

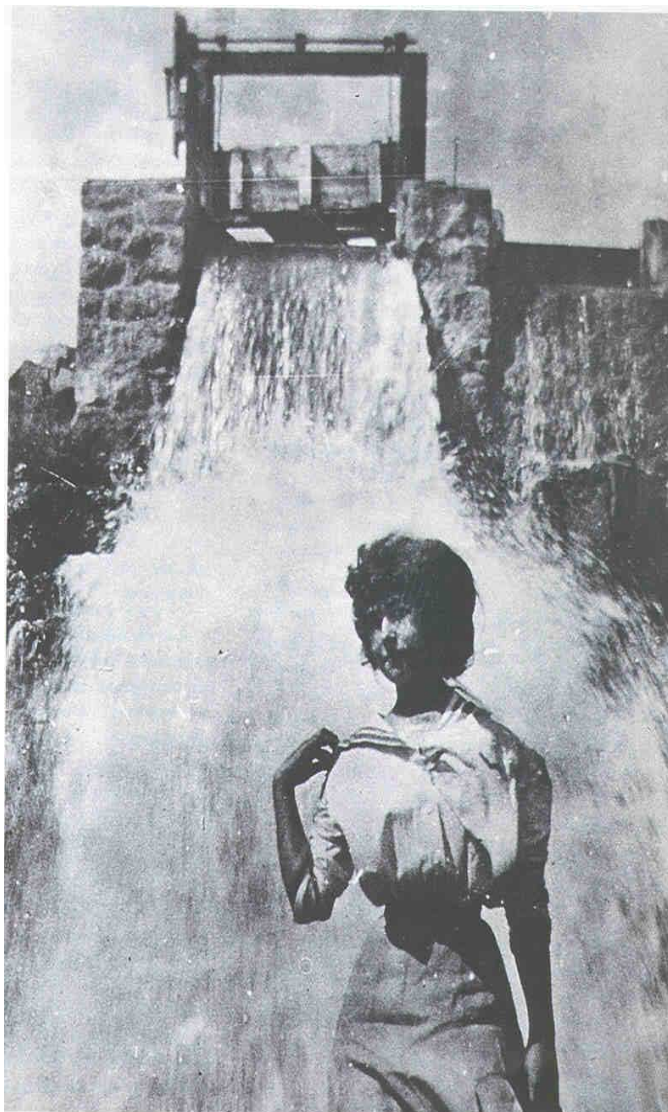
Idaho Falls Power - History

INTRODUCTION

The first public utility in America began over 120 years ago. The efforts of the early electrical pioneers have allowed the nation's municipal utilities to give inexpensive, reliable electric power to millions of Americans in the twentieth century. Today municipal utilities give over 2,000 communities a sense of energy independence and autonomy they can carry into the twenty-first century.

Lucille Keefer pictured in front of the falls, is one of the more endearing images of Idaho Falls' hydroelectric history. The Pennsylvania-born school teacher was the wife of the project's construction superintendent.

Although Idaho Falls was not the first community to own and operate its municipal utility, it is one of the oldest public power communities in the Northwest. The city of Idaho Falls is celebrating the past 100 years of providing its residents municipal ownership in its electric power system. This report will provide some interesting facts about the pioneers who installed a tiny electric generator on an irrigation canal in the fall of 1900, establishing the beginning of the Idaho Falls municipal utility.



THE CANAL ERA



The original 1900 power plant generated electricity from the water tumbling out of an irrigation ditch.

When the Utah and Northern Railroad extended its tracks to the rapids on the Snake River in 1879, the small town of Eagle Rock (now Idaho Falls) was established. The turn of the century not only brought more people to the newly formed community but new developments as well.

Agriculture played a significant roll in the development of the surrounding area. In 1872, plant geneticist Luther Burbank developed the Russet Burbank Potato from a single seed ball in his New England garden. No one knows for certain when the Idaho Russet was planted in southeastern Idaho, but by the turn of the century the area was rapidly gaining a reputation for being a prime potato producer.

Perhaps no place on earth was better suited for growing what became known as the Idaho Russet than the fertile, sandy plains of the Snake River in eastern Idaho. The gently rolling hills of the Snake River Plain surrounding Idaho Falls were also easily adaptable to the production of small grains, including spring wheat, corn, oats, and barley. Farmers from Utah soon began growing sugar beets along the Snake River from Burley north to St. Anthony. The first beet sugar factory was built in 1903 just east of Idaho Falls in Lincoln (Fritzen 1991).

Entrepreneurs dug the first irrigation canals in the vicinity of Idaho Falls in the early 1880s. Because eastern Idaho is located west of the 100th meridian, the line that divides the drier west from the wetter east, they knew the development of irrigation canals up and down the Snake River Valley was key to the growth of the area. Without irrigation crops simply would not grow, and Idaho Falls might never have started its own municipal utility.

The growth of the agricultural hinterlands surrounding Idaho Falls was bringing new businesses into the community.

During the 1880s and 1890s, lumberyards, flourmills, livestock auction houses, newspapers, banks, and clothing stores sprouted up along the railroad tracks. Population surged as merchants and professionals flocked to the city to serve the needs of dry-land farmers and ranchers from miles around. By 1892, Idaho Falls was billing itself as the “city of destiny ... situated in the heart of the best grain belt in the west.”

During the next 20 years, irrigation canals were built at a rapid pace. The Anderson Canal, Eagle Rock and Willow Creek Canal, Farmers Friend Canal, Porter Canal, the Idaho Canal and the Great Feeder helped irrigate the Bingham County farmlands (Fritzen 1991). Dozens of irrigation companies found financial backers from as far away as Salt Lake City, Denver, and Chicago to help develop the canal systems.

Canal builders in the Snake River Plains soon realized that canals had potential benefits other than irrigation. Inventors and entrepreneurs in the Midwest began harnessing the power of falling water to turn water turbines and electric generators. Electricity burst upon the scene in the 1880s and 1890s, much as computers began to transform society 100 years later. As cities across the nation were wired for electric lights and streetcars, business executives and city officials in the West began to seriously examine the tremendous electric power potential of the region’s rivers, streams and canals.

By the late 1890s, business executives from Idaho Falls and Salt Lake City considered building a privately owned electric system in the city, but the plans never materialized (Carter 1955). Bond issues to finance construction of a city-owned plant were defeated in 1896 and again in 1898. In April 1900, Idaho Falls became a city of the second class, passing from a village board form of government to a mayoral system. Before the year was over, the new city would have electric power.

SOMETHING OF A NOVELTY

Joseph A. Clark was elected the city's first mayor on April 6, 1900. He campaigned for office on a promise to bring electric power to Idaho Falls. Clark grew up in Indiana and moved his family to Idaho in 1883 (Fritzen 1991).

Clark was familiar with both public power and hydroelectric potential. Having lived in Indiana in the early 1880s, he was undoubtedly aware of the experiment with municipal ownership of the electric power facilities in Wabash, Indiana. He was also familiar with the virtual explosion of public power in America during the 1890s with more than 800 municipally owned electric systems in the United States by the early 1900s (American Public Power Association 1990). Clark also followed the progress of the municipal system established in Payson, Utah in 1897, which was the only municipal utility in Idaho or Utah at the turn of the century (American Public Power Association 1998).

As a civil engineer and surveyor, he was closely involved with the development of the region's irrigation canals. In 1890, Clark was among a group of local business people who incorporated the Idaho Canal Company, which was backed by financiers located in Salt Lake City and Chicago. The company built an irrigation canal from Bear Island, 10 miles upstream from Idaho Falls, to provide water to thousands of acres of land in the immediate vicinity of the city (Fritzen 1991).

Clark took office with ambitious plans to make Idaho Falls the first community in the young state to own and operate its electric utility. He campaigned hard for a bond election in March 1900 that finally authorized the city to build and operate a municipal electric system (Fritzen 1991). The electrification plan utilized the region's network of canals and envisioned a diversion canal to be built from the Snake River above Idaho Falls to a point at Tenth Street and Boulevard, where it joined with the waters of Crow Creek to flow back to the Snake River.



Water flowing down the Crow Creek slough. Spring, 1913.

The city hired Perham Brothers, a prominent builder and local contractor, to excavate the diversion canal (Carter 1955). Donald Swineheart, an out-of-town electrical contractor, was also hired to install the first small turbine generator at the site for \$4,650 (Fritzen 1991).



Joseph A. Clark was a mayor during the construction of the first power plant in 1900.

The power plant was located at the site that is now the small park on the west side of Boulevard where Tenth Street connects. The site also contained the first city well, which had been dug by pioneer W.H.B. Crow (*Post Register* April 25, 1937). Locals at the time called the location the "Crow Slough."

The new municipal electric plant, a newspaper reported, "was something of a novelty, being the only generating plant in this section of the state at the time" (*Post Register* April 25, 1937). Mayor Clark threw the switch to open the plant to commercial operation on October 22, 1900.

The original Corliss-type fan-belt generator had a capacity of 125 horsepower (Carter 1955). Most of the initial demand for electric power from the plant came from street lighting. The new lights were a noticeable improvement over the kerosene and whale oil lamps that were previously used. The plant ran only during the afternoon and evening hours and it frequently started up later on clear days (Fritzen 1991). During the summer, the plant frequently operated on a moonlight schedule. This meant that the plant was not run if the moon was bright enough to illuminate the area. In 1901, the first full year the plant was in commercial operation, the city took in revenue of just over \$1,000 (Carter 1955).

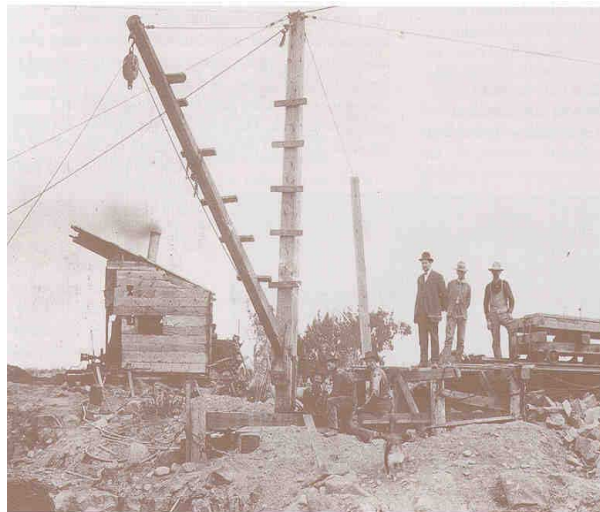
In 1902, demand for electricity led to an enlargement of the plant's capacity and the city began to sell power to residents and commercial establishments. Residents paid \$1 per month for two incandescent lights, 40 cents each for the next two lights, and 30 cents per month for each additional light (Carter 1955). Electricity was not metered in Idaho Falls until after 1910.

THE SECOND PLANT

It quickly became evident to city officials that the increasing demand for power would outstrip the capacity at the Tenth Street and Boulevard site. The canal, which flowed in from the north, did not develop enough fall (or generating head) to justify the expense of installing more turbine generators. As early as 1903, the city began studying additional sites on the river for power generation. One location, below the city on the Snake River, was actually acquired for a hydroelectric dam and plant. With the defeat of a 1906 bond issue, the site was not immediately developed for power generation.

In 1909, Mayor E.P. Coltman asked the electric committee of the city council to recommend a new site on the Snake River for a power plant. Coltman, a native of Pennsylvania, was a respected local lumber dealer and former postmaster. He suggested building a power plant just below the Broadway Avenue Bridge, which his predecessor D.G. Platt had built in 1907 (Fritzen 1991).

Coltman fought hard for the \$95,000 bond issue needed to build the dam and powerhouse on the river between the Broadway Avenue Bridge and the hospital. His efforts were rewarded in March 1910 when voters approved the bond issue in a special election (City Council Minutes, Book 3, p. 140). A few months later, the bonds were sold to John Nuveen & Co. of Chicago, an investment bank often used by municipal utilities (City Council Minutes, Book 3, p. 164).



Private interests began building a private hydroelectric plant below Idaho Falls as early as 1895.

Coltman died in office before the site could be developed, but his successor, Mayor Bowen Curley, presided over the construction of the city's first run-of-river hydroelectric plant in 1911 (Fritzen 1991).

Plant construction got off to a rocky start. The two contractors who originally bid on the City Plant project were unable to complete the work, and the spring floods of 1911 washed out the footings of the first dam (City Council Minutes Book 3, p. 332). Mayor Curley turned to W.W. Keefer to finish the job.

Keefer, at the time was the city's best-known contractor, having built the Riverside and Eagle Rock schools and many of the downtown commercial block buildings along Broadway. Keefer agreed to build the new dam and powerhouse in the fall of 1911.

He first hired a construction crew of 14 men. He paid himself \$8 per day and the three carpenters \$4 each per day. The other 11 laborers were paid \$3 per day. Work got underway in October when the water was low. Most of the outside work was done by hand and completed by the first week of December (Marker 1971). Interior work at the powerhouse, including the installation of an Allis-Chalmers turbine generator, continued through the spring and summer of 1912.

With a rated capacity of 400 kilowatts, the new City Plant went into commercial operation on September 6, 1912. Within weeks, electric rates dropped to 7 cents per kilowatt-hour, one of the lowest residential rates in the state. The city submitted a petition to the Idaho attorney general asking for permission to sell electric power to commercial customers. The Idaho attorney general ruled in favor of the city, and the city quickly established a rate of 4 cents per kilowatt-hour for commercial accounts. (City Council Minutes Book 4, p. 2).

COMPETITION AND EXPANSION

With the new City Plant in place, Idaho Falls was able to dismantle the original power plant at the Tenth Street and Boulevard location. Demolition of the site continued through 1914 and 1915, with most of the equipment at the facility sold for scrap. (City Council Minutes Book 4, p. 230). During this time, the city had acted upon the recommendation of Mayor Barzilla W. Clark, the son of the mayor who had presided over the creation of the municipal utility in 1900, to fill in the canal “from the old power house to the coal chutes” (City Council Minutes Book 4, p. 12). In the summer of 1914, city crews leveled the filled-in canal and turned it into a paved street.

The growth in electric load during the years prior to World War I quickly used up the City Plant’s excess capacity. By 1917, Idaho Falls was forced to purchase surplus power from the aggressively expanding Utah Power & Light. UP&L had purchased a hydroelectric dam and powerhouse on the Snake River, 4 miles south of Idaho Falls. The Idaho Power & Transportation Company originally built the dam, but was forced to sell during the bank panic of 1913 (City Council Minutes Book 4, p.19).

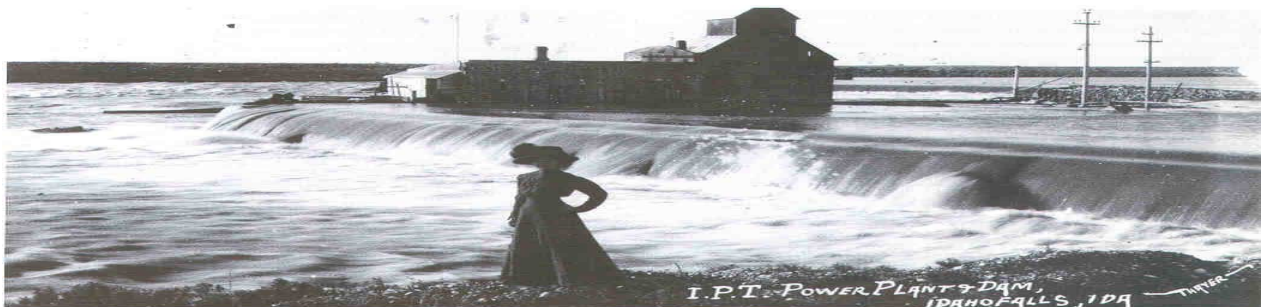
City officials felt pressure to find a second generating unit for the city plant. The city faced other problems including losing workers to the Utah utility, which paid hydroelectric operators a higher salary than Idaho Falls (City Council Minutes Book 5, p. 70).



Bowen Curley headed the fight to build a run-of-the-river hydroelectric plant on the snake river in downtown Idaho Falls in 1912.

In September 1917, the city issued \$35,000 in bonds to pay for a new waterwheel and generator at the City Plant (City Council Minutes Book 5, p. 10). As the United States drew closer to participation in World War I, production increasingly was geared to the war effort, and it became difficult for Idaho Falls to locate and purchase a new turbine generator. In October 1918, the U.S. War Production Board denied the city’s petition to purchase generating equipment for the City Plant expansion (City Council Minutes Book 5, p. 166).

It wasn’t until the summer of 1919, almost 1 year after the end of the war, when Idaho Falls purchased a 600-kilowatt General Electric turbine generator to supplement the original



The Idaho Power & transportation plant and the dam on the Snake River, seen here in 1909, was sold to UP&L before World War I.

equipment at the City Plant (City Council Minutes Book 5, p. 366). By that time, electricity demand had far exceeded the capacity of the original turbine generator. Compounding the surging demand problem was the worst drought in southeastern Idaho since the 1870s. The Snake River all but dried up at Idaho Falls and by summer, city officials declared a power emergency (Carlson 1979).

For most of the next year, until the new generator was running efficiently and stream flows returned to normal, the bulk of the city's power was bought from Utah Power & Light (City Council Minutes Book 5, p. 393). Mayor W.A. Bradbury and the city council determined that even with the second generator, the increase in demand for electricity meant the City Plant would once again be pushing against its capacity limits by the mid-1920s.

The city essentially had two choices to increase power generation at the City Plant. It could add turbine generators to the existing facility, or it could raise the level of the dam and replace the existing generators with state-of-the-art generators.

The city chose the second option, because power supply studies revealed that raising the dam and replacing the antiquated generators with more efficient equipment would increase the power capacity at the site at a far lower cost. The U.S. Bureau of Reclamation's 1921 announcement to build a dam and reservoir at American Falls to better regulate the flow of the Snake River helped make the decision a little easier (Carlson 1979).

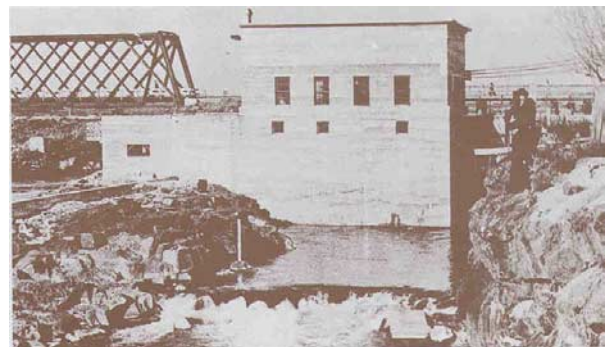
In April 1921, the city engineer submitted plans to raise the dam and spillway (City Council Minutes Book 6, p. 66). The previous week, Idaho Falls had purchased two 500-kilowatt turbine generators from Wellman, Seaver, Morgan Co.

for just under \$35,000 (City Council Minutes Book 6, p.17). The work was completed in 1922, and 4 years later, the city built an auxiliary power plant building and installed a 400-kilowatt Fulton Diesel generator at the City Plant (City of Idaho Falls 1999). The cost for the new diesel plant was \$30,992 (City Council Minutes Book 6, p. 498).

Although the city spent over \$100,000 to upgrade the City Plant between 1919 and 1926, the municipal electric operations were very much a moneymaker. In 1921, revenues from the sale of electricity netted the city just under \$100,000, more than double the amount the City Plant had made in 1913, its first full year of operation (City Council Minutes Book 6, p. 22). By 1925, the appraised value of the electric utility in Idaho Falls had exceeded \$416,000 (City Council Minutes Book 6, p. 416).

In 1928, Mayor Barzilla W. Clark, began work on a proposed Upper Power Plant to ensure Idaho Falls could maintain a reliable energy supply. Located 4-1/2 miles north of the City at the old Wright diversion dam, the Upper Plant consisted of a dam and power plant with a 1,800 horsepower turbine generator (*Post Register* April 25, 1937). The electric utility was profitable to the extent that the city was able to issue bonds for only \$100,000 of the estimated \$275,000 cost of building and equipping the Upper Plant (City Council Minutes Book 7, p. 119). The balance of the construction costs was paid from the utility's surplus account.

The Upper Plant site was even more attractive, given the potential for doubling the hydroelectric output by installing a second turbine generator (Driscoll and Schwartz 1927). When put into service in 1929, the Leffel hydraulic turbine and General Electric generator was expected to give the city years of worry-free service (City of Idaho Falls 1928).



Idaho Falls installed a new generator and waterwheel at the city plant in 1919.

The Great Depression

The Great Depression devastated southeastern Idaho. Following the stock market crash in October 1929, unemployment skyrocketed across the southern, more populous, half of the state. Unemployment in the Idaho Falls area surged into double-digits in 1930 and remained at that level for most of the remainder of the decade. Weather conditions also put pressure on the economy. The drought years, 1929 through 1940, and tight credit led to a dismaying litany of farm foreclosures across the Snake River Plains.

Unemployment told only part of the story, as far as growth of the city's electric utility was concerned. While economic activity in the city and much of the rest of the state was stifled by the onset of the Great Depression, electric power consumption kept increasing in Idaho Falls.

In 1927, the city generated 7.4 million kilowatts of energy and billed customers just over \$140,000. Ten years later, Idaho Falls generated nearly three times the power, 20 million kilowatts of energy, but only took in revenues in excess of \$250,000 (*Post Register* April 25, 1937). The reasons for the disparity were twofold.

Although unemployment reached record numbers, 8 of every 10 residents were bringing home a paycheck. The introduction of inexpensive appliances during the 1930s, including electric stoves, refrigerators, and washing machines, proved to be a powerful marketing tool for electric power. By 1937, 50 percent of the community's homes had electric ranges, and nearly one-third of the city's homes boasted electric hot-water heaters (*Post Register* April 25, 1937). Those who were working purchased the latest labor saving conveniences. This resulted in a continuous rise of the electric power load in the city even as economic activity continued to plummet.

Economies of scale derived from the upgraded City Plant, the new Upper Plant, and a second diesel engine purchased in 1931 meant that as the city generated more power, the price of that power kept decreasing. If the price of power had gone up in line with the consumption from 1927 to 1937, the city's revenues would have been more than \$400,000 in 1937. Instead, the price per kilowatt-hour had continued to drop through the decade.

During the late 1920s and 1930s, an aggressive program of selling electric hot-water heaters to residents was started. By 1934, the electric load had once again grown to such a level that the heating of water tanks seriously affected the peak load.

In 1934, Idaho Falls became the first city in the nation to install a tank-heater control system for the entire community (*Post Register* September 10, 1934). Special equipment located at the City Plant generated a high-frequency current that was

capable of turning heaters on or off. The system was used to shave peak in low water and high demand periods. The water heaters were rarely turned off for more than an hour or two at a time (*Post Register* April 25, 1937).

Even with the effects of the Great Depression and the installation of peak-shaving equipment, peak load increased at approximately 10 percent per year through the first half of the 1930s. It was estimated that if growth continued at that rate, the city's peak would double by the early 1940s.

To address this issue, city engineers reported in 1935 that "in order to meet the situation, it appears that plans must be immediately made to go forward in some discussion which should be decided in the immediate future" (City of Idaho Falls 1935). The engineers presented the mayor and city council with four options.

- Develop the Mesa Falls on the North Fork of the Snake River in Island Park
- Develop the Anderson Dam site on the South Fork of the Snake River near Heise
- Install a steam plant in Idaho Falls
- Increase the capacity of the diesel plant (City of Idaho Falls 1935).

The Mesa Falls and Anderson Dam projects were indicative of the extent of the city's search for new means to generate power. With the exception of 1936, the years from 1929 to 1942 were times in which the water flow on the Snake River was much below normal. As a result the U.S. Bureau of Reclamation reviewed options for water storage facilities and in 1939 built the Island Park and Grassy Lake Reservoirs (Carlson 1979).

In 1937, Idaho Falls approached Utah Power & Light about selling the Lower Plant. Utah Power agreed and negotiations began shortly thereafter. When the deal to purchase the Lower Plant was signed, Idaho Falls immediately began an ambitious program of upgrades. Expansions to the Lower Plant were made throughout 1938 and 1939. By the time the new decade opened, the city added 3,300 kilowatts to its generation mix.

For the next several years, city crews performed maintenance and upgrades to the Lower, City, and Upper Plants, as well as to the diesel plant. In 1939 a switch house at the City Plant was completed with money the city received from an appropriation from the Federal Works Progress Administration (Electric Light Department September 5, 1939). The new switching equipment was installed and in service by the spring of 1940 (Electric Light Department April 1, 1940).

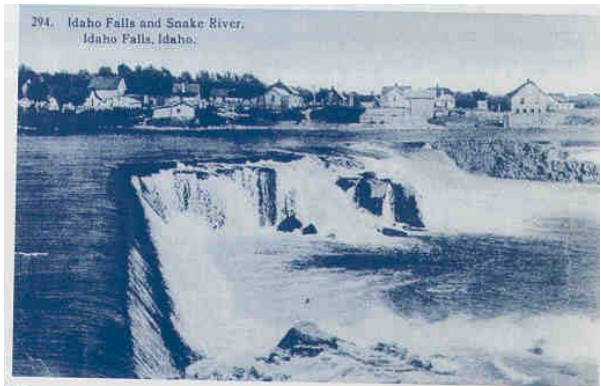
THE WORLD AT WAR

When the Japanese attacked Pearl Harbor on December 7, 1941, Electric Light Department crews found themselves finishing the annual installation of Christmas decorations. For the Department, December 1941 was a landmark month. For the first time, the utility's peak load had exceeded 6,000 kilowatts (Electric Light Department December 5, 1941). This was indicative of the continuing upward trend in load growth. Fortunately, demand was still well below the rated capacity of nearly 8,000 kilowatts generated by the three hydroelectric stations and the diesel plant.

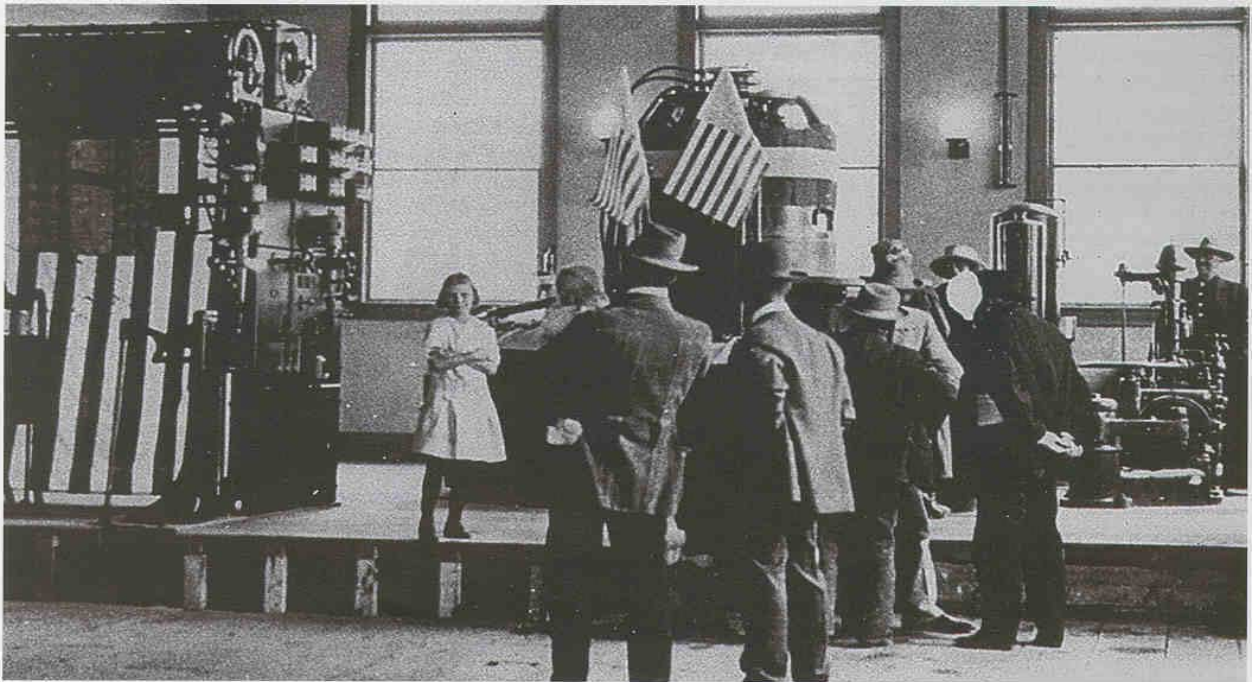
In the spring of 1942, the federal government converted from standard time to wartime. The extra hours of daylight immediately helped the Department reduce the peak load by approximately 1,000 kilowatts and improve the load factor by nearly 10 percent (Electric Light Department March 2, 1942).

World War II marked a period when Idaho Falls and municipal utilities across the nation had to "make do" with shortages of water, manpower and materials. The Bureau of Reclamation was giving priority to irrigation for farming for the defense effort, so stream flows were not always optimal for power generation.

Electric Department Superintendent M.P. Goudy and his crew had to cope with an increasing number of staff leaving to serve in the armed forces, a regular occurrence throughout the war. In the fall of 1942, two members of the line gang left Idaho Falls for the Army. Members of the remaining department crew were required to work around the clock in order to plug the gates to stop leakage at the City Plant.



THE FALLS ON THE SNAKE RIVER ABOVE THE CITY PLANT GRACED POSTCARDS AS EARLY AS THE 1920S.



THIS 1938 GET-TOGETHER CELEBRATED UPGRADES TO THE CITY'S RECENTLY PURCHASED LOWER PLANT.

Goudy also had to divert additional crews to scrapping the three old turbines at the City Plant, which had been decommissioned in the late 1920s (Electric Light Department October 6, 1942).

The war effort also created a shortage of steel, copper, and aluminum, all essential for maintaining the city's electric system. Throughout the war, city crews participated in scrap drives to aid the defense effort. Metal and copper scrap was sent to collection points to be recycled into everything from battleships to tanks.

It also became quickly apparent that during wartime, turbine maintenance would be much harder to perform. In the early summer of 1942, when the No. 2 turbine at the City Plant exhibited a problem, Goudy was informed that Allis-Chalmers was so busy with the war effort that it could not perform routine turbine maintenance for at least 2 to 3 years. Goudy had no other option but to dismantle the unit and send it to the Union Pacific Railroad shops in Pocatello, where it was repaired and put back in service within 6 weeks (Electric Light Department June 4, July 1, 1942).

When the Nordberg Diesel needed to be overhauled in the spring of 1945, Goudy and the Department crew didn't even think about sending it out for maintenance. They simply dismantled it, cleaned the cylinder walls and pistons, installed new rings, reassembled it and put it back in place (Electric Light Department April 3, 1945).

From the spring of 1941 through the end of the war, peak load had grown nearly 50 percent, an average of nearly 12 percent per year. In September 1945, the first full month of peace, peak load climbed above the 7,000-kilowatt mark for the first time. By the next month, peak load was nearly 7,500 kilowatts (Electric Light Department October 4, November 5, 1945).

Fortunately, the city was not scrambling for power like it had in the late 1930s. In 1943, the city signed a contract with Utah Power & Light for wholesale power as needed. The agreement would be in force for 20 years and would relieve the Electric Light Department of many of its worries about continuing load growth during the postwar era.

The war era brought one other major change that would have a significant impact on the Electric Light Department in later years. Two massive dams on the Columbia River were completed by the Bonneville Power Administration (BPA) to provide hydroelectric power for Boeing and the rapidly growing aircraft construction industry in the Seattle area. The Grand Coulee and Bonneville Dams were the first of a string of federally built dams on the Columbia and Lower Snake Rivers that served as the linchpin for the creation of a vast public power system in the Pacific Northwest (Holt 1987).



THE DERRICK IN THE MIDDLE OF THE FALLS WAS USED IN THE 1920S AND 1930S TO REMOVE LARGE ROCKS BLASTED LOOSE FROM THE MAIN CHANNEL OF THE SNAKE RIVER, INCREASING FLOW THROUGH THE CITY PLANT.

POSTWAR RETURN

After World War II, many veterans who left to participate in the war were returning back to work at the Electric Department.

William R. "Bill" Jones was one of a wave of returning veterans who joined the Electric Light Department in the immediate postwar years. A Shelley native who spent 5 years in the Southwest Pacific during World War II, he worked for the Idaho Falls Police Department before joining the municipal utility in 1950 (Jones, interview).

Max Storer was another returning veteran who joined the Department in the late 1940s. "I started with the electric department on March 1, 1949," Storer said more than half-a-century later. "I started out on the end of a jackhammer, chipping out old concrete."

Jones and Storer represented a changing of the guard at the Electric Light Department. To cope with continuing load growth, the utility hired dozens of new employees during the 1950s and 1960s. There was also a change at the top. M.P. "Hank" Goudy, the consulting engineer who had headed the Electric Light Department since the late 1920s, retired in 1947 (Electric Light Department April 1, 1947).

Two veterans of the Department were promoted to replace Goudy. Melvin T. "Mel" Baird was named Plant Superintendent and the following year Ray R. Moore was named Distribution Superintendent. Both had decades of experience with the Department.

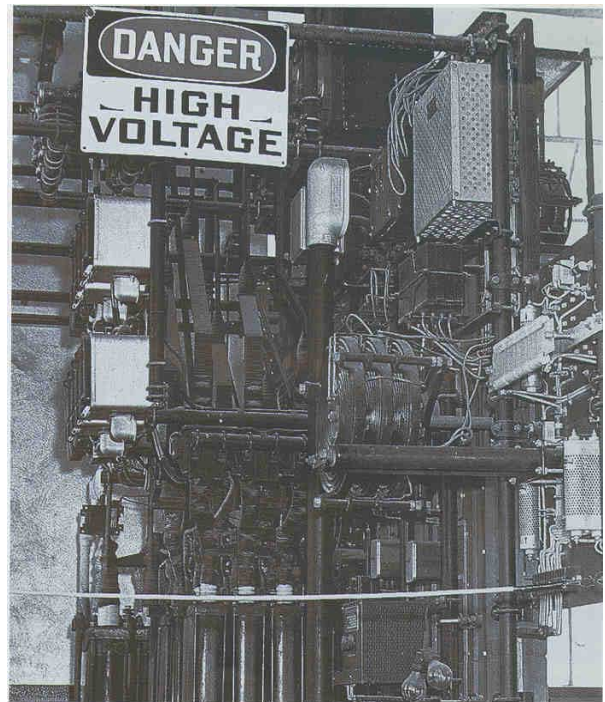
Baird, a native of Brigham City, Utah, moved with his family to Lincoln when he was 10 years old. As a young man, he worked for the Utah-Idaho Sugar Company in Lincoln and in the early 1930s helped install telephone lines in Yellowstone National Park. In 1936, Baird returned to Idaho Falls and joined the Department as a lineman. During World War II he served 3 years in the U.S. Army Air Corps and in the summer of 1945 came back to the Department. Baird remained as the

City's Plant Superintendent until his untimely death in an automobile accident in 1968 (*Post Register* August 20, 1968).

Moore was the Department's longest-serving employee when he was named Line Superintendent in 1947. A native of Idaho Falls, he joined the Department as a groundman in November 1914. He was soon promoted to foreman of the Line Department, a position he held for 30 years until his promotion to superintendent of the Line Department. When Moore retired in 1962, he had served with the Department for more than 47 years, longer than any other city employee (*Post Register* November 11, 1961).

Another longtime management employee was Martell "Marty" Klingler. A Rexburg native, he joined the Department in 1940 as an electrical inspector. He spent the 1950s and a majority of the 1960s as an electrical maintenance foreman, until he succeeded Mel Baird as Plant Superintendent in 1968 (*Post Register* August 30, 1968).

Until 1950, the utility operated in essentially the same manner as it had been operated for 50 years. The hydroelectric stations were



Electric Power usage in Idaho Falls increased 250 percent during the 1950s.

still manually operated. The Department maintained houses for hydroelectric plant employees, three on an island at the Upper Plant and one at the Lower Plant (Storer, interview). Power from Utah Power & Light was delivered through a substation to the City Plant, and peak times continued to put a strain on the system.

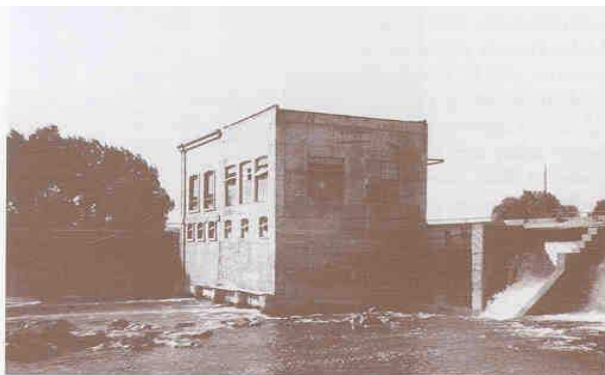
“During peak periods, you were lucky if you could see with your lights,” recalled Max Storer. “They’d just flicker back and forth. You could watch the lights dim as we hit the peak” (Storer, interview).

For most of the Department’s history, ice was a mortal enemy to power generation. The only way to keep the turbines from jamming with ice was through hard, backbreaking, manual labor. Department crews spent much of the winter months on the frozen surface of the Snake River, breaking up ice jams with metal spuds, sledgehammers, and dynamite.

Jones remembers spending bitter cold nights standing on the trash racks at the City Plant with a sledgehammer. “You’d just have to beat the racks with heavy hammers,” Jones said. “You’d have to beat your heart out” (Jones, interview).

When the river would freeze over above the plants, crews would walk out onto the ice with 3/4-inch, welded steel-point pipes. They would jab holes in the ice and then put two or three sticks of dynamite with a short fuse into the hole. “We used boxes of dynamite every year,” Jones said (Jones, interview).

The spring runoff brought another hazard. Crews manually removed thousands of logs and other debris that got caught in the trash racks. “You’d pull the debris out of the racks at the Upper Plant and throw it in the river,” Jones said. “Then, you’d do it again at City Plant, and again at Lower Plant” (Jones, interview).



By the mid- 1940s electricity from the upper plant was increasingly being supplemented by wholesale power purchases from UP&L.

A Time of Transition

The age of nuclear power dawned in southeastern Idaho and a period of change began for the utility in 1950 when. In 1949, the Atomic Energy Commission (AEC)[replaced in 1974 with the Nuclear Regulatory Commission (NRC)] selected a site near Arco for the National Reactor Testing Station. The site, 50 miles west of Idaho Falls, housed the Experimental Breeder Reactor-I (EBR-I), which in December 1950 generated the first energy in the world from nuclear fission (Fritzen 1991).

During the 1950s, the testing station attracted thousands of workers, as the AEC used the facilities to design nuclear reactors for the electric power industry and the U.S. Navy. Many of those workers lived in Idaho Falls, approximately an hour from the station. The city’s population increased dramatically during the 1950s, from just over 19,000 in 1950 to more than 33,000 in 1960 (Fritzen 1991).

As the population skyrocketed, so did electric power consumption. In 1950, the renamed City Electric Department recorded a peak load of 11,500 kilowatts (Electric Light Department, February 6, 1950). Jones recalled that in 1950, the Electric Light Department offices were in an 8x8 room in the diesel plant, which was located immediately beneath the water tower. The city had just taken delivery on three small diesels that had been surplus military equipment and originally been slated for installation in submarines.

“The two original diesels were Fulton Diesels,” Jones said. “They were two-stories high, five-cylinder, 500-kilowatt machines. I remember the flywheel for the Fulton weighed 11 tons, and it only ran at 250 rpm.” (Jones, interview).

Ten years later, the peak load for Idaho Falls was almost 2-1/2 times more at 27,400 kilowatts (Electric Light Department December 6, 1960). At an average annual load growth approaching 24 percent, the Idaho Falls Electric Department was one of the fastest-growing electric utilities in the nation during the 1950s.

The growth in peak load during the 1950s was not accompanied by a frantic search for additional generating capacity, as was the case at other times in the history of the municipal utility. Starting in the mid-1950s, Idaho Falls began drawing preference power from the U.S. Bureau of Reclamation. The drought years of the 1930s necessitated a push for the development of the upper Snake River. The Bureau first identified the Palisades site for a storage reservoir in early 1929 (Carlson 1979). The Great Depression and World War II delayed the actual development of the site, and it wasn’t until 1956 that the Palisades Reservoir was finally completed.

Palisades was 1 of 11 projects completed by the U.S. Bureau of Reclamation and BPA on the Snake and Columbia Rivers during the 1950s (Norwood 1976). Built for flood control, irrigation, and navigation, the dams all included hydroelectric facilities. The Bureau had pioneered the concept of “cash register dams” during the 1920s and 1930s, essentially letting the sale of hydroelectric power subsidize the other purposes for which the dams and reservoirs were built.

Under the terms of the Flood Control Act of 1944, public bodies and rural electric cooperatives received “preference and priority” for any electric energy generated at federal hydroelectric power projects (Norwood 1976). The preference clause ensured that municipal utilities, such as Idaho Falls, would be first in line to receive electric power from projects such as Palisades.

When Idaho Falls renegotiated its contract with Utah Power & Light in 1949, the City Electric Department gradually increased its purchase of wholesale power from the Salt Lake City utility (City of Idaho Falls 1949). However, the influx of Bureau power from Palisades began to have a major impact on the City Electric Department in the latter part of 1958. By 1960, Idaho Falls was generating only 40 percent of its power requirements internally. The balance of the 60 percent of the electric power consumed in the rapidly growing community was purchased from the Bureau (Marker 1960). Bureau power enabled the city to meet all the residential and commercial demand growth stemming from the growth of the atomic testing station west of Idaho Falls.

In the winter of 1961, the city installed new mercury vapor streetlights in the downtown area (Marker 1961). A pole-treating plant for the Electric Department was built, helping save more than \$8,000 in treatment costs (*Post Register*, February 12, 1961). City crews also welcomed the delivery of the first hydraulic, 360-degree boom truck added to the Department’s fleet (*Post Register* December 27, 1961).



During the 1960s, crews worked hard to meet the increased demand of power needs.

THE BONNEVILLE POWER ADMINISTRATION ERA

System peak demand was approaching 40,000 kilowatts by 1963, and energy consultants were estimating that if load growth continued to increase at the same level as it had been since 1950, system peak demand would be above 60,000 kilowatts by 1970 and in excess of 80,000 kilowatts by 1980 (Cornell, Howland, Hayes and Merryfield 1963). Since past experience with Bureau power was favorable, finding additional power supply to meet peak demand was of little concern to city officials.

The relationship with the Bureau, however, only lasted approximately 7 years. In the early 1960s, BPA, which administered all of the federally owned hydroelectric facilities built on the Columbia and lower Snake Rivers, initiated an aggressive expansion program. In 1961, BPA signed a power-sharing agreement with British Columbia allowing it and the Canadian province to maximize power production on both sides of the United States-Canadian border (Tollefson 1987). BPA suddenly had a great deal more power to sell.

One place BPA wanted to serve was southern Idaho, primarily because of the industrial loads associated with phosphate mining in the Pocatello region. In 1962, BPA began talks with the U.S. Bureau of Reclamation about extending its power to southern Idaho. One year later, Stewart Udall, interior secretary under President John F. Kennedy, signed an order giving BPA the job of marketing federal hydroelectric power in southern Idaho. The order gave BPA the responsibility for marketing power from Bureau projects at Palisades, Anderson Ranch, Minidoka, Boise Diversion, and Black Canyon (Tollefson 1987).

Not everyone in Idaho was happy with BPA’s encroachment into the southern half of the state. T.E. Roach, Idaho Power’s president in Boise, termed it “a bold, arrogant pressure play by the vindictive public power group...” (Tollefson 1987). For Idaho Falls, which almost immediately signed an agreement with BPA, the entry of the Portland-based utility into the southern Idaho marketplace seemed a godsend. BPA commanded what appeared to be nearly limitless supplies of inexpensive hydroelectric power. The City Electric Department’s future seemed all but assured.

THE GOOD YEARS

The flood of inexpensive hydroelectric power from BPA allowed Idaho Falls to lower its rates and aggressively market electricity for the first time in its history. Bill Jones, who left the generation department for a position as a utility customer service representative in 1968, recalls that the 1960s were golden years for the City Electric Department.

“Basically, in the late 1960s, we were increasing our power load through electric heating,” Jones explained. “We would go out and measure homes for forced air and cable heat. Our rates were so low we could beat gas or oil silly” (Jones, interview).

By 1969, Idaho Falls had established a residential electric heat rate of .8 cents per kilowatt-hour, one of the lowest such rates in the nation. Jones remembered, “wearing calculators out” trying to figure out rates for different classes of customers (Jones, interview). Eventually, the city came up with a low, flat rate for all but its largest industrial customers.

While the city was selling electric power for next to nothing, it was taking in revenue, as it had never done before. In 1965, the year Idaho Falls cancelled its transmission contract with Utah Power & Light in order to buy all its surplus power needs from BPA, the city transferred 41 percent of every dollar it took in from gross electric revenue to other city departments. The City Electric Division made in-lieu of tax payments of \$1 million to the general fund, exceeding the \$870,000 collected in property taxes that year (Fell 1965).



The latest hydraulic boom and bucket trucks were a welcomed addition to the department's fleet.

Property taxes in Idaho Falls, in fact, were two-thirds less than those levied in comparable-sized Idaho cities. Transfers from the Electric Division helped fund the acquisition, construction, maintenance, and operation of 16 city parks, the zoo, and an 18-hole public golf course.

Street lighting was totally financed from Electric Division funds, and revenue from electric power sales helped build the Idaho Falls Municipal Airport. The \$9 million utility was debt-free and operations and maintenance for the utility were funded on a completely cash basis from current revenues (Fell 1965).

Between 1964 and 1967, more than \$1.5 million in capital improvements were made to the city electric system (Idaho Falls Municipal Electric 1967). Since BPA power eliminated the need for building new generation, the major share of the improvements was concentrated on transmission and distribution systems. The Electric Division planned to spend an additional \$1.5 million on transmission and distribution upgrades between 1967 and 1970.

The increasing workload brought about by the capital improvements program and the expansion of electric marketing activities necessitated more professional management of the city-owned utility.

Harold W. Davis was hired by the city council in January of 1960 as the first Electric Division Manager. Davis spent four years as Manager, at which point the city council then named William H. Fell to the position as Director of the City Electric Division. Davis then joined a business in Idaho Falls.

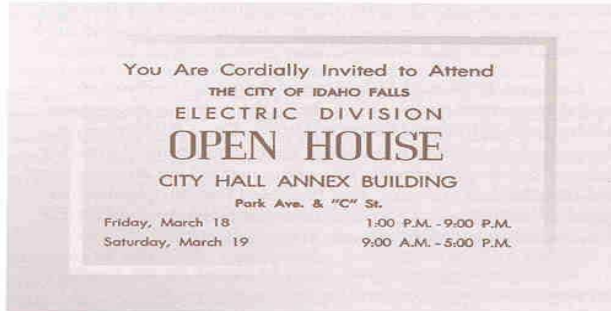
Fell came to Idaho Falls from Port Angeles, Washington, where he spent 8 years working for the Clallam County Public Utilities District as engineer, superintendent, and general manager (Bach 1967). A 20-year utility veteran, Fell brought electrical engineering experience to the top job at the city utility.

During his 6 years as head of the Division, Fell presided over more than \$300,000 in rate reductions for city residents (*Post Register* August 21, 1970). He built substations and distribution lines to serve the needs of the rapidly growing community, and he extended underground electric service to the city's new subdivisions, including Home Ranch, Rose Nielson, and Hughes Additions (Bach 1967). Fell also upgraded the Division's professional staff by adding Howard James as the customer service advisor and Steve Harrison as the chief engineer in 1965 (*Post Register* February 5, 1965, August 6, 1967).

Jones recalled Fell as “a jolly guy, who was a leader but very friendly. He was a wonderful guy all around. He was very businesslike, but he didn't throw his weight around” (Jones, interview).

TRAVAILS AND TRIUMPH

For the Electric Division, the 1970s began with a change in leadership. Fell informed the city council that he had accepted the post of general manager and chief engineer for the utility department in Glendale, California. Councilman Jim Freeman paid tribute to the departing manager, noting that Fell had presided over more than \$2.5 million in system upgrades and improvements during his tenure at the helm (*Post Register* August 21, 1970).



In the 1960s, the department started several new programs. Open houses were an excellent way to practice customer outreach.

The city wasted no time in naming a successor. In the first week of September 1970, only two days after Fell left for California, Mayor S. Eddie Pedersen appointed Glen Steven "Steve" Harrison head of the City Electric Division. Harrison, then 39 years old, was brought aboard by Fell 5 years prior to accepting this new position. An Oregon native, he graduated from Oregon State University in 1960. Before earning his degree, he served aboard a destroyer in the U.S. Navy in the waning years of the Korean conflict (*Post Register* September 7, 1970). Most of his early career was spent working as an electrician at the National Reactor Testing Station.

For Idaho Falls and the electric utility industry in general, the 1970s were a vastly different decade than the one previous. After spending 30 years building hydroelectric dams on the Columbia and Snake Rivers and their tributaries, BPA concluded that there were no more suitable sites for hydroelectric power development in the Pacific Northwest.

Electric power consumption continued to increase across the region. Idaho Falls had certainly not been unique among BPA customers in aggressively marketing residential electric heat during the 1960s. As late as 1969, BPA economists were forecasting that

Your City of Idaho Falls Electrical Department
Invites You to attend

SPRING MENU MAGIC

Free
Cooking
Demonstrations

MONDAY
MARCH 29TH

Two Shows - 2 P.M. AND 7:30 P.M.
Civic Auditorium

Ideas and Tips to Brighten Spring Menus!
Featuring . . .
Betty Nelson and Helen Brady

See the actual preparation of many tempting dishes. Each person attending the cooking shows will receive a free booklet containing recipes for interesting and unique dishes.

FREE DOOR PRIZES
Nothing To Buy
Many Valuable Door Prizes Will Be Awarded
By Participating Idaho Falls Merchants
★ ★ ★ ★
Grand Door Prize Donated by Baughman's I. F. Electric
G. E. ELECTRIC DRYER

Electric division director William Fell emphasized the sale of electric power for residential cooking and heating purposes, as with this 1965 cooking school.

electric consumption would increase seven percent per year for the foreseeable future, doubling by 1980 (Chasan 1985).

This forecast led to a momentous announcement by BPA in 1971. BPA told their utility customers that after 1974, they would receive no more hydroelectric power than they had received in 1971. Thus, BPA urged municipal utilities and rural electric cooperatives in the Pacific Northwest to join the Washington Public Power Supply System (WPPSS), which was floating an ambitious plan to build five nuclear power plants in Washington to meet the anticipated load demand growth of the 1970s and 1980s. This would have major impacts a decade later.

Although the city's rates were extremely low in 1973, an editorial writer for the Idaho Falls *Post Register* put it best one Sunday morning in January 1973 when he noted "the days of 'cheap power,' long the Northwest's siren call, are over." Residential customers paid an average rate of 1.35 cents per kilowatt-hour, commercial customers paid a tenth of a cent lower, and industrial customers received their electricity at .89 cents per kilowatt-hour (*Post Register* January 21, 1973).

In 1973, the oil embargo, during the Yom Kippur War instituted by the Organization of Petroleum Exporting Countries (OPEC) exposed the nation to the fragility of its imported oil supply. Overnight, gasoline and petroleum products doubled in price and then doubled again just weeks later. Particularly hard hit were electric utility customers in California, where much of the state's investor-owned utility industry relied on foreign oil for generation.



Above, Mayor S. Eddie Pederson presided over the fortunes of the Idaho Falls Electric Division for 13 years, from 1964 to 1977.

For BPA customers, such as Idaho Falls, the hammer fell in early 1974. BPA announced a 25 percent wholesale power increase and Idaho Falls followed suit with a 20 percent retail rate increase in June, the first rate increase for its utility customers in 14 years (*Post Register* June 7, 1974).

BELOW. BY FARNSWORTH AND AL BRUNSON
ATTEND TO THE CONSTANT MAINTENANCE
NEEDS OF THE CITY PLANT IN 1970.



LEFT,
PEDERSON
TURNS A VALVE
AT THE UPPER
PLANT IN 1970.



ABOVE, DIVISION CREWS WERE KEPT BUSY CLEARING DEBRIS, DRIFTWOOD AND ICE FROM THE TRASH RACKS AT THE CITY'S HYDROELECTRIC PLANTS.

Six Feet High and Rising

The problems with BPA and rising wholesale power costs paled in significance when compared to the events of 1975 and 1976. The first blow came in the spring of 1975 when workers from most city departments walked off their jobs in the city's first public workers' labor dispute. On April 28, employees of the Electric Division, Public Works Division, Parks and Recreation Division, as well as city police, protested the low salary paid to workers (*Post Register* April 29, 1975).



Spring runoff, such as depicted in this March 1971 photo of the upper plant, always meant high water at the city's hydroelectric plants, but nothing to compare with the June 5, 1976 Teton Dam flood.

The Electric Division had enjoyed harmonious relations with the International Brotherhood of Electric Workers (IBEW) since the local chapter was organized in 1948. Following the first Arab oil embargo in 1973, rampant inflation spurred militancy among labor organizations nationwide. The IBEW was particularly affected, striking electric utilities almost constantly from 1974 to 1977.

In Idaho Falls, most of the strikers returned to work within weeks of walking off the job. Only 34 members of the Idaho Falls IBEW bargaining unit held out for the 13.1 percent salary increase won by the IBEW local chapter representing Utah Power & Light employees. Rank and file employees ignored several city ultimatums to return to work in May and June (*Post Register* June 3, 1975). The city and the union local conducted a spirited advertising campaign in the pages of the *Post Register*. After a 50-day strike, the two sides finally agreed to a settlement in mid-June. All workers were back on the job after the union accepted a 10.6 percent wage hike (*Post Register* June 18, 1975).

In the summer of 1975, after working out of several locations scattered around the city since 1930, including the City Annex Building on C Street and Park Avenue and the old "log hut" in Tatuphaus Park, the Electric Division moved into new quarters on Capital Avenue just south of Broadway. The \$1.2 million Electrical Administration Building was part of the city's ambitious Capital Avenue Improvement Program. The new headquarters, located on the site that once housed the offices of a local moving company, included office space, a conference room, City Council chambers, 26,000 square feet of storage space, and a complete set of loading docks (*Post Register* June 1975).

The return to normal lasted not quite a year. On Saturday, June 5, 1976, the Teton Dam, a new storage reservoir on

the upper Snake River, suddenly failed. More than 80 billion gallons of water spilled out of the breached reservoir, killing six people in the Rexburg area and causing hundreds of millions of dollars in damage (*Post Register* June 7, 1976).

The muddy water crept inexorably south toward Idaho Falls as Saturday lengthened into Sunday. "I was on the South Fork of the Snake River at a rest stop when I heard it on the radio," recalled Bill Jones. "I broke all the speed limits getting to Idaho Falls" (Jones, interview). Jones and other Electric Division workers stocked up on food, water, clothing, and supplies and headed for the city's three power plants.

The slow-moving wall of water entered Bonneville County from the north at approximately 8 a.m. on Sunday. It carried with it trees, barns, cars, dead cattle, and anything else caught in its path (Jones, interview). Thousands of local volunteers helped sandbag the riverbank through the city, and crews cut a channel through West Broadway to lessen pressure on the old Broadway Avenue Bridge (*Post Register* June 7, 1976).

The crest of the flood hit Idaho Falls mid-afternoon on June 6 and did not subside until after nightfall. As the floodwaters proceeded down river, the city's three power plants were shut down. The city plant went off-line at approximately 5:30 p.m. on Sunday, and more than 100 feet of the dam at the Lower Plant washed away later that evening. Jones remembers the force of the water rushing through the windows of the City Plant. "That big concrete building was just a-rumbling," he said. "Water was slopping over the Broadway Bridge, but it was very quiet in the plant. There was no hum from the generators" (Jones, interview).



The city plant in 1970, prior to construction of the new facilities.

When the damage from the flood was fully assessed later that summer, the City Plant was judged a total loss. Damage was far less at the Upper and Lower Plants, as floodwaters never reached the generator floors, but the turbines were still in need of replacement. The city of Idaho Falls and its Electric Division were at a crossroads. BPA power was a finite resource and if Idaho Falls wanted to maintain its 75-year history of energy production, it would have to once again take its destiny into its own hands.

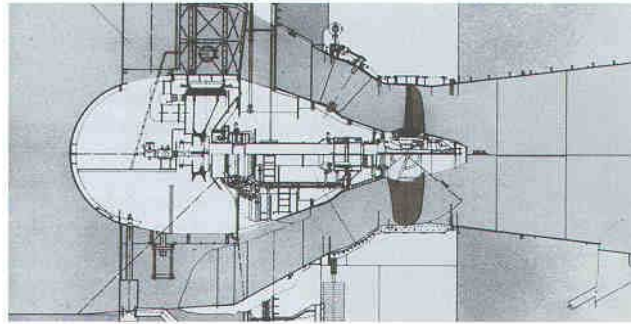
Rebirth

Since the Teton Dam was a U.S. Bureau of Reclamation project, an abundance of federal dollars poured in following the flood. Even before the city had fully dried out, Mayor S. Eddie Pedersen, Electric Division General Manager Steve Harrison, and city officials were outlining plans for a generation rehabilitation project that would increase the output from the city's plants through the use of bulb turbine technology to increase operating efficiency.

Bulb turbines had been used in Europe since 1930. Unlike the vertical Kaplan turbines that were most commonly used in United States hydroelectric plants, bulb turbines lay horizontally in the intake shaft and utilized more of the hydroelectric energy of a conventional, run-of-river plant. Harrison estimated that replacing the Kaplan turbines in the existing plants with bulb turbines could increase generation from 15 to 21 megawatts, which was more than half of the city's average load (*Post Register* September 23, 1976).

The city studied the concept as crews essentially rebuilt the dam and spillway through the community, using federal disaster aid funds. Late in 1977, the city announced a \$48 million bond issue, the largest in the history of Idaho Falls, to rebuild the three plants and install bulb turbines (Wilson 1978).

The proposed bond issue enjoyed widespread support. Idaho's congressional delegation secured a \$7.3 million U.S. Department of Energy grant for licensing and construction costs. Environmentalists favored the bulb turbines because of



The bulb turbines installed in the early 1980s dramatically improved the performance of the City's hydroelectric plants.

the minimal impact it would have on the environment. The *Post Register* editorialized that "to sit idly by and do nothing would only end up leaving everyone in the dark, or paying very high prices for alternative power – if it is available" (*Post Register* February 19, 1978).

The city's voters wholeheartedly agreed with the *Post Register*. In a record turnout on February 21, 1978, the city's electorate voted by a better than 9 to 1 margin to support the bond issue (Bolton 1979). By late 1979, the city had accepted a nearly \$12 million bid from the Austrian firm Voest-Alpine for bulb turbine manufacturing and installation. Hitachi, a Japanese firm, was awarded the bid for the accompanying generators and crews began preparing the three power plants for upgrading to the bulb turbines (Bolton 1979).



Above left in 1980, workers remove a vintage 1920s diesel generator from the city plant. Far right Mel Erickson (Councilman) and Marty Klingler inspect plant damage. Far right (bottom), Electric Division manager Steve Harrison, left and division engineer Jeff Paine conduct a Media tour of the upper dam for Ray Summers of KIDK-TV.

A Decade of Change

The 1980's brought in a new set of issues for the Electric Division to deal with. As the population in the Northwest continued to grow, the demand placed on the Columbia River System, once thought to be an inexhaustible source of power, began nearing capacity.

In the ensuing scramble to meet load-resource balance, two scenarios emerged: rate increases to absorb the costs of adding new resources to the system, and conservation programs to check rising consumer demand.

To oversee these diverse activities Van Ashton, a business administration graduate from Idaho State University with a residential construction background, was hired in 1981. An Idaho Falls native, Ashton replaced the retired Bill Jones as customer service manager and was immediately put to work on both projects.

In order to pass on rising wholesale power costs, the Electric Division had to implement rate increases in 1980, 1981, 1982, 1983 and 1987—unprecedented in the history of the utility—and a far cry from the rate decreases of the 1960's. Retail rates increased nearly 150% during the decade, with the residential rate going from 1.5 cents per kilowatt-hour in 1980, to 3.47 cents per kilowatt-hour in 1987.

A Conservation Department was established in order to implement the various programs BPA was asking its customer utilities to participate in. Beginning with a water heater wrap insulation program and a residential weatherization program, a number of new customer services were constantly developed and offered to the residents and businesses of Idaho Falls.

Also in 1981, the aforementioned WPPSS nuclear project defaulted on its bond obligation, the largest bond default in U.S. history. As a participant in the project (although relatively small) the Electric Division was faced with the prospect of a large settlement with the potential to devastate the utility.



When the case was ultimately settled the participating utilities were not obligated to make full restitution; however many investors, both locally and nationally, lost their entire life savings in what was thought to be a "safe" bond market.

Only one of the five scheduled plants was eventually completed, but since the growth rates predicted in the 60's were not realized due to many events of the 70's, the output from these plants were not as critical to the region as might otherwise been the case. Still, severe damage had been done to the credibility of the utility industry, and the need for additional generating resources remained.

When the Bulb Turbine Project was completed an unforeseen opportunity arose. BPA was still looking for resources to supplement its system, especially after the WPPSS debacle. The Electric Division was able to negotiate the sale of the energy output of the plants to BPA, and in exchange, BPA would pay for the operation and maintenance costs of the plants.

The first bulb turbine started commercial production at the Lower Plant in April 1982. The bulb turbines installed at the City and Upper Plants went commercial in July and September, respectively. By the spring of 1983, the three plants were operating at an all-time high. The three plants were producing one-third of the city's energy requirements, a six-fold increase over the energy production garnered from the old Kaplan turbines (Burke 1982).

The plants were also generating power at an average cost of 2.88 cents per kilowatt-hour, slightly more than half-a-cent higher than Idaho Falls paid BPA for wholesale power at the end of 1983 (Burke 1983). By decades end the project more than justified the investment.



In 1982, the city effectively restructured the bed of the Snake River while installing new bulb turbines at the City Plant but retained the picturesque falls that draw tourists to the community today.

THE GEM OF THE SNAKE

Mayor Thomas Campbell directed the Electric Division in 1979 to begin studying the feasibility of building a new city-owned hydroelectric plant on the Snake River below Idaho Falls (*Post Register* January 1, 1981).

Idaho Falls had surveyed sites for a new hydroelectric facility on the Snake River as early as the 1920s. One location that became more attractive as the years progressed was the existing site of an old timber crib dam approximately 5.5 miles south of Idaho Falls, straddling the Bonneville-Bingham County line. Engineers estimated that a rock fill dam at the old dam location would create enough storage water potential to generate 22.6 megawatts of electric power (Burke 1983).

Harrison and his staff filed a license application for the site with the Federal Energy Regulatory Commission (FERC) in late 1979 (*Post Register* December 11, 1979). They called it the Gem State Project. Utah Power & Light owned property at the site and agreed to help the Electric Division with land leases and water rights, in exchange for the right to purchase surplus power from the site.

The Electric Division spent nearly 5 years securing permits and laying the engineering and financial foundation necessary to accomplish the project. On September 11, 1984, the city presented the Gem State Project bond issue to the electorate. The city asked voters to approve a \$48 million bond issue to pay for construction of a rock fill dam 49 feet high and 900 feet long. The bond issue also included the construction of a powerhouse, installation of a vertical Kaplan turbine generator, and all the equipment necessary to generate more than 22 megawatts of electricity (City of Idaho Falls 1988).

Idaho Falls voters overwhelmingly approved the bond issue for the Gem State Project, as they had done 6 years earlier for the bulb turbine project. The measure gained a 77 percent approval rating, well above the two-thirds majority needed for passage (Lattish 1984).

Shortly after the successful Gem State bond initiative, Mark Gendron was hired to replace Jeff Paine as Chief Engineer.

An electrical engineering graduate from the University of Colorado, Gendron worked at the Idaho National Engineering Laboratory (INEL) [now Idaho National Engineering and Environmental Laboratory (INEEL)] for 2 years and for Power Engineers in Hailey, ID for 2 years prior to joining the Electric Division.



Thomas V. Campbell followed S. Eddie Pederson as Mayor, serving as Idaho Falls' chief executive officer from 1978 to 1993. Pederson and Campbell occupied the Mayor's office for nearly 30 years, a time of immense change for the Electric division.

"Gem State was already in the pipeline when I arrived," said

Gendron. "They were in the design-build stage. I came in at the right time. I got involved in the financing and due diligence issues. Those were the most exciting years of my career" (Gendron, interview).

Planning for the Gem State Project began even before passage of the bond issue under the supervision of CH₂M Hill Inc. of Boise. M.A. Mortenson served as the general contractor responsible for the massive earthwork needed to construct the dam and 4 miles of earth dikes that would create a 5,000-acre-foot reservoir. In August through November 1997, river-flow and weather conditions forced a fast-track schedule on the 100,000 cubic-yard embankment across the Snake River. The reservoir began filling on January 29, 1988 (DeHeer 1988).

The dam and hydroelectric station encompassed several innovative design and construction techniques. Rather than build the five massive radial gates needed for the dam's spillway, the Electric Division purchased surplus gates for \$1 from the Corps of Engineers Chief Joseph Dam, located on the Columbia River in Washington. American Fabrication of Idaho Falls was awarded a bid of \$800,000 to refurbish and install the radial gates, saving city taxpayers approximately \$1 million and keeping fabrication jobs in the community (*Heavy Industry Journal* 1988).

Gem State began generating hydroelectric power on October 22, 1988 (Richert 1988). Two weeks later, on a raw, windy Friday afternoon, Mayor Thomas Campbell threw a switch on the generator to officially dedicate the 22.4-megawatt plant. He told the crowd that with the completion of the bulb turbine project the previous decade and the Gem State Project, Idaho Falls was able to meet half of its energy needs (Richert 1988). This was a 45 percent increase from what the utility could generate before the Teton Dam failed.

Gem State was designed as a true multiple-use project. Boat ramps and a wildlife park soon turned Gem State into one of the area's prime recreation spots (*Post Register* May 25, 1989).



In the summer and fall of 1987, the Gem State project was built on a fast-track, design-build contract in which crews erected a 100,000-cubic foot dam and four miles of earthen dikes in just four months.

INTO THE FUTURE

The 1990s were one of the more momentous decades in the history of the nation's electric utility industry. The passage of the Energy Policy Act (EPAct) in 1992 set in motion forces that in many ways restructured the electric utility industry. Congress opened access to the nation's transmission grid, which spawned the creation of Regional Transmission Operators (RTOs) and Independent System Operators (ISOs). These new public-private organizations serve as gatekeepers to the nation's high-voltage transmission networks.

In the past, high-voltage transmission networks were owned and maintained by the utilities that built them. Now, they are owned and maintained by consortiums that allow any utility or industrial customer to use them.

The legislation also opened the way for the aggressive expansion of Independent Power Producers (IPPs) and noutility generators (NUGs). Building these merchant power plants allows electricity to be sold from one end of the country to the other. Rather than serving customers in a franchise territory, electricity is sold to the highest bidder, whether a utility or industrial customer. Investor-owned utilities began a wave of merger and acquisition activity, driven by the belief that only the strongest and biggest utilities would survive the accelerating restructuring of the industry.

On the state level, governments from California to New Hampshire passed landmark utility deregulation legislation that forced utilities to divest themselves of generation resources. Many deregulated utilities evolved into what the industry called "wire companies." They buy electric power from IPPs or NUGs, wheel the power across a grid maintained and dispatched by an RTO, and resell the power to end-use customers, such as Idaho Falls.

Idaho Falls and BPA faced new realities during the decade as environmental activism came to the fore. Pacific Northwest environmentalists rallied around the cause of migrating salmon, urging a suspension of dam construction and suggesting that some dams on the region's rivers be dismantled in the interest of bettering the salmon spawning grounds (*Post Register* October 23, 1995). Other environmentalists protested against expanding the region's high-voltage transmission grid, arguing that transmission lines were a blight on the landscape.

Idaho Falls found itself caught in the middle of the environmental battles. For the first half of the decade, the Electric Division conducted a losing battle over its plans to add one more hydroelectric plant to the city's stable of generating resources. The

battle over its plans to add one more hydroelectric plant to the city's stable of generating resources. The Electric Division investigated building a hydroelectric dam on the Snake River near Shelley in Bingham County in the early 1970s. Those plans accelerated in the 1980s when the Gem State Project neared completion and the city sought to become even more energy independent of outside electric power suppliers.

The 10.3-megawatt Shelley Project faced far more opposition from environmentalists, landowners, and politicians than the larger Gem State Project had encountered the decade before. By the summer of 1992, the city was still committed to going ahead with licensing for the estimated \$40 million project. Even the *Post Register*, a longtime supporter of public power in the community, called appropriation of planning money "a gamble" and "a dicey proposal" (Huegel 1992). By the time newly-elected Mayor Linda Milam took office in late 1993, the *Post Register* editorial writers were "convinced that the city is continuing to throw good money after bad by continuing to pursue" the Shelley Project (*Post Register* December 5, 1993). The Shelley project was abandoned after the Federal Energy Regulatory Commission (FERC) denied a license for the project in 1995.

Through the first half of the 1990s, BPA's power rates continued to rise. Even after an 11.6 percent raise in BPA's rates in October 1993, Idaho Falls ratepayers continued to pay one of the lowest electric rates in the nation. Idaho Falls electric consumers paid an average of 3.6 cents per kilowatt-hour, little more than half the 5.9 cents per kilowatt-hour paid by Idaho customers of Utah Power & Light. That was less than a quarter of the average rates paid by customers of big eastern investor-owned utilities such as Consolidated Edison, Philadelphia Electric, and Long Island Lighting Company (Englert 1993).

Mark Gendron, who was named Electric Division Manager in 1995 following the retirement of Steve Harrison, reminded the community upon taking office that the work done by his predecessor would pay huge dividends in the future (*Post Register* February 14, 2000). In a September 1995 interview, Gendron explained that the four plants built and operated by the city now generated approximately 43 percent of the city's energy needs, at approximately 2.8 cents per kilowatt-hour. Gendron added that all of the power plant debt would be paid off by 2015, at which time the city would enjoy a low cost power source in a deregulated and competitive marketplace (Egan 1995).

Gendron's confidence was borne out in 1996 when BPA, faced with the loss of customers to competition from merchant plants, reversed its policy of rate increases and began cutting wholesale electric prices to municipal customers such as Idaho Falls (City of Idaho Falls 1995). In the summer of 1996, the city cut power rates by 5.5 percent. Idaho Falls' customers paid \$44 (including service charge) for 1,000 kilowatt-hours of electricity, making city electric rates among the lowest in the nation (Egan 1996).

The Electric Division continued its existing conservation programs and expanded its Energy Services Department to include zero interest loans for energy efficient appliances. The city council established a rate stabilization fund that would help protect residents from the impact of fluctuating wholesale power rates caused by deregulation (City of Idaho Falls Electric Division 1998). The Division adopted a mission statement that positioned it to be “the consumer-owned, electrical energy supplier of choice for its customers by (1) offering safe, reliable, high-quality power, and related services; (2) giving superior customer service; and (3) being a regional price leader” (City of Idaho Falls 1995a).



Second Century

Electric utility restructuring created new opportunities for the Electric Division. By 1998, the city was buying 25 percent of its power needs from suppliers other than BPA, thanks to new transmission wheeling procedures that opened up high-voltage transmission networks and fostered competition in Northwest power markets.

In March 2000, the City Electric Division announced it was changing its name to reflect the new challenges of a restructured electric utility environment. Idaho Falls Power was unveiled on billboards, television, customer communications, and in newspapers as a reflection of the city’s proud past and its bright future in a rapidly changing electric power marketplace (Taule 2000).

“What we’re doing,” Gendron explained, “is trying to position ourselves to take advantage of that brave new world when full competition and customer choice begins” (City of Idaho Falls 1998b).

In the summer of 2000, Gendron reflected on both that brave new world and a century of public power in Idaho Falls. “Most of the municipal utilities in the Pacific Northwest are wires-only utilities,” he said. “Today, we can generate 40 percent of what we need. This city is truly blessed with a reliable, environmentally benign power resource. This utility today is a product of a century of foresight, courage, and incredible effort” (Gendron, interview).

Joseph A. Clark would have understood Gendron’s sentiments exactly.



One hundred years after its founding, Idaho Falls Power serves the community with clean reliable hydroelectric power from facilities such as the city plant and the Gem state project

- American Public Power Association. 1990. *Public power in America: a history*. Washington, DC: American Public Power Association.
- American Public Power Association. 1998. *1998 annual directory & statistical report*. Washington, DC: American Public Power Association.
- Bach, Louis A. 1967. "Working to improve city's electrical needs." *Post Register*. N.d., 1967.
- Bolton, Richard. 1979. "First municipal bulb turbine project underway." *Power Engineering*. November.
- Burke, Anne. 1982. "Would you want power plant in your yard? Farmer's don't." *Post Register*. August 18.
- Burke, Anne. 1983. "Turbine's power production surpasses expectations." *Post Register*. May 26.
- Carlson, Ronald D. 1979. *The Snake River story*. Idaho Falls, ID: Transcript copy located in the Bonneville County Historical files.
- Carter, Kate B. (ed.). 1955. *Pioneer irrigation: upper Snake River Valley*. Salt Lake City, UT: Utah Printing Co.
- Chasan, Daniel Jack. 1985. *The Fall of the House of WPPSS*. Seattle, WA: Sasquatch Publishing.
- City Council Minutes. Idaho Falls, ID, Bonneville County.
Book 3, p. 140.
Book 3, p.164.
Book 3, p. 332.

Book 4, p. 2.
Book 4, p. 19.
Book 4, p. 230.
Book 4, p. 12, (quoted in Fritzen 1991).

Book 5, March 1, 1918, p. 70.
Book 5, September 21, 1917, p. 10.
Book 5, October 25, 1918, p. 166.
Book 5, July 18, 1919, p. 366.
Book 5, August 26, 1919, p. 393.

Book 6, March 5, 1926, p. 498.
Book 6, April 9, 1921, p. 22.
Book 6, April 21, 1921, p. 17.
Book 6, April 26, 1926, p. 66.
Book 6, February 20, 1925, p. 416.

Book 7, June 20, 1928, p. 119.
- City of Idaho Falls. 1928. Contract. General Electric, Salt Lake City, Utah, with the City of Idaho Falls. June 11.
- City of Idaho Falls. 1949. Agreement. Idaho Falls and Utah Power & Light. August 8.
- City of Idaho Falls. 1988. Gem state hydroelectric project, project data sheets. September 1.

City of Idaho Falls. 1995a. *Electric division news and notes*. Our City, Our Home: Annual Report.

City of Idaho Falls. 1995b. I.F. *likely to benefit from changes in power industry*. Our City, Our Home: Annual Report.

City of Idaho Falls. 1998. *Electric deregulation may be good news for I.F.* Our City, Our Home: Annual Report.

City of Idaho Falls. 1999. *A century of light: history of the city of Idaho Falls electric generation facilities*.

City of Idaho Falls Electric Division. 1997–1998 Annual Report.

Cornell, Howland, Hayes & Merryfield (Consulting Engineers) 1963. *Idaho Falls City Power Plant*. June.

DeHeer, Lee. 1988. "The Gem State Hydroelectric Project." *USCOLD News*. July.

Driscoll, F. and Schwartz, H. 1927. Letter to the Honorable Mayor and City Council. Idaho Falls, ID. December 2.

Egan, Dan. 1995. "Power surge." *Post Register*. September 10.

Egan, Dan. 1996. "City to cut power rates." *Post Register*. August 26.

Electric Light Department. Monthly Report from W.P. Goudy to the Honorable Mayor and City Council. Individual Monthly Reports are dated accordingly.

September 5, 1939.

April 1, 1940.

December 5, 1941.

March 2, 1942, p. 2.

June 4, 1942.

July 1, 1942.

October 6, 1942.

April 3, 1945.

October 4, 1945.

November 5, 1945.

April 1, 1947.

February 6, 1950.

December 6, 1950.

Englert, Stuart. 1993. "Power to the people." *Post Register*. February 14.

Fell, W.H. 1965. *The Idaho Falls municipal electric story, or, a look backward to the future* Excerpts for a paper presented to the Engineering and Operations Section, Northwest Public Power Association. April 8.

Fritzen, Mary Jane. 1991. *Idaho Falls: city of destiny*. Idaho Falls, ID: Bonneville County Historical Society.

Gendron, Mark. 2000. Interview with author. July 12.

Heavy Industry Journal. 1988. Idaho Falls hydropower gem. December.

Holt, Russ. 1987. "Power at cost: dreams and reality." *BPA Circuit Special Edition*. April.

Huegel, Tony. 1992. "City bets more money on hydro projects." *Post Register*. July 15.

Idaho Falls Municipal Electric. 1967. 1966–1967, *progress report of the electric light and power division*.

Idaho Falls Times. 1892. January 28.

Jones, William R. 2000. Interview with author. July 12.

Lattish, Deborah. 1984. "Turbine bond passed, but battle remains." *Post Register*. September 12.

Marker, Joe. 1960. "City uses more palisades power than its own plants can generate." *Post Register*. Undated newspaper clipping, 1960.

Marker, Joe. 1971. "Keefer twin fete 80 years." *Post Register*. February 1.

Marker, Joe. 1961. "City installs vapor lights on streets." *Post Register*. January 15.

Norwood, Gus. 1976. *Columbia River power for the people: a history of policies of the Bonneville Power Administration*. Portland, OR: Bonneville Power Administration.

Post Register

"City's own plant prospers." September 10, 1934.

"Idaho Falls is not noted for power." April 25, 1937.

"Mayor lists city progress in report to council." February 12, 1961.

"Employee begins his 47th year." November 11, 1961.

"Idaho Falls acquires new electric truck." December 27, 1961.

"City division adds advisor." February 5, 1965.

"New chief." August 6, 1967.

"City official killed in Fremont smashup." August 20, 1968.

"Klingler named to new post." August 30, 1968.

"Fell resigns city position." August 21, 1970.

"City appoints electrical head." September 7, 1970.

"Idaho energy rates are going up." January 21, 1973.

"Idaho Falls to increase utility rates by 20 percent." June 7, 1974.

"Road, bridge employees join in strike effort." April 29 1975.

"City orders strikers back to work Friday." June 3 1975.

"City electrical workers back with 10.6 percent wage hike." June 18, 1975.

"City electrical division nears move to urban renewal headquarter." N.d. June 1975.

"Teton dam flooding devastated valley, six confirmed dead." June 7, 1976.

"Sandbags filled by volunteers Sunday." June 7, 1976.

"Bulb turbine can answer the questions." February 19, 1978.

Legal Notice: Federal Energy Regulatory Commission, Project No. 2952. December 11 and 20, 1979.

"Mayor predicts projects in state of city address." January 1, 1981.

"Wildlife park takes shape." May 25, 1989.

"Shelly Project troubles may lead to other energy options." December 5, 1993.

"Northwest GOP senators drop salmon exemption." October 23, 1995.

Obituaries: Steve Harrison. February 14, 2000.

Richert, Kevin. 1988. "Gem state plant officially humming." *Post Register*. November 5.

Storer, Max. Date?? Interview with author.

Taule, Corey. 1995. "City power taking more electrifying name." *Post Register*. February 17.

Wilson, D.J. 1976. "Innovative generator may help bulb plan." *Post Register*. September 23.

Tollefson, Gene. 1987. *BPA and the struggle for power at cost*. Portland, OR: Bonneville Power Administration.

Wilson, D.J. 1976. "Innovative generator may help bulb plan." *Post Register*. Sept 23.

----- . 1978. "Age, flood helped bulb plan." *Post Register*. February 17.