

# final word

## Energy policy: more politics than engineering?

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THE PAGES of this magazine have, over the past few months, featured the concerns of engineers that the compact fluorescent – or ‘low energy lightbulb’ as they are more publicly known – is not the panacea it first appeared to be. Unfortunately, once the momentum of media driven policy is under way, it is very difficult to stop.

The poor power factor of fluorescents means that the energy saving benefits suggested by the power rating is not what it seems. There also seems to be agreement that the life of these units is becoming shorter: possibly intentionally. The everlasting lightbulb is, of course, commercial suicide. If the misguided green lobby get their way and ban incandescent lamps, the lifespan and price of the remaining alternative will undoubtedly take full advantage of the absent competitor. As reported in July's *Engineering and Technology*, electronic chips no longer have the longevity once assumed and their shortening lifespan is now becoming a problem. All good for business no doubt, but not for the environment when so much electronic equipment has to be replaced earlier.

The evolution of compact fluorescents is understandable. Attempts to produce small lamps with separate gear in a fitting have floundered as the complete package, easily changed by the householder when the old lamp expires, has sold easily. The public do not realise that they are buying a complete light fitting and then throwing it away. Changing a lamp to one that is perhaps a little dimmer with slightly poorer colour rendering is acceptable; a fluorescent fitting in the living room is not.

Our politicians understand that global warming knows no national boundaries but do not, or will not, realise that its causes are similarly global. They smugly point out that Britain's emissions are falling and censure countries with accelerating power consumption; failing to note that the former is due to the fact that we no longer have a manufacturing industry and the latter due to our goods being made in China.

Public discussion of the carbon footprint of a product ignores its manufacture. The compact fluorescent has to be manufactured, its control gear has to be made and all the components start as raw materials, mined, refined and processed. At the end of its life it has to be disposed of. The mines and refineries are not next to the assembly plant so some degree of transportation – possibly global – is involved. How much carbon is produced by the mines, refineries, factories, packaging, storage and transportation per year divided by the number of units produced? It may be significant: it may not, but the fact that no one knows the true carbon footprint is what we should worry about.

The same argument could be applied to other domestic appliances. We are encouraged to change our old refrigerators for more efficient models in order to save the planet. Even the IET's Energy Sector Panel advises as much. The same questions apply; how much carbon to mine and refine the raw materials, make the components, assemble the refrigerator, ship the parts and finished product halfway round the world, store it in warehouses and deliver it in vans to the door? Add to that the disposal of its predecessor and it does not seem worth the energy saving potential over the life of the appliance to justify scrapping a serviceable piece of kit. Cars may also be subjected to this assessment; buying the latest environmentally friendly car every two years feeds an enormous industry and prevents



economic stagnation but is the overall effect green? Apart from the energy concerns, how can the word sustainable be used in the context of policies that involve digging up more raw materials and burying more rubbish? Driving policy by public opinion – which is in turn led by over simplifications – leads to the EU banning mercury in barometers and having to issue directives to cope with all the noxious materials in discharge lamps to replace the newly banned incandescent ones. The directive will have little effect on CFLs used domestically and their disposal will put more poison into the environment than a few barometers.

Using taxes as a disincentive to affect consumer choice, such as buying a car, justifies a claim to be green while not having to show where the additional revenue has gone. George W Bush and Karl Marx agreed on one thing; everything is dictated by the economic base. This may seem overly cynical, but political parties need contributions from commerce and industry in order to win power in government. Government needs taxes to operate so encouraging consumption of ‘green’ goods and raising ‘environmental’ taxes serves both purposes without upsetting the voter.

There is so much that could be

done with environmental policy rather than blame the public for the increase in CO<sub>2</sub>. We are told not to drive so much while they close post offices; we are told to turn off the standby on televisions and radios while the transfer to energy hungry digital transmission continues apace; fortnightly rubbish collections are used to encourage recycling (not to save costs of course), but nothing done to halt the creation of excessive packaging and junk mail. Standby facilities can be eliminated by type approval regulations, miles driven to do shopping is a planning issue. We can stroll down the local high street to buy a house, but have to get in the car to shop for weekly essentials. All of these anomalies can be dealt with by policy, but claiming green credentials by raising taxes and banning the lamps that maintain a competitive market are easy and financially beneficial to both government and party.

Although the IET are consulted in regard to energy policy, there is certainly no serious public debate outside of our closed world on the less than simple subject of energy conservation. Surely one of the tasks of our institution is to bring such matters into the public domain: even if only as a series of questions until someone funds the finding of answers. ■