Environmental Technology

Definition

Environmental Technology is an all-inclusive term used to describe pollution control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be utilised to remove pollutants or contaminants from, or to prevent them from entering, the environment[1].

Both sustainable energy systems and materials technology play an important role in achieving environmentally sound technologies, structures and processes.

Our perspective of the term `environmental technologies` also extends to the buildings and structures we inhabit and work in, and the design, efficiency and ergonomics of energy-intensive, industrial and other anthropogenic activities such as manufacturing processes, logistics & supply chains, and waste flow management. We also believe it is important to focus on the total lifespan impact of the products, materials and methods distributed to the wider community.

Examples of technology areas we aim to promote include process technologies such as wet scrubbers for emission reduction, treatment of waste such as recycling and agricultural washing systems for soil protection, granulated activated carbon units for conservation of the aquatic environment, and advanced purification and filtration technology such as microfluidics, protecting our air and water supplies.

Current Applications

Eco-Building

Definition

[1] www.nsc.org/ehc/glossary.htm

On the simplest level, this relates to the structure itself: a building incorporating "green" technologies and design elements, making it energy efficient, comfortable, and healthy. An ideal eco-building is simultaneously responsive to its occupants and to the environment; it is *aware* of its inside and its outside, and how they relate and connect.

Eco-building is also a broader term that describes a theory, a process, an approach. "Green" can be considered to include the building's comprehensive lifetime impact from conception through design, construction, use, re-use, demolition, and disposal. It can be considered to impact not just its occupants, but builders, suppliers, financers, neighbours, passers-by, and future inhabitants. It can be a building that learns; a building that teaches. It's the nexus of a complex system, weaving together threads of people, materials, natural resources, wealth, art, history, and ecology[2].

Environmental Studies Program

The Environmental Studies Program at Oberlin College in Ohio, USA is chaired by David Orr. The entire building is rather unexciting at first glance. It has been suggested that without the living machine and the photovoltaic solar cells, the building would appear to be quite typical. With two-story window walls, a graceful roof and plenty of exposed wood, it is not unattractive, nor is it a glamorous building. David Orr believes that buildings should teach, especially those on college campuses, and in that regard this building succeeds brilliantly, beginning with an interactive data console to be located near the entrance. Visitors will be able to query the building and measure its performance. The impact on building design, construction and maintenance procedures will be revolutionised with arriving occupants and visitors being able to inquire about the quality of the indoor air prior to entering.

The building, which has been described as the most ecologically sound academic structure in America, has its own water purification system. There are many remarkable attributes to the Adam Joseph Lewis Centre for Environmental Studies, but none more so than this system for purifying wastewater to be reused for non-potable uses. The room is filled with light and greenery, two of the components necessary to break down atmospheric impurities[3].

The following additional goals have been summarised by Orr:

- Discharge no wastewater, i.e., drinking water in, drinking water out.
- Generate more electricity than it uses.
- Use no materials known to be carcinogenic, mutagenic, or endocrine disrupters.
- Use energy and materials with great efficiency.
- Promote confidence with environmental technologies.
- Use products and materials grown or manufactured in a sustainable manner.
- Landscape to promote biological diversity.
- Promote analytical skill in assessing full costs over the lifetime of the building.
- Promote ecological competence and mindfulness of place.
- Become, in its design and operations, genuinely pedagogical.
- Meet rigorous requirements for full-cost accounting.

Regulations

Summary Regulations

- **Panorama**
- General provisions

[2] http://www.ecobuilding.org/green_building/green_building_101/
[3] http://www.isdesignet.com/Magazine/Oct'00/eco.html

- Sustainable development
- Waste
- Noise
- Air pollution
- Water
- Nature and biodiversity
- Soil protection
- Civil protection
- Climate change

Legal Texts

- Treaty establishing the European Community (Articles 2 and 6, Title XIX)
- Legislation in force
- Legislation in preparation and monitoring of the decision-making process between institutions
    - Search in the Legislative Observatory of the European Parliament
    - Search in the Public Register of the Council of the European Union
    - Search in PreLex
    - Opinions of the European Economic and Social Committee
    - Opinions of the Committee of the Regions
- Recent case-law of the Court of Justice and the Court of First Instance

Environmental Liability

The European Commission adopted a White Paper on Environmental Liability on 9 February 2000 (COM(2000) 66 final) . The objective of the White Paper was to explore how the polluter pays principle, one of the key environmental principles in the EC Treaty, can best be applied to serve the aims of Community environmental policy. The White Paper explored how a Community regime on environmental liability might best be shaped. Having explored different options for Community action, the Commission concludes that the most appropriate option was a Community framework directive on environmental liability.

The background to the White Paper includes a Commission Green Paper in 1993 (COM(93) 47 final), a Joint Hearing with the European Parliament that year, a Parliament Resolution asking for a Community Directive and an Opinion of the Economic and Social Committee in 1994.

The White Paper has elicited numerous comments from Member States and a wide range of interested parties alike. Consultees' responses have been summarised and may be viewed on our searchable database.

The White Paper was also the subject of Opinions from the Economic and Social Committee (pdf ~50K) and the Committee of the Regions (pdf ~25K). The European Parliament has not adopted an official position on the White Paper, but its Environment Committee adopted an opinion on the subject (pdf ~50K).

The Environment Council also debated the issue of environmental liability in April and December 2000. Background studies and follow-up studies have been commissioned to assist in the task of developing the proposals outlined in the White Paper.

On the basis of the comments available and the material so assembled, Environment Directorate-General has prepared a working document which was submitted to public consultation. (The submissions and comments made by interested parties in the context of this public consultation can now be viewed from this site.)

Further to this consultation and the conclusion of the ongoing studies, a legislative proposal was finalised and adopted by the Commission on 23/01/02 (See also the related press release and the frequently asked questions on the Commission's proposal on environmental liability).

Resources

Commission

- Environment
- Grants

European Parliament

- Committee on the Environment, Public Health and Food Safety

Council of the European Union

- Environment

- The European Ombudsman
- European Environment Agency
- European Investment Bank

Documentation

- Press releases
- Bulletin of the European Union
- General Report on the Activities of the European Union
- Publications
- Statistics