



Interior of Redlands Orange Producers packinghouse. They were an early customer of Mill Creek's electricity. (Note arc lighting and electric-powered conveyor belts.)



Upland Citrus Association (great photo!) showing hearty wholesomeness. The two men seated at the top with backs mainly to the camera are providing the sizing machine its power – treadle foot power! (circa 1905).

interests. They proceeded to further develop the electric power potentials of Mill Creek. They built Mill Creek Plant #2, and this was completed in 1898 upstream from Plant #1. The water from this powerhouse was furnished by taking the water out of Mill Creek at its junction with Mountain Home stream and conveying it by flume and penstock to the turbines.

As soon as #2 was finished, another canal was built diverting Mill Creek water just below Forest Home, and it was conveyed by still another flume and penstock to #3 unit. The turbines and generators for #2 and #3 were all in the same building – thus, only enlarging the building and creating a savings.

If Mill Creek did not have enough litigation, another suit was filed in June 1899. This time, it was the people of Crafton against the people of Mill Creek. It was known as the Barton Land and Water Company et al vs. G. W. Tyler et al. We will not get into this, only to point out that this case was largely fought by the Southern Pacific Railroad as it held ownership of each alternating section of land in the Mill Creek watershed

Just in passing, but another interesting development, Crafton Water Company had a well dug and installed a pump on this successful well. The Redlands Light and Power Company furnished free power and the water from the well, working together, increased the flow to #1 and #2 generating plants.

Sinclair and Fisher started another company under the name of Southern California Power Company, and they set out to build a hydroelectric plant in the area where Alder Creek and Keller Creek flow into the Santa Ana River (about 12 miles from Redlands and referred to as Santa Ana River #1). It has been said that 18 tunnels in total were required to be dug, and a 30- inch steel pipeline exceeding 2,210 feet was set.

As it turned out, the demand from users -- including the additional placement of electric motors to power the new



Santa Ana #1 (circa 1899).

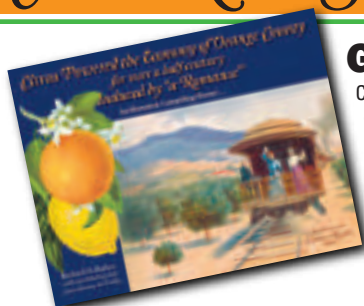
equipment required by citrus packers, water pumps and other users -- the supply capacity did not come close to an equilibrium. The capacity from their multiple plants to generate electrical power was totally in excess.

The Edison Electric (EEC) in Los Angeles had the exact opposite problem. The two met, although the distances and how to deliver at first was thought to be unsolvable. Eighty-some miles apart was far in advance of anything thus far attempted. On the financial side, Edison Electric did not have the funds to purchase Southern California Power Company, and the latter did not have the capital to purchase the eighty-some mile right-of-way not to mention the needed generators and transformers.

Sinclair and O. H. Ensign, Chief Engineer of Southern California Power Company, put their engineering heads together and came up with the unheard-of plan of transmission delivery some 83 miles distant. O. H. Ensign also wrote history regarding the insulator design work. As they sought answers, the questions of connection and distance were solved by the Southern Pacific Company, allowing poles to be placed along their tracks.

In June 1898, the Southern California Power Company was purchased through a stock transaction by Edison Elec-

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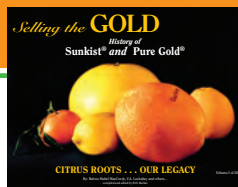


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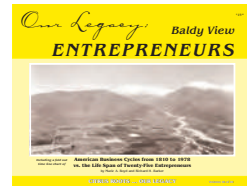
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tric Company. (The EEC became Southern California Edison in 1909.) Work was started on an 83-mile transmission power line from the Santa Ana River #1 hydroelectric plant to the Edison's Substation #1 in Los Angeles. In February 1899, this line was energized at 33,000 volts!

So, in a duration of about seven years, the industry had earned another chronicle of distinction as witnessed by the emerging citrus-growing region. This was truly a quantum leap accomplishment when one compares this 33,000 volts to Dr. Baldwin's 10,000 volt transmission (or 29 miles to San Bernardino compared to 83 miles). The Inland Empire and Southern California were again the "mainspring" in the development of the worldwide electrical utility system.



SAR 33kV line to L.A.

And so it comes about that Dr. Cyrus Baldwin, the first president of Pomona College, sold his idea to the people of deriving power from the rushing creek. He sought help from his friend Almarian William Decker. It is the latter gentleman to whom the world owes so much, yet so few recognize his name as earlier mentioned. His brilliant mind perceived and understood the previous experiments and sought their useful, practical application. He brought the explications together to the status of functionality. A job well done, and the world is indebted to him through: (1) long-distance, commercial high-voltage electric transmission, and (2) introducing the usage of three-phase alternating current which became universally employed.

New electric motors were synchronous, with ease in starting, stopping, and restarting. As we have read, the electric motor modernized the citrus packinghouses. Electric motors quietly powered water pumps and wells instead of the extremely loud petroleum-powered engines. Additionally, ice plants were located where needed and not on the banks of streams, etc.

As mentioned earlier, Decker was in his prime of life at about 41 when tuberculosis took this brilliant mind. As we close this story in honor of Almarian W. Decker, we should not forget the other parts of the story -- the roles of Dr. Cyrus Baldwin, J. Albert Dole, William G. Kerckhoff, Henry Fisher, Harry H. Sinclair and the citrus community at large, which made these accomplishments and enterprises a reality. This story is another example of working together which had a huge worldwide beneficial effect in past, present and future generations.

In the coming months, in this *Citrograph* section, we will acquaint ourselves with the huge San Joaquin Light and

Power Corporation founded by William G. Kerckhoff. His company grew from Fresno covering an immense area, serving six million acres, even providing electric power to Fresno, San Luis Obispo, Santa Barbara and Monterey Counties.

His company benefited the people by serving agricultural, commercial, industrial, governmental and residential demands. The San Joaquin Valley could never have attained its great productivity without the investment made by his company in providing low cost electric power. From starting in 1903 to 1931, gross earnings grew by almost 100%.

William G. Kerckhoff leaves a compelling powerful story! He never failed, and his "word was his bond." The binding agreement he made was based on honesty endorsed by a handshake! This is only one part of the story, for he founded Southern California Gas Company and more. The Kerckhoff's philanthropy left in 1929 is still helping society through UCLA, Caltech, USC, and two medical facilities in Germany. This is truly a persuasive story of assisting countless generations from his success!

Richard H. Barker is the founder and president of the Citrus Roots-Preserving Citrus Heritage Foundation. For a number of years, he has been leading a drive to bring about a higher awareness of the role citrus played in developing California. Dick is a retired investment banker and was a third generation Sunkist grower. He has published four volumes on citrus heritage.

The author wishes to credit the following: Special Collections, Honnold/Mudd Library of The Claremont Colleges; The Huntington Library, San Marino; the Sherman Library and Gardens, Corona del Mar; and the Edison Collection (SCE). ●

Kerckhoff biography available

This biography of William G. Kerckhoff written in 1935 by Henry W. O'Melveny, the founder of what is now the oldest law firm in Los Angeles (O'Melveny & Myers LLC) has been reprinted by Richard Barker by permission of the O'Melveny family.

Copies are available from the Foundation for just \$15.00. Download the order form at www.citrus-roots.com/books.html.

