HISTORY OF

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

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1992 marked the 50th anniversary of the Iowa-Illinois Gas and Electric Company, serving the greater Quad Cities area and other Iowa communities. It is therefore appropriate that we recognize Iowa-Illinois for its many accomplishments and excellent service to the community.

Iowa-Illinois Gas and Electric Company is an investor-owned utility providing gas and/or electric service to nearly 275,000 customers today, up from 75,000 when the company formed in 1942. The role that Iowa-Illinois plays in the lives of its customers has grown dramatically over the years. A recent company-sponsored survey established that 89 percent of residential customers have microwave ovens, 70 percent have VCRs, and 20 percent have personal computers in their homes. It would be a safe bet that none of these appliances existed in 1942! The survey also showed that 87 percent of Iowa-Illinois customers heat their homes with natural gas.

The quality of service demanded by utility customers has continually increased, along with advances in manufacturing technology, medical equipment, and automated control systems. Meeting these needs now and in the future will be a challenging proposition for Iowa-Illinois Gas and Electric Company.

Pre-History

To understand the history of Iowa-Illinois Gas and Electric Company will require some knowledge of the Quad Cities community and the early utility company predecessors to Iowa-Illinois.

The Quad Cities is the name given to the communities in Iowa and Illinois bordering the Mississippi River at the only location where the mighty 1500-mile river turns to flow west. Rock Island, on the Illinois side, and Davenport, on the Iowa side, were the early settlements that began in the 1830's. Today, Moline (IL) and Bettendorf (IA) comprise the remainder of the Quad Cities.

Records show that the first "utility" service in the area was a manufactured gas facility in Davenport, beginning in 1855. During the next several years, plants began operating in Rock Island and Moline Illinois in 1860, and Ottumwa, Iowa (home of M. A. S. H.'s Radar O'Reilly) in 1871. The gas was used for early street lights "down town" and was distributed to businesses and homes. Peoples Power Company used a horse-drawn "drip wagon" at the turn of the century to vacuum pump moisture from the gas mains.

In 1879, Thomas Edison successfully tested the first incandescent lamp that was practical for commercial use. This development led the way for the first electric utilities, to supply the demand for this cleaner, safer lighting source. Beginning in 1882, the first electric plants are built in Davenport, Rock Island, and Moline. The earliest electric lights in this area are installed in Rock Island in 1884. In 1885, the Davenport City Council voted to light the city by electricity. Moline followed suit the next year.

In 1888, Peoples Light Company of Davenport is incorporated, and a 2,000 volt transmission line is constructed across the Mississippi River from Moline's Peoples Power Company to Davenport. Because of its length and high voltage (for that time), it was considered an outstanding achievement, being powered by alternating current generator. Locally, C. H. Deere Company becomes the first manufacturing plant to light its facility with its own generator, capable of lighting eight large lamps at the Plow Works. By 1894, electric service is responsible for replacing horse-drawn rail cars with electric streetcars serving the Rock Island Government Bridge.

Electric service has indeed become a business by 1902, as witnessed by correspondence dated October 27, 1902 from F. W. Kelley, Secretary and Manager of Peoples Light Company Davenport, to S. S. Davis, Peoples Power Company Moline. (Appendix A) In the letter, Kelley is complaining to Davis that power went out on Friday afternoon, and three more times on Sunday night:

> "The German Theatre at Turner Hall (Davenport) was in complete darkness during these periods, and the large audience present was given to understand that the fault was due to the service of the Peoples Light Co.
>
> At present we have about two-thirds of Silberstein Bros' business, and had made arrangements to take the balance, but as they were at the theatre they decided that it was not safe to depend upon one Company and canceled their order for the additional business."

Kelley includes a copy of a Bristol's Recording Volt Meter chart for October 26, 1902 showing variations in voltage, with a comment "Ain' This a Peach". (Appendix B)

By 1906, J. G. White Engineering and Construction Company acquires all the local electric, gas, and street railway properties. The firm begins installing equipment of the latest design, including the first turbo generators. In 1912 the operations are sold to United Light and Power Company, which becomes one of the largest public utility operating companies in the country. In addition to the Quad Cities area, United buys

Iowa City, Ottumwa, and Fort Dodge properties in Iowa in 1912 and 1913.

A major coal-fired power plant is constructed in 1925 in Riverdale, Iowa, just north of the Quad Cities. With a generating capacity of 27 megawatts, it was the largest generating facility west of the Mississippi River. United Light and Power opens its new local office in downtown Davenport in 1926. This facility is still in use today as headquarters of Iowa-Illinois Gas and Electric Company.

Natural gas is introduced in Fort Dodge and Manson, Iowa in 1931. Within a few years, this clean fuel is introduced throughout United's service area, and becomes a popular choice for heating.

Under the Roosevelt administration in 1935 Congress passes the Public Utility Holding Company Act, which forces holding companies to simplify their organizations and dispose of properties not a part of an integrated system. FDR issues an executive order creating the Rural Electrification Administration, providing loans for the construction of electric facilities in rural areas not already receiving electric service.

Parallel progress in other fields dictates the end of an era, as the last electric streetcars are replaced by buses in the Quad Cities in 1940.

The Iowa-Illinois Era

Iowa-Illinois Gas and Electric Company began its operations in 1942 by acquiring the assets of ten independent utilities. Electric expansion is interrupted by World War II, and by 1946 a limit on gas heating installations is imposed due to temporary inadequacy of pipeline capacity. Later, in 1947, work began on a 120-mile portion of a 161,000-volt transmission line from the Riverside Generating Station to Searsboro, Iowa, and an 80-mile line from Des Moines to Fort Dodge. This work is completed by 1949, interconnecting the company's generating stations. Fort Dodge Mayor Henry Anderson threw the switch for the final connection of the transmission line. Riverside is connected with three other utilities which forms the United Power Pool. An expansion of the Riverside plant is completed in 1949, increasing its capacity to 140 megawatts. One reason for the expansion is the construction of the Alcoa aluminum manufacturing plant near Bettendorf, Iowa. Alcoa becomes one of the largest electric users in the Quad Cities.

During 1950, Iowa-Illinois distributes stock certificates to stockholders of United Light and Railways Company, and becomes an independent operating utility. Later that year, the first dividend is paid to stockholders, and has continued every year since.

The restriction on new gas heating services that was imposed earlier continues into the 1950's, with more than 14,000 potential customers on a waiting list. Not until the Natural Gas Pipeline Company of America installed a pipeline south of the Quad Cities in Milan, Illinois, in 1958 would this problem be resolved.

Moline's generating station, acquired in the 1942 consolidation, is increased to 64 megawatt capacity in 1952, and again to 86 megawatts in 1953 to meet increasing demands for electricity. The increasing use of air conditioners causes the

company's peak electric demand to occur for the first time in the summer of 1956. Previously, the load due to holiday lighting contributed to peak electric demands in the winter. Further increases in electrical demands required yet another expansion of the Riverside plant, this time a 125 megawatt addition.

The government begins to intervene in utility rate regulations in 1963. The Iowa Commerce Commission takes over rate regulation of Iowa Utilities. Previously, utilities negotiated their own rates with individual communities. This would prevent utilities from over-charging the customers.

The first major power outage in the Iowa-Illinois grid occurred in 1965. A power failure at the U.S. Bureau of Reclamation of South Dakota causes over loading on the systems of many inter-connecting utilities in the Midwest, including Iowa-Illinois. Outage affect a total of two million people, including a twenty-two minute outage for all of Iowa-Illinois' customers.

Beginning in the early 1970's the nation becomes concerned with the energy crisis. Reserves of natural gas decline as consumers use more than the amount of new gas discovered. A liquified natural gas plant is constructed near Bettendorf. One of the few liquid gas plants in the Midwest, the plant produces and stores liquified natural gas at minus 260 degrees Fahrenheit during the summer and converts it to gas during peak demands in the winter.

In 1972, the Mid Continent Area Power Pool is organized, enabling Iowa-Illinois and the other twenty-one member utilities to share reserves and exchange power on inter-connecting transmission lines thereby lowering costs and improving system reliability.

Construction is completed in 1972 on the Quad Cities Nuclear Power Station in Cordova, Illinois. Iowa-Illinois owns 25 percent (385 megawatts) of the plant, which is operated by

Commonwealth Edison Company. The area's first nuclear plant is designed to use a spray canal system for cooling of the reactor at an added cost of $25 million.

This cooling system received some criticism from local residents including Thomas B. Clark of Davenport, who wrote to the Davenport Times-Democrat in December of 1971 (Appendix C), describing his "Experiment in Ecology" to show that it was an unnecessary waste of money. Clark and his wife believed that the heat pollution from using a direct diffuser system would not amount to a "tinkers darn" and proceeded to prove why. The cooling system was calculated to use seventeen percent of the ten-year low flow of the Mississippi River or 2,270 cubic feet per second of water. This water would be raised 23 degrees through the condensers and then put back into the river. The Clark's heated six cups of water to a temperature of 70 degrees F. and one cup of water to 93 degrees F. and mixed the two for a resultant temperature of 74 degrees. This was below the five degree limit allowed for systems of this type.

Clark called the Corps of Engineers and found that the average river flow was more like 47,000 cubic feet per second, so the average diversion of water to the plant would be more like five percent instead of seventeen percent. In his second experiment he mixed twenty cups of water at 70 degrees with one cup at 93 degrees and the resulting temperature was 71½ degrees, for a 1½ degree rise. Clark continues:

> "Now in the Sunday, December 26 Times-Democrat they raise the issue of "Thermal Preemption," the giving to the nuclear power plant a virtual monopoly on the Mississippi River's ability to absorb heat for perhaps 30 miles down stream. So what? They were there first and the river is 1,500 miles long so there is room for many plants. When a restaurant or motel locate on a choice section of a well traveled highway don't they preempt the public highways that lead to their corner?..."

Clark proved to be ahead of his time for in 1984, the spray canal system was converted to a fish hatchery. Studies have shown that the system is not needed to cool water discharged from the plant.

In 1974, Iowa-Illinois opens its Operation Control Center in Davenport to enhance its system reliability. This state-of-the-art control center uses advanced computer techniques for continuous monitoring of energy supply systems. The concrete encased "bunker" on the west side of Davenport is immune to any outside influences God or man can generate.

A series of expansions takes place in the late 1970's including the Neal Generating Station in Sioux City, Iowa, Council Bluffs Generating Station, and Ottumwa Generating Station adding nearly 500 megawatts of capacity to the Iowa-Illinois system. In 1983, the Louisa Generating Station in Muscatine, Iowa, is put on line with Iowa-Illinois owning 43 percent of the plant (280 megawatts). This is the last generating station built by Iowa-Illinois. A general industry down-turn in the Quad Cities area in the mid 1980's limited electrical system demand to the point where Iowa-Illinois has excess electrical capacity.

Partial deregulation in the natural gas industry begins in 1985. During the next several years, drastic changes occur in the industry including introduction of competition among pipelines and producers, and transportation of customer-owned gas by Iowa-Illinois and its pipeline suppliers. A $3.3 million pipeline is constructed to interconnect with ANR Pipeline, providing a second source of gas supply to the Quad Cities, Cedar Rapids, Iowa City and Ottumwa Districts in 1989. Another pipeline interconnection is completed in 1991 between Cedar Rapids and Iowa City Districts at a cost of $7.7 million.

Recent legislation in Iowa is forcing utility companies to practice Demand-Side Management, thereby reducing the need for

additional generating capacity. Iowa-Illinois instituted a DSM program in 1992 that offers incentives and rebates to customers who purchase and install energy efficient systems and equipment. This has proven to be an effective program, as it encourages contractors, suppliers, and manufacturers to offer higher efficiency equipment at the same price after rebate.

By delaying the requirement for new generating capacity, Iowa-Illinois has been able to divert its revenues towards a new high-rise office complex being constructed in downtown Davenport. This facility will replace the original United Light and Power Company building built in 1926. This new office complex is part of a redevelopment project including expansion of the Davenport River Center convention and exhibition facility. The Iowa-Illinois offices are being designed with state-of-the-art utility systems. DSM Manager, George Phillips, states "We want visitors to this office ten years from now to marvel at the energy efficient systems in use here."

Iowa-Illinois Gas and Electric Company has met the needs of its customers for fifty years and is planning to continue this tradition for the next fifty years.

Presidents of
Iowa-Illinois Gas and Electric Company

1942 - 1945	John V. McKinney
1945 - 1946	Frank L. Conrad
1946 - 1954	Cuthbert P. Conrad
1954 - 1975	Charles H. Whitmore
1975 - 1984	Dean R. Stichnoth
1984 - 1990	Barry C. O'Brien
1990 - Pres	Stanley J. Bright

Appendix A

Appendix B

Appendix C