

Alternative energy solutions

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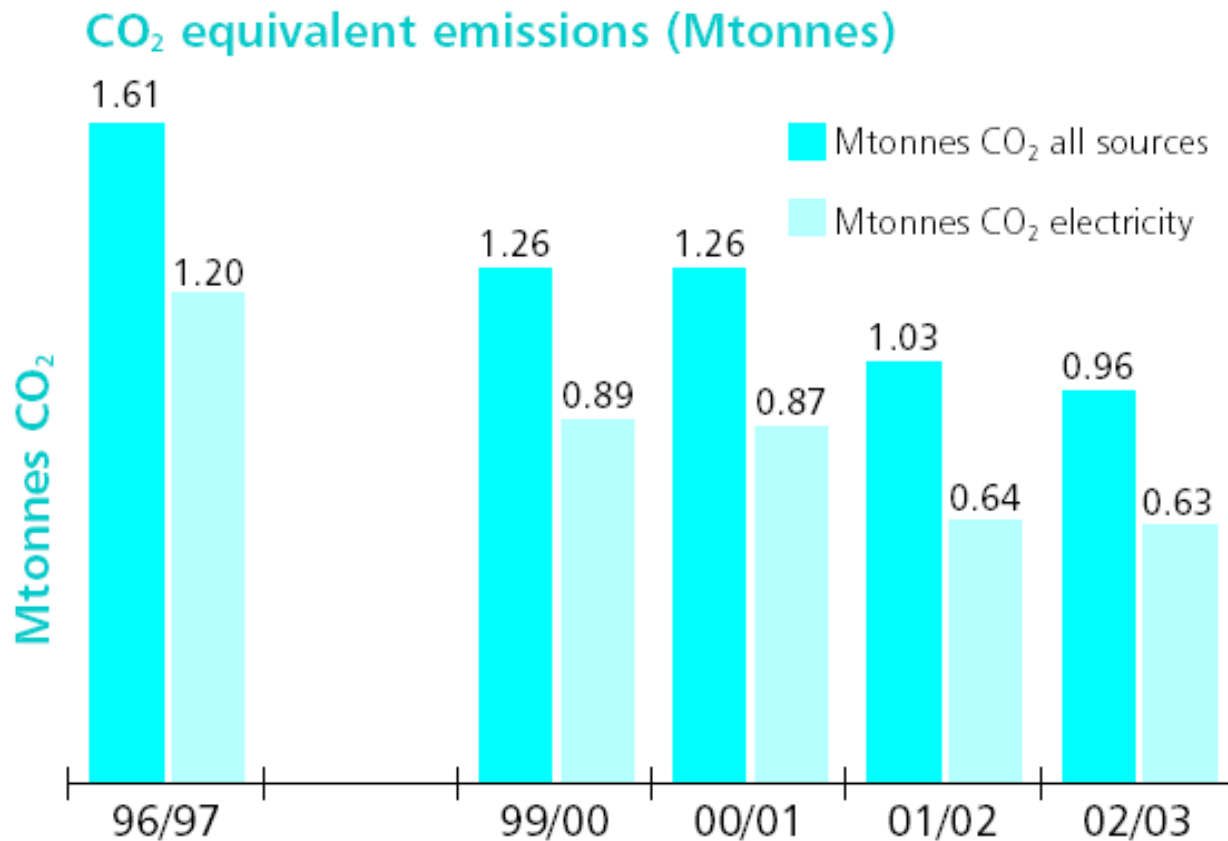
*Energy Commercial
Manager BT Plc.*



Emission reduction - progress to date

- Use of Lower Pressure Amplification (LPA) technologies in chillier plant.
- Changed strategy to the use of fresh air cooling plant wherever possible.
- Changing to Variable Speed Drives (VSD) on fan equipment.
- Consolidated offices.
- Promoted Homeworking.
- Starting to insist vendors provide low energy solutions.
- Installed half hour metering at all 5,000 operational sites and used data benchmarking to drive out wastage.

BT's CO₂ Profile



Source: Forum for the Futures report - Powering Ahead (2003)

Difficulties in obtaining 'Green' electricity

- Just two years ago the UK electricity market was very different - with limited green available.
- BT then engaged Forum for the Future (FFF) to investigate why.

FFF's reports recommendations were...

- *BT should commission a detailed audit of its estate (both land ownership and buildings) to assess the potential for installing its own on-site renewable generating capacity.*
- *BT should explore the potential to invest in new renewables projects through initiating discussions with a variety of specialist developers, possibly in partnership with an NGO.*
- *BT could work with a specialist broker organisation to explore the possibility of buying and retiring Renewables Obligations Certificates, thereby expanding the market.*
- *BT should devise transparent criteria to use when assessing renewables supplies.*

Our new 'Green' electricity Contract

- 950GWh of 'new green' which includes Wind, Solar, Hydro and Biomass
- 1TW of Combined Heat and Power (CHP) which provides a significant CO₂ saving (typically 40%).
- A small quantity of 'brown electricity' to make up the 2.1TWh requirement.

Supply Issues

- Continued supply.
- Audibility.
- Green washing.
- Increased cost outside of the 'fixed term'.

The longer term

- BT can not continue to covet 10% of the UK Green electricity market.
- More green GW's of must be stimulated in the market.
- MOD and planning issues in the UK must be clarified and resolved.
- Site specific on site generation must be considered.
- 21ST Century Network components must be 'lowest practicable' power consumption.

The way forward

- Act on the data from the wind surveys carried out by the Carbon Trust following the FFF report.
- Install a mix of Micro, medium and large Wind Turbine.
- Further investigate the potential of PV.
- Lobby government to resolve planning and military Radar issues.
- Work with regulators and government to ensure the green credentials of supply.
- Champion the use of the UK REGO's '*eco-labelling*' system with suppliers and OFGEM.

Embedded Wind Turbines - our first choice

Rooftop VAWT's
typically (1- 4kW)



Conventional micro WT's
typically (1 - 15kW)



Joint Ventures with our
electricity suppliers
typically (1 -2MW each)



Some other solutions

B20 biodiesel in Standby generation.



Photo Voltaic's (PV) at sites or on buildings



Biofuels to heat buildings

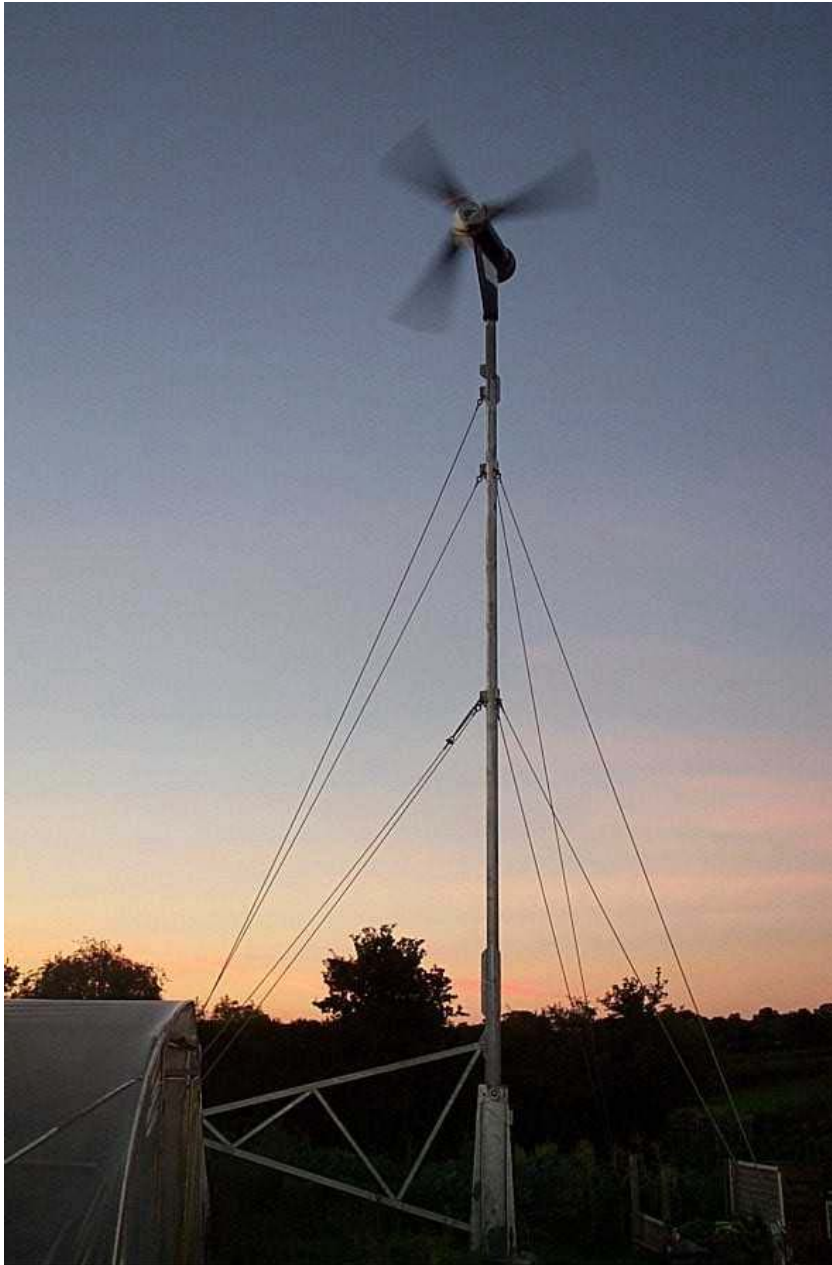


Some final thoughts

‘...we as TELCO’s have the joint responsibility to assist in reducing global CO₂ emissions through the use of our innovative products and services...’

‘...This may of course be at a burden to us in an extra cost in CO₂ emissions due to more energy use in our networks, but we believe it can significantly negate travel, which is far more harmful to the planet.

‘....This more than justifies our relatively small increase in emissions’



Any questions?