

Text of speech made by Nigel Griffiths MP, Minister for Construction, at the CIBSE/ASHRAE Worldwide Gathering of the Building Services Industry in Edinburgh 24-26 September 2003

Making the Argument for Green Engineering – The Government’s Perspective on Building Sustainability

1. Thank you Terry for that (kind) introduction. I would like to add my welcome to Edinburgh a city I know well. [The Minister may wish to add a few words as MP for Edinburgh South]. I am delighted to be here today and glad that such a wide spectrum of people ranging from some of the most Senior Industry experts from around the world through to students are able to attend this event. Events like these are extremely valuable for sharing and discussing best practice and the latest research on the construction of sustainable building for domestic, commercial and industrial use.

Energy White Paper

2. To consolidate the Government’s commitment to the environment, we published the Energy White Paper February of this year. It is the first comprehensive, forward-looking statement of energy policy published in the UK for more than 20 years. The Paper provides a long-term framework to address the key challenges that lay ahead of us.
3. The first challenge of which is Climate change. The levels of carbon dioxide in the atmosphere have risen by more than a third since the industrial revolution and are now rising faster than ever before.
4. The second challenge is the decline in our indigenous energy supplies (oil, gas nuclear and coal). Our current demand for primary energy far exceeds the amount that we as a country are able to produce. We currently import nearly half the coal we use, with much of our economically viable deep mined coal likely to be exhausted within ten years. By 2006 we will also be a net importer of gas and by 2010 of oil.
5. The final challenge is the need to update much of the UK’s energy infrastructure over the next two decades. During the 1990s there was significant investment in generating capacity, especially for gas-fired plants. However over recent years the generating capacity and interest in building new plants, other than renewables has declined.
6. To address these three challenges, there are four key targets. First, as recommended by the Royal Commission on Environmental Pollution, we must reduce carbon dioxide emissions by some 60% by 2050 with a 20% reduction below 1990 levels achieved by 2010. Buildings directly or indirectly account for more than 50% of the carbon dioxide that is emitted into the atmosphere of which public sector accounts directly for only 5%. Therefore improving energy efficiency in buildings and designing innovative ways of reducing our dependence on fossil fuel appliances are vital to achieving government targets.

7. Second, to maintain the reliability of energy supplies. Reliable energy supplies are fundamental to the economy as a whole and to sustainable development. An

adequate level of energy security must be satisfied at all times in both the short and longer term.

8. Third, to promote competitive markets in the UK and beyond. Liberalised and competitive markets will continue to be a cornerstone of energy policy. Where the market alone cannot create the right signals (for example on the environment) we will take steps that encourage business to innovate and develop new opportunities to deliver the outcomes we are seeking.
9. Fourth, to ensure that every home is adequately and affordably heated and insulated.

What can be done?

10. An example of energy efficiency at it's best is The Eden Project which was designed by Consulting Engineers Arup. The Project incorporated some of the latest techniques in computer modelling and made use of the existing environmental conditions in designing the heating, cooling and humidification of this giant botanical garden and visitor attraction. The design utilised the thermal mass of the rock on which the domes stand to store the heat of the sun during the day and radiate heat back into the domes at night.

Biomass (vegetable matter) provides 60% of the base-heating load for the site – mainly drawn from locally grown willow, which grows quickly and absorbs carbon dioxide from the atmosphere.

Water conservation is also a feature of the project with support from South West Water. Grey water is used for irrigation and toilet flushing whilst rainwater is collected, treated and used for irrigation and humidification within the domes.

Role of industry

11. Industry has a clear role to play and I welcome the initiative developed in response to the challenges laid out in the Energy White Paper in the form of The CIBSE Carbon Task Group which was set up last year. Energy policies cannot be enacted in isolation or by decree, they require the active support of organisations such as CIBSE who are uniquely placed to bring together some of the UK's leading experts to formulate specific actions and set targets for carbon reduction.
12. This Group initiates and adopts policies that contribute to the redirecting of society to a low carbon future in pursuit of the mitigation and eventual reverse of manmade climate change

Role of Government

13. We are regularly seeking to improve conservation of fuel and power through tightening the regulations through Part L of the Building Regulations. We are moving away from concentrating solely on energy efficiency towards regulations based on carbon emissions.

14. I welcome the significant role that CIBSE is playing in this process with the production of several important new publications and the development of a building logbook template and guide, which was jointly funded by the DTI and launch partners of this event, the Carbon Trust and the British Institute of Facilities Management
15. Although production of a log book will be a requirement under Part L of the Building Regulations, the benefits in improved energy efficiency will come from spreading the message to building and facilities managers who look after the building once it has been handed over.
16. Wider changes to the Building Regulations will require the concerted efforts of all the key stakeholders – of customers, architects and designers, the construction industry, manufacturers and suppliers, the professional bodies, energy companies and, of course Government itself. The Better Buildings Summit organised by ODPM, Defra and DTI, will be taking place on 21 October this year. The event will not only be attended by the three Secretary of States John Prescott MP - ODPM, Margaret Beckett MP - Defra and Patricia Hewitt MP- DTI, but will also be well represented by industry and will consider how best we can improve the sustainability of all aspects of construction.
17. But that will not be the end of the process we know that there is still a lot more to be done. We have to improve energy efficiency far more in the next twenty years even more than we have done in the last twenty if we are to meet the challenging goals set out in the Energy White Paper. We also need to ensure that the industry makes the kind of return that allows it to invest in research, training and all the other things that will ensure continuous improvement in performance long into the future.

International aspect

18. ASHRAE members in the USA should also be congratulated for their efforts. Spurred by the electricity crisis in California and the rising cost of natural gas, consumers and policymakers across the nation are thinking a lot more about energy. With this in mind, September last year the Department of Energy and private sector partners including a participant of this Conference, BP Solar sponsored the Solar Decathlon. This groundbreaking event provided an opportunity for students to design, build and operate the most effective and efficient solar-powered house. All 14 houses were built and put on display on the National Mall in front of the Capitol in Washington DC, with the University of Colorado being the winner with a design that proved that solar energy can work in just about any house.

Conclusion

19. Achieving the energy efficiency savings that we envisage over the next twenty years will present many challenges. There is no single measure which on its own can deliver those savings, but we do believe that the package of measures which we as Government have set out in the Energy White Paper will put us firmly on track, for improving the energy performance of buildings. However, we are unable

to achieve this on our own We will need the support of industry and stakeholders from right across the economy to demonstrate commitment and engagement in the process to help us to take forward these measures. In the short term it is a substantial challenge. In the longer term it is absolutely in all of our interests to adapt to these new changes and to work towards achieving these targets.

Thank you.

NB. Contact the Department of Trade and Industry to check the speech against delivery.