Energy wedges - lab report example

Science, Chemistry

ENERGY WEDGES

Energy Wedges Introduction The shift towards low carbon economy is believed to be strongly associated with the creation of a broad range of new employment opportunities. However before we expect the opportunities to occur it is important to plan and execute a mission that is likely to reduce carbon emission by half in the next 50 years. Research indicates that the earth’s atmosphere currently contains about 800 billion tons of carbon as carbon dioxide. The increasing emission of carbon dioxide and other greenhouse gases in the atmosphere is mainly attributed to production of energy, which is required to run machinery, and production of electricity. Our group resorted to cutting carbon emission by half hence built an energy wedge that shows how the significant reduction is likely to take place if endorsed by the whole world.

Results and Discussions

Our energy wedge begins with efficiency in transport as the basic of reducing carbon emission by 50%. The group believes that the current consumption of fuel by vehicles is likely to double from 30 mpg to 60mpg in the next 50 years. In order for saving to be achieved, there is need for the economy to shift from carbon energy sources to hybrid diesel engine technologies. Building efficiency comes second in the wedge. If technology is well utilized, buildings are supposed reduce emissions of carbon by 25% (Levy, 2010). This can be done through using solar heaters and using good insulators in construction of houses to reduce the demand of heat by electricity and other carbon sources. The next energy conservation strategy involves use of conservative measure in transport. Reducing face-to-face communication

and using more electronic sources of communication will reduce the rate at which people travel (Neuhoff). This will lead to conservation of energy.

The next wedge of conservation is efficiently producing electricity. Use of coal as a source of energy leads to production of about a fifth of worlds carbon. Reducing this b half in the next 50 years helps in solving this problem. Use of green sources as energy conservation form the next four level of our wedge. We realized that production is only likely to reduce by half so we opted for other means through which the remaining half of carbon emitted could be stored or reduced. This could be achieved by use of forest storage. Conserving forests ensures that trees absorb carbon emitted and use it as a source of food production. Soil is also another form in which carbon products can be stored. This can be supported by planting cover crops and preventing soil erosion. Use of biofuels is believed to be cost effective in but not as compared to wind and solar. However, it is expected to increase the efficiency of plant photosynthesis and use of crop residues hence leading to borrowing of carbon in the atmosphere (PWC).

Conclusion

Low carbon emission presents a good chance of saving our environment. Most of the group members also learnt about current technologies existing that can help in cutting carbon emission by half by the year 2055. The game also helped, as students were able to learn from each other.

Works Cited

Levy, Charles. " 2020 Low Crabon Economy." A knowledge Economy Report (2010): 1 of 76.

Neuhoff, K. Tackling Crabon. Cambridge: University of Cambridge, 2008.

PWC. " Sustainability." Are Consumers Buying it? (2008): 234-238.