

Sector reports – education and training

Description of the activities covered by the sector

The results from the questionnaire survey are given in the table below, and indicate that around 2/3 of agencies do at least some work in schools. Only about half of this number do teacher training however, which indicates that most of the work in schools is done by agency staff working directly with the schoolchildren.

This is confirmed by the Managenergy study of EU-wide Co-operation of local actors on sustainable energy education (August 2004) which pointed out a lack of collaboration with teachers and parents' associations amongst the respondents, in view of the fact that so many were active in schools.

Training and adult education activities are also significant.

Examples of the type of work done by energy agencies include:

With schools:

- Projects: agencies working with schools for a limited period of time for example on a science or innovation project or developing an exhibition. In one example a prototype for a PV powered giant 'Scalectric' game was developed.
- Visitor centre /permanent displays: particularly where an agency is located in a science park or an interesting building (such as a Finnish agency based in an old hydropower building).
- Competitions and events: examples include designing energy saving posters and cooking a meal at a summer festival using solar energy.
- Linking building energy use to educational aims: such as by involving schoolchildren in monitoring energy consumption in the school building, and linking this to carbon emissions and saving money on fuel bills. Some agencies have run projects specifically aimed at installing renewable technologies in schools.
- Transport: linking the need for efficient and safe ways for children to get to school with environmental and health awareness, including car-sharing, measures to promote cycling and walking (such as safer routes and cycle storage), and 'walking buses'.

In adult and further education:

There are fewer common activities easily identifiable in this field, but some examples of agency approaches include:

- An agency in the Netherlands delivered energy awareness workshops for students in their accommodation, linking in with the delivery of free energy efficiency measures
- An agency in the UK developed and published materials about energy saving for use in adult literacy, numeracy and language classes for residents with limited grasp of English. These were developed in partnership with tutors working in this field and distributed via a specialist publisher. Links include understanding about temperature and thermostats, the information on fuel bills, reading the domestic gas and electricity meters, and the impact of insulation
- An agency in Finland delivered briefings about sustainable energy and the links to policy to university students

- Some agencies take the opportunity to be a visiting speaker on educational programmes run by community groups, such as retirement social groups, rural womens' groups, village halls.

Professional and workforce training:

There are a wide range of interesting examples of the important role that agencies can play within this sector. This includes arranging or organising as well as delivering training, depending on the capacity of the agency. Examples include:

- Training for installers of renewable energy technologies
- Inclusion of modules on energy efficiency or renewables technologies in standard courses for plumbers, heating engineers, electricians and other building and building services trades .
- Training for local authority staff on energy management, energy efficiency and renewable energy in housing, sustainable energy in land use planning
- Training for the commercial sector, for example in the form of 'breakfast briefings' or other short sessions, sometimes followed by longer sessions for those whose interest has been attracted by the briefing.
- Training for the health and social care sector on the relevance of adequate warmth to vulnerable clients and how they can be helped.
- Training to raise general awareness of sustainable energy, its importance and its practical application, targeting the workforce of major employers such as local authorities and private companies.
- Training of others to provide energy efficiency advice.
- Inclusion of energy saving driving techniques in driver courses, for fleet drivers or the general public.

Statistics on the agencies that have operated and/or are operating in the sector

Around 2/3 of agencies responding work in schools, but only around a fifth of agencies see this as having a strong relevance to policy, which shows that this may be lacking in national/local policy (unless agencies are unaware of educational policy). It is also interesting to note that so many agencies see the relevance of this type of work, in spite of an apparent lack of political back-up. A considerably smaller number carry out teacher training.

More than half of the agencies carry out training for professionals and/or the general workforce, although this is not generally a core activity. A smaller number are also involved in adult education

Number of local/regional agencies indicating that they provide education and training

Sector of activity	Core activity		Secondary activity		Potential activity		Strong relevance to policy indicated	
	number	% of responses	number	% of responses	number	% of responses	number	% of responses
Educational activities with students in schools	48	30%	55	35%	20	13%	29	18%

Teacher training	20	13%	39	25%	38	24%	0	0
Adult education	17	11%	49	31%	28	18%	23	14%
Training for professionals or workforce	29	18%	63	40%	31	29%	25	16%

Relevance to EU policy

There is an interesting opportunity in relation to the Energy Performance of Buildings Directive and its application to public buildings, for a holistic approach linking the energy performance of buildings used for education to the comfort levels, fuel costs and carbon emissions, to the curriculum and to ‘taking the message home’.

There may also be an opportunity in the development of energy saving companies and third party finance, to enable schools to carry out the capital measures

Relevance to local policy

National or regional policy on school education may contain references to sustainability, and this can be reflected in curriculum areas such as citizenship, science and technology, geography, domestic science.

There is a strong relevance to local authorities policy, both on sustainability and in quality management of public buildings (including schools) and housing, as well as planning and development control. Local authority officers trained in these specialisms will not typically have been trained on how to integrate sustainability into their work, or how to deal practically with potential conflicts between sustainability and other aims (such as reducing capital expenditure, or conservation of the historic or natural local environment) but will increasingly be expected to achieve sustainability targets.

Rate and reasons of success

Schools:

The best results are gained by agencies achieving a long term relationship with individual schools (or even better the actual school authorities) and linking the activity that they can offer to the core needs of the curriculum. An example is one of the agencies in Finland which has children from particular year groups in the local schools to visit their centre every year, to cover particular issues – so that virtually all schoolchildren in the town will have this experience. To do this requires staff with the right skills (and ideally experience) to communicate effectively with different ages of schoolchildren.

Energy agency staff often find that they are welcomed into schools as a one-off event, to provide an alternative type of activity for children, which can be fun and different, at a time when it is possible to have a break from the core curriculum (such as at the end of term).

A positive aspect is the relatively open-minded nature of children and lack of established prejudice against the environmental message – in fact children tend in general to have a positive response to this issue, and the school culture (at least in primary schools) tends to be encourage children to be caring about environment. This is also endorsed by the Managenenergy report referred to above, which states that low interest from students is not mentioned as an obstacle encountered.

Rate and reasons of failures or problems

Schools:

Most energy agencies seem to appreciate the potential value of working with school children, and they generally find that the experience is a rewarding one. The most common negative comments by agencies about this sector of activities are that:

- a) They lack the resources to carry out more than the occasional activity
- b) They have been unable to develop the funding needed for a longer term involvement
- c) They find that teachers do not take up resources offered to them as much as they would like
- d) They develop a good relationship with some schools, typically based on the interest of an individual within the school who becomes a 'champion' for the subject, but do not succeed in developing this into a comprehensive approach in their area.

Another common problem is that teachers are too busy with core curriculum requirements to look at new ideas and developments, even when these may in fact link quite well to the core curriculum. It may be difficult for energy agencies to establish sufficient credibility with educational establishments to achieve a long term impact.

Most agencies have the technical expertise to teach about sustainable energy, many have the communications expertise to do this effectively to a general audience, but it is possible that relatively few have experience in communicating this kind of information to children, and very few have staff with in-depth knowledge of the curriculum at different levels and an insider's knowledge of schools and how they are managed.

Level of technical qualifications required and possible training needs

The level of technical qualifications required will depend on the level of education or training in question. Common to all these activities will be the need for communication skills, but these will also be different depending on the age and educational level of the target group.

Achieving an impact in school education requires a good understanding of the school curriculum, and how schools are managed, and it is desirable that agencies targeting this sector seek staff with teaching qualifications.

Other relevant qualifications are youth and community work or professional training qualifications.

Potential for expansion and support by European programmes and exploitation of an EU added value.

An area that could be built upon further is the identification and dissemination of best practice and examples, not only of short term 'fun' projects, but also those with a longer term impact on the curriculum, or that succeed in integrating sustainable energy into the existing curriculum, in one school or an educational administrative area (whether regional or national).

A general impression of this sector is that the majority of the work is with the older primary school children, who are receptive to relatively complex issues but are not yet constrained by the secondary school syllabus. It would be useful to analyse this further and to see whether other age groups that might benefit are being addressed, and if not, how this might be done. An example might be the need for preparation for independent living, as well as the tie in to science, health and citizenship issues.

Training for professionals has tremendous potential for energy agencies, and is something they are well placed to deliver, with their broad range of knowledge and skills. It is also an activity that has the capacity to be self-sustaining, in that employers expect to have to pay for this service. Training may be useful to employers in two different forms:

- tailor made to the needs of the specific group
- set courses with a certificate and accreditation attached

Agencies do not generally have the resources to develop accreditation for their courses or their trainers, and sometimes key into other training networks within their own countries. However, there may be some value in assessing whether an accreditation scheme could be developed for energy agency trainers and/or their courses with Europe-wide applicability.