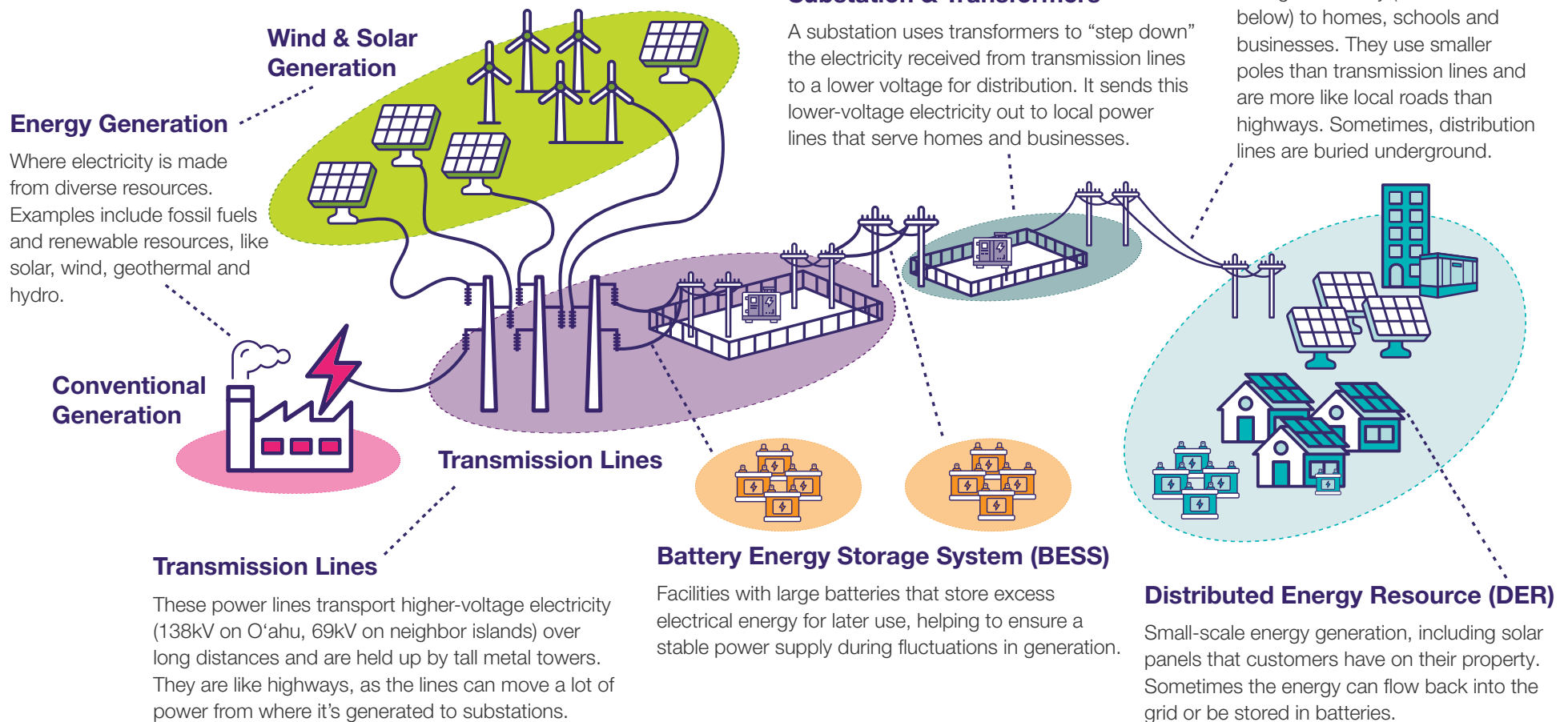


What is the electric grid and how does it work in Hawai'i?

The electric grid is an interconnected system of energy generation, battery storage, substations, transmission and distribution lines that makes and moves electricity so it's there when you need it.

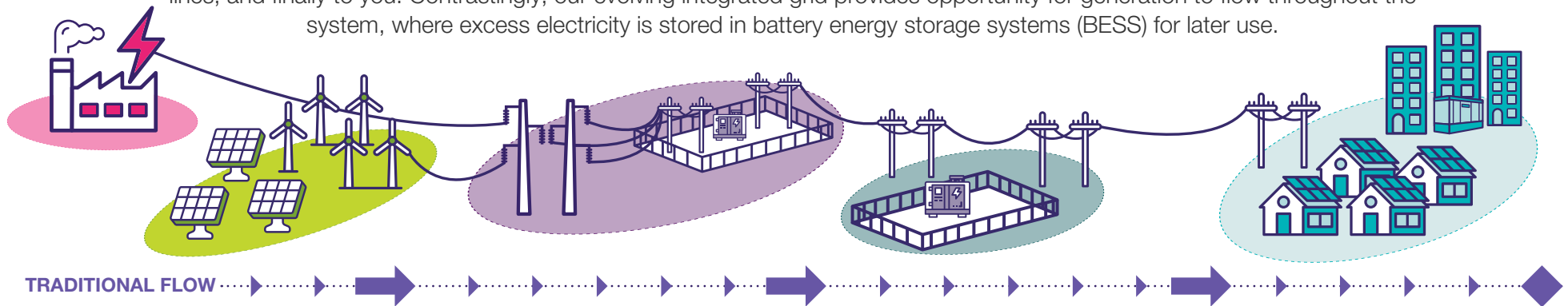
THE GRID

These are the fundamental pieces that make up each island grid



Flow of energy through an interconnected grid

In a traditional one-way powerflow model, electricity flows from generation to transmission lines, to substations, to distribution lines, and finally to you. Contrastingly, our evolving integrated grid provides opportunity for generation to flow throughout the system, where excess electricity is stored in battery energy storage systems (BESS) for later use.



Energy Generation

Where electricity is produced—from sources like solar, wind, and other power plants—and where it begins its journey to homes and businesses. This electricity is generated at levels that are practical for producing power, but not yet suited for long-distance travel or everyday use.

Transmission Substation

Electricity may need to travel across an island, so it moves on transmission lines at a higher voltage to do so efficiently and reliably. Transmission substations step this voltage down to lower levels, allowing power to move from energy sources to communities and neighborhoods.

Distribution Substation

Distribution substations further reduce the voltage so electricity can be delivered within local communities. These substations help manage power flow to match the needs of different areas, from rural regions to dense urban neighborhoods.

Distribution to Customer

Electricity then travels along local power lines to homes and businesses, where it is stepped down one final time to the voltage used by everyday appliances. By the time it reaches customers, the electricity has been carefully adjusted to be safe, reliable and ready to use.

INTEGRATED FLOW

