Assignment 2. Comparison of options

This is the second part of three assignments:

1. Develop a specification for an electrical energy system
2. Compare options
3. Develop a system component design specification

The objective of these assignments is for students to develop an appreciation of system design principles and of applications of electrical energy conversion devices.

Typical systems included:
- Electric vehicles
- Remote area power supply
- Grid connected power supply

In the first part an electrical energy system was selected and a specification prepared. The specification was written from the point of view of the final end user or owner, and did not enter into details of what was inside the system.

The objective of Assignment 2 is to propose and evaluate some options for the components of the system which might meet the specification.

Typical options might include:
- System voltages
- Types of fuel cells and fuels
- Control methods
- Power electronics
- Motor types
- Generator types
- Energy storage method

The options would be evaluated against the system specification including safety and other relevant standards and regulations.

Each group will present the assignment work and submit a hardcopy of the complete report on the assignment presentation day, which is Tuesday 29 April 2008 in Week 8. The Power point presentation slides must be sent as an email attachment to the lecturer well before the presentation day. It is encouraged to submit a softcopy of the assignment report besides the hardcopy.