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The Development of Gas and Electricity in Rochester

by Ruth Rosenberg-Naparsteck





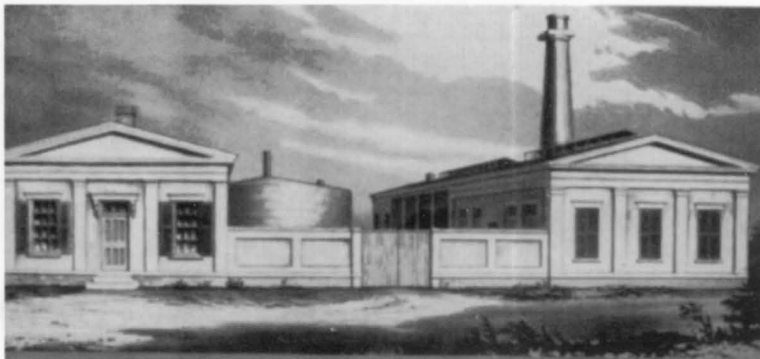
*The first gas lights were lit on Rochester streets in 1848.
(Rochester Public Library)*

Cover: the Beebee Station, built on the Genesee River near the Upper Falls in 1959, increased RG&E's output to 496,000 kilowatts. The company then had 200,000 customers.(Rochester Public Library)

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Rochester's first gas plant, The Rochester Gas Light Company, was organized in 1848.(RG&E)

A Century and A Half of Community Energy

When the first gas street lamp was lit in America in Baltimore in 1816, Rochester was settled only five years and, though it was growing rapidly, it was still a year from becoming a village. The infrastructure of the settlement was in the early stages. There were roads to be laid out, public water to be provided, councils to form, schools and hospitals to be organized, and many businesses and homes to be built. The rapid growth of the area made it necessary to form the new county of Monroe to serve the area more efficiently.

Only three decades after settlement, when natural gas became available in western New York, Rochester was quick to organize a company of local investors to found the Rochester Gas Light Company on May 19, 1848. Some of the founders were pioneers or descendants of pioneer families like Nathaniel Rochester's son and Levi Ward, Joseph Field, Edward Whalin, Isaac Hills, Thomas Montgomery, William Perkins, Edmund Lyon and Louis Chapin. Their intent in organizing the company was as much to improve the city amenities as to invest in a solid business. The first gas plant was constructed on Mumford Street (now Andrews Street) along the banks of the Genesee River. Spurred by the progress of its rival, Buffalo, Rochester contracted with the new gas company to install about fifty or sixty gas lamps at important intersections. Buffalo (West Main Street), North Fitzhugh, Front, Exchange, Mumford (Andrews), St. Paul, Franklin and North Streets were the first public areas lit.



A large crowd gathered to watch “the illumination” of C.A. Jones’ home on December 13, 1848. Across the street from his home burned one of four new gas lamps in the city.(RG&E)

C. A. Jones, whose contracting business laid the gas mains, invited the public to witness the celebratory “turning on of the gas lights” at his home on Franklin Street, on the present site of Sibley Tower. One account states that amidst a cheering crowd Jones’ 11-year-old daughter, Althea Arabella, lit an open gas jet in the window of a cupola on the two-story house and it burned bright and clear.

A contradictory account states that the jet would not light in the Jones home so Nehemiah Osburn, Jones’ partner, invited the crowd to his nearby home at East and Main Streets to witness the lighting of his gas lights. The contrast to the whale oil lamps was impressive to onlookers because the gas burned much brighter and clearer while the oil burned as yellow as an orange. Rags were found stuffed in the gas pipes at Jones’ house. Someone did not want the demonstration to go well.

The same evening that Jones demonstrated the gas light, three other lamps cast their glow in the city; one at the corner of North and Franklin Street outside of the Jones home, one on Buffalo Street (now West Main) near Front Street in front of Bell & Goodman Grocery and in front of Brackett Crockery Store on Buffalo Street.

The company supplied eighty private homes or businesses and ten lamps in its first year of business. The company had four miles of street mains and a 50,000 cubic feet capacity gas holder. A

The city hired a lamp lighter to ignite the gas lamps on moonless nights and to douse them each dawn. Sometimes the bitter cold froze the gas lines and flames could not be lit. (RG&E)

dozen years later, in 1860, the company served 2,413 consumers and maintained 657 street lamps. The city hired a lamplighter. Everyday life was changing within and without the home as a result of natural gas service. But the outbreak of Civil War set back the economy as well as the focus of the community for half a decade.

The Civil War placed a heavy tax burden on businesses, a tax that was passed on to the consumer, sparking numerous complaints and investigations into profits and charges of utility companies. Public utilities were considered so integral to public welfare that regulation was called for by many citizens. As public and government demand for inexpensive gas rose, the method of testing its illuminating power was also devised. The public suspected that the companies would reduce illuminating power as prices were reduced so that no profits would be lost.¹ Prices were at \$2.50 per thousand cubic feet. During the Civil War utility





An unidentified man clings to a gas lamp post at Exchange Place during the St. Patrick's Day flood of 1865. (Rochester Public Library)

companies were required to pay a 10% war tax that further drove up the cost for customers.

At War's end the worst disaster in Rochester's early history occurred when the Genesee River overflowed its banks in March of 1865. Word had been received by telegraph from upriver that a major flood was heading toward the city, but not seeing any unusual weather, the warning went unheeded. By 6 p.m. on March 17, St. Patrick's Day, the river had risen six feet and was running throughout the city through the Erie and Genesee Valley canals.

Downtown stores were flooded to the tops of first floor awnings. The current was too swift for rowers to rescue personal belongings.

The water entered the gas mains, causing the shut down of two holders. The gas light was dowsed in the street lamps, creating an eery darkness throughout the downtown. The flooding waters rushed through the streets threatening to knock out bridges and carrying debris, trees and parts of buildings. On the Main Street bridge where businesses had been built, entire trees were carried through one building on the south side of the bridge, across the street and through the north side building where the tree continued its path along the river. The water at the Gas Works at Mumford and Front Streets rose to five feet. A twelve inch main was carried away in three sixty-foot sections. George W. Parsons, superintendent of the Gas Works, remained at the Mumford Street Works until flood waters forced him out through a window at 6 a.m. on March 18. For five days people were without the gas light they had come to depend upon.

After the war the company continued to seek the least expensive sources of energy for its customers. In 1870 the company thought it could bring natural gas by pipe from the fields at Bloomfield twenty miles from Rochester. It might have worked had the pipes not been wood. The joints were wrapped in pitch-soaked Civil War blankets but still leaked badly. The field was also not as extensive as had been hoped. \$800,000 was lost on that experiment.

Business was good enough to attract competing companies to Rochester: the Citizens' Gas Company (at Smith Street) in 1872 and Municipal Gas Light Company (on Canal Street) in 1880. The three companies were consolidated in 1889 into the Rochester Gas Company.

The Emergence of Electricity

While improvements were being made in the delivery and use of natural gas, experiments with the use of electricity were taking place around the country and Rochester's businessmen were quick to bring home the improvements. Electricity was a curiosity to the public; but even as its generation was being perfected, businessmen watched closely as inventors labored over its many applications.

In January of 1879 the *Union & Advertiser* headlined the exhibition of a light bulb: "The Gas Flame Eclipsed. An electric light to blaze in Rochester next week." The article announced that James H. Kelly's plan to bring Thomas Edison to Rochester had failed; but he would bring H.S. Maxim, inventor of a patented light bulb owned by U.S. Electric Light Company in New York City. Kelly planned to exhibit "the wonder" in Corinthian Hall and thought there was enough public interest to charge an admission that he would donate to Protestant and Catholic institutions. Kelly, owner of Kelly Lantern Company, planned a free exhibition to inmates of Rochester's House of Refuge. Maxim demonstrated the light in City Hall. The *Rochester Herald* reported that the electricity "Illuminated the City Hall and threw large pencils of light about the city in a way never seen before."²

On a trip to New Jersey, Kelly had seen the light that Maxim invented. It was already in use on Russian war ships. Kelly, of course, was interested in this light for his railroad headlights which required only forty of the 8,000 candle power (cp) generated by the 3 horsepower motor. The 8,000 cp was so brilliant, the *Union & Advertiser* reported it "cannot be looked at except through colored glass."

The following Spring, in March of 1880, there was great excitement about electric light in Rochester's rival, Buffalo. The *Union & Advertiser* reported, "so far only one light has been placed, and that projected from a window in the third story. The light is of 10,000 candle power, and last evening was working at almost 7,000. The effect was a beautiful one, and during the evening a large number of people were attracted to the vicinity to watch the brilliant spectacle."³

E.H. Butler, owner of the *Buffalo News*, placed the bulb in his newspaper office. He planned five bulbs, one on the street and one in each room including business, editorial, composing and press. The *Union & Advertiser* noted with some reservation, "the arrangements thus far are quite experimental."⁴

For several years the practical adaptations of electricity kept businessmen and industrialists closely tied to inventors and exhibitionists while the public watched "the wonder" with great curiosity and expectation. Charles R. Barnes, superintendant of Fire Alarm Telegraph, left Rochester to attend the convention of the

National Electric Light Association in St. Louis. He reported improvements on the light bulb using one instead of two filaments and using a one inch long copper wire one eighth inch thick. The demonstrator, Professor Telsa, used a potential current of 300,000 volts. Telsa held the wire in one hand and a bulb in the other and with the current passing through his body, he lit the bulb. Barnes declared the demonstrations, "show the possibility of a radical change in the methods of electrical illumination."⁵

Gas and electricity were making changes in the way everyday people in the city lived. Housewives were shown at county fairs how the gas stove could regulate the oven and cooking temperatures more evenly, assuring successful baking. Gas heating stoves placed strategically throughout the house would be cleaner and less work than the coal stoves and furnaces. The 1876 Centennial Exposition at Philadelphia demonstrated a gas range/oven that operated with the turn of a knob. What woman would not trade for her wood or gas stove that required lugging the fuel, estimating the temperatures and cleaning and toting the ashes?

Hope For the Future

Electricity offered great hope for the future in home and industry. No longer would the cold winter weather freeze up natural gas lines lighting the home when electricity provided the light. Bulbs of varying intensity had also been invented. Shirley Dare predicted in 1889 in the *Union & Advertiser* that electricity would make great changes in our everyday lives:

Science will do much for us in dismissing the worst ills of civilization. The sanitary advantages of electric motors and pneumatic tubes in doing away with the insufferable noise and smells of horse teams for street cars and traffic will render cities healthier by half and summer less dreadful the sewage problem will be solved by electricity, as it is being tried in English provincial cities this year. The waste of towns being disinfected by currents of electricity without oar or puff of steam, plies a trim varnished boat, with a little electric motor in the stern the size of a water filter, and the two gentlemen in it glide luxuriously without effort beyond guiding its course by a pull of a cord. That little motor fascinates my eyes beyond telling. I see in it more than a mere propelling power. It is enfranchisement. That motor, the size of a hotel coffee pot, madam, will turn your sewing machine, your patent washer, your laundry roller for ironing, or the egg and cake beater, and bread mixer. It will saw the wood, run the lawn mower, or garden cultivator, and render you so far



The Edison Illuminating Company, located on Exchange Street near the Erie Canal, in a late 19th century photograph. Organized in 1886, it introduced underground wiring, direct current and varying wattage to lights. Rivals scoffed at Edison's major achievement calling it "a hot wire in a bottle." Thomas Edison slept in the basement of the old Reynolds Arcade while he worked on another invention, the quadruplex telegraph device and worked at other times with George Eastman. (RG&E)

independent of intelligence offices and labor cliques. It will propel your basket carriage, and give you the pleasure of riding without the expense and bother of keeping a horse and a man to care for him. Machinery eats nothing, doesn't waste one third its time in holidays and days after, doesn't drink, doesn't join boycotts, swear or have sick headaches; and electric machinery is self-protecting, because it will not bear meddling without speedy revenge on the perpetrator. ⁶

Shirley Dare went on to predict that women could sleep well at night knowing that their windows and doors were wired to shock any would-be intruder. She asked the readers to trust her predictions based on her earlier predictions that had come to pass such as the sale of California strawberries in Boston on the same day they were picked, the heating of cities with compressed street sweepings and streets clean enough for a lady to walk without soiling her hem. Certainly her exciting predictions reflected the enthusiasm the public had for the possibilities of emerging forms of energy.

Bringing Electricity to the City

Many businessmen kept a sharp eye on inventions and improvements that could raise the standard of living in the city as well as improve their own businesses. As he was boarding the train from Rochester to Garbuttville, James H. Kelly was asked by a reporter about his meeting with inventor Thomas Edison. Kelly, with his traditional toothpick at the corner of his mouth, rested one foot on the granite step of the Commercial Building and said it was his strong hope that Edison would bring his electric light to demonstrate in Rochester. Edison sold his patent for North and South America to Western Union Telegraph Company and though the light bulb was not yet perfected, Kelly said, it was so near there were no doubts it would soon be ready.”⁷ He said he would arrange for Edison to show the Common Council that “I can light every one of those lamps with arc pots in them out in the streets where the mud is a foot deep, as well at the ‘Four Corners.’ I’ll do that to show ‘em what can be done.”

Kelly went to Menlo Park to check on the use of electric lamps in the train headlight he manufactured at Kelly Lantern Company. He said excitedly, “When we get it going I’m going to put it on every engine from New York City to Chicago.” He turned to the reporter thoughtfully and said, “Yes, I have lived here so long that I want to do something for it [Rochester]. When I have found that the city can be lit up by electricity, I’ll have it here. We have the steam here in the Holly Water Works all the time and all they have to do is to turn on the steam and the city is instantly illuminated.”⁸

On May 2, 1887 the Edison Illuminating Company tested incandescent lamps. The company proposed to replace every oil lamp using five incandescent bulbs to light the area already lit by one arc light. The city Lamp Committee was satisfied with the demonstration because no shadows were cast.”⁹

Nearly two weeks later, the Lamp Committee witnessed the lighting of a two and a half block area on Spring Street. Ten lights and a one hundred candle power lamp on Exchange Street gave a steady bright light. The lamps were six feet high on the iron lamp posts where old gas fixtures had been removed. The Lamp Committee was considering electricity, gas and oil.

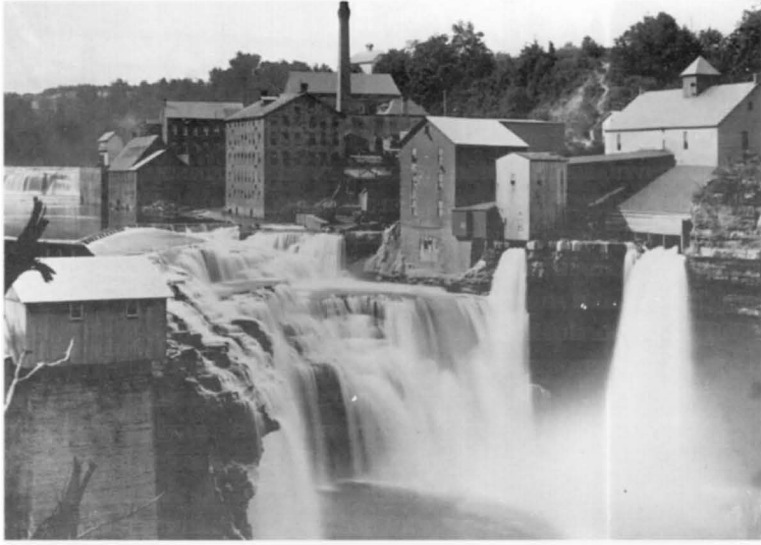
Great Public Interest In Electricity

The Rochester Electric Light Company formed in 1879 as the city's first electric utility. A second electric company, Brush Electric Light Company, operated a steam-driven dynamo on Water Street two years later in 1881. Brush Electric began by powering forty lamps, but Rochester's demand for electricity grew rapidly enough to require a more powerful source of generation. There was great excitement in the city when the Brush Electric Light Company opened a new site in mid-July of 1883.¹⁰ Progress on the pit dug for the water wheel was monitored and when the red brick building housing the wheel and offices was completed, a reporter, accompanied by company manager George A. Redman, descended the pit again. With only the dim shadowy light of the lantern to guide their steps they descended the gorge wall inside the building, down six ladders and four flights of stairs. Along the descent, the reporter became nervous as he felt the strong wind created by the several wheels turning rapidly. The reporter was surprised by the beautiful view of the Lower Falls behind which they emerged from the wheel pit. A second wheel pit was under construction, connected by a sixty-foot tunnel through the gorge wall.

In the darkness one of the reporters ascended the wrong ladder and hit his head on the ceiling of the gorge. He quickly stepped down and ascended a different ladder.

The reporter described the pit:

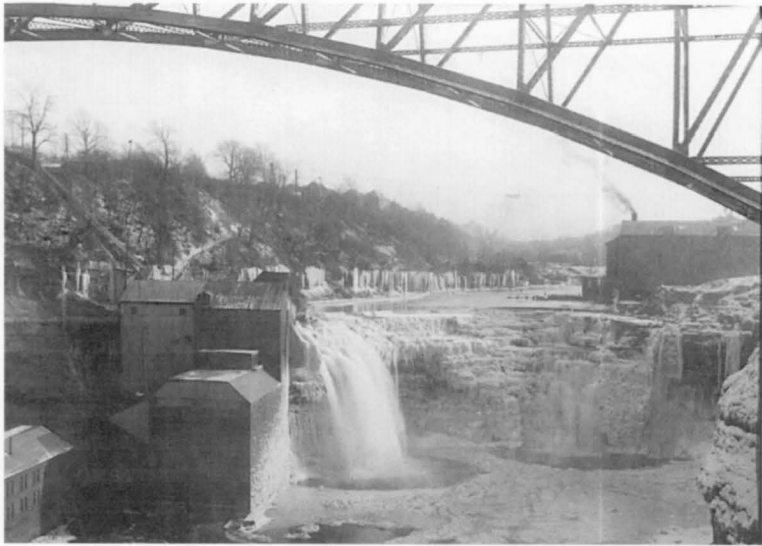
There are two twenty-inch Victor water wheels, each one possessing 572 horse power. Only one of them is in use at the present time. They have a bulk head of ninety-four feet and make 582 revolutions per minute. This is believed to be the fastest speed of any similar wheel in the world. The upright shaft in the pit is sixty feet long and six inches in diameter. Upon this shaft are two spur wheels six feet and seven inches in diameter, one weighing 6,000 pounds and the other 4,800. These make 183 revolutions, the highest speed ever acquired for such an immense wheel. Another interesting feature is the endless rubber belt connecting a ten foot pulley with the machinery on the first floor. It is fifty-four inches wide and weighs 600 pounds, thus being the largest in the world. It travels 5,900 feet or over a mile a minute. On the first floor is a three inch shaft, upon which are to be placed nineteen taper sleeve dead pulleys. Each pulley will be connected with as many dynamo machines. Only one machine is, however, now running, but others will be moved in



RG&E at the Lower Falls. (Rochester Public Library)

immediately, the work beginning today. If found necessary thirty of those machines can be put in. The shafting on the upper floor makes three hundred and fifty revolutions per minute. Each machine has a governor to relieve the magnets at any time when it becomes necessary. A switch board has been put on so as to transfer any machine to any current. The company has at present 240 lights throughout the city. They have power at present sufficient to run 1,150 lights, the one circuit used during the daytime. The night lights are furnished by dynamos in various parts of the city. These, however, as stated above, will be removed to the building at the Lower Falls. When the new wheel pit which is now being sunk is complete, two thirty-inch water wheels of 700 horse power will be placed in position. This will furnish almost unlimited power for the Brush Electric Light Company.¹¹

When a third electric company, the Edison Illuminating Company, began in 1886, it offered incandescent lights which required direct current and more wires than the older arc lamps. The utilities ran the wires directly from rooftop to rooftop until the city ordered that the wires be carried on poles to avoid a fire hazard. By the 1880s, Dr. Blake McKelvey noted, the streets of Rochester were “darkened by a forest of electric poles.”¹² Telephone and trolley poles added to the entanglement of wires in the city, but like the smoke belching from the stacks of industries, the wires and poles were also symbols of progress.



RG&E station under the Driving Park Bridge at the Lower Falls in winter. (Rochester Public Library)

Electric and Gas in the 20th Century

In 1904 the gas and electric companies came under the control of a Philadelphia company and a New York City company. Two years later the New York Central Railroad bought most of the Rochester Railway and Light stock intending to electrify its lines. In 1919 Rochester Railway & Light Company changed its name to Rochester Gas and Electric Company (RG&E) because the company was no longer in the railway business. By 1928 the railroad sold RG&E.

RG&E used hydropower and coal-generation to produce electricity in Rochester. The Driving Park hydropower plant was the most powerful. A tunnel carried water a quarter of a mile from the dam at the Middle Falls to the Lower Falls where the water was held in a pond and regulated by movable water gates. The



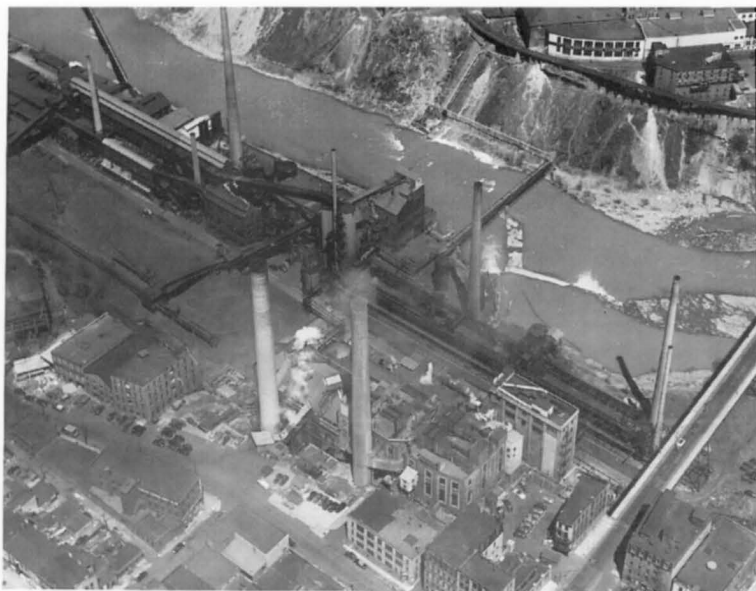
RG&E storage tanks near the Beebee Station in 1963. (RG&E)

largest steam generating plant in mid-century was Russell Station at Lake Ontario. Between 1948 and 1957 four units of Russell Station opened to generate up to 275,000 kilowatts. A station near Platt Street generated the next highest amount of power at 139,000 kilowatts. Downtown at Lawn Street and Mt. Read Blvd., steam was generated for heating businesses, greatly reducing the number of smoking stacks in downtown Rochester.

The river could fluctuate as much as 20,000 cubic feet per second (cfs), sometimes leaving the utility without sufficient water to generate electricity.

Because hydropower generation in the Genesee Valley depended upon the Genesee River, in 1925, RG&E built a dam at Canadea which had a storage pond in Rushford Lake, Allegany County.

The 420-foot wide dam, 126 feet high was built at the juncture of Canadea and Rush creeks, two miles west of Canadea. The resulting Rushford Lake drains a watershed of sixty square miles and helped to prevent local flooding.



An aerial view of the Beebe Station, undated. (RG&E)

About 1850, Jonathan Child brought the first anthracite to the city for industry. He sold surplus, broken coal to heat homes that were by then using the more modern Franklin stove. Wealthy people paid to have anthracite as well as coke delivered to their homes, while people of lesser means picked up small amounts of the fuel themselves. Competition between wood and coal dealers periodically became brisk as one or the other was in short supply. About the same time Roswell Hart became the first coal dealer to supply anthracite primarily to homes. By 1851, coal was producing steam in some flour mills, creating a more dependable source of energy than the river, with its fits of drought and flood.

In the last half of the 19th century, advances in energy use allowed households to move from heating and cooking on a wood stove to gas. Lighting progressed from oil lamps to gas, then to electricity. Cities began to look to electricity for other uses. In 1863 Rochester's horsedrawn street cars came into operation only to be replaced three decades later with electric trolleys.

Purchase of most of the water rights along the Genesee enabled electric utility companies to produce power more efficiently for mills and factories. George Eastman pioneered in

on-site electrical generation which allowed his Eastman Dry Plate Company to be untethered from the river. The numerous power companies over the latter half century merged and in 1904 the Rochester Railway & Light Company was formed. Only Fairport, Spencerport and Churchville remained outside of the RG&E company.

Early Sources of Power

It was peculiar that the city's first electric utility, intended to surpass the power of the Genesee, not only drew its power from the river, it was located on the site of Rochester's first industry-Ebenezer Indian Allen's mill. The dynamo operated inside the Beehive building on Aqueduct Street where Allen's mill was located. Rochester Electric Light Company supplied mechanical power to its Beehive tenants, then added nearby factories, Reynolds Arcade and the Powers Block.

Rochester Electric Light installed the city's first lights in Reynolds Arcade where the arc lights shot current between two carbons creating a brilliant light; but also letting off a noxious odor making it undesirable for indoor use.

Only a year later in June of 1881 the Brush Electric Light Company began transmitting alternating current several miles, further untethering factories from the banks of the Genesee. Across the country electricity and rapid improvements on the longevity of lights and dependability, sparked the city council to begin replacement of gas and oil lamps.

The third electric company, Edison Illuminating Company began in the spring of 1886 on Exchange Street at the Erie Canal. It generated steam power, utilizing the exhaust steam in water to heat neighboring buildings.

In August of 1892 the three companies consolidated into the Rochester Gas and Electric Company only a dozen years after the first electric company formed. Though the three companies consolidated to streamline delivery of service a fourth company emerged that very year. The Citizens' Light and Power Company, generating by steam and hydropower at Browns Race, operated for a decade before it sold out and became Municipal Gas & Electric Company. Only two years later, in 1904, Municipal Gas and Electric was absorbed by Rochester Gas & Electric.



Station Number 14 was built near the old Bartholomay Brewery in 1892. (RG&E)

A sixth company organized in 1893 as the Central Light & Power Company in several buildings at Aqueduct and Grove Streets. Rochester Light & Power Company absorbed this company in 1903 and a year later merged with RG&E giving this newly consolidated company the name Rochester Railway & Light Company.

After a century and a half of providing public utilities to upstate New York, RG&E has returned to its pioneer field of competition among energy producing companies. RG&E remains locally controlled, but some companies in America are buying up smaller utilities, creating huge conglomerates. After decades of regulation, the field of competition is open to speculation.

A New Age in Energy Generation

The invention of the atomic bomb introduced Americans to a new age that they were, perhaps, not ready for. Tests for atomic



Number 7 East Gas Station in July of 1949. (RG&E)

power had been kept necessarily secret and when the secret became known in 1945 when the bombs were dropped on the Japanese cities of Hiroshima and Nagasaki, the introduction was a negative, frightful and awesomely powerful one. Never had such power been known on earth. Scientists, of course, were experimenting on the many peaceful uses of nuclear energy; electrical generation was one of them.

Rochester Gas & Electric first began exploring the use of nuclear power in the late 1950s as other companies across the country did. A full decade later, after months of careful planning and land purchase, The Robert E. Ginna Nuclear Power Plant open in 1969. The plant was built in a record 42 months by Westinghouse along the south shore of Lake Ontario near Sodus, just east of Rochester.

Nationally there were numerous protests from the public and environmentalists concerned about the unknowns of nuclear power and the effect on the environment and humans. RG&E established the Brookwood Science Information Center to educate



Rochester Gas distribution tool wagon in the early 19th century. (RG&E)

the public about the benefits and safety of nuclear power. Full page notices were published in the newspapers informing the public of the safety precautions taken to protect the people and the environment. RG&E worked with the Civil Defense Department on evacuation and emergency alert plans.

Even while Ginna was under construction, Nuclear Regulatory Commission specifications for nuclear power plants were undergoing changes. Ginna was licensed to operate until 2009, operating for several years under a provisional license that allowed them time to meet the changing standards. Every twelve months the plant was taken out of operation for scheduled refueling and maintenance. During this time off-line, RG&E purchased electricity from other sources in order to supply its customers. How long parts could function without cracking, leaking or replacement was still being learned, so precautions were taken with regular inspections and strict standards.

In the late 1970s, RG&E requested permission to build a second nuclear power plant at Sterling, New York, but the plan

was not approved because the public's demand for energy had slowed. Before the 1970s oil embargo, utility companies were experiencing a 7% annual growth in energy consumption, but demand slowed by 2 to 3% instead. The energy industry was moving toward demand-side management. The New York Power Pool Consortium, made up of taxpaying utilities and the New York Power Authority, organized to buy and sell energy from one another and lessen the duplication of power production. By 1992, RG&E had 300,000 customers and Ginna was supplying half of the electricity used.

The 1970s oil embargo sparked interest in alternative energy sources as well, but solar and other forms were not well accepted by the public and were inefficient or impractical.

In 1979 the nuclear accident at Three Mile Island in central Pennsylvania alerted the public and the industry to the vulnerability of power plants. Only three years later a tube in a steam generator at Ginna ruptured and a small amount of radioactive steam escaped into the air; but the incident, because it closely followed the nuclear accident at Three Mile Island, received international publicity. The amount apparently was small enough to harmlessly escape into the air, but it brought home the fragility and dangers of nuclear power.

Nuclear power was not the inexpensive source of energy it was supposed to be. The government had placed a moratorium on its disposal of nuclear waste until 2013, forcing power plants across the country to re-rack their spent fuel in 40 foot deep pools. For Ginna this was a 48 hour process of removing 121 fuel assemblies from the reactor, placing them in a cart and sliding them to a berth over a grid. The entire process was done underwater with equipment capable of moving the one ton, 12-foot-long assemblies.

Ginna was the sixth oldest of 110 nuclear power plants in the country. Half of those licenses were due to expire by 2014. With relicensing coming up in the next decade, RG&E studied its options. RG&E could de-commission Ginna, upgrade the existing plant or purchase power on the open market. Some people believed that if the industry becomes deregulated a nuclear power plant could not be competitive in the market.¹³ RG&E would fare better as an energy distributor than a producer.¹⁴

Another option would be to decommission the plant. If RG&E elected in 1996 to close Ginna in 2009 it would have had 632 tons of nuclear waste to dispose of with the government moratorium proably still in effect for at least four more years. De-commissioning a nuclear plant was proving to be an expensive option to consider. The average cost was over \$300 million. Several plants in the nation that went off-line still owed debts from their construction. By early 1996 fifteen reactors in the United States were closing while another nineteen worldwide were replacing 59 steam generators.¹⁵ The average cost of replacement was \$200 million.

Replacement of the steam generators seemed to be the best option for RG&E. It would extend the refueling schedule from 12 to 18 months, save customers millions of dollars over the next decade and increase the power generated. The plant would be out of production about 67 days at a cost of \$115 million, well under the world average.

In the cold winter of 1996 two steam generators were brought by barge over Lake Ontario. Pushed by a tug boat the barge moved slowly over the lake to Rochester then to the town of Ontario. Three times the barge was turned back to Rochester by high winds. The plant's old generators were lifted from the containment domes by a 2,600 ton crane, thirty-two stories tall, higher than the Eastman Kodak headquarters building on State Street. For ten hours, spectators watched from an RG&E viewing platform as the steam generators were lifted out of the containment domes. Nuclear workers from Japan, Slovenia, Canada and other parts of America came to observe.

In 1997, RG&E, the New York State Public Service Commission and several other parties signed a five-year agreement to bring electricity choice to customers. During a period of transition, it is expected that other electricity suppliers will enter the Rochester market to compete with RG&E.

It would be difficult to predict how quickly this new era of choice will evolve, or which customers new suppliers will seek out. The agreement that makes it possible balances the interests of everyone who has a stake in the change-consumers, communities and utility shareholders. It is an era that is just beginning.

On the brink of the city's third century, Rochester is

studying new sources of energy and improvements on existing sources. There is more emphasis on conservation and efficiency than two centuries ago. We have become dependent on what was once considered a “wonder.” Gas and electricity not only provide energy for production, but also for hospitals, life support and other critical needs.

Endnotes

1. *Union & Advertiser*, April 30, 1874, p.2.
2. *Union & Advertiser*, January 15, 1879, p.2.
3. *Union & Advertiser*, March 17, 1880, p.2.
4. *IBID*.
5. *Union & Advertiser*, March 4, 1893, p.5.
6. *Union & Advertiser*, September 14, 1889, p.9.
7. *Union & Advertiser*, December 12, 1878, p.2.
8. *IBID*.
9. *Union & Advertiser*, May, 3, 1887, p.2.
10. *Union & Advertiser*, July, 26, 1883, p.2.
11. *IBID*.
12. McKelvey, Dr. Blake, *Rochester: the Flower City, 1855-1890*, Harvard University Press, Cambridge, 1949. p. 252.
13. *Democrat & Chronicle*, January 2, 1896.
14. *Democrat & Chronicle*, January 25, 1892
15. *Times Union*, April 29, 1896.



RG&E workers enjoy an outing together in this undated photograph

Back cover: Hydro Electric Station Number 26 under construction near the Court Street Dam in August of 1951. (RG&E)



The photograph published on the back cover of "The Development of Gas and Electricity in Rochester", Fall, 1998 issue of Rochester History was printed in reverse. This is your replacement corrected back cover. The editor apologizes for the inconvenience. Hydroelectric Station # 26 under construction near the Court Street Dam in August of 1951. (RGE)