

BRINGING POWER TO IDEAS



P O R T L A N D G E N E R A L E L E C T R I C

Pictured on front and back cover are PGE Hawthorne Shop employees in 1930, including (front row, from left) D.R. "Roy" Davey, R.B. "Bill" Farr, W.V. Chapman, Herman P. Collins, Charles E. Wagner, Claud A. Warren, C. Justin Seavelle, R. Merle Johnson, Hans O. Lien, Tom C. Gorrie, and T.M. "Mel" Glass; (back row, from left) Ludlow French ("Frenchy"), Jess Haynes, John Gates, Charles O. Merrell, O.J. "Bob" Harrington, W.B. "Bert" Davey, Frank Stickney, A. "Stan" Renil, and Charles Newman.

Flip a switch...and a light bulb comes to life. A television captures invisible air waves to bring you Sesame Street or Johnny Carson. A computer helps balance your checkbook.

It's easy to take electricity and all that it does for granted today. But it took a lot of bright ideas and hard work by dedicated people to bring us to this point.

Back in 1889, when a generator at Willamette Falls in Oregon City produced power to light 55 street lamps in Portland, it was nothing short of an amazing feat. Just stringing wire 14 miles was an unprecedented task in itself. But PGE's founders had confidence it could be done. As a result, PGE has the distinction of producing the nation's first long-distance transmission of electricity and pioneering electrical generation and distribution in Oregon.

Many challenges would follow that auspicious beginning 100 years ago. At first, Oregonians had to be educated about the potential uses of this mysterious power source. Then, as new and wonderful time-saving electrical devices were developed and demand for power skyrocketed,

PGE would need to build a network of power plants. Later, when resources became scarce, we would devise ways to help customers use electricity more efficiently.

Adapting to a constantly changing world required pioneers with courage and foresight. And our employees always rose to the challenge. We owe our progress over the past century to their efforts.

Likewise, PGE's achievements yesterday and its success today go hand-in-hand with the growth and prosperity of the Willamette Valley communities we serve. These communities molded our business just as surely as we influenced their development.

This Centennial publication is dedicated to all those employees, past and present, who have made Portland General Electric what it is today, and to the customers and neighbors we have had the pleasure of serving for the past century.

"I am very proud of my record in pioneering, promoting, and developing the use of electricity on the farm, in the home, in the office, in the store, and in industry."

—Craig McMicken, one of PGE's earliest salespeople, upon retiring from a 48-year PGE career in 1950.

CONTENTS

PIONEER ERA

1889-1905

PGE's story begins with the formation of the Willamette Falls Electric Company, which brings power 14 miles from the Willamette Falls at Oregon City to light Portland's streetlights—the nation's first long-distance transmission of electricity. Electric trolleys come next. 6



BOOM TIMES

1905-1930

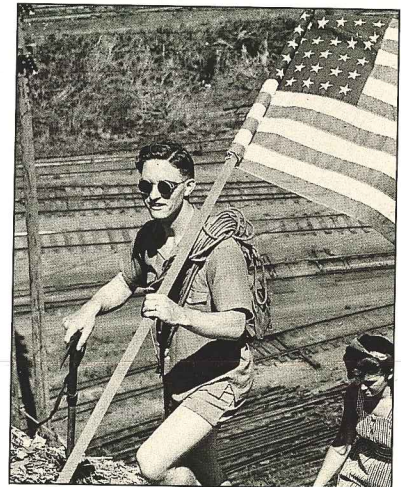


PGE lights the Lewis & Clark Expo, dazzling visitors and leading the Portland area into a period of explosive growth. Employees keep busy selling the wondrous assortment of electrical appliances rolling off production lines and building new power plants to keep up with growing demand. 12

NEW CHALLENGES

1930-1950

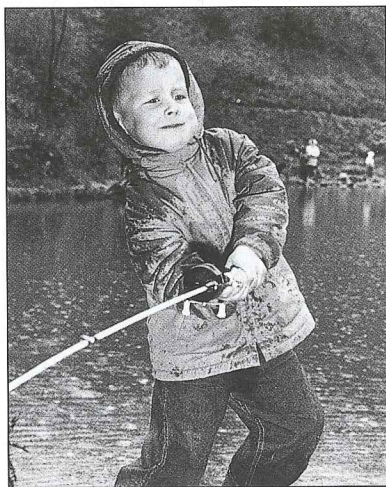
If the Great Depression isn't bad enough, a holding company fiasco nearly drives the Company into bankruptcy. Heroic leadership helps it overcome these hurdles and others posed by public power proponents and World War II. Meanwhile, growth in electricity use—especially in the commercial/ industrial and agricultural areas—keeps the Company hopping. . . 16



GROWING PAINS

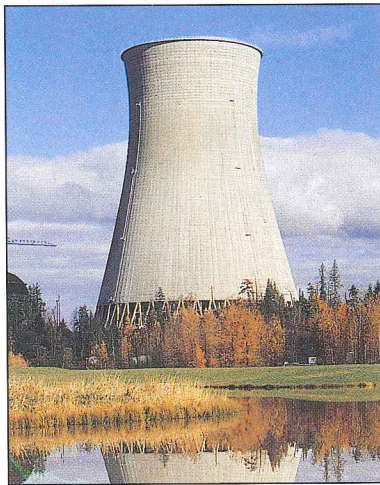
1950-1967

It's a race to keep up with customers, whose appetite for electricity is three times the national average. As they discover the convenience of time-saving home appliances, PGE sets out to build new hydroelectric plants—only to discover the process is more complicated than before.21



CONSTRUCTION

1967-1980

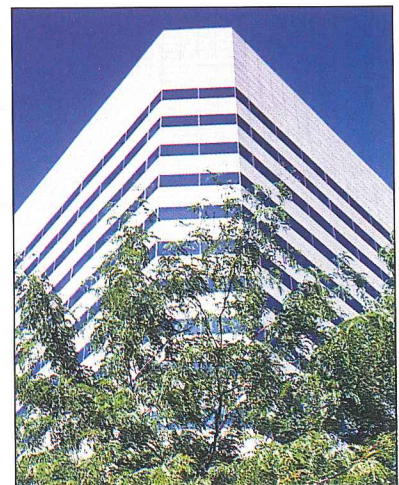


With demand for power projected to double in 10 years, PGE dives into an ambitious program to build several thermal plants, including the Trojan Nuclear Plant. Faced with double-digit inflation and plant licensing and construction delays, the Company must raise rates for the first time in more than 60 years. At the same time, the energy crisis strikes and employees switch gears to help customers conserve. . . .25

THE NEW PIONEERS

1980-present

Growth in demand for power declines dramatically, prompting PGE to reconsider and then write off its investments in three nuclear plants. Facing a new energy marketplace with greater competition, the Company goes through several changes to better serve customers and to explore new business ventures—stepping boldly into its second century.29



PIONEER ERA

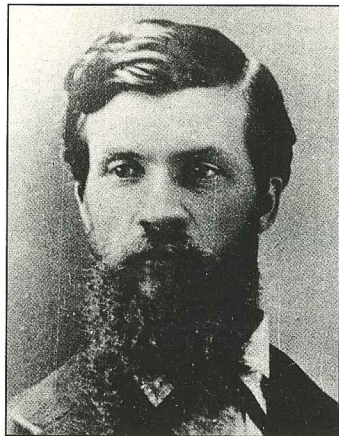
1889-1905

Harnessing Mother Nature's vim and vigor to power industry was not a new idea in the Pacific Northwest in the late 19th century. By 1860, our abundant Western rivers were already turning the wheels of many mills—sawmills harvesting the region's plentiful supply of lumber, flour mills, even a woolen mill.

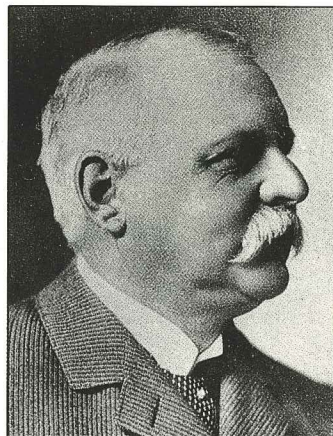
But converting the raw power of a roaring river into a magical form of energy that could light lamps and run machinery miles away was... well, a mighty radical notion.

That didn't deter Parker Morey and Edward Eastham, two visionary entrepreneurs who founded our company, Portland General Electric (PGE). Together, they shared a zeal for innovation, for taking risks, for doing the unthinkable.

Morey came to Portland around 1880 to build and operate the Portland Hydraulic Elevator Works (pressurized water was used to operate elevators in those days). He arrived at a propitious moment. Portlanders had just been introduced to the wonders of electric lighting by the steamship "SS California," which dropped anchor at a city dock



Edward Eastham, President, 1888-91.



Parker Morey, President, 1891-1902.

in 1879 and powered an arc streetlight over First Avenue and Flanders Street for three nights. That same year, on the far side of the country, Thomas Edison invented the incandescent lamp—a discovery that would

open doors for the practical application of electricity and revolutionize our lives.

In Portland, the revolution officially began with the installation of electric lights in 1880 at a sawmill, a seafood restaur-

ant, and later, a dock. Small steam engines and "dynamos" (generators) provided the power. Immediately smitten with the new technology, Morey installed dynamos at his elevator company with the intent of serving the general public. By 1884, he and two partners had formed the United States Electric Lighting and Power Co., which began powering city streetlights the following year.

Meanwhile, events in a small town southeast of Portland began to attract Morey's attention. Edward Eastham, an Oregon City attorney, bank president, civic booster, and state legislator, was preparing to enter the electricity business himself—by capturing the power of adjacent Willamette Falls to light his town. In 1888, within days after a waterfall-powered generator began bringing electricity to Oregon City, the two men incorporated the Willamette Falls Electric Company with the intent of bringing some of that power to Portland.

This was no simple undertaking. A dynamo house (generating plant) had to be built, along with a 14-mile-

THE MANY HATS OF PGE

We've been called by many names over the years, and we have to admit—keeping them straight is challenging even for us. Here's a brief look at the names you'll see popping up in this publication, and the years they applied:

- Willamette Falls Electric Co.—1889-92
- Portland General Electric (PGE)—1892-1906
- Portland Railway Light & Power (PRL&P)—1906-24
- Portland Electric Power Company (PEPCO)—1924-30
- Pacific Northwest Public Service Co. (with PGE resurrected as the name of its electric subsidiary)—1930-32
- Portland Electric Power Company (PEPCO) (PGE continues as a subsidiary)—1932-48
- Portland General Electric (PGE emerges as an independent investor-owned utility after PEPCO is dissolved)—1948-present

- 1752—Benjamin Franklin flies his kite, proving that lightning is a form of electricity.
- 1800—Alessandro Volta invents the first true battery.
- 1805—Lewis and Clark arrive at the Pacific Ocean.



Benjamin Franklin.

- 1821—Michael Faraday's experiments lead to his discovery of electromagnetic induction which, in turn, leads to the invention of the transformer, electric motor, and generator.
- 1842—Settlement of Oregon begins via the Oregon Trail.
- 1844—Arc light invented.



Lewis and Clark.

- 1849—Territory of Oregon established by act of Congress.
- 1851—City of Portland incorporated.

long—the nation’s longest—transmission line. And dynamos had to be moved from a Portland sawmill to the Oregon City site.

But our founders persevered, and on the evening of June 3, 1889, the Willamette Falls Electric Co. was responsible for producing the nation’s first long-distance transmission of direct-current electricity—from Station A perched atop the falls to Portland. A single generator produced power to light one circuit of streetlights.

“It worked magnificently and conclusively demonstrated that our city can be lighted successfully from the falls,” stated *The Oregonian* the following day. “The result was a pleasing surprise to the company, the percentage of loss of electricity by transmission being less than their most sanguine expectations.”

The following year, Station A switched to producing alternating current, which by then was gaining acceptance as more practical and efficient than

The Company’s first power plant, Station A at Willamette Falls in Oregon City, produced the nation’s first long-distance transmission of electricity on June 3, 1889, when it lit Portland streetlights 14 miles away.

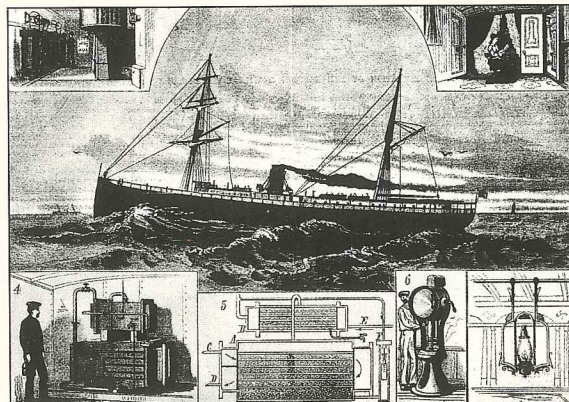


Thomas Edison.

■ 1857—Lighthouses electrified; the Statue of Liberty is lit.

■ 1859—Oregon admitted to the Union on Feb. 14 as the 33rd state.

■ 1876—Alexander Graham Bell reads soliloquies of Hamlet to demonstrate the telephone at Philadelphia Centennial Exposition.



■ 1877—Charles Brush introduces the electric arc light system.

■ 1879—Portlanders introduced to electric lighting when the S.S. California visits Portland and powers an arc lamp strung above city intersection.

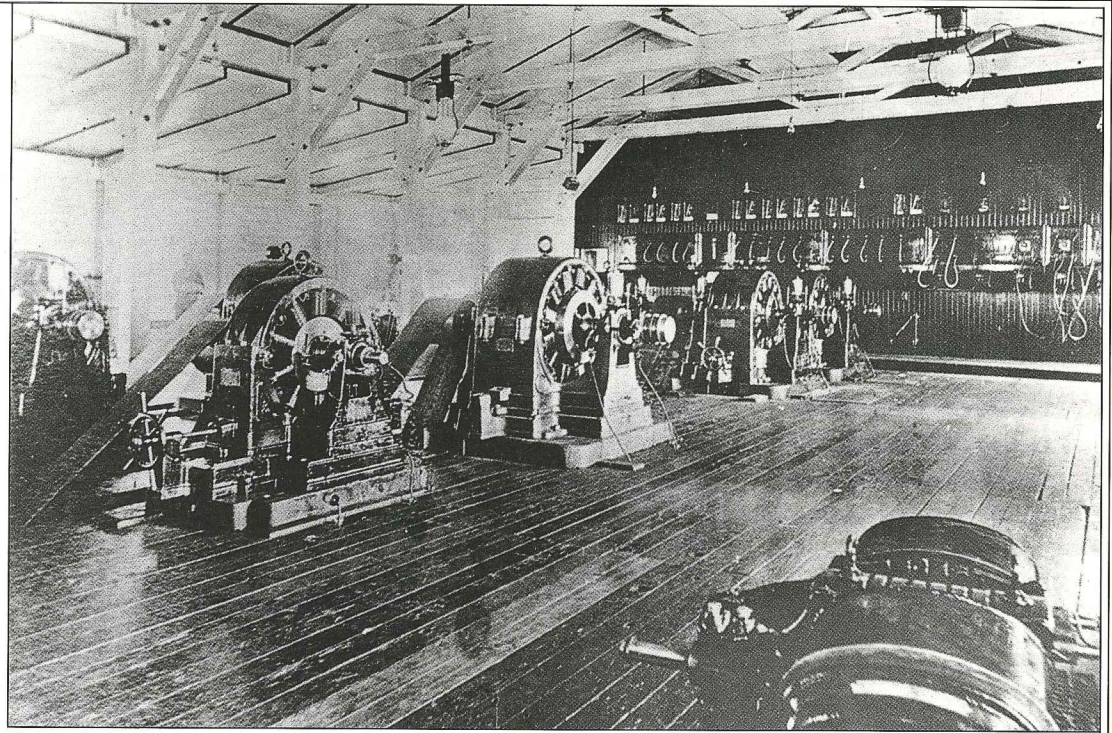
Steamship Columbia brings light to Portland, 1880.

direct current. This was also a challenge. Westinghouse Company engineers had to be talked into building alternators of an unprecedented size—capable of generating 4,000 volts—and only agreed on the condition they did not have to guarantee the machines.

And there were other problems—namely pheasants, which frequently flew into the Oregon City-Portland line and shorted it out, and farmers, who felled trees or blasted stumps through the wires when clearing land. As the sole source of power to an entire city, the line required constant maintenance.

“The line was out so often that customers claimed it went out every time a fish went through the paddle wheel at Oregon City,” recalled an early employee, Joseph Ryan. “The old joke about lighting a match to find the electric light was too nearly true to be humorous. It was not uncommon to have two- or three-hour shutdowns during the day or two or three days (without power) during a month.”

But if power was unreliable at first, it was nonetheless in hot demand. Portland was booming. Besides lighting city streets,



Turbine deck of Station A, 1890.

we began lighting store windows and homes. Among our bigger electricity users were the city’s 400 saloons that stayed open all night. But most of our power in these early days was gulped down by the growing network of electric railways.

Of course, electricity was a luxury then and did not come cheap. At a time when the

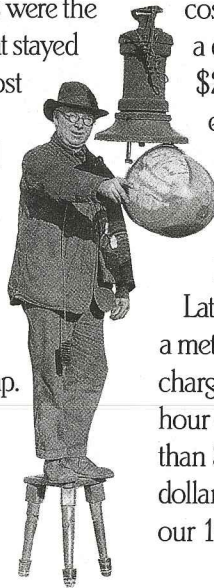
average mill worker made less than \$2 a day, it initially cost customers more than a day’s wages (about \$2.50) per month for each 16-candlepower carbon lamp installed.

For a while, we replaced burned-out lights for free.

Later, when we figured out a metering system, we would charge 20 cents per kilowatt-hour (kwh)—that’s more than \$4 per kwh in 1989 dollars and nearly 100 times our 1989 residential rate of

4.83 cents/kwh. (The first meter was installed at the Dayton Hardware Company on First and Taylor streets, where PGE’s headquarters is located today.)

Despite the price, it became apparent the well could soon run dry. We needed to produce more power to feed a growing city—and that required more investors. Thus, in 1892, Morey incorporated a new company called Portland General Electric—so named, it is widely believed, to remind potential investors of the



Joseph Poffenberger trims an arc lamp, 1927.

■ 1879—Thomas Edison invents the incandescent lamp, opening the door for the practical application of electricity.

■ 1880—Steamship “Columbia” shows off incandescent lighting in Portland; the nation’s first



Singer’s electric sewing machine, 1889.

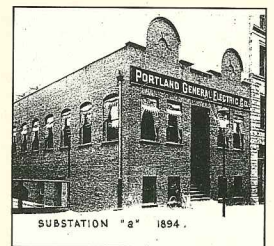
electric trolleys go into service in New York City, Chicago, and Richmond, Virginia.

■ 1883—The nation’s first night baseball game is played using 17 arc lights.

■ 1884—Portland’s first electric company, the United States Electric Lighting & Power Co., is

incorporated by Portland businessmen George Weidler, Parker Morey, and Fred Holman; long-distance phone service first available in the U.S.

■ 1888—Parker Morey joins Edward Eastham to incorporate Willamette Falls Electric Co.; Nicola Tesla introduces alternating



Alder Street substation and Company offices.

current (AC), which can be transmitted much farther than direct current (DC).

electrical manufacturing giant General Electric (GE) that had just been created in the East. Our first board of directors was elected, with Morey as president.

Flush with new funds from both local investors and an Eastern financier, PGE's first official act was to acquire two Oregon City companies—a lighting company and another owning water rights around Willamette Falls. That paved the way for construction of a new, larger hydro plant—Station B (now the T.W. Sullivan Plant, named after the engineer who built it)—on the west side of the falls.

With Station B's completion in 1895, we were convinced our worries were over—that we could generate enough power to take care of load for 50 years. But it was not to be. No one could foresee that electricity demand would skyrocket, triggered by an expanding population and dizzying succession of electrical inventions. PGE was running headlong into a new era.

LINE WORK IN THE EARLY DAYS

In 1894, one of our line crews (then called "gangs") embarked on a three-year project to rebuild the original "West Side pole line" that carried the nation's first long-distance transmission of electricity five years earlier. As General Line Foreman John Kincade, who joined PGE in 1893, recalled in our employee publication in August 1927:

"It was decided we had outgrown the old pole line (which had) over 40 wires on it. We replaced all the old poles with new 50-footers and when the job was done, we had one of the longest and finest transmission lines in the United States.

"We didn't have any trucks or even a team and wagon for the gang to travel in. The materials (for rebuilding the line) were hauled out on the ground by a team (of horses), but the men all had to go to Oswego on the boat and then walk to work. The fare to Oswego was 25 cents round-trip. Linemen were paid \$2.50 per day plus car or boat fare, and normally worked 10-hour days.

"Times were hard and we didn't always get pay on regular paydays. One month we might get our pay on time and then in about six weeks we would get another month's pay. At one time the Company owed me seven months' wages. Rules were pretty strict, too. If a lineman fell off a pole, he was docked from the time he left the pole until he got back up again.

"At that time, Jake Miller was a line rider patrolling the lines between Portland and Oregon City. This was rather an arduous task. Spacing between wires and crossarms was less than now and so trouble was more apt to occur. And then if anything happened to the line, there were no spare lines to fall back on as there are now. Of course, patrolling on foot was out of the question, so Jake rode a horse named 'Kate'.

"Nowadays (1927), the line gangs ride to and from their work in good trucks and they can count on their pay on paydays. If they are hurt, their pay goes on and they lose nothing by it. Times have surely changed, but nevertheless I claim that those were the days!"



By 1913, line crews used a three-speed pole truck.

■ 1889—The nation's first long-distance transmission of electricity occurs June 3 when power from Station A, built by PGE's earliest predecessor (Willamette Falls Electric Co.) at Willamette Falls in Oregon City, is sent 14 miles to Portland; first electric

trolleys appear in Portland; first electric sewing machine introduced by Singer.

■ 1892—Portland General Electric (PGE) is incorporated; General Electric (GE) is formed by the merger of two electrical manufacturing giants, the

Thomson-Houston Co. and the Edison General Electric Co.

■ 1894—Nation's first public showing of motion pictures; swollen Willamette River causes Portland's worst flood in history, putting 250 city blocks under water.



Worst flood in Portland's history, 1894.

ELECTRIC TROLLEYS BROUGHT NEW LIFE TO CITIES, SUBURBS

Besides the nation's first long-distance transmission of electricity, PGE's predecessors take credit for building the West Coast's first electric trolley line in 1889.

Before then, Portland trolleys were driven along tracks by horses, while trolleys serving outlying areas were powered by small steam locomotives called dummies. It was slow going and, in the case of dummies, noisy and smoky.

Electric railways offered the solution. More compact, easier to operate, and able to carry heavier loads at higher speeds than small locomotives, they had lower maintenance costs and longer lives as well.

Supervising construction of the first electric rail line was Tom Baldwin, a former Postal Telegraph employee whose crew had never even seen a street railway car. Relying on blueprints, the men took six weeks to string wire along the trolley route, which ran from Third and Glisan streets in Portland across the upper deck of the old Steel Bridge via Williams Avenue to Albina.

Their snail's pace was partly explained by painstaking efforts to pull wire so taut that it "hummed like a fiddlestring when struck." But there were also rumors that Baldwin's

linemen periodically took time out to scuffle with the bridge's toll collector—shaking nickels and dimes out of his pockets until they had enough to buy a can of beer.

After the first line went electric, many small companies popped up to build and operate city and suburban electric railways. Gradually, a need for economy in operation led to mergers of the independent lines. By 1906, one of PGE's predecessors—Portland Railway, Light & Power Co. (PRL&P)—owned all city railways and many of the interurbans. This was a natural marriage, since railways were among the biggest power consumers.

By making residents more mobile, our railways brought new life to cities and suburbs alike—having an enormous impact on social and economic development. What had been a weekend safari became a day's journey; a day's journey became a two-hour jaunt. Families went to the city for shopping, theater, and dining, but began to settle in the surrounding rural areas where they could own their homes and have a garden and pets.

To promote railway use on weekends and holidays, we owned and operated 14 parks along trolley routes including Council Crest in Portland Heights, the Oaks along the Willamette River a few miles south of Portland, Canemah Park overlooking Willamette Falls on the end of the Oregon City line, and—among the most remote—the Estacada Park and Hotel on the Clackamas River. At the latter, we offered a sweet package deal: round-trip from Portland to the Estacada Hotel, three meals, and one night's lodging, all for \$2.75.

Electric railways also provided fast, efficient freight transportation. Cordwood, brick, fir logs, gravel, and crushed rock were imported from along the Springwater and Mt. Hood divisions, which



The Sellwood interurban line connected Portland and Oregon City.

extended out to Troutdale, Gresham, Cazadero (now Faraday), and Bull Run. Perishables—fresh fruits, vegetables, and dairy products—were soon hauled into the city this way, opening new markets for surrounding farmers. Business in smaller cities prospered as the system provided same-day service for supplies.

Conductors and motormen—called carmen—kept the cars running on schedule. The first cars were small with open vestibules that offered carmen little protection from the elements. Consequently, during winter storms, they were often crusted with ice at the end of their 10- to 12-hour shifts.

There were other hazards. Cars frequently hopped from their tracks, requiring passengers to congregate at one end and rock the car up and down to jump it back on the rails. As trolley lines were extended into sparsely settled areas, roaming livestock became a concern. According to one popular story, a calf accidentally killed by a trolley in the east Portland suburbs was dragged by the crew to the tracks of a competing railway company—which was blamed for the accident and forced to pay for the veal.

Whether they liked it or not, carmen were among the most scrutinized public figures of the day. If passengers felt rudely treated or a car was late, letters would show up in *The Oregonian* cursing the railway. But letters of praise would follow if a carman did a good deed, such as helping an elderly lady with her packages.

For their part, carmen truly thought no vocation tested a man's temper more than their own. A 1910 issue of the monthly employee publication *Portland Carman* lamented how "there is a certain class of people who blame the car crews for any change in the climate. If a morning happens to be chilly, the conductor and motorman are held to be personally responsible!"

But carmen were proud of their jobs and their company, and it showed. Between 1907 and 1919, they conducted more than one billion passengers on the city lines alone—and not one passenger was killed. That was an electric railway operations record in the United States.

Electric trolley patronage steadily declined after the mid-1920s due to competition from gas-powered buses and automobiles. PGE continued to operate a railway system until 1946, when we sold it to Portland Transit Company. The last electric trolleys retired from Portland's streets in 1950. But they would not disappear forever. In 1986, Tri-Met's Metropolitan Area Express (MAX) light rail system hit the tracks—history repeating itself.

ODD EXPERIENCES OF A CARMAN

(Excerpted from an article by A.M. Singleton, of the Savier Street Division, in the September 1911 *Portland Carman*)

"One Sunday morning while southbound on Third Street near Oak, a mastiff dog was standing in the middle of the car track looking up the street and did not seem to hear the gong that I was sounding loudly so as to cause him to leave the track. Not being able to attract his attention I let the car up gently against him.

"What happened in the next few seconds was considered very amusing by the passengers on the car. Standing on the curb in front of a clothing store was a young man intently gazing at the display in the windows. He was standing with his back to the car and his hands were in his pants pockets.

"When the car touched the dog, the dog swung to the right, and in two bounds reached the curb, striking the man and knocking him down. In a flash the dog disappeared around the corner before the man had time to see what it was that had hit him. When he arose from the sidewalk, he could see nothing that could be blamed for his downfall except a carload of smiling passengers.

"One of the most original of April fool jokes was attempted one evening on Glisan Street just about dusk. Ordinarily a motorman has a great deal of this sort of stuff to take from the younger generation and of necessity he must do it with a smile, no matter what the dose looks like.

"I was sailing along unconscious of a prank that was to be tried on me. The car that I was operating was the old style single-truck type, without a vestibule. The first thing I knew a white object appeared about 10 feet ahead and level with my face. I stepped quickly to one side and crash, it struck the front door of the car.

"Upon investigation, it was found that the boys living in the neighborhood had tied a string from pole to pole across the track and, fastening an egg to another string, had placed it in such a position that it would have hit the motorman square in the face. I wiped the remains of the egg off the door and proceeded on my way—smiling!"



Carman
R. Olson, 1892.

BOOM TIMES 1905-1930

Shortly after the turn of the century, Henry Goode succeeded Parker Morey as PGE president. An ardent civic booster, Goode believed his company should play an active role in promoting economic development. He didn't have to look far for a grand opportunity.



Henry Goode, President, 1902-07.

Plans were already under way for Portland to host a world's fair. Recognizing its potential, Goode threw himself behind the event, becoming its director general. He traveled to New York to convince our major shareholders to invest some \$300,000 in a new generating plant to illuminate the fair; they reluctantly agreed, making him personally liable for the results.

And so we built another steam plant to light the event—adjacent to one we'd already

built in northwest Portland in 1901 to supplement our hydro power. When the switch was thrown on opening day, June 1, 1905, the Lewis & Clark Centennial and American Exposition Oriental Fair awed the crowd with 100,000 sparkling lights.

By all accounts, the Expo was a smashing success—attracting more than three million visitors during its five-month run and leading Portland into a period of rapid industrial expansion. Goode and PGE were largely credited for this.

At the Expo's close, we began publishing a free monthly promotional booklet for customers—the "Bulletin"—to advertise the glittering array of new electric appliances coming on the market. By now we were expanding our electrical service beyond a dusk-to-dawn schedule (which had been appropriate for lighting) and were eager

to encourage new uses of our power. Because there were no such things as appliance stores, we had to sell the newfangled inventions ourselves—as well as offer maintenance services.

At first, the inadequacy of home wiring hampered sales. We urged home builders to wire houses as they were built and offered homeowners low-cost programs for wiring their

residences. For further enticement, we slashed our electric rates by more than half during the century's first decade—from 20 cents to 9.28 cents per kilowatt-hour.

Electric irons were one of the first appliances promoted by our salespeople. "Ironing day robbed of all its terrors!" shouted a Company advertisement. Unfortunately, fear of electric shock kept buyers away, so we upped the ante—offering the "mistress of the house" 30 days' free use. We even used horsedrawn buggies to deliver irons to customers' doorsteps. (Purchase price was \$4.)



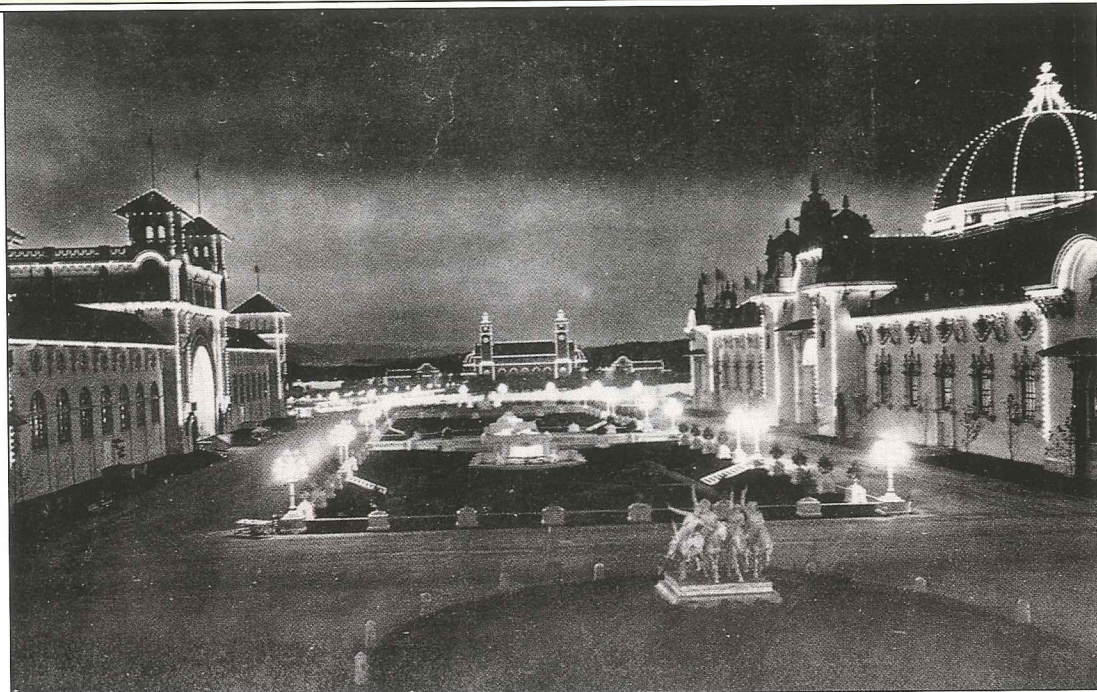
An early model electric washing machine, 1909.

- 1895—PGE's Station B, now the T. W. Sullivan Plant, is completed on the west side of Willamette Falls, to meet growing load in Portland, including electric railways.
- 1900—The nation's first escalator is displayed.
- 1902—Henry Goode becomes PGE President.
- 1903—Successful flight of the Wright brothers.
- 1905—The Lewis & Clark Exposition is held in northwest Portland, attracting three million

Soon after came electric vacuum cleaners, toasters, percolators, chafing dishes, razors and curling irons (“with no flame or soot to blacken the coiffure”), sewing and washing machines, ranges, and refrigerators. By 1910 we were selling these goods from the Electric Store on the ground floor of our new headquarters—the Electric Building on Sixth and Alder in Portland. The freedom brought by these labor-saving devices would have a profound effect on lifestyles and society.

Others, however, were crediting electricity with extraordinary powers. Electric currying brushes for horses were promoted as a means for stimulating the animals’ blood and curing nervous defects. Electric lights were said to provoke cheerfulness in humans. In medical circles particularly, amazing claims were made. A dose of electricity, properly applied, could cure obesity, bad hygiene, diabetes, gout, rheumatism, ulcers, asthma, hysteria, and writer’s cramp, among other ailments.

Despite the hype, many legitimate, lifesaving innovations would emerge. So, too,



The Lewis & Clark Centennial and American Exposition Oriental Fair, 1905.

would new, spectacular forms of entertainment that depended on electricity: Portland got its first movie theater in 1906 and its first commercial broadcasting station—KGW Radio—in 1922. In the commercial area, electrification of everything from printing presses to wood lathes revolutionized nearly every industry.

As early as 1906, city records claimed Portland was using more electric light per capita than any other city in the Northwest. In that same year, the city held its first Rose Festival, highlighted by a parade

of 20 illuminated floats carried on flat cars on our electric trolley lines. Six years later, we would make an even grander contribution to the Rose Festival and city by lighting the Hawthorne Bridge.

This trend continued, and



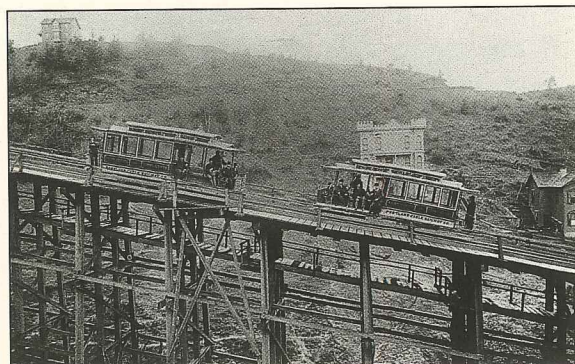
St. Johns office, 1929.

by the mid-1920s Portland had earned a reputation as one of the region’s best-lit cities. Broadway street alone was called the “brightest lit street in America.” Even Mayor Jimmie Walker of New York City, visiting Portland in the ’20s, was reportedly struck speechless by its splendor.

PGE underwent major changes during this period. In 1906, we took city and interurban railway services under our wing by merging with the Portland Railway Co. and the Oregon Water Power and Railway Co. Calling ourselves

visitors. The event is lit by PGE with power from its newest steam plant, Station E.

■ 1906—PGE merges with Portland Railway Company and the Oregon Water Power & Railway Company to become Portland Railway Light &



PRL&P cable car to Portland Heights.

Power Co. (PRL&P)—the owner and operator of city and interurban electric railway services; PRL&P purchases two power companies and takes over electric service to Washington customers in Vancouver and Oregon customers in Salem,

Mt. Angel, Silverton, and Woodburn.

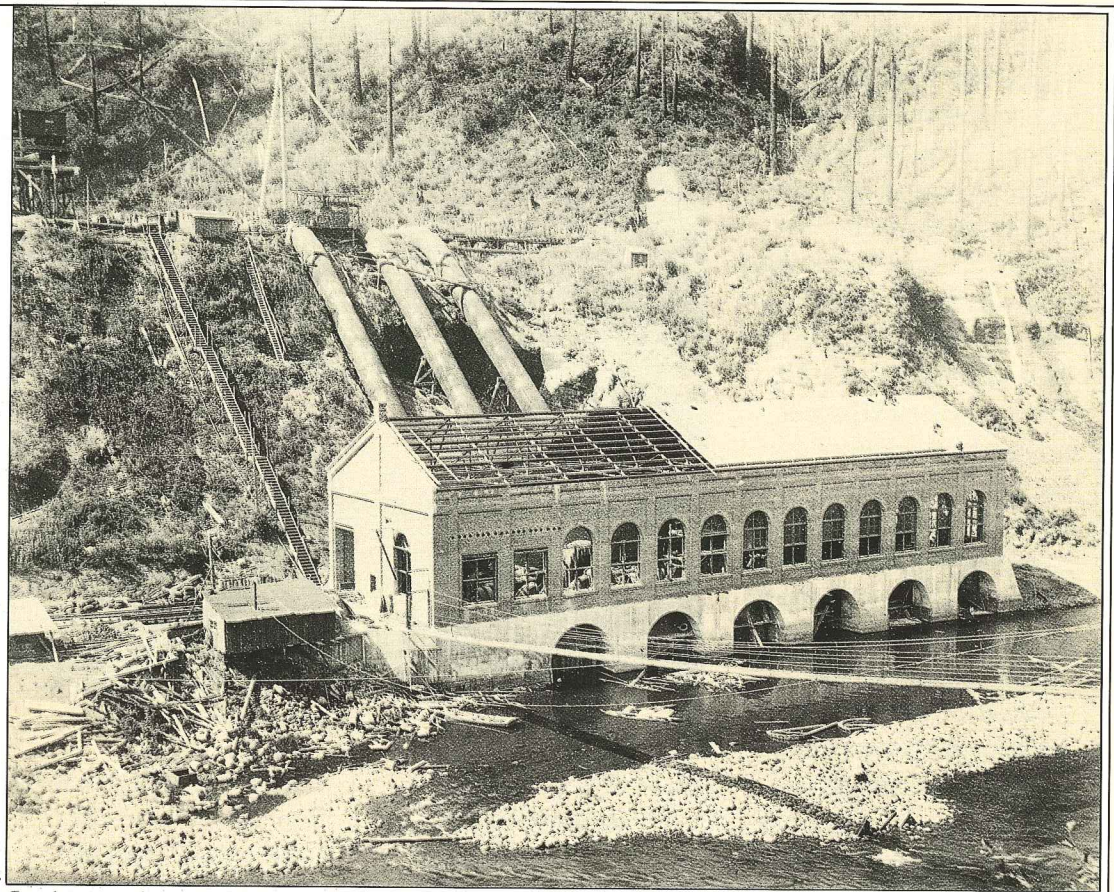
■ 1907—Benage Josselyn becomes PRL&P President; the Company’s first hydroelectric plant on the Clackamas River (Cazadero, later renamed Faraday) is completed; Portland City Council

the Portland Railway Electric Light & Power Co. (PRL&P), we gained attention as the biggest merger ever on the Pacific Coast. Financial control of the Company now shifted to the East, where our new major shareholders were located. (Our president for the next six years would be a transplanted Easterner—Benage Josselyn.)

Mergers were happening all over the nation then—especially in the utility industry. The reasons were pretty much the same everywhere: to combine resources and attract investors. More money was needed to build new power plants and string new lines at the staggering rate required to keep up with demand.

We entered the transportation business at a time when it was expanding rapidly. In short order, our electric railway system was considered one of the best in the country. By 1908, gross revenue from railway operations was nearly three times that from light and power operations. (Railway gross income peaked in 1913 at just under \$4 million.)

But our utility operations were also growing by leaps and bounds. By purchasing smaller



Cazadero powerhouse (today's Faraday Plant) under construction, 1906.

power companies, we began serving a growing network of customers in all directions—north to Vancouver, east to Gresham and Sandy, south to Salem, and west to Beaverton and Hillsboro. By the late 1920s, we would be serving more than 70 communities in Oregon and Washington.

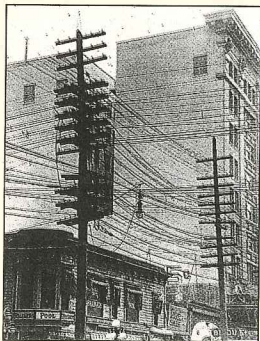
Of course, international events also gave us an unexpected jolt. When the United

States declared war against Germany in 1917, new shipbuilding and other manufacturing activity in Portland created a tidal wave of new demand for electricity.

To keep up with growing demand, most of our Clackamas River hydro system was built during this period. Our Cazadero Plant (later called Faraday) was the first to go into operation in 1907—

increasing our power supply by one-third. In 1911, our River Mill Plant began producing power, and in 1924, Oak Grove. In addition, we completed construction of our Bull Run Plant fed by the Sandy River in 1912.

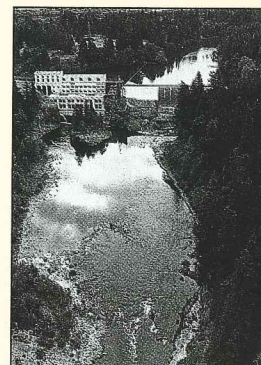
And in 1910, we completed Station L, our largest steam power plant of the era. Sited along the east bank of the Willamette River in Portland,



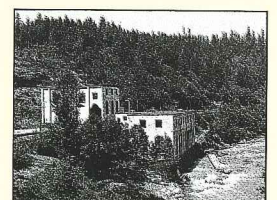
Before wires went underground in Portland, 1907.

passes an ordinance requiring all electric wires within the downtown area to be placed underground; the first modern utility regulating commissions with broad powers are established in New York and Wisconsin; first electric washing machine.

■ 1909—PGE's Electric Building opens on Sixth Avenue and Alder Street in Portland. The building was the first in Portland to feature permanent exterior lighting—1,100 low-wattage light bulbs.



River Mill Plant, 1911.



Bull Run Plant, 1912.

■ 1910—The Company's Station L steam plant in Portland is completed; Pacific Power & Light,

it gobbled up “hog fuel”—waste from adjacent lumber mills.

By 1913, we had a new president, Franklin Griffith. Griffith quickly gained the respect and trust of both the public and his own employees. That was important, because things were getting rocky. Our customers were worried about how big their power company had become. We had new sets of eyes looking at our books—a state regulatory body called the Public Service Commission. At the same time, ridership on the trolleys would soon peak and then decrease, as motor buses and private automobiles offered more flexibility.

And suddenly we had a fox in the henhouse. Serious competition, in the form of the Northwestern Electric Co., arose in 1914. After building a hydro plant on the White Salmon River to serve a Washington paper mill, Northwestern looked to Portland to market its excess energy. It undercut our rates and quickly grew to serve half the electrical load in downtown Portland, the cream of our business.

Help came from an unlikely source. In 1917, the Public Service Commission ruled that



Ad on the side of the Electric Building.

electric rates must be uniform in Portland. That put us on equal footing to compete for customers, although it led to a lot of duplication of services. We would continue to compete, side by side, until exclusive service territory agreements were signed nearly 50 years later.

Griffith led us through all this. His first act as president was to raise the wages of all 4,000 employees by 1 percent. This was particularly welcomed by carmen, who were paid 28.5 cents per hour. Griffith also called for complete candor in working with regulators and the public and instilled in employees the importance of their role as “public servants.” And, like Henry Goode before him, he made the utility an

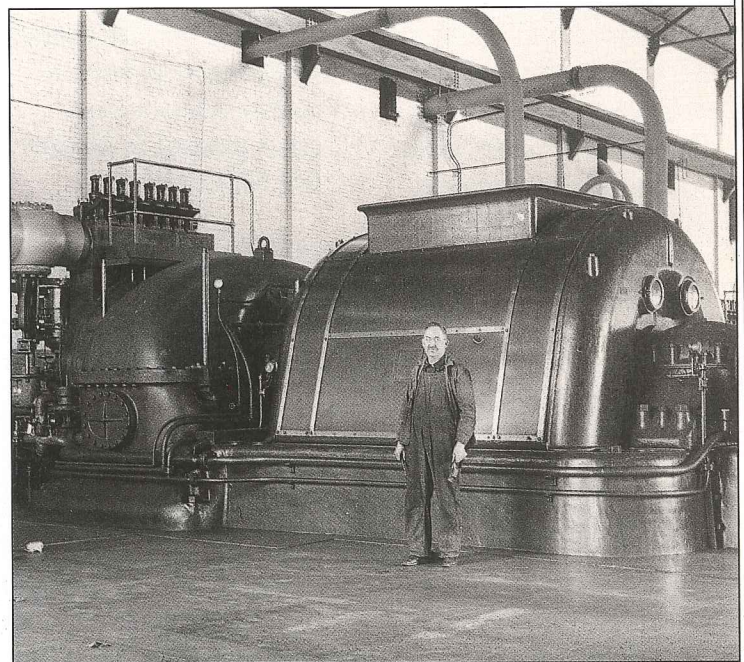
active player in promoting local communities’ social and economic welfare.

In 1924, Griffith guided the Company through another name change to better represent our services. As the new Portland Electric Power Company (PEPCO), we immediately began to offer bus services in an effort to pick up some of the riders no longer using our trolleys. Three years

later, we would have some 40 buses in operation.

But by then, our electric railway operations were bleeding red ink. It took a lot of money to build and maintain the railways, and we needed more riders to help us pay the bills. The problem would continue into the next decade.

The 1930s, ushered in by the stock market crash, were bound to be challenging.



Interior of Station L in the 1920s.

...serving 17 communities scattered throughout Oregon and Washington, is incorporated.

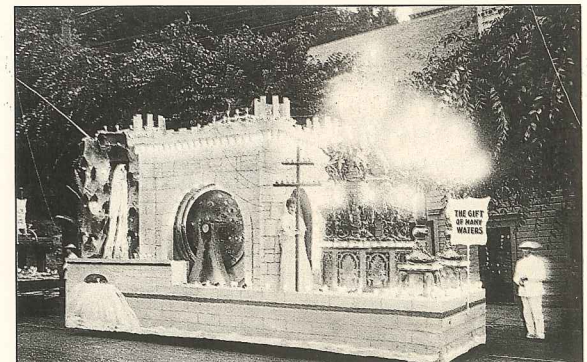
■ 1911—PGE signs a 15-year wholesale power contract with North Coast Power Co. to provide electricity to customers in Beaverton and surrounding Washington County;



Electric “genie” overlooks a Portland intersection during “Electric Week” in 1915.

...the Company’s River Mill Plant is completed on the Clackamas River; Oregon begins regulating electric utilities; air conditioner introduced by Carrier.

■ 1912—PRL&P purchases assets of Mt. Hood Railway & Power Co. and takes over franchises to furnish power to Hillsboro,



Early Rose Festival floats were illuminated with lights.

NEW CHALLENGES 1930-1950

No longer a luxury, electricity by the 1930s had nearly become a birthright. It cost a lot less than before (by 1930, PEPCO's residential rates had dropped to just over 3 cents/kilowatt-hour), and manufacturers were cranking out new electrical gadgets every day. Thomas Edison's brilliant invention had become an indispensable labor-saving servant of home and industry.

Ironically, a proposal in 1931 to pay tribute to Edison on the day of his funeral by turning off all electricity nationwide for one minute was declined by Pres. Herbert Hoover for fear it would paralyze the nation. There was no turning back.

For PEPCO, the 1930s and '40s

would be complicated. First would come the Great Depression's economic stranglehold. Then we'd face a movement for government ownership of electric utilities. At the same time, rapid growth in demand for power would send us searching for new generating resources. And automobiles would continue to take riders away from our electric trolleys.

But before we could wrestle with these external forces we would experience a major internal upheaval. In October 1929, PEPCO's majority

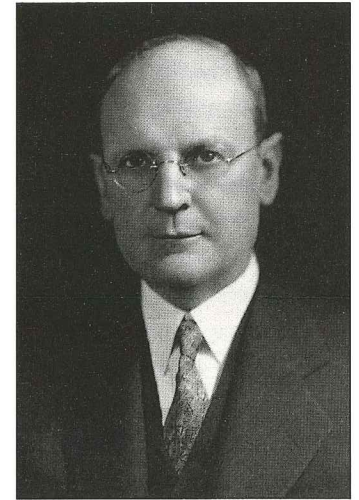
stockholders in Philadelphia sold out to a New York holding company—Public Utility Holding Co. of America (PUH). Following the stock market crash, PUH turned over its PEPCO stock to another holding company giant—Central Public Service Corp. (CPS) of Chicago.

With grand plans to turn PEPCO into a regional holding company, the new board of directors changed our name to Pacific Northwest Public Service Co., under which were three operating companies: PGE (electric services), Portland Traction Co. (electric rail-

ways), and Seattle Gas Co., a newcomer with unwelcome financial problems. Government oversight during this era was lax at best. Ignoring the objections of our managers, CPS

undertook dubious financial maneuvers that put its entire business on shaky ground. Against a backdrop

of the nation's deepening Depression, the golden certificates of towering holding companies were shriveling like autumn leaves in a fire.



Franklin Griffith, President, 1912-40; Chairman, 1940-46.

When CPS declared bankruptcy in 1932, our president, Franklin Griffith, scrambled to save us from a similar fate. He convinced CPS officials to relinquish authority to a voting trust composed of himself and two Portland bankers. He initiated a stock exchange that enabled disgruntled CPS investors to retrieve their former PEPCO stock, and he cut our strings to Seattle Gas. And he was able to refinance a bank note falling due, earning him kudos from Eastern bankers as



Company truck reflects our name in 1930-32.

Gresham, Fairview, and Camas, Wa.; the Company's Bull Run Plant is completed on the Sandy River; Northwestern Electric Company, which becomes part of Pacific Power & Light in 1947, enters the Portland electricity market—the Com-

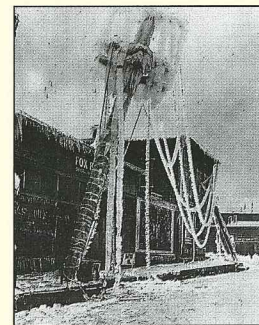


Early automatic toaster.

pany's first serious competition; PRL&P lights the Hawthorne Bridge for Rose Festival Week; the Company builds its Haw-

thorne Shop and Central Market Street Garage in east Portland; Franklin Griffith becomes PRL&P President.

■ 1914-18—World War I; first fully automatic electric ranges and electric toasters are produced.



Ice storm damage in Troutdale, 1921.

- 1919—Prohibition Amendment (18th) passes.
- 1920—Women win the right to vote (19th Constitutional Amendment); nation's first licensed radio broadcasting station begins operating; Federal Power Act gives federal government purview over naviga-

“the best financier to come out of the West in recent times.”

Griffith’s actions to pull us back under local control also made him a hero at home. “The company has been freed from the evil Eastern control that was bringing about its destruction,” wrote *The Oregonian* on Dec. 19, 1932, “and nearly 15,000 Oregon families have received hope that their securities, apparently lost, will be restored. The state could not have a happier Christmas present than this.”

The victory would be short-lived. Two major court-sanctioned reorganizations would follow in the ’30s and another in the ’40s. The Depression was largely the culprit. By 1933, again operating under the PEPCO name but with an electric subsidiary called PGE, we were struggling to stay afloat like everyone else. “Hoovervilles”—makeshift shanty towns erected by families who had lost everything—popped up in Portland as in all the nation’s cities. Businesses shut down. PGE’s gross earnings plummeted 25 percent between 1930 and 1933.

But we fought back—cutting costs, streamlining operations,



Mazamas’ members climb “Mt. Osborne”—the 150-foot sawdust pile at Station L, 1941.

and stepping up our sales campaign. By 1938, we were able to switch from direct sales of electrical appliances to promotion through more than 200 independent dealers.

We pushed hard to make power available to more people, and that meant building lines to the many rural customers scattered throughout our corner of the Willamette Valley. By 1938, electricity was available to 86 percent of the farms and rural dwellings in

PGE’s seven-county, 2,800-square-mile service area. That compared with a national average of 19 percent. To serve the country dwellers, new substations were built in Tigard, Yamhill, Carlton, Woodburn, Hubbard, Canby, and Mt. Angel, and substation capacity increased in Beaverton, Cedar Mill, Hillsboro, Beaver Creek, and Burlington.

By this time, PGE “agricultural engineers” had been working with farmers for nearly

a decade, helping them improve berry crop yields with electric-powered irrigation systems or milk larger herds of guernseys in less time with mechanical milking machines. Our employees even performed soil moisture tests and straightened irrigation pipe. By the 1940s, PGE’s Rural Service Agents were playing a key role in boosting local farmers’ production and standard of living.

To a large degree, the services PGE offered these cus-



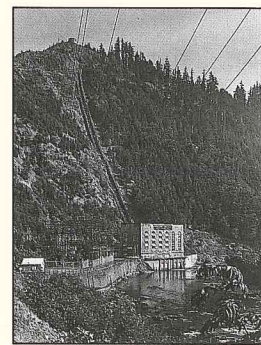
The Electric Building, built in 1909.

ble streams (and their potential power generation).

■ 1922—KGW Radio goes on the air as the Portland area’s first commercial broadcasting facility.

■ 1924—The Company’s name changes to Portland Electric Power Company (PEPCO); the Oak Grove

Plant is completed on the Clackamas River; PEPCO starts operating bus lines as its electric trolley system loses money; the Company provides power to Tigard; the nation’s first three-color electric traffic signals appear.



Oak Grove Plant, 1924.

■ 1925-26—PEPCO takes over service to Lake Oswego and St. Helens areas, as well as Beaverton and surrounding east Washington County from Banks in the north to Sherwood in the south.

tomers were the reason we were able to withstand more than a dozen attempts by public power proponents to take over parts of our service area in the late 1930s and '40s. One of the most widespread proposals to create a seven-county people's utility district (PUD), including five counties served by PGE, met defeat in 1938. In 1940 alone, we faced 10 separate PUD or municipal takeover elections, of which eight were defeated. Of the two gaining approval, the Woodburn municipal system never became operational and the PUD in Columbia County would not obtain voter approval of funds to start operations until 40 years later.

(In Washington state, where the public power movement was more successful, the Clark County PUD would take over service to PGE's Vancouver customers in 1946, ending our business in that state.)

By 1940, PGE was on the verge of a tremendous comeback. A second round of cost cuts, rate reductions for all customers, renewed marketing efforts, and an improving economy would, in combination, put us back on the fast track.

Guiding us along this route was James Polhemus, former general manager and chief engineer at the Port of Portland. Polhemus was brought in as Griffith's right-hand man in

1936 and made President in 1940. His experience with river-based engineering projects and his firm, fair leadership would prove invaluable as we scrambled to shore up our generating and distribution system and keep up with demand. Among other projects in 1940, we rebuilt a flume (a man-made channel) that diverted water to our Faraday Plant. It was the largest wooden flume in the world.

By this time, the Bonneville Dam had been built by the federal government on the Columbia River and we were lapping up as much of its hydropower as we could get. Reflecting our new role, PGE's logo in 1941 gained the phrase: "Bonneville Power Distributor."

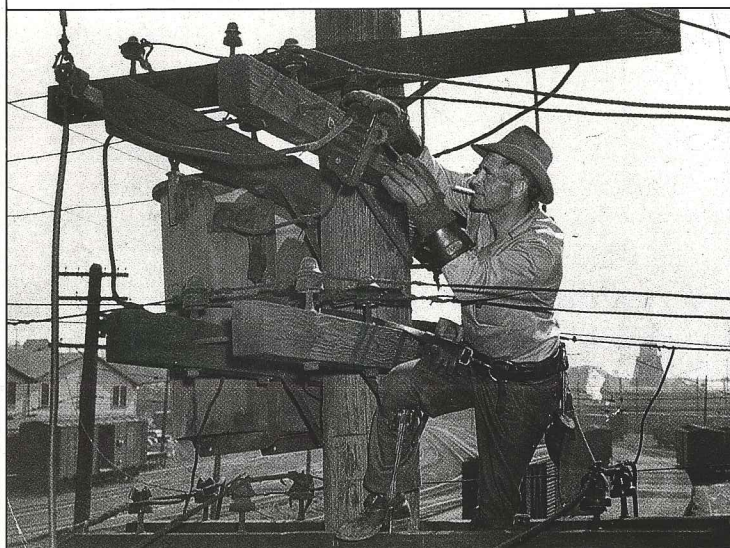
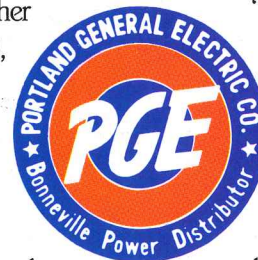
If the Northwest's and PGE's economic recovery was not already assured, World War II would do the trick. While many of our employees went off to serve their country, we played a critical role at home serving a host of defense plants in Portland. Among the biggest were the Kaiser Shipyards on

Swan Island and the Iron Fireman Manufacturing Co., a supplier for Boeing, the Seattle aircraft maker.

Despite restrictions on copper, which hampered our ability to install new power lines, and mandatory streetlight "dimouts" (to make Portland less of a target for the enemy), the war effort overall gave us a giant boost. In 1944, electricity sales were 75 percent more than in 1940.

Of course, meeting this kind of demand wasn't easy. All PGE's hydro and thermal plants were running at capacity, including the Station L steam plant in Portland. To keep that plant running, an immense quantity of hog fuel was stockpiled, at one point reaching a height of 150 feet and covering 4 acres—and earning fame as the world's largest sawdust pile. In 1941, the pile was named Mt. Osborne, after Charles Osborne, our Superintendent of Operations, and ascended by the Mazamas as practice for winter mountain climbing.

By 1945, when the war ended, PGE's electrical distri-



A PGE lineman during the war years, 1944.

- 1927—First solo flight from New York to Paris by Charles Lindbergh, who dedicates Portland's first airport the same year; talking pictures are demonstrated.
- 1928—Oregon voters defeat a proposal for PEPCO to buy out North-

western, our Portland competitor; electric razor invented by Schick.

- 1929—New York stock market crashes on Oct. 23; first automatic waffle iron developed; PEPCO's majority stockholders, the Clark family of Philadelphia, sell out to a New

York holding company (Public Utility Holding Co. of America), which in turn turns over its PEPCO stock to Central Public Service Corp. of Chicago in early 1930. PEPCO becomes the Pacific Northwest Public Service Co., with three operating com-



Pres. Franklin Roosevelt.

panies: PGE, Portland Traction Co., and Seattle Gas.

- 1930—Electric clock invented by General Electric.
- 1931—Oregon Legislature passes a law allowing voters to create people's utility districts (PUDs); office of Oregon Public Utility Commissioner

bution system was nearly worn out. We embarked on a three-year program of new construction just in time to accommodate another explosive growth in demand—this time from consumers frustrated by the rationing of the war years who raced to catch up with all the new electric appliances. PGE's low residential rates—1.5 cents/kilowatt-hour by 1946—gave them added incentive.

Before the end of the decade, we would go through more structural changes. Finally concluding that electric trolleys were doomed, PEPCO sold all its railway operations in 1946 to pay off a large debt—one of the last legacies from the early '30s. Then, as part of a reorganization plan in 1948, our electric subsidiary, PGE, emerged as an independent corporation and we bid adieu to the PEPCO parent company altogether. We had a new, streamlined look as we entered the 1950s.

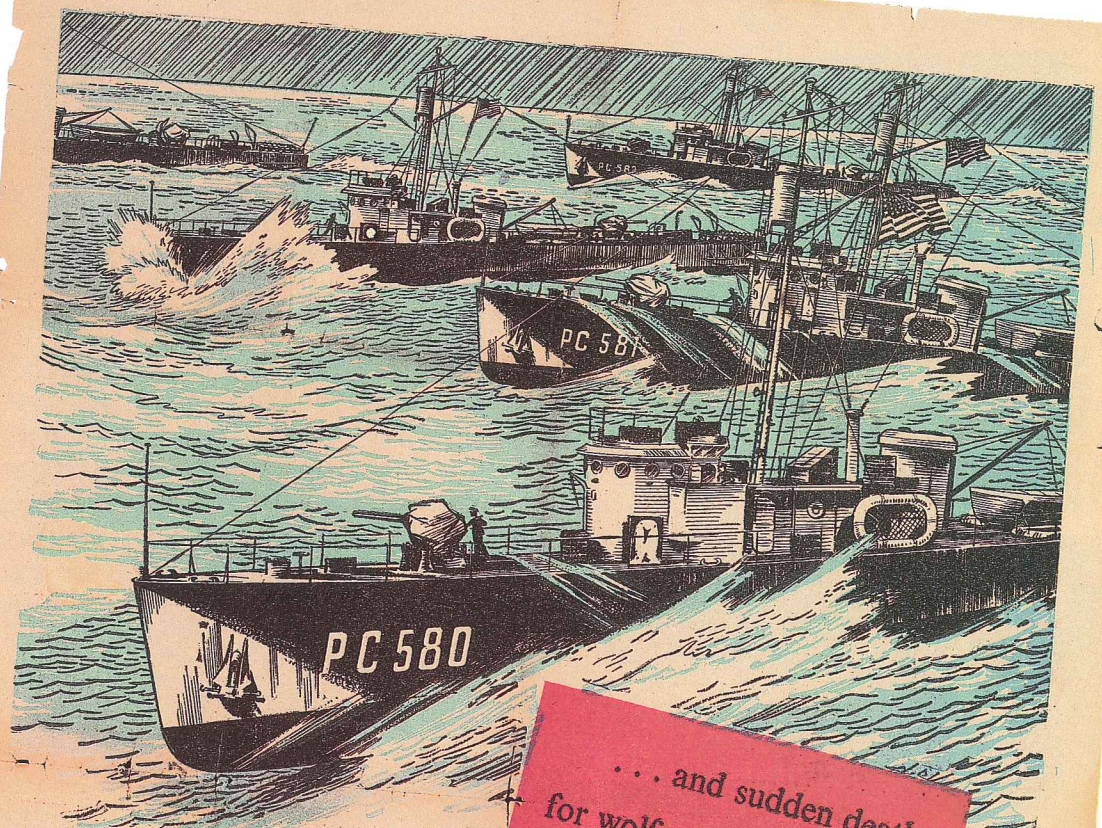
PGE advertisement in The Oregonian, Sunday, September 5, 1943.

created; Oregon Public Utility Commissioner succeeds the Public Service Commission to regulate utilities.

■ 1932-33—Central Public Service Corp. declares bankruptcy; President Franklin Griffith pulls the Company back under

local control; Company name reverts to PEPCO; reflecting the Great Depression, the Company's gross earnings plummet \$3 million

between 1930 and 1933; Franklin Roosevelt is elected U.S. President; FM radio introduced.



If you work at Albina, you may have an enlarged reproduction of this R. B. Rogers drawing, without overlapping, for hanging in your home. One copy for each Albina employe will be distributed Tuesday at the yard with PGE's compliments.

... and sudden death for wolfpacks of the deep

PGE salutes Albina war-workers — who build the subchasers your Invasion Warbonds buy

- ▶ Scan again the sickening headlines of a few months ago: SUBMARINE WOLFPACKS SHATTER CONVOYS . . . ALLIED OPERATIONS STALLED BY LOSSES AT SEA . . . RUSSIAN STAND IMPERILED BY MURMANSK-ROUTE SINKINGS . . . OVERSEAS FORCES DESPERATE.
- ▶ Today armies of free men are charging triumphantly against tyranny's bastions. They are winning because their fighting spirit is backed up by a fast-growing supply of munitions.
- ▶ The wolfpacks are being driven from the deep. A flood of supplies is riding the sea-lanes to the battlefronts; supplies which are protected against submarine attack by planes and naval vessels—including a fleet of explosive-laden subchasers.
- ▶ Foremost among the Allied builders of subchasers is the Albina Engine & Machine Works & Shipyards here in Portland. Albina was the first Pacific coast shipyard to be awarded the Army-Navy "E" pennant with star for prolonged efficiency. Albina's craftsmen turn ships out with a speed that has won them worldwide attention; but there is no sacrifice of precision

workmanship in the Albina shops and yards. A mass of secret equipment, including the latest submarine-detection devices, goes into Albina's fast-darting defenders of the high seas.

Entering their shipyard, Albina's war-workers pass under a sign reading: "Through these gates pass America's finest shipbuilders." California's governor a few months ago was moved to say: "Albina workers have proved themselves as valuable to the war effort as have the soldiers and sailors at the front."

PGE is proud to be able to supply the "fightingpower" used in Albina's shops. For nearly 30 years PGE has been delivering power required by these shops in building or repairing everything from four-master sailing vessels to hard-hitting naval craft. Today skilled workmen in Albina's shops turn out propellers, propeller shafts, tanks, stacks, rudders, booms, and engine parts. They also do valuable repair and conversion work on numerous war-damaged ships flying flags of the United Nations.

As the power needs of Albina and other war industries have grown, PGE has steadily increased the capacity of its system. In the past four years, PGE has spent 4½ million dollars to enlarge its facilities for delivering—from PGE'S own eight water power and steam plants, and from Bonneville dam—the many thousands of horsepower required by industries and other customers throughout a 2500-mile-square territory. Today PGE electricity, at rates among the very lowest in all America. [The average family on PGE lines pays only 1½ cents an hour for a horsepower of electricity; 46% below the national average.]



Portland General Electric Company
Electricity is the lifeblood of war production! Don't waste it



Oregon! let's close in for the kill

Behind cold steel this American boy is advancing. He is pitting his courage, his strength, his flesh and blood against those of the enemy. If you call yourself American, your place is right behind him . . . supplying the dollars that will pay for the arms and equipment for this American boy. Your part is at least \$150 in Invasion Warbonds during September . . . plus every single additional dollar you can scrape up. This is the zero hour; let's drive in with fixed bayonets; let's get it over with . . . with Invasion Warbonds.

speed the invasion: buy Invasion Warbonds

3d War Loan starts Thursday, September 9

THE DAY THE LIGHTS WENT ON

(PGE customer Richard Jossy recalls when electricity came to his farm.)

"In the fall of 1937, I was a 12-year-old boy living on a 30-cow, 120-acre dairy farm in the Bethany area with my Mom, Dad, brother, and usually about two hired hands. Rumors were that electricity was coming to the community. Mom and Dad talked of it a great deal. For me electric power was something my city cousins had, and it did great things. Their lights were a lot brighter than our oil lamps.

"PGE's field staff came out and talked to possible users in the community. The

ready by telling us what would be needed to get the power. The house and barn had to be wired and a service pole set in the yard.

"There was great excitement as the "high line" came nearer. Kids watched the line crews as they worked. It was exciting to see a man with just a pair of spurs go right to the top of a pole, put a strap around it, and lean back. We had never seen anything like it!

"Finally everything was ready and the power was turned on about 4 p.m. on New Year's Eve, 1937. In getting ready for the power, Mom had taken a little money out of her special savings jar and bought a brand new Ward's Airline console radio—a big piece of furniture, with three bands: AM, short

I had ever seen.

"Nobody went anyplace for New Year's Eve. We all sat around listening to the radio and the Portland police calls. We saw in the New Year, and then about 2 a.m. all went to bed. Milking started at 5 a.m.

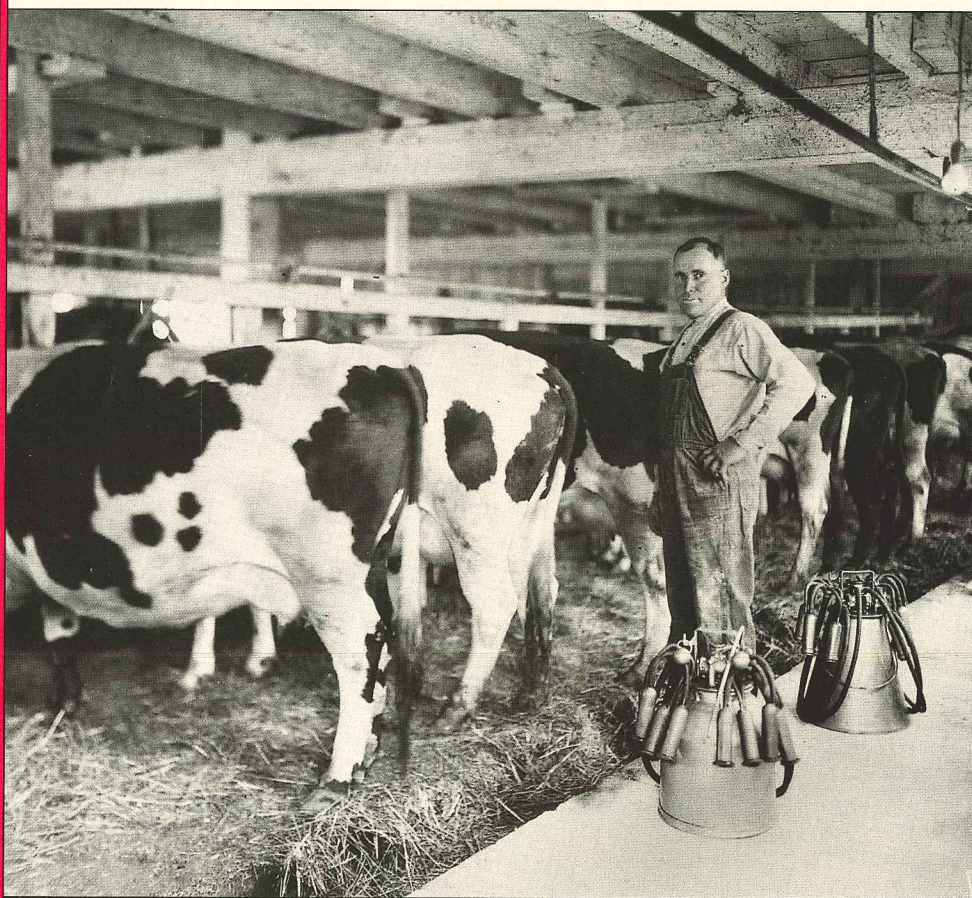
"Changes came fast after that day. The greatest change was mechanical milking. We were milking 30 cows by hand two times a day—three hours of hard work. The milking machine cut that to about 2½ hours, and gave us time to do other things. Putting lights all over our barn enabled us to get home late and still do our chores.

"Our new electric water pump worked so well we were able to put in drinking fountains in the barn for the cows. Every cow had cold, fresh water whenever she wanted it. Milk production increased about 10 percent and paid for this water system very quickly.

"Changes kept coming in the house. One that I liked best was the waffle baker. We had never had waffles because they were very difficult to make on the old wood stove. The waffle baker was followed by an endless supply of small appliances, such as toasters, mixers, and the table model radios. Finally, with a little remodeling, the old wood stove was replaced by the big, beautiful electric range, with its automatic timer and deep well cooker. This was some change for a housewife who had cooked all her life on a wood stove. And it was a nice change for the kids, who had spent one to two hours after school splitting and carrying wood for the next day's supply of fuel for the old stove. All these things just kept improving our way of life.

"After we switched to mechanical milking, and with all the other changes, I remember when my father came to me and said I was going to be able to have every fourth Sunday afternoon off. That was one of the greatest days of my life, I thought, because it was pretty nice to have a Sunday afternoon once a month to just go and do what you wanted to do.

"These were certainly exciting changes. It makes me think I've lived through the best times in this country."



Arthur Ireland with his Washington County dairy herd in the 1940s.

Photo courtesy of Washington County Historical Society

requirement was that three farms or families had to subscribe for power (for a minimum monthly charge of \$4). Two of our neighbors didn't see what good this new thing could do for them, so would not participate. Dad wanted the power, so he agreed to pay their \$4 as well as our own. The folks wondered if we could ever use enough electricity to make it pay. Then PGE's field staff helped us to get

wave, and police. This radio sat in the house for weeks and when it finally came on, Mom thought the sound might be better than some big city concert hall—and here it was right in our own home!

"The folks had also purchased a refrigerator. By bedtime, it had frozen a tray of ice cubes. Mom made a pitcher of lemonade and we all had a glass with ice cubes in it—the first

GROWING PAINS

1950-1967

Free of the shackles of Depression and war, the Northwest flourished in the 1950s. PGE and its inexpensive hydropower would play a leading role in the region's thriving economy and improving standard of living. To keep up with demand, we would pursue building more hydro plants during this period. And we would learn that was much more complicated than before.

During the '50s would come technological advances that would radically alter the social and economic face of the nation. The most obvious of these was television. On Saturday afternoon, Sept. 20, 1952, PGE would power Portland's first television broadcast by station KPTV, which boasted the nation's first commercial ultra-high frequency (UHF) transmitter. After a short documentary on TV transmitters, the airwaves brought Jimmy Durante's "All-Star Revue" and Sid Caesar's "Show of Shows." Portland wrestling followed in the prime time lineup.

PGE would be a technological leader in other areas as well. We created the first residential underground wiring

system in the nation, installing it in the Humphrey Park development in Portland's West Hills in 1955. And the Company's headquarters boasted the nation's most modern elevator, complete with a "phantom voice" that talked to riders.

Among our most important customers at this time was the homemaker. She was largely responsible for PGE residential customers' voracious appetite for electricity—three times the national average. As she discovered the magic of electric

freezers, canners, blenders, and dishwashers (popularly dubbed "electric servants"), we stepped up our efforts to help her gain the maximum benefits of each.

By the mid-1930s, PGE had already built a model kitchen in the Electric Building and was offering free cooking classes. By the '50s, our home economists were also offering courses on such topics as freezing and laundering. We taught customers that frozen vegetables should not be thawed before cooking. And we invited guest

speakers who revealed their best-kept secrets about how to restore nylon clothes to their original colors.

These marketing efforts took on an added significance in 1956, when natural gas was introduced to the Northwest as an alternative way to power some major household appliances. The battle was on to win the homemaker's favor.

Family gardeners were also the focus of PGE efforts to promote the use of new '50s gadgets. To make yard work easier, we recommended such products as the "Moe Hoe," a multiple purpose tool that could serve as a garden tiller, lawn trimmer, power lawn shears, floor polisher, table saw, and bench grinder.

With many new appliances freeing them from household chores, our customers found more time to explore the great outdoors. Capitalizing on this, PGE began developing public parks along riverbanks and lakefronts adjacent to its generating plants. Roslyn Lake, which forms the forebay of our Bull Run Plant, was among the first opened for picnicking and boating. By 1958, we were maintaining nine parks and



Electric water heater trade show display, 1955.



Installing Portland's first traffic lights, 1938.

- 1935—U.S. District Court in Portland approves reorganization plan after PEPCO is forced into receivership for defaulting on debenture coupons; IBM introduces the first successful electric typewriter; Congress passes the Rural Electrification Act (REA).

- 1936—Oregon voters defeat a proposal to create a PUD spanning seven counties—including five in the Company's service area.

- 1937—Bonneville Dam—the Northwest's first federal hydroelectric project—is completed on the Columbia River; Bonneville Power

Administration (BPA) formed.

- 1938—Molalla Electric Co. and Yamhill Electric Co. merge with PGE; first traffic lights in Portland (Southwest 10th and 11th at Burnside) and in Salem; fluorescent lighting introduced.



A crowd views Portland's first television broadcast (by KPTV) through a department store window, 1952.

Photo courtesy of KPTV

campgrounds—enabling our customers to swim and fish in the same water that powered their clothes dryers and ranges. For our efforts, PGE received the electric industry's highest national honor—the Edison Award—in 1962.

While customers were enjoying their newfound leisure, PGE leaders were busy making sure we had enough power to keep their electric

servants running. The Northwest experienced a serious power shortage in the late 1940s, resulting in brownouts in Central Oregon. In the early '50s, a record-breaking drought in the region left our hydro plants thirsty and forced us to fire up more expensive steam plants. That resulted in a temporary 20 percent rate surcharge, which didn't make customers too happy.

It was obvious we needed to get our hands on more power—particularly hydropower—to withstand the whims of Mother Nature and keep customers supplied with low-cost electricity. So we looked at the options. With new federal hydro projects delayed in Congress, we knew we had to squeeze every possible kilowatt out of our existing plants and to build new plants as well.

For part of the solution, we upgraded Station B (today's T.W. Sullivan Plant) on the Willamette River to produce three times as much electricity. We also looked again to the Clackamas River, where we completed our North Fork Plant in 1958 and added generating capacity to the Faraday Plant. In addition, we built Frog Lake and Timothy Lake to store more water and increase the capacity of our Clackamas plants.

We also looked farther east—to Central Oregon. In 1948, PGE had started wheels turning to build Pelton Dam on the Deschutes River, unable to foresee it would go through nearly a decade of legal wrangling. Stiff resistance came from the state's Fish Commission and sports fishermen, who believed the dam threatened steelhead and Chinook salmon runs.

By the time the dispute came before the U.S. Supreme Court in 1955, the issue had become one of who has jurisdiction over rivers. The court supported PGE's position. Pelton's construction began in 1956. Upon its completion in 1958, PGE had spent \$2.5 million on the generating portion of the plant, but would go on to spend

- 1939—PGE signs first contract with BPA for purchasing and distributing power generated at Bonneville Dam; R.C.A. demonstrates color television to the Federal Communications Commission; another PEPCO financial reorganization puts two trustees in charge—one of

them Thomas Delzell, who would later become chief executive officer.

- 1940—PGE is first utility in the nation to have two-way radios in line vehicles for more efficient dispatching; Franklin Griffith becomes PEPCO's first Chairman; new President is James Polhemus;

voters defeat several proposals to create PUDs throughout the Company's service area, with one exception—a PUD in Columbia County gains approval, but doesn't become operational for 40 years.

- 1941—The nation enters World War II; another federal hydroelectric project on the Columbia River, Grand Coulee Dam, is completed.

- 1941-45—During World War II, PEPCO serves several defense plants in its service area.

- 1942—Northwest Power Pool organized to coordinate use of the region's power resources.

- 1945—World War II ends.

- 1946—PEPCO splits into separate power and railway companies, selling the railway operation to a



James Polhemus, President, 1940-54.

nearly \$3.7 million more on a state-of-the-art fish ladder and other fish protection facilities.

While we waited for Pelton to clear hurdles, we also arranged to purchase electricity from other sources, starting with a firm, long-term commitment from the Bonneville Power Administration (BPA). In 1953, after months of negotiations, PGE President James Polhemus and leaders of other Northwest utilities signed 20-year contracts with BPA. They established a more equitable system for distributing federally generated electricity.

Believing there was strength in numbers, Polhemus also pushed for teaming up with other private and public utilities and the federal government to share costs of new plant construction.

Legislation already was in place to allow development of several dams on the Columbia River, and PGE wanted a hand in those projects. In 1954, we proposed building one of them—the John Day—as a joint project involving investor-owned utilities and the federal government.

The proposal died in Congress, but Polhemus' partnership idea lived on. A few partnership hydro plants on the mid-Columbia—involving public utility districts (PUDs) in Washington state and investor-owned utilities throughout the region—would come to fruition. By the end of the decade, PGE had signed contracts to obtain power from four of them.

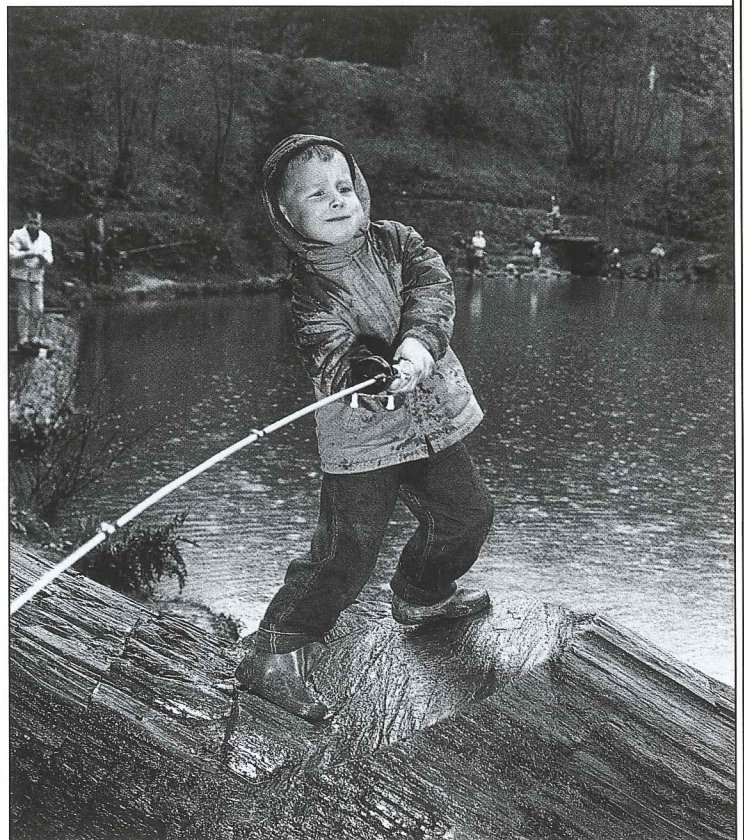
Later, in the mid-'60s, PGE would join with other utilities, local governments, and BPA to build the Pacific Northwest-Southwest Intertie—transmission lines connecting the Northwest with Southern California and enabling power sales and exchanges to both areas. Helping to build the intertie's tall steel towers and string miles of high voltage line in Central Oregon was a plum assignment for PGE crews. "When you become a lineman, you

dream of working on transmission towers like these," our Project Manager, Allan Johnson, said at the time.

During this period, PGE was still growing rapidly. In 1956, we extended our boundaries east to the Mount Hood area by acquiring the Sandy Electric Co-op. That same year, we built a new, big service center on Southeast 17th Avenue in Portland to accommodate our growing number of employees.

Two years earlier, because of the tremendous growth of residential housing in Washington County, we had opened our Beaverton district office.

In 1964, we would complete Round Butte Dam on the Deschutes River—our last large hydro plant. By then the number of attractive sites for building dams was dwindling. And so our attention turned from cascading waters to a new form of energy: the atom.



Casting for trout at PGE's Small Fry Lake.

California firm to pay back money owed an Eastern bank; Tekrad (later Tektronix) is started in Portland, leading development of the area's high-tech industry; PEPCO's distribution system in Vancouver is taken over by a PUD, ending the Company's



PGE hooks up Portland's first TV tower, 1952.

service in Washington state; first coast-to-coast TV broadcast; Atomic Energy Commission (AEC) is created.

■ *1947—Power shortage threatens Northwest, with brownouts occurring in Central Oregon in the winter; transistor invented.*



North Fork Plant, 1958.

NATURE'S TANTRUMS IN THE '60S

Mother Nature has challenged PGE employees' endurance and resourcefulness over the years, but she was especially nasty during the 1960s. On Columbus Day, Oct. 12, 1962, a freak cyclone whipped through the Pacific Northwest, bringing wind gusts of over 100 mph that ripped lines from electric poles and left 262,000 of 268,000 PGE customers without power.

The wind, flying debris, and uprooted trees destroyed 84 Oregon homes and damaged nearly 52,000 more. Twenty-four people were killed in Oregon, and 24 more died in Washington and California. Oregon's total damages came to \$170 million.

Dan McLellan, retired Assistant to General Managers, Service & Installation, recalled the scene when he took the bus home that evening: "I remember walking up to the (Portland) bus depot and seeing Meier & Frank's windows blown out. As the bus went through the park blocks, a big elm tree fell over right behind the bus. Then, as the bus reached Sunset Highway, I knew things were really getting bad when a Volkswagen bus passed us on its side!"

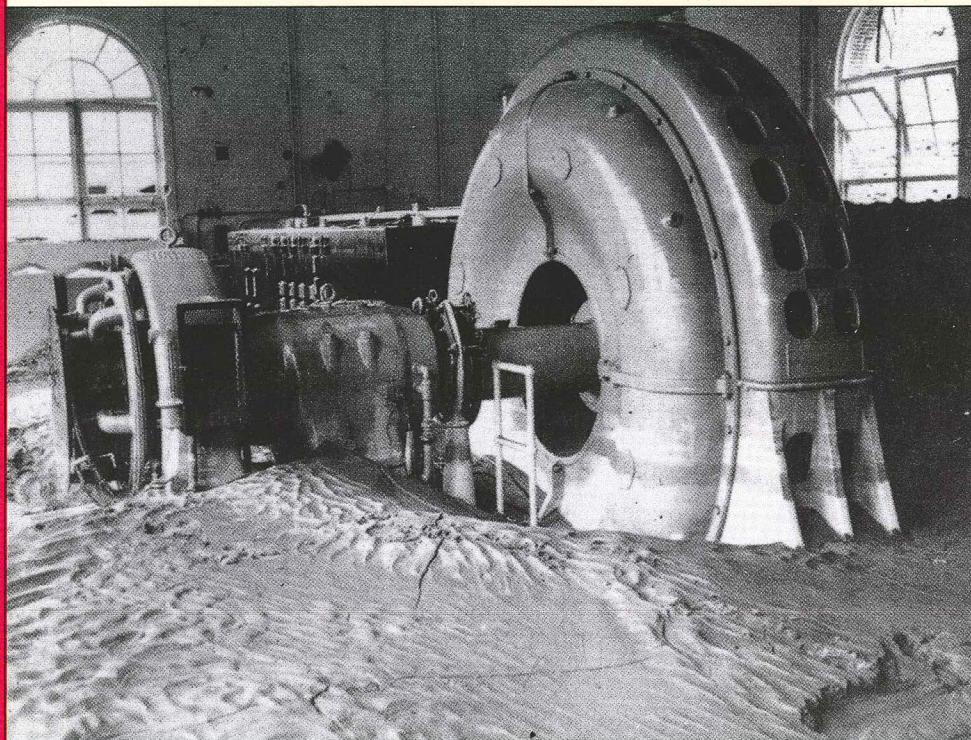
What followed was a herculean restoration effort. Our linemen rose to the challenge, working 18- to 20-hour shifts for weeks on end. "We'd take naps when we could get them, but mostly the adrenaline kept you

going," recalls Quentin Dodge, now a Working Line Foreman in Woodburn. "We had some fellows in from Utah helping us, and retirees were called in and paired up with apprentices. Supplies were a problem, though. We just didn't have enough."

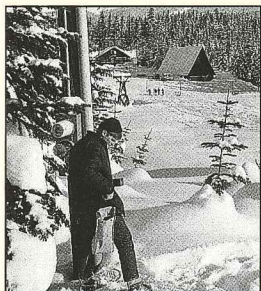
With the aid of 500 contractors and linemen from utilities throughout the West, power was restored within 10 days. Company officials calculated that if crews had worked regular eight-hour days and if no outside help had been hired, the system would not have been restored until March 6, 1963—nearly five months later.

Two years later, record-breaking floods washed out PGE's Faraday dam on the Clackamas River and flooded the Faraday powerhouse, depositing 12 feet of rock and silt. The flood also washed out the road to the Oak Grove Plant, requiring the Company to contract a helicopter to bring food and supplies to 20 stranded employees and their families. At the same time, we used the helicopters to aid in several rescue missions transporting other people trapped by floodwaters.

The flood also posed a challenge for PGE meter readers in the Gresham Division, who finally found the solution on horseback. "The only time I was scared was when we forded the swollen Sandy River," related Bob New in our February 1965 *Bullseye* publication. "The water was up to the horse's belly and he really staggered around before we reached the other side."



Silt fills the Faraday powerhouse after the 1964 flood.



Meter reader on Mount Hood.

- 1948—PGE begins operating as an independent corporation involved in light and power services only; Thomas Delzell is Chairman; Columbia River floods, affecting Portland and Vancouver.

- 1950-1953—Korean War.

- 1950—Congress passes the River and Harbor and Flood Control Act, empowering Corps of Engineers to proceed with Columbia Basin hydro projects, including Priest Rapids, John Day, and The Dalles dams.

- 1952—Portland's first TV station and the nation's first ultra-high frequency (UHF) station—KPTV Channel 27—is powered by PGE.

- 1952-53—Northwest drought causes power shortage, forcing utilities to fire up expensive steam plants.



All-electric Medallion Homes were state-of-the-art in energy efficiency.

CONSTRUCTION 1967-1980

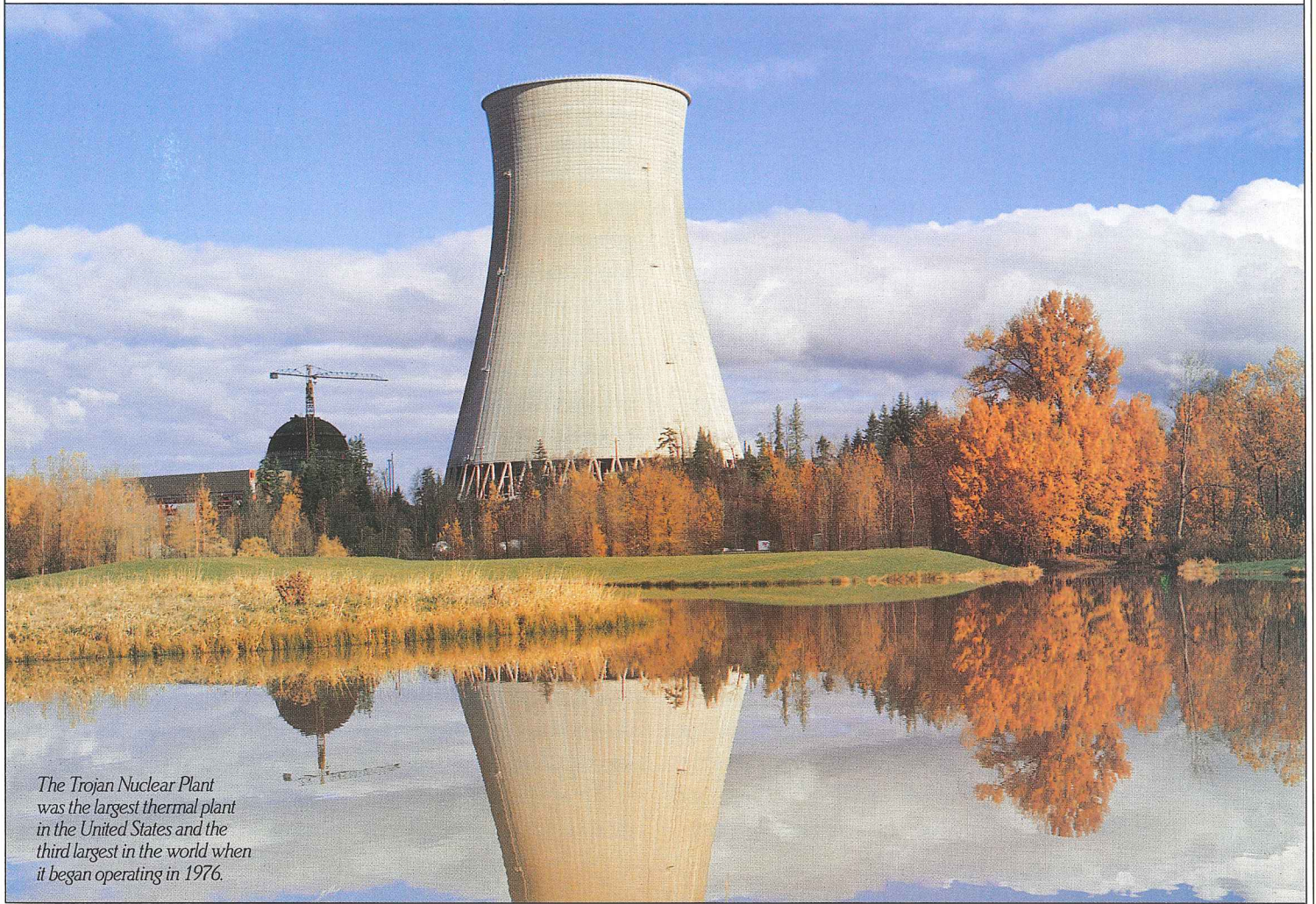
Valentine's Day, 1967, heralded a new era for PGE, our customers, and the Pacific Northwest. On that day, PGE President Frank Warren stood before a group of Columbia County business and government leaders to announce the Company would build a 1.1-million-kilowatt nuclear

plant nearby along the Columbia River. His announcement meant a huge shot in the arm for the local economy and a giant change in direction for PGE.

"The era of dependence wholly upon economical

hydro power is coming to a close," Warren observed in our 1966 annual report. That was largely because environmental and regulatory concerns were making it nearly impossible to develop remaining Northwest

sites suitable for large hydro projects. A PGE partnership effort to build two large dams on Idaho's Middle Snake River, for example, would be stalled for years in the licensing process. (In 1975, federal legislation creating the Hell's Canyon National Recreation Area would nix plans altogether.)



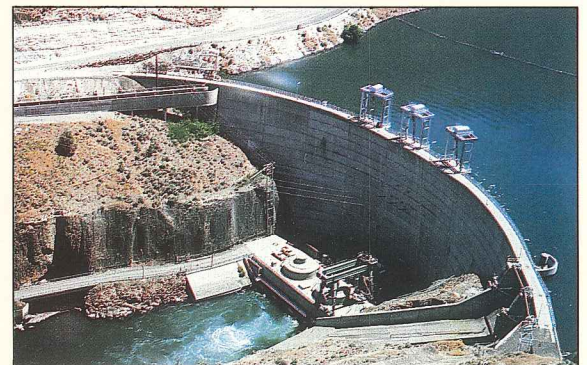
The Trojan Nuclear Plant was the largest thermal plant in the United States and the third largest in the world when it began operating in 1976.

- 1953—PGE signs a 20-year contract to receive power from BPA.
- 1954—PGE joins with PP&L and two other utilities to form the Pacific Northwest Power Company to pursue joint projects; PGE representatives are part of a study team observing nuclear-

fueled power generation at an Atomic Energy Commission (AEC) installation at Hanford; Timothy Meadows reservoir is developed above the Oak Grove Hydro Plant, adding capacity to PGE's three Clackamas River plants.

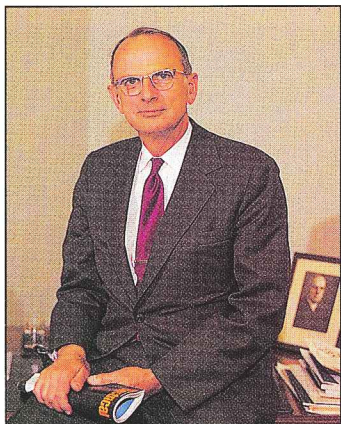
- 1955—Frank Warren becomes PGE President.

- 1956—PGE acquires Sandy Electric Co-op, extending its service territory to Government Camp on Mount Hood; natural gas introduced in PGE's service area; PGE's Portland Service Center is built; all-electric homes marketed nationwide (later called Bronze or Gold Medallion homes).



Pelton Dam on the Deschutes, 1958.

PGE also faced the expiration in 1973 of a 20-year BPA contract that was supplying about 600,000 kilowatts of low-cost power annually. With demand expected to grow at 7 percent a year—doubling every 10 years—the Company could end up between a rock and a hard place.



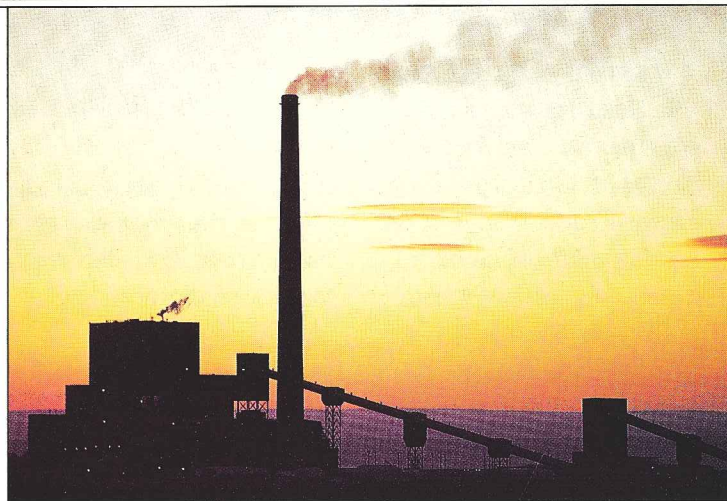
Frank Warren, President, 1955-77; Chairman, 1977-80.

And so we dived into an ambitious building program. Spurred on by the federal Hydro-Thermal Power Program, which encouraged utilities to build large thermal plants and ensured transmission over the federal power grid, we would pursue every option. “Coal-fired steam plants (as well as oil/gas-fired plants) will provide some of the new energy,” Warren said in the

1966 annual report, “but inevitably nuclear energy will be a major factor.” Indeed, the capacity of our newly proposed nuclear power plant would far exceed that of the Bonneville Dam.

PGE had participated in the development of commercial nuclear power from the beginning. Back in the '50s, we joined 32 other utilities to study atomic reactors. Company representatives were present in 1957 when the nation's first commercial nuclear power plant produced electricity in Shippingport, Pa. The following year, we joined 51 other utilities to invest in a prototype nuclear plant in the same state. By the time it began operating in 1965, PGE was ready to pioneer putting the new technology to work in Oregon.

After several sites were investigated, a nuclear plant site 40 miles north of Portland along the Columbia was selected based on its solid bedrock foundation. (The plant would take the name of a former resident—the Trojan Powder Co., a dynamite and explosives storage facility during World Wars I and II.) PGE then hired renowned architects to work



Boardman Coal Plant, completed in 1980.

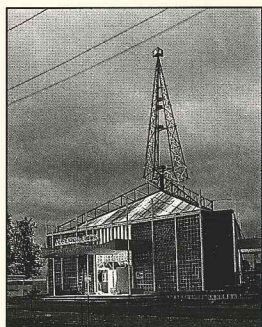
on the master plan, which included areas of wildlife preservation, a public park, and a visitors center. As work got under way in 1968, we sought to make Trojan “state of the art” technically and environmentally.

Little did we know, our technological strength had the potential to be our Achilles' heel. By building the region's first nuclear plant, PGE became the focal point for an emerging environmental movement. Society's views of atomic power in peacetime were changing. We faced a vocal opposition that challenged Trojan during hearings before regulatory agencies and in the media.

We worked to address as many concerns as possible as

they were raised. Some meant major design changes. A cooling tower was added to the design in 1970 to alleviate concerns about plant water possibly warming the river—earning PGE a commendation from the National Wildlife Federation. Every change cost time and money. (By 1970 PGE was joined by two other investors—Pacific Power & Light (PP&L) and the Eugene Water & Electric Board—who wanted to share in the plant's output.)

By anyone's account, the Trojan Nuclear Plant was a gigantic undertaking. In 1975, the work force on-site peaked at 1,800. To get the plant operating by the end of that year, employees worked 12-hour days, seven days a week, and



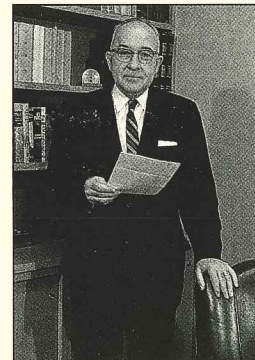
PGE's "Electri-City" display at Oregon's Centennial Expo, 1959.

■ 1957—PGE representatives observe as the commercial nuclear industry is born in Shippingport, Pa., when Duquesne Light Co.'s nuclear plant begins operation; the Soviet Union sends Sputnik into space.



After the Columbus Day Storm, 1962.

■ 1958—PGE's Pelton Plant is completed on the Deschutes River, after a decade-long political struggle that goes to the U.S. Supreme Court; the Company's North Fork Plant is completed on the Clackamas River.



Thomas Delzell, Chairman, 1948-64.

became strangers to their own families. "I can count on one hand the times I had dinner with my family in those years (mid-'70s)," recalls PGE retiree Jake Aldersebaes, Trojan's resident engineer during construction. "But it's the only way you can do those jobs. It takes that kind of dedication."

After a test run in December 1975, Trojan began commercial operation in 1976. Its cost of \$420 per kilowatt (kw) of capacity would be considered a bargain; projected costs of new nuclear and coal plants were already over \$1,000/kw.

While Trojan encountered delays and demand for power kept growing, PGE built gas/oil-fired combustion turbine plants at Bethel in Salem and Harborton in Portland. These also experienced some complications; for example, Portland City Council concerns about noise from Harborton and its effect on air quality led to severe restrictions on its operation. We considered relocating the entire plant but, in the end, would sell the plant's equipment to a Texas utility.

Still, both plants ran just in time to help us meet demand in 1973, when stream flows and

reservoir levels hit record lows. The threat of a power shortage was enough to make us bring the Station L steam plant in Portland out of a nine-year retirement for 60 days of emergency service. To ensure we had more emergency generation on hand in the future, we would build the Beaver combustion turbine plant at Port Westward, 60 miles northwest of Portland on the Columbia, a year later.

For more long-term power resources, we would pursue building other nuclear plants and coal plants during the '70s. Construction of a coal plant (owned 80 percent by PGE) near Boardman in north-

central Oregon began in 1976 and was completed in 1980. We also planned to build a two-unit nuclear project at Pebble Springs and, through partnerships, were investing in Montana Power Company's Colstrip coal project, a Washington Public Power Supply System nuclear plant, and the two-unit Skagit nuclear project planned by Puget Sound Power & Light. In our 1972 annual report, we estimated we would be investing more than \$735 million in new construction between 1973 and 1977.

If things were turbulent at home, we were not alone. By the early '70s, the world had turned upside down. The Oil

Embargo of 1973 caught America napping. Oil and gas, once abundant, were suddenly scarce and expensive. And double-digit inflation and high interest rates would make PGE pay dearly for the huge sums of money it needed to borrow to pay for new plants. As a result, starting in 1970 we had to boost our rates for the first time in more than 60 years. In the next 10 years, there would be 10 more increases. Our customers didn't like it. Neither did we.

With the nation in the throes of an energy crisis (later in the '70s, President Carter would call the need to conserve energy the "Moral Equivalent

FOSTER and KLEISER

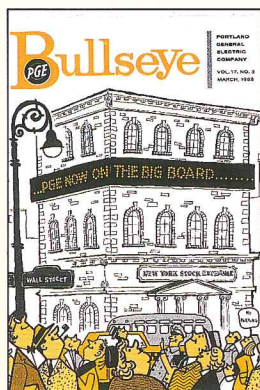
Join the Watt Watchers in '73 and save.



Mr. Watt Watcher offered energy conservation tips.

- 1959—Oregon's centennial; PGE builds a display entitled "Electri-city" for the 100-day Oregon Centennial Exposition; first photocopier introduced by Xerox.

- 1961—The nation's first manned space flight made by Alan Shepard.

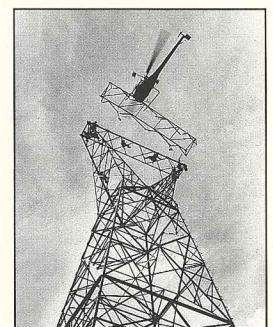


- 1962—Columbus Day windstorm tears down PGE's electrical system to the tune of \$3.95 million in damages; 98 percent of customers are without power; John Glenn orbits the earth; PGE receives the national Edison Award for its leadership in developing parks and conserv-

ing natural resources around its dams.

- 1963—President John F. Kennedy assassinated; Martin Luther King shares his "dream."

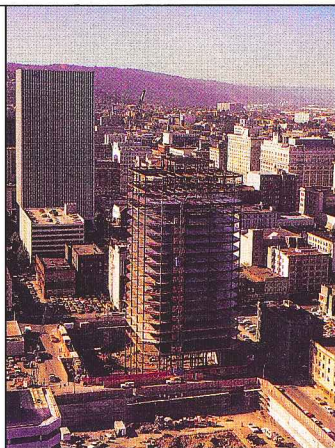
- 1964—PGE's Round Butte Plant is completed on the Deschutes River;



Building the Intertie, 1966.

of War”), PGE joined other utilities across the nation to help customers use energy wisely and get the most from their energy dollars. Mr. Watt Watcher, a figure that was part Sherlock Holmes and part electric meter, made his debut in 1972 to lead our conservation education efforts—aimed both at adults and children. In 1976, we began sponsoring a series of weekly television programs, “How to with Pete,” featuring a local handyman who demonstrated proper insulation of homes as well as how to make storm windows, wrap water heaters, and take other weatherization steps. PGE received national awards for this effort.

But we didn’t just teach customers to help themselves. We went on to do it directly. PGE insulated electric water heaters for free and mailed each customer shower head flow restrictors. In 1978, PGE and PP&L were the first utilities in the nation to offer to weatherize electrically heated homes and apartments through interest-free loans. This program enabled customers to install insulation, storm windows, and other materials, with no



Willamette Center takes shape.

payment required until they sold the home. PGE home inspectors conducted free energy audits at customers’ homes and then arranged for and financed the work. By the beginning of the ’80s, audits had been made of more than 28,000 homes and more than 13,000 customers had opted to weatherize their homes.

Overall, the programs were effective—between 1971 and 1981, average annual electricity use per residential customer declined more than 10 percent. But that didn’t mean PGE had stopped growing. Our average number of customers would increase by 43 percent during the decade, reflecting Oregon’s booming economy, growing population, and the record number of new homes being built.

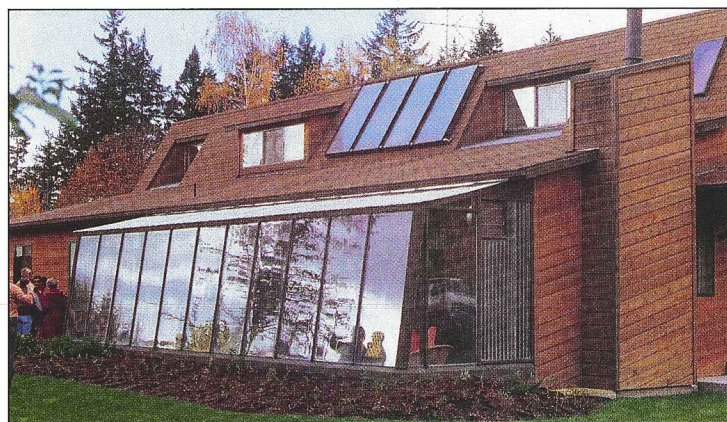
As PGE’s operations and staff

grew, we consolidated several of our offices. Among them, PGE’s Western Division Center opened in Beaverton in 1974, replacing smaller offices in Tigard and Beaverton. That same year, we built a new district office in Newberg, consolidating several smaller offices. In 1976, employees previously scattered in six different buildings began moving into our new downtown headquarters—Willamette Center. The three-building complex would serve as an anchor in the revitalization of an older section of Portland.

There would be other challenges before the 1970s were over. In 1979, an accident at the Three Mile Island nuclear plant near Harrisburg, Pa., brought construction of

new nuclear plants to a halt and fanned the flames of public concern. This would have a significant effect on the nuclear program PGE was pursuing.

But PGE’s biggest challenge was to regain public confidence at home. A decade of building controversial plants and annual rate increases had kept the Company on the front pages of newspapers and on the political hotseat. In 1977, Warren restructured the Company to improve customer relations. He became Chairman and Robert H. “Bob” Short succeeded him as President. Several key areas, including corporate planning, were strengthened. We had learned a thing or two, but we still had a ways to go.



Solar heating is among renewable energy options PGE encouraged.



Neil Armstrong on the moon, 1969.

Frank Warren assumes PGE Chairman responsibilities; Congress passes the Gulf of Tonkin Resolution; the nation enters the Vietnam War; Christmas Flood of 1964 affects Oregon rivers and wreaks havoc with PGE’s system.

- 1965—Peach Bottom nuclear power plant in Pennsylvania—funded by PGE and 51 other utilities—goes on-line; power blackouts experienced on the East Coast.
- 1966—PGE begins building its 194-mile section of the Pacific

Northwest-Southwest Intertie.

- 1968—Construction begins on PGE’s Trojan Nuclear Plant; PGE stock listed on the New York Stock exchange (PGN); John Day Dam completed; the Pacific Intertie is completed; Martin Luther King



Energy crisis shakes the nation, 1973.

and Robert F. Kennedy assassinated.

THE NEW PIONEERS

1980-present

As PGE emerged from the turbulent '70s, it faced a dramatic decline in the projected growth of electricity usage, a recessionary Oregon economy, and a bruised company image.

By 1980, projected growth in demand for electricity in the Northwest had dropped from doubling every 10 years to doubling every 50 years, giving PGE sufficient generating capacity to last well into the 1990s. It was a lesson in economics: As prices of all fuels rose in the '70s, consumers had a growing incentive to use less energy.

Further dampening customers' appetite for power was a recession that began in 1979. In Oregon, the housing, lumber, and electronics industries suffered; a number of PGE's major industrial customers shut their doors.

Given this unforeseen drop in load growth, we rolled up our sleeves to take another look at decisions we'd made in the '70s. PGE was still involved in several large thermal power plants in varying stages of development. Now there was good reason to doubt all the projects would be needed.

Meanwhile, customers' electric rates were continuing to rise, and so were their frustrations; Oregon voters had passed two

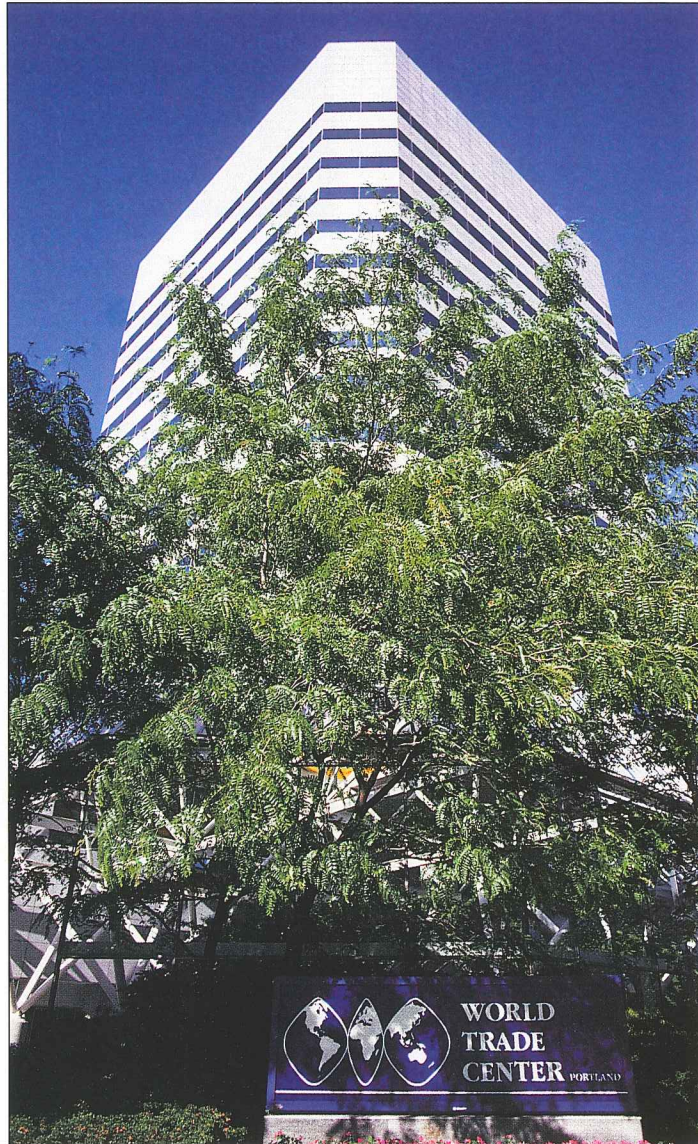
laws adding legal and financial uncertainty to any plans to build power plants in the state.

Bob Short became Chairman

and Chief Executive Officer in 1980. A former journalist who began his PGE career in 1955 as a lobbyist in Washington D.C., Short had clear ideas about how to tackle PGE's future.

Foremost on his agenda was improving communication—between PGE and its customers, its employees, and the media. That meant approaching the Company's problems with his trademark candor. For example, when PGE proposed building a new hydro plant at Willamette Falls in Oregon City, we created a citizen's advisory committee to ensure special interest groups and local residents were actively involved in the project. The group recommended PGE not build the plant unless 20 conditions involving fish protection could be met. Short did not believe the Company could provide this absolute assurance and canceled the project. We were listening.

Cutting costs to put the brakes on rate increases was also high on Short's agenda. There would be several internal reorganizations as the decade



PGE's headquarters takes on a new name and mission.

■ 1969—Neil Armstrong is the first man on the moon, courtesy of U.S. Apollo 11.

■ 1970—PGE's Summit Diesel Plant is completed near Government Camp on Mount Hood; Trojan partnership created: PGE, PP&L, and EWEB (Eugene Water & Electric Board);

Earth Day highlights the nation's concern about environmental issues.

■ 1971—The nation's voting age is lowered to 18.

■ 1972—PGE and PP&L sign a service exchange agreement, ending duplication of services throughout Portland.



Gov. Tom McCall test-drives an electric van, 1974.

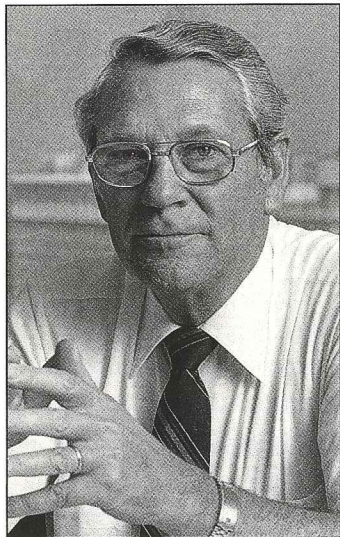
■ 1973—PGE's Bethel Combustion Plant begins operation near Salem; Watergate scandal; nationwide energy crisis; double-digit inflation.

■ 1974—PGE's Beaver Combustion Plant begins operation near Clatskanie.



Ice storm's handiwork in Gresham, 1979.

progressed; each time, PGE employees rose to the challenge, devising new, more efficient ways of doing their jobs. But we also took a hard look at our nuclear program—specifically, our investments in two nuclear plants still on the drawing board and another under construction. Skyrocketing financing costs and licensing difficulties had put the Pebble Springs, Skagit, and Washington Public Power Supply System (WPPSS) nuclear projects in limbo.



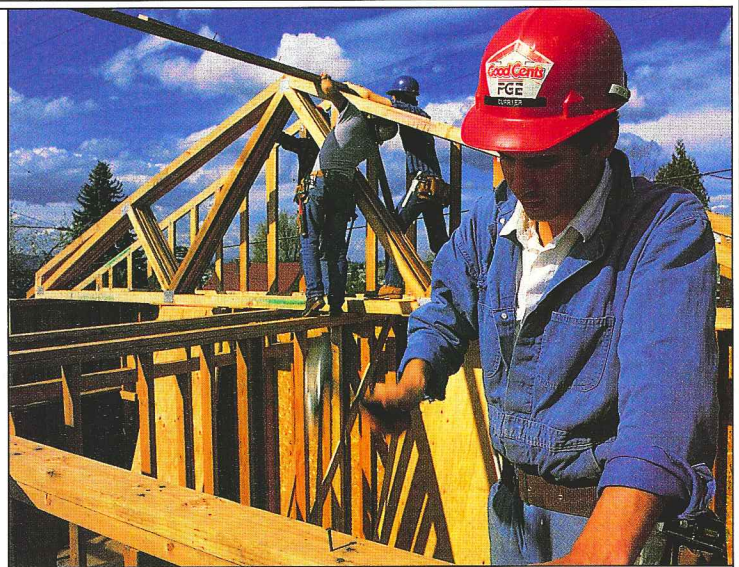
Bob Short, President, 1977-80; Chairman, 1980-88.

Finally, we bit the bullet. By 1983, PGE had written off its more than \$250 million investment in the Pebble Springs and

Skagit plants following their termination; three years later, we wrote off our 10 percent share in the unfinished WPPSS 3 plant. The decision to cut our losses and move on “was the most heroic challenge this Company ever faced,” Short would observe later.

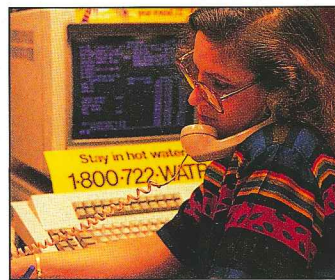
Meanwhile, PGE continued to encourage customers to conserve energy. By the end of 1988, the estimated energy savings resulting from our residential weatherization programs alone over the past 10 years were 105 million kilowatt-hours (kwh) annually—slightly more than the electrical production of the T.W. Sullivan Plant in 1987. We also promoted efficient electric heating systems—zonal heating and heat pumps—and for new homebuyers, encouraged construction of energy-efficient “GoodCents” homes.

Solar, wind, and other alternative forms of power generation were also gaining attention. PGE began promoting the use of renewable energy sources back in the '70s, supporting research efforts by the Electric Power Research Institute (EPRI) since its creation in 1972. By the '80s, PGE was



PGE's GoodCents School Project trains high school students to build energy-efficient homes.

offering \$300 rebates to customers installing solar water heating systems. We also bought electricity produced by customers, such as a Corbett farmer who installed an

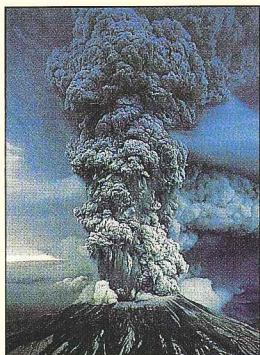


Customers get fast answers from hot line representatives like Robin Libby.

electricity-generating windmill on his property. On a bigger scale, we purchased energy from Publishers Paper Company's Newberg mill, where

cogeneration units used steam for industrial use and to generate electricity.

PGE's efforts to help customers conserve became a model for the rest of the nation. One of the provisions of the Regional Power Act of 1980, which PGE played a key role in drafting, was to give the Bonneville Power Administration (BPA) authority to invest up to \$2.5 billion in similar conservation programs. More significantly, the Act enabled PGE and other Northwest utilities to exchange part of the electricity used by their residential and farm customers for lower-cost power from BPA—and to pass the savings along to those



Mount St. Helens erupts, 1980.

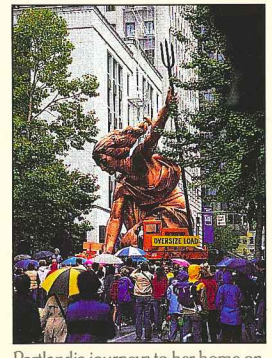
- 1975—The Nuclear Regulatory Commission (NRC) replaces the Atomic Energy Commission (AEC).
- 1976—PGE's Trojan Nuclear Plant begins commercial operation; employees begin moving into PGE's new headquarters, Willamette

Center in Portland; the nation celebrates its bicentennial.

- 1977—Frank Warren officially takes title of PGE Chairman and CEO; Robert Short becomes PGE President; Three Mile Island (TMI) accident on March 28, near Harris-

burg, Pa., heightens public scrutiny of nuclear power.

- 1980—Robert Short becomes PGE Chairman and CEO; PGE's Boardman Coal Plant begins operation near Boardman; Congress passes the Regional Power Act; Mount St. Helens erupts.



Portlandia journeys to her home on the Portland Building, 1985.

customers. This reduced the disparity in rates between people's utility districts (PUDs), which had preferential access to BPA's inexpensive power, and investor-owned utilities. The Act also established an eight-member Northwest Power Planning Council to monitor the region's energy needs and recommend what resources should be developed to meet those needs.

By cutting ties to unlicensed nuclear plants, reducing costs, avoiding construction of new plants through conservation, and exchanging power with BPA, PGE was able to stabilize its rates by the mid-'80s. This, combined with our efforts to be better listeners, helped end the Company's wild ride on the roller coaster of public opinion. Surveys showed our customers were growing happier with us every year; more than two-thirds gave PGE a positive rating in 1987.

A fresh face and calmer political environment helped the Company successfully weather several challenges. In 1980, voters defeated ballot measures that would have created several PUDs in our service area. And in 1986,

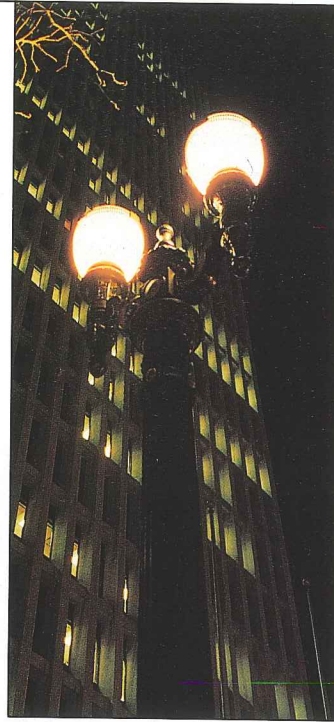
a ballot measure to shut down the Trojan Nuclear Plant was overwhelmingly defeated.

The energy marketplace in the mid-'80s was a whole new ballgame. Competition was stiff. To come to grips with it, we would look in two directions. First, we bolstered our marketing efforts to focus more strongly on customer satisfaction and personal service.

For residential customers, we set up hot lines offering expertise on water heaters, electric



A windmill generates electricity on a Gresham farm.



Portland converts to more energy-efficient street lights.

lighting, spas, heat pumps, and weatherization.

For commercial/industrial customers, we created a new sales organization geared to help them make the best use of electricity. In 1986, we also opened the Energy Resource Center (ERC), where restaurant owners might be found sampling an 18-pound turkey cooked to perfection in an hour in the latest convection oven while, down the hall, other business owners and building and design professionals are learning about inno-

vations in lighting or heating/cooling equipment.

Meanwhile, PGE was moving along a second path—exploring new ventures to complement its core energy business. As early as 1983, the Company had formed a subsidiary to market energy management services. A year later, PGE formed Columbia Willamette Development Co. (CWDC) to develop the Company's nonutility properties and to look for other land development opportunities. By itself and through partnerships, CWDC went on to build several residential, commercial, and mixed-use developments in Oregon, Washington, Arizona, Idaho and Hawaii. Among the largest are the 379-acre mixed-use Murrayhill development in Beaverton, featuring 1,500 homes and 800 apartments, and the partnership RiverPlace development on Portland's riverfront, featuring a hotel, marina, condominiums, and office and retail space.

By 1984, PGE had entered the leasing business. Columbia Willamette Financial Group, Inc. (later called Portland General Financial Services)

- 1981—Northwest Power Planning Council, a state-appointed body, is formed to formulate policy on future electrical energy demand and resources in the region, and to promote regional cooperation; U.S. hostages in Iran return home; first flight of the nation's space shuttle.

- 1982—PGE cancels plans for its Pebble Springs nuclear project; AT&T is forced to split up.

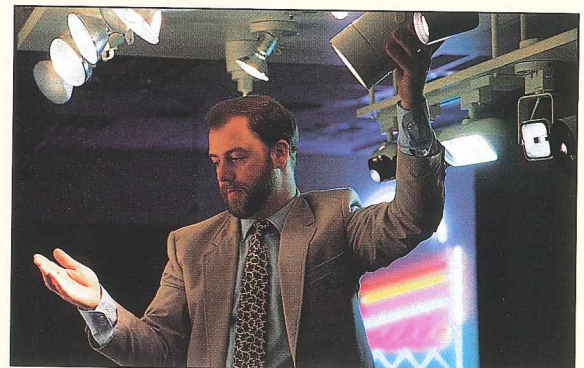
- 1983—PGE writes off its investment in the Skagit nuclear project.

- 1984—Oregon voters approve creation of a

Citizens' Utility Board (CUB).

- 1985—A new PGE subsidiary, Columbia Willamette Development Co., is created to pursue real estate projects.

- 1986—Portland General Corporation is created,



Specialist Dave Weigand tests new lighting applications in the ERC lighting lab.

purchases big-ticket items like jets and cargo ships and then leases them to other companies.

As subsidiaries of an electric utility, these new ventures came under state and federal utility regulations. This made it difficult for them to meet their competitors head-on in highly competitive markets. And so in

1986 we took a large step—forming a holding company called Portland General Corp. Its structure clearly separated the new businesses from PGE—protecting PGE customers from the greater financial risks of these new businesses while giving them the chance to operate in the same environ-

ment as their competition. We were making the Company less dependent on one business, yet building on what we knew best: the electric industry, real estate development, and financial services. “We’re in a brand new world, and we think it absolutely essential to look at all possible options,”

Bob Short would tell shareholders at a future annual meeting.

The evolution continued. In early 1987, PGE was organized into two divisions to further refine our efforts to meet customer needs and control costs. Kay Stepp was named President of the Energy



RiverPlace, developed through a subsidiary partnership, changed the look of Portland's west riverfront.



OMSI plans a new home at PGE's Station L site.

with PGE as a subsidiary; Oregon voters defeat Ballot Measure 14, an attempt to shut down PGE's Trojan Nuclear Plant, but approve expanding the Public Utility Commission to include three commissioners; PGE donates Station L to the Oregon Museum of Science

& Industry (OMSI) for a new museum complex; the Company writes off its 10 percent investment in a Washington Public Power Supply System nuclear plant; PGE stock hits an all-time high of \$36.75; the Soviet Union reports an accident at their

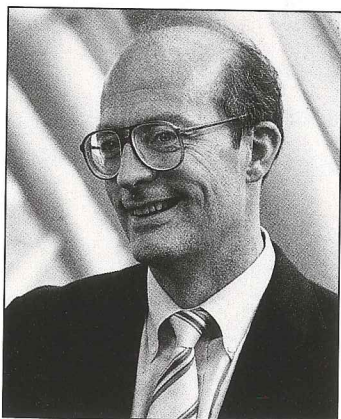


Timberline Lodge notes its 50th year.

Chernobyl Nuclear Plant; the U.S. space shuttle

Services Division and Bill Lindblad became President of the Generating Division.

Continuing to break new ground, the Company created two energy-related subsidiaries in 1988. Portland General Exchange (PGX) buys, packages, and sells long-term electric energy and energy services to utilities and other buyers of wholesale electricity. Moving beyond customers' meters, Portland General Energy Systems (PGES) focuses on

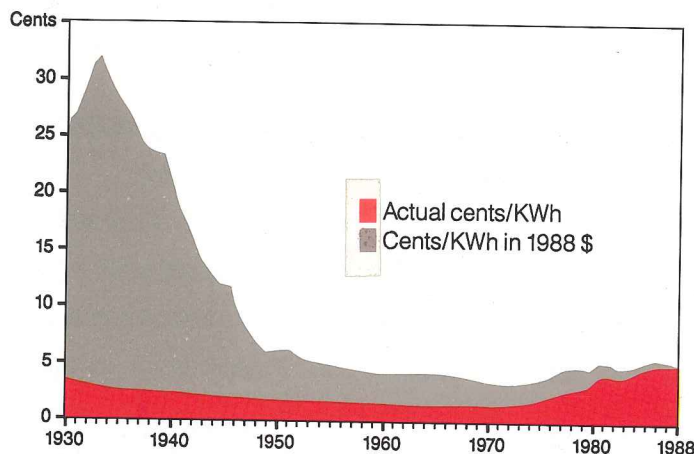


Ken Harrison, Chairman, 1988.

designing integrated energy systems and installing and maintaining electric equipment for commercial and industrial customers.

The '80s also saw PGE looking beyond its immediate boundaries. By 1984, we were taking part in trade missions to

Residential Rates Since 1930



Japan and China, working with state and local officials to entice those countries' high-tech companies to Oregon's fertile "Silicon Forest."

Then, in 1987, Portland General formed World Trade Center Northwest Corp. In line with our emphasis on economic development, the new subsidiary transformed our headquarters, Willamette Center, into the World Trade Center Portland. WTC Portland was selected as the home for the state's new Oregon Trade & Marketing Center in 1988. (Portland General also owns the license to develop a World Trade Center in Seattle.)

PGE's commitment to the community took other forms as well. In 1986, the Company

donated 18.5 acres of its old Station L site to the Oregon Museum of Science and Industry for a new museum. The complex, to be completed in the early 1990s, is expected to anchor redevelopment of Portland's east riverbank.

1988 was a year of major leadership change: Bob Short retired in November. His successor, Ken Harrison, has been with PGE since 1975 and brings a background in banking and investment management. One of Harrison's first acts as Chairman was to invite Richard (Dick) Reiten, Director of the Oregon Department of Economic Development, to join Portland General as President. Reiten, a former forest products executive, was

formerly a Portland General board member. The Company entered its second century with a new management team and a new look.

Vision and the courage to follow it through—that's what it took 100 years ago to get PGE started and that's what it has taken each day since to get where we are today. For a century, we have grown up with the communities we serve, playing a major role in improving Oregon's economy and quality of life. Now, with the same pioneering spirit as our earliest predecessor, we are reaching beyond the utility business to create a strong, diversified family of businesses. We plan to be here for another 100 years—bringing power to ideas.



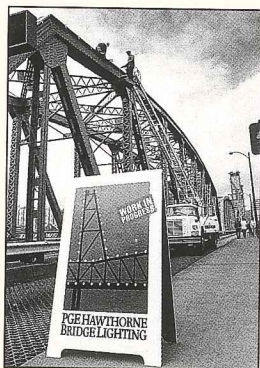
Every PGE employee plays a part in achieving the Company's goal. Introduced in 1985, Our Teamworks measures and rewards successful achievements in a variety of areas.

"Challenger" explodes; MAX, the Metropolitan Area Express light rail commuter train, begins service between Portland and Gresham.

■ 1987—Portland voters defeat proposals to create two people's utility districts (PUDs); PGE is restructured to create two new

divisions—the Energy Services Division and Generating Division; Timberline Lodge on Mount Hood celebrates its 50th anniversary.

■ 1988—Ken Harrison succeeds Robert Short as Chairman and CEO of Portland General Corp.; a wholesale power market-



Re-lighting the Hawthorne Bridge.

ing subsidiary, Portland General Exchange (PGX), is created; the Company's headquarters is renamed World Trade Center Portland and a new subsidiary is formed to promote international trade in the Northwest; most of PGE's customer representatives relocate to the Company's

new Customer Center in Tualatin.

■ 1989—Richard Reiten becomes PGC President; PGE starts the year serving more than 550,000 customers; the Company relights the Hawthorne Bridge as part of its centennial celebration.

PGE's founders would not recognize the company they created if they visited us today. But we think they would be proud of what they see.

Today, instead of one hydroelectric plant, PGE owns and operates a diversity of generating resources—including eight hydro plants, a nuclear plant, a coal plant, and two oil/gas-fired combustion turbine plants—and has an interest in several other generating projects in the Northwest. Instead of one 14-mile-long transmission line subject

to damage by errant pheasants, we have a reliable network of nearly 2,000 miles of transmission lines (not counting our portion of the Pacific Intertie) and more than 13,000 miles of distribution lines.

From its humble beginnings serving a handful of customers, the Company has grown to serve 555,000 homes, businesses, and industries in 54 cities and six counties in a 3,170-square-mile area of the Willamette Valley.

"A lot of things have happened since 1900 and most of them plug into walls."

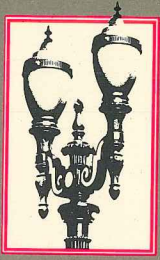
—John Culkin,
noted American educator.

Although PGE no longer has arc lamp trimmers or trolley conductors on the payroll, today we employ more than 3,000 men and women performing a multitude of jobs. They operate power plants, advise customers on their bills or about energy use, forecast electricity demand to ensure there's a steady supply, develop new services to meet customer needs, and install and maintain power lines in the best and worst weather conditions.

As we have for the past 100 years, we at PGE are working to ensure customers receive economical, reliable, and safe electrical service—today and tomorrow.

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