

## INTRODUCTION

Energy recovery from municipal solid waste (MSW) is receiving attention worldwide and can be an integral part of urban solid waste management plan. The thermal treatment processes can assist in achieving significant waste diversion from landfills by decomposing the combustible fraction. Apart from energy recovery, the other useful liquid and solid by-products can be produced which may be recycled. Apart from the dedicated heat treatment facility, the MSW derived fuel can also be used as co-fuel in energy intensive operations. Its blending with the main fuel (such as coal) may help the industry in reducing the net greenhouse gas (GHG) emissions and the demand for non-renewable coal. The success of thermal treatment processes and the acceptance by the energy intensive industries largely hinges on the quality of waste derived material. Hence, the nature of emissions during pre-processing of MSW (using mechanical biological treatment) and energy recovery processes should be understood before the implementation. In the short course, the pre-processing options for MSW, thermal treatment processes and their environmental impacts will be discussed.

## BROAD OBJECTIVES

- To present an overview on MSW generation, characteristics and existing disposal practices
- To discuss energy recovery options from segregated MSW (as mono-fuel or co-fuel) in Indian scenario
- To understand the need for various MSW pretreatment options prior to energy recovery
- To comprehend the feasibility of various energy recovery options (using life cycle approach)
- To present the case studies from developing as well as developed countries

## COURSE CONTENTS

This short course will include following topics:

- Overview of MSW management in India including generation, characteristics, existing policies and current status of waste disposal
- Mechanical biological treatment (MBT) of MSW to produce fuel-like material for energy recovery
- Various energy recovery options from MSW derived fuel
- Case studies on the use of MSW derived combustible fraction as mono- and co-fuel
- Possible emissions during pre-processing and energy recovery operations

## WHO MAY BENEFIT

- Experts from Government organizations and private consultants/ companies dealing in MSW management,
- Academicians involved in teaching and/or research activities in this area
- Young researchers/ students interested in solid waste management and energy from waste

At the end of the course, the participants will appreciate various waste treatment processes which can be used for segregation and energy recovery. The attendees will also be familiar with the on-going research activities in other countries.

## BOARDING & LODGING

Accommodation is available for a limited number of participants on payment as per actual and with advance request.

## FACULTY

The major teaching faculty constitutes experts from Centre for Environmental Science and Engineering (CESE), IIT Bombay.

## VENUE FOR CLASSES

Classes will be held in Conference Hall of Institute Guest House, IIT Bombay.

## LECTURE NOTES

To fully understand the objectives of the course, the lecture notes/handouts will be made available at the time of registration at IIT Bombay.

## DATE & TIME OF REGISTRATION:

**February 5, 2015, 9.00 AM at Seminar Hall of Institute Guest House, IIT Bombay.**

## COURSE FEE

- For professionals from Private organizations and industries: Rs. 12000/- + S.T. @12.36% per participant
- For Academicians/ Government professionals: Rs. 10000/- + S.T. @12.36% per participant

- For Students (only few seats): Rs. 6000/- + S.T. @12.36% per participant  
The course fee includes course material, working lunch and coffee/tea.

The demand draft may be drawn in favour of “**The Registrar, IIT Bombay - CEP Account**”. Please note that no income tax is to be deducted at source from the course fee, as IIT Bombay is exempt from the same.

**Completed Registration form (Typed) should be sent to Course coordinator:**

Prof. Anurag Garg  
Coordinator  
CESE, IIT Bombay, Powai  
Mumbai  
Ph. No.: 022-25767861  
E-mail: [a.garg@iitb.ac.in](mailto:a.garg@iitb.ac.in)

**Deadline for submitting application: 28 January, 2015**

**Notification of acceptance: 30 January, 2015**

- The Format of Registration forms can be downloaded from IIT Bombay website.
- Incomplete application forms will not be entertained.

For further details: <http://www.iitb.ac.in/~cep/>



CEP Short Term Course on

## **Energy Recovery From Municipal Solid Waste: A Potential Method for Waste Diversion from Landfills**

**February 5 - 6, 2015**

Coordinator

**Prof. Anurag Garg**

Centre for Environmental Science and Engineering

**Office of  
Continuing Education & Quality Improvement Programmes**

Indian Institute of Technology Bombay  
Powai, Mumbai – 400 076

## REGISTRATION FORM

CEP Course on  
**Energy Recovery From Municipal Solid Waste: A Potential  
Method for Waste Diversion from Landfills**  
February 5 - 6, 2015

NAME (BLOCK LETTERS) : \_\_\_\_\_  
\_\_\_\_\_ Gender: M / F

DESIGNATION : \_\_\_\_\_

ORGANIZATION: \_\_\_\_\_

MAILING ADDRESS : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TELEPHONE : \_\_\_\_\_ (O) \_\_\_\_\_ (R)

FAX: \_\_\_\_\_ MOBILE: \_\_\_\_\_

EMAIL : \_\_\_\_\_

QUALIFICATIONS : \_\_\_\_\_ EXPERIENCE : \_\_\_\_\_ Yrs.

IIT Guest House accommodation required?\* YES / NO

PAYMENT: D.D. No.: \_\_\_\_\_ Dt. \_\_\_\_\_ Rs. \_\_\_\_\_

[Demand draft should be drawn in favour of "Registrar, IIT Bombay (CEP A/c)".]

Date: \_\_\_\_\_ Signature of Applicant \_\_\_\_\_

**\*Guest House bill to be paid directly by participant.**

(PHOTOCOPY ADDITIONAL COPIES OF THIS FORM, IF NEEDED)

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