

For Consideration During Our Debate

- The following slides contain information on the current and future carbon footprints of all electricity generating technologies
- This information is in The Parliamentary Office of Science and Technology *Postnote* Number 268, October 2006

Overview

- All electricity generation technologies emit CO₂; none are entirely “carbon free”
- Life cycle inventory analysis is used to measure the amount of CO₂
- Fossil fuelled electricity generation has the largest carbon footprint with most emissions during plant operation
- “Low carbon” technologies have low life cycle emissions – most during non-operational phases
- Future carbon footprints can be reduced for all electricity generation plants if high CO₂ emission phases are fuelled by low carbon energy sources

Future Carbon Footprint Reduction in All Technologies

- If the manufacturing phase & other phases of the technology life cycles are fuelled by low carbon energy sources
- Using less raw material, ie use recycled materials
- New semi-conducting materials for PV to replace resource intensive silicon
- Biomass has potential of “negative” CO₂ emissions
- Burning “carbon neutral” biomass and carbon capture & storage (CCS) technologies would result in a net removal of CO₂ from the atmosphere

Current & Future Carbon Footprints

