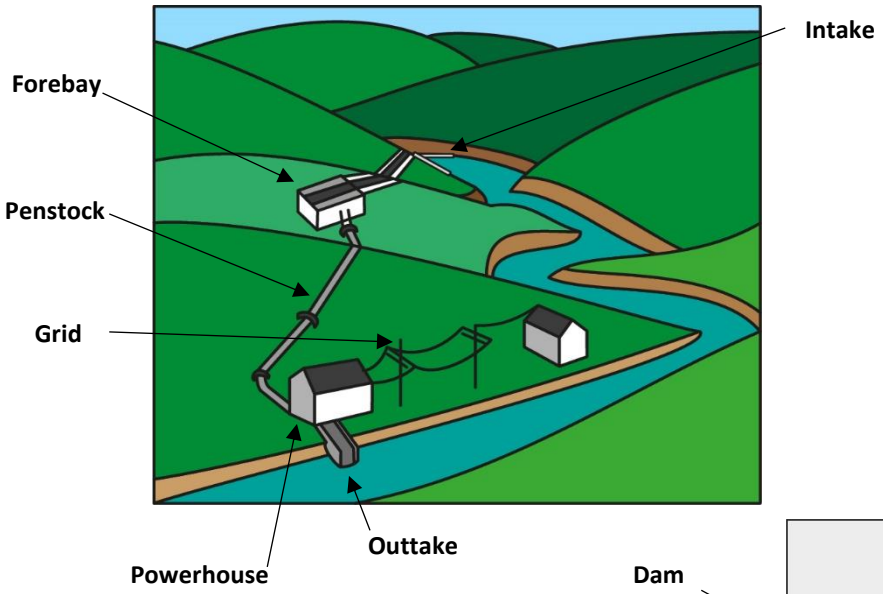
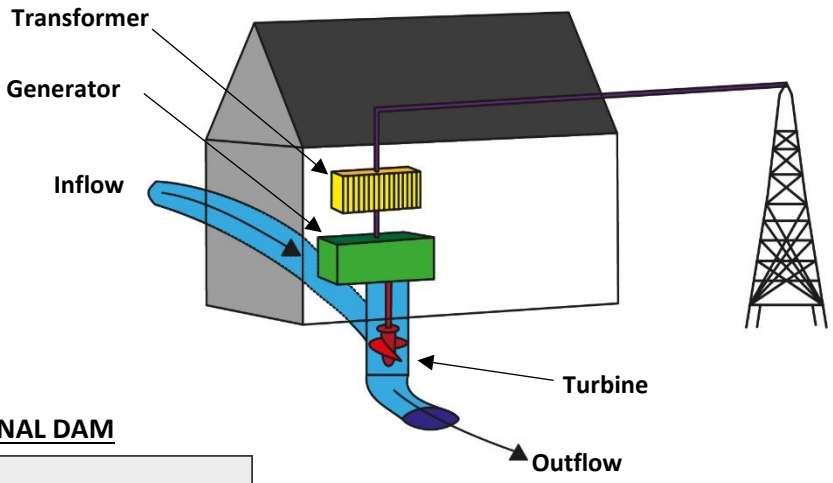
RENEWABLES INSURANCE WEEKLY MINI-SERIES EPISODE 10: HYDRO PLANTS

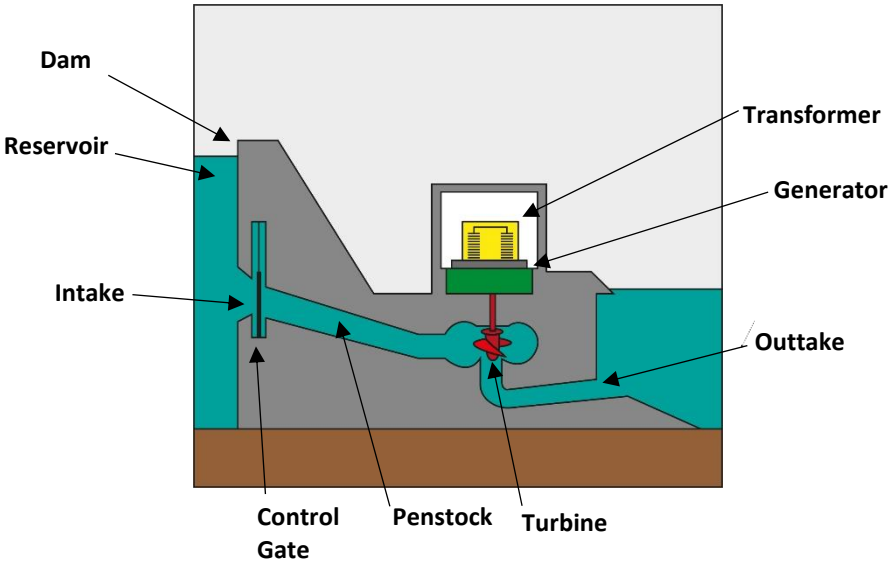
RUN-OF-THE-RIVER LAYOUT



RUN-OF-THE-RIVER POWERHOUSE



CONVENTIONAL DAM



RUN-OF-THE RIVER

- This is a generic simplified diagram.
- Run-of-the-river plants have small or no reservoir capacity. There is a constant supply of water from a lake or existing upstream reservoir.
- Water is taken in at the intake and moves through the system to the powerhouse.
- The turbine rotates as the water passes through the powerhouse generating electricity.
- Certain components must be waterproofed to prevent water damage.

CONVENTIONAL DAM

- This is a generic simplified diagram.
- Conventional dams have an energy change in the system coming from the difference in height between the water on both sides of the dam.
- A large volume of water will only flow through the penstock to the other side of the dam.
- Energy Transfers: Gravitational → Kinetic → Electric.
- Certain components must be waterproofed to prevent water damage.

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