

Unit 3: screening and assessment



**ASSIGN
BUSTER**

The Assessment Process Maria Barrezueta Kaplan University The Assessment Process Many sources of energy exist all around us, the two main forms of energy are kinetic and potential. While potential energy is less obvious, kinetic energy can be easier to identify. Energy comes from different sources, some that are renewable and others that have a limited supply. The world that we live in has a high demand for energy, and it is important to find alternative sources that are renewable and cost effective.

It is beneficial to reflect on the energy that is used daily, try to find ways of using renewable resources, and making it a personal duty to conserve energy by reducing daily usage. Energy is used in many different ways, anything that is able to do “ work” exhibits energy (Trefil & Hazen, 2010). Humans rely on food for energy, as our bodies convert food into work (Trefil & Hazen, 2010). With so many technical advances, energy has a significant role in our everyday lives.

The alarm that is used to wake up, the lights that we use when its dark, the hot water that we use in the morning, the electricity that is used for a blow dryer or straightener, to make coffee and toast, the gas that is used to drive to work...it seems as energy sources are in constant use, half the time it happens effortlessly. Electricity is a source of energy that is used for many different appliances that serve our daily needs. It is however a secondary source of energy because it originates from coal, natural gas, oil, and nuclear (energy4me. com, 2013).

Electricity can be made from renewable sources such as solar energy and wind (Trefil and Hazen, 2010). As electricity makes many of the tools we need functional, gas is also an energy source that is used at home, during

travel and at work. Living in California, the weather is not a subject to complain about. Nonetheless, we use the air conditioner in the summer time and the heater in the winter. Some homes use electric stoves while others use gas. All of these energy sources come from petroleum; the energy source that provides fuel for our vehicles, heat for our homes, produces electricity, and is used in many everyday products (energy4me. om, 2013). According to Trefil and Hazen “ Fuels like oil (petroleum), coal, and natural gas are called fossil fuels because they are the result of processes that happened long ago” (2010). Consequently, petroleum a very high in demand source of energy, is not renewable. Renewable energy has become a very important topic, as the need to conserve fossil fuels has increased significantly. When considering renewable resources, different factors exist such as reliability and cost.

As mentioned earlier, the two main forms of renewable energy come from wind and solar energy because these sources are reliable and there are no global warming risks involved (Trefil and Hazen, 2010). Wind energy is a renewable source of energy; with the use of wind turbines, it generates electricity with each turn of the blade (energy4me. com, 2013). Since electricity is produced with each turn, the amount of energy obtained depends on the amount of wind available to that region. California has 3 main wind farms and are located in Tehachapi, Altamont Pass, and San Geronimo (California Energy Commission, 2013).

Wind energy is generally higher around spring and summer, which doesn't make it a reliable source all year long. Using wind energy for personal home use would only work if one lived by the coast. Wind energy is not a

renewable energy source that is available to many populations, thus would not be appropriate to residents looking for alternative energy sources. A renewable source that can be more accessible is solar energy, especially in California since energy is obtained from the sun. The use of solar energy has been around since ancient times, the amount of solar power available is endless.

The downfall is that when the sun is not shining, there is no power generated. However, living in southern California, using solar energy is more readily available than in other regions because it is typically sunny. To use solar energy, solar panels that produce photovoltaic cells are created, these panels turn sunlight into electricity (energy4me. com, 2013). Another source of renewable energy is hydropower, which uses water to create electricity. Generally hydropower projects consist of a strong flow of water that puts pressure and turns the turbines that generate electricity (energy4me. om, 2013). Hydropower is a reliable source, however it would not be appropriate for southern Californians because the area is too dry and a hydropower project would not work. The main energy source that is used is petroleum, we use it for transportation, heating, cooling, and for its many other benefits. The disadvantage of petroleum is that only a limited supply exists. There is also a possible risk of environmental damage whenever drilling for petroleum is done. The advantage of renewable energy sources is that the supply relies on the weather conditions.

This means that as long as there is sunlight, solar energy can be produced. Wherever wet regions exist, hydropower projects can be set up, just as windy regions can use wind turbines to generate electricity. All of these

resources are naturally available, thus allowing an endless supply of energy. Nonetheless, the main disadvantage of all renewable energy sources is that all of the methods discussed are quite costly. Building wind turbines can be expensive, however after they have been built, electricity is generated at no cost. The same with solar energy, it involves a high investment and only works with sunlight.

However, the system does last 15-30 years which is a significant amount of time. The hydropower projects are not only pricey, but there is also a risk that it may have an environmental impact by changing the dam area (energy4me. com, 2013). Despite its disadvantage, it does have the capability of creating large amounts of power. It is important to take personal responsibility on the energy that is used, by practicing energy conservation. This can be done * In addition to using alternative forms of energy, energy conservation is also a significant way in which we can reduce our ecological impacts on the environment.

Determine areas where you may already practice energy conservation and also identify at least 3 ways in which you can reduce your energy use both at home, at work, and in other actions you take on a regular

Shawn_Edwards_Assignment2. doc References California Energy Commission (n. a.) (n. d.). Retrieved on April 18, 2013 from: <http://www.energy.ca.gov/> Energy Sources (n. a.) (2013). Retrieved on April 18, 2013 from: <http://www.energy4me.org/> National Renewable Energy Laboratory (n. a.) (2013) Retrieved on April 18, 2013 from: <http://www.nrel.gov/>