

Research report:

## Process safety competency profiles for the power generation sector

RESEARCH REPORT: PROCESS SAFETY COMPETENCY PROFILES FOR THE POWER  
GENERATION SECTOR

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## FOREWORD

The Energy Institute (EI) Power Utility Committee identified a need to ensure process safety training is suitable to the power generation sector. In order to achieve this, this report was commissioned to identify relevant process safety competencies required by various power station personnel.

Six levels of personnel in power stations have been identified (based on having similar roles), and relevant process safety competencies have been identified for each level. These competencies are based on the EI process safety management framework (PSMF), and similar work undertaken by an EI Technical Partner Company.

This report can be used to aid in the development of process safety training courses, generalised or targeted to specific levels of personnel, in order to fill gaps in process safety competence. The intended users of this publication are training- and process safety- professionals who work with power generation site-based personnel.

The information contained in this publication is provided as guidance only, and while every reasonable care has been taken to ensure the accuracy of its contents the Energy Institute (EI) and the representatives listed in the acknowledgements, cannot accept any responsibility for any actions taken, or not taken, on the basis of this information. The EI shall not be liable to any person for any loss or damage that may arise from the use of any information contained in any of its publications.

Suggested revisions are invited and should be submitted through the

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Stuart King (Secretary)	Energy Institute
Celestia Godbehere	Energy Institute
Alan Dickson (Chair)	Scottish Power
Steve Gilmore	Uniper
Phil Horner	Centrica
Ian Kinnaird	Scottish Power
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# 1 INTRODUCTION

In 2011 during the formation of the EI Power Utility Committee (PUC) the committee identified a need to address competency assurance for individuals working in conventional power generation. Training and assessment has historically been developed in the oil and gas sector. Whilst power generation facilities are similar to onshore hydrocarbon assets such as refineries, there are significant enough differences to potentially mean that training courses may not meet the training requirements of power station staff.

An interim report commissioned by the PUC concluded that process safety responsibilities were not clearly defined in the power generation sector, and that there is no standard approach to implementing process safety management. Efforts to create dedicated courses to fill these gaps uncovered the need for training to be specifically targeted at certain levels within organisations, depending on the responsibilities and competencies associated with specific roles.

*Research report: Process safety competency profiles for the power generation sector* was commissioned to aid the process for creating process safety training for power station personnel. Based in part upon the work of an EI Technical Partner Company, the report first identifies various power generator roles and groups these into five levels according to the process safety competencies needed. There is also an additional level that is equivalent to a process safety specialist that may be responsible for a number of power generation sites, or who needs to visit a power generation site occasionally, such as to conduct audits. A process safety competency profile has been developed for each level, designed to show the expected responsibilities and competencies likely to be required. A large part of the material for this section was adapted from work that has been developed by an EI Technical Partner Company and augmented by the EI's process safety management framework (PSMF).

The information in this report can be used to aid in the development of process safety training courses, generalised or targeted to specific levels of personnel, in order to fill gaps in process safety competence. The intended users of this report are training- and process safety-professionals who work with power generation site-based personnel.