Improving Energy Efficiency in Manufacturing and Industrial Processes
22nd November 2012, University of Wollongong

This single-day Continuing Professional Development (CPD) course in Improving Energy Efficiency in Manufacturing and Industrial Processes is presented by the Sustainable Buildings Research Centre (sbrc.uow.edu.au) at the Faculty of Engineering, University of Wollongong, with the support of the NSW Government Energy Efficiency Training Program.

Course Objectives

This course will provide companies and individuals with the following:

- Advanced knowledge and capabilities to enhance energy efficiency of manufacturing and industrial processes;
- Advanced knowledge of strategies and technologies that can be used to achieve energy savings in manufacturing and industrial processes;
- Skills to be able to commission and/or carry out effective energy efficiency improvement initiatives;
- Case studies on energy efficiency of key industrial energy systems.

Course Benefits

On successful completion of the course you will have gained knowledge and skills to assist you in the following:

- Understanding of methods, technologies and process related issues that must be considered to achieve energy efficiency in industry;
- Introduction to legislative frameworks and requirements governing industrial energy efficiency;
- Knowledge of industrial energy performance assessment methods and technical tools for modelling energy efficiency measures;
- Introduction to Whole System Design (WSD) approach for industrial energy efficiency;
- Knowledge of economic assessment of industrial energy efficiency measures;
- Knowledge of life cycle analysis (LCA) of industrial energy efficiency measures to determine optimal solutions;
- Knowledge of a range of modern strategies to improve energy efficiency in industry; and
- Appreciate the importance of understanding user perception and behaviour when designing and implementing energy efficiency measures in industry.

The Venue

The course will be held at the Australian Institute for Innovative Materials (AIIM) Building at the University of Wollongong's Innovation Campus (Building 231), North Wollongong. Venue details will be announced in due course.

Who Should Attend?

Industrial energy managers, engineers, professionals, industrial energy advisors, energy auditors, commissioning professionals, industrial equipment suppliers, facility managers, environmental specialists, educators and students who wish to know more about energy efficiency opportunities and methodologies in industrial systems, or who wish to understand aspects of energy consumption, energy audits, and energy conservation measures.

About the Speakers

Professor Paul Cooper is the Director of the Sustainable Buildings Research Centre and a Professor in the Faculty of Engineering at the University of Wollongong.

Dr Zhenjun Ma is a Lecturer in the Sustainable Buildings Research Centre in the Faculty of Engineering at the University of Wollongong.

Dr Duane Robinson is a Senior Lecturer in the Sustainable Buildings Research Centre in the Faculty of Engineering at the University of Wollongong.

Mr Albert Dessi from the Department of Resources, Energy and Tourism (DRET) is an engineer who has worked in DRET’s EEO program for several years. He will provide a presentation on legislative framework and requirements that apply to energy efficiency in the industry sector.

Mr Murray Ackers is an Environment Engineer at BlueScope Steel Limited. He has 20 years experience on a wide range of engineering and energy efficiency projects.

Mr Kane Livingstone is a Process Engineering Manager at Manildra Group.

Other Invited Industry Speakers will be included to provide case studies and practical experience of energy efficiency improvement projects.
Course Outline

The course is conducted over a single day commencing at 8:30 am on Thursday 22nd November, 2012 and comprises lectures and case studies. The proposed course outline is provided below.

<table>
<thead>
<tr>
<th>Time &amp; Topic</th>
<th>Topic</th>
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<tbody>
<tr>
<td>8:30 am</td>
<td>Registration</td>
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<tr>
<td></td>
<td>Welcome and introduction</td>
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<tr>
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<td>Overview of energy use and CO₂ emissions in the industrial and manufacturing sectors</td>
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<td>National and international legislative frameworks and requirements governing industrial energy efficiency</td>
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<td>Morning Tea</td>
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<td>Holistic view of industrial energy efficiency and cost benefit analysis of energy efficiency opportunities</td>
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<td>Guidelines on identifying energy efficiency opportunities for industrial facilities and cost benefit analysis methods</td>
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<td></td>
<td>Case studies on identification of energy efficiency and energy cost reduction opportunities and importance of minimising energy waste</td>
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<td>Lunch</td>
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<td>Energy efficiency measures for industrial motor systems and case studies, including power factor correction.</td>
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<td>Industrial waste heat recovery opportunities and case studies</td>
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<td>Afternoon Tea</td>
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<td>Energy management and energy management systems for manufacturing and industrial processes</td>
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<td>Problem solving workshop including discussion on energy efficiency issues and how to address</td>
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<td>Course summary and evaluation</td>
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<td>5:00 pm</td>
<td>Conclusion</td>
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Training Investment

The course investment provides for an inclusive industry related training package with course notes, lunches and morning and afternoon tea. Course fee per person is AUD$ 420 including GST.

Extended Course Program

This continuing professional development (CPD) course is one of several offered as part of the Energy Efficiency Training for Engineers program (eete@UOW) at the University of Wollongong in 2011-2012. Other courses included in the program are:

- Renewable and distributed generation
- Energy efficiency enhancement in domestic buildings
- Energy auditing and de-carbonization of the built environment
- Energy efficiency in electrical energy utilisation
- Electricity network energy efficiency enhancement
- Energy auditing and efficiency in industrial systems
- Smart metering and demand side management
- Improving energy efficiency in industrial processes
- Energy efficiency enhancement through retrofitting of commercial buildings

Organisations or individuals registering as a group or in one or more of the above courses within the energy efficiency training for engineers program may be entitled to a group or multiple course discount. Please contact registration enquiries below for details.

Accommodation

Arrangements for accommodation are the responsibility of participants and costs are not included in the course fee. A list of hotels and motels in the Wollongong area will be supplied to participants upon registration. Daily travel from Sydney is convenient by public transport.

Enquiries

Registration enquiries:

Please call Ms Rachel Weine at the Faculty of Engineering, University of Wollongong.
Phone: (02) 4221 4566
Fax: (02) 4221 5474
Email: rweine@uow.edu.au

Course enquiries:

Please call Prof Paul Cooper at the Sustainable Buildings Research Centre (SBRC), University of Wollongong.
Phone: (02) 4221 3355
Fax: (02) 4221 3143
Email: pcooper@uow.edu.au
Please enrol me in the single-day course “Improving Energy Efficiency in Manufacturing and Industrial Processes” to be held in Wollongong, Australia on 22nd November 2012.

Cost per person: AUD$ 420 inclusive of GST

Please register before 12th November 2012 (please see Note below).

Surname:…………………………………………………………Given Name:…………………………………………………………
Organisation…………………………………………………..…Job title/position…………………………………………………
Postal Address………………………………………………………………………………………………………………..
State……………….....Postcode………………...……… ..Country………………………………………………………………
Telephone……………………………………………………Fax……………………………………………………………………
Mobile…………………………………………………………Email………………………………………………………………

Special dietary requirements………………………………………………………………………………………….....

Pre-Course Questionnaire

To assist us to tailor the course to your experience please answer the following (please circle the appropriate weighting).

My knowledge in the field of energy efficiency in industrial processes is: 1 2 3 4 5
My project experience in the field of energy efficiency in industrial processes is: 1 2 3 4 5
My organisation’s objectives in the field of energy efficiency in industrial processes are: 1 2 3 4 5
My organisation’s project experience in the field of energy efficiency in industrial processes is: 1 2 3 4 5
My engineering or other professional discipline is: …………………………………………………………………………….

Methods of Payment

☐ If you wish to pay by credit card, please fill out the details below and fax to +61 2 4221 5474 or scan and email to rweine@uow.edu.au

Please debit (circle): Bankcard Visa Mastercard

Card number: □□□□□□□□□□□□□□□□□□□□
Expires: □□ / □□ in the amount of AUD$……………………………………………………………………………………

Name on card: ………………………………………………………………………………………………………

Signature: …………………………………………………………………………………………………………………

Email for receipt: ………………………………………………………………………………………………………

☐ Cheque payable to “The University of Wollongong”

Mail to: Attention: Ms Rachel Weine
(CPD Course Registration)
Faculty of Engineering
University of Wollongong, NSW, 2522, Australia

Payment Enquires: Ms Rachel Weine
Industry Liaison Officer
Faculty of Engineering
Ph: (02) 4221 4566
Email: rweine@uow.edu.au

Note: There is no guarantee that economic participation levels for this course can be achieved. Registrants will be notified on the 15th November 2012 if the course cannot proceed due to insufficient numbers. The program may be changed at any time due to unforeseen circumstances. If the course cannot proceed for any reason, UOW will not accept liability of whatsoever kind for expenses incurred by any person or corporation with the sole exception of the course investment, which will be refunded in full.