

Hard-path versus soft-path energy development

[Engineering](#)



To reduce energy use from conventional sources on the property, the first step is to insulate my house to improve heating and lessen the need for heaters. The next step is to install solar power cells on the roof of the house for electricity. A solar water heater (NREL) will also be installed to heat water. Larger insulated windows will be installed in strategic areas of the house to reduce the need for the use of electric light sources during daytime as the windows will serve to brighten the interiors of the house. A study of the direction of prevailing winds will be done and some trees will be cut down to clear wind channels in the forest towards windmills which I will construct near the house. These windmills can power generators and can be set-up to pump water from water wells. I will set aside an area where I can cut down trees to use for fuel in the winter months to power the heater and for cooking. Cut down trees will be replanted.

3. Environmental Impacts of Dam Construction

Construction of dams has associated environmental impacts such as loss of farmlands, loss of vegetation and biodiversity, sanitation and solid waste disposal, air, water and noise pollution, and impact on river ecology (Byaruhanga et al.). In order to minimize these effects, safeguards and mitigation measures must be applied during the construction phase. Some mitigating measures which could be undertaken during construction are the replanting of vegetation in other areas to minimize vegetation loss; avoidance of environmentally critical area (i. e. migratory paths and breeding areas of wildlife); maintaining the discharge of water from the dam to recreate the normal volume of water flowing in the rivers; establish flood control and erosion control measures in the construction sites; maintain proper sanitation and disposal of wastes; and other such measures as to <https://assignbuster.com/hard-path-versus-soft-path-energy-development/>

reduce the levels of noise pollution in and around the construction site.

4. Relationship of the Global Water Shortage to Food Production

Rapid and growing changes in the natural ecosystem affect the hydrologic cycle and thereby affect water supply globally. Deforestation, massive land conversion, and other human activity affect climate and reduces the volume of the ground and other natural water sources. Combined with increasing population and conversion of lands for agricultural purposes, water resources are being diverted from human consumption to support the world's hunger, with about 40% of the world population already competing for water (Sandford). Larger tracts of land are already being converted for food production use in order to support human food needs. This conversion leads to the destruction of natural vegetative cover which in effect affects the water cycle. Unless the population is controlled and more efficient food production technologies are developed, man will always be competing with agriculture for water usage.