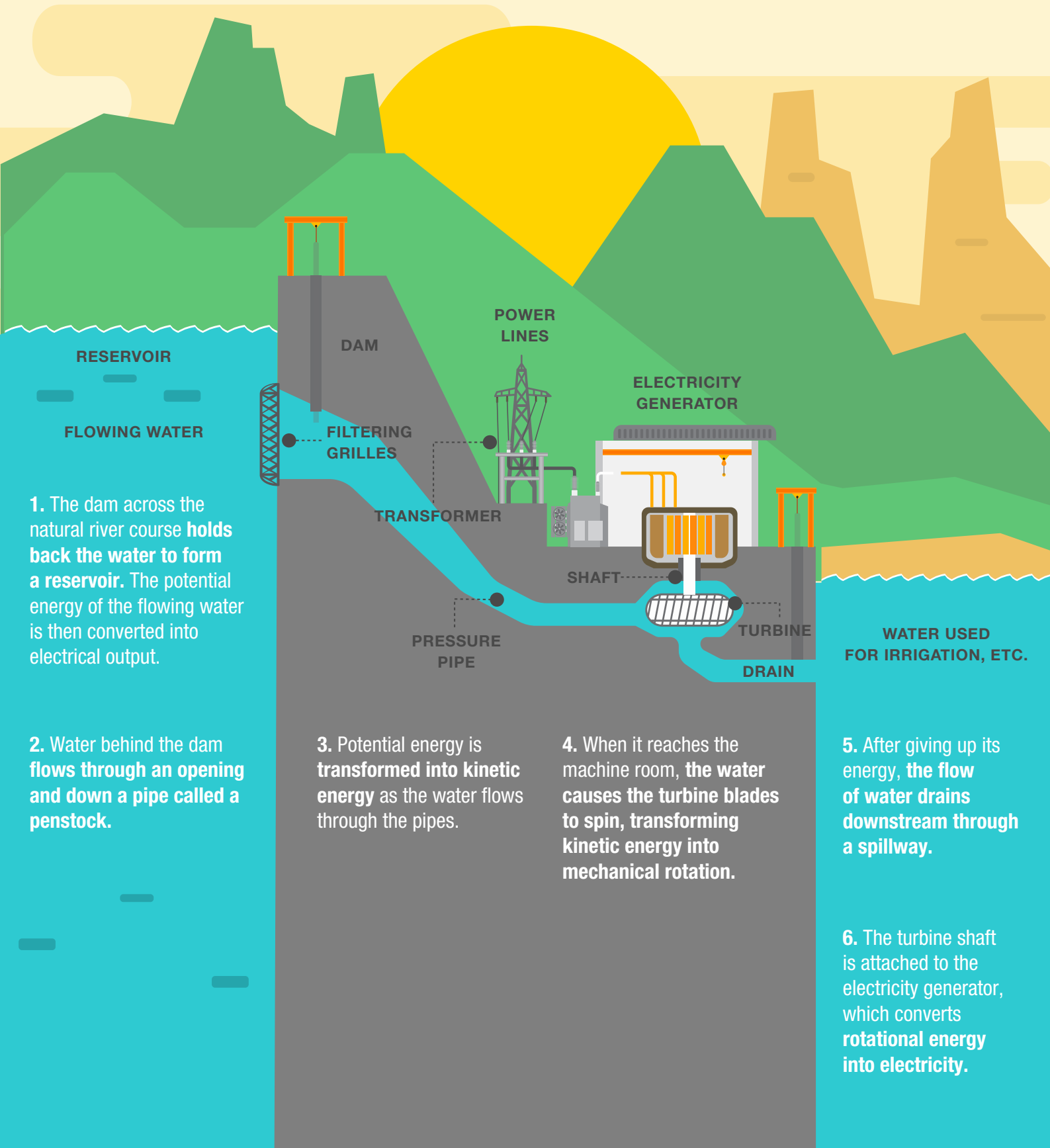


How does a hydroelectric power plant work?

Hydroelectric power plants convert the potential difference of water into electricity by transferring it between two points at different heights or elevations.



1. The dam across the natural river course **holds back the water to form a reservoir**. The potential energy of the flowing water is then converted into electrical output.

2. Water behind the dam **flows through an opening and down a pipe called a penstock**.

3. Potential energy is **transformed into kinetic energy** as the water flows through the pipes.

4. When it reaches the machine room, **the water causes the turbine blades to spin, transforming kinetic energy into mechanical rotation**.

5. After giving up its energy, **the flow of water drains downstream through a spillway**.

6. The turbine shaft is attached to the electricity generator, which converts **rotational energy into electricity**.