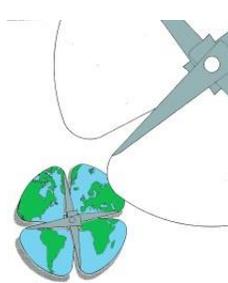


# ENERGY MANAGEMENT IN SMALL- AND MEDIUM-SCALE INDUSTRIES

## with focus on preparing for ISO 50001 Energy Management



An international course for the public and private sectors involved in energy efficiency and environmental protection in industries.

**10 October 2018 – 25 January 2019**

### INTRODUCTION

Energy efficiency is one of the most important means to reduce CO<sub>2</sub> emission in the coming years. In order to promote energy efficiency most governments require companies to introduce energy management as a mean to reach a reduction in the energy consumption. In this course you will learn what energy management is, how it can be implemented and how it can result in improving the energy efficiency.

It should be emphasized that these improvements provide a win-win situation for large and small medium Enterprises as well as helping industries contribute to their Corporate social responsibility activities and goals. In particular there is a focus on preparing for reaching the International Standard on Energy Management (ISO 50001).

### TARGET GROUP

Management staff, energy managers and SHE specialists involved in energy planning in their companies. Policymakers from government organizations, industrial associations, and institutes involved in industrial development. Consultants who work in areas related to the themes of the course.

### OBJECTIVES

The short-term objectives are to provide the participants with practical tools, knowledge and insights into:

- General problems with energy efficiency within large and small medium Enterprises and possibilities to improvement through energy management.
- The key elements of an energy management system
- Preparation and execution of energy audits
- Preparation for reaching ISO 50001 Energy Management
- Policies and instruments to support energy efficiency improvements in large and small medium Enterprises.
- Energy monitoring and tools for analyzing energy data.

The long term objectives are to provide the participants from government, branch and large and small medium Enterprises with management capabilities with respect to:

- The efficient use of energy and the reduction of emissions caused by industrial processes and energy use in buildings.
- Policy and practical options and strategies for implementing energy management in large and small medium Enterprises according to ISO 50001

### ORGANIZATION

The course is divided into two parts. Part 1 is a 5 module online course spread out over 10 weeks in which participants, in their own time, participate in Webinars and on-line forums, undertake reading assignments, watch short videos, listen to presentations and complete short quizzes and written assignments. It is estimated that to complete the material participants will need 8 hours per week. All modules of Part 1 must be successfully completed before the start of Part 2 – the two week residential course. Part 2 consists of an assignment in which participants work in groups on an energy audit in a real situation (in 2017 this was in a factory of an international tire company), that forms the basis of a plan to reach ISO 50001. This component is supported by lectures, including guest lectures by leading specialists, presentations, case studies, audits, discussions, and a site visit.



### HISTORY OF THE COURSE

The University of Twente has been offering the annually training courses on energy management and cleaner production in small and medium scale industries since 1987.

Since 2017 we have substantially revised the delivery of the programme including an element of the teaching through five online modules spread over a 10-week period followed by a 2-week residential programme.

We have teamed up with UNEP DTU Partnership and UNIDO to deliver our programme.

### CONTENTS

**Module 1:** Motivation for Energy Management

**Module 2:** Introducing the Energy Management System

**Module 3:** Energy Policy

**Module 4:** The Energy Manager and the Energy Team

**Module 5:** Introduction to ISO50001

**Module 6:** Practical steps towards achieving ISO Standard 50001



## GENERAL INFORMATION

**Venue** – Online through The University of Twente’s Website (10 October – 13 December 2018) 2 weeks residential in Enschede, the Netherlands (14 – 25 January 2019).

**Entrance Requirements** – BSc, MSc or equivalent from a recognized university, at least two years of professional experience, and a basic understanding of engineering and economics is necessary. The language requirement is IELTS 6.0 (or equivalent). For the online component participants must have access to an appropriate internet connection.

**Tuition fees** – 3000 Euro

**Living expenses** – Estimated total costs for two weeks are 1150 Euro which covers accommodation, food, out-of-pocket expenses, and Insurance (Medical and Third Party Liability).

**Accommodation** – The course organizers will arrange accommodation for the residential part of the course.

**Insurance requirements** – Attendees must be covered by Health, Accident and Third Party Liability Insurance from the date of arrival in the Netherlands. The course organizers will make the necessary arrangements.

**Facilities** – During the residential part of the course, participants will have access to the UT library and an internet connection. Course materials are provided electronically. Participants are expected to bring their own laptop.

**Cancellations** – An administration fee of 500 Euro will be charged for all cancellations not notified at least 30 days prior to the course start date.

Here is the verdict of two past participants of EMSI on what the course has done for them:

*“The industry audit gave me the opportunity to practically implement what was taught during the course.”*

*“I learnt new technical skills to supplement the services I can offer as a consultant. After conducting some more energy audits I will be able to qualify for licensing as a certified energy auditor”.*

## FURTHER INFORMATION AND HOW TO APPLY

**Online application form:** [www.utwente.nl/bms/cstm/education/emsi](http://www.utwente.nl/bms/cstm/education/emsi)

Deadline for self-funded applications is 5 October 2018.

Places are limited and selective. Apply early to avoid disappointment.

For questions you can contact our course administration:

**Mrs Barbera van Dalm**

**Phone: +31 (0)53 489 4377**

**E-mail: [cstm-courses@utwente.nl](mailto:cstm-courses@utwente.nl)**

## ABOUT THE ORGANIZERS

### UNIVERSITY OF TWENTE.

University of Twente, Department of Governance and Technology for Sustainability provides education at Bachelors and Masters level on problems related to the role of technology in the development of the South.

[www.utwente.nl/bms/cstm](http://www.utwente.nl/bms/cstm)



The UNEP DTU Partnership, Copenhagen, Denmark supports the United Nations Environment Programme (UNEP) in its aim to incorporate environmental aspects into energy planning and policy worldwide with a special emphasis to assist developing countries.

[www.unepdtu.org](http://www.unepdtu.org)



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environment sustainability.

[www.unido.org](http://www.unido.org)

