

Short-Course at IIT Gandhinagar
Energy Efficiency: An Overview

Mr. Virendra S. Kothari, Director, Innotem Services Private Limited
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Energy is a basic requirement for human existence. During the last century, world energy use has grown dramatically. There is significant potential to reduce current levels of energy use. Energy efficiency is the use of energy in a manner that reduces or minimises energy losses and unnecessary waste of energy. Energy efficiency is the first step toward sustainable energy use, and is the cheapest, fastest, safest and simplest way to reduce greenhouse gas emissions to address climate change.

This short course will provide an overview of the many dimensions of energy efficiency, through a quick exposure to various aspects of energy use and energy efficiency in all spheres and types of human activity. This will enable an appreciation of the following issues:

- Why is there continuing and increasing importance of energy efficiency?
- Where are the possibilities?
- What are the ways and the means?
- How can the opportunities be realised?

The topics covered in the lectures will include: Macro Perspective; Basic Concepts; Energy Use and Energy Efficiency in Industry, Buildings, Appliances, Transport, Agriculture, and Electricity Generation; Energy Audit; Managing Energy Efficiency; and Energy Efficiency Policies and Programmes. Some theoretical concepts and practical aspects of energy efficiency applications will be discussed. The course will consist of 4 lectures, each of 2-2.5 hour's duration. There are no prerequisites for this course.

About the Instructor

Mr. Virendra S. Kothari is a Director of Innotem Services Private Limited, New Delhi where he is involved in work encompassing the engineering, management, economic/financial and policy aspects of energy efficiency, demand-side management and renewable energy. He received a Bachelor of Technology degree in Mechanical Engineering from IIT Kanpur, and a Master of Science in Engineering degree in Mechanical and Aerospace Engineering from Princeton University, USA. He holds the professional qualification of Certified Energy Auditor and Certified Energy Manager, awarded by Bureau of Energy Efficiency, Government of India. He has worked earlier at Energy and Environmental Analysis, Inc., USA, Engineers India Limited, and The Energy and Resources Institute. He was a member of the Board of Directors of IIT Kanpur Alumni Association during 2006-08.

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