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Assignment

Power Generation

Q3/ What are the Conventional Source of energy and explain briefly?

Ans/ Conventional source of energy are the natural energy resource which are present in a limited quantity and are being used for a long time.

They are called non-renewable source as once they are depleted, they cannot be generated at the speed which can sustain its

consumption rate. They are formed during matter over hundreds of millions of years.

These resources have been depleted to a great extent due to their continuous exploitation. It is believed that the deposits within few decades and the coal reserves can last for a hundred more years.

Some common example of Conventional source of energy include coal, petroleum, natural gas and electricity.

Q1/ why hydro electric station have high transmission and distribution costs?

Ans/ The biggest expense with hydro is the transmission costs due to the required high voltage necessary for long distance transmission.

High grade steel is required for the tower construction.

Land acquisition costs, remote location access, specially designed brackets for supporting the cables, special protection from lightning, damage due to people trespassing on the equipment, and maintenance to equipment located directly outdoors and subject to the weather.

You are probably looking at about \$100,000 per tower, then there is the power losses in transmission, which must be bucked up every 100 miles or so. The estimated losses are about 5%. Then there are additional heat losses in the transformers bucks, or reducing the high voltage to lower voltage for use.

Then there is the losses due to 24 hour coffee pots... that alone is staggering.

Q2/ Give one practical example where wind-mill is used.
Wind farms:

Wind farms are stretches of open land that often see very high wind. These open stretches of land are also often uninhabited by people, making them ideally suited to the large turbine on top of several stories high towers. As the wind turns the blade of the dozens or hundreds of turbines, electricity is generated and incorporated into the power grid. Wind farms have been criticized for the loud noise they produce and for disturbing bird populations, but have been applauded as a clean energy source that still allows the land around the turbine to be used for things like crop production and animal grazing.