

RIVER



Roll:

1. Continue floating down the RIVER.
2. Flow into a RESERVOIR.
3. Animal takes a drink; evaporates during respiration; rise into the air; form a CLOUD.
4. Flow into the OCEAN.
5. Seep into groundwater; enter a plant's roots; go to CLOUD during transpiration.
6. Flow into a run-of-river project; flow through a penstock; spin a TURBINE.

RESERVOIR



Roll:

1. Evaporate; rise into the air; form a CLOUD.
2. Remain in the RESERVOIR.
3. Enter a DAM.
4. Seep into groundwater; enter a plant's roots; go to CLOUD during transpiration.
5. Remain in the RESERVOIR.
6. Soak into a swimmer's bathing suit; evaporate; rise into the air; form a CLOUD.

CLOUD



Roll:

1. Cool, condense and fall as rain into the RESERVOIR.
2. Cool, condense and fall as rain into the OCEAN.
3. Cool, condense and fall as rain into the OCEAN.
4. Cool, condense and fall as rain onto land, run off into the RIVER.
5. Cool, condense and fall as snow onto a glacier; melt; flow into the RIVER.
6. Remain in a CLOUD.

OCEAN



Roll:

1. Remain in the OCEAN.
2. Evaporate; rise into the air; form a CLOUD.
3. Remain in the OCEAN.
4. Join other water molecules to create OCEAN ENERGY.
5. Evaporate; rise into the air; form a CLOUD.
6. Remain in the OCEAN.

DAM



Roll:

1. Go through the spillway and back out into the RIVER.
2. Flow through a penstock; spin a TURBINE.
3. Flow through a penstock; spin a TURBINE.
4. Flow through a penstock; spin a TURBINE.
5. Flow through a penstock; spin a TURBINE.
6. Dam operator slows flow of water; return to RESERVOIR.

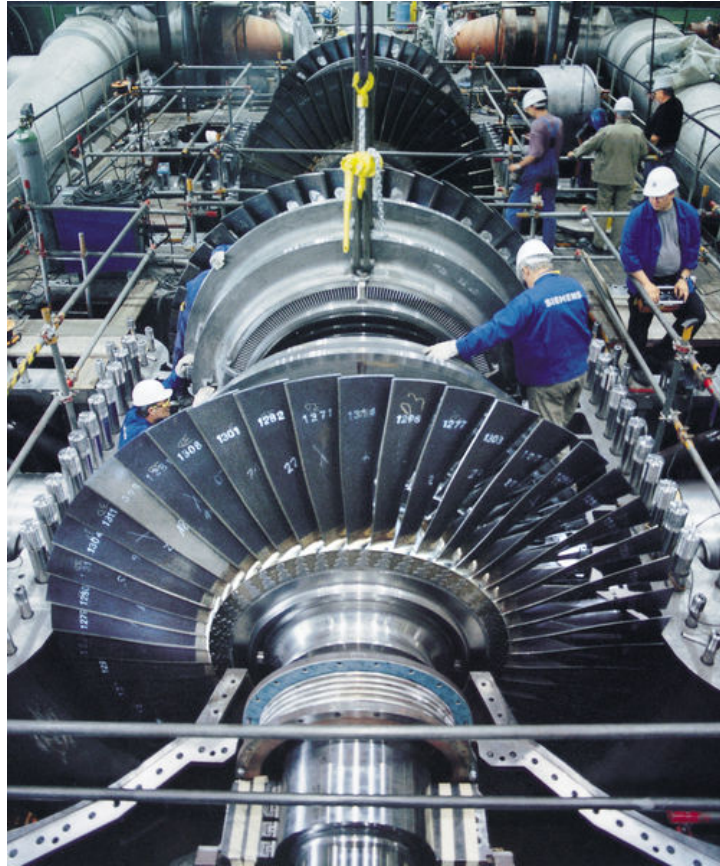
OCEAN ENERGY



Roll:

1. A wave flows through a tidal barrage and spins a TURBINE.
2. A wave flows in and out of an oscillating water column; the air inside the chamber is compressed and decompressed; the forced air spins a TURBINE.
3. A wave flows into a *TAPCHAN* system (a narrow channel connected to a reservoir in a cliff). As the channel gets narrower, the wave increases in height until it spills into the reservoir. The stored water flows out of the reservoir spinning a TURBINE..
4. A strong, steady ocean current spins an underwater TURBINE.
5. A wave bobs a Salter Duck (tethered rotating devices) up and down. The nodding motion of the Salter Duck compresses oil in pistons inside the device. The pressurized oil is released through a hydraulic motor that converts 90 percent of the harnessed energy into electricity. Electricity flows through transmission lines to smaller distribution lines in your neighborhood and then into your HOME.
6. A wave moves through an AquaBuOY, a cylinder-shaped buoy that floats on the surface, with a long, hollow tube attached below it. In the middle of the tube is a piston held in place by two hose pumps. As seawater moves up and down through the tube, it moves the piston, stretching and compressing the hose pumps. The hose pumps channel the seawater through a TURBINE.

TURBINE



All Rolls:

The flow of air, steam, or water spins a turbine. A turbine is attached to a long pole in a generator. Inside the generator are magnets and coils of copper wire. As the turbine spins, it moves magnets inside coils of copper wire making an electromagnetic force. Electrons are pushed from one copper atom to another inside the wires. Then the electrons in the coils flow into transmission lines. Moving electrons are electricity. Electricity flows from a power plant through transmission lines to smaller distribution lines in your neighborhood and then into your HOME.

HOME



Roll:

1. Open the refrigerator and take out a cold beverage.
2. Turn on a light and read a book.
3. Use the computer to research hydropower.
4. Chore time. Use hot water to wash the dishes.
5. Charge up your mp3 player and listen to your favorite song.
6. Your home's air conditioner keeps you comfortable on a hot afternoon.