

Energy Efficiency and Renewable Energy Integration into Industry

Using expertise in energy metering and monitoring to develop and implement energy efficiency solutions.

Competitive advantage

- The development and implementation of energy efficiency road maps
- · Strategic energy metering and monitoring
- · Holistic energy efficiency assessment in industry
- · Energy accounting from process department to factory level
- · Renewable energy integration into factories through micro-grids
- Management of energy supply and demand in factories

Impact

 Helping industry to save money and go 'greener' by increasing energy efficiency and integrating renewable energy into their operations.

Successful applications

- Significant reduction in energy cost and associated environmental footprint in the aluminium, pharmaceutical, metal fabrication, waste management and heavy engineering industries. In particular,
 - 45% energy consumption reduction in aluminium industry
 - 51% energy consumption reduction in pharmaceutical industry
 - 43% energy consumption reduction in metal fabrication
- Successful planning and implementation of an on-site micro-grid in a pharmaceutical company which resulted in 85% on-site renewable energy generation

Capabilities and facilities

- · Extensive energy metering and monitoring equipment
- Propriety energy consumption models for various industrial processes
- In-house energy flow analysis and optimisation software for industry

Our partners

- ALCOA Australia
- Baxter Australia
- Preformed Line Products Australia
- FIP Breaks Pty Ltd
- Suez Australia
- IFU Hamburg, Germany

More Information

Professor Sami Kara

Sustainable Manufacturing and Life Cycle Engineering Research Group

T: +61 (0) 2 9385 5757 E: s.kara@unsw.edu.au

UNSW Knowledge Exchange knowledge.exchange@unsw.edu.au www.capabilities.unsw.edu.au

+61(2)93855008