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Electricity North West electrical assets

The electrical grid

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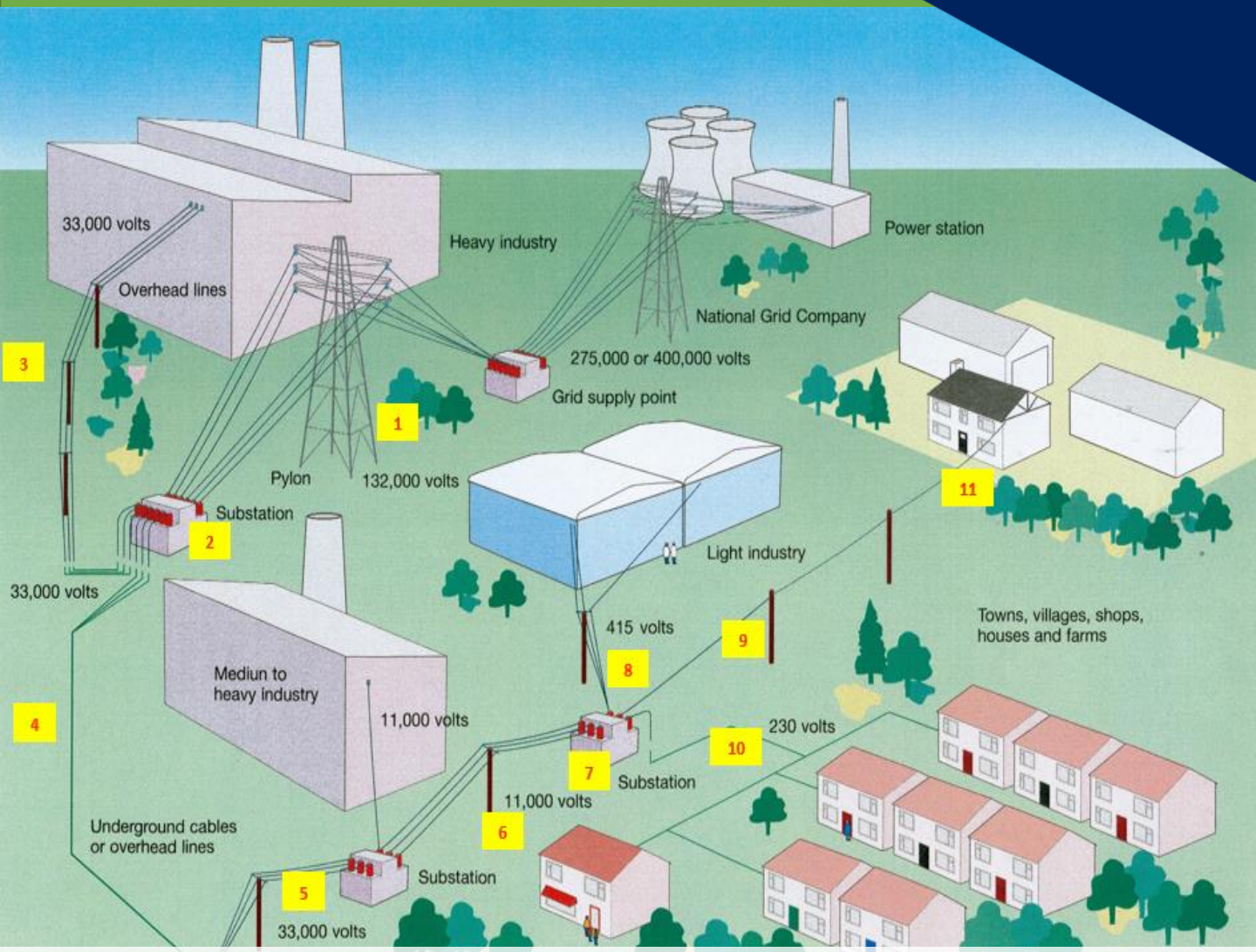

The role and how you can apply

1. 132kV Grid Supply Point & Tower
2. Bulk Supply Point
3. Overhead connection into Heavy Industry
4. Underground distribution of Extra High Voltage Electricity
5. Primary Substation
6. Distribution of High Voltage Electricity
7. Distribution Substation
8. Distribution of 400V Electricity to light industry
9. Overhead distribution of Low Voltage Electricity in rural areas
10. Distribution of electricity to residential areas
11. Connection of Low Voltage electricity to Farms and rural customers.

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Wind Turbine

Wind Turbines can be found across the north west, some are offshore in places such as off the coast of Barrow-In-Furness and Blackpool and can be taller than Blackpool Tower. Some can be found inland in places such as Hyndburn. Wind turbines use large blades to catch the wind. When the wind blows, the blades are forced round, driving a turbine which generates electricity.

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Power Station

A Power Station, also referred to as a power plant and sometimes generating station or generating plant, is an industrial facility for the generation of electric power. Power can be generated in many ways such as coal, gas, nuclear, solar, wind, and hydro-electricity. A couple of examples of these in the north west are Heysham Nuclear Power Station, and Carrington Gas Power Station.

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Towers

Towers are used to carry extremely high voltage transmission lines that transport bulk electricity from generating stations to electrical substations. We use them to transmit electricity at 132kV from our Grid Supply Points to our Bulk Supply Points and our Primary substations.

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Grid Supply Points

Grid Supply Points or GSP for short is the section of the electricity network where we take over from National Grid. These substations are located at 18 key areas across the North West. These can be spotted as very large substations as electricity cables come in at 400kV or 275kV and using transformers we bring this down to 132kV or 33kV to transmit across the North West safely.

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Bulk Supply Points

Bulk Supply points are sections on our network which connects the transmission section of our network to the distribution section of our network. Power comes in at 132kV and is transformed down to 33kV, before being distributed to our primary substations.

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Primary Substations

Primary substation are points in our power system where power is transformed from 33kV to 11kV or 6.6kV. These can be found all around our network and can be inside buildings or outside. The use of extra high voltage allows us to distribute electricity in large quantities and safely.

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Primary Substations

Distribution Substations are points on our network where electricity is transformed from high voltage (11kV or 6.6kV) to low voltage (400V) to allow electricity to be passed through cable to your homes. These will typically be found nearby to houses and sometimes in between houses. They can situated in a building or a fenced area depending on the location.

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Electricity Signs

Electricity Signs can be found on the front of every electricity substation. They contain; the name of the substation, the unique identification number for that substation, the company which owns the substation and the number to call if something doesn't seem right with that substation. The yellow danger of death sign highlights the dangerous places substations can be.

Pole mounted transformers

A Pole Mounted Transformer is a transformer which is on a pole. They are the same as a transformer on the ground, just on a pole. These are usually found on our overhead sections of our network but can be used when there isn't enough space on the ground for a regular substation.

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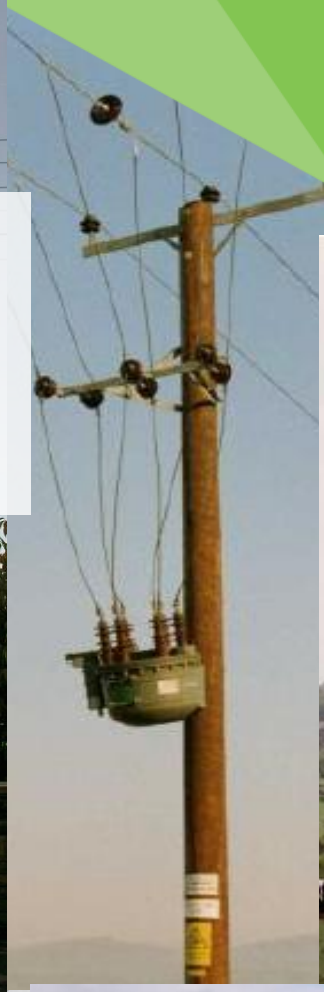
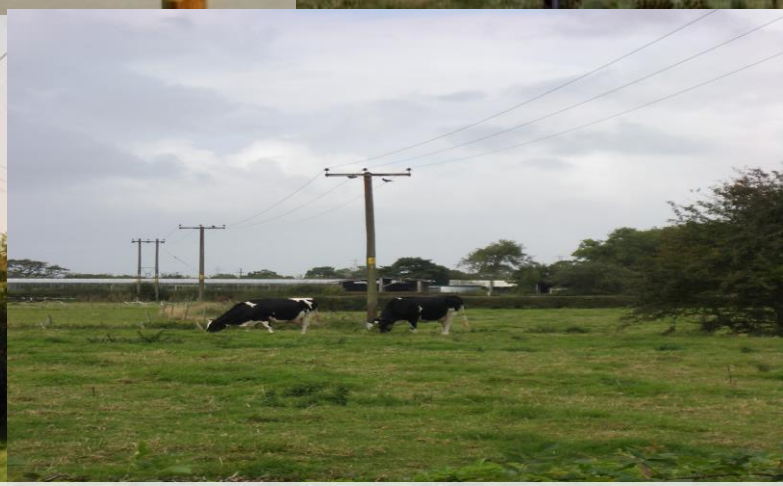
Primary Substations





Wood Poles can be found out in the rural parts of our network. We use wood poles to support our overhead equipment and cables. Wood poles allow us to distribute electricity across vast, sparse landscapes where hills, mountains and rivers make it difficult to lay cable. They are found in suburban areas too. Our poles get damaged occasionally due to wind, so if you see a pole or its equipment damaged do not approach and call us.

Linkboxes

Linkboxes can be found in underground sections of our network often in the pavements. They are recognisable by their covers and they are used to connect multiple sections of underground cables together. If you ever have a power cut, you may see our engineers using these boxes to isolate the fault or to restore the supply.

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Smart Meters

A Smart Meter is the next generation electricity meter. Smart Meters measure how much electricity you're using, as well as what it's costing you and display this on a handy in-home display. In the future these will allow us to better understand our network through data gained from Smart Meters.