



Energy advice in the UK - future needs and priorities A discussion paper, October 2009

Strategic priorities

Current UK government policy priorities of relevance to home energy advice are:

- a) National Fuel Poverty Strategy 2001: fuel poverty in vulnerable households to be eradicated by 2010
- b) Low Carbon Transition Plan and the Heat and Energy Saving Strategy, 2009: emissions from home to be minimal by 2050, including (given the relatively slow rate of replacement of the housing stock), a reduction in emissions from existing buildings of at least 80%

The role of energy advice

The practical implementation of such a major reduction in emissions will require thorough, effective and wide-reaching mechanisms for motivating and enabling consumers to take the necessary steps – involving behaviour change, purchasing decisions, building works to homes, and significant levels of investment.

As an example, SWEA carried out a feasibility study in Stroud District in 2007 to establish a programme for reducing carbon emissions from existing homes by 60% and found that this typically required a mix of physical measures costing in the region of £20,000 to £30,000 per home, as well as changes in energy use behaviour.

Consumer access to advice and information is crucial, to enable them to adopt a more sustainable use of energy, and advice should be considered a standard component of most other related policy tools, whether these are grants programmes, incentives, financial or regulatory approaches. While it is important that advice is commercially impartial and technology-neutral, it should not be seen in isolation from practical implementation of measures, but as an essential accompaniment to support consumer decisions and ensure the full potential savings are achieved.

SWEA led a study of energy advice in the EU27 (SEENADE project: Energy Advice in Europe 2007), the conclusions for which summarised the multiple roles of energy advice indicated by practitioners:

- A focused process to help consumers to take the steps from an awareness of serious environmental problems to taking positive action in their everyday lives

- Enabling consumers of all kinds to assess the impact of their actions and choices on the household, business and municipal economy, comfort and health, as well as the global environment.
- Facilitating the take-up of practical measures, by helping citizens to identify, prioritise, finance and practically implement the actions relevant to their situation.
- Ensuring that the potential savings from concrete measures are fully realised – such as understanding how to use a new heating system or adapt to lower heat requirements after insulation work.
- Helping consumers to understand how to combine technologies, in a market where many companies promote single technologies only.
- Providing impartial help in a market that is competitive both in terms of energy supply and the growing market for energy efficiency and related services.
- Helping consumers to take care of their homes, achieving the right temperature and humidity levels and avoiding damp and mould growth from condensation.
- Encouraging the development of job creation in sustainable energy by stimulating demand for sustainable energy measures.

Issues to address within current provision

The resources required to meet the ambitions set out in the Heat and Energy Saving Strategy consultation are extensive - proposals where by 2020 1.8 million households per year are in receipt of whole house energy audits and advice, as well as relevant finance packages.

Given the shift in approach this will require, it will be essential to iron out inconsistencies and mixed messages with the 'system'. For example:

- In order to be effective, an advice service must be capable of carrying a whole house approach through to a whole house practical conclusion, with advisers genuinely committed to promoting all the relevant technologies and able, knowledgeable and experienced enough to advise on the detail. This is unlikely to be achieved by an advice service which offers only a superficial level of support in order to maximise the number of clients reached.
- Advisers need to be able and qualified to offer support on finance, as well as technical matters, and have access to finance packages which are practical and cover ***all the relevant measures as well as the variety of built form, tenure and household economic situations***. It is essential that these are developed and ready in advance of attempting to roll out extensive audit programmes, or the effort may be wasted, as the householder may not in practice be able to implement the advice. A prime example of this is where whole house advice is given and finance supports only the standard short list of measures: cavity and loft insulation, boiler replacement, and occasional extras such as draught-proofing and low energy lighting.
- The use of the term 'cost-effective' to categorise energy efficiency measures can be misleading and should be avoided, especially if without a definition (as in the EPC in its current form in England and Wales). While within the EPC this uses a hidden definition of a 7 year simple payback on investment, we note that current government thinking (such as within the Heat and Energy Saving Strategy consultation) appears to

be shifting towards defining cost-effective measures as those which will pay for themselves over their lifetime through reduced energy bills.

- An artificial split between advice on physical and behavioural measures is to be avoided, as in practice both are needed together: for example, advice to identify and prioritise measures, and then in relation to behavioural adaptation to maximise the benefits of the measures. However, it is important to recognise that while all physical measures should be accompanied by behavioural advice, achieving behavioural change across the broader spectrum of energy use is complex and likely to require a support programme over an extended period of time.
- Experience indicates that consumers need advice on many levels, and one size does not fit all. This is borne out by the feedback from advisers carried out as part of our review of energy advice in Europe. A high quality and effective strategy for advice provision should take account of this, and tailor services accordingly. As an initial proposal, we have identified six levels of advice, with examples drawn from our EU study (below) as well as the industry in the UK.
- In relation to the point above it is important to emphasise that the cheapest option is not necessarily the one that achieves the best return on investment. This may be more achievable by effectively tailoring the level of delivery to customer need and interest (anecdotal evidence at least would suggest that outcomes are better if you give the customer what they actually want rather than forcing them into a prescriptive methodology).

Designing advice services

There are risks inherent in starting an analysis with what exists and looking at how to gear up delivery or fill in gaps – not least a natural tendency to protect market share. A more logical approach is to start by identifying the primary objectives, as for example set out in the Heat and Energy Saving Strategy, and to consider carefully each of the specific outcomes desired, for which the right intervention can then be designed.

From the details of the interventions needed to achieve these outcomes can then flow the answers to issues such as the organisational structure required for delivery, and the skills, qualifications and training needed.

One way this might be approached is to categorise the required outcomes in the current policy context and then address what advice is needed to achieve each, for example:

- a) A step change in the level of take up of the most cost effective measures (cavity wall and loft insulation, low energy lighting, heating upgrades)
- b) Widespread take up of the remaining retrofit measures to achieve deeper cuts. This includes the full range of measures which are technically developed but not yet achieving market penetration, including solid wall, floor and ‘non-loft’ forms of roof insulation, window improvements and micro-generation

- c) Behavioural change (household purchasing decisions and usage behaviour, such as with regard to heating and hot water controls, electrical appliances, ICE technology)

There is no reason why water saving, low carbon personal transport and waste minimisation and recycling should not be fully integrated with domestic sustainable energy and affordable warmth advice. This is becoming more the norm, and should be developed and consolidated as part of a modern carbon aware public information agenda.

Energy/sustainability audits are not generally necessary to achieve (a), as these measures are well-known and widely implemented and supported. Audits are however of particular relevance to (b), as a helpful form of advice to support householder decisions on installing measures, through quantifying the costs and benefits of different measures for the specific home. This is of particular relevance to the stated aim of achieving a 'whole-house' approach, but will only be effective if they promote and explain the full range of measures, including solid wall, floor and all types of roof insulation, window and lighting improvements as well as micro-generation.

As noted above, the EPC in its current form is not an appropriate tool for promoting a whole house approach, as it contains too strong an emphasis on short payback actions only. However well-established energy rating software such as the NHER can be used as the basis for a more positive and informative home energy report. One current example is our own work with Stroud District Council, (the Target 2050 project), in which we have used NHER energy audit software as the basis for a tailor-made home energy report, which uses the theme of a target of 60% carbon reduction in existing homes and sets out the measures and savings for that specific home. Our locally based advice office provides follow up advice on finance and getting measures installed, as well as local supply chain support – note that these are an essential part of the approach.

We are doubtful as to the effectiveness of providing in depth advice and audits as a commercial (as opposed to non-profit) service, in view of the in-depth and client-led approach needed in practice, as well as the time to integrate with local communities and services.

For achieving behavioural change (c) energy audits are not the most appropriate approach, as advice will need to focus on usage (of heating controls, appliances etc) rather than physical measurements or the installation of measures. Current research indicates that advice is an important part of the main requirements to achieve behavioral change, but is most effective as part of a mix of technical and people-based communication processes, including:

- face to face advice specific to the client
- simple and effective consumption feedback, including benchmarking and historic data
- supported goal setting, motivational support and sense of 'collective agency'
- focused approach to breaking habits (unfreeze, focus and alter, refreeze)

Feedback on consumption is an important part of achieving behavioural change, and can be particularly effective if integrated with the provision of advice – whether this is by basic meter reading or the use of smart meters. Real Time Devices can be a useful advice tool to raise awareness in the short term, and are a useful 'fill-in' measure, or as a one-off indicator of the range of consumptions of different appliances. More important in the longer term are good

quality smart meters offering the full range of consumer interface options, including visual display in an accessible and attractive format both in the home and online of current and historic consumption, set against benchmarks such as national and local averages. These might also show a breakdown against circuits and zones, and include water consumption as well as energy/fuel and related carbon emissions. The technologies already exist for this, but have not been fully market developed, and might in the long term be built into standard practice – perhaps as part of the regulations for domestic electrical services.

One of the issues faced by households is how to integrate sustainable energy technologies into existing systems and structures, including solutions for comfort, space, aesthetic and built heritage issues, and this is an area where a wide range of exemplars and freely shared good practice with full practical details can be valuable – households and trades-people alike need to know that a range of applications (such as methods for internal solid wall insulation, for making older windows more energy efficient without loss of character, or linking solar thermal to various standard heating systems) meet building and planning control requirements, and offer good efficiencies. Exemplars can for example be promoted through open homes events, written case studies, or websites, and can form a useful advice tool.

The use of exemplars is another element of the Stroud Target 2050 programme, where 23 exemplars, all working towards the 60% reduction target, have been selected to be broadly representative of the main house types within the existing housing stock (stone rural cottage, 1950s semi, brick town house and so on, including one listed building). Another example, with national scope, is the (growing) Old Homes Super Homes network.

Levels of advice – a possible analysis

Set out below is a first attempt at an analysis of the different levels of advice needed by consumers, with some examples. These are not intended to be in any way comprehensive, but are drawn from experience, and we are in many cases aware only of the concept and aims rather than having evidence of the quality of delivery in practice.

The development of levels is not intended as indicating levels of quality, rather to clarify the practical differences so that these may be effectively linked to costs, outcomes and resource planning. In practice the most effective strategy may be a combination of delivery at different levels – for example level 1 activity at its best can be highly effective in bringing consumers to invest their time in level 4, 5 or even 6.

Level 1:

Generalised information on why and how action might be taken to improve sustainable energy use, such as leaflets, advertising campaigns, factsheets, non-interactive websites.

Examples: Marketing campaigns by EST, ADEME (France), IDEA (Spain) and many other national energy agencies and fuel suppliers.

Level 2:

General advice but specific to the home in question, at a relatively superficial level, such as computer generated reports and interactive websites (allowing sufficient information about the home and household to be entered to elicit specific rather than generalised responses).

Carbon footprint software which gives a snapshot but not a full facility for self-monitoring.

Signposting and referrals services, with a level of personal attention but detail provided by generalised information resources and referral to other services.

Examples: Milieu Centraal, Netherlands
Act on CO₂ website
Various carbon calculator websites
EST Home Energy Check reports
Home Heat Helpline

Level 3:

Detailed response to specific questions, personalised and in some cases client led (can lead on to other levels below). Carbon and consumption self-monitoring which sparks off advice messages.

Examples: Freephone lines, drop in and outreach at events, such as by:
ESTACs (UK)
EKIS (Czech)
Espaces Info Energie (France)
Energitjenesten (Denmark)
Dena helpline (Germany)
German consumer organisations (regional level)
IDAE (Spain)
Consumer Associations (Italy)
Guichets d'Energie (Walloon, Belgium)
Web-based advice with well-developed interactive features, such as CO₂
Online in Germany

Level 4:

Advice on the range of options, costs, savings, specific to the home and client, such as through home energy audit with written report and communication of results.

In some countries this tends to focus upon technical reports for owners of apartment blocks, rather than being aimed at the occupant.

Examples: EST Home Action Plan
NHER and other energy auditors
Energy audits related to grants programmes, such as Thermo Modernisation (Poland)
Energy Advisory Network, Slovakia
BAFA in Germany

Level 5:

Level 4 plus support to implement actions, including follow-up questions, finance for measures, finding installers, dealing with technical or financial barriers and problems, and issues around how to combine technologies. Could be detailed project support, for example for client building low carbon home.

Examples: Stroud Target 2050 enhanced domestic advice service (existing homes)

Household advice service, Energisparverband (ESV), Upper Austria
ENSVET, Slovenia
London Green Homes Concierge scheme

Level 6: Level 5 plus a behavioural change programme, including feedback, goal setting, peer group support and motivation.

Examples: Stroud Target 2050 exemplars programme

Scale of delivery

An advice programme might be made up of a mix of the levels above, and these may be delivered in different ways – however it is essential that referral through the levels is streamlined, and all involved understand fully what is available and why.

For the sake of consistency and resource efficiency, an advice network (whether made up of one or many providers) would ideally be provided with technical resource material by one central resource nationally. This may also be the ideal scale for provision of web-based advice, while other forms of direct delivery would be better achieved at a scale which enables:

- a degree of local knowledge and identity
- personalised contact (a small enough team for a named individual to be identified for clients)
- outreach and home visits to be accessible to all
- advisers to be able to mix telephone, surgery, outreach and home visit activities (for the sake of experience and breadth of knowledge, as well as job satisfaction)
- effective referral networks and links to local services

Personalised contact and the availability of home visits are important not only to enable more in depth advice, but also to cater better for the needs of many categories of more vulnerable households.

Our experience at SWEA as practitioners indicates that an ideal level for direct delivery, which balances these requirements against economies of scale, might for example be that of a single large urban area, or 3 rural counties (depending on size).

Trigger points

The identification of 'trigger points', offering the opportunity to influence household decisions at the appropriate time, will come as second nature to many experienced advisers – but more could be done to use these strategically, for example:

- Arrival of a high winter fuel bill, actual meter reading, or budget scheme monthly payment review, as a trigger for a reminder of energy saving advice.
- Contact with building control or planning authority as a trigger for whole house advice – this could be built into standard practice, and useful for both householders and general builders, if of good technical quality and depth, and with knowledge of local supply chain. In Upper Austria, for example, applicants for general building subsidies have to go first to the energy agency, which encourages them to take up the lower carbon options, explaining the costs and benefits.

- House purchase or new lettings - with whole house advice offered as a positive, as opposed to the rather negative way in which the EPC has been portrayed as a costly legal obligation of little consumer value
- Purchase of major new appliance such as fridge, freezer, washing machine, dryer, dishwasher, tv as trigger for behavioural advice

Innovative ways to reach the wider population make the most of the communication media that people actually like to use – some interesting examples include:

- The 'Apaga La Luz' soap opera in Spain, which reached a cumulative audience of over 36 million viewers
- Sending SMS energy efficiency messages to electricity company customers in Malta
- Using hairdressers as energy efficiency ambassadors in Sweden
- Advising the queues at the annual 'flu jab clinics in the UK (this is standard practice for SWEA and we understand that many other UK local groups do this)

Severn Wye Energy Agency - Our perspective

Severn Wye Energy Agency (SWEA) can be classified as a horizontal provider at local and sub-regional level, which develops, pilots and delivers approaches to improving energy and carbon efficiency, and affordable warmth. SWEA is a non profit SME and registered charity, working to achieve a more sustainable use of energy and affordable warmth, in Wales and South West England

As such we have delivered a wide range of advice services and behavioural change approaches, to households, businesses, local authorities, schools and community groups (as well as being an EST advice contractor since 2001), and participate in local and regional activity at all levels, from the strategic to practical.

In particular SWEA is a key delivery agent and influencer with regard to the delivery of National Indicators 186 and 187 at local level, (within the Local Area Agreement structure) which are in turn key to delivery of the headline national objectives noted above. We consider therefore that our organisation and its approach offers a useful example of horizontal delivery which attempts to forge the link national and local objectives (vertically), to establish cross-sectoral and theme linkages (horizontally), and to draw in resources from a range of sources to deliver according to need.

SWEA has a broad perspective on the issue of energy advice, gained from our cross-sectoral partnerships, and our collaboration with energy agencies throughout Europe, including our review of advice provision in the EU27 (Energy Advice in Europe 2007 – produced as part of the SERENADE project).

Relevant examples of our work include:

- Target 2050 Homes: developed as part of the Stroud District Council Climate Change Programme, this is an enhanced level of advice to achieve deeper carbon cuts, with tailor-made home energy reports showing how each home can achieve a 60% reduction in emissions. This programme is backed up by development of a local sustainable energy installers network, and links made with the construction training colleges.

- Target 2050 exemplars: case study examples of 23 homes (representative of the range with the local existing housing stock) working to reduce emissions by 60%, with additional advice and financial support, including a 2 year behavioural change programme.
- The Energy Neighbourhood behavioural change competition engaging neighbourhood groups across several European regions
- Tenant focused advice services with Registered Social landlords, and a social housing energy forum bringing together landlords and relevant energy expertise, a concept shared with 7 other EU regions in the SWEA led SHARE project (Intelligent Energy Europe 2006-8)
- Linking secondary schools to local employers, using energy efficiency as a theme for work experience, to achieve energy savings on the school, workplace and home.
- An innovative programme of support for prisons and prisoners, which included energy efficiency surveys of prison buildings, awareness training with staff, an educational programme with prisoners and energy advice with prisoner families. As part of this we developed the C&G 6177 'Energy Skills for Life and Work' qualification, trialed with specialist trainers working with prisoners in .Wales and South West England.
- The award winning (Ashden Award 2006) Warm and Well programme, which promotes the health benefits of energy efficiency, a partnership between seven local authorities and the NHS, with a proactive referral network of health and social care agencies and local media and community activities – as a main plank of implementation of the multi authority local Affordable Warmth strategy, it has made improvements to over 20,000 local homes.

Established in 1999 under the EU SAVE programme, we are active in local, regional, national and European partnerships. The SWEA Director is a vice-president for FEDARENE, the Federation of European Local and Regional energy agencies, with a portfolio for advice and education, and has carried out research and training for new energy agencies for the European Commission. She is also currently Chair of the Energy Advice Providers Group of the UK Energy Efficiency Partnership for Homes, and represents the Gloucestershire Environment Partnership (which holds responsibility for local delivery of National Indicators 185-8, with direct relevance to climate change) on the Gloucestershire Community Strategy Executive Board.

Catrin Maby, Director
 Severn Wye Energy Agency
 01452 835060
catrin@swea.co.uk

www.swea.co.uk

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