

## Energy Cost Reduction – Efficiency and On-Site Generation

**Date From:** 22 March 2018

**Date To:** 22 March 2018

**Location:** Australia

**Description:** Dramatically rising energy prices means that Australian businesses need to find efficiency gains or cheaper energy sources to remain competitive. This course will outline strategies for dealing with both sides of energy costs: reducing energy demand and lower cost energy options. Both power and thermal heat will be addressed against the backdrop of the current market landscape and technology options that are proven and economically viable.

**Event Type:** IChemE Course

**Venue:** Melbourne, Australia

**Organiser:** IChemE

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### Overview

Dramatically rising energy prices mean that Australian businesses need to implement energy efficiency or find cheaper energy to remain competitive. This course will outline strategies for dealing with both sides of energy costs: reducing energy demand and lower cost energy options. Both power and thermal heat will be addressed against the backdrop of the current market landscape and technology options that are proven and economically viable.

### Course outline

#### Session one: Technology options for energy efficiency and on-site generation

- two sides of the coin: energy demand and energy generation
- how to get more value out of the same amount of energy
- grid versus grid parallel versus island mode
- reciprocating engines versus turbines
- waste to energy
- exercise one – simple concept level analysis tools for waste heat recovery, co-gen and tri-gen

#### Session two: Energy markets overview; simple economic analysis tools

- overview and trends
- electricity pricing & tariff structures
- project feasibility and evaluation
- project delivery models
- attracting investment and funding
- exercise two – levelised cost of energy generation

#### Session three: risks, emissions and future trends

- risk assessment and management
- renewable Energy Credits
- current state of play in Australia: carbon reporting and pricing
- emissions Reduction Fund
- threats and opportunities
- strategies for future proofing
- exercise three – risk

### Who will benefit

- engineers looking to understand the economic impacts of energy efficiency and on-site power and thermal heat systems
- individuals interested with operational efficiency and cost reduction
- those with responsibility for energy systems, strategy or energy procurement