

Question 27 (4 marks)

There are two areas in which energy savings can be made by the use of superconductors. These are:

4

- electricity generation and transmission;
- transportation.

Discuss how energy savings can be achieved in each of these two areas.

Advancements in technology are already present as in Japan with their monorail that hovers off the track, due to the superconductive nature of the magnets they use.

They are cooled via liquid nitrogen, which is very expensive.

Electrical generation & transmission would greatly improve, as the superconductors are kept very cold in order to operate sufficiently, thus creating little to no heat.