## **Guiding Questions & Suggested Resources**

#### **Guiding Questions**

- Where is your town? How many people live in it?
- What are the monthly energy needs of the town? If you cannot find specific information for the town, what about a similar town in a nearby region? If no numbers can be found, calculate a rough estimate based on the number of people in the town and how much energy each person might use.
- What are the available sources of energy to the people? How do they produce electricity and/or heat?
- What are the pros and cons of each type of energy resource in the context of your town? Some topics to
  consider include materials limitations, environmental impact and the efficiency of converting energy from
  the resource to electricity/heat.
- How much does it cost to install and maintain each of these energy solutions (solar, wind, geothermal, etc.)?
- What can the people in your town afford to pay for energy?

### Suggested Resources

- 1. http://www.geni.org/globalenergy/library/renewable-energy-resources/world/africa/index.shtml
- 2. http://www.irena.org/potential\_studies/
- 3. http://costing.irena.org/
- 4. https://en.wikipedia.org/wiki/Energy in Africa#Current Energy Usage in Africa
- 5. http://www.globalconstructionreview.com/markets/electrification837373673636363636363636363636africa/
- 6. http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC
- 7. http://data.worldbank.org/indicator/NY.GNP.PCAP.CD

#### **Additional Resources**

# TeachEngineering.org



- 8. Types of Renewable Energy (REW) http://www.renewableenergyworld.com/index/tech.html
- 9. Technology Basics (NRDC) http://www.nrdc.org/energy/renewables/technologies.asp
- 10. Fueling Sustainable Development: The Energy Productivity Solution (McKinsey Global Institute; PDF file) <u>http://www.mckinsey.com/~/media/McKinsey/dotcom/Insights%20and%20pubs/MGI/Research/Resourc</u> <u>e%20Markets/Fueling%20sustainable%20development%20-</u>

<u>%20energy%20productivity%20solution/MGI\_Fueling\_sustainable\_energy\_productivity\_solution\_perspe</u> <u>ctive.ashx</u>

11. Making Sense of Renewable Energy Technologies (Carbon Trust; PDF file) <u>https://www.carbontrust.com/media/63632/ctg011-renewable-energy-technologies.pdf</u>



