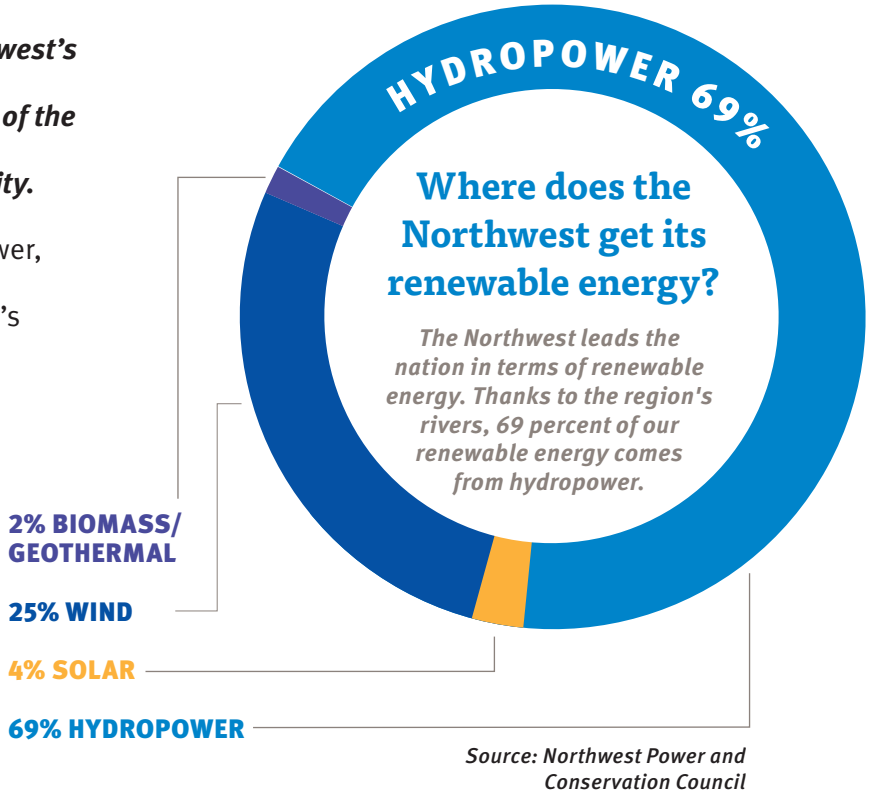
Hydropower:
The Foundation Supporting A Renewable, Carbon-Free Northwest Electricity Future

Hydropower is the backbone of the Northwest's clean energy system, supplying over half of the Northwest's capacity to generate electricity.

This foundation, also called Baseload Power, is the key to the Northwest being America's leading producer of renewable, low cost, carbon-free electricity.

Indeed, about 40 percent of the nation's hydropower is in the Northwest.



Source: Northwest Power and Conservation Council

Hydropower CARES

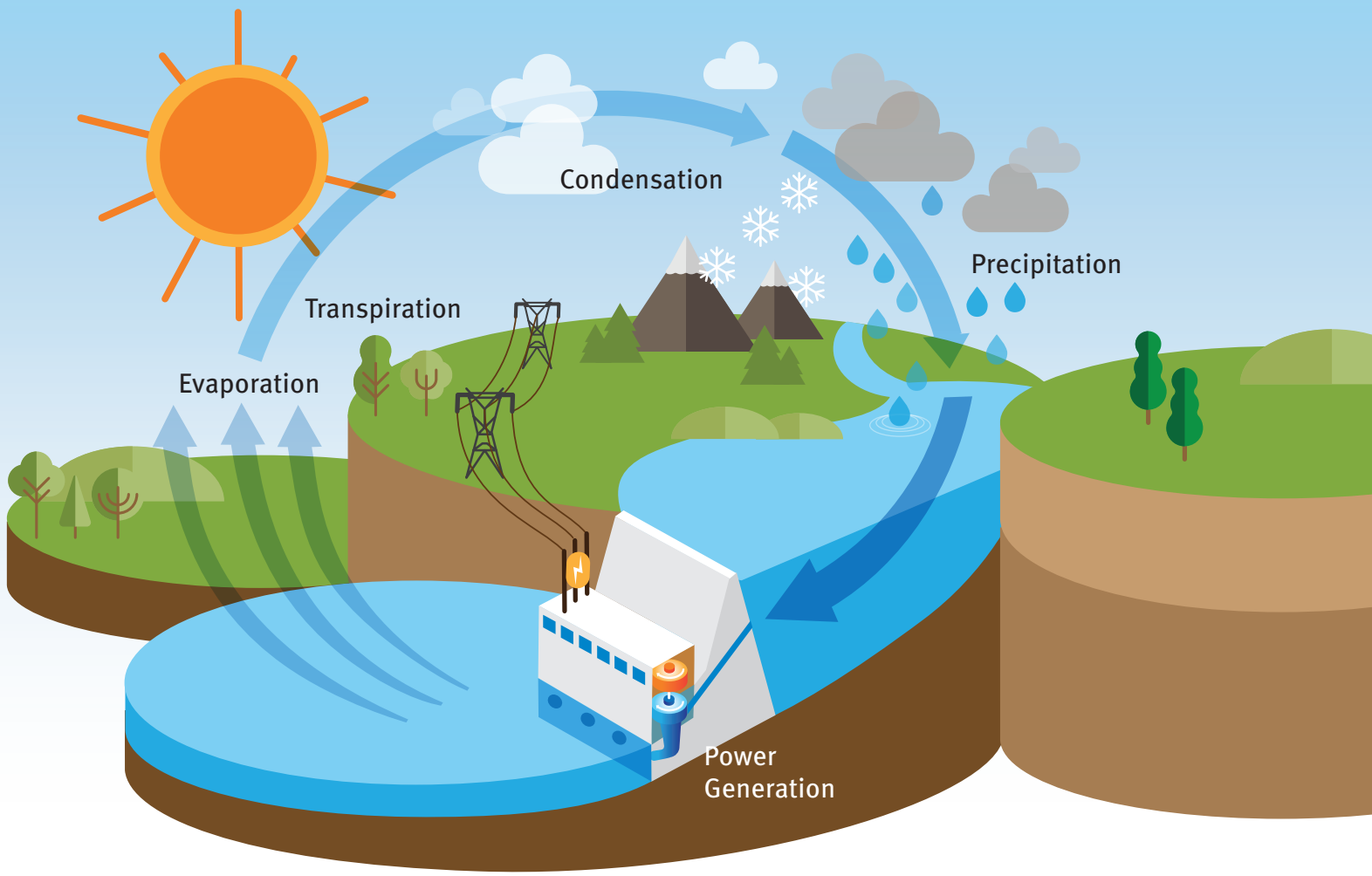
AN EASY WAY TO EXPLAIN THE BENEFITS OF HYDROPOWER

C CLEAN & CARBON-FREE

Hydropower produces **no emissions**. There are no gases or waste products that contribute to air pollution or climate change.

A AFFORDABLE

Our rivers provide the "fuel"—water—for **free**. This helps keep operating costs low.



THE WATER CYCLE: PROVIDING HYDROPOWER ITS RENEWABLE FUEL

Energy from the sun powers the water cycle. ***Evaporation*** *from oceans, rivers, lakes and even puddles turns water from a liquid to gas (also called vapor) that rises into the atmosphere.* ***Transpiration,*** *when water is given off through the pores of plants and animals, is another form of evaporation.* ***Condensation*** *happens when the water vapor condenses around and clings to fine particles of air. As the air gets moister, droplets that form clouds get larger and larger. Eventually,* ***precipitation*** *returns these droplets to earth as rain, snow, sleet or hail. The cycle begins again.*

R RENEWABLE

The water cycle assures Mother Nature **replenishes** our rivers with snow and rain every year.

E EFFICIENT

About **90 percent** of the potential energy from falling water flowing through hydropower dams is converted to electricity. Compare this to fossil fuel plants such as natural gas and coal, where only about 50 percent of these fuel sources can be converted to electricity.

S SECURE

The Columbia River is a Canadian and American resource that, as needed, is cooperatively managed.