

# **ECONOMICS OF ELECTRICAL DISTRIBUTION**

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Economics of Electrical Distribution by P. O. Reyneau & H. P. Seelye

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**P. O. REYNEAU & H. P. SEELYE**

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BY

**P. O. REYNEAU, M.E.**

MEMBER A.I.E.E.

ASSISTANT ELECTRICAL ENGINEER, THE DETROIT EDISON COMPANY

AND

**H. P. SEELYE, B.C.E.**

ASSO. MEMBER A.I.E.E.

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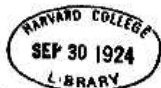
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## PREFACE

Electrical Engineering is more than the application of the principles of electricity to the design, construction and operation of a machine, a power plant or a distribution system to the end that it fulfills satisfactorily its intended purpose. It is highly desirable that efficiency be also accomplished. Further than this, it should be the aim of all engineers to develop efficiency in its broader sense, that is, by the realization of maximum economy in both design, construction and operation.

In designing, constructing, or operating an electrical distribution system, the object to be striven for is to provide all customers with a good quality of service at the least possible cost over the system as a whole. This result can be attained only through a careful and conscientious application of the principles of economics to all parts of the system. It is to define those principles and to indicate methods for their application that this book is presented.

This work has been prompted by the realization that the transmission and distribution system, representing a large part of the total investment in any central station and offering a wide field for economic study has not often been given sufficient attention. Much valuable information may be found scattered through the engineering literature, but it is thought that there is need of bringing together the factors involved in such a study and of discussing the subject as a whole.

This book is by no means an attempt to cover the whole field of economics as applied to the central station system. It is well recognized that the range of problems encountered is very broad and varied and that, as yet, comparatively little progress has been made in such work. It would be impossible in a work of this kind to cover in detail even the field of distribution and transmission economics. The purpose of the book is to present the need for the application of economic principles to the design of distribution systems, to explain the fundamental principles involved, to indicate the types of problems most often encountered and to offer methods of studying such problems and reaching their solution.

A considerable part of the material presented in this book has appeared previously in the *Electrical World*. The chapter on single-phase secondaries is a rearrangement of material published in the *Proceedings* of the American Institute of Electrical Engineers.

Merrill W. De Merit has furnished valuable assistance particularly in the chapters on Energy Cost and Underground Lines.

DETROIT, MICH.,  
Dec. 1921.

THE AUTHORS.

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