

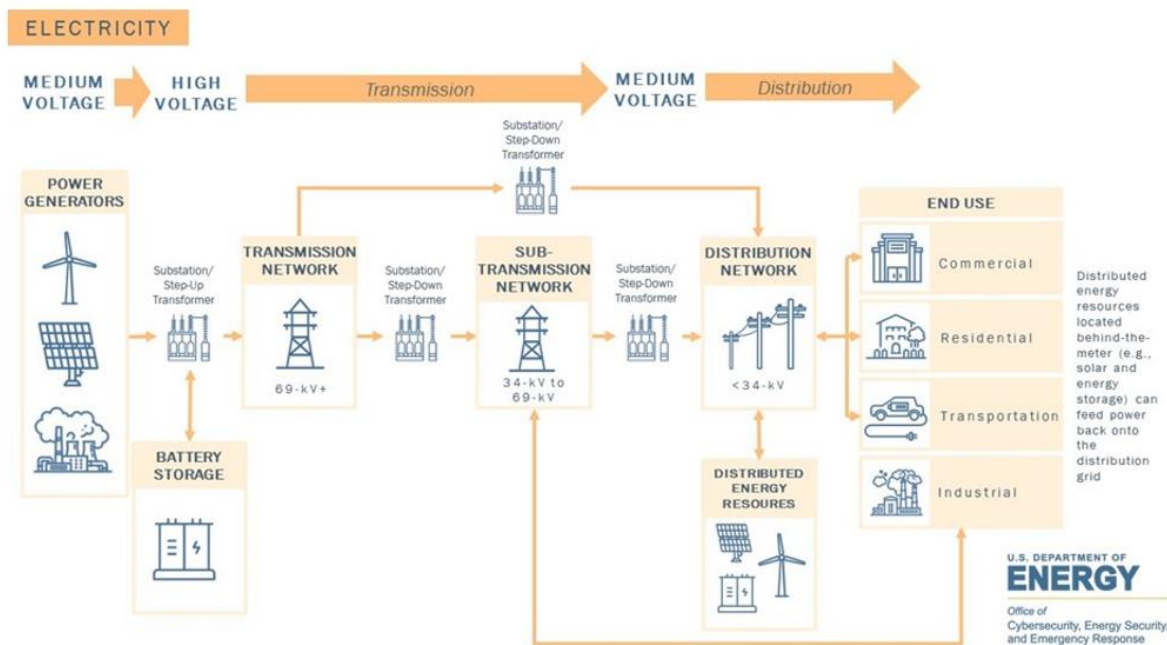


Common Electrical System Features

The electrical grid consists of three primary systems:

- **Generation:** Depending on the project, generation facilities may be near end users (behind the meter) or connect to the distribution or transmission grid (front of the meter).
- **Transmission:** The process which moves power from generation sources over long distances through high-voltage power lines, referred to as transmission lines.
- **Distribution:** The process which moves power over shorter distances to end users using lower-voltage lines, referred to as distribution lines. Distribution lines deliver electricity to homes, businesses, and other end users.

Exhibit 1. U.S. Electric System Overview



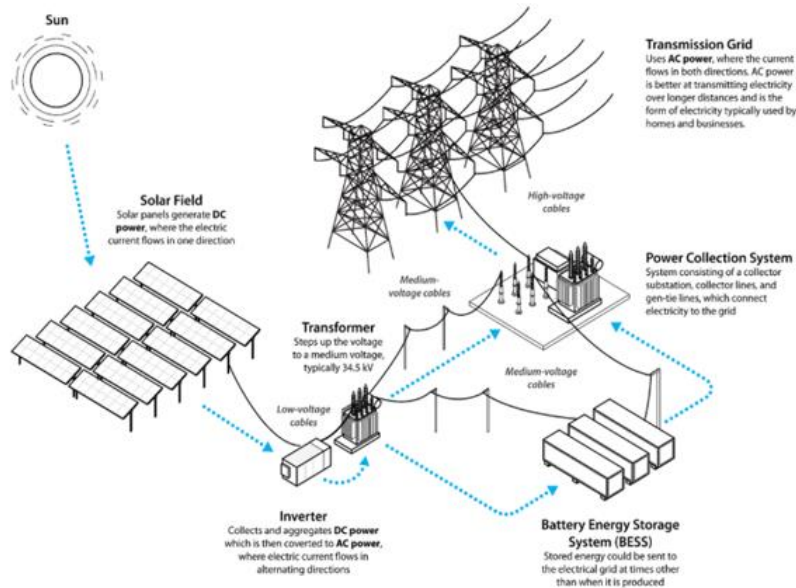
Source: U.S. Department of Energy

Delivering electricity from generation facilities to end users requires supporting infrastructure that connects generation facilities to transmission and distribution systems. Common interconnection components include:

- **Inverters:** convert direct current (DC) within generated energy into alternating current (AC) of most grid and end user systems.
- **Substations:** contain transformers, breakers, switches, and protection and control equipment used to transform voltage levels and safely connect, control, and protect portions of the electric power system.
- **Transformers:** can convert between high and low voltages as needed for connection across systems.
- **Switchyards:** function as a routing center to direct flow of power for operation flexibility and system reliability.
- **Generation tie-in lines (gen-tie lines):** provide generation interconnection. They enable a generation facility to interconnect to the power grid.

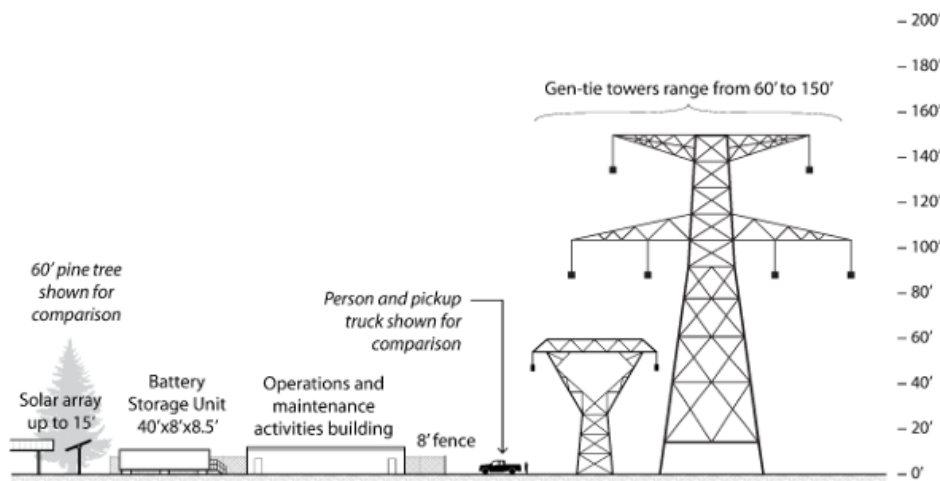


The proximity to existing grid infrastructure can inform early site planning, project design, and environmental review. More favorable locations for generation facilities are often near existing grid infrastructure.



Source: Washington State Department of Ecology, Utility Scale Solar PEIS, 2025

As part of the CESP, transmission-related discussions will remain general and focus on whether an energy facility would require new gen-tie lines, substation construction or expansion, distribution upgrades, right-of-way acquisition, utility coordination, or improvements that could potentially create additional disturbance or jurisdictional review. Certain transmission lines, such as gen-tie lines that have a specific purpose of connecting an energy storage or generation source to the grid, are included in the CESP as part of associated infrastructure.



Source: Washington State Department of Ecology, Utility Scale Solar PEIS, 2025

Electronic transmission lines that are designed to move power over between load centers and are part of the regional (multi-county and multi-utility) grid network are not part of the CESP. Regional planning of these bulk transmission lines occurs through state-level processes. The appropriate permitting pathway should be confirmed and additional environmental review conducted on a project-specific basis once the specific voltage, length, capacity, location, ownership, and point of interconnection are known.