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FOREWORD


Under the mandate of The Energy Conservation Act 2001, the Bureau of Energy Efficiency is implementing various programmes to provide momentum to the energy efficiency movement in the country. Development of Certified Energy Managers and Energy Auditors is one of the thrust areas of Bureau of Energy Efficiency, for which a National Certification Examination is being conducted. The first examination conducted by the Bureau of Energy Efficiency in 2004 saw an overwhelming response, which reflects the vibrancy of energy conservation movement in India. These guidebooks prepared by the Bureau were also received very well by candidates and by others and are proving to be good source of reference for all the issues related with improvement of energy efficiency in all sectors of economy.

To prepare guidebooks covering a wide range of topics in a concise form at the same time without sacrificing the details is a daunting task. In the field of energy management, where the information available is scanty and scattered, comprehensive guidebooks of this nature are unique of its kind. The compilation is lively and candid, and the examples are taken from an array of applications. Based on the feedback from the candidates of previous examination, a few changes have been incorporated in this second edition.

The inputs for these guidebooks have been drawn from extensive literature survey of several publications. Case studies and examples from the energy audits conducted by National Productivity Council over the past four decades have been liberally used in these guidebooks making them more practice oriented.

I recognize that the readership of these guidebooks will be varied due to the intrinsically multidisciplinary nature of energy management. This easy-to-read and appropriately illustrated guidebooks will be used over and over again by practicing engineers, energy professionals and consultants, who are dedicated to activities leading to energy efficiency. Thus, the guidebooks will appeal to a wide audience of users for those who are to appear for the examination and those who just want to read it and learn more about energy efficiency concepts.

I wish all candidates who will write the future National Certification Examinations, a success.


(R.V.SHAHI)



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Acknowledgement

A guide book as ambitious as this one is always the product of the hard work and creative insight of a number of individuals, dedicated to energy conservation. The soul of this book is the crisp and lively presentation, which facilitate easy reading and absorption for enhancing our knowledge of underlying issues.

Writing a book, as with any other large project, requires the coordinated efforts of many people. The publication of the first edition drew encomiums from all cross sections of readers and also subsequently opened the doors to unsolicited submissions for refinements, corrections and value additions across our transom, from all over the country.

The production of this second edition of the manual has been the result of the contributions of a large number of individuals including the candidates of the previous examination who have taken the time and effort to suggest improvements to previous versions, and to draft new sections.

For the readers it will be a stimulating, challenging and rewarding learning experience and is bound to increase their effectiveness not only as a candidate for the exam but also as a practitioner of energy efficiency.

In assembling this second edition, we were once again privileged to work with and enjoy the support of enthusiastic and inspired group of energy specialists from National Productivity Council.

The preparatory team deserves special mention for enduring the piles of manuscripts and late-night proofing that goes with putting together a guidebook.

With gratitude, we acknowledge those whose diligent labor and tireless commitment to energy conservation made this possible. The following individuals had major responsibilities in the fruition of these guide books.


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