



Careers in manufacturing: operational sustainability

Overview

Those working in the field of sustainable manufacturing provide the thinking and the technology required to produce goods in an environmentally friendly and sustainable way, and at the same time maintaining, if not improving productivity.

Sustainability in manufacturing might include the development and implementation of new systems and procedures such as more-improved use of insulation, heat recovery, cogeneration, and variable speed drives, just to name a few.

Those working in the sustainability field may be involved in:

- designing new machines, equipment or systems
- carrying out research in the use of different types of fuel and energy, materials handling, heating and cooling processes, the storage and pumping of liquids and gases, and environmental controls
- the use computer-aided design (CAD) to assist in design and drawing
- specification, selection, installation, management, and maintenance of factory production and machinery
- setting up of work control systems, e.g. testing of equipment to make sure that standards of performance, quality, cost and safety are met.

Specialist occupations in the sustainability field include:

- Organisation and methods analyst
- Operations manager.

Organisation and methods analyst

Organisation and methods analysts provide leadership or change management functions in an organisation on sustainability, including setting of sustainability strategy and leadership and planning for the deployment of the sustainability strategy. Responsibilities may include:

- regulatory responses
- setting and monitoring of sustainability related performance indicators
- liaison with stakeholders, including shareholders, employees, value chain members and the local and general community.

Relevant qualification:

- Vocational Graduate Certificate in Sustainable Operations

Organisation and methods analyst

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Those working in the sustainability field may be involved in:

- designing new machines, equipment or systems
- carrying out research in the use of different types of fuel and energy, materials handling, heating and cooling processes, the storage and pumping of liquids and gases, and environmental controls
- the use computers to analyse and control raw materials waste and energy procurement
- specification, selection, installation, management, and maintenance of factory production and machinery
- setting up of work control systems, e.g. testing of equipment to make sure that standards of performance, quality, cost and safety are met.

Relevant qualifications:

- Diploma of Sustainable Operations
- Vocational Graduate Certificate in Sustainable Operations
- Degree

Skill Sets

For those who are responsible for determining energy procurement and sustainability risk as part of their job role a number of Skill Sets are available.

Audit energy usage for a work area

The skills required to undertake an energy audit for a defined process or a work area and recommend energy improvements based on the audit.

Determine energy usage

The skills required to measure and calculate the energy consumption of the whole organisation taking into account carbon 'sinks' such as offsets, sequestration or co-generation. The information is used in decisions about managing energy use.

Improve energy usage for a process or organisation

The skills required to make energy efficiency improvements that are both strategic and embedded into day-to-day work.

Improve energy usage for a work area

The skills required to make improvements in a defined work area or process where energy efficiency is a key sustainability issue.

Recommend energy improvements

The skills required to use mathematics and process data to analyse energy consumption and generation in the organisation and recommend where to target improvements.

Reduce sustainability risk

The skills required to analyse the sustainability risks in a process and/or value chain and recommend how to reduce those risks.

More information:

www.sustainabilityskills.net.au

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