

## Overview

This national occupational standard defines the competence required to connect new engineering components and assets to the existing gas network. It requires a high level of knowledge of the various types of connection techniques available, and the particular circumstances in which they can be used.

This standard is for those responsible for operations during gas network construction activities. These activities will usually include the leadership and direction of the members of a team and decision making regarding the approach to take when undertaking the work.

This standard consists of five elements:

1. interpret technical information for connecting engineering assets to the system
2. select components and resources for the connection
3. connect engineering products or assets to the system
4. commission new engineering products or assets to the system
5. use and communicate data and information

## Performance criteria

*You must be able to:* **Interpret technical information for connecting engineering assets to the system**

1. use drawings, records, work documents, manuals, technical specifications and authorisations to provide work details for connection
2. interpret dimensions, lengths, widths, and quantities from the technical information
3. note the positions of other utilities plant, sub-structures, buildings, kerbs and boundaries insofar as they affect the connection

### **Select components and resources for the connection**

4. select the type of the components in compliance with the work and specifications
5. follow approved procedures to replace defective components, non-match components and sub-standard components
6. check and make sure sufficient labour, plant, equipment, materials and consumables are available for the job in hand
7. respond promptly and effectively to actual and predicted changes to the planned use of resource

### **Connect engineering products or assets to the system**

8. determine the correct method of connection to be used to meet the design criteria based on known information and site circumstances
9. carry out a site-specific risk assessment and review as job progresses, in accordance with company policy
10. apply control measures identified in risk assessments
11. select, check condition, use and store the appropriate PPE
12. check and confirm the condition and size of the excavation is sufficient and conforms to instructions and specifications
13. ensure that the job instruction, operational procedure and authorisations are in place prior to commencement of connection work
14. take adequate precautions to prevent damage to components, tools and equipment
15. support and anchor installed engineering assets in accordance with approved codes of practice
16. connect to the existing system using authorised techniques
17. carry out all work to approved procedures and practices and in compliance with statutory and regulatory requirements

### **Commission new engineering products or assets**

18. ensure that a written operational procedure has been produced and authorised
19. carry out the commissioning in accordance with the authorised operational procedure document

**Use and communicate data and information**

20. choose and provide information to people requiring technical information in a way that suits the person, type of information and how it will be used
21. check and confirm understanding of the technical information provided from the recipients
22. report to a designated person inaccuracies in the technical information sources used
23. complete work documentation in accordance with organisational procedures
24. report to the designated person damage or defects to tools, equipment or materials
25. report work which is incomplete and not to schedule to the designated person
26. refer problems and conditions outside the responsibility of the job role to the designated person using approved procedures

## Knowledge and understanding

*You need to know and understand:* **General**

1. the main responsibilities of the employer and employee under the Health and Safety at Work Act and how to comply with them
2. the main responsibilities of the employer and employee under environmental legislation
3. how to carry out and review risk assessments
4. the company reporting lines, roles, responsibilities and levels of authority
5. the identification and application of safe procedures for handling hazardous and non-hazardous materials
6. organisational accident recording and reporting procedures
7. the range and use of personal protective equipment for the work activity and procedures for checking PPE is fit for purpose
8. statutory, organisational and emergency reporting procedures
9. the potential dangers and hazards from medium or intermediate or high pressure systems

### **Connecting and commissioning to existing gas network assets**

10. the importance of carrying out and reviewing on-site risk assessments
11. the organisation's policy and procedures for meeting relevant statutory requirements, regulations, Codes of Practice
12. the implications for not obtaining appropriate authorisation
13. factors affecting, and means of confirming, the suitability of excavations
14. the potential dangers in cavities and trenches
15. the dangers of taking actions that can create confined spaces risks in excavations
16. the range of PPE available and the importance of wearing it
17. the different types of flow stopping equipment that may be used
18. the implications of using flow stop equipment on different pressure regimes
19. the importance of using correct plant, tools, materials and system components
20. reporting procedures for defective plant, tools, materials and system components and assets

21. faults associated with use of incorrect installation methods and tools
22. the range of isolation methods available and the rationale for their selection
23. the procedure for obtaining authorisation to proceed with connections
24. the importance of obtaining necessary permissions for isolation of any part of network
25. the range of actions to be taken if work cannot proceed to schedule
26. how to determine appropriate safe remedial action if, for any reason work, cannot proceed
27. the organisation's reporting procedures
28. different methods of accessing information obtainable from reference documents, Regulations, Codes of Practice
29. the types and causes of disruption likely and avoidance measures
30. the dangers of inadequate handling and lifting procedure
31. the types and signs of defect likely to be present on sub-system and means of determining appropriate and safe action
32. the importance of compliance with current industry standards

---

<b>Developed by</b>	Energy & Utility Skills
---------------------	-------------------------

---

<b>Version Number</b>	2
-----------------------	---

---

<b>Date Approved</b>	December 2017
----------------------	---------------

---

<b>Indicative Review Date</b>	December 2021
-------------------------------	---------------

---

<b>Validity</b>	Current
-----------------	---------

---

<b>Status</b>	Original
---------------	----------

---

<b>Originating Organisation</b>	Energy & Utility Skills
---------------------------------	-------------------------

---

<b>Original URN</b>	EUS GNC014
---------------------	------------

---

<b>Relevant Occupations</b>	Gas Team Leaders, Craftspersons and Technicians
-----------------------------	---

---

<b>Suite</b>	Gas Network Construction
--------------	--------------------------

---

<b>Keywords</b>	gas, network, gas network, commission, connections, mains
-----------------	---

---