



Edward W. Kimbark

Edward Wilson Kimbark

1902–1982

By Eugene C. Starr

Edward Wilson Kimbark, an internationally known electrical engineer, author, and educator, died February 8, 1982, at the age of seventy-nine. Although he had formally retired in 1976, at the time of his death he was serving as a part-time consulting engineer with the Bonneville Power Administration in Portland, Oregon.

Dr. Kimbark was born in Chicago on September 21, 1902. He earned a B.S. in electrical engineering in 1924 from Northwestern University in Evanston, Illinois, and an M.S. and Ph.D., also in electrical engineering, in 1933 and 1937 from the Massachusetts Institute of Technology (MIT).

His noteworthy accomplishments extended over forty years. From 1963 until his retirement, Dr. Kimbark was employed by the Bonneville Power Administration in the Pacific Northwest. There he developed and guided the use of a large network analyzer that was used to plan for system power flow and stability. As head of the Bonneville's Systems Analysis Unit, he and his staff developed the fundamental performance requirements of many stability controls that are still in use today. These controls included those used to regulate series capacitor switching, dynamic braking, direct current (DC) line power boosting, generator dropping, load rejection, and single-pole switching.

In 1976, based on the studies of Dr. Kimbark and his unit, a modulation control was added to the Pacific Intertie high-voltage DC line that allowed the damping of a chronic regional power oscillation. Owing to the upgraded transfer capabilities of the parallel high-voltage alternating current intertie that were provided by this control, substantial economic benefits were felt throughout the western region.

During the last years of his life, Dr. Kimbark investigated the wider uses of single-pole switching. In recognition of his work, he received the Institute of Electrical and Electronics Engineers' (IEEE) Best Paper Award (1975). Other awards included the U.S. Department of the Interior's Gold Medal for Distinguished Service (1974) and IEEE's Habirshaw Award (1980) for the "advancement of electric power transmission through innovative research, classic textbooks, and inspirational teaching."

Dr. Kimbark's earlier career included positions in academia and industry. He was professor of electrical engineering at MIT from 1939 to 1950; assistant professor of electrical engineering at the Polytechnic Institute of Brooklyn from 1937 to 1939; a teacher of electrical engineering and graduate subjects at MIT from 1933 to 1937; assistant curator of the Division of Power at the Museum of Science and Industry in Chicago from 1929 to 1932; an instructor in electrical engineering at the University of California from 1927 to 1929; and, from 1925 to 1927, a substation operator and assistant in the testing laboratory of the Public Service Company of Northern Illinois, in Evanston, Illinois.

From 1950 until 1955, he was professor of electrical engineering at the Instituto Tecnológico de Aeronáutica at São Paulo, Brazil, where he taught classes using his fluent Portuguese. On his return to the United States, Dr. Kimbark served as the dean of engineering at Seattle University in Seattle, Washington, from 1955 to 1962. He was instrumental in securing accreditation of the school by the Engineering Council for Professional Development in 1962.

Dr. Kimbark was widely recognized as a leader in the advancement

of power system practices. His three books on power system stability, which were completed in 1948, 1950, and 1956, and his volume on direct current transmission, completed in 1971, continue to be basic power system references. He also wrote or coauthored three other notable publications, in addition to definitive papers in his field. Dr. Kimbark's principal fields of interest were electric power transmission, including high-voltage DC transmission; symmetrical components and the related transformation of variables; single-pole switching; subsynchronous resonance; and power system stability.

Dr. Kimbark was elected to the National Academy of Engineering in 1979. He was a fellow and life member of IEEE and its Power Engineering Society. He was also a member of the Conférence Internationale des Grands Réseaux Électriques à Haute Tension, the National Society of Professional Engineers, and the American Society for Engineering Education. In addition, he belonged to the Eta Kappa Nu and Sigma Xi fraternities and the Phi Beta Kappa honorary society.

Dr. Kimbark and his wife Iris, who survives him, shared an avid interest in cultural affairs. As a matter of fact, at the time of his death, he was active as chairman of the Chamber Music Society of Oregon.

His cheerful personality and graciously helpful attitude endeared him to his students, associates, and many friends.