1. Water in a reservoir behind a hydropower dam flows through an intake screen, which filters out large debris, but allows fish to pass through.

2. The water travels through a large pipe, called a penstock.

3. The force of the water spins a turbine at a low speed, allowing fish to pass through unharmed.

4. Inside the generator, the shaft spins coils of copper wire inside a ring of magnets. This creates an electric field, producing electricity.

5. Electricity is sent to a switchyard, where a transformer increases the voltage, allowing it to travel through the electric grid.

6. Water flows out of the penstock into the downstream river.
Hydropower Energy Flow

1. SOLAR ENERGY
   - CONDENSATION (Gas to Liquid)
   - PRECIPITATION (Liquid or Solid)
   - EVAPORATION (Liquid to Gas)

2. OCEANS, LAKES, RIVERS (Liquid)

3. TRANSMISSION LINES

4. RESERVOIR
   - Intake
   - DAM
   - PENSTOCK

5. TURBINE

6. GENERATOR
   - SWITCHYARD

7. ENERGY FLOWS

8. HOUSE