How dependable electricity reaches you

Most of us take reliable electric power for granted. But do you know what's really involved in getting that power to you?

Power Plant
At Idaho Falls Power's generating plants, water flows through hydroelectric dams and powers turbines that turn generators to produce electrical energy.

Step-Up Substation
Transformers at the generating plant increase the voltage up to 161,000 volts, so it can travel long distances over high-voltage transmission lines.

High-Voltage Transmission Lines
These lines carry the electric energy over long distances. Insulators on the towers prevent the power from flowing to the towers or the ground.

Transmission Substation
Transformers reduce the electric energy up to 44,000 volts, making it suitable for high-volume delivery over short distances.

Large Industrial User
Most industries need 2,400 to 4,160 volts to run heavy machinery. They usually have their own substation at the facility.

Consumer-Owned Renewable Generation
A wind turbine, solar panel array or methane digester is interconnected to the co-op's lines through a cut-off switch and other equipment. The switch disconnects the turbine from the line to ensure the safety of linemen working during outages and regular maintenance projects.

Distribution Lines
Lines belonging to local electric co-ops carry electricity to transformers that reduce power levels to 120/240 or 120/208 volts for use in schools, farms, homes and small businesses.

Local Distribution Substation
Local electric co-ops operate several of these substations to reduce electricity to 7,200-14,400 volts for distribution to their members.

Schools

Farms

Homes

Small Businesses

Source: Iowa Association of Electric Cooperatives