Association of Professional Engineers

of the

Province of Manitoba

Merit Award

to

DENNIS ALLEN WOODFORD

B.E. Hons. (Elec.), M.Sc., P.Eng.

Dennis Woodford was born in Melbourne, Australia and completed his Associate Diploma of Electrical Engineering at the Royal Melbourne Institute of Technology in 1964. In 1966 he joined the English Electric Company in Australia and following his Bachelor of Engineering degree from the University of Melbourne in 1967, transferred to England. There he worked on HVDC transmission, static compensators and thyristor drive control systems. In 1970 he enrolled at the University of Manitoba as a graduate student, receiving the Master of Science degree in 1973. In 1972 he joined the System Planning Division of Manitoba Hydro, but never severed his ties with the University or research. He has taught an undergraduate course, given numerous graduate seminars and supervised graduate students. In 1983 he was appointed Adjunct Professor of Electrical Engineering.

At Manitoba Hydro, Dennis Woodford undertook planning studies associated with the Nelson River generation and transmission development. In 1974 as Special Studies Engineer, he was responsible for the planning studies of the Winnipeg-Twin Cities 500 kV ac interconnection, including the specification of equipment for this line, recommendation of a unique monitoring and protection plan with single pole switching and the research carried out by both the Electrical Power Research Institute in the U.S. and the University of Manitoba on the geomagnetic induced current effects on ac transmission systems. He was responsible for the project management of two unique microwave current monitoring devices, used to detect small amounts of solar induced currents on the Manitoba Hydro and Minnesota Power and Light Co. systems. He was also responsible for the feasibility and technical studies for the Manitoba-Nebraska interconnection, where ac, dc and multi-terminal dc transmission alternatives were considered. It was during these studies, that the lack of a good digital programme for the simulation of electromagnetic transients in large power systems, with both ac and dc transmission, became evident. Therefore Dennis set about on his own time, as a professional development exercise, to develop such a programme. The programme today is rapidly gaining international acceptance.

Mr. Woodford has published over ten papers and holds a patent on these studies and developments. He has been a member of the IEE, the IEEE (with recent service as Chairman of the Winnipeg Section). He was the treasurer of the 1980 IEEE International Conference on Integrated ac-dc systems in Winnipeg. He has been a member of the Association of Professional Engineers of the Province on Manitoba since 1973.

For his outstanding contributions to research and development and to his pioneering achievements in the fields of electromagnetic transient simulation and electical power transmission, this recognition is extended to Dennis Woodford.

October 18, 1985