

GAS AND ELECTRIC
NEWS
AND YEAR BOOK



February 1924

ROCHESTER GAS & ELECTRIC CORPORATION

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Rochester Gas and Electric Corporation
Rochester, New York

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FOREWORD



IT is with particular gratification that we devote this issue of Gas and Electric News to a recital of the Company's policies, accomplishments and consistent growth during the year 1923. It is a record of notable achievement and progress in every phase of the Company's business. The gross revenue, sales of gas, electricity and by-products, number of customers, distribution systems, generating plants and substations, number of employees and stockholders have all materially increased since the beginning of the year. This splendid progress is largely due to the increasing demands of the territory served for additional

heat, light and power in every phase of human activity. The Company realizes that industrial and civic activity and expansion, together with home comforts, depend largely on adequate equipment, proper maintenance and continued growth of the gas and electric industry and, therefore, it has not only kept pace with public needs, but in many cases has also anticipated its responsibility in this respect.

The Company's properties are all in excellent operating condition and constant vigilance is maintained in their upkeep, repair and extension. Visitors are welcome and competent guides will be furnished at any time to serve those interested in seeing any of the Company's stations or departments. Security holders are especially urged to familiarize themselves with the splendid institution they own.

Obviously no other single business institution means so much to the whole of Rochester and vicinity as this Public Utility. The Community and the Company are dependent upon each other for successful growth, and past experience justifies the most optimistic expectations of future expansion and usefulness for both.


President

Rochester—A Commercial Center of International Reputation

ROCHESTER with a population of 320,000 persons is the third largest city in the Empire State and the 22nd largest in the United States. Located in the fertile valley of the Genesee River and extending about nine miles southerly along the river from the shores of Lake Ontario, it has unequaled charm, advantages and progressiveness.

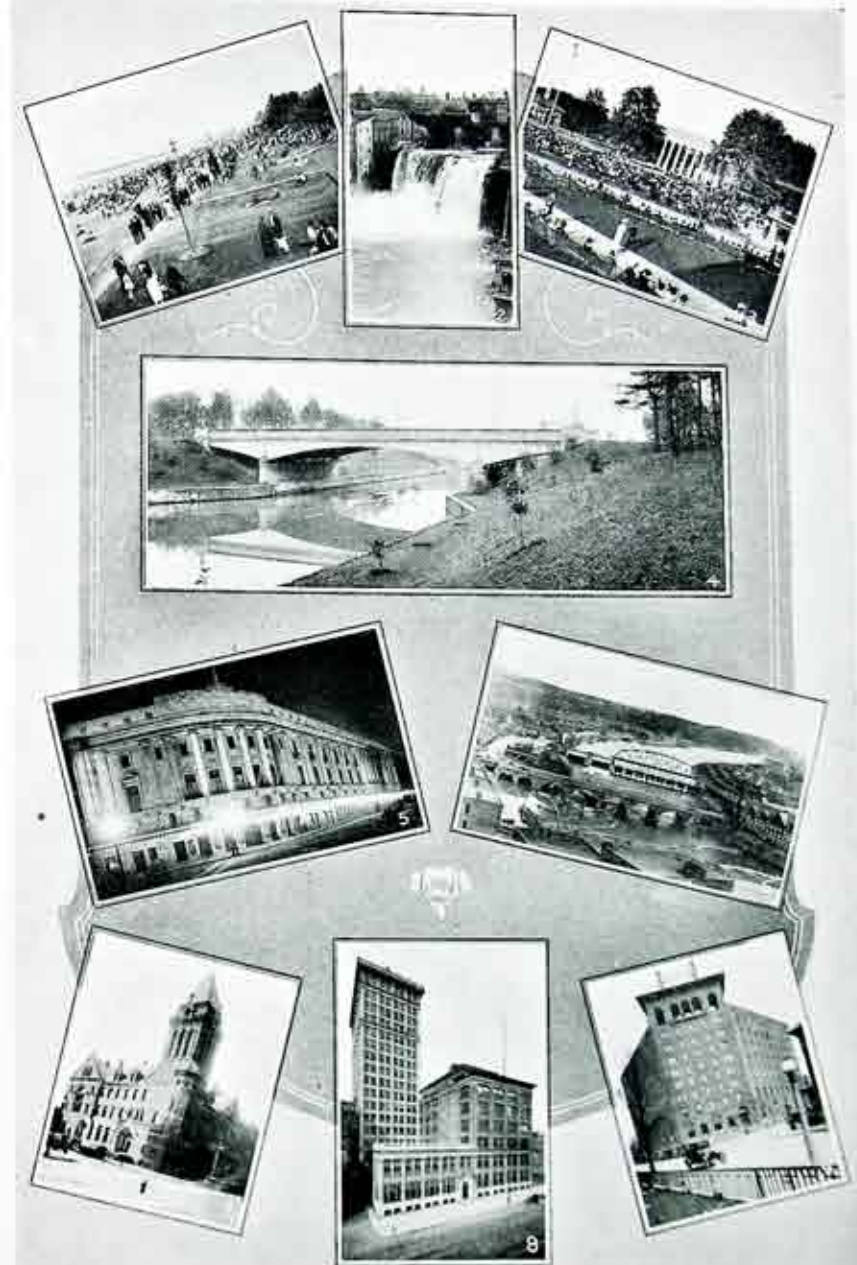
Its history begins with that of the Genesee Valley and its proximity to Lake Ontario together with the natural waterfalls of the Genesee River within the present city limits have made it a natural settlement for civilized man for more than a century. It was incorporated as a village in 1817 and named after Colonel Nathaniel Rochester, one of the pioneers of the region. Since that time it has grown from a "Flour and Flower City," and progressive and important centers in the heart of the largest and farming continent, it is also a trading and financial center of great importance. Smaller cities and thriving villages, each with its own special interests and positive advantages, lie in its vicinity. Within a radius of ninety miles is found a population of 2,000,000.



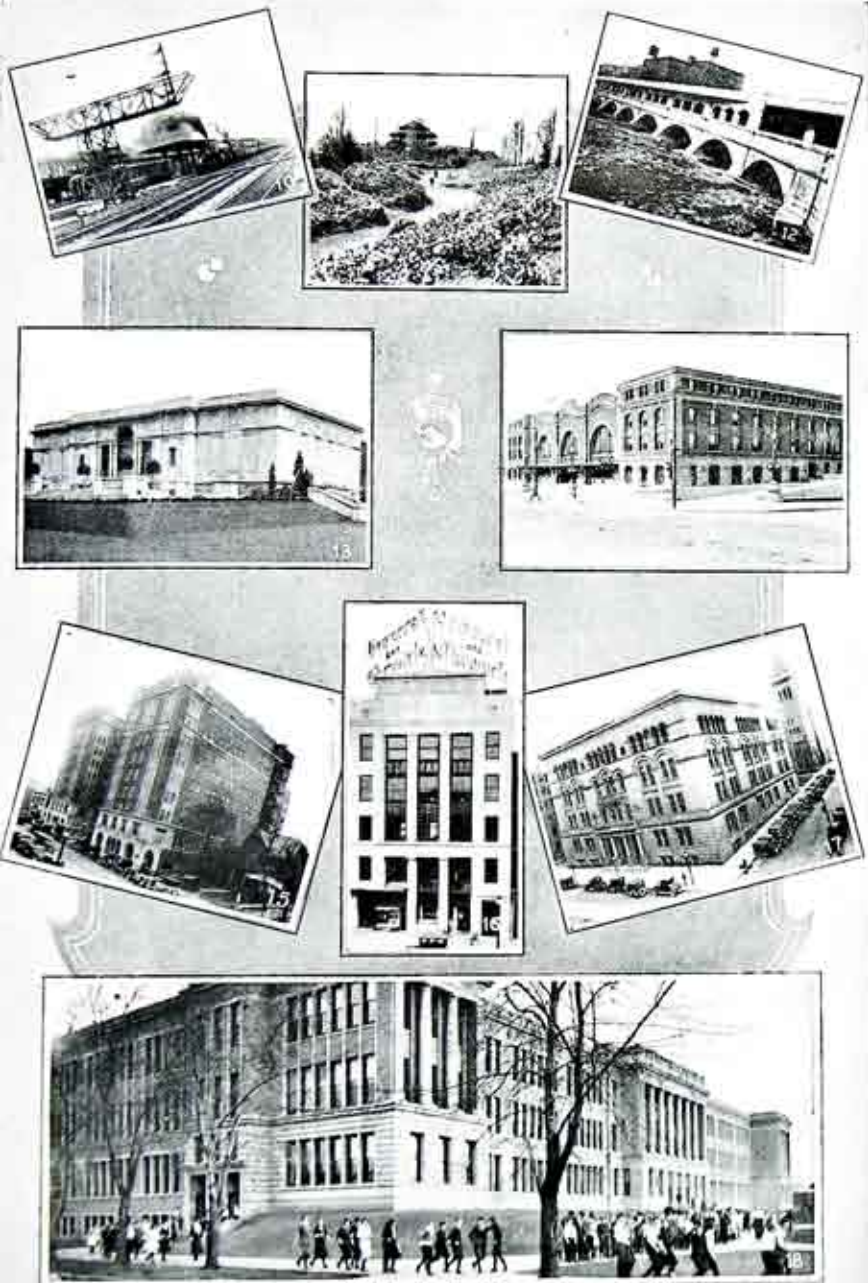
Rochester's noteworthy history, assets, institutions and people guarantees her continued progress.

As a manufacturing city, Rochester leads the world in the production of a number of articles requiring highly skilled workmanship, such as: cameras, and photographic materials, optical goods, thermometers, enameled steel tanks, filing devices, office systems, check protectors, soda fountain fruits and syrups, and mail chutes. The city ranks high in the production of machinery, women's, misses' and children's shoes, men's clothing, carbon paper and typewriter ribbons and ivory buttons. Other products include automobiles, trucks, equipment and parts for autos, motors, electrical supplies and equipment, trunks, stoves, stamped metal ware, sheet metal work, seeds and nursery products, railway signals, railroad car wheels, and supplies, perfumes, furniture, tools, dental chairs, lenses, jewelry, castings, candy, soft drinks, paper boxes, beds and lithographing. The products of its steadily growing industries are shipped to markets in all parts of the United States and foreign countries, and the high character of materials and workmanship have justified the slogan, "Rochester Made Means Quality." The diversified character of the city's industries insures industrial stability.

Rochester's transportation facilities are excellent. Five steam railroads,



Familiar Rochester Scenes and Buildings: 1—Ontario Beach Park. 2—The Upper Falls. 3—Edgerton Park. 4—In Genesee Valley Park. 5—Eastman Theater. 6—The Barge Canal Harbor. 7—Main Post Office. 8—Eastman Kodak Office Buildings and 9—Central Y. M. C. A.



Rochester Schools and Buildings Continued: 10—N. Y. C. Railroad Yards. 11—Highland Park. 12—Rochester's New Street and Subway. 13—Memorial Art Gallery. 14—N. Y. C. Railroad Station. 15—The Sagamore. 16—Democrat & Chronicle Building. 17—Court House and 18—Madison Junior High School.

four interurban lines and the New York State Barge Canal with a magnificent harbor all serve the city's best interests. In addition, the Port of Rochester, which is the largest United States harbor on Lake Ontario unites the City with important Canadian ports.

Living conditions in Rochester are ideal. It is a clean, healthful, well-governed City with adequate public utility service. Its water supply and sewerage systems are of noteworthy excellence. It has numerous parks embracing 1,700 acres, playgrounds and comprehensive educational facilities which include the public and parochial schools, the University of Rochester, the Mechanics Institute, three Theological Seminaries, private schools, commercial schools, schools of art and music and well equipped libraries.

Beside being known the world over for the quality of its manufactures, Rochester is fast gaining an enviable position in the sphere of culture and education, especially as regards art and music. The generosity and public-spiritedness of Mr. George Eastman are well known, however, his gift of the Eastman Theatre and School of Music makes possible for Rochester, the most far-reaching advance along cultural lines. The operation of this institution by the University of Rochester, under Mr. Eastman's personal supervision, is more than attaining the ideals entertained for it by its most optimistic follower.

At this early period in its development, the Eastman Theatre and School of Music is reflecting great credit to this city which is even now recognized quite generally as a place where the very best in music may be assimilated. This applies to the study of music itself as well as to the keen satisfaction that comes upon merely hearing the wonderful program it affords.

Extensive research work here along the line of better moving pictures will have a world-wide effect upon the quality and superiority of film portrayals. As Rochester is the center of the film manufacturing art it seems but fitting that she should also be the leader in other branches of this great modern industry, as well as in music, art and culture.

Rochester with an area of over 21,000 acres is truly called "The City of Homes," and its geographical location allows ample room for future expansion.

Thrift stands as an element of success and in this connection Rochester banks have experienced no failure in over thirty-six years. It has fourteen banks with \$8,550,000 capitalization, \$20,431,973 surplus and deposits of over \$290,300,485 or \$907. per capita. The City's municipal bonds demand the highest prices in the open market of any city in the world. More than \$200,000,000 is invested in the manufacture of more than 225 commodities, the annual production being valued in excess of \$400,000,000.

It is, therefore, little wonder that Rochester people are proud of their City, have faith in its future, and eagerly serve to maintain its enviable position. To those who know the City and its history, assets, institutions and people, it is inevitable that Rochester will continue to go forward.

The Development of Gas and Electricity in Rochester

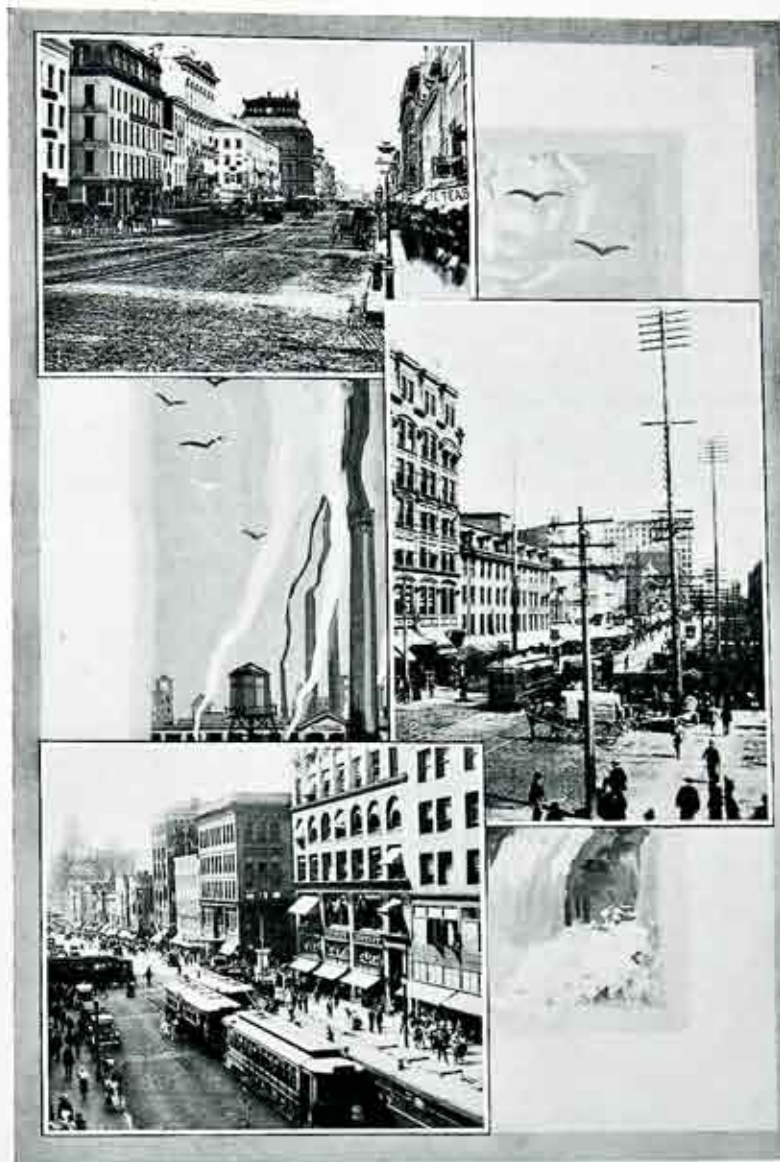
THE story of the Rochester Gas and Electric Corporation is one of the romances of business. It embraces the absorbing history of a progressive city located on a river endowed by nature with 259 feet of water-fall within the city limits, a condition unique in this country. The first development of water power in Rochester itself was made in 1789 by Ebenezer Allen who constructed a mill on what is now known as the Rochester Carroll and Fitzhugh Race on the west side of the Genesee River, at the Court Street Rapids. The Upper Falls developments were begun in 1807 and the dams at the Middle and Lower Falls being constructed in 1817 and 1828, respectively.

The water power thus developed was used in the early days for flour mills, lumber mills and later for paper mills and general manufacturing. The inefficient but picturesque overshot water wheels of that time gave employment to comparatively few men, while, today, with the aid of highly efficient apparatus in modern hydro-electric power stations, practically the same amount of water is converted into energy supplemented by steam generation and Niagara Power which gives employment to thousands of men and women and affords power for the necessities, convenience, comfort and pleasure of the entire community.

Lamps and candles were universally in use for illumination until about 1807 when gas lighting was perfected as a commercial possibility. Gas was first used for lighting in London in 1807 and after a period of time began to gain popular favor and success in various American cities. The Rochester Gas Light Company was incorporated about seventy-six years ago on June 22, 1848, to manufacture and distribute gas for illuminating purposes in Rochester. Two other gas companies were incorporated after twenty-four and thirty-two years respectively, engaging in active competition. However, recognizing the economic error consequent to their duplication of investment and effort, the three initial companies finally consolidated on April 10, 1891 into the Rochester Gas Company.

Until 1880, Rochester, like other cities, was using gas lamps for street lighting as well as interior illumination. At this period the new light made possible by electricity had reached such a point in its development that, on April 25, 1880, a few bold and intrepid investors incorporated the Rochester Electric Light Company. This Company generated and distributed electric current for lighting by means of the electric arc lamp, the principle of which was first demonstrated in London in 1810 by Sir Humphrey Davy.

In 1881, the Brush Electric Light Company was incorporated, using for its lighting business a new development, the Brush Arc-light generator and lamp. In the meantime, however, Thomas Edison had developed the



The Progress of Rochester has been Intimately Connected with the local Development of the Gas and Electric Industry. Three Stages in its Advance as Evidenced by Main Street's Contemporary Appearance are herewith Portrayed. 1—In the Days of Horse Cars and Gas Street Lights; 2—Early Days of Electricity Before wires were Put Underground, and 3—The Modern Main Street.

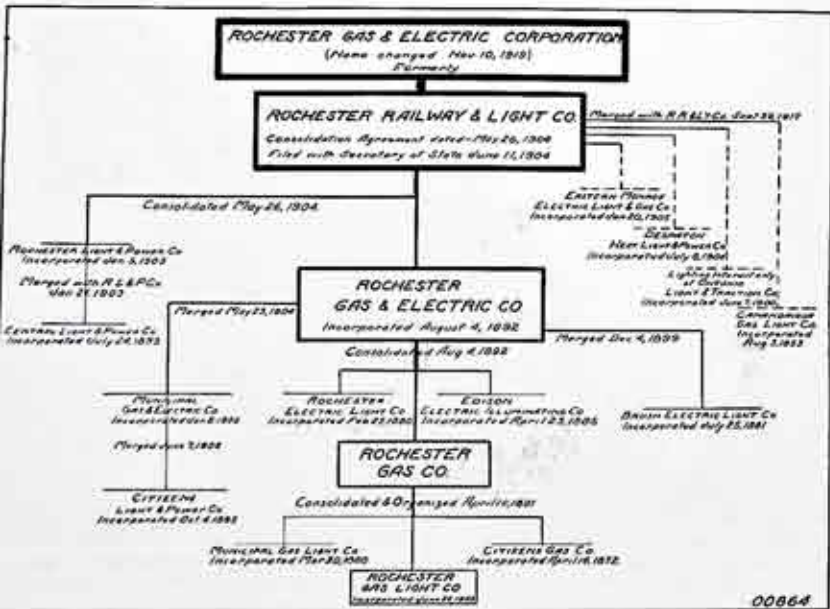
incandescent lamp and the three wire system, which, by subdividing the electric light into smaller units than the arc lamp, permitted its introduction into a field heretofore exclusively occupied by the gas lamp.

The incandescent lamp together with the electric motor, which was commercially perfected about this time, were inventions whose possibilities seemed unlimited, and, accordingly, the Edison Electric Illuminating Company was incorporated in April, 1886, and started to do business in a field practically untouched by the gas or other electric companies. The rapid introduction of the electric motor on account of economy, cleanliness and adaptability to any and all power uses, including the street railway which in Rochester started to change in 1890, from the horse cars to the electrically operated type, soon made the Company's power business its chief interest.

During the succeeding years, other electric companies were formed and economic consolidation of both gas and electric companies were made from time to time, as shown by the accompanying chart.

Today the Rochester Gas and Electric Corporation which is a business organization incorporated under the laws of the State of New York with approximately \$40,000,000 of service-giving properties devoted to the public use, stands as a monument to the courage and confidence of its founders, the industry, zeal and intelligence of its management and employees.

The problem of supplying gas and electricity to a city the size of Roch-

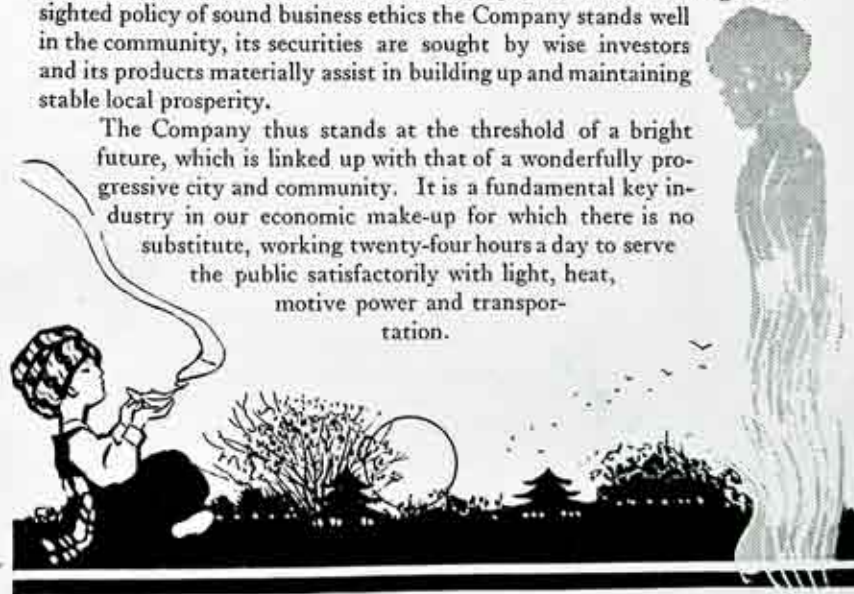


A Graphic Delineation of the Consolidations and Mergers leading to the Eventual Development of the Rochester Gas and Electric Corporation



ester includes many varying conditions, requiring constant, intelligent and expert study on the part of experienced men who have the welfare of the community, the stockholder and the employee at heart. Through a far sighted policy of sound business ethics the Company stands well in the community, its securities are sought by wise investors and its products materially assist in building up and maintaining stable local prosperity.

The Company thus stands at the threshold of a bright future, which is linked up with that of a wonderfully progressive city and community. It is a fundamental key industry in our economic make-up for which there is no substitute, working twenty-four hours a day to serve the public satisfactorily with light, heat, motive power and transportation.



Gas and Electricity, the Modern Genii, Transform Our Homes into Wonderfully Delightful Places and Increase our Capacity for Happiness and Culture

Extent of Territory Served

THE Rochester Gas and Electric Corporation serves a territory of over 400 square miles. This includes at least 360,000 persons and an unusually high proportion of mercantile and manufacturing establishments which depend upon this Company for gas and electric service.

The Company's main electric generating stations and gas manufacturing plants are located in Rochester, and from them there extends a network of transmission lines in this city and from it westward to Hilton, North to Lake Ontario, East to Wolcott and South to Canandaigua. The Company has a coal gas manufacturing plant at Canandaigua for the supply of that city, and a subsidiary hydro-electric power house at Littleville, six miles therefrom. The Company also

supplies substations for the conversion and distribution of electric current at Float Bridge, Webster, Ontario, Williamson, Sodus, Wolcott, Gates, Manchester, Canandaigua, Hilton, Victor, Pittsford and East Rochester. Some of these are Company property and others are owned by the New York State Railways, Rochester Lines, the Sodus Gas and Electric Co., the Northern Wayne Electric Light and Power Co., and the Hilton Electric Light and Power Co., all of which purchase electricity from the Rochester Gas and Electric Corporation for distribution and use in their respective territories.

During the year 1923, over 40 miles of rural electric lines were completed. Among these the following may be mentioned: The Henrietta-West Henrietta line; the Greece-Ogden line; the Penfield Road line, Penfield; the Bay Road and Cemetery Road lines, in Webster; the Lyell Road line, Gates, and two miles of additional line on the North Greece Road.

The Company further supplies gas in East Rochester, Pittsford and Fairport, through high pressure lines from Rochester.

The territory served, as well as the population and character of the Company's service is indicated in the following tabulation:

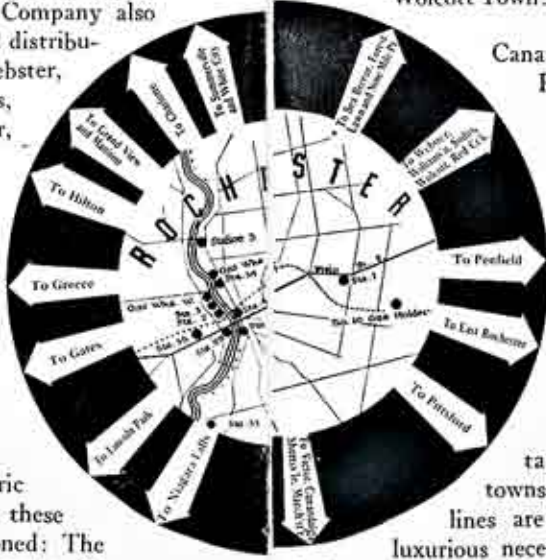
Territory Served	Population	Service Supplied
Rochester City (Monroe County)	295,750	Gas and Electric
Brighton Town	2,911	Gas and Electric
Chili Town	1,780	Gas and Electric
Gates Town	1,419	Gas and Electric
Greece Town	3,350	Gas and Electric
Irondequoit Town	5,123	Gas and Electric
Parma Town	2,923	Electric
Penfield Town	2,087	Gas and Electric
Perinton Town	7,799	Gas and Electric
Pittsford Town	4,614	Gas and Electric
Webster Town	3,976	Electric
Ontario Town (Wayne County)	2,620	Electric
Sodus Town	4,408	Electric
Williamson Town	3,293	Electric
Wolcott Town	2,792	Electric

Ontario County		
Canandaigua City and Town	9,214	Gas and Electric
Farmington Town	1,465	Electric
Hopewell Town	1,339	Electric
Manchester Town	5,567	Electric
Victor Town	2,319	Electric

TOTAL 364,749

The entire region served by the Company is knit together in the sense that the Company's customers all receive the same high grade service, and are benefited in home and business life in proportion to their ability to take advantage of it. The small towns and villages on the Company's lines are no longer cut off from to-day's

luxurious necessity — electricity — which has found such favor with their city friends. Likewise the villages supplied with gas are enjoying this best of all heating mediums. It is the policy of the Company to continue making reasonable extensions, and, as time goes on, we trust the territory thus served will continue to grow, and permit the Company's usefulness to be proportionately increased.



Territory Served by the Company



Steel Towers on the Canandaigua Transmission Line



Wooden Poles as used on a Narrow Right-of-Way in Canandaigua.

Gas Manufacture and its By-Products

IT may not be known generally that the production of gas is a complicated chemical process. In the manufacture of coal gas the principal raw material is coal, a staple necessity of tremendous national importance and world-wide economic value. Instead of wastefully consuming the many valuable constituents of coal for the production of heat only, the process of gas making separates them and passes each on to the field for which it is best adapted. Coal is thus separated into gas, coke, coal tar, ammonia and benzol all of which have many valuable uses and some of which form the basis for numerous important industries.

Gas has been manufactured in Rochester in a highly scientific manner since 1848, a period of seventy-six years. From a small beginning the "Gas Works" has grown to huge proportions so that today the Company operates a coal gas plant that is considered by Gas Engineers generally to be one of the most efficient and up-to-date to be found in the United States. This plant, called "West Station," is situated at the foot of Falls Street on a New York Central Railroad siding. This location near the geographic center of Rochester greatly simplifies the handling of the raw materials and the finished products.

In the process of gas making the elimination of waste is noteworthy, ninety-six percent of the coal burned being accounted for in the resultant products. From the 550 tons of coal carbonized daily there is produced 6,000,000 cubic feet of gas; 385 tons of coke, part of which is used in various Company operations; 6,600 gallons of heavy coal tar, and 3,300 pounds of ammonia. In addition to this there are produced several hundred gallons of ammoniacal oil, light coal tar and crude light oil used in manufacturing Bengas, the Company's excellent motor fuel product.

Coke is a high-grade solid fuel having many characteristics making it superior to coal. The Company guarantees that a ton of its Guaranteed Gas Coke will last at least as long as a ton of anthracite coal if the simple instructions regarding its use are followed. The increasing number of satisfied coke customers indicates that the people of Rochester recognize its merit. The coke is transported from the Gas Works by belt conveyors to a 1,000 ton storage and screening bin located nearby



Fig. 1: Small Trenching Machine which cuts down the Cost of Digging Trenches for Gas Main and Electric Duct Installations.

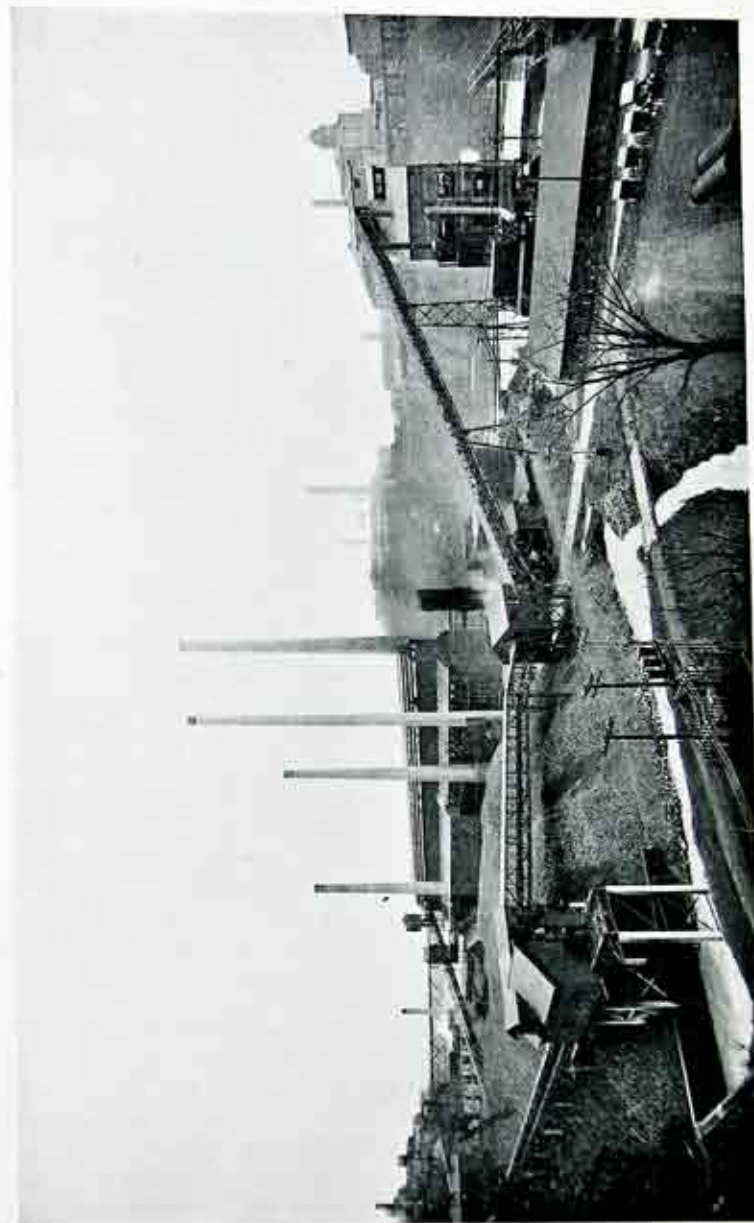


Fig. 2: The Company's Coal Gas Plant—West Station. The Structure at the Extreme Right is the New Carburetted Blue Gas Plant, Recently Completed

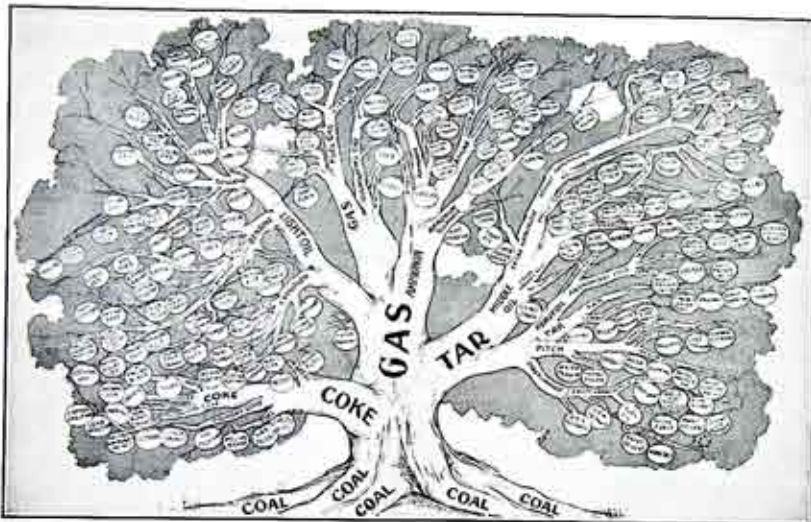


Fig. 3: The Family Tree of the Coal Family. Each Oval Represents a Useful Commercial Product

where it is sized for delivery to the general public. Twenty-five special delivery trucks are constantly kept busy delivering this high-grade fuel to local homes and business institutions

Coal tar is of great importance and has tremendous possibilities in the program of industrial progress. On an average more than twelve gallons of tar are produced from each ton of coal carbonized in the Company's plants. In 1923, over two million gallons of this tar were pumped into tank cars and shipped to refineries.

Ammonia is still another by-product of gas manufacture which has a large industrial sphere of usefulness. The ammonia solution is concentrated for economical shipment to industrial plants where the resultant gas liquor is utilized as a base for fertilizers, explosives and many other products of economic utility.

Other by-products which have recently come into prominence are the light oils which are washed from the gas during manufacture. Primarily these are the benzols and toluols. This Company was the first Public Utility in New York State to manufacture these products for war purposes, the work being carried on in a specially constructed plant at the East Gas Works. Since the signing of the armistice these products have been refined into our high-grade motor fuel, Bengas, which is composed of a mixture of benzol, toluol, solvent naphtha and gasoline. Bengas is a superior fuel for internal combustion motors. It greatly reduces costly carbon troubles, produces more power, starts easier than gasoline and has no harmful effect on motors.

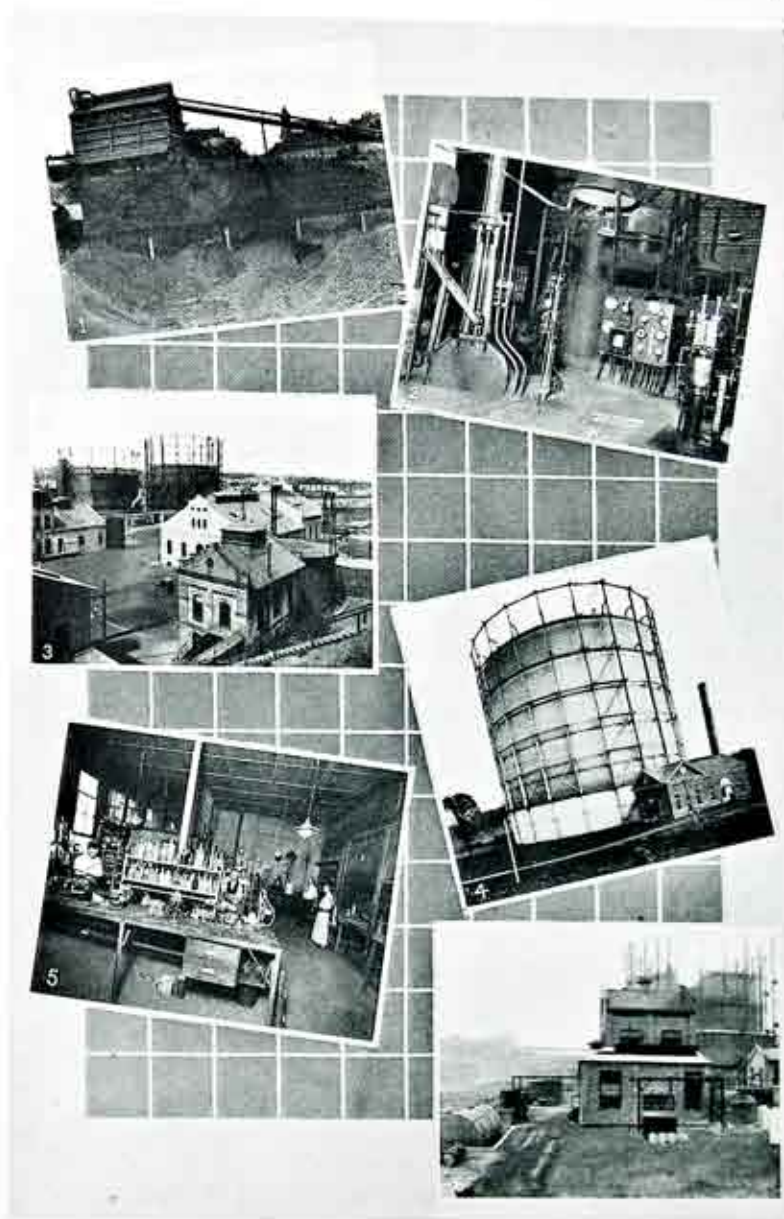


Fig. 4: at 1—Coke Bins, and Pile, 2—Operating Floor of New Carburetted Blue Gas Plant, 3—East Station Gas Plant, 4—Blossom Road Gas Holder, 5—The Laboratory at East Station, and 6—The Light Oil Plant

At its East Station Gas Works, the Company has also manufactured for many years carburetted blue gas (erroneously called water gas). This plant is located on the east side of the Genesee River diagonally across from the coal gas plant, the two stations being connected by a Company bridge. The capacity of this plant is about 8,500,000 cubic feet of gas daily.

The outstanding difference between coal gas and carburetted blue gas is this: the first is the product of a simple distillation of soft coal by which the gaseous constituents are driven off, leaving coke; while the second is the product of decomposed steam united with carbon in coke and vaporized oil. Both gases have the same general properties and characteristics. The Company's gas output during 1923 averaged about sixty per cent coal gas and forty per cent carburetted blue gas. Prior to entering the gas distribution system these two gases are mixed in gas holders from which it is pumped as the requirements of the homes and industries of this vicinity demand.

During 1923 the Company constructed the first unit of a new Carburetted Blue Gas Plant near its present Coal Gas Plant at a cost of \$600,000. This gas machine has a capacity of 4,700,000 cubic feet of gas daily and many automatic operating features are incorporated in its up-to-the-minute design. This is in line with the Company's policy of installing the best and most efficient equipment which the gas and electric art affords at the time of installation. In many cases the Company has been a pioneer and leader in inaugurating original designs and processes which have proven to be valuable contributions to modern engineering and public utility practise.

The rising curve of gas consumption foretells a steady program of expansion beyond the fondest hopes of the most sanguine observer. The possibilities for the utilization of gas for heating purposes are unlimited, and each year offers new problems for meeting an ever increasing demand.

Due to the increase of the Company's gas send out, Coke and Bengas sales have materially increased. The revenue received from these and other by-products is credited to the cost of gas making, thus enabling the Company to sell its gas at the lowest rate existing in New York State and one of the lowest in the entire United States. All the efficiency that can be brought to bear on the recovery and sale of the by-products of the Company reverts to the ultimate gas consumer in the form of reduced rates. Were it not for the revenue thus received, the price of gas to the consumer would of necessity be appreciably increased.



Trench Dug by the Company's Large Trenching Machines Utilized Mostly in Rural or Suburban Digging.

Electric Generation and Distribution

THE Company's Electric Generating Department comprises six hydraulic stations, two steam generating stations and nine sub-stations, each station being a factor in the generating, transforming and converting of electric energy. This power is used for street lighting, in the household and for electric railway, commercial and industrial plant uses. In emergencies electric current is also taken from or supplied to the Niagara System, thus giving this Company's patrons and the general public a threefold guarantee of adequate and continuous electric service at equitable rates.

More than \$8,262,000 has been invested by the Company in its



Group of Electric Meters as Displayed in the Company's 1923 Exposition Exhibit

Rochester water rights and their development. The principal water power resources of the Company are derived from the four water falls on the Genesee River located within the Rochester city limits at Court Street, Central Avenue, Ravine Avenue and Driving Park Avenue, respectively.

The Company's hydraulic properties have a generating capacity of 47,000 horsepower, which can be increased to 70,000 horsepower by additional local development. About 167 million horsepower hours, or approximately two-thirds of the total electric current handled by the Company is thus generated annually.

The most recent hydraulic development was made at Station 5 located

at the Lower Falls in 1917 at a cost of \$1,876,000. This development embraced the combining and modernizing of two old plants and included the construction of a 400 foot movable steel storage dam, a new power house containing two generators of 16,000 horsepower capacity each, a 1,400 foot tunnel 20 feet in diameter leading from the dam to the power house, a surge tank and an inclined railway for raising and lowering materials. The design of this power house is such that an additional 16,000 horsepower turbine and generator may be installed at a comparatively small expense when justified by economic conditions.

The use of Rochester water rights is governed by the extent of rain-fall controlling the flow of water on the Genesee River. This uncertain quantity necessitates the constant readiness of an adequate steam reserve service for periods of low water. Therefore the Company has two steam generating stations, the largest of which is known as Station 3, located on Mill Street near Factory Street, close to the heart of the city. This location places it within easy reach of the New York Central Railroad, thus facilitating the handling of coal and supplies and making possible a minimum expense for cable and wire required for the distribution of its electrical output. Its location on the Genesee River also insures an ample supply of water for boiler feed and condensing purposes. This station contains seven modern steam turbines having a combined capacity of 81,000 horsepower, and frequently uses as much as 1,000 tons of coal a day when heavy load conditions prevail.

Considerable construction work was done during 1923 on steam generating equipment at Station 3 where a new 20,000 h. p. steam turbine and generator, in addition to two new boilers and auxiliary apparatus for the burning of powdered coal were installed. The latter installation contains many original features adopted after a thorough study of the advantages gained through the burning of coal in the pulverized form.

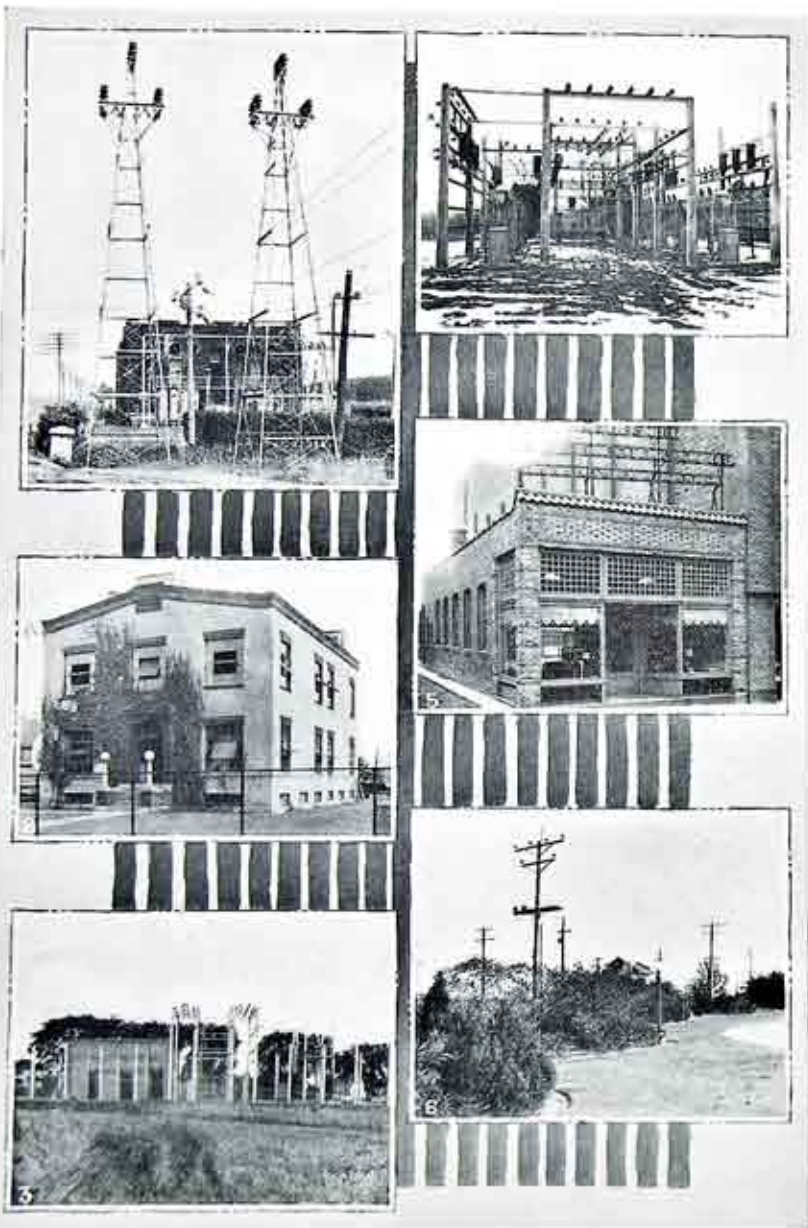
In order to make more advantageous use of the Company's water rights in connection with Station No. 26 on the Carroll and Fitzhugh Race, a new three hundred and fifty kilowatt automatically controlled generator was installed recently at this plant to replace old and inadequate equipment. This installation although small, functions economically with the Company's other generating stations.



Company Properties: 1—Station 3 Steam Plant. 2—Turbine Room at Station 3. 3—Movable Dam 1/4 mile south of Station 5. 4—Huge Tunnel Conveying Water from Dam to Turbines at Station 5. 5—The 48,000 H. P. Development at Station 5. 6—A 16,000 H. P. Generating Unit at Station 5



The Company Makes all its Concrete Poles.



Company Properties: 1—Station 33, where Niagara Power is received. 2—Station No. 1. 3—Canandaigua Substation. 4—Station 37, Lincoln Park. 5—New Office Building at Canandaigua, N. Y. 6—Scene on the East Rochester Line, at the Harwood Farm Subdivision

The extension and betterment of Rochester's streets, required in 1923 the installation of 102 Street lights, while the increasing number of gas and electric customers demanded the installation of 341 miles of overhead wires, 120 miles of cable and 51 miles of subway duct under the city's thoroughfares. Rochester is one of the best lighted cities in the State, and has the distinction of having the largest number of Boulevard lights per 1000 persons of any city in the state, exclusive of New York.

The Company's Electric Distribution system comprises 3,563 miles of wires, of which 1,307 miles are underground. The underground electric conduit construction in Rochester is proportionally greater in extent than that of any other city in the country and together with the rear lot lines, an innovation in electric distribution which originated in Rochester, makes for the beauty and safety of our streets, as well as a continuity of service which is second to none.

The Company's electric sub-stations are located at advantageous economical points of distribution throughout the City of Rochester, as well as in various smaller communities which are supplied by this Company. All stations are kept continuously in excellent operating condition and are manned by experts.

The growing utilization of electricity locally necessitated the recent building of three new electric sub-stations in this city known as sub-stations number 36, 37 and 38. All of these sub-stations contain high grade modern equipment and are located in widely separated parts of the city. Sub-station number 36 is located on the Charlotte Boulevard and is of the indoor type; sub-station number 37 is located at Lincoln Park in the western end of the city and is of the outdoor type, while the growth of Rochester's business section, notably in the vicinity of the Eastman Theatre, required the building of number 38, an automatic sub-station on Swan Street.

A phase of the Company's business which is not so well known is the sale of steam for industrial and heating purposes. This load is steadily increasing as that of gas and electricity, and the distribution system has been materially expanded to take on new customers who require large quantities of steam.



These Men Install Your Electric Meters

Company's Securities Are Owned By Persons In All Walks of Life

TO keep pace with the growing and prosperous communities the Company serves, it is necessary to invest each year, on the average, one and one-half millions of dollars in extensions which include land, buildings, equipment, wires, gas mains, meters, etc. The money required to pay for these physical extensions must come from the sale of securities authorized by the Public Service Commission.

The outstanding securities of the Rochester Gas and Electric Corporation are much sought after by the investing public and have always had a ready market at a price above most utility issues. The Company's bonds and stocks are owned by people in all walks of life located in many countries throughout the world.

In 1918 the Management decided to give the opportunity to invest in the Company's securities to those it served notwithstanding the fact that investors outside the city have been in the past and are still anxious to purchase our securities with less effort and expense on our part. In order to make it possible for everyone to become partners with us a liberal partial payment plan was inaugurated. That this policy was justified is shown by the readiness with which about 4,000 persons, principally customers, and employees, in Rochester and vicinity have invested over four million dollars during the last five years. It is gratifying to note that during 1923 over one thousand persons availed themselves of the privilege and opportunity of becoming stockholders in this well managed institution.

Thus the dividends we pay for the use of the money invested in our business is paid to our customers and employees, and keeps money circulating at home among those from whom we receive our income. We believe that the best interests of the

This little Pamphlet is free to all Persons who Wish to Know More about The Company's Securities and how They will Assist You Toward Thrift and Independence.

WE HAVE PAID
DIVIDENDS
CONTINUOUSLY

for
57
years



Hundreds of Rochesterians Have Become Stockholders and Part-Owners in the Company after a Thorough Investigation into its Excellent Properties, Resources and Management.

people of Rochester and surrounding territory are fostered by encouraging investment in a sound home industry the products of which are an essential factor in the life of the community. In addition, the fact that the present Company and its predecessors have paid dividends on their Preferred stocks for fifty-seven years continuously during good and bad times is ample evidence of the stability of the business and the soundness of its securities. The Company's successful record is well known and its affairs are wide open to anyone interested.

Three special well attended meetings for Stockholders were held in 1922-23 to give all local stockholders of the Company, an opportunity to become better acquainted with its physical properties, business, and management, in addition to giving them the opportunity of asking questions and offering suggestions. Various officers of the Company gave talks, while charts and transparencies visualized physical properties and growth. It is essential that all security holders know as much as possible about this successful utility with \$40,000,000 of tangible assets dedicated to public service.

The Company's Investment Department is making progress in interesting its customers in the ownership of its extensive properties and encouraging the employees of numerous representative Rochester industries to save a portion of their wages regularly through the purchase of its 6% Preferred Stock.

After investing in Company Stock,
your Money Begins to Earn
Interest and You receive
a Dividend Check Four
Times a Year.



Advertising and Publicity Activities

INASMUCH as advertising helps to bring the public and the utility into a closer co-operative relation with each other, it can be understood why this Company is a firm believer in its utilization. Company publicity, however, somewhat in variance with that employed by the average privately owned business enterprise where competition is a greater factor, quite consistently follows that of an educational and informative character. Its chief object is to give facts and information which will enable the public to have a better understanding of the Company, its policies, products, problems, methods, service and place in the community.

For the purpose of this publicity the Company utilizes the daily press, Gas and Electric News and various special bulletins, booklets or folders which are prepared for publication as occasion requires.

An innovation in publicity, so far as public utilities are concerned, is comprised in the Prize Essay Contest conducted by the Company during the past year. Much favorable comment and numerous requests for copy followed the appearance of a series of twenty-six unusually large and comprehensive display advertisements in Rochester papers. These advertisements, an understanding of which was essential to the proper preparation of the essays on "The Rochester Gas and Electric Corporation, What it is and What it does," apparently succeeded in arousing the interest of parents and children quite generally in the interesting processes of manufacture, generation, distribution and utilization of Company products. A series of thirteen advertisements along the same line were run in Canandaigua papers with equally satisfactory results.

Another medium of publicity is the use of a Balopticon to show attractive colored slides portraying the Company in operation, its buildings, plants, etc. This machine is operated almost daily in the Investment Department, on the Main Floor, where it attracts many persons and apparently interests them in many phases of Company operation which its customers should be familiar with. The Educational Department is also frequently called upon by various churches, clubs and organizations to give illustrated talks covering numerous phases of the Company's business.

School teachers of Rochester have frequently availed themselves of Company publications, statistics and charts, in their teaching work. The Company considers publicity of this character invaluable because by interesting and educating children, the customers of tomorrow, a big step has been taken toward a continuous, pleasant and satisfactory relation with future parents.

Still other publicity mediums are the yearly displays of Company equipment at the Rochester Industrial Exposition, special stockholders meetings held during the winter months, and window displays, each of

which helps to impress upon the customer the fact that he is being served by an up-to-date progressive utility, second to none in the country.

Satisfactory and adequate service may well be expected to arise from a better understanding and a closer co-operation between the Company and the public. This is substantially the mission of the publicity disseminated by this Company.



Samples of Educational and Informative Publicity which together with Consistent Newspaper Advertising and News Items helps Foster a Spirit of Understanding between the Company and the Public.

Sale and Utilization of Company Products

WE are living in an age of gas and electricity, two vital necessities in our domestic, commercial and industrial life. These modern slaves perform a myriad of tasks in a manner undreamed of a comparatively short time ago. They light the streets, factories and homes, cook the meals, wash and iron the clothes, heat the home, turn the wheels of industry, run the street cars, operate office machinery—in fact gas and electricity are used in some form at every turn, day and night 365 days a year. Directly or indirectly they promote the health, happiness, comfort and prosperity of everyone in the community.

The homes and industries in Rochester and surrounding territory together with the retail and wholesale merchandising establishments and the transportation and other public utility systems provide for our Company a large, diversified and rapidly growing market for both the retail and quantity sale of gas and electricity.

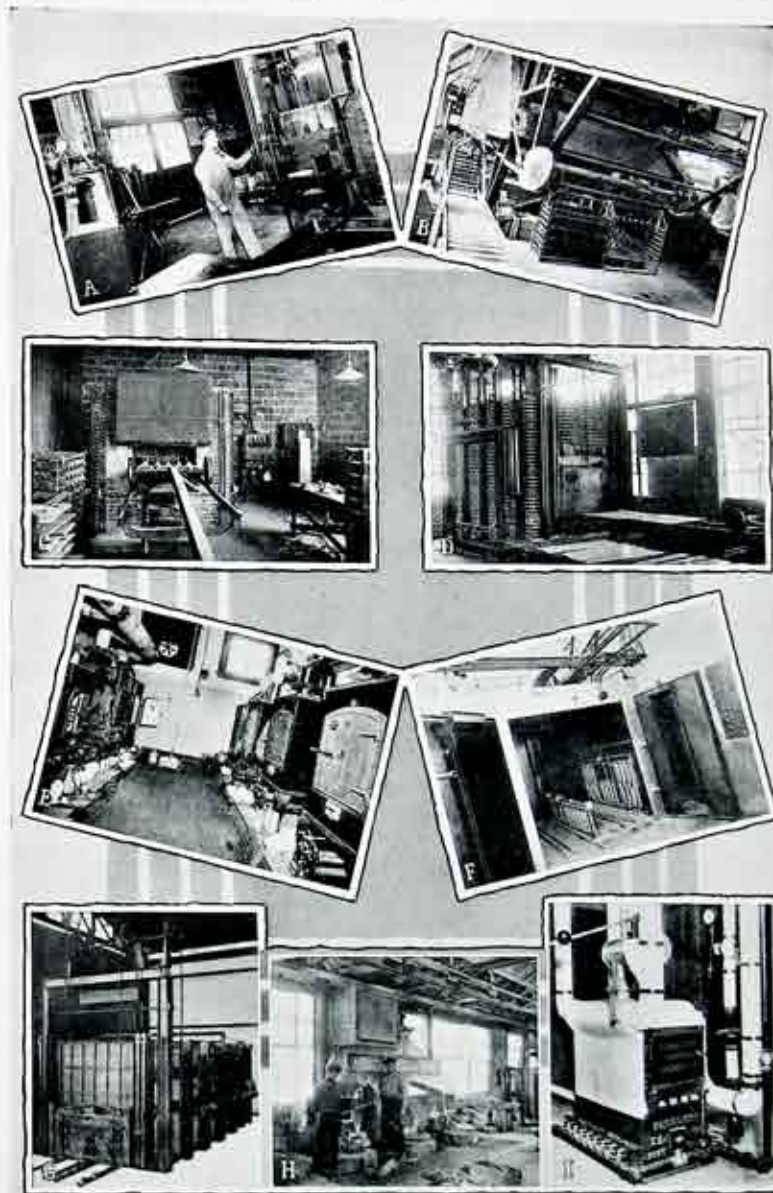
The Rochester Gas and Electric Corporation supplies over three-fourths of the total amount of power used in the territory covered by its distribution system.

The Engineers of the Company's Industrial Sales Department are always subject to call by any industry in the city to assist in the solution of problems connected with the utilization of gas, electricity, steam and coke. Likewise, the Company's Domestic Sales Department conducts an intensive sale of the highest grade gas and electric current consuming devices for household uses that the market affords, making repairs to the same at a nominal cost. Industrial and domestic appliances are subjected to rigid tests and sold at prices prevailing in the open market. This tested performance of the equipment it sells is a branch of Company service not generally understood and therefore scarcely appreciated. It is, however, an important factor in the adequate and satisfactory utilization of gas and electricity.

This same policy was carried out in connection with Bengas and coke. Before putting them on the market, the Company assured itself that they will, respectively, not only equal but also excel the staple products gasoline and coal. By this means the Company has built up an enviable patronage which has done much to popularize and put into common daily use not only its products but also the equipment and devices required in their utilization.

Being assured of the excellence of its stock in trade, the Company enters whole-heartedly into intensive sales campaigns through which it secures the business support not only of householders but also large industries and as a result an increasing demand for them assures its continued prosperity.

The Company also keeps abreast of the times in connection with a hundred-and-one possible sources for the new utilization of gas and elec-

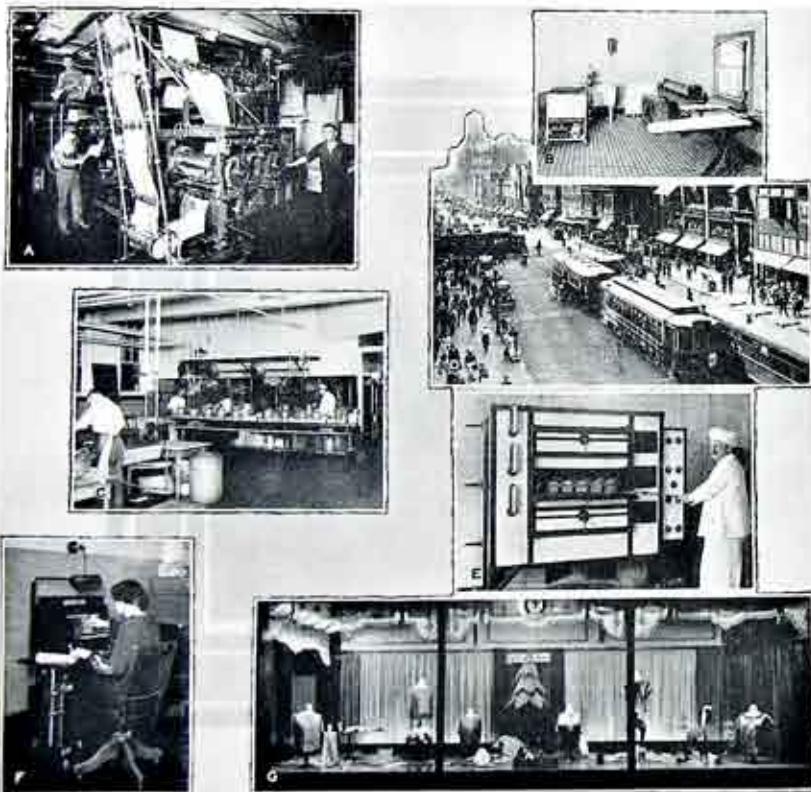


Some Specific Uses of Gas and Electricity for: A—Steel treating. B—Kodak Manufacture. C and D—Enameling Stove Parts. E—Firing China Ware. F—Manufacture of Dental Supplies. G—Forging. H—Foundry Work and I—House Heating.

tricity, many of which after being scientifically tested become agents for increased satisfaction and decreased drudgery to the public. An example of this kind is incorporated in the new gas furnace for house heating which has been developed recently, and several of which are now in use and giving much satisfaction. In the near future this house-heating load will doubtless comprise a substantial demand and its growing popularity discounts the arguments of some persons that the popularity of gas as fuel is on the wane.

A special Home Lighting service, recently inaugurated, is proving to be a decided benefit to householders, contractors and architects, this service being furnished without cost to all who desire its expert advice.

By adopting a broad service policy, therefore, the Company endeavors to decrease the burden of its thousands of customers and give them real satisfaction not only in respect to the cost of what it has to sell but also in the finer things of business intercourse which are not generally bought and sold but have to do with the ethics of satisfactory public relations.



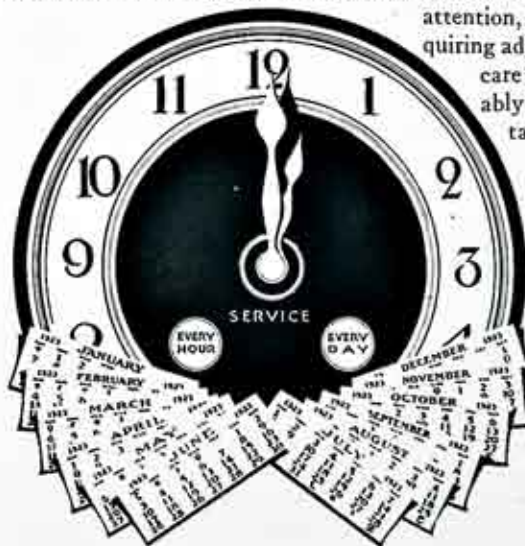
Specific Uses of Gas and Electricity, Continued: A—Printing, B—In the Home, C—In Hospitals and Hotels, D—Operation of Street and Suburban Cars, E—Baking, F—In Offices and G—In Show Window Lighting

The Company's Conception of Service

THE service of the Rochester Gas and Electric Corporation consists of a courteous and competent assistance which it renders to the communities it supplies with gas, electricity, steam, coke and Bengas by means of its human organization and its physical apparatus to improve both home and business life. Its real measure is not in dollars, but in satisfaction to the people served, and its full realization is made possible through the general and generous co-operation of all concerned.

The Company's service in substance is a help which is rendered to reduce labor, save expense, provide better products and add attractiveness in home, civic and commercial activities requiring heat, light and power. While this help is supplied by means of the commodities sold, the user however, is not primarily interested in them, but in the services which they perform for him. Thus gas is used for lighting, cooking and industrial processes; electricity for lighting, heat and power; steam and coke for heating and Bengas for motor fuel. Satisfaction therefore, consists in results secured through the constant supply of these Company products of satisfactory quality and in adequate quantity at the lowest rates possible consistent with good service, plus what is of equal importance—practical advice in their use. In these services the products are simply the best, cheapest and most satisfactory means to the end desired.

The Company further believes that in all of its transactions the customer is entitled to respectful and adequate consideration with rightful action as soon as we can give it, that all persons should always receive courteous attention, and that matters requiring adjustment should be taken care of promptly and equitably. The Company entertains a high conception of its responsibility to its customers and to Rochester as a whole, not only in connection with its own service but also by co-operating in all civic movements for the general benefit. Thus, through a consistent policy of the highest business ethics the rights of the Public, Employees and Security Holders are adequately safeguarded.



Our Service Knows No Time Limits

The Rochester Gas and Electric Organization



A CORPORATION is frequently looked upon as something intangible, without heart, soul or conscience. This is certainly not true of the Rochester Gas and Electric Corporation which has many friends throughout the city who have been won through the exercise of the basic virtues of honesty, reliability and courtesy. The Company has in its employ today as fine a

group of men and women as can be found in the Public Utility Service or elsewhere. Although no human organization is perfect, there exists in this Company an excellent "esprit de corps" and an attitude of endeavoring to render as nearly perfect service as possible. The officers are the President, two Vice-Presidents, General Manager, General Auditor and Secretary, Auditor, Treasurer and Assistant Treasurer.

Operating Superintendents have charge of the following departments respectively; Electric, including Generation and Distribution; Gas, including Manufacture and Distribution; Personell; Industrial Sales; Domestic Sales; Purchasing and Shops; Engineering; Transportation and Coke Sales. Each Operating Officer and Superintendent reports directly to the Management and carries on his departmental work through Assistant Superintendents, Engineers and Foremen. In order to co-ordinate the various functions in the most efficient manner, regular weekly meetings of the Management, superintendents and assistants are held. These are supplemented by regular monthly departmental meetings and in each all problems of policy and operation are considered and acted upon in accordance with the combined judgment of all concerned.

Many collateral departments are required to handle the various details in connection with the production, distribution, merchandising and utilization of the Company's products, and in addition to the regular commercial operations and the special manufacturing processes there are the following activities:

The Purchasing Department maintains a corps of experts who study market and railroad traffic conditions, in order that the purchase and disposal of material and machines, including thousands of articles costing several hundred thousand dollars annually, may be done to the best advantage.

The employment, placement and follow up of new employees, Safety Work in which the Company has been a pioneer, the investigation and settling of Claims, the Company Magazine, the Library and Employee Education are all centered in the Employment and Claim Department and handled by those especially trained for the work.

The Management requires, and the public through the Public Service Commission is furnished with, detail records of the Company's operation.

A constant stream of reports and data, therefore, passes from all departments to the General Auditing Department, where they are classified, tabulated and prepared into the dependable statements required by the Management and the regulatory bodies under whose jurisdiction we operate. This includes the work of the Consumers' Bookkeeping Department which keeps all records and statistics in relation to about 146,693 customers' accounts, from the receipt of the application for service through all the phases of credit checking, meter reading, billing, bill delivery, account keeping, etc., together with the settlements of service complaints. The work of this department also covers the supervision of payroll, insurance, taxes, contracts, mailing and telephone service. Modern and up-to-date machines and accounting devices are used wherever possible.

The General Construction Department takes care of all necessary departmental repair and construction work, installations of machinery, etc., which is too large to be done by the regular station maintenance men. The variety of the work performed requires expert craftsmen for machine, wood-working, structural steel and painting shops, and field forces.

All electrical construction and repair work in the various stations is supervised by the Electric Construction Department. This includes all station wiring, inspection and repair work covering a large variety of intricate apparatus and necessitating the services of skilled workmen.

The Engineering Department, in conjunction with the Management and various operating superintendents, makes studies of the Company's future growth and requirements, particularly as related to the electrical phases of the business. Special designs, layouts and research of an engineering character are also carried on. Studies and analyses of immediate operating results and future requirements are also conducted by technical experts in both the Electric and Gas Manufacturing and Distributing departments.

Complete records and maps in detail of every foot of overhead and underground wire, gas mains, and accessories, poles, transformers, street lights, etc., are kept up-to-date by the Record Drafting Department. A perpetual detailed inventory of all the Company's property is maintained by the Auditing Department.

The nature of the Company's business necessitates the use of a large fleet of automobiles, auto trucks, and motorcycles. These are carefully operated and maintained by the Transportation Department.

The sale of the Company's products—electricity, steam, gas and its by-products is supervised co-operatively by the Industrial, Domestic and Coke Sales Departments, whose effective work is demonstrated by the constant growth of the business in all its branches.

Thus with three primary interests to serve—public, stock-holders and employees—the Management has built up in Rochester a human organization which, all things considered, functions with an exceptionally high degree of efficiency.

The Company's Coal Problem

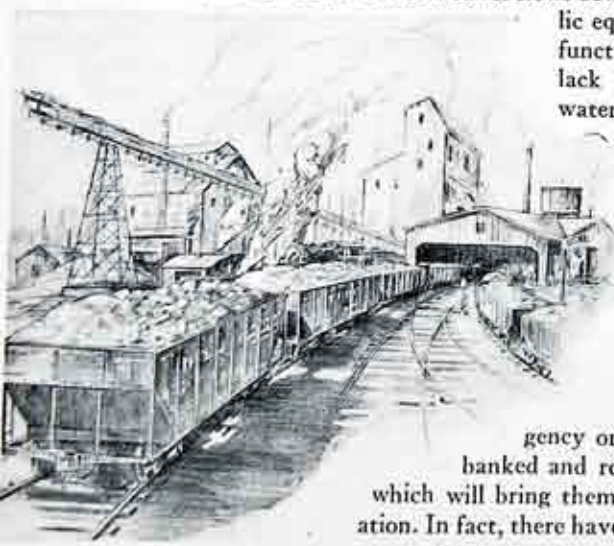
ALTHOUGH it is estimated that there is approximately 3,527,000,000,000 tons of coal of various kinds hidden away in the vast subterranean storehouse of nature, there are many barriers connected with its satisfactory mining, distribution and utilization. When no labor troubles interrupt the supply of this product, and coal flows in an uninterrupted stream from the mines into industry, the Company's coal problem is greatly reduced and localized. However, when coal strikes, bad weather, shortage of freight cars and other bothersome conditions embarrass the procuring and distribution of coal, the basic fuel of the gas and electric industry, then the Company's reserve coal pile of 40,000 tons at the Ambrose Street Yards looks and functions like a miniature coal mine and becomes the first line of defense. In addition, every resource of the Purchasing and Traffic Departments must be utilized to insure a supply of coal so that the community may be supplied with gas and electricity without interruption.

The purchasing of coal is a very important matter and receives the most careful consideration. Its quality is carefully analyzed to show the proportionate amounts of carbon, ash and sulphur it contains and its heating value per pound is also considered, for without this scrutiny the present efficient operation and low rates of the Company could not long be maintained.

Coal is the "old stand-by" in the electric department, especially during the months when the flow of the Genesee River slows down and our hydraulic

equipment ceases to function regularly for lack of the necessary water supply. In the blustery, rainy, and snow-melting months, on the contrary, Station 3, the Company's steam plant "stands by" ready to operate in any emergency or crisis, its boilers banked and ready for the word which will bring them into active operation. In fact, there have been times when

typical Collier Scene in the Pennsylvania Coal Fields, Where the Best Quality Gas Coal Originates



typical Collier Scene in the Pennsylvania Coal Fields, Where the Best Quality Gas Coal Originates



About 20 cars of Coal are Required Each Day to Supply Company Needs

this station had to carry the Company's entire electric load.

Of the 345,436 tons of coal used by the Company during the year 1923, about 205,290 tons went to the Gas Department and 140,146 tons to the Electric Department. Each day, the Company's total coal requirements approximate 945 tons, of which 550 tons are used at its West Station gas manufacturing plant. The Company's total yearly coal expense for 1923 reached the enormous figure of \$2,016,348.58.

It easily may be seen how closely the Company's traffic problems are related to those of its coal supply. During 1923 a total of 7,502 carloads of coal were received at the Company's Ambrose Street yards, an average of about 20 cars per day. The total freight charges paid by the Company for that year amounted to \$970,240, over \$900,000 of which represented charges on coal alone.

It is worthy of mention that in 1922-23 the Utilities Fuel Commission of which President R. M. Searle was an active member, performed a real service to the country as a whole. This Commission aided effectively in the apportioning as well as the procuring and distributing of a waning coal supply. Their efforts did much to conserve this valuable product and prevent actual stagnation in many industries requiring it for the production of essential public necessities, such as gas, electricity, transportation, etc.



Over 40,000 Tons of Coal Forms the Company's Reserve Pile at the Ambrose Street Yards

How The Company Maintains Its Low Rates For Gas and Electricity

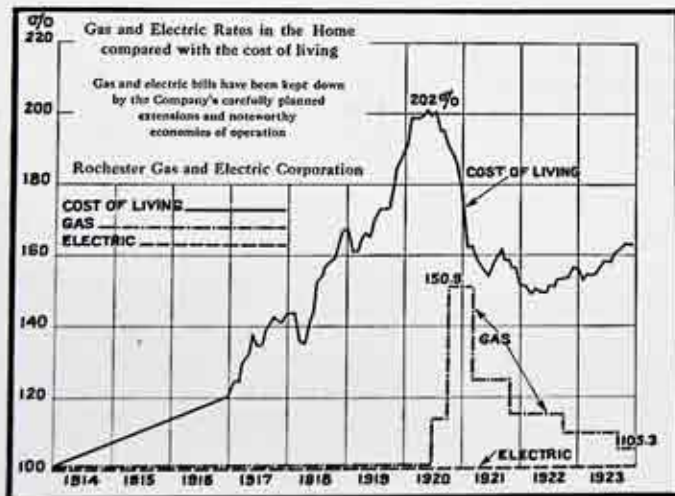
HOW is it possible for the Company to sell gas and electricity at the present reasonable rates in view of the general increase in material and labor costs? The residential gas rate is only five percent above the pre-war period and the electric rate is the same. Coal for gas making has increased in price 104.6%, steam coal 106.3%, gas oil 54.4%, labor more than 100%, taxes are \$684,000.00 more than in 1914, money—the cost of new capital—has increased also, and all other materials have increased from 50 to 200 percent.

The solution is found largely in the two following reasons:

First, the Company has built new manufacturing plants, both gas and electric, of the most modern and efficient type—plants which through their increased efficiency have in large measure offset the increased price of new materials; it has purchased new apparatus, new boilers, new electric turbines, new labor-saving tools and machines and has adopted new methods all of which are much more efficient than those which were replaced.

The new coal gas plant improved the process of gas manufacture so that a much larger percentage of coal gas was made and the success of this plant has been made possible by the sale locally of the surplus coke produced for household use.

The Coke Sales Department, which has been largely responsible for establishing the use of coke as a fuel in Rochester upon a sound basis, has saved the Company's coke customers thousands of dollars and the Company's gas consumers a much larger amount, because the credit from the



sale of the surplus coke has kept down the cost of gas making. Without this credit the manufacture of coal gas would not be practical.

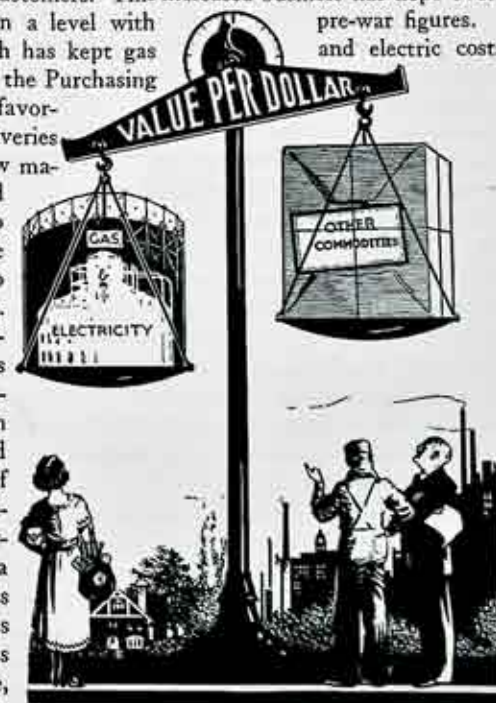
The new hydraulic station has resulted in increased hydraulic generation and a much more efficient use of the water of the Genesee River. New turbines and new boilers have produced larger coal savings. New substations have reduced line losses and all of these improvements have helped to keep down electric rates.

This development of the Company's plants and property, by keeping it continually abreast of the progress of the art, often leading in the very front rank, has required foresight, courage and millions of dollars of money. Too much credit cannot be given to our President and Board of Directors, whose vision and broad gauged courageous policy means so much to this City and this Company.

The second reason why rates have not increased with rising costs of materials and labor is found in the large increase in sales. Electric sales have increased 103.5% since 1914, gas sales, 116.4%. In 1914 this Company had 66,736 gas and 16,101 electric customers; in January, 1923, 87,121 gas and 59,455 electric customers. This increased business has kept overhead and labor costs on a level with pre-war figures.

Another factor which has kept gas down is the fine work of the Purchasing Department in making favorable purchases and deliveries of coal, oil and other raw materials during a period when it was necessary to purchase largely in the open market in order to keep the plants operating.

The splendid co-operation of all departments of this Company is another important factor in keeping costs down and this working together of different groups has effected economies too numerous to mention. It is a fact that through all this turmoil of rising prices and disturbed conditions the quality of the service, the Company's first consideration, has not been allowed to deteriorate.



The Dollar You Spend for Gas and Electric Service Buys More Value than any other dollar you spend

The Company's Taxes

TAXATION is a subject that should be of interest to each and every citizen of this country. In fact, it might be put much stronger than that because it can be said truthfully that taxation effects the relative daily happiness of every man, woman or child, no matter what his station in life may be. Each one of the millions of persons who comprise the general public helps in his small way to carry the total tax burden of the municipal, state and federal governments. An individual's financial responsibility in the tax question does not depend upon the mere owning of real property, for only about one-eighteenth of the entire population of this country pay the direct taxes contingent upon such ownership. It is easy to understand, however, how he pays his share when he buys any one of the hundred and one articles he needs regularly in his home or business.

Corporations, like individuals, also pay their just share of taxes to the various municipal, state and federal governments. Such taxes of course represent a substantial item in their cost of operation which is passed on to the ultimate consumer of their products. When a customer of the Company pays his gas or electric bill he is helping to pay the country's tax burden, and small though this item may appear as he casually reflects upon it, it is no doubt larger than he has fully realized. In order to indicate the individual customer's proportionate share of Company taxes we show herewith some of the totals in Company tax figures covering the year 1923:

In 1923, this Company paid out in combined taxes to the city, state and federal governments a total of \$944,890.15, or almost one million dollars. Of this amount \$330,677.46 applies to gas production, \$598,593.11 to the production of electricity, and \$15,619.58 to that of commercial steam. Out of its total tax item last year, over \$498,742.00 was paid to the City of Rochester in local taxes on property, etc.

In 1923, the Company sold 3,408,967,100 cubic feet of gas, and 199,985,438 kilowatt hours of electricity. Therefore, on each thousand cubic feet of gas he purchased last year each Company customer paid 9.7 cents to the Government. In like manner he paid three-tenths of a cent on each K. W. H. of electricity he purchased. It may surprise the man who believes he pays no taxes to know that approximately 10% of his gas bill alone represents his assessment for taxation. Apply this reasoning to the many other items of living expense and one can see how vitally concerned individuals as well as Corporations should be in the tax problem. In round numbers, \$6.44 is the amount paid, per customer, last year for taxes assessed the Company in connection with the production of gas and electricity. Notwithstanding this fact, the Company's rates for gas and electricity are among the lowest in the United States, which is just cause for satisfaction to both it and the public it serves.

New Office Buildings

THE continuous rapid growth of this Company has made necessary the construction of numerous new office buildings and stations as well as the enlargement and expansion of many of its older stations and plants. Among the recent office buildings constructed may be mentioned those at East Rochester and Canandaigua.

At East Rochester the opening of the new office was made quite a gala day and many persons came for miles around and became guests of the Company at an interesting community gathering. Refreshments were served and an effort was made by representatives of the Company to acquaint its patrons with some of the interesting facts and figures in connection with its continuous growth. This was done principally by means of colored charts and transparencies which appeared to be of genuine interest to all.

The people of Canandaigua also seem greatly pleased with the Company's new office building in that city. An indication of the friendly spirit of confidence in the Company evident in both of these towns may be surmised from the fact that many persons in each place have availed themselves of the opportunity to purchase Company stock.

Needed expansion has been permitted also by recent changes in the Andrews Street Offices. The Line Dispatcher's office and the Right-of-Way Department have been transferred to the recently purchased Stewart Building which now connects with the enlarged Electric Distribution Offices immediately adjacent to it. The new telephone switchboard is also located at Andrews Street, an arrangement which makes for more efficient service.

The Record Drafting Department, formerly located at the Main Office, also occupies space in the reconstructed Andrews Street Offices, being located on the main floor where it is afforded space large enough to permit of the consistent growth which the Company's rapidly increasing business necessitates in all Departments. The reconstructed Andrews Street Offices make possible a more efficient intercommunication of operating Departments than was possible under the former arrangement whereby they were housed either in different buildings or in widely separated parts of the same building. The purchase of the Stewart Building was apparently a big step toward greater efficiency for all the Departments concerned.

On the Main Floor of the Stewart Building, the Domestic and Industrial Sales Departments are now operating a sales room which is somewhat of an innovation. Here, employees of the Company skilled in the operation of gas and electric current consuming devices and equipment will demonstrate them to prospective buyers, and show them in actual operation. This new Department will make possible, it is hoped, a keener appreciation of the utility and importance of gas and electricity both in the house and in industry and will result in increased as well as more satisfactory sales.

A Look into the Future

AMONG the many important activities of the Company's Engineering Department is a perennial study of the continual growth of "load," or demand for Company products. Coordinate with this is the periodic planning of extensions of all facilities for meeting the demands caused by new business. The city of Rochester is growing both in geographic extent and in density of population. The territory which the Company serves also grows as it reaches out farther into the surrounding towns and villages with the distribution system for both gas and electricity.

Still another factor in the growth of this business is the gradual discovery on the part of each user of gas and electricity that new ways are constantly being found in which both convenience and economy can be effected by their greater use.

In the decade from 1914 to 1923 inclusive, an increase of 60% in the population of the territory served was accompanied by an increase of 100% in the electric production and 114% in the gas production. It needs no great ability as a prophet to foresee that the per capita consumption of both gas and electricity, together with their by-products, coke and steam heating, will probably increase faster in the future than in the past. This fact immediately presents the problem of selecting from a number of possibilities the one way by which the Company can meet the demands for increased service at the lowest combined cost of necessary capital and operating maintenance.

In the Gas Department we may choose between coal gas retorts and water gas generators. There is a considerable difference between the relative operating expenses and capital carrying charges for these and the combination which results in a minimum total cost is determined in large part by the uniformity of sendout from day to day; partly by broad changes to be expected in the prices of coal and oil; and partly by the local market for coke for house heating purposes. Coke is the principal by-product of coal gas manufacture and the principal raw material for water gas manufacture. A sudden expansion or contraction in the market for domestic coke, if of relatively small magnitude, can easily be taken care of by a change in the proportion of water gas to coal gas which we send out. If a change in the coke market reaches serious proportions its effect is felt in the choice of new equipment for gas production.

The influence of the coke market on plans for extension of gas works is, however, not so great as that of seasonal variations in the demand. A coal gas plant requires a much greater investment than a water gas plant of equal capacity but entails less operating expense per thousand cubic feet of gas manufactured. If a considerable portion of our daily demand were required for only a few weeks in the year it would be more economical to build a water gas plant on which the fixed charges for interest, taxes,

etc., would be as low as possible than to invest the large amount necessary in a coal gas plant. In the latter the fixed charges alone might easily exceed the total fixed and operating charges of a water gas plant if the demand is of such a nature that it can be satisfied with only a few days' operation per year. This fact has all the greater weight because of the greater facility with which a water gas plant may be quickly put into operation from a cold start while a coal gas plant suffers very serious deterioration if any of the retorts are operated intermittently. This is of considerable interest to us just now because of the wide interest being taken in the convenience of residence heating by gas. This is rapidly increasing at present and it may be but a few years before larger plant capacity may be required to serve this business.

Similarly in the Electric Department we have three major sources of power—in our steam stations, our hydro-electric stations on the Genesee River and in our connection with the Niagara, Lockport and Ontario Power Company which supplies us with an amount of energy generated at Niagara Falls comprising about one sixth of our electric requirements. The selection of our next large electric plant extension will depend upon our best judgment of the probable trend of a number of important factors during the next decade. Among the most important of these are the following:

- (1) The cost of coal which, at present, comprises nearly three quarters of the total production expense in our steam-electric generating stations.
- (2) The great possibilities of fuel economy in electric generation by the use of the recently developed mercury turbine and the hoped-for internal combustion turbine.
- (3) The cost of capital where investment requirements are much larger for hydraulic development than for steam development.
- (4) Cost of materials and labor required in the construction and operation of various proposed plants.
- (5) The market for exhaust steam for industrial heating purposes.
- (6) The possibilities of the purchase of reasonable energy when made available by St. Lawrence river development or further development at Niagara.

In order to give these factors their proper weight it has been necessary to make a tentative design of four proposed hydraulic plants on the Genesee River and a proposed steam station, all of which will probably be built and in operation within the next twenty years. Our present study is to determine which one should be the first to be undertaken.

If it should be decided that our next large development should be a steam station it will necessarily be located where an abundance of water may be obtained for condensation purposes. We have already reached our limit of capacity at Station 3 which requires, when carrying full load,

a little more than the minimum flow of the Genesee River. Naturally the demand on this station is the greatest when the river flow is the lowest.

The principal alternative to this is the proposed regulation of the Genesee River flow by means of a storage reservoir above the Village of Mt. Morris. This would make possible the detention of enough flood water in the springtime to nearly quadruple the low flow during a protracted period of drought which we experience nearly every autumn. The choice between these two alternatives hinges largely on the relative investments and operating expenses required. The river regulation would require a capital outlay of between eight and nine million dollars on which the carrying charges for interest, taxes, amortization, insurance, and the operating expenses for labor, supplies and repairs would amount to approximately one million dollars per year. The steam station could be built for about two million dollars initially with provisions for additions later as required by the growth of load. The operating expense, however, would include nearly a half million dollars' worth of coal every year besides a much greater expense for labor and repairs than would be the case in the more simple hydraulic development.

Another possibility is the installation of an additional generating unit of from 15,000 to 20,000 HP capacity in our hydraulic Station No. 5, which would be able to generate enough energy during the spring months when the river is at flood stage each year to pay its carrying charges but would add very little to our station capacity at the season of the year when it is most needed until regulation of the river flow becomes effective by means of the proposed storage reservoir.

The wide variation between our peak load during certain hours of the day and our low load between midnight and 8:00 A.M. makes it possible to supply a greater demand than the average river flow could supply by



An Aeroplane View of a Section of the Genesee Valley Where a Dam May possibly be Constructed

borrowing from a pond during the daytime and restoring the pondage from unused river flow at night. This principle is now employed so effectively at our Station No. 5 that it will probably be found economical within the next year or two to enlarge the pond. This may be done by dredging the accumulation of mud and silt from the banks of the pond and removing the waste to some space less valuable than that which might be occupied by a daily change of pond.

One of the earliest hydraulic developments ever made on the Genesee River has been in operation for over a century, very near the center of the city of Rochester. This site has possibilities of development along modern lines which would enable us to get two and a half times the energy that is now being produced in the fifteen plants which are operating on the various power races supplied from the Court Street dam and the Central Avenue dam. This would require an investment of several million dollars and would add little to our low water generating capacity until the proposed river regulation at Mt. Morris became effective. The time is not far distant when our load will have reached the point where the extent to which we could avail ourselves of flood flow in the springtime at such a plant would enable us to pay the cost of development out of coal savings without credit for the increased capacity of our system.

Various ways have been suggested for accomplishing this. One is by means of a tunnel which would carry the river water from the Barge Canal Harbor above Court Street to some point below the upper falls near Central Avenue where turbines and generators could be installed in a manner similar to that employed at our present Station No. 5.

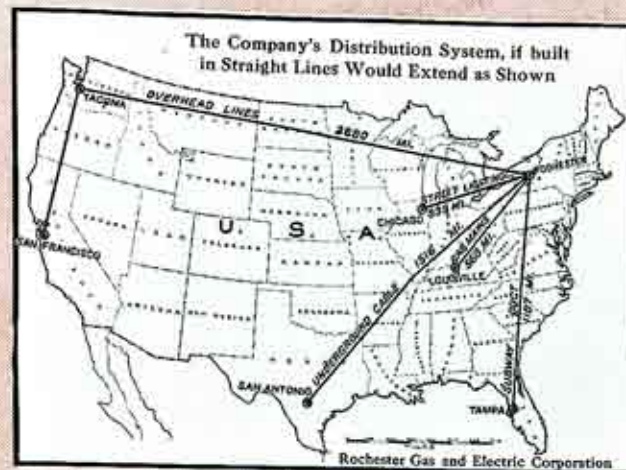
Another possible way of accomplishing nearly the same result would be by building a new dam of a movable type at Central Avenue. This would create a pool extending from the dam to the present structure which now serves to control the Canal Harbor level. Both of these plans present many technical problems that will require some time for their solution.

These are but a few of the many points which have to be considered every time we make an addition to our generating equipment. Our problems would be fewer and simpler if we did not have such a wealth of resources upon which to draw. It is fortunate for our consumers who have to pay the rates that a detailed study which requires the expenditure of months of time and thousands of dollars of money often saves many times its cost by the avoidance of mistakes which we would probably make if we plunged ahead on whatever line of development first suggested itself, or seemed best by superficial analysis. It is pertinent to reiterate that the problems of gas manufacture and electric generation are economic problems of the first magnitude. On their correct solution hinges not only the question of adequate service, but financial stability which in turn results in reasonable rates and continued growth.

The Rochester Gas and Electric Corporation

As of Dec. 31, 1923

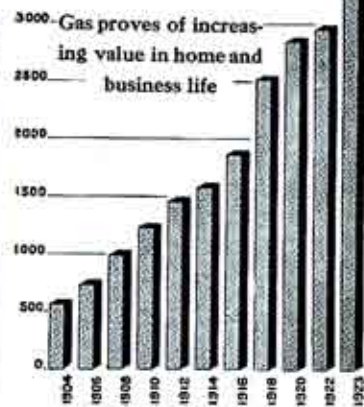
Gross Income	\$9,181,060.00
Number of Employees	1814
Consumers—Gas	87,121
Electric	59,455
Steam	117
Total	146,693
Capitalization	\$35,390,287.20
Square miles of territory served	400
Population of territory served	384,000
Wages paid	\$2,859,313.90
Taxes paid	\$944,890.15
Horsepower capacity in hydraulic plants	56,950
Horsepower capacity in steam plants	82,675
Total horsepower developed	139,625
Kilowatt hours of electricity sold	199,985,438
Coal gas capacity per day	6,170,000 cu. ft.
Carburetted blue gas capacity per day	12,716,000 cu. ft.
Cubic feet of gas sold	3,408,967,100 cu. ft.
Number of street lamps	12,374
Miles of overhead wire	2,880
Miles of underground cable	1,516
Miles of subway duct	1,107
Miles of gas mains	560
Miles of steam mains	31,088 feet
Tons of steam coal used	140,604
Tons of gas coal used	204,832
Gallons of gas oil used	3,834,872
Tons of coke made	144,793
E. B. A. membership	1,313



From 1904 to 1923 the population of Rochester practically doubled. In the same period the Company's sales of gas and electricity increased about six fold.



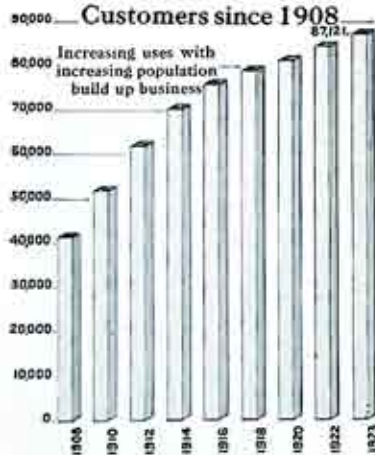
Gas Sales in Millions of Cubic Feet since 1904



Rochester Gas and Electric Corporation

Year	Cubic Feet
1908	984,307,100
1909	1,074,420,300
1910	1,221,421,400
1911	1,299,228,600
1912	1,448,370,100
1913	1,523,673,800
1914	1,578,890,600
1915	1,588,318,000
1916	1,865,289,900
1917	2,158,695,500
1918	2,518,879,700
1919	2,549,583,900
1920	2,847,931,100
1921	2,729,495,000
1922	2,966,205,200
1923	3,408,967,100

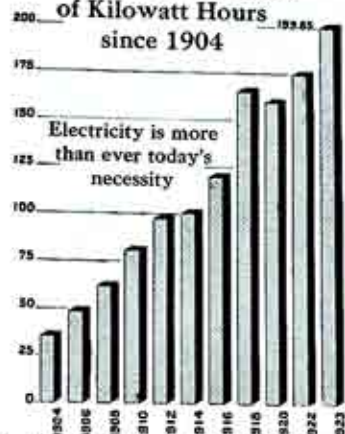
Growth in Number of Gas Customers since 1908



Rochester Gas and Electric Corporation

Year	Gas Customers
1908	41379
1909	45984
1910	51757
1911	56848
1912	61667
1913	66736
1914	70092
1915	71448
1916	75784
1917	78657
1918	79037
1919	79816
1920	81241
1921	81585
1922	84460
1923	86875

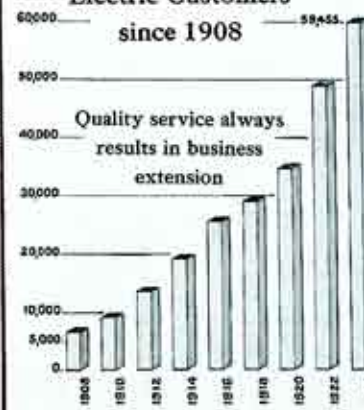
Electric Sales in Millions of Kilowatt Hours since 1904



Rochester Gas and Electric Corporation

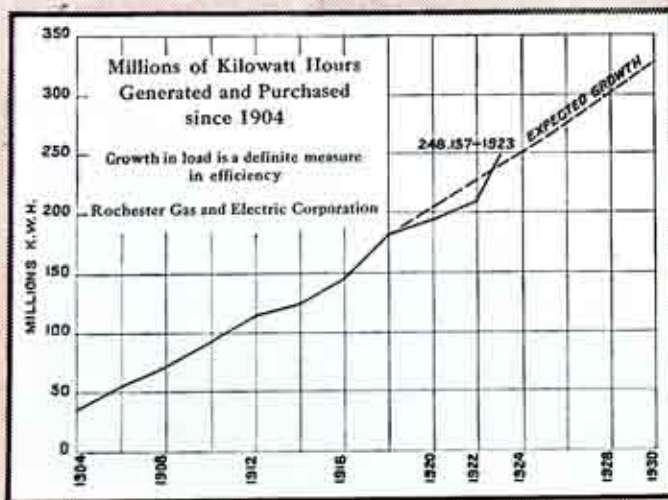
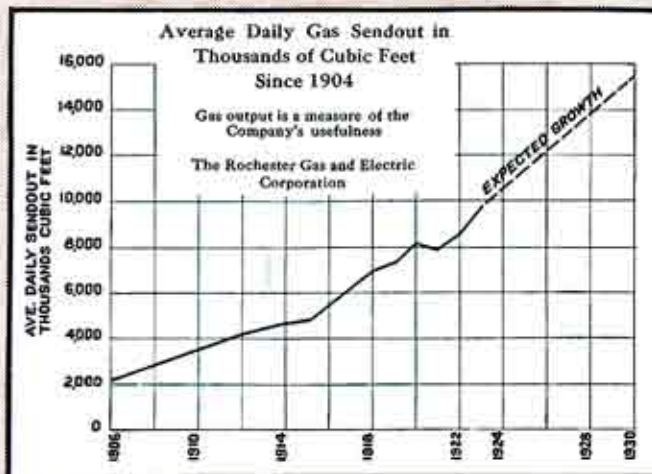
Year	KWH
1908	61,718,007
1909	69,748,139
1910	80,588,796
1911	86,085,838
1912	97,413,027
1913	103,623,894
1914	100,670,217
1915	100,416,760
1916	120,216,608
1917	127,038,918
1918	165,196,164
1919	142,350,696
1920	159,836,103
1921	154,028,182
1922	174,915,638
1923	199,853,800

Growth in Number of Electric Customers since 1908

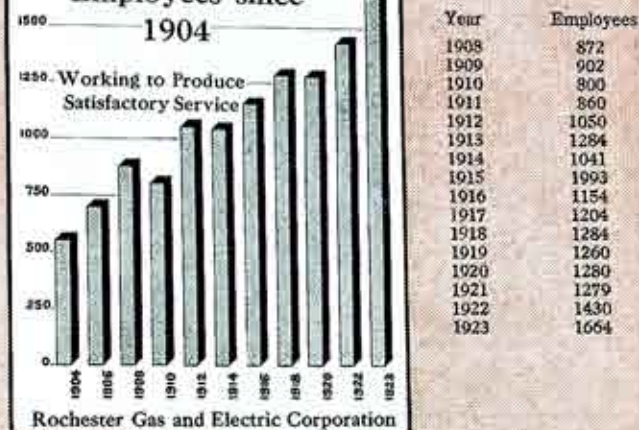


Rochester Gas and Electric Corporation

Year	Electric Customers
1908	6437
1909	7317
1910	8972
1911	10789
1912	13340
1913	16101
1914	19081
1915	22316
1916	25335
1917	27774
1918	28907
1919	30978
1920	34742
1921	46391
1922	48911
1923	58354



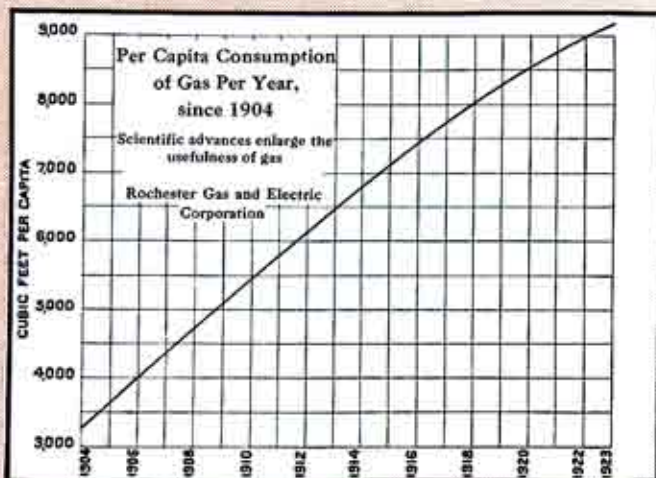
Growth in Number of Employees since 1904



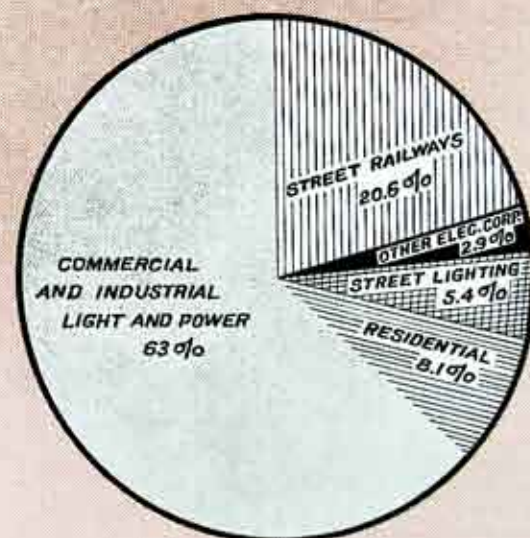
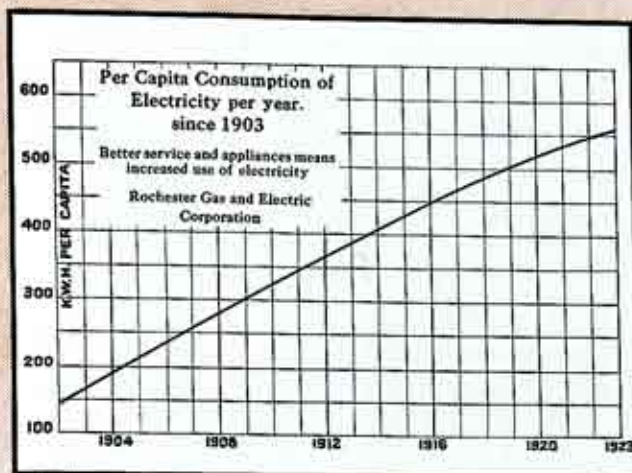
Population Growth of Rochester

Our Company grows with and in advance of it

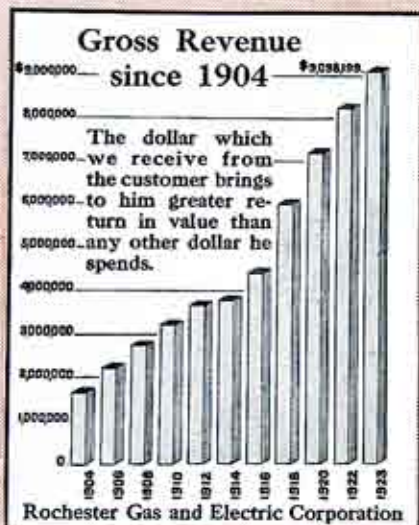




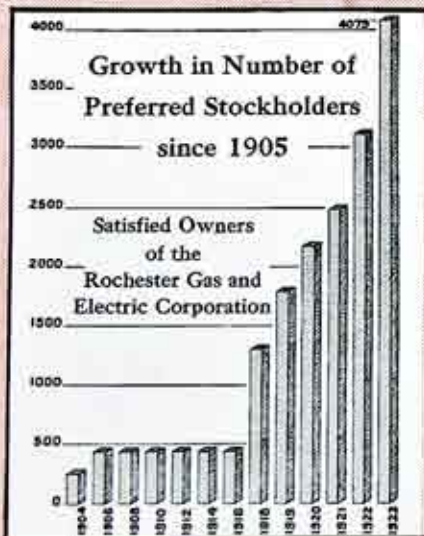
Division of Gas Sales During 1923



Division of Electric Sales During 1923



Year	Gross Income
1908	\$2,696,252
1909	2,878,813
1910	3,187,252
1911	3,375,572
1912	3,633,611
1913	3,638,230
1914	3,758,767
1915	3,786,003
1916	4,349,572
1917	5,036,208
1918	5,983,903
1919	6,027,922
1920	7,175,458
1921	7,489,938
1922	8,212,727
1923	9,098,200



Money used for extensions must come from the sale of Company Securities. This now averages \$1,500,000 annually.

The Financial Report

THIS YEAR (1923) was one of the most successful in the history of the Company and was comparatively free from disturbing conditions prevalent since the war. Business conditions generally were more nearly normal and earnings and operating expenses were not materially affected by conditions over which we had little or no control.

Our supplies of coal and gas oil were not effected by labor troubles and contracts for these commodities were made at favorable prices as compared with the preceding year. The decreased cost of coal and oil enabled the Company to reduce the price of gas from \$1.05 to \$1.00 per thousand cubic feet, a rather pleasanter experience than in former years when increased costs made increases in the rate necessary.

The statement of earnings and the balance sheet for the years 1922 and 1923 which follow, are condensed, but these statements and the comments in reference to them will give a comprehensive picture of the Company's operations and will enable the reader to form some idea of the magnitude of the Company and the stability of its securities.

EARNINGS STATEMENT

	YEAR 1923	YEAR 1922	Increase
Gross Income	9,181,000.60	8,212,727.17	968,273.43
Expenses	5,345,851.82	4,932,963.30	412,888.52
Taxes	977,122.48	866,293.76	110,828.72
Net Income	2,858,026.30	2,413,470.11	444,556.19
Interest Charges	1,162,772.60	1,156,795.50	5,977.10
Balance for Dividends and Surplus	1,695,253.70	1,256,674.61	438,579.09

BALANCE SHEET

ASSETS:	Dec. 31, 1923	Dec. 31, 1922	Increase
Plant and Equipment	35,390,287.20	33,365,632.49	2,024,645.71
Inventories	973,399.75	666,145.24	307,254.51
Cash	425,118.88	339,710.11	85,408.77
Accounts Receivable	1,166,845.62	1,040,436.93	126,408.69
Special Deposits	4,398,794.62	1,557,120.70	2,841,673.92
Investments	47,781.00	43,341.00	4,440.00
Work-in-Progress and Suspense	4,351,597.34	2,088,366.60	2,263,230.74
	46,753,824.41	39,100,753.07	7,653,071.34
LIABILITIES:			
Capital Stock—Common	7,248,200.00	7,248,200.00	
5% Preferred	2,997,800.00	2,997,800.00	
7% Preferred, Series B	3,932,600.00	3,600,600.00	332,000.00
6% Preferred, Series C	325,700.00		325,700.00
Unissued 6% and 7% Preferred	741,700.00	399,400.00	342,300.00
Funded Debt	23,499,500.00	19,499,500.00	4,000,000.00
Bills Payable	1,340,000.00		1,340,000.00
Accounts Payable	879,716.29	506,821.67	372,894.62
Consumers Deposits	259,931.41	196,706.96	63,224.45
Taxes and Interest Accrued	919,091.95	822,769.41	96,322.54
Reserves	2,746,519.43	2,261,759.20	484,760.23
Surplus	1,863,065.33	1,567,195.83	295,869.50
	46,753,824.41	39,100,753.07	7,653,071.34

The gross income for the year increased \$968,273.43 or 8.5% over the previous year. Normally we look for about a 10% increase, which corresponds to the normal growth of the City. The Electric Department is responsible for \$672,306.40 of the increase or 15.86% over the previous year. The Gas Department shows an increase of \$217,090.78 or 5.06% over the previous year. The steam, and gas and electric appliance sales increased \$100,047.82 and non-operating revenue decreased \$21,171.57.

A word of explanation is due the Gas Department on the increase of 5.06% as compared with 15.86% in the Electric Department: The cubic feet sales of gas increased 10.23% but the revenue was effected by the decrease in rate. In 1922 heating with gas, because of the shortage of anthracite coal, increased sales above the average, so that 1923 is compared with an exceptionally large year. An average for the two years indicates normal increases.

Operating expenses require no special comment, except that the entire increase in expenses occurred in the electric department. The increased output naturally increased expenses. The hydraulic stations were handicapped by lack of water (1923 was an exceptionally dry year) and the increased demand was taken care of by steam stations and by purchased current from Niagara. The largest item of increased cost was for coal. In 1923, 140,604 tons costing \$738,155.77 as compared with 109,800 tons costing \$613,385.46 accounts for \$120,011.46 of the increased expenses. In the gas department 204,832 tons of coal were used in the manufacture of gas at a cost of \$1,278,192.81. The total tonnage in both gas and electric departments was 345,436. At an average of 50 tons to a car this tonnage required 6,908 cars or 23 cars of coal per day to keep the plants supplied.

In connection with operating expenses, some payroll statistics are of interest. One thousand eight hundred and fourteen individuals were on the company payroll at the close of the year. During the year 4,004,575 hours were put in by those employed directly by the company and the total compensation paid amounted to \$2,859,313.90. In addition to this a large amount of the Company construction and repair work was done by contract.

Taxes for the year amounted to \$994,890.15, an increase of \$118,384.88 over the previous year. During the year \$84,123.62 was paid to the State of New York, \$214,844.99 to the Federal Government and \$645,921.00 to the City of Rochester and County of Monroe for real estate and franchise taxes. The taxes paid average \$6.44 per consumer per year and a fraction over 10% of all the money paid to the Company for its service, is in turn paid to Federal, State, County and City for taxes. To this extent the Company acts as a tax collector, a fact to be kept in mind when paying your gas and electric bills.

The balance of \$2,858,026.30 after paying operating expenses and taxes is a return of 7.01% on the money invested in the business. This investment (which amounts to \$40,763,394.00) is divided as follows:

Steam Stations.....	\$3,990,740.00	
Hydraulic Stations.....	3,656,430.00	
Water Rights.....	4,839,529.00	
Sub-Stations and Other Bldgs.....	1,618,905.00	
Transmission System.....	365,934.00	
Overhead Distribution System.....	1,978,251.00	
Underground Distribution System.....	2,831,064.00	
Municipal Street Lighting.....	828,337.00	
Transformers, Meters and Other Electric Capital.....	4,833,177.00	
TOTAL ELECTRIC.....		25,212,367.00
Coal Gas Plants.....	2,482,927.00	
Water Gas Plants.....	1,590,859.00	
No. 10 Holder Plant.....	439,033.00	
Gas Mains.....	2,489,931.00	
Services, Meters and Other Gas Capital.....	2,925,709.00	
TOTAL GAS.....		9,928,459.00
Commercial Steam Dept.....		249,461.00
TOTAL FIXED CAPITAL.....		35,390,287.00
CURRENT ASSETS LESS CURRENT LIABILITIES.....		3,331,815.00
WORK-IN-PROGRESS.....		2,041,292.00
TOTAL INVESTMENT.....		\$40,763,394.00

There is much that could be said about this invested capital, but a few very pertinent facts will have to suffice for this article.

It represents the money that has been invested in the company by those who have purchased the stocks and bonds of the company and out of this 7.01% return, interests and dividends must be paid to the holders of our securities. The invested capital schedule is taken from the books of the company and represents the book or historical cost of the property. An appraisal at cost today would be considerably in excess of this amount. It is this invested capital on which the company is entitled to earn a fair return and the highest courts in the country have ruled time and again that 8% is a fair return. This sum represents an investment of \$4.50 for each \$1.00 of gross revenue the Company receives. This means that for every \$1.00 of income we add to our business we must invest \$4.50 to serve the customer that pays it.

A return of 7.01% after paying operating expenses and taxes is not intended to and does not provide money for new equipment, line extensions, etc. The money required for these purposes from year to year must be procured through the sale of the stocks and bonds of the company.

To return to the subject of this paper—"The Financial Report"—From the net income, the interest on the Funded Debt, and on borrowed money, must be paid before dividends can be declared and paid. There was no change (except for some temporary loans) in the interest bearing obligations of the Company until December 27th, when \$4,000,000, Series C 5½% bonds were sold, and therefore very little change in the interest payments over 1922. The total amount required for this purpose and for the annual charge for amortization of discount on bonds sold below par was \$1,162,722.60. The total amount of Funded Debt, on which interest was paid, was \$19,499,500.00. Some bonds bear interest at 4½%, some at 5%, some at 7%. The average cost of money for the year was approximately 6%.

After paying interest the amount available for dividends was \$1,695,253.70. The Preferred stockholders have first preference and it required \$417,191.40 to pay the dividends they were entitled to receive. The amount available for dividends was sufficient to have paid the preferred dividends four times and indicates the margin of safety for our preferred stock. After Preferred stock dividends are paid the balance is available for the common stockholders and for surplus.

The Company has an obligation to those who have invested in its stocks and bonds in addition to the payment of interest and dividends and that is to safeguard their principal or investment. As the apparatus or equipment purchased with the money invested with us becomes obsolete, it must be replaced with new and more efficient equipment. Reserves are therefore created for this purpose and each year a certain amount is charged to operating expenses and set aside for this purpose. In 1923 the accruals for Replacement Reserve amounted to \$806,634.34.

Financing Additions—We have described in detail in other articles the procedure that must be followed in issuing and selling securities and will therefore not go into the subject thoroughly at this time.

Every \$1 of additional gross revenue entails on the average an addition to plant investment of approximately \$4.50 which must be paid for with money received from the sale of stock and bonds and not from the earnings of the Company.

To meet the demands on the Company for service required an expenditure of \$3,673,772.19 for construction purposes in 1923. The budget for 1924 indicates an expenditure of \$3,000,000. To finance 1923 and 1924 expenditures the Company was authorized by the Public Service Commission in February 1923 to issue and sell at par \$1,000,000 of 6% Preferred stock and in December 1923 to issue and sell \$4,000,000 Series C 5½% General Mortgage Bonds. The entire issue of bonds was sold on December 27th, 1923 to J. P. Morgan & Co., and the proceeds deposited with the Bankers Trust Company, Trustee of the mortgage, subject to further orders of the Public Service Commission. To February 15th, 1924 inclusive, \$665,800.00 of the authorized Preferred stock has been sold to customers and employees of the Company and the prospects are that the balance authorized will be sold in the near future. The stock and bonds authorized are not sufficient to pay for all the construction that will be done in the two years. The amount authorized will however provide sufficient funds to enable the Company to proceed with its program and the additional amounts required will be supplied by further issues at a later date.

In describing our operations and financing we have simply told the story of what happened during the year in as plain a way as possible, touching only the high spots and without going into lengthy descriptions.

Our offices are always open to anyone interested in the activities of the Company and we invite inquiries either by letter or by personal calls on any question in regard to the Company's affairs.