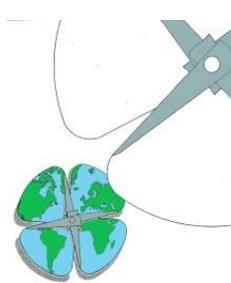


# ENERGY MANAGEMENT IN SMALL- AND MEDIUM-SCALE INDUSTRIES

## 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.

**27 September – 15 December 2017**

### INTRODUCTION

There will be a focus on energy management tools to improve energy efficiency and to create cleaner production, emphasizing that these improvements provide a win-win situation for SMIs. In particular there is a focus on preparing for reaching the new International Standard on Energy Management (ISO 50001).

### TARGET GROUP

Management staff involved in energy planning in their industries. 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 insight into:

- General problems with energy efficiency within SMIs and possibilities to improvement through energy management.
- The link between energy management and cleaner production.
- The 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 SMIs

The long term objectives are to provide the participants from government, branch and SMIs with management capabilities for SMIs in emerging economies with respect to:

- The efficient use of energy in SMIs
- The reduction of emissions caused by industrial processes
- Policy options and strategies for energy management in SMIs
- Implementing ISO 50001
- General energy conservation options within industry

### ORGANIZATION

The course is divided into two parts. Part 1 is an 5 week online course 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, that forms the basis of a plan to reach ISO50001. 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.

For 2017 we have substantially revised the delivery of the programme including an element of the teaching through online modules spread over an 5-week period followed by a 2-week residential programme.

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

### CONTENTS

#### Module 1:

Energy Management as part of Modern Management of SMIs

#### Module 2:

Energy Management Systems

#### Module 3:

Energy Supply and Demand

#### Module 4:

Energy Audits

#### Module 5:

Energy Policies

#### Module 6:

ISO Standard 50001



## GENERAL INFORMATION

**Venue** – 5 weeks online through The University of Twente's Website (27 September – 22 November 2017) 2 weeks residential in Enschede, the Netherlands (4 - 15 December 2017).

**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.

**Fellowships** – Our 2017 short courses have been approved by the Nuffic NFP short course list. If you are admitted to our course you can apply for an NFP fellowship at [www.nuffic.nl/nfp](http://www.nuffic.nl/nfp) The NFP fellowship application deadline for this course is **5 April 2017**.

**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.

## FURTHER INFORMATION AND HOW TO APPLY

**Online application form:**

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

**Online tool for Nuffic scholarships is open from 2 February until 5 April 2017.**

If you intend to apply for a NUFFIC scholarship we need to have received your application form by March 26<sup>th</sup> to ensure we can process it in time.

Deadline for self-funded applications is 27 August 2017.

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, Risø, 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)



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)

