

Mr. Allan Brereton,  
Energy Team,  
Cabinet Office,  
Performance and Innovation Unit,  
Admiralty Arch,  
The Mall,  
London,  
SW1A 2WH

13<sup>th</sup> September 2001

Dear Mr. Brereton,

**UK Energy Policy - submission in relation to solar water heating market**

I am writing as a director of Sustainable Energy Limited (a consulting and research company specialising in renewable energy and energy savings technology), as a director of Filsol Solar Limited (a manufacturer of both solar water heating systems and photovoltaic panels) and as a council member of the UK Solar Trade Association.

As an introduction, I would draw to your attention the following issues concerning solar water heating in the UK:

- (i) At present the UK solar water heating market is very small relative to the market situation in other Northern European countries.
- (ii) Notwithstanding the small UK market size, the UK has a manufacturing and technical skills base which forms the basis for growth.
- (iii) Solar water heating systems integrate particularly effectively in housing, but also can provide heat for commercial water heating applications.
- (iv) A solar water heating system in a typical household provides energy in the form of heated water of approximately 1,000kWh to 1,500kWh per annum.
- (v) Present system costs are typically £1,300 to £1,500 (new build housing) and £2,000 to £2,500 (when retro-fitted to existing houses).
- (vi) System life expectancies can exceed 30 years.
- (vii) Solar water heating is generally the most practicable and cost effective means of using renewable energy directly within a house. As householders can experience the performance of the systems in a very tangible way, solar water heating provides a very real way of engaging individuals in the drive to use renewable energy.

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- (viii) The potential therefore exists (and has been proven in other Northern European countries) to stimulate investment by the private sector (home-owners and house-builders) in renewable energy technology.
- (ix) Solar water heating in social housing offers the benefits of lower energy bills for tenants as well as engaging them in the drive to utilise renewable energy.
- (x) Solar water heating offers the potential for new jobs at a local level in installation, design, sales and manufacture.
- (xi) European market studies suggest the potential for implementation of solar water heating equals 1 sq. metre of solar collector per head of population. In the UK each sq. metre of collector provides 300 to 500 kWh per annum of useful energy. At present UK implementation is less than 0.1% of its potential.

Solar water heating, therefore, whilst not providing the lowest cost form of energy, could play a significant role in reducing the energy demand of the domestic sector and attract considerable levels of private sector investment into renewable energy assets.

UK policy to date and in particular the almost exclusive focus of support mechanisms on electricity generation has led to us having one of the smallest solar water heating markets in Europe. If we delay further in developing our own market, our domestic solar industry will find it extremely difficult to flourish and when more widespread use of the technology becomes a necessity we will be dependent on imports (and will lose export opportunities that we could otherwise have secured).

The question then arises as to how we could best (in terms of effectiveness and value for money) stimulate the development of the UK solar water heating market. I would like to suggest a series of options for consideration:

- a. The heat energy supplied to houses by solar water heating systems could be counted as part of an overall renewables obligation on suppliers (i.e. by developing the new electricity focused obligation to also take account of heat supplied). Alternatively the value of heat energy provided by solar water heating systems could be reflected as carbon credits.
- b. The setting of increasingly stringent energy targets for new houses in building regulations could provide a regulatory tool which would require house builders to implement technologies such as solar water heating. Such an approach would create a level playing field (i.e. all house builders would have to meet the energy specification) and the cost of the solar water heating systems would be absorbed within the costs of the house (effectively as a society we would be paying a little more for housing but would be repaid in the form of lower energy bills). There would be limited demands on the public purse.

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- c. A grants based programme could be established in a similar model to those that have been used for energy savings technologies and cavity wall insulation. These would need to be designed carefully to assure quality, to ensure value for money and to avoid temporary market stimulation followed by subsequent market collapse (once grants are withdrawn). Grants programmes have been applied successfully in both The Netherlands and Denmark and the UK can learn from these models.
- d. Tax incentives could be provided to homeowners and to house-builders linked to investment in solar water heating systems.
- e. UK energy suppliers could be engaged in the solar water heating market by including a renewable energy band within the new Energy Efficiency programmes.
- f. Public buildings (council offices etc.) could be required to incorporate solar water heating systems.
- g. Targeted promotional campaigns could be organised to improve awareness amongst potential user groups.

In addition, to support UK market growth, further efforts will be required in the areas of quality assurance infrastructure, training of installers etc.

I hope that these comments are of some help within the overall energy policy review.

Yours sincerely,

John Blower