New Ideas

Cutting Edge Design

As demand for electricity grew, the company now known as Portland General Electric scoured the technological world for a dam design that would speed up construction and reduce cost. They chose the new “slab and buttress” design by Nils Ambursen for the River Mill Dam.

The Ambersen design did exactly what PGE had hoped. The Faraday Dam, built 4 years earlier, took 4 years to build at a cost of $1 million, while the 1911 River Mill Dam took only 18 months, at about the same cost.

River Mill dam originally had three generators; one was added in 1927, another in 1952. Altogether, the dam generates enough electricity to power more than 10,000 homes. A fish ladder added in 1912 was the first in a series of efforts to provide passage for migrating salmon.

PGE Firsts

Portland General Electric made its start in the 1880s. Often running ahead of the technological curve, the company brought several “firsts” to the region.

First Electricity in Portland
Oregon railroad magnate Henry Villard was so impressed with Edison’s new incandescent light that he bought an Edison dynamo and Brush arc lights and sailed them to Portland on his ship, the Columbia. He ran wires from the ship to light up the Clarendon Hotel, and Portland’s electrical era was born.

“The powerful rays lighted up the whole neighborhood to the brightness of day...”
—The Oregonian, September 4, 1880

First Long Distance DC Power Transmission in the United States
The earliest predecessors to PGE saw the enormous hydroelectric potential of Willamette Falls and built the nation’s first long distance transmission of direct current electricity, from Station A atop Willamette Falls to Portland, 14 miles away.

First Long Distance AC Power Transmission in the World
In February of 1880, damage done by a flood of the Willamette River offered an opportunity to shift from DC to AC power, using an experimental Westinghouse generator. This was likely the first long-distance transmission and distribution of AC in the world.

River Mill was the first Ambersen dam built on the West Coast. By the 1920s, 200 more had been built all over the U.S. This photo shows River Mill’s upstream side, under construction.

Inside Station A, four dynamos pumped enough electricity to light 35 streetlamps in downtown Portland.
Electrifying Oregon

The Hydroelectric Solution

At the turn of the 20th century, Portland was a bustling, vibrant city that welcomed thousands of new residents each year. People traveled all over Portland on electric trolley lines, and electric lighting was increasingly popular. Demand for power grew by leaps and bounds.

Since hydroelectric plants on the Willamette River were working at full tilt, the Oregon Water Power and Railroad Company (OWPRC) set out to explore the upper Clackamas River country for potential new water power sites. The region was found to be ideal for hydroelectric dams.

Building Estacada

In 1903, OWPRC built the elegant, 47-room Estacada Hotel and sent out brochures encouraging people to ride the train out for the day, hoping they’d buy land. By 1904, 300 people had settled in Estacada, and the town was incorporated in 1905.