

# Introduction



*W. Harry Prevey*

This book commemorates the achievements of the Electrical Industry in Canada over the past 100 years and longer. The story is contained partly in text material and partly in photographs. It has been undertaken by the Canadian Region of the Institute of Electrical and Electronics Engineers in support of the Institute's centennial celebrations which occurred in 1984.

**ELECTRICITY!** We call it the "MAGIC MEDIUM" because it is a phenomenal force which magically converts the energy of our country's fossil fuels, the power of our waterfalls and the thermal content of our nuclear sources into a form in which this energy can be transmitted to our farms, homes, factories, streets, public places and into space to perform the tasks of our daily lives. We have not always had this magical medium. A hundred years ago or more Canada did not possess the capability to use these wondrous forces of nature through the medium of

electricity. Today we rely on, and take for granted, the silent energy of electricity for instant communication with places or people near and far, for lighting and heating our homes, driving our machines of production, transporting our people and produce, operating our office buildings, lighting our streets, controlling our traffic movements, calculating our scientific problems, doing our accounting, carrying out a great variety of medical treatments, and educating and entertaining ourselves.

This is a story of people, institutions, public bodies, private industries and organizations who have been leaders in harnessing the energy of nature for the benefit of Canadians from one end of the country to the other. It is a story about invention, adventure, patience, courage, and persistence. It is not a complete story: it is only an illustrative one. It could not be otherwise within a volume of this size.

Our growing electrical systems have been a major contributing factor in Canada's century of development and welfare of Canadians. Although we are a relatively small nation we recognize ourselves, and we believe we are recognized around the world, as a country of freedom and high standards of living. Our farms and cities are clean, productive, enjoyable, and healthy places to live. Without our ample supply of electricity and our advanced electrical machinery and devices we would not be in this happy state. Without the continuing development of our electrical systems and appliances we should not be capable of carrying on in the next century as one of the most favoured countries of the world. It is with these thoughts that this book has been undertaken by the Canadian Region of the IEEE.

## **Acknowledgements**

Many people and organizations have contributed to the development of this book. Those who have assisted through their financial support are listed on page 183. Others have given freely of their time and expertise during the planning stages by contributing or gathering background material including treasured photographs or by advice on graphics and printing. It is quite certain that we will omit some but feel obliged to acknowledge our debt of gratitude to all our contributors and to mention them to the extent that we have succeeded in maintaining our record.

Our success in gaining a broad interest in this project from all parts of the country and from all segments of this industry is due to the early work and support of the IEEE Regional Director,

Council Representatives, Advisory Board and Editorial Board-all of whom are listed on page v. Then the Planning Committee, also listed on page v, established the format and laid the ground work for gathering source material.

Various Sections of the IEEE across Canada have participated financially & have contributed background material for the book.

We are also indebted to both the IEEE Regional Office in Toronto and the Institute's Headquarters in New York. When this Centennial Project was first undertaken Fred Heath was Regional Director and George Armitage was Regional Office Manager. Later Wallace Read was elected Regional Director and Fred Heath was appointed Regional Office Manager. Throughout, Mrs. Pamela Woodrow has served as Assistant Manager. These officials have steadfastly carried out myriad tasks associated with planning, communications, publicity, financial management, and record keeping for this undertaking. We also extend our thanks to Dave Staiger, Staff Director-Publishing Services-IEEE Headquarters, New York, for his most valued guidance regarding procedures for printing.

Then there are the authors who have contributed the text of the various parts. Larry Collins has provided the story of Electronic Communications and Control, Fred Kee researched and provided the story of the Development of Electric Power in Canada. Ray Findlay wrote the story of Electrical Engineering and Technology Education. George Armitage and Fred Heath produced the account of the Institute in Canada while Dean Gordon Slemmon, of the University of Toronto, has contributed his commentary: "Past, Present and Future".

We are especially indebted to those who have provided us with the French language text translations-essential to the production of a truly national Canadian publication. The portion on the Development of Electric Power in Canada is the contribution of the Hydro-Québec organization. Other portions have been translated by Gerry Matteau of Ottawa with editorial assistance by Bell Canada (in the Communications portion) and École Polytechnique (in the part on Education). The balance of the translations are contributed by the Canadian Electrical Association, through the assistance of Murray Phillips and Georges Portelance.

Regarding photographs: we have received a great many from all across Canada. Some are of modern-day accomplishments. Others are of the early days. We are grateful for these and regret that we have been able to only include a part of those which have been so kindly provided for our use. To the extent possible we acknowledge the contributor in the caption of each photograph.

The list which follows gives the names of the individual contributors of the various categories which we have summarized in the foregoing acknowledgement-other than those who have already been listed in the boards and committees on earlier pages. We extend our most grateful thanks to each individual and organization who has assisted us to bring this publication through to its completion.

W. Harry Prevey - Editor