

Alternative energy sources: overview

[Environment](#), [Ecology](#)



The consumption of natural resources has come to dominate the minds of policy-makers and general public in the US, given the limited range of these resources and concerns associated with the burden the growing population places on the reserves.

The most obvious problem the US encounters in the realm of natural resources consumption is undeniably the consumption of energy resources.

In addition to increasing the efficiency of oil production, the nation will sooner or later have to turn to alternative energy sources. While these sources still remain too expensive to be operational, their technology is undergoing rapid transformations to make them more cost-efficient. Wind mills are already effectively used in Spain where the climate is characterized by strong winds.

Solar energy, geothermal power, tides, hydroelectric power plants - all these are ways to receive energy in a way that is less dangerous for the environment and can with time fully replace oil as a source of energy. Considering the dangers posed to the US society by the resource depletion, we will also try to look at alternative solutions that will enable us to replace the reserves.

Current State

Solar energy is attractive because the energy received by the earth annually exceeds the amount of energy used by humanity by 35, 000 times, although " about 1/3 of this energy is either absorbed by the outer atmosphere or reflected back into space" (University of Utah).

Geothermal energy that stems from the inner heat of the earth is of lesser importance as it can be used only to replace a small amount of human needs. The temperatures of 100 degrees Celsius are located only three miles away from the surface, which gives man an opportunity to use geothermal energy.

Tidal facilities like the one operated by the former Soviet Union in Lumkara, use the power of the water “ to fill reservoirs, which are then slowly discharged through electricity-producing turbines” (University of Utah).

The attraction of tidal power, in contrast to solar and wind energy is its predictability and rich supply that can be calculated since it comes on a regular basis. In contrast, in the case of solar and wind energy, the industry often has to wait for days until the sun comes out or the wind begins to blow. However, the Survey of Energy Resources published by the World Energy Council in 2001 points to “ long construction times, high capital intensity and low load factors” as preventing economic efficiency of this type of energy (World Energy Council).