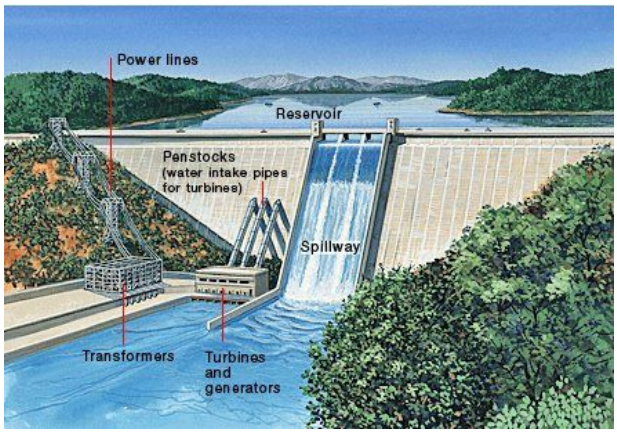
Hydropower

Hydropower is a key component of our renewable energy portfolio. With existing infrastructure waiting to be tapped, we could harness this clean energy source further and create many more jobs.

Overview

- Hydroelectric power (hydropower) is a renewable energy source from which electric power is derived from the energy of water moving from higher to lower elevations.



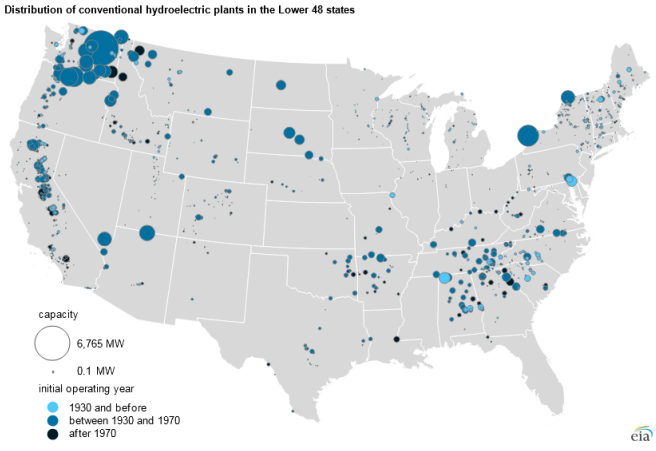
- A typical hydroelectric plant includes a **power plant** where the electricity is produced, a **dam** that can be opened or closed to control water flow, and a **reservoir** where water is stored.
- **The amount of electricity generated** depends on how far the water drops and how much water moves through the system.

Current Standing in the U.S.

- A report from the Department of Energy estimates **65 gigawatts (GW)** of potential new hydropower across more than 3 million U.S. rivers and streams.
- Hydropower accounts for **33% of the nation's renewable electricity** generation and 7% of total electricity generation.
- About half of total U.S. utility-scale conventional hydroelectricity generation capacity is concentrated in **Washington, California, and Oregon.**

Economics

- Hydropower requires relatively high initial investment, but has a **long lifespan** with low operation and maintenance costs.
- Though prices differ widely, the median cost of hydro in 2017 was $52.9/MWh.
- Hydropower has an **energy payback ratio of 200–300, highest of all renewables**.
- America's hydropower industry **employs 66,000 people**, and could create more than 1.4 million jobs by 2025.



What's Next for Hydropower?

- Continued innovation and technological development is important to make hydropower more efficient, while **regulatory streamlining is necessary** to reduce cost and time.
- Fully utilizing existing facilities could already provide an additional electrical generating capacity of more than 12 gigawatts (GW), equivalent to roughly **15% of current U.S. hydropower capacity,** while new projects continue to develop.