

ONE HUNDRED YEARS OF PROGRESS



**Public
Service
Company**
of
Colorado

an Investor-Owned Utility Serving Colorado Since 1869

as its "Pure Rocky Mountain Spring Water" beer; Great Western Sugar; Ideal Cement; Gardner-Denver; and, of course, the world famous Climax Molybdenum Co., to name only a few of the old stalwarts.

But in the last few years, these companies have been joined by the new breed of American industry, and Colorado in this relatively short period of time has become recognized as the location of one of the nation's most rapidly growing "Scientific Complexes."

Just a little more than three years ago, Public Service Co. financed and worked closely with the University of Denver's Denver Research Institute in preparing a study called, "The Scientific Complex . . . Challenge to Colorado." In answer to requests, four thousand copies of this study have been mailed to all parts of the U.S. and some foreign countries. This study outlined the ingredients necessary for the development of the nucleus of scientific and research oriented activity that we refer to as a Scientific Complex. At the same time, the study inventoried, so to speak, those necessary ingredients that were to be found in Colorado. We found that we had, even at that time, a substantial start toward a significant complex. Since then and with the activity stimulated to a great degree by the publication of this study, the state has attracted such sophisticated manufacturers as the IBM Corporation; Hewlett-Packard, with two plants in Colorado, both of which have doubled their size recently; Ampex; Sparton Electronics; Amphenol—just to name a few.

A little more than two years ago, Boulder, Colo., became the home of ESSA, The Environmental Sci-

ence Services Administration, an agency within the U.S. Department of Commerce that will perform in close association with the Boulder Laboratories of the National Bureau of Standards, and will be the world center for Environmental Research on land, sea and air.

In the words of President Johnson, the Environmental Science Services Administration provides, "A single national focus to describe, understand and predict the state of the oceans, the state of the upper and lower atmosphere, and the size and shape of the earth."

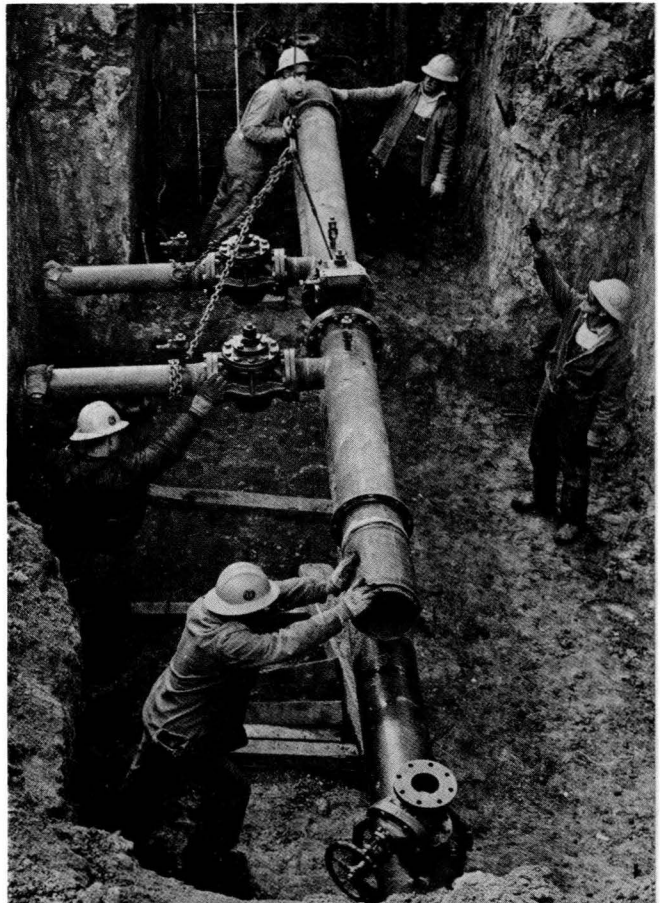
So it is apparent that the state's economy is well diversified, and there is every reason to be extremely optimistic about the economic future of the state.

Robert T. Person, PSCo president since 1959, commenting on the company's past, present and future had this to say, "The same pioneering effort which shaped the West is reflected in the successful history of our company. Let us not for a moment be lulled into a complacency of belief that pioneering in our company is passe. Rather this pioneering spirit will be even more important in the years ahead as we keep up with rapidly developing technical advancements in the industry and as we continue to keep ahead of the rapidly expanding needs of the people and area which we serve.

"While the years ahead will have their challenges, we know we have the material and human resources to meet and solve them. We are enthusiastic about the future of our company and our state. As our pioneering predecessors did, we look forward with greatest confidence."



ABOVE GROUND FACILITIES at PSCo's Leyden Mine Gas Storage Project. This was the first abandoned coal mine known to be used for underground storage of gas.



GAS OPERATING PERSONNEL install section of a major gas line in Metropolitan Denver.



PUBLIC SERVICE COMPANY OF COLORADO

Colorado was seven years away from statehood when the first investor-owned utility was formed in Denver

MARAUDING bands of hostile Indians were still on the warpath in the Colorado territory and this frontier land was seven years away from statehood when the Denver Gas Company, the first predecessor of the Public Service Company of Colorado, was incorporated on Nov. 13, 1869.

By the feeble glow of a kerosene light, this pioneer parent of Public Service Co. was formed in a room of the original *Rocky Mountain News* building in Denver. William N. Byers, owner of the *News*, Colonel James Archer, who was to become the company's first president, Walter S. Cheesman and Louis Bartels were among the men who conceived the Denver Gas Company, Colorado's first investor-owned utility.

Since that early pioneering day, the history of Public Service Co. of Colorado has been interwoven into the historical fabric of the State of Colorado.

The first extensive settlement of Colorado had been spurred on ten years earlier by gold discoveries. The most important of these was the famous Pikes Peak Gold Rush of 1859.

The decade of the Sixties was probably the gloomiest in the history of Colorado. The placer gold mines had played out and refractory ore—ore difficult to extract, process and transport—was encountered in the mines; the Civil War claimed citizens for soldiers and Indian resistance threatened the existence of the territory.

However, by 1869, when the Denver Gas Co. was incorporated, Colorado was on the threshold of a new decade of prosperity and growth. During the Seventies, railroads were extended into Colorado, narrow-

gauge rail lines in the mountains tapped the mining regions rich in silver, colony towns were founded; agriculture was extended and immigration increased greatly.

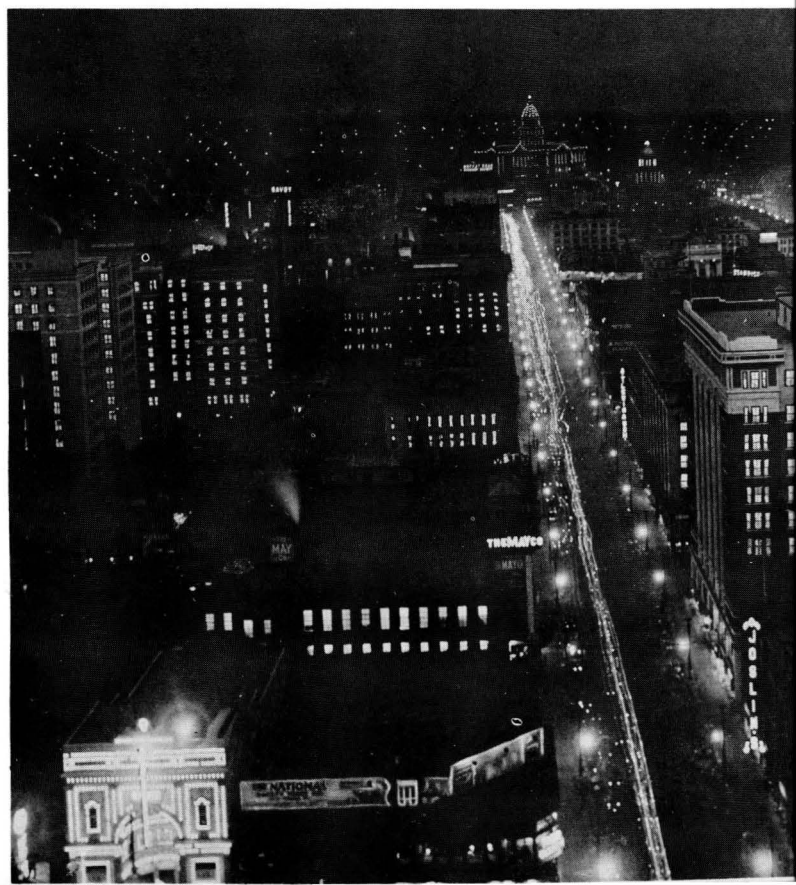
The pioneer Denver Gas Company was founded for the purpose of providing manufactured gas to illuminate the homes and streets of the little town of Denver, which was destined to grow from less than 5,000 people into the largest city in the Rocky Mountain Region and to become the capital of the State of Colorado.

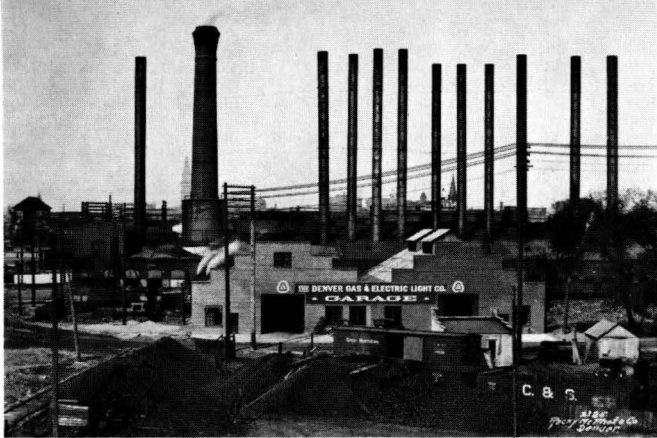
Heavy freight rates and the dangers involved in transporting equipment and supplies by horse or ox-drawn wagon trains from the Missouri River to Denver delayed initial construction work on the gas plant and distribution system until a railroad line could be built into Denver.

By the end of 1870, Denver had two major rail links with the eastern markets and one with those on the Pacific. On June 22, 1870, amidst wild demonstrations and celebrations, the first train entered Denver as a solid silver spike was hammered into place commemorating the occasion and completing the Denver-Pacific railroad between Denver and Cheyenne, Wyo.,

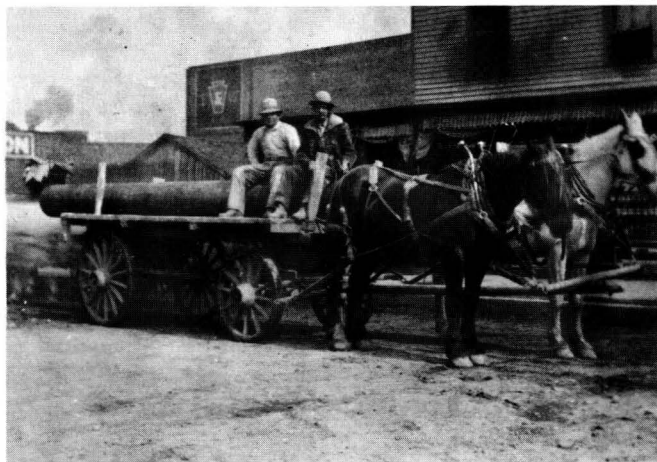
EARLY DAY Denver. Gas and Electric Building (center of picture) was a prominent landmark from 1910 to 1962.

PICTURED ON THE FRONT COVER is the modern Arapahoe Steam Electric Station, with a total generating capability of 256,500 kilowatts, as viewed through the spokes of the historic Salida Corlis Engine. This 300-horsepower engine was used in the now-retired Salida Steam Generating Plant from 1908 to 1925. The Arapahoe Station and the Corlis Engine symbolize the progress and technical advancements achieved by the electric industry and PSCo through the years.





DENVER GAS AND ELECTRIC LIGHT Company brought the city's entire gas, electric and steam heating services under one management for more economical operation.



PIPE FOR MANUFACTURED GAS on its way to being installed in Denver in early 1900s.

where it is interconnected with the transcontinental Union Pacific railroad, giving Denver a tie with both the East and West coasts.

The second link with the East occurred when the first Kansas-Pacific train arrived in Denver on Aug. 15, 1870, from the Missouri River 639 miles away.

Following the advent of railroad operations into Denver, materials were soon flowing into the thriving city. Gas pipe laying began on Sept. 20, 1870.

The first gas was manufactured in "retort houses" where huge furnaces extracted and captured the gas produced by burning coal. The initial gas retort plant was housed in a building erected on the southwest corner of 18th and Wewatta Streets, the present site of the Union Pacific railroad yards.

Signaling the start of a bright new decade of prosperity for the State of Colorado which would be admitted to the Union on Aug. 1, 1876, the Denver Gas Company's gas street lights brightened the streets of pioneer Denver for the first time in 1870. By late 1871, 8½ miles of distribution mains were in operation in Denver.

At first, manufactured gas was used exclusively for street lighting. Later it was used in homes for illumination. The Denver streets were lighted by gas lamps on iron posts. To reach the lights, lamplighters carried short wooden ladders over their shoulders or toted them down sidewalks in wheelbarrows. Just before dusk, the lamplighters made their rounds and struck the match to bring into flame the hissing gas.

The "old lamplighters" days were numbered, however, for Denver was among the first cities in the world to adopt electric lighting.

Electric lighting was first introduced to the citizens of Denver in 1880. By this time a decade had passed



since the coming of the railroads and manufactured gas.

Denver's population had swelled to over 35,000 and new families were arriving at a rapid rate. The state's population was 195,000, about five times that of ten years earlier.

Electricity at this time was so new and mysterious that the first problem was to demonstrate to Denver citizens that electricity could be used safely and to inform them of its benefits.

Exhibition Plant Installed

An exhibition plant was installed at 390 Curtis Street primarily for this purpose. In this plant, on April 21, 1880, before a throng of amazed people, light was produced at the end of a wire for the first time in Denver.

The possibilities of this new white magic were grasped by Colorado's richest and greatest men including: Will G. Fisher, pioneer department store owner; Walter S. Cheesman, who was destined to give Denver its great water system; Frederick Gold Vaille, who just recently had organized in Denver the fourth telephone exchange in the United States; James Duff, who was manager for English capital which built the internationally celebrated Windsor Hotel and other large enterprises; Edward W. Rollins, who was to become nationally known as the head of the investment firm of that name; Nathaniel M. Tabor, son of H.A.W. Tabor, the picturesque Leadville millionaire, U.S. Senator from Colorado and builder of the famous Tabor Grand Opera House; Thomas E. Johnston and Charles G. Ruthroff. This group of men incorporated the Colorado Electric Co. on Feb. 21, 1881. The company's electric plant was constructed at 21st and Wewatta Streets and was called East Side station and later Barker substation.

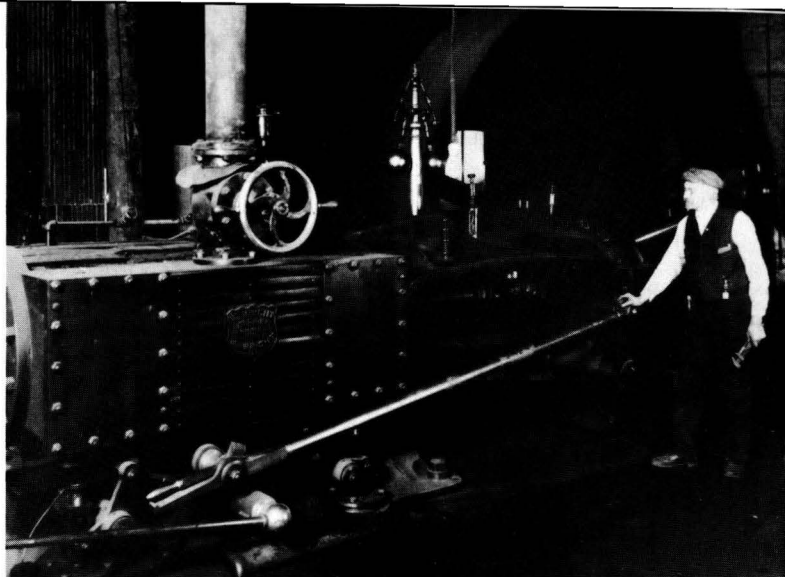
The plant's initial generating equipment consisted of two 35-hp Brush-Swan direct-current dynamos. Alternating current had not yet been introduced.

W. J. Barker was sent to Denver in the spring of 1881 by the Brush-Swan Co. to install and operate these machines which were the first west of the Missouri River. To drive these dynamos, he installed a 250-hp Wright steam engine which at that time was the third largest of its kind in the United States.

The engine's fly wheel weighed nine tons and was 17 ft. in diameter. "Old Sally," as it has sentimentally been nicknamed, can still be seen by visitors to PSCo's modern Valmont steam electric station near Boulder, Colo., where it has been placed in the shadow of the power station as a monument to the early pioneers of electricity in Colorado.

The Colorado Electric Co. was chartered to generate electricity for street lights and for general use in homes and stores. However, since the contract for street lighting between the Denver Gas Co. and the city did not terminate until 1885, electricity was initially confined to dwellings and business houses.

Commercial lighting of stores and businesses was effected in 1881. The famous Daniels and Fisher Department Store was the first store to be arc-lighted. In those early days, most residences were not wired for electric lighting. However, lighting could be ordered for special occasions from the electric company which furnished temporary wiring, lamps and batteries. It



'OLD SALLY' was the first generating equipment west of the Missouri River when installed in Colorado Electric's plant in Denver in 1881. The 250-hp Wright steam engine used to drive the dynamo was third largest in the United States at the time.



REMOVING THE COKE from the huge retorts in this early day gas manufacturing plant was a hot, tedious and dangerous task. The coke was all that remained of coal which had been baked to release gases that were used to illuminate Denver's first street lights in 1870; and as a fuel for lighting and heating businesses and homes in later years.

became a familiar sight to see a horse-drawn wagon carrying a load of huge storage batteries to the location of a Denver home. The batteries were parked outside the residence during the night and were taken away the following morning to be recharged for the next customers.

Entry of the new electric company into the lighting field marked the beginning of an era of fierce competition between gas and electricity as a source of light. It must be remembered that the existence of the Denver Gas Co., in the first few years, depended largely upon the use of gas for street lighting.

Although the street illumination contract between the city and the gas company did not expire until 1885, it was decided by the electric company to demonstrate the superiority of street lighting using electricity. Between 1881 and 1885 the famous "lighthouses of the plains" were constructed. These consisted of eight iron towers ranging in height from 150 ft. to 210 ft. located at strategic positions throughout the city. It is known that one tower stood at 16th and Curtis Streets, then on the edge of the residential section—now in the heart of downtown Denver; one at West 32nd and Shoshone; one at 9th Street and Colfax and one at 23rd and Ogden. Each tower carried eight 3,000 candlepower arc lights which lighted large areas. The 64 arc lights were serviced daily by men ascending from the ground in a small cage manipulated by a cable. These towers remained in use until 1891.

In 1885 the electric company won the new street illuminating franchise from the city. In a short time the gas lamps and the lamplighter disappeared, and 20-candlepower electric globes were burning brightly on the old gas lamp posts at street intersections.

Between 1880 and 1890, Denver's population tripled, rising from 35,629 to 106,713. The demand for electricity and gas grew with the population increase. To keep up with the growing demand, several competing electric utility organizations were formed to serve the city.

These companies, together with the pioneer Colorado Electric Co., soon found that consolidated service was more efficient and economical.

Denver Consolidated Electric Company Was Formed in 1889

As a result, a series of mergers, consolidations and purchases of electric companies followed and on May 7, 1889, the Denver Consolidated Electric Co. was formed.

The Eighties were also a period of steady growth for Denver's gas utilities. Although the city had awarded the street lighting franchise to the electric company in 1885, demands for gas lights in homes and businesses had developed over the years, spurred by refinements in burner tips largely due to the introduction of lava and nonmetal materials and lower cost of gas service. The Wellsbach mantle did not come into general use until after 1890. Had it been used earlier, even greater progress would have been made in combating the competition of electricity. But, even so, the increased demands for gas lights necessitated an enlargement of the gas retort plant and a move to a new location.

On March 25, 1886, a site at 7th and Wewatta Streets was purchased and in September 1889 a new coal retort house at this location was put into operation. It was built for 22 benches (interconnected units of a long furnace) each with a capacity of 50,000 cu. ft. of gas per day.

Denver Consolidated Gas Formed

Just as the electric companies of the era had recognized the need for consolidation to improve service and efficiency, Denver's gas industry initiated its own consolidation when, on Oct. 29, 1891, the Denver

Gas Co., the United Gas Improvement Association and the People's Gas Light Co., the latter two being inoperative companies, merged as one company under the name of the Denver Consolidated Gas Co. Offices of the new company were at 1714 Curtis Street.

The state's progress during the Eighties had continued on a grand scale. Mining wealth poured forth from Leadville and other mining centers. Agriculture had expanded with the construction of irrigation systems. The livestock industry thrived and wool production soared. Smelters were erected for reduction of ore. Cities grew. It was indeed the period of the "prosperous Eighties."

Suburban Electric Companies Formed in Early Nineties

The rush of people into Denver gave momentum to the birth of several new towns in its suburbs. Early pioneers will remember such towns as Montclair, Colfax, South Denver, Brooklyn, Elyria, Highlands and several others. Several new suburban electric companies were formed between 1890 and 1893 to provide service to these fast growing communities.

However, in late 1893 the prosperity of Denver and the state suffered a severe shock when the Sherman Silver Purchase Act was repealed. Under the act, the government had been authorized to make large purchases of silver.

Since silver was Colorado's most important product during the Eighties and early Nineties, the prosperity of the state was largely built on it.

The depression years which followed were responsible for the fact that for the remainder of the decade no new electric companies were formed.

This depression and the uneconomical competition of gas and electricity companies for the same business were more than likely the primary reasons for the incorporation in 1889 of the Denver Gas and Electric Co. This was one of the most important consolidations in the history of the local utility business, since it brought together for the first time all of the gas and electric companies serving the city and county of Denver at that time.

Lacombe Electric Company Formed at the Turn of the Century

As Colorado stood on the threshold of the twentieth century, she again could look forward to a promising future. Gold discovered in the Cripple Creek area was taking the place of silver in the state's economy. Farming continued to expand; new crops such as sugar beets created new wealth. Investments in irrigation during the decade would multiply five times and the irrigated land area would be increased over one million acres, or 75 per cent, by 1910.

These ten years of prosperity again saw the organization of several competing electric companies in the Denver area.

In April 1900, the Lacombe Electric Co. was incorporated to do business in Denver. A street lighting franchise was granted to the new company by the city and the Lacombe power plant at 13th and Zuni



LINEMEN of the Denver Gas and Electric Light Company install a transformer on a distribution line power pole using up-to-date equipment, including a modern line truck of the Twenties.



A THREE-MAN LINE CREW sets a line pole using the latest equipment available in the early Twenties.

Streets was built. This is the location of Public Service Co. of Colorado's present Zuni electric generating station.

On Nov. 29, 1909, the Denver Gas and Electric Light Co. was formed (not to be confused with the Denver Gas and Electric Co. which had been in operation since 1899).

Thus, as the second decade of the century began, Denver once again had several competing utilities serving its gas and electric requirements. The population of Denver had risen from 133,859 in 1900 to 213,381 in 1910. Paralleling the growth of Denver and other cities was a dramatic growth of the state. Its population increased by 48 percent, greatest of any decade in its young history.

Gas Business Continued to Expand

During the 20-year period between 1890 and 1910, the gas companies, having relinquished the illuminating business of the city to electricity, were developing gas cooking, water heating, room heating and other uses. The additional business more than offset the losses in the lighting field.

In March 1906 work began on a new retort house for 20 additional coal gas benches with a capacity of 70,000 cu. ft. per day per bench. By 1910 the plant contained a grand total of 52 benches. This plant was the largest hand-fired retort house in the country.

It was no simple matter to hand-fire a retort ten feet long and twenty-eight inches wide. The stokers, stripped to the waist, opened the retort door and skillfully flung a scoop of coal over the red hot coking bed. The coal had to be deftly spread, evenly and loosely. Otherwise, it would pack and an undesirable spongy coke would be produced.

Few night scenes can equal the picture of the old Denver retort house with its hundreds of firing doors continually popping open with a belch of flame and being fed by sweat-dripping, half-naked men, wielding shovels. To those who witnessed the production of gas in those times, the sight of the huge retorts and sweating shovelers has left a lasting impression.

Cities Service Company Formed

Only eight months had passed in the new decade between 1910 and 1920 when the Cities Service Co., which was to become a nation-wide utility holding company, was formed, with the Denver Gas and Electric Light Co. as the foundation upon which it was to be built.

Less than a year later on July 11, 1911, the entire gas, electric and steam heating services of the city were once again combined under the single management of the Denver Gas and Electric Light Co. through the merger and property transfer of all the gas and electric utility companies serving Denver and its suburbs.

Headquarters of the new company were in the Gas and Electric Building at 15th and Champa Streets which had been officially occupied by the Denver Gas and Electric Co. on Nov. 10, 1910.

On that Saturday night at 8 p.m., with Mayor Robert Speer pushing a huge button built on a platform two stories high, the 13,000 electric lights on the new structure flashed on and a great shout of approval welled up from the throng which filled 15th and Champa Streets.

Colorful Early-Day Sales Promotion

For the next 12 years, from 1911 to 1922, Denver Gas and Electric Light Co. entered into a period of normal operation and growth.

An early-day promotion as described by a long-time employee of the company gives a colorful description of "high pressure selling" at the turn of the century.

"We used high-pressure (but wholly legitimate) methods to place irons in Denver homes. Every two salesmen were assigned a driver for a horse-drawn wagon, piled high with electric flatirons. We drove



VALMONT steam electric generating station constructed in 1923-24 was the largest powdered fuel generating station between the Missouri River and the Pacific Coast. Present net generating capability of the plant is 300,000 kw.

down each street, with one salesman covering each side of the street. We would ring the bell, shove a flatiron into the hands of the housewife, explain that this was a free one-week trial of the iron and that we would be back within a day or two, to show her how to operate it.

"We would then dash back to the slowly moving wagon and disregard the housewife's usual protests that she didn't want a flatiron, that she already had a perfectly satisfactory sad iron, and that she did not care to try it. Our reply—thrown over the shoulder as we hurried away—was that she was under no obligation, and that we would be back in a day or two. The return call was made upon a bicycle so that it was obvious that we could not transport the flatiron back to the office.

"Sometimes on our return call the flatiron would still be on the front porch, sometimes just inside the door, and sometimes back in the kitchen. We persuaded the housewife to permit the flatiron to remain for a week's trial or to do some ironing with it. When we returned with the horse-drawn wagon at the end of the week—sometimes it was ten days or two weeks later—an occasional sale would be made."

Public Service Company No. 1 Formed in 1923

Public Service Co. of Colorado No. 1 was incorporated on Aug. 2, 1923, to build a new steam-electric generating station to supply electricity to both the Denver area and northern Colorado. Economy and dependability dictated that the new plant be located near the lignite coal fields of northern Colorado.

These factors had a definite bearing on choosing the site for Valmont plant, five miles directly east of Boulder. Initial construction started in 1923 on a 600-

acre plot of ground. A five-story brick building was completed in 1924 to house coal handling and pulverizing equipment, the boiler, generator and accessories. Outdoor transformers were installed and a 120-acre artificial lake was formed immediately adjacent to the plant building. A 20,000-kw Westinghouse turbine-generator was installed.

The plant was the most modern and the largest powdered fuel generating station between the Missouri River and the Pacific Coast when it began to generate electricity in December 1924.

Since that time, the No. 1 generator has been completely rebuilt, raising its net capability to 33,000 kw. The addition over the years of three units of 29,000 kw each and the No. 5 unit with a 180,000 kw capability has raised the net capability of the plant to 300,000 kw.

Public Service Company of Colorado II and III

Two months after the organization of PSCo I, Public Service Co. of Colorado II was incorporated, merging PSCo I, the Denver Gas and Electric Light Co. and the Western Light and Power Co.

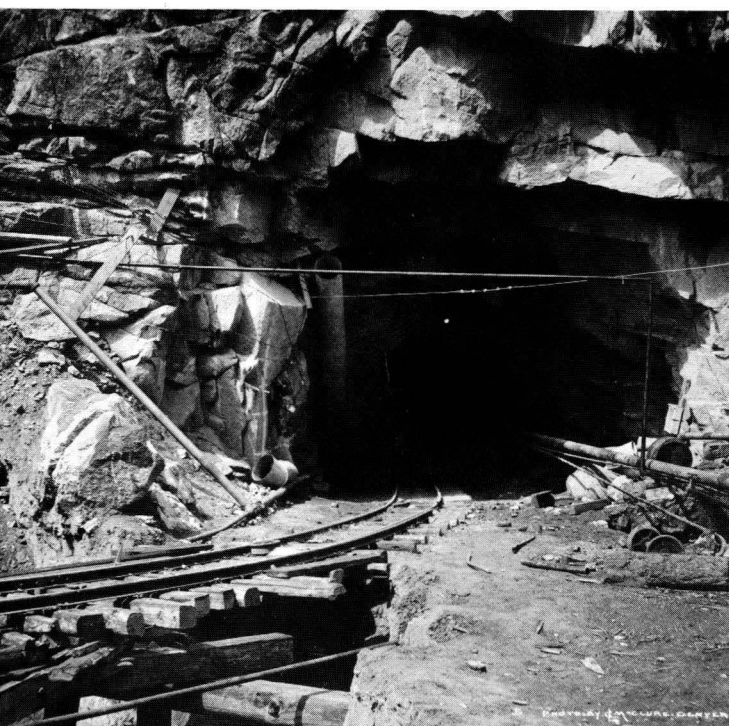
Less than a year later, on Sept. 3, 1924, Public Service Co. of Colorado III was incorporated, merging Public Service Co. of Colorado II and the Colorado Power Co.

Thus, what had started as the Denver Gas Co. in 1869 and the Colorado Electric Co. in 1881 was built into a state-wide gas and electric utility company.

It is of interest to retrace the history of the companies which eventually joined with the Denver Gas and Electric Light Co. to form Public Service Co. of Colorado II in 1923 and Public Service Co. III in 1924.



SHOSHONE, one of PSCo's most colorful hydroelectric plants, is located in the beautiful canyon of the Colorado River about eight miles east of Glenwood Springs. The plant has been in operation since 1909 and presently has a 14,000 kw capacity.



DIVERSION TUNNEL carrying water from the Colorado River to the Shoshone hydroelectric plant is 2½ miles long and bores straight through the granite wall of the canyon.

Northern Colorado Power, 1906

The formation of the Northern Colorado Power Co. was promoted by a Denver man named Joseph J. Henry. He had been actively securing control of isolated utility properties for investment appreciation and had seen the advantages of central system generation and power transmission. His plan for the territory north of Denver was to build the latest type steam generating plant at Lafayette, in the midst of the northern Colorado coal fields, and transmit power at high voltage to the surrounding towns.

Of the many projects that had been conceived in various parts of the country for producing electric power close to coal mines and transmitting current to centers of distribution, the Northern Colorado Power Company's project of 1906 was one of the first to be put into successful operation.

Growing towns in the heart of rich agricultural, mining and dairy areas were close at hand for power consumption. Lafayette, Boulder, Longmont, Loveland, Berthoud, Fort Collins, Greeley, Fort Lupton and Brighton are all within a 45-mile radius of Lafayette. A 150-mile transmission line would include them all. To the north, only 47 miles from Fort Collins, was Cheyenne, the capital of Wyoming. On all sides of Lafayette were numerous coal mines which could be supplied with electric power, especially in the Louisville area.

Options on franchises in many of the towns were obtained by Mr. Henry and he managed to interest an eastern financial institution in the project. Upon obtaining the money, the Northern Colorado Power Co. was organized on April 3, 1906. A contract was let to Westinghouse, Church, Kerr and Company to build a steam generating plant at Lafayette.

The new Lafayette steam plant was completed and put in operation in 1907. Steam generating equipment of the latest design was installed. Much of the equipment secured had been on display and in operation at the St. Louis World's Fair. Total rated capacity of the plant was 6,000 kw.

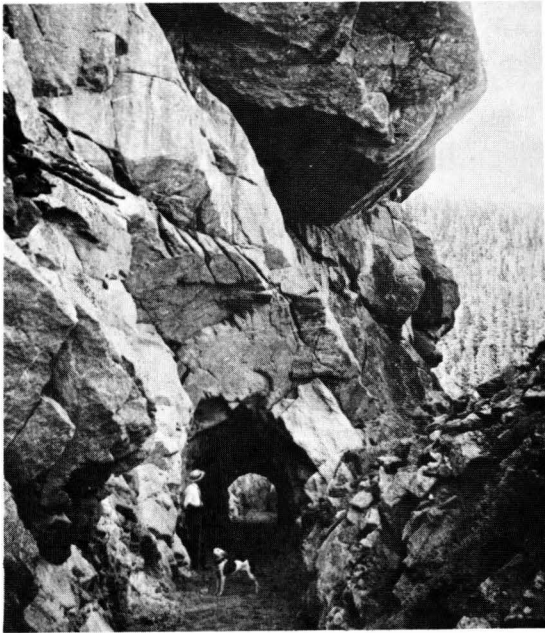
For the following seven years the company prospered. The 150-mile, 44,000-v transmission line was completed in 1911. During this period the Northern Colorado Power Co. acquired the Cheyenne Light, Fuel and Power Co. (1906) and the Boulder Electric Light and Power Co. (1914).

All did not remain rosy for the company, however. Technical problems, strike conditions and a financial depression of the territory retarded its progress. This combination of problems necessitated a reorganization on Sept. 10, 1914, and the name of the company was changed to the Western Light and Power Co.

Earnings were improved during the succeeding years and on Oct. 3, 1923, the Western Light and Power Co. was merged into the Public Service Co. of Colorado No. II.

Central Colorado Power, 1906

The inception and development of the Central Colorado Power Co. is a spectacular record of pioneering and resourcefulness. Founder of the company was Myron T. Herrick, later governor of Ohio and am-

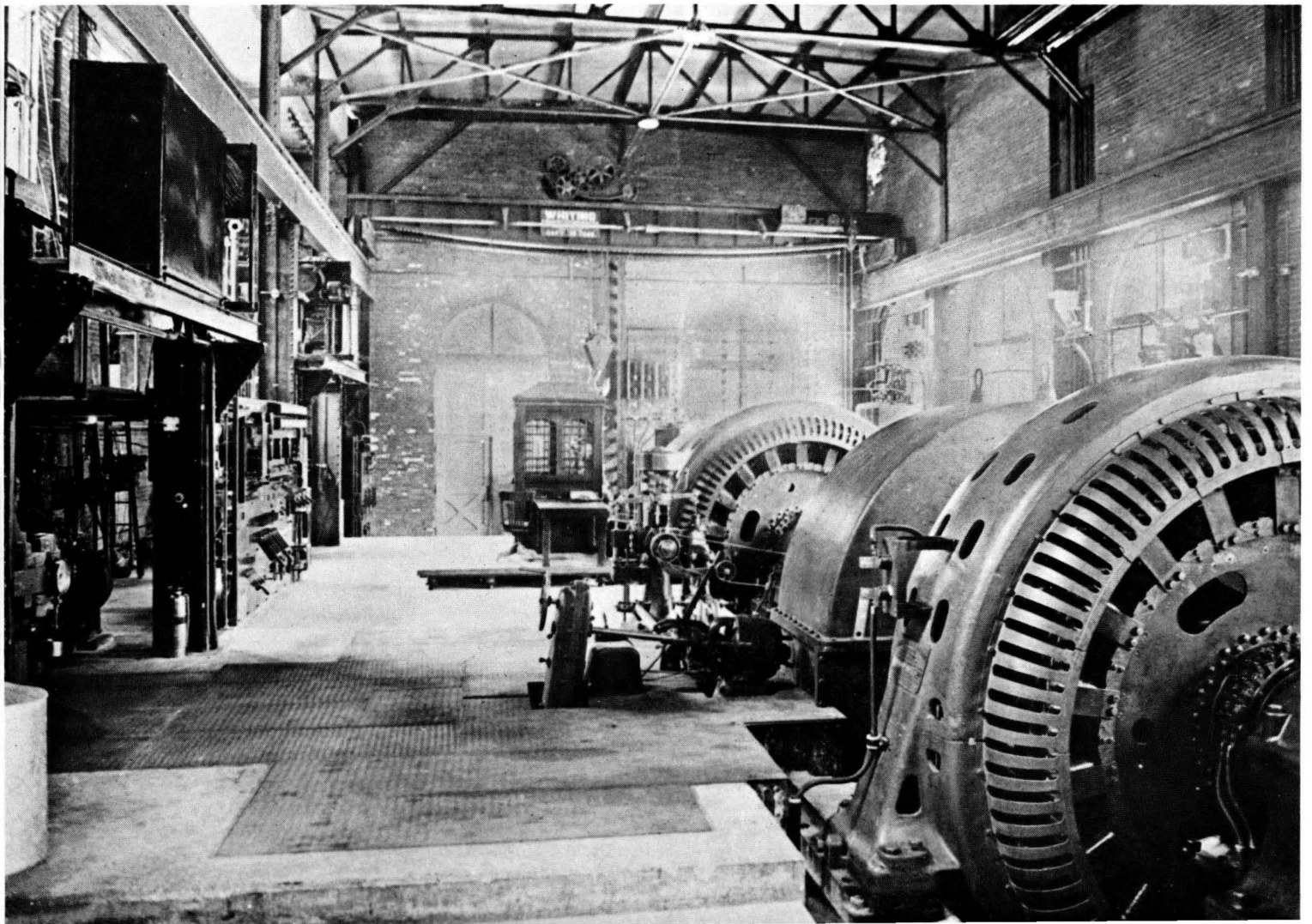


TRENCH cut through solid rock is typical of the rugged terrain and engineering problems which were faced in building the gravity line between Boulder hydroelectric plant and the Barker Dam.



TRANSPORTATION OF EQUIPMENT between Boulder, Colo., and the hydro plant site, five miles up rugged Boulder Canyon, required ingenuity. Here, a 10-horse team inches its way up, pulling a wagon loaded with a section of original generating unit. Horses at rear are a relief team.

BOULDER'S TWO GENERATING UNITS had a capacity of 10,000 kw when they went into operation in 1910. The plant produced on the highest head (1,828 ft.) in the United States when it was constructed.



bassador to France, who came to Colorado to have field tested certain theories and practices having to do with hydroelectric generation, which up to that time had only been used in the laboratory.

Hydroelectric power resources seemed limitless in the Rockies. Thriving mining camps throughout the mountains seemed ready markets for electricity. Live-stock raising and agriculture also were becoming important industries.

Extensive plans were formulated. An era of hydroelectric generation, the like of which never before had been seen by man, was envisioned. In this trackless frontier, high up on the Continental Divide of the nation, in the heart of the mountain wilds of Colorado, a proving ground would be made on which to demonstrate methods and practices of power generation and transmission which would revolutionize the industry.

On Nov. 13, 1906, the Central Colorado Power Co. was formed, and work was started simultaneously on construction of the Shoshone hydroelectric plant in the majestic canyon of the Colorado River about eight miles upstream from Glenwood Springs; on construction of the over 150-mile, 90,000-v Shoshone transmission line, which is the loftiest of its kind in the world, crossing the Continental Divide three times in its course; and the construction of the Boulder hydroelectric plant located in middle Boulder Creek Canyon, about five miles west of Boulder.

Shoshone Hydro Plant Built

Construction of a diversion tunnel for Shoshone hydroelectric plant got under way in 1907. Shoshone, unlike other plants, depends upon river flow rather than on captive water from a reservoir.

The Shoshone diversion tunnel is $2\frac{1}{3}$ miles long and bores straight through the solid granite wall of the canyon, delivering Colorado River water from the diversion dam to Shoshone hydro plant. The tunnel, even today, is a remarkable engineering feat.

On May 24, 1909, Shoshone, with a rated capacity of 10,000 kw, later increased to 14,000 kw, started generating power. The plant operates all year; however, in winter production is curtailed in direct proportion to the decrease of water flow in the river.

Today, the plant has five transformers which boost the generator's 4,000-v power to 115,000 v for the famous Shoshone electric transmission line to Denver.

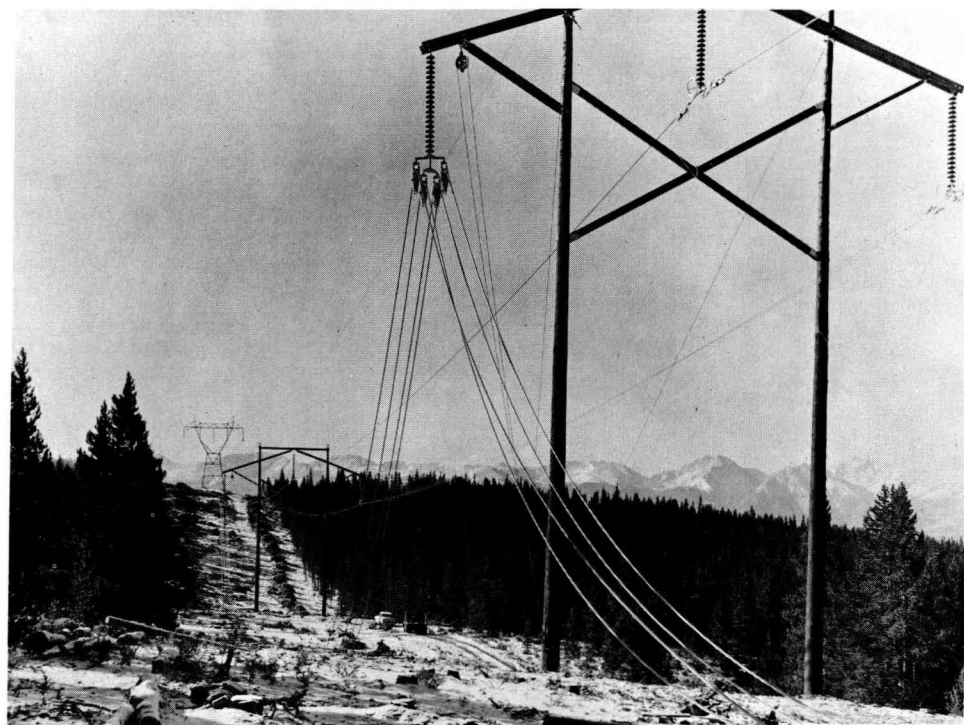
World's Loftiest High Voltage Transmission Line

Many aspects of the famous Shoshone line are among the most unusual in the world. Beginning at the plant itself, three shining aluminum wires leap 1,800 vertical feet to a tower perched atop the cliffs. Huge steel towers, anchored in solid granite, suspend the line to the canyon rim. It extends over 150 miles suspended over 1,000 towers and passes over some of the most forbidding terrain in the world before feeding its current into a substation two miles west of Denver. It crosses the Continental Divide three times as it snakes its way through Colorado mountains over Hagerman Pass, 12,055 ft., Fremont Pass, 11,346 ft., and Argentine Pass at an altitude of 13,532 ft.

Work started on the line in late 1906 and, in spite of the rugged terrain over which the line was built, the severe weather encountered, and the fact that much of the line's design was revolutionary in concept, it progressed rapidly and was completed early in 1909.



GIANT HELICOPTER is used to set sections of steel towers in place during construction of high voltage electric transmission line between Malta Substation, south of Leadville, and Waterton Substation, southwest of Denver.



HIGH ALTITUDE, HIGH VOLTAGE TEST LINE near Leadville has drawn international attention, and has already produced results. Test findings were recently incorporated in the construction of the company's first 230,000-v line.

More than 60 years have passed since its construction began, and even today there is nothing in the world to equal the Shoshone line, the first high-voltage system ever put into operation at such an altitude.

Boulder Plant Design in Textbook

In the meantime, the depression of 1907 had interfered with the completion of the Boulder hydroelectric project. Not until 1909 did construction resume on this project. The original dam site was abandoned and the present Barker Dam location was selected. The dam is located about 12 miles above the plant site on Middle Boulder Creek. After 18 months of construction, Barker Dam rose to its completed height of 175 feet and stretched across Middle Boulder Creek 720 feet at the crest.

Actually, construction of the gravity line to feed the hydro plant offered more engineering problems than the larger project of Barker Dam. Clearing of dense stands of timber, tunneling and "mountain moving" were among the thorny puzzles to be solved.

Construction methods and machinery were relatively crude by today's standards and magnified the scope of the venture. Water behind Barker Dam, when released, flowed in the gravity line to Kossler forebay, on a mountain above the plant. A 1,828-ft. drop from Kossler reservoir through the penstock created pressures of 800 psi at the power plant. This tremendous pressure caused the riveted butt-joints of the penstock pipe to leak excessively.

Experiments Bring New Methods

Out of the leakage problem arose a new method of acetylene welding, then in its infancy. After much experimentation, it was discovered that hammering the welds with a ballpeen hammer while the weld was still warm prevented joints from cracking when the weld cooled. Thus, ballpeen welding was introduced to the world.

Experimentation was the watchword in construction and operation of the hydro plant itself. Practical knowledge in high pressure hydroelectric generation was practically nonexistent in the early 1900s. Many of the principles derived from "theory in practice" at Boulder hydro were later used as examples in textbooks on power plant design.

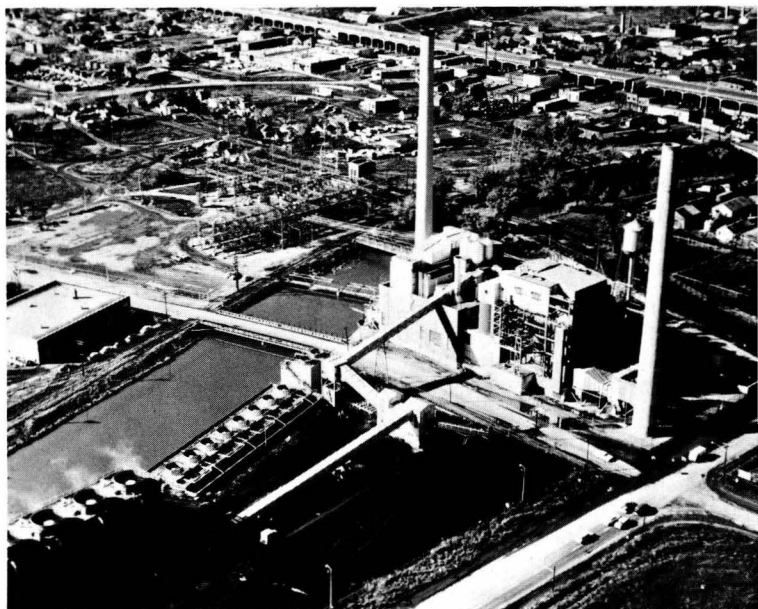
When constructed, the plant produced on a higher head (1,828 ft.) than any other hydro plant in the nation.

On Aug. 4, 1910, water flowed from Barker Dam and Boulder hydro plant's turbines spun to produce 10,000 kw of electricity. Over the years additions to the plant have increased the capacity to 20,000 kw.

The following five years were trying for the Central Colorado Power Co. Having completed its plants and systems in the face of great difficulties, and now ready to deliver power, it found the market dwindling. Mining had slowed up in the districts of Leadville, Dillon, Georgetown and Boulder. At the same time, although Denver was still growing, its rate of growth was retarded to such an extent that the population increase from 1910 to 1920 was only 20 per cent, as compared to the phenomenal 48 per cent rate of growth of the previous decade. A combination of these circumstances, coupled with the burden of a \$15 million indebtedness, caused the financial collapse of the ambitious project.



ARAPAHOE STATION is an impressive sight at night.



ZUNI STATION bears little resemblance to its predecessor on the same site, built by Lacombe Electric Company in the early 1900s.



CHEROKEE STATION contains the 150,000-kw unit that made Public Service Company a million-kilowatt utility in June 1962.

On April 2, 1913, a reorganization was effected and the Colorado Power Co. was formed to acquire the property and assets of the Central Colorado Power Co. and the Leadville Light and Power Co., which had been organized by the same group in 1907.

Following the reorganization, Colorado Power Co. purchased several electric utilities during 1915 and 1918. The company, however, did not particularly strengthen its position as a large volume producer of

electric power by these purchases, because all but one of these properties were isolated systems.

On Sept. 3, 1924, the Colorado Power Co. was merged with the Public Service Co. of Colorado II, and the Shoshone hydroelectric plant and Boulder hydroelectric plant became an important part of Colorado's largest integrated electric generating and transmission system.

Advent of Natural Gas in Colorado

During the early Twenties, a great deal of interest had been developed nationally in the idea of transporting natural gas from gas-producing fields to cities, where it could be used to take the place of manufactured gas and make possible a saving for the people served.

Because of the lower cost and higher heat value, natural gas presented great possibilities for increasing comfort and convenience through its wider use for general heating purposes.

As if to help in the celebration of Armistice Day, the discovery well in the Wellington oil field, 10 miles north of Fort Collins, "blew in" on Nov. 11, 1923, with such force that the derrick and rigging were blown all over the landscape. The pressure behind the gas was so great that it was some time before the well was capped.

Eight months later, in July 1924, the Mitchell well, in the same field, came in with an explosive roar that ignited the escaping gas in a billowing torch 150 feet high. This immense gas flame was visible from Denver over 50 miles away.

With the discovery of natural gas in sufficient quantities in the Wellington field, the Colorado-Wyoming Gas Co. was formed Dec. 1, 1925. This company completed a pipeline to carry natural gas to Fort Collins on Dec. 9, 1925, and another to Cheyenne on July 7, 1926.

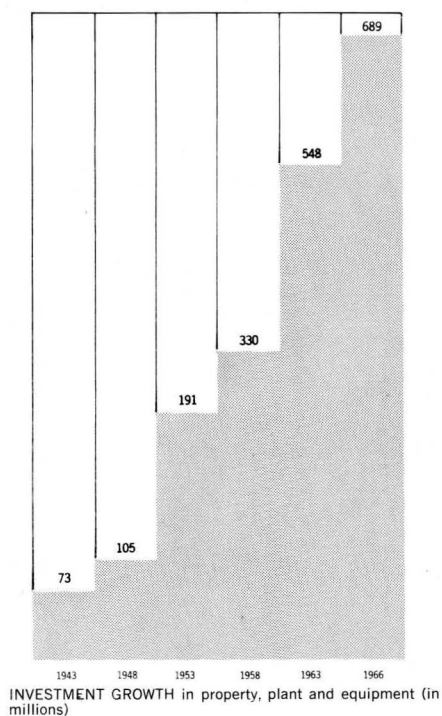
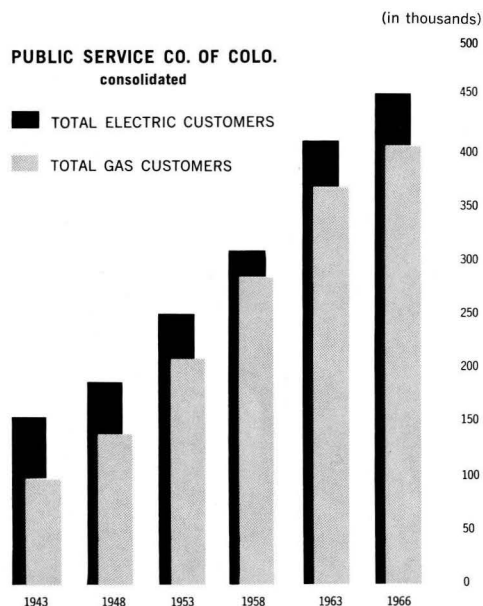
On Sept. 22, 1931, the 50,000 shares of common stock of the Colorado-Wyoming Gas Co. were delivered to Public Service Co. by Cities Service Co. to cancel a debt. At that time CWG became a subsidiary of Public Service and remained so until Dec. 31, 1964, when it was merged with Western Slope Gas Co., another PSCo subsidiary.

Natural Gas Comes to Denver

Negotiations, which had been under way for some time between the company and the city officials of Denver, were finally consummated on Sept. 19, 1927, when a natural gas ordinance was passed by the city council granting the company the right to distribute natural gas in Denver. Shortly thereafter the Colorado Interstate Gas Co. began construction on its pipeline from the Texas Panhandle gas fields to Denver.

On the evening of June 23, 1928, at 9 p.m. the town border station valve on the southern edge of Denver was opened with appropriate ceremonies and natural gas passed into the distribution mains of Denver. This pipeline, which serves cities along the way, including the Pueblo Gas and Fuel Co. which became a PSCo subsidiary in 1943, is 340.7 miles long.

With the introduction of natural gas in Denver, fires which had burned night and day for years in the manufactured gas retorts, were banked for the last time on Aug. 1, 1928.



INVESTMENT GROWTH in property, plant and equipment (in millions).

Local Ownership and Growth

The year 1943 witnessed one of the most important developments in the eventful history of Public Service Co. of Colorado. On Nov. 29, 1943, pursuant to an order of the Securities and Exchange Commission, Cities Service Power and Light Co., a subsidiary of Cities Service Co., which had held the entire common stock ownership of Public Service Co., divested itself of the ownership through the sale of its common stock holdings to some 8,300 investors. As a result of this, the number of stockholders, both preferred and common, at the end of 1943 numbered approximately 12,500. By the end of 1966, PSCo shareholders numbered 23,325.

Since the Forties, Colorado has continued its phenomenal population and economic growth. During the 26-year period, 1940 to 1966, the state's population rose from 1,123,000 to over 2,000,000.

Mining, agriculture and the tourist industries continued to expand. The manufacturing industry made great strides. Between 1947 and 1966, the number of manufacturing plants in the state grew from 1,586 plants employing 58,500 persons to 3,053 employing some 96,000.

Public Service Company's growth has paced the state's progress. During the 23 years of independent operation through 1966, the total number of gas customers jumped from 100,818 to 402,488. Electric customers which numbered 156,292 in 1943, had soared to more than 452,000.

To provide for the increases, both in number of customers and individual usage, it was necessary for PSCo to undertake a vast expansion program. In 1943 Public Service Company's investment was \$72 million. By the end of 1966, PSCo had \$689,374,000

invested in facilities. This expenditure made it possible to increase company generating capacity from 202,000 kw in 1943 to 1,256,200 kw gross capability by the end of 1966. Gas sales had grown from 15 billion cubic feet per year to more than 143 billion cubic feet annually.

A few highlights of the additions to gas and electric facilities made by PSCo during this 23-year period indicate some of the steps that were taken to accomplish this astounding growth in gas and electrical capacity.

Huge New Supplies of Natural Gas

Between 1947 and 1953 several new gas transmission pipelines were constructed by Colorado Interstate Gas Co. into Denver, in addition to the original 340-mile line from the Texas Panhandle. A 20-in. pipeline was completed from Hugoton, Kan., in 1947 and in 1949 its capacity was increased by building another 38 miles of 20-in. main looping it at the Denver end.

In 1951 Colorado Interstate completed 215 miles of 20-in. pipeline from the Amarillo Gas Field to Kit Carson, Colo., halfway point of the Denver-Hugoton line.

In 1952 the 38 miles of line which had been in operation since 1949 were extended and interconnected with the 215 miles of line that had previously been constructed from the Amarillo field to Kit Carson, giving PSCo another direct pipeline supply from a gas field. Colorado-Interstate Gas Co. now supplies Public Service Co. wholesale gas, either directly or indirectly, from five major gas fields.

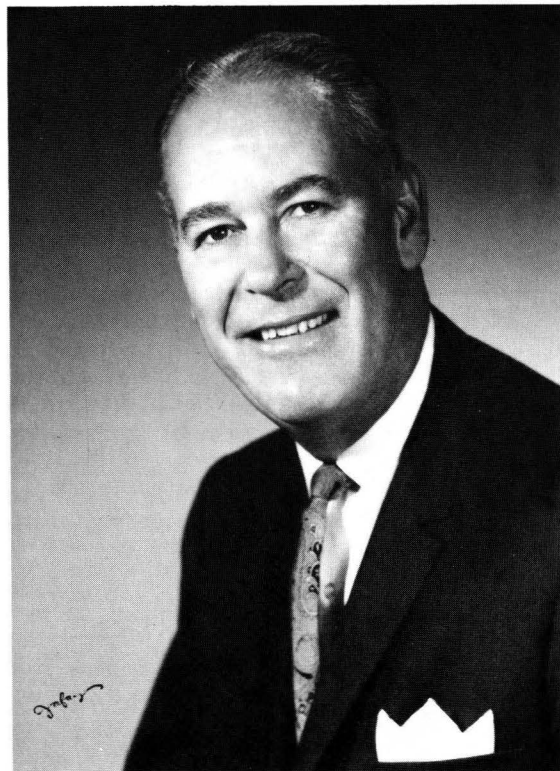
Western Slope Gas Co. was incorporated in 1952, as a wholly owned subsidiary of Public Service for



COLORADO INTERSTATE GAS Company was the first natural gas pipeline company to supply PSCo and the Denver area. Original line was much like the one pictured.



NEW HEADQUARTERS of Public Service Company, located at 15th and Welton Streets in Denver, were occupied early in 1962.



ROBERT T. PERSON, President and Chairman of the Board, Public Service Company of Colorado.

the purpose of building and operating a pipeline to bring natural gas to Grand Junction, Colo. In October 1952 natural gas was turned on and replaced the company's manufactured gas operations in Grand Junction. Since that time Western Slope has extended its facilities to bring natural gas to many cities in the San Luis and Arkansas Valleys of South Central Colorado. One section of its gas transmission line in the San Luis Valley crosses the Continental Divide near Summitville, Colo., at an altitude of 12,060 ft. This is believed to be the highest gas transmission line in the United States.

As mentioned previously, WSG and Colorado-Wyoming Gas Co. were merged in 1964 to form one of the nation's largest intra-state pipeline companies. The surviving company is Western Slope Gas Co., with nearly 1,000 miles of transmission lines and more than 160 miles of gathering lines from Colorado gas fields in its system.

Growth in Electrical Capability

On the electric side of the picture, significant additions were made to PSCo's generating facilities, including construction of three entirely new giant steam electric stations and the complete rejuvenation of another steam electric station. The three new generating stations and their present capabilities are the Arapahoe power plant, 256,000 kw; Cherokee, 400,000 kw, both located near Denver; and Cameo, 73,000 kw, located near Grand Junction. The original Lacombe steam electric generating station was completely rejuvenated and its name changed to the Zuni electric generating station, with a capability of 115,000 kw.

A significant milestone in the electric operations of the company occurred in mid-1962 when the third

and largest unit, with a 170,000 kw generating capability, was placed in operation at the Cherokee station. This gave PSCo's eight steam electric stations and six hydroelectric plants a total generating capability of over 1,000,000 kw.

Another unit with a capability of 180,000 kw went into operation in 1964 at the Valmont steam electric generating station near Boulder, Colo.

Continuing to provide efficient and reliable power to its customers at reasonable costs is a primary objective of Public Service Co. of Colorado. To do so requires retaining and expanding generating systems developed in past years and the willingness to adopt and integrate into its power complex new generating concepts as they are developed and their reliability demonstrated.

A trio of PSCo electric generating projects under construction or contract exemplify the Company's dedication to this objective. They employ distinctly different proven power production concepts — pumped storage hydroelectric, conventional fossil fuel steam generation, and nuclear fueled generation. Each will complement the other, assuring maximum operating efficiency throughout the entire electric system.

Cabin Creek Pumped Storage

Number one is the Cabin Creek Pumped Storage Hydroelectric Project, which is just now getting into operation.

Cabin Creek consists of an upper reservoir at an elevation of 11,202 feet above sea level, and a lower reservoir at an elevation of 10,000 feet. A 43,000-foot power tunnel and penstock connects the two reservoirs through a powerhouse located on the lower reservoir.

**CABIN CREEK PUMPED STORAGE
HYDROELECTRIC PROJECT . . .**



The powerhouse contains two reversible pump/turbine units. This means the units spinning in one direction generate electricity and when reversed, they act as pumps.

During the early morning hours and on weekends when the electric use by PSCo's customers is low, there is low cost power available from PSCo's efficient steam generating plants in Denver for pumping water from the lower reservoir to the upper reservoir.

When the demand for electric power reaches its peak, the water is released for the return trip down the power tunnel, through the generating units, and back into the lower reservoir.

Cabin Creek will provide significant operating economies. Like all major electric utilities, much of PSCo's steam generating capacity is idle during off-peak hours. This idle generating capacity will be used to pump the water back up the mountain.

In effect, Cabin Creek stores surplus off-peak steam generated electricity and releases this power when it is of much greater value in meeting PSCo's electric system demands during peak periods.

The building of Cabin Creek represents the willingness of PSCo's management to adopt the latest in generating techniques when their merit has been proven, and it reflects the pioneering spirit of PSCo in applying new, but proven, ideas and technologies for the benefit of customers and investors alike.

Cherokee Unit No. 4

Late in 1968, the largest single generating unit in the PSCo system and the second in the trio of electric generating concepts, that of fossil fueled conventional steam generation, will go on the line.

It will be the fourth generating unit at Cherokee Station, north of Denver, and will provide another 350,000 kilowatts of generating capacity to the company's system.

Power from this steam electric generating unit will be the most economical on the company's system. This is made possible because the efficiency of generation increases with the size of the unit when it is employing the latest, most efficient technological advances.

Fort St. Vrain Nuclear Generating Station

The third in the Company's trio of different types of generating concepts is the proposed Fort St. Vrain Nuclear Generating Station.

The plant will be built 35 miles north of Denver near the community of Platteville, close to the junction of the South Platte River and St. Vrain Creek, not far from the site of historic Fort St. Vrain, a major fur trading post of the mid 1840s.

Public Service Company's engineers and technicians launched into a study of various concepts of nuclear generation of electricity in 1954, shortly after the U.S. Atomic Energy Commission made nuclear information broadly available to private industry. Much of this early activity was conducted through the Company's membership in the Rocky Mountain Nuclear study group (1954) and the Rocky Mountain Pacific Nuclear Research group (1958).

In 1958 the Company's interest began to center upon a new concept—the high temperature gas-cooled reactor (HTGR). That same year PSCo joined 52

other investor-owned utilities to build a prototype HTGR plant at Peach Bottom, Pa.

The Company focused its full attention upon the HTGR concept in 1963 when it took the lead in forming a group known as Advanced Reactor Development Associates (ARDA). This group immediately initiated studies of the feasibility of a commercial size HTGR, based on Colorado economics.

PSCo's decision to build a nuclear generating station is predicated upon careful analysis and years of intensive study and research.

The Fort St. Vrain Nuclear Generating Station, as it is to be known, will be fueled with a mixture of enriched uranium and thorium and actually produce some fuel while it is in the process of consuming fuel for the generation of electricity. This is a tangible step toward developing a generating technique which, by maximum utilization of fuel resources, will conserve the precious basic energy resources our nation is to need in ever growing quantities.

The proposed Fort St. Vrain plant will be the first commercial size nuclear installation to take advantage of high steam temperature and pressure. Basically, this means that it will generate more power per pound of fuel than any commercial nuclear plant now operating in the United States.

Our present schedules call for field construction to begin in 1968, following observation and analysis of the operation of the Peach Bottom facility and the securing of needed permits and approvals from the Atomic Energy Commission and the Public Utilities Commission of Colorado. It is scheduled to go into operation in late 1971 or early 1972.

Research and Development

In addition to its activities in the field of nuclear power, PSCo also continues to support other research and development.

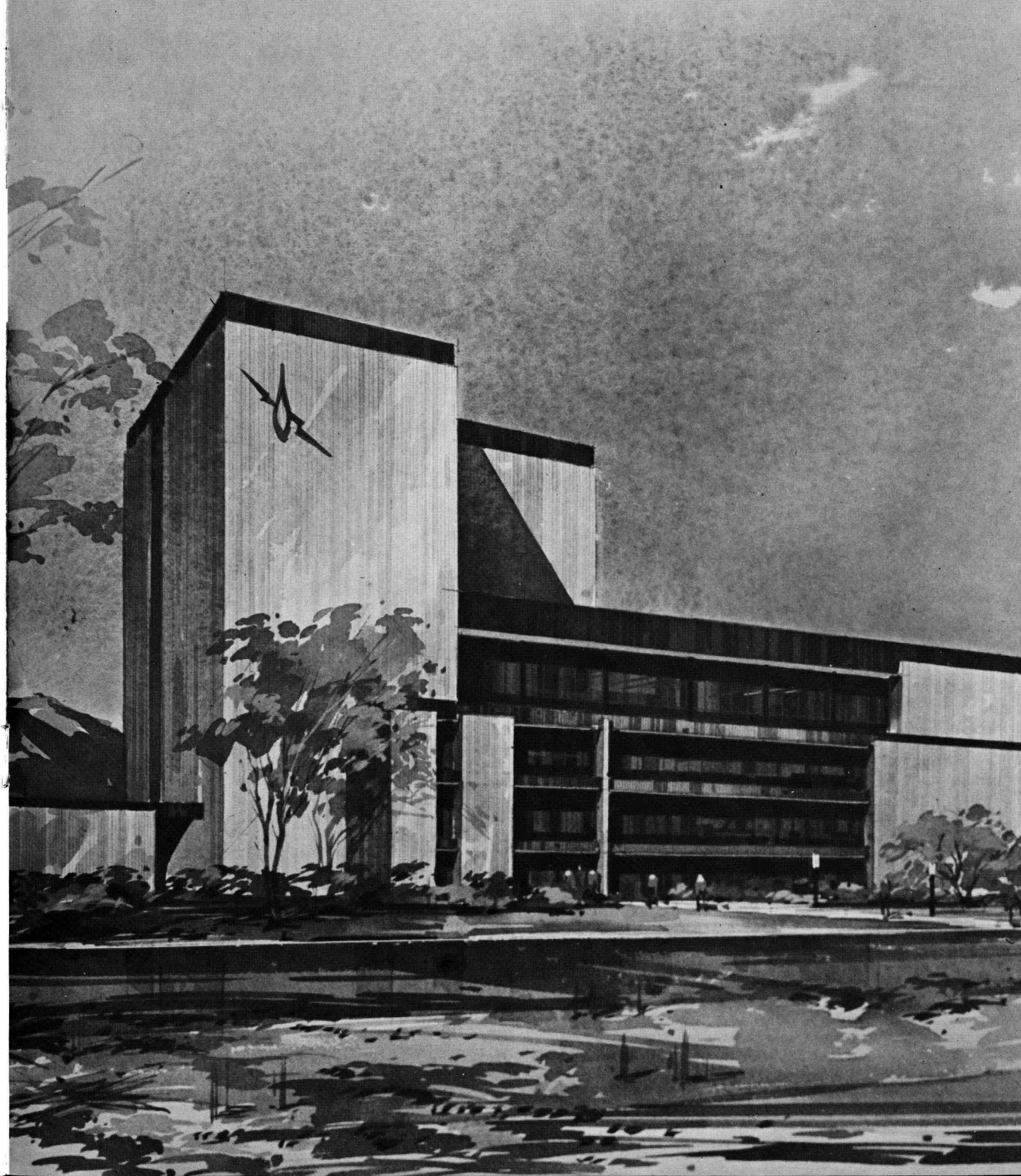
As a supporter of the Edison Electric Institute research programs, PSCo is associated with such varied projects as theoretical or fundamental research relating to the field of possible future generation, including such technologies as the fuel cell, thermionic converters and magneto-hydrodynamics. Also included is research in high voltage direct current transmission and continued research in design and development of a storage battery system for a practical electric automobile. This latter project envisions a rechargeable, high-energy-density battery system capable of storing large amounts of power for use in electrically driven vehicles. Communities would benefit from this quiet, pollution-free source of locomotion.

On the gas side of the picture, the Company is also active in research and development as a member of the American Gas Association, the Midwest Gas Association and as a contributor to the Institute of Gas Technology. This includes research in manufacture of high quality synthetic gas from such raw materials as coal and oil shale, in developing new gas equipment and improvements in utilization of gas for refrigeration, air conditioning, incineration and many others.

The Company's overall research and development program includes more than participation in the latest technological advancements achieved through its support of industry association activities. It also includes research at the Company level.

FORT ST. VRAIN NUCLEAR GENERATING STATION

*Artist's Drawing of Fort St. Vrain
Nuclear Generating Station to Be
Completed in 1971*



High Voltage Transmission

The Company's high-altitude, high-voltage electric test line at Leadville has attracted international attention. Experiments on this 1½-mile test line at 10,500 feet altitude, which began in 1956 and are now completed, showed that a minimum of power loss and radio interference can be maintained on a smaller, less expensive electrical conductor than formerly considered possible. The reduction in line size permits a saving to be realized on future construction projects. For example, the findings of these tests were incorporated in construction of PSCo's 230,000-volt transmission system.

The first section of this 230,000-volt system, between Cameo Station near Grand Junction and the Hopkins Substation near Carbondale, was completed in 1961. The second segment, from Hopkins Substation to Leadville, was completed in 1963. A section was completed between Fort Lupton and Brush in 1964, and another from Waterton to a point midway between Colorado Springs and Pueblo was completed early in 1965. Portions of the 230,000-volt lines will operate at 115,000 volts until integrated into the 230,000-volt system. The first segment to operate at the higher voltage was the one from Cabin Creek to Denver, which became operational in 1966.

Gas Storage Projects

The continued development of the Leyden Mine Gas Storage Project is a particularly interesting aspect of the company's research and experimental program. The underground storage of natural gas in an abandoned coal mine near Denver is believed to be the first of its kind—attracting worldwide attention. Storage capacity of Leyden is 2.3 billion cubic feet, with a maximum daily withdrawal capability approaching 160 million cubic feet.

Another gas storage project, the Asbury Creek Gas Storage Project 15 miles north of Grand Junction, was started by Western Slope Gas Company in 1965. This is a nearly depleted natural gas field which supplied gas to the city of Grand Junction initially in 1952. The field has a storage capacity of 2.9 billion cubic feet of gas.

The three combination injection/withdrawal wells in the field are capable of delivering 1.2 million cubic feet of gas daily to Public Service Company's Grand Junction distribution system.

The underground storage of gas, such as Leyden and Asbury Creek, insures a reserve supply of gas during extreme and extended cold weather. It also improves the reliability of service and makes substantial contribution to pipeline capacity by improvement of load factor. The effectiveness of underground storage has been proven so completely that further research is being conducted into the feasibility of other natural gas storage projects on the PSCo system.

Public Service Company Today

Today Public Service Co. of Colorado represents a composite of over 80 gas and electric companies dating back to 1869 and 1881, respectively. The latest company merged into the Public Service Co. was the Colorado Central Power Co., which joined PSCo on Dec. 29, 1961.

Colorado Central (not to be confused with the Central Colorado Power Co. mentioned earlier) provided electric service, purchased at wholesale from PSCo, to some 42,000 customers in a rapidly growing area, predominantly south and west of Denver, including Englewood, Littleton, Golden, Evergreen and the Fort Lupton area.

PSCo and subsidiaries supply electric service at retail in Denver and 182 other communities and to rural, mining and other industrial customers. It also renders gas service to Denver and 111 other communities, steam heat in Denver, bus service in Boulder, Colo., and operates a water system in Evergreen, Colo.

Another PSCo subsidiary, Cheyenne Light, Fuel and Power Co., serves the gas, electric and steam heat needs of the city of Cheyenne, Wyo., and environs.

While the company recognizes that adequate plant facilities are indispensable, it fully appreciates that the heart of its operations and the essence of good service rest with its over 4,500 employees.

Approximately one-fourth of these employees are located in the company's divisions outside of Denver, which consist of the Boulder Division, Brighton Division, Fort Collins Division, Front Range Division, Grand Junction Division, Mountain Division, San Luis Valley Division, Sterling Division, plus the Cheyenne Light, Fuel and Power Co., The Pueblo Gas and Fuel Co. and Western Slope Gas Co., all three subsidiary companies.

The remaining 3,300 plus are located in the Denver Division, approximately 1,050 of which are located in the company's headquarters building at 15th and Welton in Denver. The ultra-modern 12-story building was dedicated on March 1, 1962.

As part of the ceremonies, outside lighting on the old Gas and Electric Building at 15th and Champa, an area landmark since 1910, were turned off for the last time. PSCo had leased the building since 1910. During recent years, however, increases in the employee population had created the need for housing them in several different locations in the downtown area. The new building makes it possible to house all of these employees under the same roof and creates greater efficiencies in overall operations.

Conclusion

A few of the elements involved in the bright future predicted for Colorado which, in a literal sense, reflect PSCo's bright future, include its wonderful climate and natural beauty that make it a very desirable place in which to live. Statistically, during the last fifteen years, the nation's population grew 26.5 percent while Colorado grew 48.6 percent.

Colorado's natural resources are many and varied. In addition to the production of gold, silver, copper, lead and zinc, other important minerals have been discovered. Molybdenum, uranium, vanadium, pyrite, manganese, beryllium, cadmium, columbite-tantalite and rare earth metallic minerals are produced in volume.

Colorado sits on top of a staggering reserve of 100 billion tons of coal. Natural gas reserves are estimated to be 2½ trillion cubic feet with Colorado ranking tenth in reserves.

Its oil shale reserves are estimated to be equivalent to over 960 billion barrels of oil, or more than four times the total free world's estimated proven reserves.



COMPRESSORS AND DEHYDRATING EQUIPMENT are the only evidence of activity at Public Service Company of Colorado's Leyden Mine Gas Storage Project, northwest of Denver. Some 900 feet beneath the ground is the cavern of an abandoned coal mine converted to a natural gas storage reservoir. Operating capacity of the mine is 2.3 billion cubic feet of gas under 250 pounds of pressure per square inch. During periods of intense or prolonged cold, approximately 150 million cubic feet of gas per day can be withdrawn from the mine for use in the Company's distribution system in the Denver area.

Economic stability is further provided by the state's agriculture and livestock industries which have continued to develop since pioneer times. On the basis of the last farm census, the average Colorado farm was valued at \$92,393, or almost twice the national average. Colorado's more than two million acres of irrigated land are exceeded only by the states of California, Texas and Idaho.

Rounding out a well-balanced economy is the tourist industry, currently third most important in terms of dollars in the state; and the state's relatively new manufacturing industry has grown by leaps and

bounds. It already employs more people and produces almost three times the personal income now provided by agriculture. In fact, since 1954 manufacturing has been the most important single contributor to the state's economy. For many years the manufacturing sector of the state's economy was dominated by such internationally known firms as Samsonite, the world's largest producer of luggage — currently undergoing major expansion in Denver; Gates Rubber Company, the sixth largest rubber company in the United States and the world's largest producer of industrial belts, also diversifying within the state; the CF&I Steel Corporation; Coors, now as famous for industrial ceramics