



April 2009

Welcome to the new Trittech ETV quarterly newsletter containing exciting and informative information about environmental technologies and associated topics..

For those of you who do not know, Trittech ETV is a three year project funded by the LIFE environment programme. Its main aim is to establish a mechanism to validate objectively the performance of innovative environmental technologies which will ultimately lead to new products being introduced into the market place at a much quicker rate.

To find out about more the Trittech project please contact Caroline Wadsworth email: caroline.wadsworth@betatechnology.co.uk.



Top 10 Environmental Technologies

1. **Make oil from just about anything**
Any carbon based waste can, by adding sufficient heat and pressure be turned into oil through a process called thermo-depolymerization.
2. **Remove the salt**
According to the UN, water supply shortages will affect billions of people by the middle of this century. Desalination is one way to provide portable water in parts of the world where supplies are limited. The problem with this technology is that it is expensive and requires a lot of energy. Scientists are working towards a process where inexpensive fuels can heat and evaporate the water before running it through membranes with microscopic pores to increase efficiency.
3. **The 'H' power**
Hydrogen fuel cell usage has been promoted as a pollution free alternative to using fossil fuels. The problem with fuel cells is obtaining the hydrogen. Molecules such as water and alcohol have to be processed to extract hydrogen to feed into a fuel cell. Some of the processes require using other energy sources, which then defeat the advantages of this "clean" fuel.
4. **Sunny new ideas**
Solar collections come in many different forms and are already used successfully by energy companies and homeowners. The two widely known types of solar collectors are solar cells and solar thermal collectors.



But researchers are pushing this energy by concentrating solar power by using mirrors and parabolic dishes to convert it into high temperature heat.

5. Ocean thermal energy convention

OTEC technologies convert the chemical energy contained in the oceans and turn it into electricity by using the water's surface which is heated and the cold of the ocean's floor. The major short coming of this technology is that it is still not efficient enough to be used as a major mechanism for generating power.

6. Harness waves and tides

The oceans cover more than 70% of the Earth's surface. Waves contain an abundance of energy that can be diverted to turbines, which can then turn this mechanical power into electricity. The obstacle to using this energy source has been the difficulty to harness it.

7. Plant your roof

Green roofs or roof gardens help absorb heat, reduce the carbon dioxide and giving off oxygen, absorb storm water and reduce summer air conditioning usage.

8. Let plants and microbes clean up after us

Bioremediation, an alternative to conventional remediation, uses microbes and plants to clear up nitrates in contaminated water with the help of microbes and using plants to uptake arsenic from contaminated soil in a process known as phytoremediation. Making it less disruptive to the environment and does not involve waiting for new plant communities to recolonise the site. It also avoids excavation and transport of polluted media thus reducing the risk of spreading the contamination.

9. Bury the bad stuff

Carbon dioxide is the most prominent green house gas contributing to global warming. Some experts say it is impossible to curb the emission of CO₂ into the atmosphere and that we should find ways to dispose of the gas. One suggested method is to inject it into the ground before it reaches the atmosphere. After the CO₂ is separated from other emission gases, it can be buried in abandoned oil wells, saline reservoirs and rocks. Scientists are not sure whether the injected gas will stay underground and what the long term effects are. The cost of separation and burring are still far too high to consider this technology as a practical short tem solution.

10. Make paper obsolete

Replace paper with electronic paper, a flexible display that looks like real paper but can be reused. The display contains lots of tiny microcapsules filled with tiny particles that carry electric charges bonded to a steel foil. Each microcapsule has white and black particles that are associated with either a positive or negative charge. Depending on what charge is applied, the black or white particles surface displaying different patterns.

Source: www.livescience.com

Articles

Floating the idea of purifying water with glass beads - To read the full article please visit: http://ec.europa.eu/environment/etap/inaction/showcases/unitedkingdom/360_en.html

Adapting to climate change: the European Union must prepare for the impacts to come - To read the full article please visit:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/519&format=HTML&aged=0&language=EN&guiLanguage=en>

Consumers beware the costly spin of wind turbines - To read the full article please visit:

<http://www.timesonline.co.uk/tol/news/environment/article5992864.ece>

Swedish MEP welcomes Stockholm's "Green Capital" award - To read the full article please visit:

http://www.europarl.europa.eu/news/public/story_page/064-50583-061-03-10-911-20090302STO50551-2009-02-03-2009/default_en.htm

Underground water absorbs CO₂ emissions: study - To read the full article please visit:

<http://uk.reuters.com/article/environmentNews/idUKTRE53064W20090401>



Events

Solarexpo 2009 - May 7-9th 2009

Verona, Italy

Exhibition event displaying technologies, applications and services in the following areas:

- Solar System
- Green Plant
- Water, Wind and Fire
- Microgen and Polygen
- Nyenergy
- Ecomove
- Consulting, Design Service, Escos, Carbon Trading and R&D



For more information please visit: <http://www.solarexpo.com>

Sustainability Live 2009 - 19-21st May 2009

NEC Birmingham, UK

The UK's largest forum for excellence and innovation in environment, water, energy and land it encompasses five industry leading events:

- BEX (Brownfield Expo)
- ET (Environmental Technology)
- IWEX (International Water & Effluent Exhibition)
- NEMEX (National Energy Management Exhibition)
- SB (Sustainable Business - The Event) **New**

For more information please visit: <http://www.sustainabilitylive.com>

Renewable Energy World Europe 2009 - 16-18th May 2009

Cologne, Germany

Renewable Energy World Europe Conference and Expo concentrates on large, utility-scale renewable power technologies and applications along with business and policy, putting renewable power generation right at the heart of Europe's mainstream power business.

For more information please visit: <http://ree09.events.pennnet.com/fl/index.cfm>

World Bio-energy / Clean Vehicles & Fuels 2009 - 14-18th September 2009

Stockholm, Sweden

Consisting of an integrated international conference, excursion and tradeshow programme the event is unlike any other. It is focused on the practical implementation of bio-energy systems and sustainable transport solutions. It covers the whole chain, from policy making right through to technology roll-out and systems evaluation.

For more information please visit: <http://www.elmia.se/en/wbcvf>



Case Study

Crown Bio Technology Ltd.'s first experience of Environmental Technology Verification (ETV) was when the US Environment Protection Agency (EPA) asked us several years ago to send a Safe Soil Tester™ plus 8 months supply of consumable kits to the Battelle Institute in Washington. This also included a substantial fee which we could not facilitate at the time since we were about to start manufacture of the SST™'s.

Subsequently when Beta Technology made us aware that a similar ETV Programme was being setup by the EU in 2008 we jumped at the opportunity to become one of the first pilot projects.

In Oct/ Nov 2008, CBT visited the IVL Swedish Environmental Research Institute in Stockholm to discuss becoming part of the TRITECH Project. We found them to be very approachable and positive. We saw the great benefit of getting our new Biosensor Soil Screening/ Toxicity Testing Technology verified by an internationally recognised Institute, in another EU country.

Already CBT are talking to major UK-based Companies like EDF Energy, Exxon-Mobil, Corus, the MoD, etc, to sell SST's to them. This confirmation/ verification of our claims will very importantly enable us to immediately start to appoint Distributors throughout the EU and beyond.

Interestingly the USA EPA (ETV Programme) are collaborating with the EU ETV in recognition of the Verification Protocols which opens up the Global Market Place for the Safe Soil Tester Technology, i.e. EU verified products will be able to be sold in USA/ Canada.

We believe major sales of the SST & consumables will take off once the verification is completed and our products are confirmed as unique, safe and economically beneficial to the user/ market place.

We have no hesitation in recommending other UK and EU Companies joining this very important ETV Programme. For us once the EU Soil Directive (currently under review under Czech Presidency) becomes law, such an important 'branding' will help us drive this potentially multi-million pound/euro market!

