



## Energy Resources

world population in 2023 = 8.0 billion  
China population = 1.41 billion  
India population = 1.40 billion  
U.S. population = 335 million or 0.335 billion  
world population in 2050 = 9.7 billion  
fossil fuels = coal, oil, natural gas  
more cars, more appliances, more everything - everybody wants more

## **Possible Essay Questions**

Describe the three main categories of glacial landforms that exist in Lower Michigan (moraines, outwash and lakebed deposits) as we referred to them on the glacial map of Michigan. Describe the process of how each type of landform was deposited and what shape they have on the landscape. Tell me everything you know.

Describe the following features listed under the two categories below and describe how they come to exist. (I will select some of the following terms for the exam).

### Continental Glaciers

kettle lake  
drumlin  
esker

### Alpine Glaciers

hanging valley  
lateral moraine  
medial moraine  
cirque  
arete  
horn

Describe the geography of the iron industry around the Great Lakes.

Be able to list the Great Lakes and their connecting waterways in the order in which they flow to the Ocean.

Read this entire question before starting in. Without mentioning climate change or any other environmental issues, **discuss why we need to come up with sustainable sources of energy** (besides coal, oil, natural gas and nuclear). Nuclear energy is not sustainable. **Can 8.0+ billion people survive without electricity or other types of power?** If you don't think that we need to come up with sustainable sources of energy, **then discuss that**. Please don't forget the second sentence of these instructions-- do not mention climate change or any other environmental issues such as smog or poor air quality or lung disease (a common mistake in answering this essay question). Also, it is very tempting to say that humans lived without electricity before (in caves or whatever), so we can do it again. But read the question carefully. It asks if 8.0+ billion people can live without electricity. The human race has not done that before. Electricity is not just a convenience. **Why would it be impossible for 8.0+ billion people to live without electricity?**