

Chapter 4**ENRICHMENT**

Use with Section 2

● Alternative Energy Resources

Tidal Power

Tidal power is a source of energy that could play an important role in generating electric power during the coming years. Tides are the rhythmic rise and fall of the ocean's surface caused by the gravitational pull on the water by the moon and, to a lesser extent, the sun. This back and forth flow of ocean waters can provide a source of energy that does not pollute and will never run out.

Tidal energy can be used wherever there are high tides in a bay that is narrow enough to be enclosed by a dam. During high tide, the bay fills with water. During low tide, the level of the ocean drops below the level of the water stored behind the dam. The stored water is then

released. As the water falls, it drives turbines that generate electricity.

The first and largest tidal power plant in the world began to operate in France in 1966. A dam equipped with reversible turbines permits the tidal flow to work in both directions—from the sea to the tidal basin on the incoming tide and from the basin to the sea on the outgoing tide. Russia also has several tidal power plants.

Some disadvantages to tidal power plants include their expense to build and maintain. Also, tidal power plants are not always able to provide energy when it is needed. The amount of energy generated varies according to time of day and with the seasons.

1. List some advantages to using tidal power.

2. List some disadvantages to using tidal power in addition to those mentioned above.
