



**National Certificate in Electricity Supply (Distribution Faultman) (Level 4) with strands in Line Mechanic, and Electrician**

level of qualification: 4

credit total: 77-79

**Purpose and content of the National Certificate**

**Purpose:**

This qualification is awarded to people who have demonstrated competence in the skills and knowledge required for locating and diagnosing faults likely to occur in a distribution network. It is designed to upskill people who are qualified to work on distribution networks as fault men. The qualification has two strands recognising that both line mechanics and electricians may progress into this role: the Line Mechanic strand of the qualification provides line mechanics with the additional electrical skills required to undertake fault work; and the Electrician strand provides electricians with the line mechanic skills required to undertake fault work.

**Content:**

**Compulsory unit standards**

**core skills**

		level	credit
12387	Operate electrical switchgear in the electricity supply industry	3	4
20090	Carry out switching operations on metal clad switchgear	4	3
20094	Receive and return transfer of control in the electricity supply industry	4	4

**distribution networks**

25074	Locate and repair or replace faulty components or repair faults in a distribution network	4	8
-------	---	---	---

**power system management**

19479	Use SCADA to manage the power system	3	5
-------	--------------------------------------	---	---



		level	credit
<b>Line Mechanic strand</b>			
<b>core electrical</b>			
2017	Describe and use complex electrical instruments	4	2
2031	Demonstrate knowledge of three-phase theory	4	4
15847	Demonstrate knowledge of mathematics and mechanics for electrical trades	2	4
15853	Demonstrate knowledge of alternating current (a.c.) theory	4	7
25070	Explain the properties of conductors, insulators, and semiconductors and their effect on electrical circuits	2	7
25071	Demonstrate knowledge of electromotive force (e.m.f.) production	2	3
25072	Demonstrate knowledge of electromagnetism theory	2	5
<b>electrical installation and maintenance</b>			
2016	Install earthing systems for multiple earthed neutral installations	3	3
<b>core skills</b>			
19323	Demonstrate knowledge of single and three phase transformers used in the electricity supply industry	3	4
<b>distribution networks</b>			
20417	Replace or repair single phase electrical components	4	6
20418	Replace or repair three phase electrical components	4	6
<b>testing</b>			
20190	Conduct introductory insulation resistance testing in the electricity supply industry	2	2
<b>Electrician strand</b>			
<b>core skills</b>			
10509	Climb and work on electricity network structures	3	6



		level	credit
17027	Demonstrate the requirements for holding access permits on high voltage electrical lines	3	2
18272	Operate power-operated elevating work platforms (EWP) in a electricity supply environment	3	5
23899	Carry out phasing tests on HV electricity networks	3	2
<b>distribution networks</b>			
10510	Use machinery, plant and equipment in an electricity network environment	4	6
10511	Develop work plans for construction and servicing of overhead electrical lines and equipment	4	6
10512	Joint electricity network overhead conductors	3	4
10513	Determine condition of electrical lines	3	6
10522	Install low voltage (LV) electricity network overhead conductors	4	8
10526	Operate ground and structure mounted electrical equipment associated with electric lines up to 66kV	3	4
10529	Dismantle electricity network lines and structures	4	6