



National Certificate in Electricity Supply (Operator) (Level 3) with strands in Network and Hydro Operator, and Thermal Operator

level of qualification: 3

credit total: 69-77

Purpose and content of the National Certificate

Purpose:

This National Certificate covers operating electrical switchgear, developing and actioning an operating sequence, applying and removing safety measures, and maintaining and updating operating logs, along with other skills required by an Operator in either the hydro or network, or thermal operating sectors.

Content:

Compulsory unit standards

core electrical

		level	credit
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

core skills

12296	Apply earths to and remove earths from electrical conductors, plant and equipment	3	2
12387	Operate electrical switchgear in the electricity supply industry	3	4
12390	Demonstrate knowledge of electricity supply systems	3	5
19323	Demonstrate knowledge of single and three phase transformers used in the electricity supply industry	3	4
19325	Demonstrate knowledge of the fundamentals of electricity generation in New Zealand	3	3



		level	credit
20091	Read and interpret single line diagrams in the electricity supply industry	3	3
20093	Develop and action an operating sequence in the electricity supply industry	4	4
power system maintenance			
14700	Apply and remove safety measures in an electricity supply environment	3	3
26019	Demonstrate knowledge of introductory concepts in power system protection	4	10
power system management			
16281	Maintain and update operating log for electricity supply operational purposes	3	3
Network and Hydro Operator strand			
core skills			
17028	Demonstrate the requirements for holding permits on high voltage electrical equipment	3	2
power system maintenance			
14701	Manage electricity supply work control systems	4	4
power system management			
16284	Remove electricity supply network equipment from service for access for work (System Operation)	4	10
19479	Use SCADA to manage the power system	3	5
Thermal Operator strand			
core skills			
20090	Carry out switching operations on metal clad switchgear	4	3
24668	Demonstrate knowledge of New Zealand Electricity Market generation dispatch	3	4



power system management

26748	Carry out operations on a DC system associated with a power station electrical system	4	6
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