EUROPEAN ENVIRONMENTAL CITIZENS ORGANISATION FOR STANDARDISATION

ECOS

ORGANISATION EUROPÉENNE ENVIRONNEMENTALE CITOYENNE POUR LA NORMALISATION

6 October 2006

Input of ECOS to the EC Consultation on Promotion of Heating and Cooling from Renewable Energy

ECOS, the European Environmental Citizens' Organisation for Standardisation, is an association of NGOs active in the field of environmental protection, which together have more than 26 Million individual members. ECOS was created in 2002 as a non-profit association under Belgian law to enhance the voice of the environment within the European standardisation system. ECOS is supported by the European Commission and EFTA. Its secretariat is based in Brussels. Website: www.ecostandard.org .

See http://ec.europa.eu/energy/res/consultation/heating_cooling_en.htm for the consultation.

ECOS did not reply to all the questions. For the full questionnaire please see http://ec.europa.eu/energy/res/consultation/doc/2006_10_10_heating_cooling/2006_public_consultation_res_heating_cooling_en.pdf

Question 1 *– Considering that a number of technologies are available to promote Heating and Cooling from renewable energies (RES), what are the main obstacles (economic, technological, social, organizational, etc) to their more widespread use? Why are other energy sources more successful in Heating and Cooling than RES?*

Other energy sources and systems, i.e. fossil fuels such as oil and natural gas, have enjoyed state support as well as infrastructure support and state development for more than a century. To enable a shift in energy sources, a massive support system for Renewable energy systems and sources is therefore needed to even out the lead of the fossil fuel industry before the market can be opened up to “normal” market rules.

Question 2 *– In the light of the subsidiarity principle, do you agree that an EU initiative regarding the promotion of Heating and Cooling from RES can be justified? If so, what type of effective measures should be taken by the EU?*

ECOS supports the joint declaration of EREC (the European Renewable Energy Council) and its signatory groups for a European Directive to promote renewable heating and cooling and calls for strong and consistent action on the European level to promote renewable heating and cooling. See the joint declaration at:

http://www.erec-renewables.org/publications/RES_heating_cooling.htm

ECOS asks the EU institutions to adopt a Renewable Energy Systems Heating and Cooling directive (as also proposed in the Green Paper on developing a common, coherent European Energy Policy (8 March 2006)).

Question 7 *– Taking into account the quality and availability of EU 25 existing data (which is in many cases rather poor), what is the feasibility of using targets to the promotion of Heating and Cooling from*

RES? What type of targets should/could be used (on energy produced, on sales of equipment, on the number of installations, on the replacement rate of conventional fuels, etc)?

ECOS supports the opinion of EREC and its signatory groups in its joint declaration (see question 1), stating that targets represent an important step in policy making. Targets for renewable energy use in the heating and cooling sector will guide national and local policy makers in their decisions and send important signals to investors and the public.

An overall target for heating and cooling from renewable energy sources in the EU by 2020 shall be set for at least 25% of overall heating and cooling consumption.

***Question 8** – Should harmonised indicators be developed at EU level to measure the potential and the development of Heating and Cooling from renewable energies? If so, what type of indicators and how could they be used to do this monitoring? How could these indicators be developed in a way that a level playing field could be raised at EU level?*

ECOS is in favour of harmonised indicators at EU level. The indicators should show the potential for RES development in each member state and region, since this potential varies considerably in different areas of Europe and in each member state. The indicators should also provide information about how this potential is being developed or not yet used by each member state (thus show good and bad performers). Since heat generation is often linked to electricity generation (i.e. combined heat and power plants), indicators should be developed for all energy generation, not only for heating and cooling.

***Question 9** – Developing standards could be one option to facilitate the implementation of energy efficient equipment and Heating and Cooling from RES. Standards would have also to take into account cultural or geographical characteristics (like architecture). This would imply a legal framework which provides for the political goals, while leaving the details to be defined by the European Standardisation bodies (CEN/CENELEC) and the stakeholders (industry) on how to achieve them.*

Should the EU promote the development of standards for RES in Heating and Cooling in order to raise a market for specific equipment? What type of standards could be used? Do you consider that fuel standards (for example) will improve the opening of the market? Would it be feasible to use standards that are currently used in other sectors? Please give evidence.

As more technical details of implementation are being delegated from legislative to expert level decisions by applying the concept of the New Approach, this often leads to serious concerns from an environmental & democratic point of view. In recent years ECOS has observed serious shortcomings regarding taking environmental considerations adequately into account in New Approach standards (e.g. the “revised” packaging standards). Further more, environmental NGOs are concerned that standardisation may lead to deregulation, while the procedures of its implementation are not up to democratic standards that should be mandatory for such a transfer of competences to private bodies (see also ECOS position on the revision of the New Approach, http://www.ecostandard.org/position_papers.php).

Since the standardisation process is dominated by industry & lacks real transparency it is difficult to ensure that public interests are duly taken into account, especially for environmental aspects. Stakeholders in this consultation are not only industry, but also public interest groups! As associate member/co-operating partner of CEN/CENELEC, ECOS can participate in the development phase of standards but does not have voting rights.

More specific comments regarding individual standards:

- Active solar heating: A standard already exists for thermal solar collectors (EN 12975) & for solar water heaters (EN 12976). A standard similar to EN 12976 could be elaborated for solar heating using a water tank, though this system is not widely used. Another solar heating system uses floor slabs as an energy storage, but it is neither widely used. In general, such systems are designed & installed specifically for each building, & there is little possibility for industrial production, which could limit the relevance of a standard.

- The same is true for air heating: Air collectors, double skin facades etc. are designed by architects & consultants - not produced by industry. Some systems are taken into account in the standard for heating & cooling (H&S) calculations (EN 13790) but the absence of industrial production limits the need for further standards.
- Solar cooling remains rather experimental at the moment. Systems are combining thermal solar collectors (preferably vacuum collectors) & an absorption heat pump. Such systems could be promoted & maybe a standard could be useful to define precise info about their performance. As far as ECOS knows, other systems like desiccant cooling are still in a research phase.
- The existing standard for calculation of heating and cooling energy consumption in buildings (EN 13790) imposes a method that disadvantages passive solar heating because a constant solar transmittance through glazing is used all year long. In reality, the transmittance is higher in winter because the incidence angle of the radiation is lower than in summer. The model for thermal mass (possibility to store solar energy in the masonry) is also very simplified.
- The ASHRAE Standard 140-2001 allows different simulation tools to be compared without imposing a single model. Currently, the scientific knowledge is not advanced enough to prove that one model is the most precise. Therefore, the choice of a single model is arbitrary as in EN 13790. The problem is that other methods, possibly more precise, are not considered compatible with the European standard for H&S calculations. At the moment each MS can choose different methods but in the future, harmonisation is wished & this standard may be imposed for building thermal regulation & certification. A more open standard, including validation tests like the ASHRAE standard, could be elaborated so that H&S calculation methods are allowed to progress, the reference EN 13790 method being included but as an example method only.

Question 10 *– In order to facilitate the development of a policy action to promote Heating and Cooling from RES, specific actions towards citizens should be considered as they are often the final decision makers. Would it be useful to facilitate training on the specific technology so that professionals are able to better promote it and install it? Who should facilitate that training? What measures could be taken to raise public awareness in order to promote/market this type of equipment/solution?*

ECOS supports specific actions towards citizens as well as facilitating training. However, communication is not enough; a shift of subsidies from fossil fuels to RES solutions is requested to convince citizens to change their consumption habits.

Question 13 *– Considering the current uses of renewable energy sources, how could a new initiative on Heating and Cooling from renewable energy sources be better raised in coordination with the existing policies regarding biofuels or electricity generation from renewable energy sources? Would Heating and Cooling from renewable energy sources distort the market and/or jeopardize the targets for these other policies? Would it affect nonenergy use market for biomass? If so, how? How to overcome that possible difficulty?*

The market concerning RES is growing explosively and the big companies are saving their claims. A good example is the global sugar market. This trend is also seen regionally, for instance in Schleswig-Holstein where farmers are cultivating maize in order to convert it directly into biogas. Another example is the liquefying of wood. However, Ecosystems considerations in relationship to needed capacities are poorly taken into account. A first use of agricultural products and a second use of the biological waste material are not promoted sufficiently.

If industry via standardisation (see also question 9) shall work out the technical details for heating & cooling equipment important problems will arise, e.g.:

- Big industry solutions generating fuel & electricity from RES may be privileged
- Decentralised solutions, often developed by SMEs – e.g. stoves for wood or pellets – may not be taken into account especially because e.g. SME or stove-fitter have a poor lobby in standardisation
- Problem solutions that are uninteresting for big industry may be excluded by standards

Thus, the legal framework shall include detailed political goals that help to avoid these possible problems.

ECOS thinks the fast move to bio-based products for heat and electricity production can potentially improve environmental and health performances, at the condition that the regrowing raw materials are produced and harvested in a verifiably sustainable manner. ECOS agrees with EEB, WWF and Birdlife International that a certification system is needed to prevent potentially negative ecological effects of the production of raw materials (deforestation, decrease of soil fertility, degradation of water quality, loss of biodiversity and emissions of pollutants to the atmosphere, transportation of raw materials around the globe, …).

Because there is still a lot of work to be done to ensure that representatives of the environmental and consumers groups have a real influence in the "classical" standardisation process (ISO, CEN), ECOS recommends to initiate biocrop standards for this 1st phase within the framework of the ISEAL Alliance platform (International Social and Environmental Accreditation and Labelling).

As this second phase involves the industry sector, ECOS believes it will be difficult to avoid the classical standardisation process. However, it has to be stressed again that it is difficult to include environmental considerations into and to be environmentally progressive within the framework of the classical standardisation process for various reasons (non-exhaustive list):

- The process is dominated by economic considerations and stakeholders, not by those of public interest;
- Environmental stakeholders (NGOs, EPAs) don't even have a vote when standards are being adopted, even if they have participated in the elaboration of the respective standard;
- Even when working on the basis of EC standardisation mandates, the results delivered by CEN are not subject to a regular independent compliance check, since the Commission does not have the staff resources to do this.

See further in "Comments by ECOS on the revised preliminary EESC draft opinion", February 2006, http://www.ecostandard.org/position_papers.php

See also ECOS comment to question 1.

Question 15 *– Do you have any other considerations on the development of Heating and Cooling from renewable energies?*

ECOS would like it to be noted that although heat pumps contribute to energy efficiency, they are still using electricity. This primary energy need for heat pumps needs to be covered by renewable energy if a heat pump were to be considered a renewable energy option.

Finally, ECOS would like to point out that since electricity is in total on the European energy market always produced by fossil fuels on the margin, heat pumps can not in reality be considered as a renewable energy option. Even by choosing a renewable option for the electricity used for a specific heat pump, the result will still be that somewhere else more electricity needs to be produced by fossil fuels instead. This is because an increase in electricity use is always covered by fossil fuels on the margin.

In fact, using 1kWh electricity means using 1kg extra CO2 emissions from coal condensing anywhere in Europe because on the margin we use coal condensing in Europe. (This is true in total for the European energy market, even for countries that do not produce coal condensing energy, since those countries import energy on the margin. Source: Björn Karlsson, Professor, Linköping Institute of Technology).

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