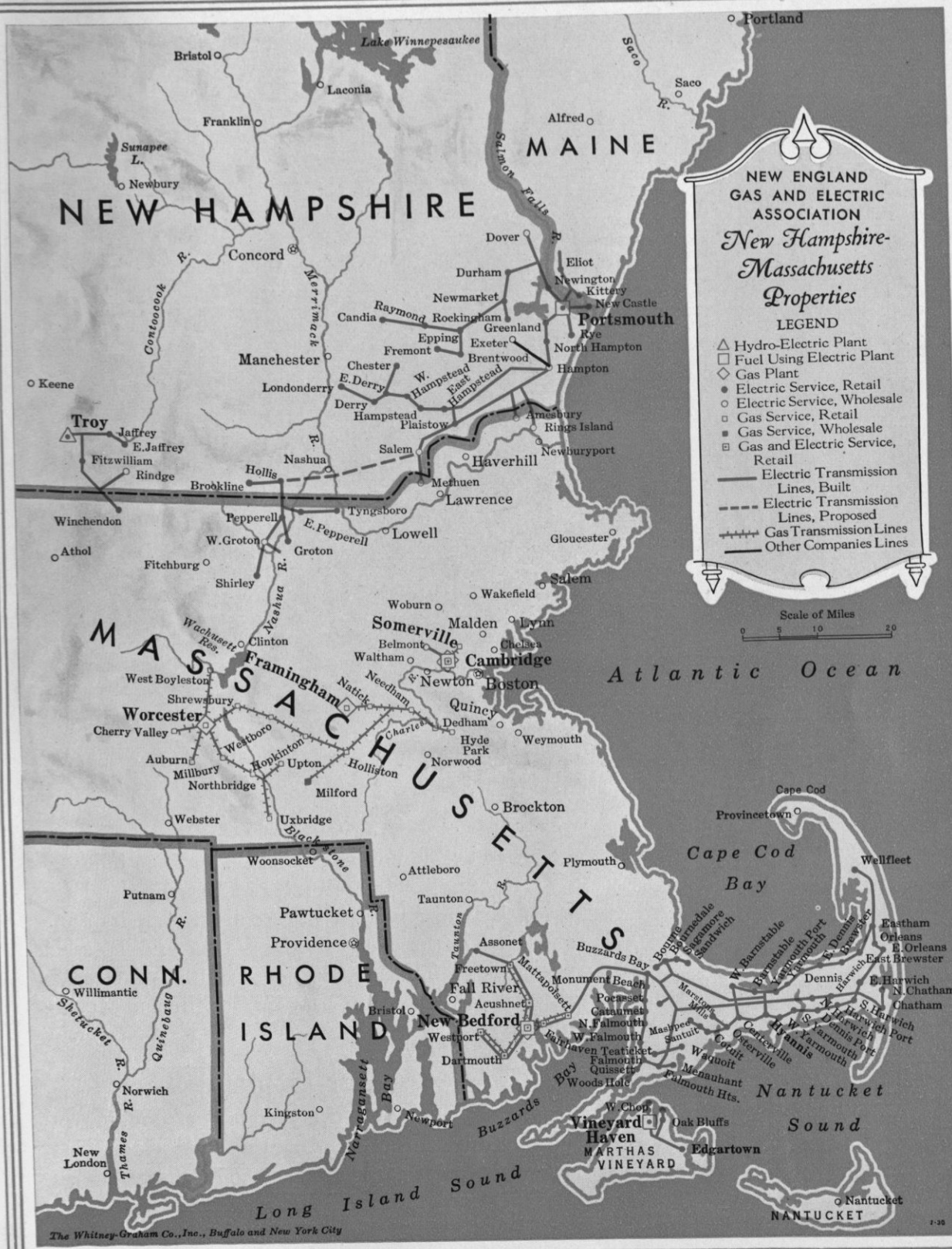
Air Port
Lighted Electrically

Staten Island and Long Island Group

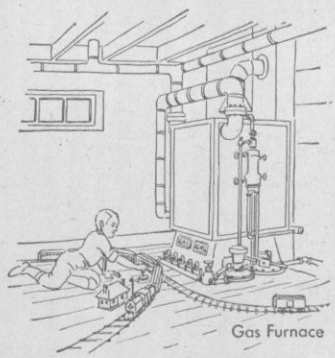
The Associated System has no competition in furnishing electricity in the Borough of Richmond (Staten Island) ,New York City. More than 42,000 customers are served by a system which includes ten indoor and twenty-four outdoor substations.

Water service to Nassau County, Long Island, is furnished by the Long Island Water Corporation.

Twenty-one years without a shutdown is the record of the Patchogue Electric Light Company, which supplies electricity to 7,000 customers.


NEW ENGLAND GAS AND ELECTRIC ASSOCIATION
New Hampshire-Massachusetts Properties
LEGEND
Hydro-Electric Plant
Fuel Using Electric Plant
Gas Plant
Electric Service, Retail
Electric Service, Wholesale
Gas Service, Retail
Gas Service, Wholesale
Gas and Electric Service, Retail
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Gas Transmission Lines
Other Companies Lines
Scale of Miles
0 5 10 20
MAINE
NEW HAMPSHIRE
MASSACHUSETTS
CONN.
RHODE ISLAND
Atlantic Ocean
Cape Cod Bay
Buzzards Bay
Nantucket Sound
Long Island Sound
Portland
Saco
Alfred
Lake Winnepesaukee
Bristol
Laconia
Franklin
Sunapee L.
Newbury
Concord
Dover
Durham
Eliot
Newington
Kittery
Newmarket
Rockingham
New Castle
Portsmouth
Rye
Greenland
North Hampton
Exeter
Brentwood
Hampton
Epping
Fremont
Manchester
Chester
E.Derry
Londonderry
W. Hampstead
East Hampstead
Derry
Hampstead
Plaistow
Amesbury
Rings Island
Newburyport
Haverhill
Salem
Methuen
Lawrence
Tyngsboro
Lowell
Nashua
Hollis
Brookline
Pepperell
E. Pepperell
W.Groton
Groton
Fitchburg
Shirley
Gloucester
Keene
Troy
Jaffrey
E.Jaffrey
Fitzwilliam
Rindge
Winchendon
Athol
Wakefield
Woburn
Somerville
Malden
Lynn
Belmont
Chelsea
Waltham
Cambridge
Boston
Newton
West Boylston
Framingham
Shrewsbury
Worcester
Cherry Valley
Auburn
Millbury
Northbridge
Westboro
Hopkinton
Upton
Holliston
Milford
Natick
Needham
Charles R.
Quincy
Dedham
Hyde Park
Weymouth
Norwood
Brockton
Webster
Uxbridge
Blackstone R.
Woonsocket
Attleboro
Taunton R.
Plymouth
Putnam
Pawtucket
Providence
Assonet
Freetown
Fall River
Acushnet
Bristol
New Bedford
Westport
Dartmouth
Mattapoisett
Monument Beach
Pocasset
Cataumet
N.Falmouth
W.Falmouth
Falmouth
Quissett
Woods Hole
Buzzards Bay
Bourne
Sagamore
Sandwich
Cape Cod
Provincetown
Wellfleet
Eastham
Orleans
E.Orleans
East Brewster
Brewster
E. Dennis
Harwich
W. Barnstable
Barnstable
Yarmouth Port
Yarmouth
Dennis
E.Harwich
N.Chatham
Chatham
S.Harwich
Harwich Port
N. Dennis
Dennis Port
S. Yarmouth
W. Yarmouth
Hyannis
Centerville
Osterville
Marstons Mills
Mashpee
Santuit
Cotuit
Waquoit
Menauhant
Falmouth Hts.
Teaticket
Willimantic
Shetucket R.
Quinebaug R.
Norwich
Thames R.
New London
Kingston
Narragansett Bay
Newport
W. Chop
Vineyard Haven
MARTHAS VINEYARD
Oak Bluffs
Edgartown
Nantucket
NANTUCKET
The Whitney-Graham Co., Inc., Buffalo and New York City

Gas Plant, Cambridge, Mass.



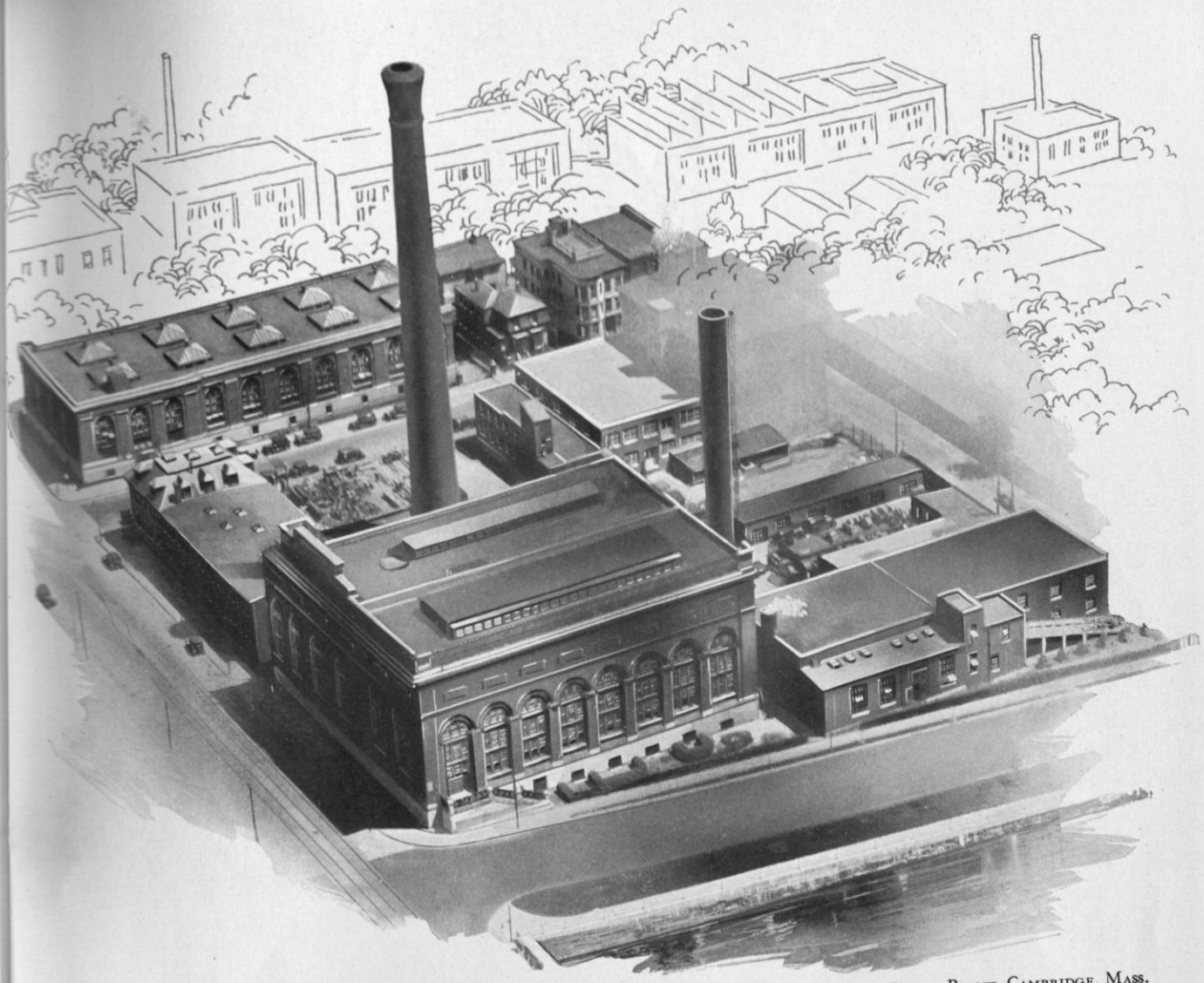
Gas Furnace

New England Group

One in every ten gas customers and one in every twenty electric customers in New England are served by the Associated System through its affiliation with the New England Gas and Electric Association. The 141,000 gas and 102,000 electric customers are in Maine, New Hampshire and Massachusetts.

Cambridge Gas Light Company

Organized in 1852, the year of the founding of the Associated System, the Cambridge Gas Light Company now serves 50,500 customers in Cambridge and Somerville, Massachusetts.

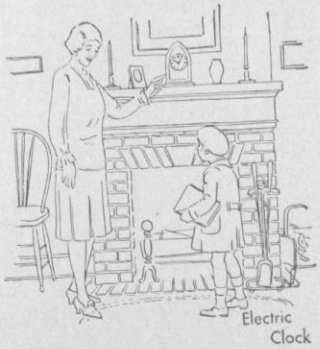


Steam Power Plant, Cambridge, Mass.

Cambridge Electric Light Company

The Cambridge Electric Light Company furnishes electric light and power to nearly 35,000 customers in Cambridge and sells electricity wholesale to the neighboring town of Belmont. The main generating station, located on the Charles River, has a capacity of 23,950 Kw.

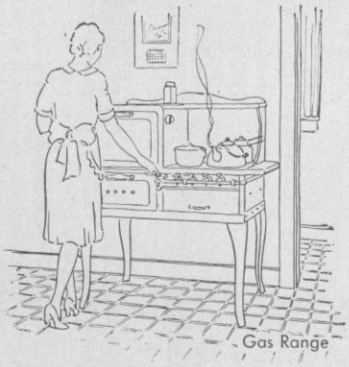
This company has a ten-year contract to supply Harvard University with from 400 to 600 million pounds of steam annually for heating, as well as 4,000,000 kilowatt hours of electricity. Soap, wire,



Electric Clock

Gas Plant, Worcester, Mass.

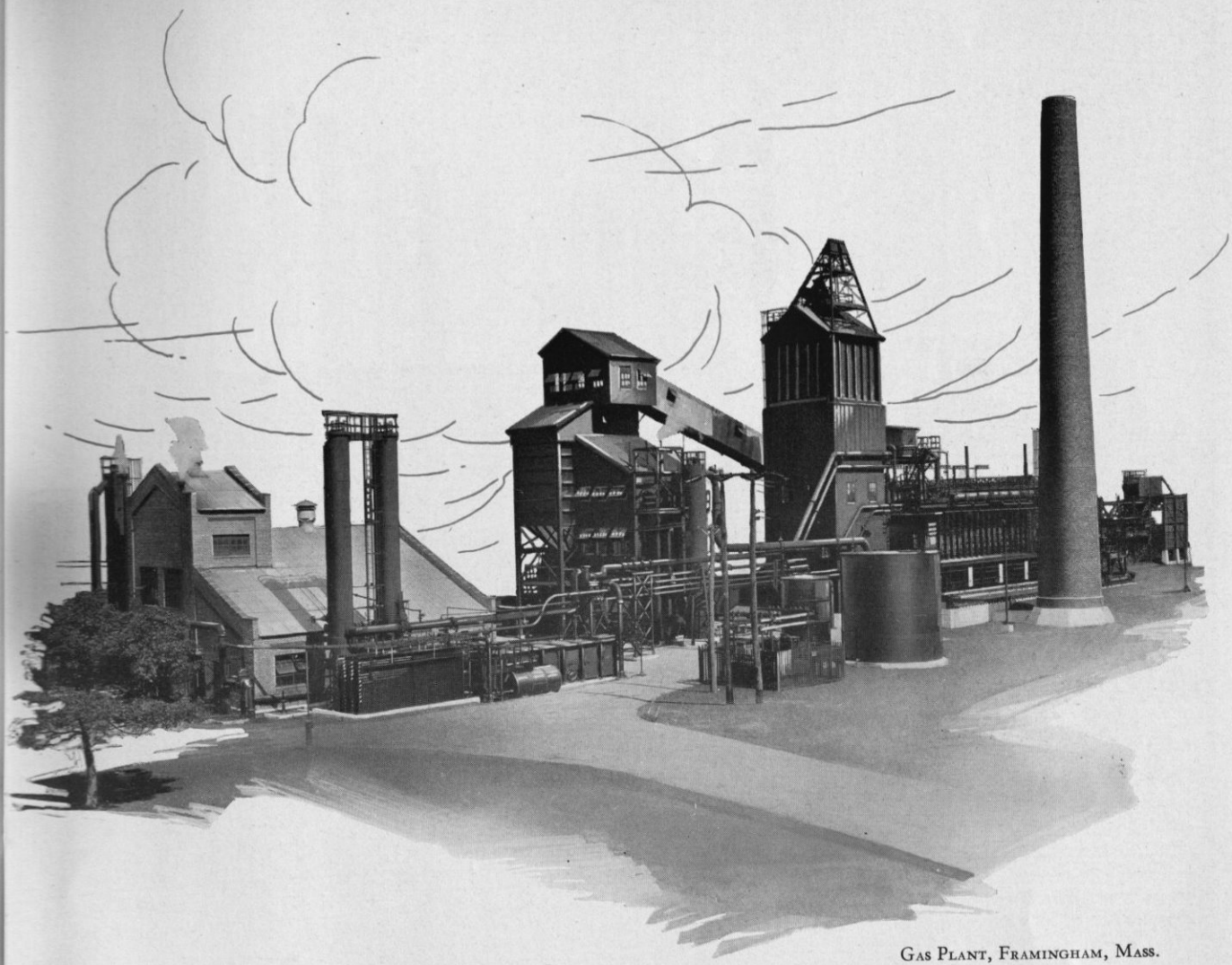
cable, candy and ice factories purchase large quantities of electricity for power purposes.



Gas Range

Worcester Gas Light Company

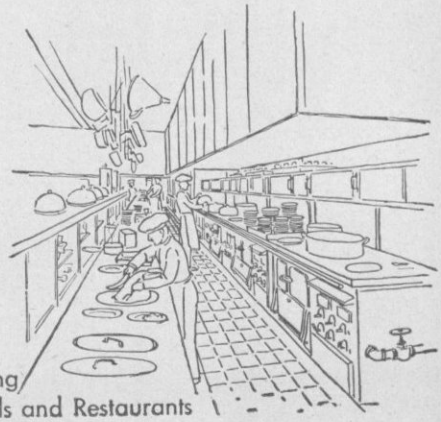
A new gas plant with a daily capacity of 16,800,000 cubic feet of water gas supplies the demands of over 43,104 customers of the Worcester Gas Light Company. It will increase the annual output to 1,700,000,000 cubic feet distributed throughout Worcester and suburban communities.



Gas Plant, Framingham, Mass.

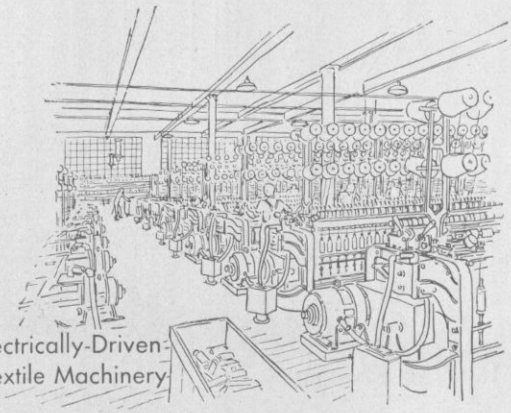
Worcester is the second industrial city in Massachusetts with 600 manufacturers of a wide diversity of products, many of which use gas in manufacturing processes. Residential consumption of gas has increased materially due to the use of gas for house heating, refrigeration and other modern appliances.

High pressure gas mains were extended to four communities in 1929 and further development will bring service to seven more in the near future.



Gas Cooking in Hotels and Restaurants

Steam Power Plant, with Gas Plant at Extreme Right, New Bedford, Mass.



Electrically-Driven Textile Machinery

New Bedford—Cape and Vineyard Group

New bedford, leading city in the United States in the manufacture of cotton goods and fifth industrial city in New England, is served by the Associated System. There are 33,500 gas customers and 40,000 electric customers.

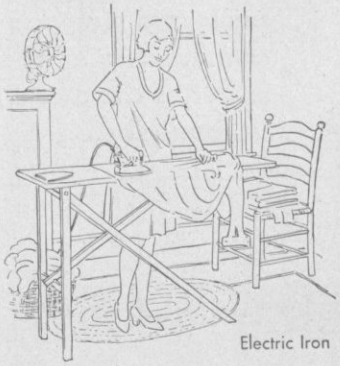
In the picturesque vacation land of Cape Cod and Martha's Vineyard, another unit of the System serves about 15,000 customers including the year round residents and thousands of vacationists who migrate to this section during the summer months.

Steam Power Plant, Portsmouth, N. H.

New Hampshire Gas and Electric Group

Portsmouth of navy yard fame, Derry and nearby communities in New Hampshire and Massachusetts are served with electricity by the New Hampshire Gas and Electric Company. The electric plant in Portsmouth has a capacity of 15,500 kilowatts and distributes power to 15,000 customers.

In addition to the summer tourist business, the manufacture of chemicals, fertilizers, buttons, shoes and gypsum are the chief (industrial) activities of this section.



Electric Iron

Maritime Group

More than 11,000 customers are served in the Canadian Provinces of New Brunswick, Nova Scotia and Prince Edward Island, and in Calais, Maine. The industrial development of these Provinces has advanced rapidly in the past few years, especially in the production of wood pulp and paper.

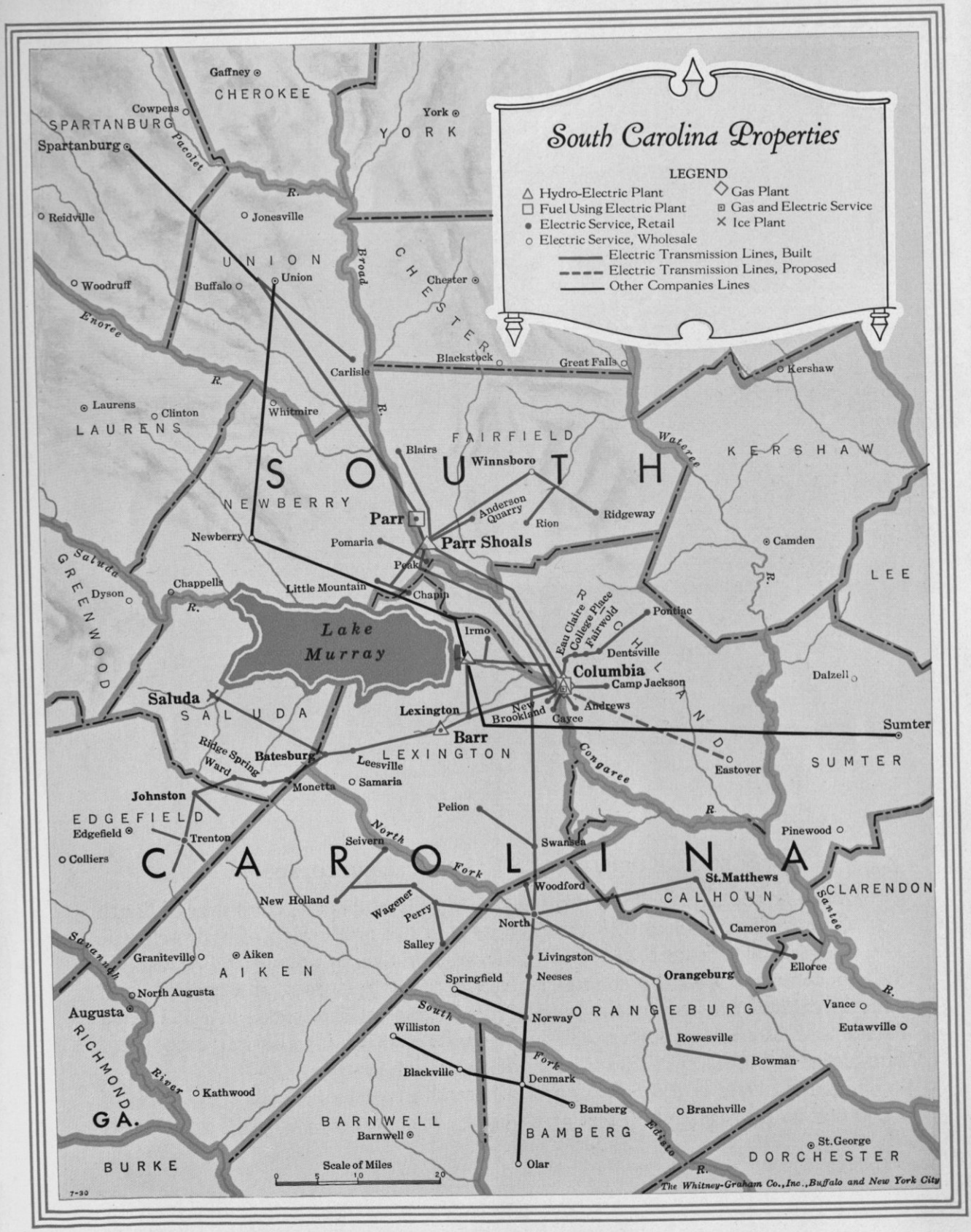
The Tusket Falls hydro-electric development of the Nova Scotia Power Commission near Yarmouth, Nova Scotia, from which the System buys a part of its power, was made possible by the co-operation of the Associated System with government and industry.

This modern electric plant is paving the way for a period of economic growth and expansion that has never before been possible in this Maritime Province. The original installation consists of three 1,000 H.P. vertical wheels. Power is delivered to Yarmouth over 8½ miles of double-circuit transmission line. The system will eventually develop all the potential water power available from the numerous lakes in Western Nova Scotia which drain into the east and west branches of the Tusket River.

American Utilities Group

More than 26,000 customers residing in 115 communities are served by the American Utilities Company, a part of the Associated System. Utility groups are operated in Missouri, Kentucky, Tennessee and Louisiana and smaller properties in Arkansas, Oklahoma, Texas, New Mexico, Arizona, Delaware and Pennsylvania. Electricity, gas and other utility services are furnished to communities widely diversified industrially. Cotton, sugar cane, wheat, tobacco, cattle raising, coal mining and oil regions are located within these areas. Certain districts in these southwestern properties are growing very rapidly. Population has trebled since the 1920 census.

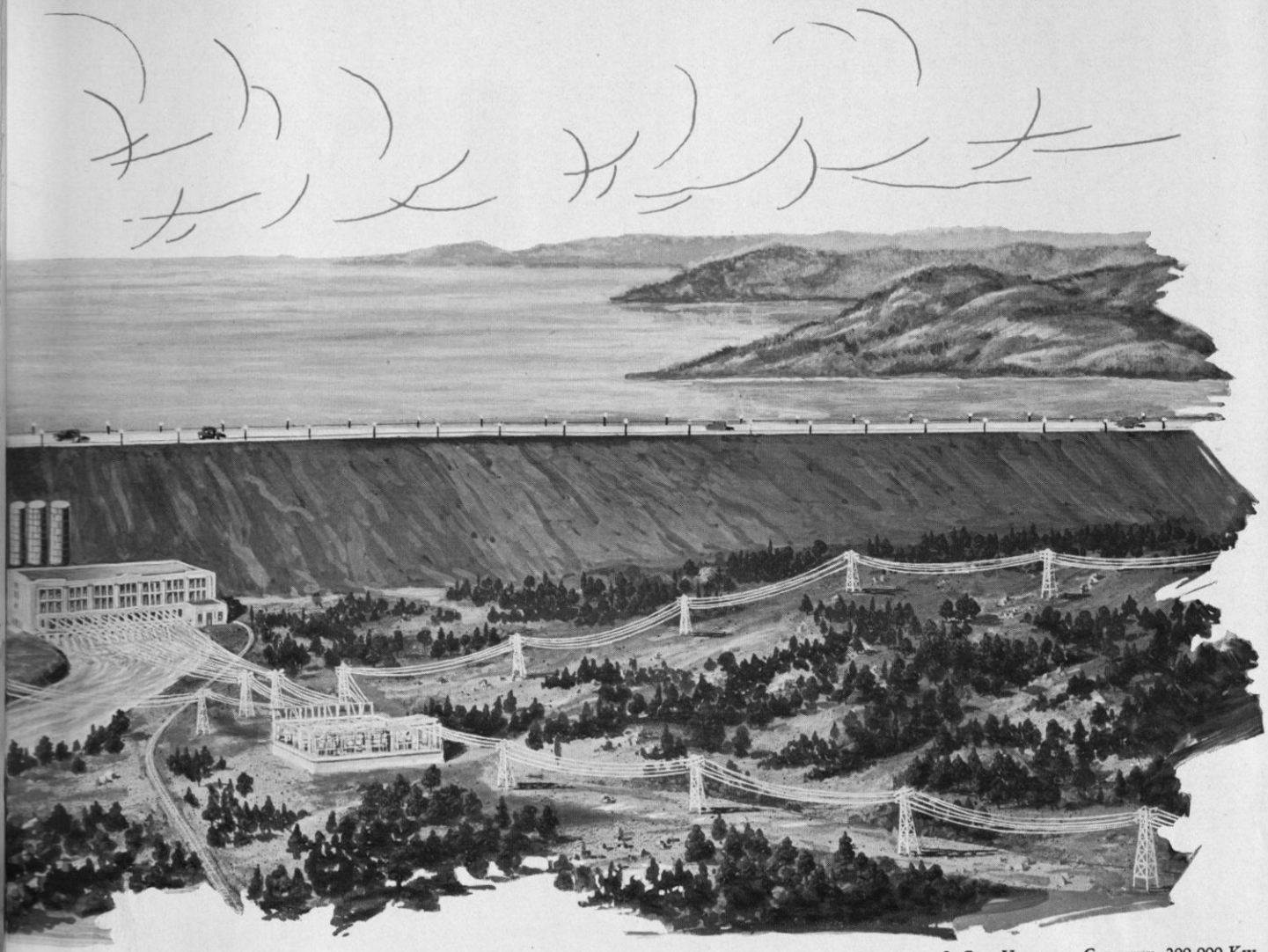
Among the more important properties, those in Missouri and Oklahoma serve a fertile farming country. Louisiana territories are noted for their sugar-cane, cotton and lumber. Texas properties furnish electric service to three communities and ice to one. The single property in New Mexico is in the center of the cattle area. Coal mining is important in Tennessee, agriculture in Kentucky.


South Carolina Properties
LEGEND
Hydro-Electric Plant
Fuel Using Electric Plant
Electric Service, Retail
Electric Service, Wholesale
Gas Plant
Gas and Electric Service
Ice Plant
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Other Companies Lines
SOUTH CAROLINA
Lake Murray
Columbia
Parr
Parr Shoals
Winnsboro
Blairs
Newberry
Saluda
Batesburg
Lexington
Barr
Johnston
Edgefield
Trenton
Colliers
Ridge Spring
Ward
Monetta
Leesville
Samaria
Gaffney
Cowpens
Spartanburg
York
Chester
Great Falls
Carlisle
Union
Buffalo
Jonesville
Reidville
Woodruff
Laurens
Clinton
Whitmire
Chappells
Dyson
Little Mountain
Chapin
Irmo
Pomaria
Peak
Anderson Quarry
Rion
Ridgeway
Camden
Kershaw
Pontiac
Eau Claire
College Place
Fairwold
Dentsville
Camp Jackson
Andrews
New Brookland
Cayce
Dalzell
Sumter
Eastover
Pelion
Swansea
Seivern
North Fork
Pinewood
St.Matthews
Woodford
New Holland
Wagener
Perry
Salley
North
Cameron
Elloree
Livingston
Neeses
Springfield
Orangeburg
Norway
Williston
Blackville
Denmark
Bamberg
Olar
Rowesville
Bowman
Vance
Eutawville
Branchville
St.George
Barnwell
Graniteville
Aiken
North Augusta
Augusta
Kathwood
Scale of Miles
0 5 10 20
The Whitney-Graham Co., Inc., Buffalo and New York City
7-30

Saluda River Hydro-Electric Development

Through the Saluda River Hydro-Electric Development, the State of South Carolina has become fifth ranking state in the production of hydro-electric power. The project which is the largest producing unit of the Associated System contributes to the country's electric power resources, the largest earth dam in cubical content in the world, the largest artificial lake in the United States and a modern power station with its central installation capable of furnishing 360,000,000 kilowatt hours of electricity yearly.

The Saluda Dam is 208 feet high, a mile and a half long, with a thickness of 1,150 feet at its base and 50 feet at its crest. It contains 11,000,000 cubic yards



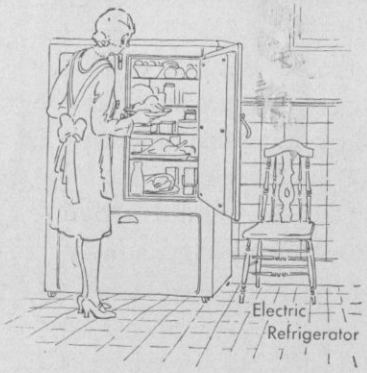
HYDRO-ELECTRIC DEVELOPMENT ON THE SALUDA RIVER, COLUMBIA, S. C.—ULTIMATE CAPACITY, 200,000 KW.

of earth fill. By the construction of this dam, a lake has been formed, 41 miles long and 14 miles wide at its widest point, covering 76 square miles and having a shore line of 520 miles.

This great reservoir has a capacity of 93,000,000,000 cubic feet. Because of the immense storage capacity of the lake, the power station is able to generate sufficient electrical energy through periods of most serious drought. The completed development would provide sufficient electricity for a city of 667,000 population.

Such an immense and dependable source of hydro-electric power should prove to be a powerful impetus in the development of the entire south and particularly of the State of South Carolina.

Steam Power Plant,
Parr Shoals, S. C.



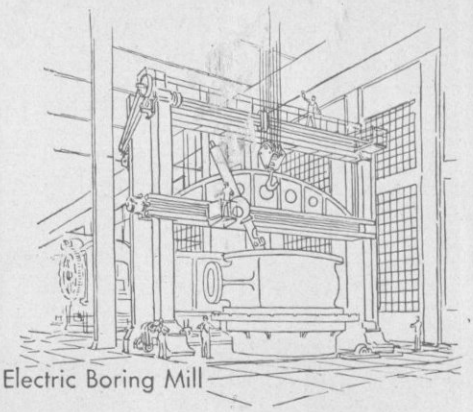
South Carolina Group

Columbia, the state capital of South Carolina, and 45 other communities are served with gas and electricity by the Associated System. The generating stations have an installed capacity of 102,705 Kw., with 431 miles of distribution lines and 394 miles of high tension transmission lines. The gas plants have a 24-hour generating capacity of 1,800,000 cubic feet and 87 miles of mains. Chief

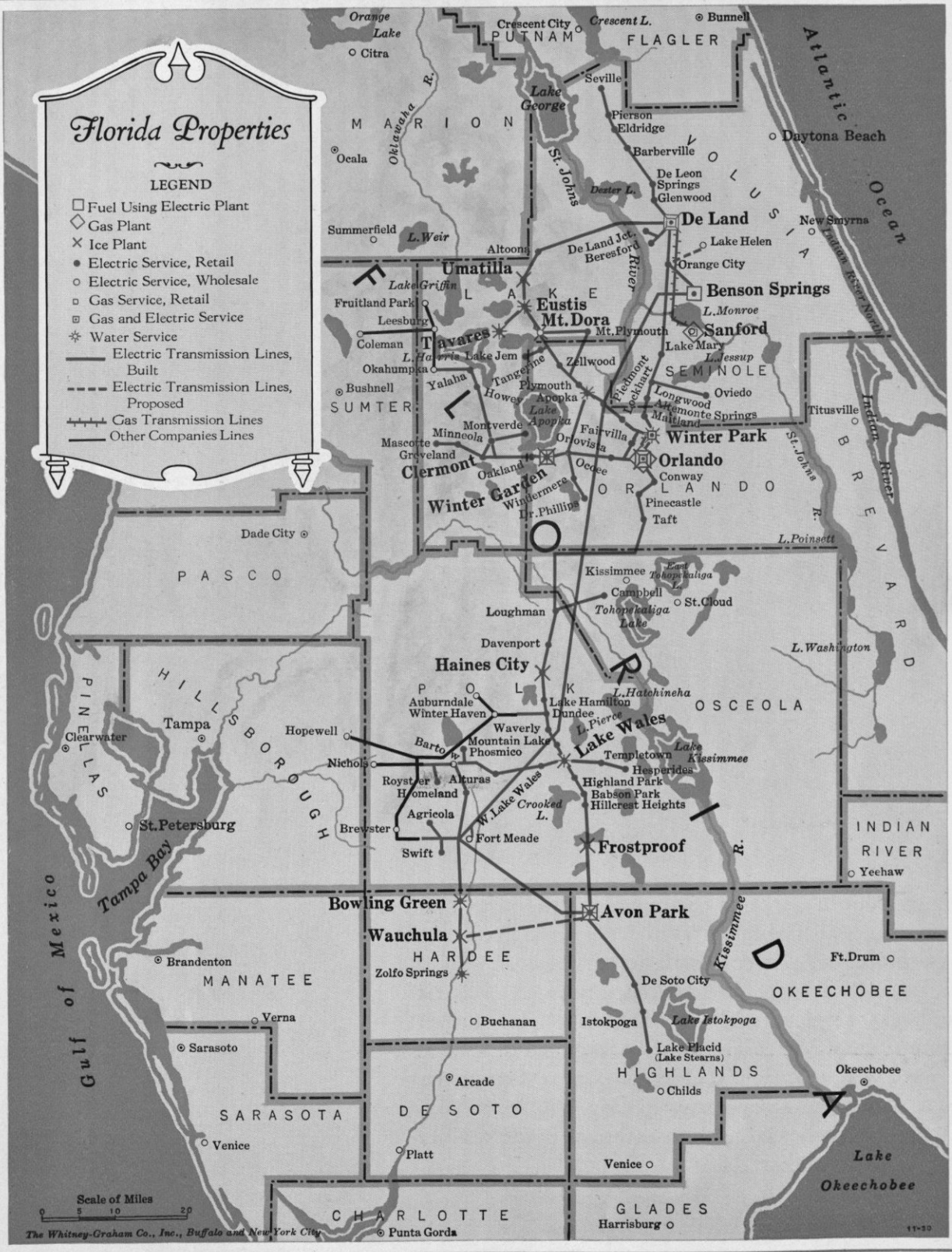
HYDRO-ELECTRIC PLANT, PARR SHOALS, S. C.

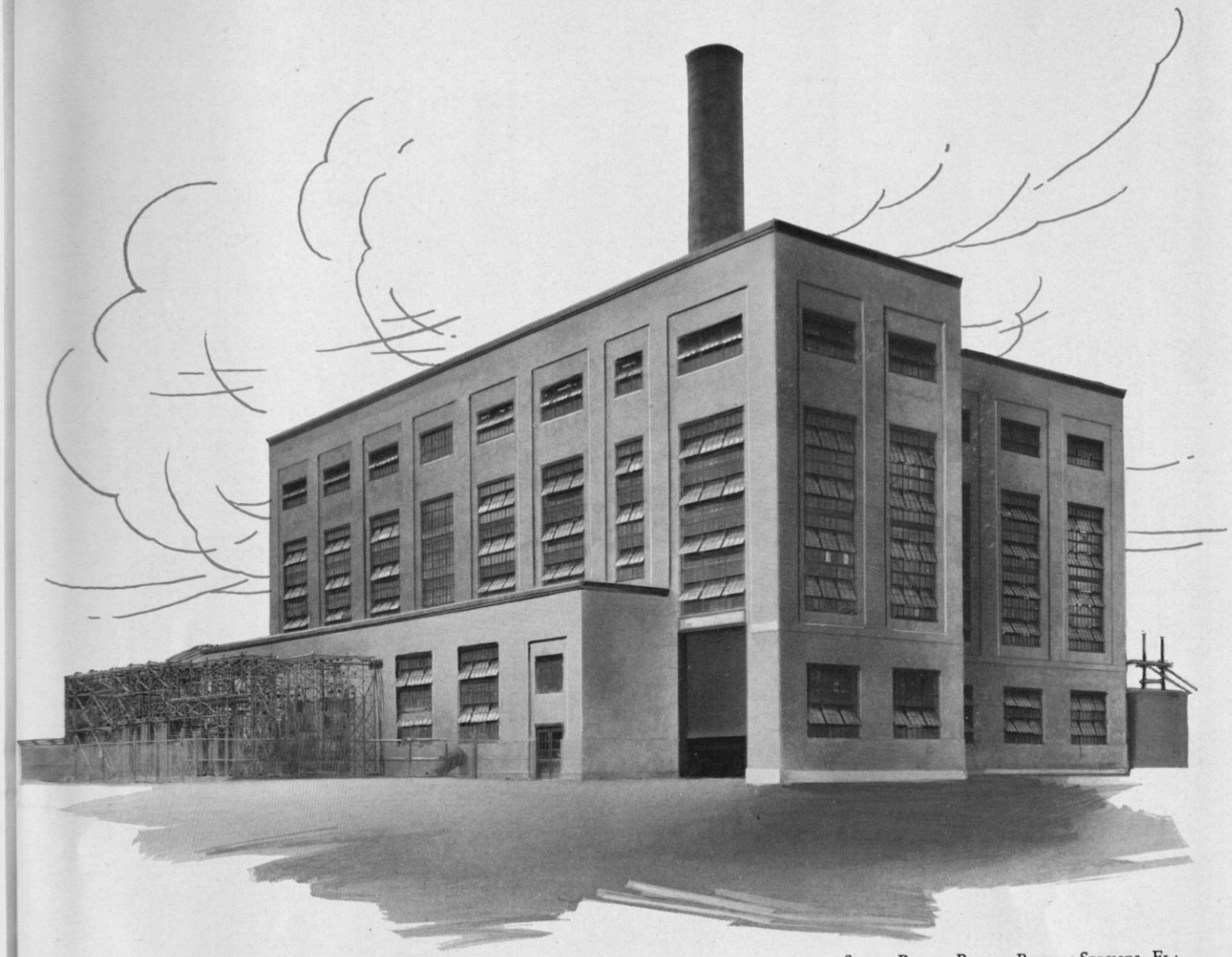
among South Carolina customers are the large textile mills at Columbia which depend upon the Associated for power and light.

The Broad River Power Company retails electric and gas service, while Lexington Water Power Company, which has recently completed a 200,000 Kw. hydro-electric development, near Columbia, is a wholesaling company, having long term contracts with other large power systems in the rapidly growing Southeast.



Electric Boring Mill


Florida Properties
LEGEND
Fuel Using Electric Plant
Gas Plant
Ice Plant
Electric Service, Retail
Electric Service, Wholesale
Gas Service, Retail
Gas and Electric Service
Water Service
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Gas Transmission Lines
Other Companies Lines
Scale of Miles
0 5 10 20
The Whitney-Graham Co., Inc., Buffalo and New York City
11-30
Gulf of Mexico
Tampa Bay
Atlantic Ocean
Lake Okeechobee
Orange Lake
Crescent City
Crescent L.
Bunnell
Citra
Seville
Lake George
Pierson
Eldridge
Daytona Beach
Barberville
De Leon Springs
Glenwood
Ocala
Dexter L.
De Land
New Smyrna
Summerfield
L. Weir
Altoona
De Land Jct.
Beresford
Lake Helen
Orange City
Umatilla
Lake Griffin
Fruitland Park
Leesburg
Eustis
Mt. Dora
Benson Springs
L. Monroe
Sanford
Coleman
Tavares
Mt. Plymouth
Lake Mary
L. Jessup
L. Harris
Lake Jem
Okahumpka
Zellwood
Yalaha
Tangerine
Plymouth
Oviedo
Howey
Apopka
Longwood
Altamonte Springs
Maitland
Bushnell
Montverde
Lake Apopka
Fairvilla
Winter Park
Minneola
Ocoee
Titusville
Mascotte
Groveland
Clermont
Oakland
Orlando
Conway
Winter Garden
Windermere
Dr. Phillips
Pinecastle
Taft
Dade City
L. Poinsett
Kissimmee
East Tohopekaliga
Campbell
St. Cloud
Loughman
Tohopekaliga Lake
Davenport
L. Washington
Haines City
L. Hatchineha
Auburndale
Winter Haven
Lake Hamilton
Dundee
Waverly
Lake Wales
L. Pierce
Hopewell
Mountain Lake
Phosmico
Templetown
Lake Kissimmee
Nichols
Hesperides
Tampa
Clearwater
Royster
Alturas
Homeland
Highland Park
Babson Park
Hillcrest Heights
W. Lake Wales
Crooked L.
Agricola
Brewster
Fort Meade
Swift
Frostproof
St. Petersburg
Bowling Green
Avon Park
Wauchula
Brandenton
Zolfo Springs
De Soto City
Ft. Drum
Verna
Buchanan
Istokpoga
Lake Istokpoga
Sarasoto
Lake Placid
(Lake Stearns)
Arcade
Childs
Okeechobee
Venice
Platt
Harrisburg
Punta Gorda
PUTNAM
FLAGLER
VOLUSIA
MARION
LAKE
SEMINOLE
ORANGE
OSCEOLA
BREVARD
INDIAN RIVER
OKEECHOBEE
HIGHLANDS
HARDEE
MANATEE
SARASOTA
DE SOTO
CHARLOTTE
GLADES
HILLSBOROUGH
PINELLAS
PASCO
SUMTER
Oklawaha R.
St. Johns
Dexter L.
Piedmont
Beckhart
Indian River
St. Johns R.
Kissimmee R.



Steam Power Plant, Benson Springs, Fla.

Florida Group

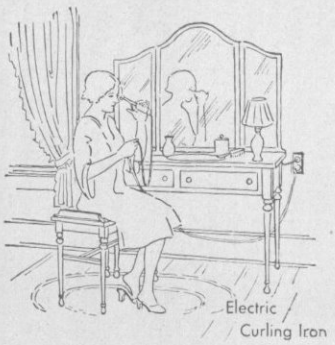
The Florida territory, supplied by Florida Public Service Company with electricity, gas, water and ice, covers 180 miles from Seville to Lake Placid through the rich fruit growing and trucking central part of the State. Over 29,000 customers are served at Orlando, Winter Park, Winter Haven, DeLand, Eustis and 67 other towns. The number of

Steam Power Plant, Avon Park, Fla.

customers throughout the territory has increased 20,000 since 1924.

The combined utility service in the territory includes electric generating stations with 31,578 Kw. installed capacity, gas plants with 24-hour generating capacity of 3,800,000 cubic feet and ice plants manufacturing 475 tons of ice daily.

Population served with electricity or gas is about 100,000.

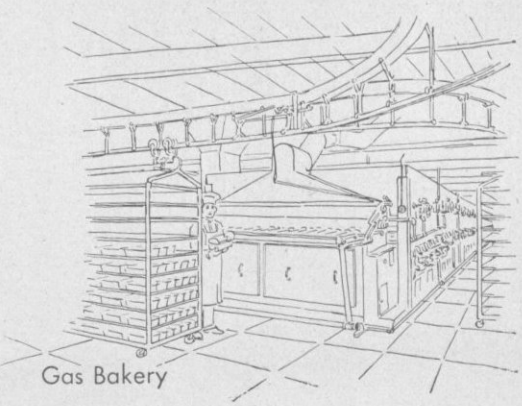


Electric Curling Iron

Gas Plant, Orlando, Fla.

Kentucky-Tennessee-Indiana Group

Agriculture and the manufacture of wood, stone, oil, asphalt and tobacco products are the main activities of the area included in the Kentucky-Tennessee-Indiana Group served by the Associated System. The total population of the 111 communities served is approximately 156,000. Gas and/or electricity and water is available to 46,000 customers. The principal cities served are Bowling



Gas Bakery

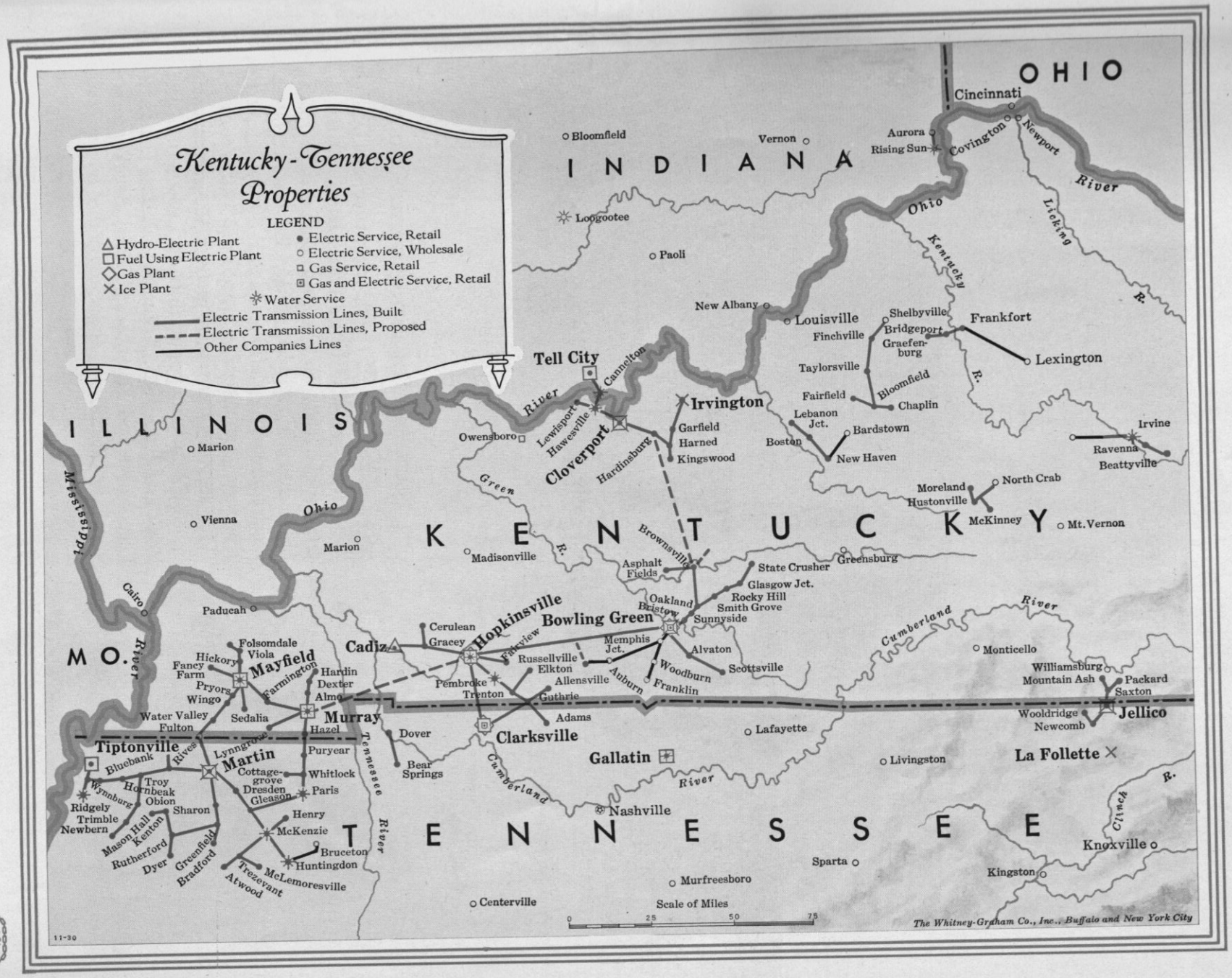
Ice Plant, Orlando, Fla.

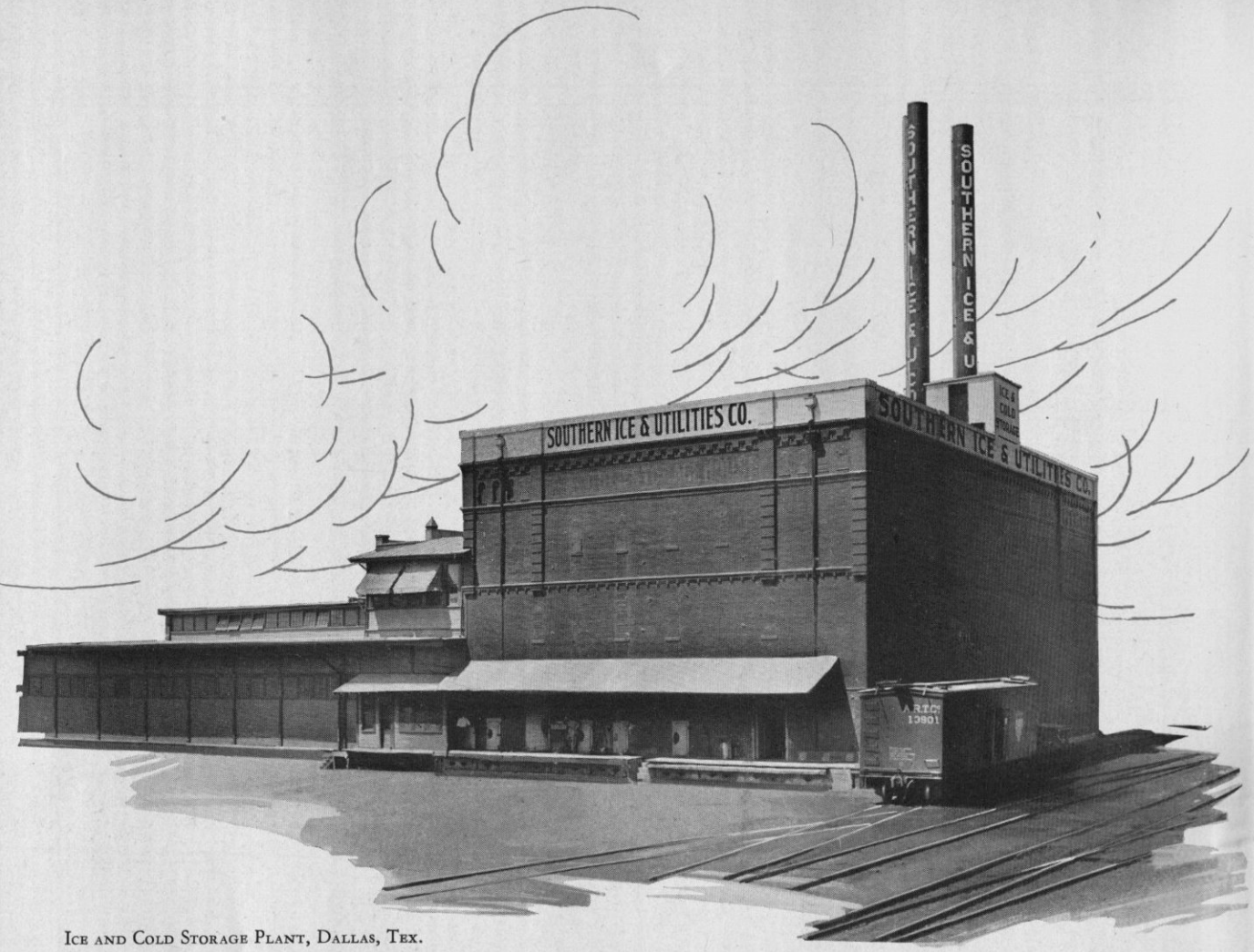
Kentucky-Tennessee Group—continued

Green, Frankfort and Hopkinsville, Ky., Clarksville, Tenn. and Tell City, Ind.

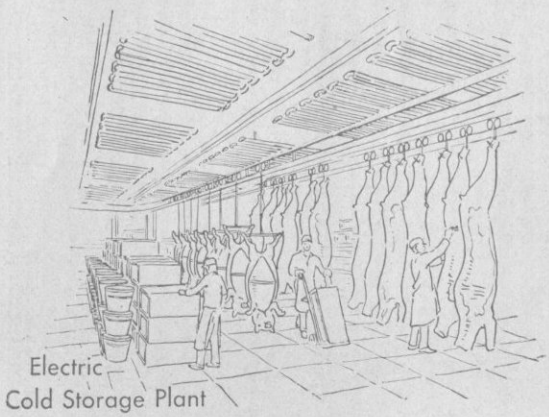
Twenty-two electric plants and six water plants formerly municipally operated have been brought into this group and united with other operating properties of the Associated System.

Clarksville has held the state record for continuity of electric service for six years.


Kentucky-Tennessee Properties
LEGEND
Hydro-Electric Plant
Fuel Using Electric Plant
Gas Plant
Ice Plant
Electric Service, Retail
Electric Service, Wholesale
Gas Service, Retail
Gas and Electric Service, Retail
Water Service
Electric Transmission Lines, Built
Electric Transmission Lines, Proposed
Other Companies Lines
OHIO
INDIANA
ILLINOIS
KENTUCKY
TENNESSEE
MO.
Cincinnati
Aurora
Rising Sun
Covington
Newport
Bloomfield
Vernon
Loogootee
Paoli
New Albany
Louisville
Shelbyville
Bridgeport
Finchville
Graefenburg
Frankfort
Lexington
Taylorsville
Fairfield
Bloomfield
Chaplin
Lebanon Jct.
Bardstown
Boston
New Haven
Irvine
Ravenna
Beattyville
Moreland
Hustonville
North Crab
McKinney
Mt. Vernon
Tell City
Cannelton
Lewisport
Hawesville
Cloverport
Hardinsburg
Irvington
Garfield
Harned
Kingswood
Owensboro
Marion
Vienna
Madisonville
Asphalt Fields
Brownsville
Greensburg
State Crusher
Glasgow Jct.
Rocky Hill
Smith Grove
Oakland
Bristow
Sunnyside
Hopkinsville
Bowling Green
Cerulean
Gracey
Fairview
Cadiz
Memphis Jct.
Alvaton
Russellville
Elkton
Scottsville
Woodburn
Franklin
Auburn
Allensville
Pembroke
Trenton
Guthrie
Adams
Clarksville
Dover
Bear Springs
Lafayette
Gallatin
Livingston
La Follette
Nashville
Monticello
Williamsburg
Mountain Ash
Packard
Saxton
Jellico
Wooldridge
Newcomb
Knoxville
Sparta
Kingston
Murfreesboro
Centerville
Paducah
Folsomdale
Viola
Hickory
Fancy Farm
Mayfield
Farmington
Hardin
Dexter
Almo
Pryors
Wingo
Water Valley
Fulton
Sedalia
Hazel
Murray
Puryear
Whitlock
Paris
Henry
McKenzie
Bruceton
Huntingdon
McLemoresville
Trezevant
Atwood
Tiptonville
Bluebank
Rives
Lynnrogue
Martin
Cottage-grove
Dresden
Gleason
Troy
Hornbeak
Obion
Wynnburg
Ridgely
Trimble
Newbern
Sharon
Mason Hall
Kenton
Rutherford
Dyer
Greenfield
Bradford
Tennessee River
Cumberland River
Ohio River
Mississippi River
Cairo
Green R.
Licking R.
Kentucky R.
Clinch R.
Scale of Miles
0
25
50
75
The Whitney-Graham Co., Inc., Buffalo and New York City
11-30



Ice and Cold Storage Plant, Dallas, Tex.

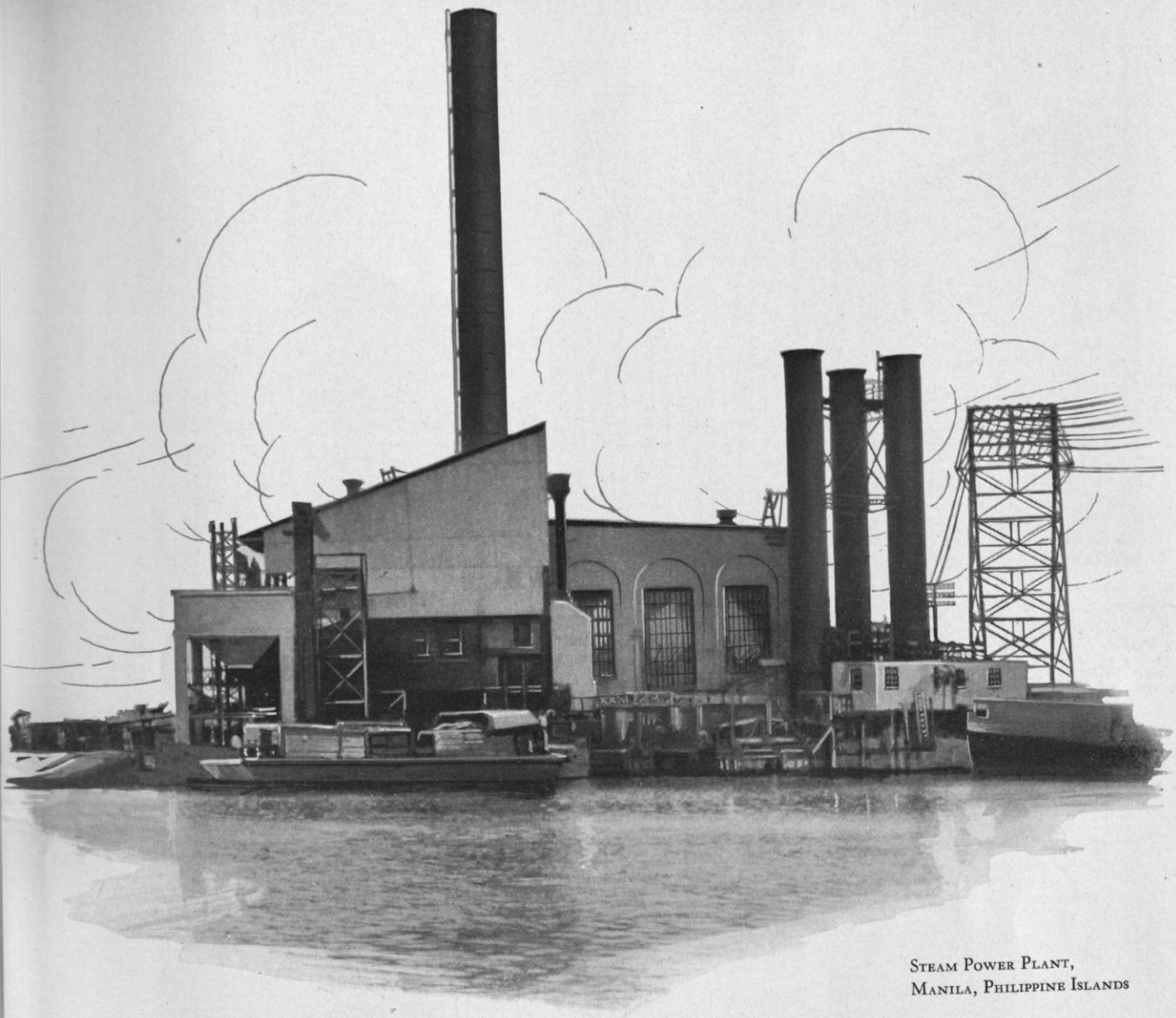


Electric
Cold Storage Plant

Southern Ice and Utilities Group

By the purchase of the Southern Ice and Utilities Company, 42 artificial ice plants, 30 ice distributing outlets and 4 large commercial storage plants have been added to the Associated System's properties. The daily capacity of ice output is 2,770 tons; the storage capacity is 75,000 tons.

Ice service is provided in over 300 communities having an urban population of 1,030,000. Little Rock and Pine Bluff, Arkansas; Dallas, Dennison, Fort Worth and Texarkana, Texas; Muskogee and Sapulpa, Oklahoma, are among the larger cities served.

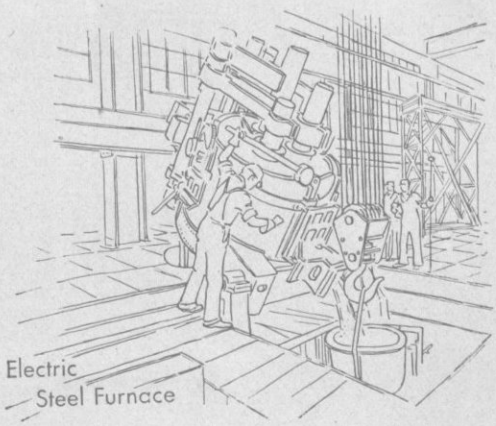


Steam Power Plant,
Manila, Philippine Islands

Manila Electric Group

Public service 10,000 miles from New York gives a world-wide aspect to the Associated System. The Manila Electric Company, established in 1903, distributes electricity to more than 86,000 customers in the city of Manila and its suburbs. Many American and foreign firms have offices in Manila, which is one of the more important commercial centers of the Orient.

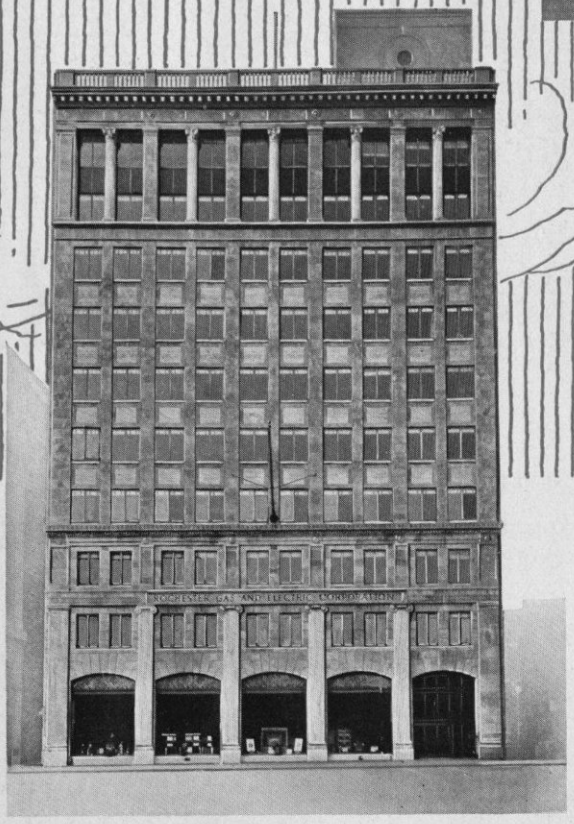
In the foothills at Botocan, P. I., a new hydro-electrical development is under construction. It has a capacity of 16,000 Kw. and will be connected with Manila by a 55-mile transmission line.



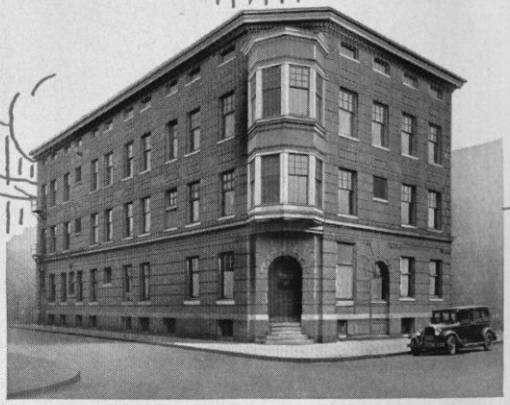
Electric
Steel Furnace

Staten Island, N. Y.

Ithaca, N. Y.

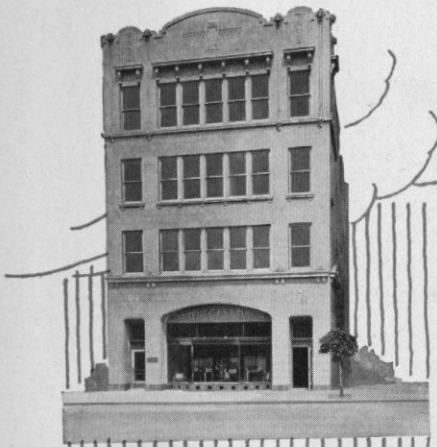


Rochester, N. Y.



Elmira, N. Y.

Office Buildings and Showrooms



Terre Haute, Ind.

Reading, Pa.

Erie, Pa.

Cambridge, Mass.

Office Buildings and Showrooms

Record of Progress

79 Years of Growth.

Over 1,425,000 customers.

Properties and service in 26 states, the Canadian Maritime Provinces and the Philippine Islands.

Service to a population of 5,700,000.

99% increase in customers from 1920 to 1929.

109% increase in gross revenue from 1920 to 1929.

132% increase in electric kilowatt hour sales from 1920 to 1929.

38% increase in gas sales from 1920 to 1929.

Over $63,000,000 was expended for new construction in 1928 and 1929.

Over 214,000 Associated investors, an increase of 148,437 in 1929.

$97,862,000 of Associated securities owned by customers served by Associated properties.

85.3% of the employees are investors.

7,681 miles of high tension transmission lines.

4,307 miles of gas mains.

90.5% of gross operating revenue derived from gas and electricity.

93,209 customers are investors.

One in every 32 residential gas consumers in the United States is served by the Associated System.

One in every 27 residential electric consumers in the United States and its possessions is served by the Associated System.

Complete map showing area served by properties of The Associated Gas and Electric System will be found attached to inside back cover.

ORGANIZATION
OF THE
ASSOCIATED GAS AND ELECTRIC COMPANY
(INCORPORATED UNDER THE LAWS OF THE STATE OF NEW YORK IN 1906)

Officers

J. I. MANGE, *Chairman and President* . . . . . New York
H. C. HOPSON, *Vice-President and Treasurer* . . . . . New York
S. J. MAGEE, *Vice-President and General Manager* . . . . . New York
J. M. DALY, *Vice-President* . . . . . New York
O. E. WASSER, *Comptroller and Assistant Secretary-Treasurer* . . . . . Ithaca, N. Y.
M. C. O'KEEFFE, *Secretary and Assistant Treasurer* . . . . . New York

Directors

CHARLES W. BEALL . . . New York
Harris, Forbes & Company

WILLIAM BUCHSBAUM . . New York
Vice-President, Barstow-Tyng & Co.

FREDERICK S. BURROUGHS . New York
Harris, Forbes & Company

JOHN M. DALY . . . . New York
Vice-President

HOWARD C. HOPSON . . . New York
Vice-President and Treasurer

SANFORD J. MAGEE . . . New York
Vice-President and General Manager

JOHN I. MANGE . . . . . New York
Chairman and President

W. EUGENE McGREGOR . . . Boston
Harris, Forbes & Company

DANIEL STARCH . . . . New York
Daniel Starch and Staff

FINANCIAL OFFICE, 61 Broadway, New York City
PRINCIPAL OFFICE . . . Ithaca, New York

MANAGERS—OPERATING PROPERTIES
THE UTILITY MANAGEMENT CORPORATION
120 WALL STREET, NEW YORK CITY
former name
The J. G. White Management Corporation