



E. C. Starr

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1901–1988

By Thomas H. Lee and Ralph S. Gens

Eugene C. Starr, engineer, educator, and leader in the electric power industry, both in the United States and in the international community, died on February 5, 1988, at the age of eighty-six.

Elected to the National Academy of Engineering in 1977, Gene was a respected engineering leader, a dedicated professional, and a beloved teacher. Throughout his entire life, he pursued the development of advanced technology for the electrical transmission system. He was extremely active in professional societies, where he provided inspiration to young engineers in the electric power field.

Gene received from Oregon State University his B.S. in electrical engineering in 1923 and his E.E. in 1938. From 1924 to 1927 he worked on high-voltage research at the General Electric Company. In 1927 he returned to Oregon State to become an instructor in electrical engineering, and was appointed professor in 1939. He remained in that position until 1954, when he left the university to become chief engineer for the Bonneville Power Administration (BPA) in Portland, Oregon. BPA was no stranger to Gene, because between 1939 and 1954 he had served as consulting engineer to BPA and thus was familiar with BPA activities. From 1962 to his death in 1988, Gene served as full-time senior consultant to all BPA administrators and chief engineers.

Gene led the technical development of one of the world's outstanding power transmission organizations—BPA—during some of its most important years of technological development. Although it is difficult to separate the impacts of his activities as manager from those as consultant, clearly the application of series capacitors on transmission systems had the greatest impact in the western United States. Without the series capacitors, the 500-kilovolt alternating-current system, stretching all the way from six hundred miles north of the Canadian border to the Mexican border, would not have been technically and economically feasible. His interest in direct-current transmission technology, first kindled by the need in 1939 to explore long-distance transmission, was applied again in the fourteen-hundred-mile-long West Coast direct-current intertie link. Other major interests were the introduction of large high-voltage shunt capacitor installation for transmission economy and reliability, and his quests to find fast, reliable, and restrike-free circuit breakers for transmission system applications. His experience with high-voltage research led to better understanding of arc deionization time requirements for transmission line lightning flashovers, radio noise, and corona phenomena, from both conductors in air or in oil-impregnated insulation structures. Not to be overlooked is his basic work on aircraft static charge precipitation, which also led to his involvement in similar work in the Manhattan Project.

However, Gene had also other interests. He was a crack pistol shot, an avid hunter, a connoisseur of powerful automobiles, and he had a willingness to share any experience, from making wine to making ammunition.

In addition to his duties with BPA, Gene was a life fellow of the Institute of Electrical and Electronics Engineers (IEEE); a member of the board of directors of the American Institute of Electrical Engineers (AIEE); the U.S. representative for CIGRE, the International Conference on Large High Voltage Electric Systems, Study Committee No. 14; a member of the executive committee of the American Nuclear Society's Power Division; a member of the Atomic Energy Commission's Advisory Committee on Reactor Policies and Programs; a consultant to UNESCO,

the United Nations Educational, Scientific, and Cultural Organization, for activities in India; a member of the Federal Power Commission's Advisory Committee on Power System Reliability; and many other similar activities.

In 1965 he received the U.S. Department of the Interior's Distinguished Service Award with Gold Medal, and he was named Engineer of the Year by Professional Engineers of Oregon. He was the recipient of IEEE's William M. Harbirshaw Award in 1968 and its Lamme Medal in 1980, and BPA's Administrator's Award for Distinguished Service in 1982. In 1976 he received the Distinguished Service Award from Oregon State University. He published more than forty professional and technical articles in the field of high-voltage, high-capacity alternating-and direct-current power transmission, high-voltage dielectric and environmental phenomena, conventional and nuclear power generation, and power system reliability.