An overview of the provincial grid

The Alberta Interconnected Electric System—often referred to as "the grid"—moves electricity from where it is generated to where it is used. The provincial grid has many components. Here are simple explanations of the most important ones.

More information on the grid can be found at **www.aeso.ca/aeso/about-the-aeso/**

A. Generating plants:
Power is generated using a specific fuel source to create electricity. There are several types of generating plants in Alberta, using a variety of fuel sources including gas, coal, hydro, wind and biomass.

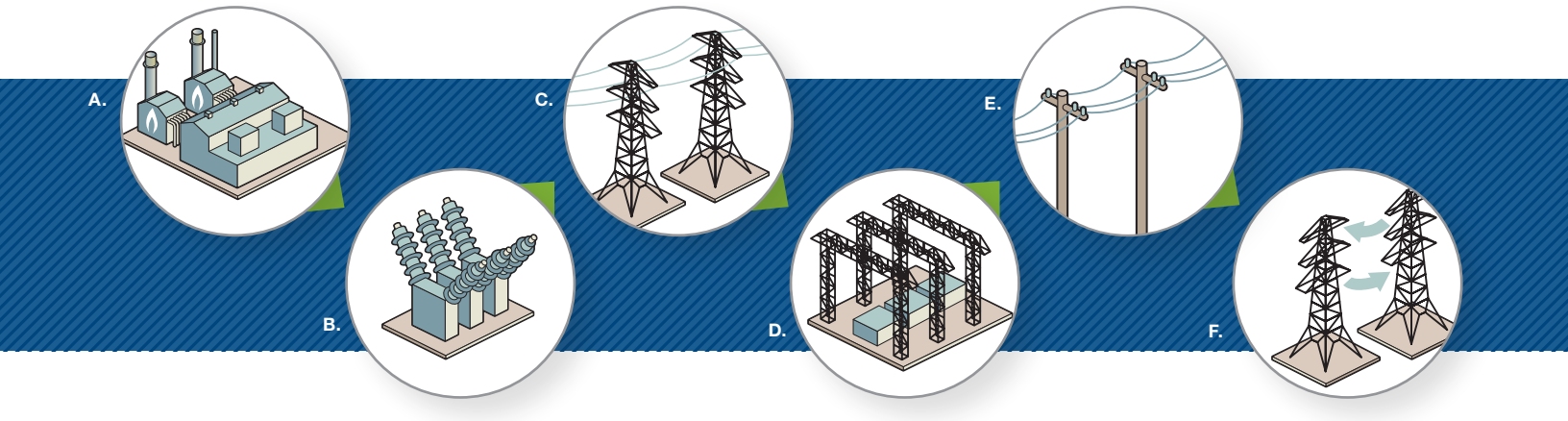
B. Transmission substation:
A set of large transformers (devices that change the voltage of alternating current) increases the voltage coming from a generating plant for the long journey through the grid. Increasing the voltage improves transmission system efficiency and helps limit land use by decreasing the amount of towers and equipment needed.

C. Transmission lines:
Transmission is the backbone of the electrical system, moving power from where it is generated to where it is needed. A network of towers, poles, wires and transmission substations provide high availability as they move electricity to customers throughout the province.

D. Distribution substation:
Power lines enter a substation where a transformer reduces voltage to a level that can be safely delivered to customers.

E. Distribution lines:
Distribution lines carry electricity from a substation to homes, farms and businesses. These lower-voltage power lines are best for transporting electricity over short distances.

F. Interties:
Connections with neighbouring electric systems allow power to move in or out of the province. Interties provide a stable and reliable supply of electricity and are an important component of Alberta's electric system. Primarily, they are used to import power into the province.



The Alberta grid must operate as part of a larger North American interconnected electric system, and must be planned accordingly to comply with North American standards and practices.