

UNIT 3 SAC 1 - DUE DATE WEDNESDAY MARCH 22nd

Discuss the advantages and disadvantages of renewable and non-renewable energy sources, and analyse and evaluate the technology used to harness, generate and store non-renewable and renewable energy

You need to write a typed report between 750-1500 words under the following headings below, using articles you collected over the holidays, the internet, textbooks, newspapers etc. Hand written reports will not be accepted. Information should include written information, diagrams, graphs, charts and costs where possible. All information you use must be referenced, stating the source of the information and a full bibliography must be included at the end of the report. This report will be marked out of 50 and contribute to 10% of you final study score. Refer to p232 of your workbook.and p66-74 of your textbook. All newspaper articles must be handed in with this report. The more variety of resources used the higher the mark will be.

1. List and describe all of the renewable and non-renewable energy resources.
5 marks
2. Compare the advantages and disadvantages of non-renewable and renewable resources.
5 marks
3. Explain recent technological developments to reduce carbon emissions and improve the efficiency and to improve the environment credentials of non-renewable resources.
10marks
4. Describe, evaluate and diagrammatically represent the technologies and processes used to harness or extract, generate, transport and store renewable energy sources.
10 marks
5. Describe the factors that determine the efficiency of energy conversion of all the renewable and non renewable energy sources
(eg many solar cells are only 15% efficient converting light energy into electrical energy due to factors such as materials used, positioning of the cells towards the sun, how clean the panels areas they get dirty, reflection of light, energy lost as heat .etc etc)
5 marks
6. Describe the energy transformations of renewable and non renewable energy sources through the life cycle of energy/power supply, including harnessing or extraction, generation, conversion, transportation, storage
Eg solar car
Sun-----(-light energy)-----solar panels-----(-electrical energy)-----

---Batteries store chemical energy------(electrical energy)-----motor-----
(mechanical energy)-----drive shaft------(kinetic energy) ----- wheels turn

5 marks

7. Evaluate solar and wind power technologies and compare these methods of harnessing energy with non-renewable energy methods. (Could we survive just on wind and solar power? Give arguments. Look at economics, jobs, politics efficiency, setup etc etc)

10 marks

IMPORTANT NOTE: Plagiarism is viewed extremely seriously at this level. Should it be discovered that two or more students have partaken in such practices then all those involved will be dealt with under VCE regulations. Unless you have a medical certificate late work will not be accepted and you will be given a score of ZERO.