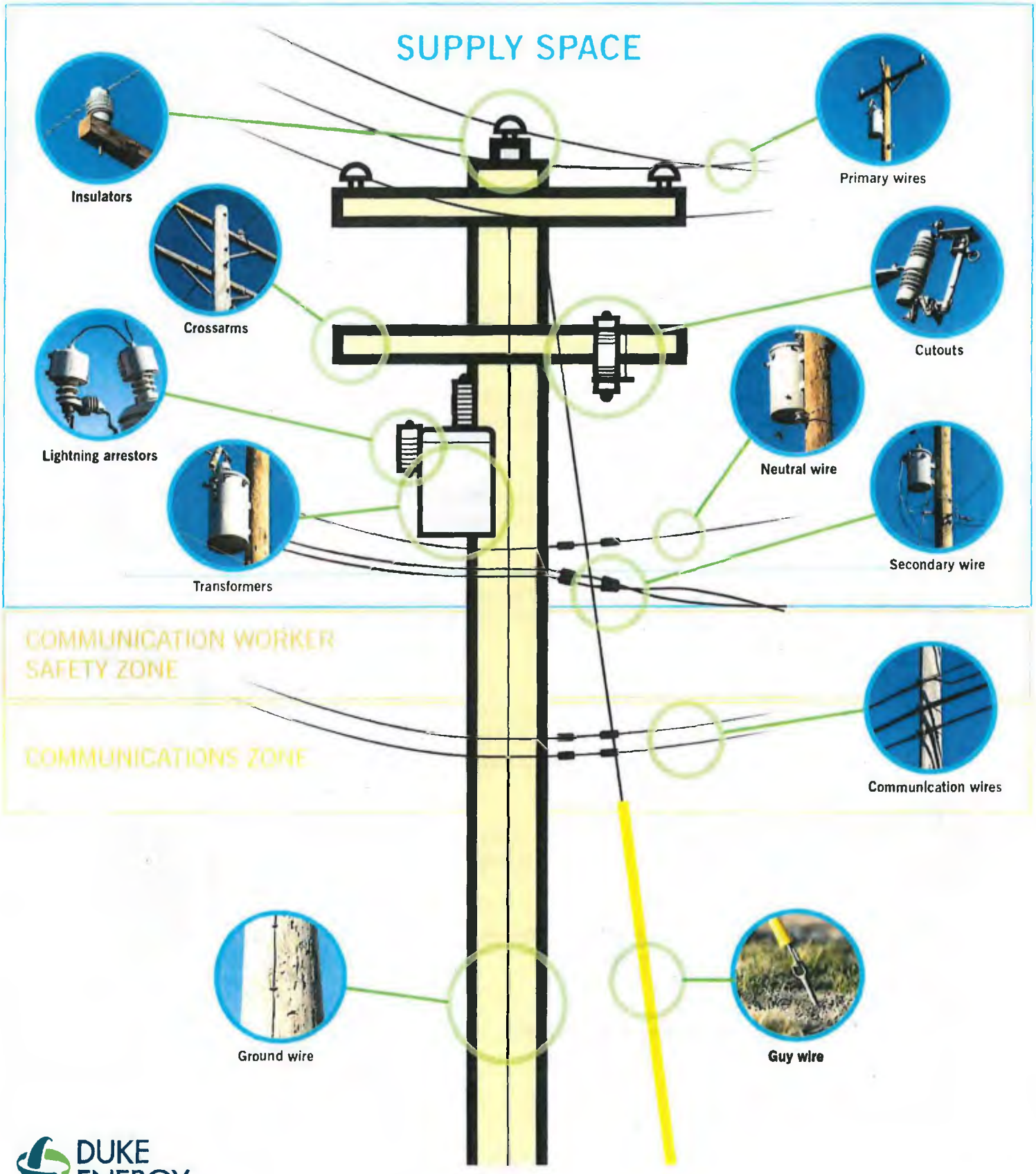
What's on an electric utility pole?

Here is the equipment you might see on a typical electric distribution power pole.



DUKE ENERGY.

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Descriptions of the equipment you might see on a typical electric distribution power pole.

Insulators

Insulators, typically made of porcelain or rubber, prevent energized wires from coming in contact with each other or the utility pole.

Primary wires

Primary wires run on top of the pole and carry between 4,000 and 25,000 volts of electricity.

Crossarms

Crossarms are used to secure electrical power lines to poles.

Cutouts

Cutouts (or switches) work like a fuse and open automatically when they sense a problem with the line or a section of it.

Lightning arrestors

Lightning arrestors protect equipment from lightning strikes or other accidental electric surges by discharging it to Earth.

Neutral wire

The **neutral wire** acts as line back to the substation and balances out the amount of electricity on the system.

Transformers

Transformers convert higher-voltage electricity carried by the primary wires to a lower voltage for use in homes and businesses.

Ground wire

A **ground wire**, running the length of the pole, helps to protect equipment, line workers and the public by providing a conducting path safely to the ground.

Secondary wire

The **secondary wire** (or service drop) carries lower voltage electricity from the transformer to individual electric meters.

Communication wires

Communication wires (telephone, cable, fiber optics) are usually the lowest wires.

Guy wires help stabilize the pole.

Guy wire