

Frans Plugge from ECOsystems recently attended the SEIA (Sustainable Energy Industry Association) Energy Expo in Sydney, Australia: Below are two interesting extracts;

- 1) The Minister of Energy revealed in his address that sustainable energy/energy efficiency was the biggest growing industry in NSW. The minister has set up an Industry Action Group with a view of making this a \$1.0 billion business by the year 2010. The federal government as a result is investing millions to kick start the industry and it was interesting to note that whereas last year the first Expo attracted 100 delegates, this year there were 400.
- 2) Alan Tate, an Australian delegate at COP5 in Bonn, Germany provided an insight to the latest developments to the Kyoto agreement. (COP5 is the Committee Of the Parties who have agreed to reduce emissions and Kyoto was COP3).

In summary there are two requirements for the agenda to reduce CO2 levels to 1990 levels: a) 55% of industrial countries must agree and b) 55% of the total CO2 producers must agree. To date 60% of the countries have signed off and 80% of the 55% total CO2 production has been met.

While the Senate in the US is holding up proceedings there is sufficient momentum now that not even the US could hold up progress and it is likely that agreement will be ratified by 2002 with emissions trading likely by 2005. Some examples of this momentum include:

- a) The U.K. has voluntarily increased its target reductions in CO2 from 12 to 20% by 2008. The government has established a 2.0bn pound fund offering discounts for large users if they can show they are rapidly implementing energy efficiency.

- b) Poland presently uses 23% renewable energy and is aiming to increase this to 50% by 2010. The government will invest in R&D, develop tax incentives and deregulate the energy market.
- c) The US is restructuring its energy industry with an aim to triple BIO Energy by 2010, have 5% of its total energy produced from wind and the government has recently introduced a \$1.0m solar roof programme.

The oil producing nations of OPEC have set out to destroy the Kyoto protocol and Saudi Arabia for example wants compensation for loss of oil sales! On the other hand the nuclear industry see themselves as major producers of sustainable energy and as CO2 emissions are reduced are looking for government subsidies.

At Bonn, not one of the 127 governments represented argued that climate change is not occurring. In fact countries are already beginning to increase the height of their sea wall defences.

The latest science suggests the temperature over the globe is likely to increase 4-5 degrees Celsius over the next 50 years. Globally rainfall is likely to increase but in places such as Australia and South Africa it is likely to decrease. Questions are also being asked now about a link between El Nino and global warming and this is presently being researched.

What does all this mean for business?

- 1) The political will to implement Kyoto has increased dramatically
- 2) There will be penalties for countries not supporting the accord
- 3) Business should be working with government to reduce emissions voluntarily or regulation will increase, and
- 4) The race is on to produce products that reduce emissions
- 5) Call ECOsystems for a holistic approach to reducing your energy bills at the same time as you do your bit to reduce CO2 emissions.



The Christmas season is upon us again (already!) and the new millennium is about to begin. The team at ECOsystems wish all our clients a Merry Christmas and a happy and prosperous new year. We hope that you enjoy the season and have a chance to relax and unwind - we know for many of you it has been an exceptionally busy year. Our office will be closed from 24 December to 4 January (although our Smart Energy Team will be busy on many projects over the Christmas break). You can contact us again after 4 January.

Project Updates ... (Smart Energy Team)

Kapiti College

This Wellington college recently had a small energy efficiency upgrade which will save the college around **\$4,800.00** per annum with a major reduction in the lighting energy usage in the gym and the addition of insulation and energy efficient security lighting. The cost of the project will be paid back from energy savings in just over 3 years.

Energy Saver Fund Projects

ECOsysteMS was successful in obtaining funding for two separate Energy Saver Fund projects.

The first is the promotion of a package of energy efficiency measures targeted at residential rest homes and student hostels. The measures include ceiling insulation, energy efficient light bulbs, hot water cylinder wraps, pipe lagging, low flow shower heads, clothes dryer heat exchangers and hot water valve blankets.

The second project is the market development of the ECO GFX water to water heat exchanger installed under the shower waste drain to dramatically reduce the cost of heating water. This innovative product can now typically be installed at less than half the cost thanks to a government grant available through the ESF (Energy Saver Fund).

These two projects combined have an estimated lifetime savings of 9,135,552 kWh and CO₂ savings of 8,752 tonnes.

... more updates inside ...

Taranaki Polytechnic saves energy...

A package of energy efficiency measures for Taranaki Polytechnic will reduce annual CO₂ emissions by 119 tonnes as well as result in substantial energy savings for the polytechnic. The measures include:

- Replacement of old air conditioning units with new units better matched to building requirements
- Installation of heat recovery ventilators in the accommodation block
- Installation of a building management system
- Boiler optimisation
- Installation of valve covers, low flow shower heads and a swimming pool cover
- Lagging hot water cylinders

The project is being achieved by the use of a Crown Energy Efficiency Loan and is expected to pay for itself in less than 5 years.



ECOsystems Directors Frans Plugge and Scott Martin, with Taranaki Polytechnic Technical Services Supervisor Ken Souto.

The energy efficient upgrade at the Polytechnic will reduce gas consumption by 2065 GJ and electricity consumption by 15.6 MWh a year.

Heat Recovery for Rest Homes

ECOsystems are currently completing energy efficient upgrades for 15 rest homes throughout the country. This includes heat exchangers on the dryers, ECO GFX water to water heat exchangers under showers, energy efficient lighting, valve blankets and low flow showerheads etc.

Have you changed e-mail address recently ?

Some of our clients who receive our regular e-mail updates have changed their address and forgotten to tell us! If you still wish to receive this interesting update on changes in the energy industry don't forget to keep us informed of your e-mail address

Green & Clean – Auckland YHA

Clean, bright and stylish – the Auckland International Youth Hostel which opened on 2 July is a cut above the typical grungy inner-city backpackers lounge.

But beauty is more than skin-deep – the hostel has energy-efficiency built in. Altogether 9 ECO GFX units recover heat from 16 showers. The pre-warmed water is fed back to the cold supply of the shower mixer. No pumps are required as the existing pressure is enough to feed the cold water supply.

ECOsystems have found YHA to be very progressive and environmentally aware, we believe they set a good example for all New Zealand corporates.

Industry Update ... (from our last e-mail EConews)

After the changes in ownership over the last year or so New Zealand now has 9 main energy generators and 35 network operators.

The largest retailers are; TransAlta, Contact, Meridian Energy, Genesis, Mighty River Power, TrustPower, Natural Gas Corporation, King Country Energy and Todd Energy (in no particular order).

The main gas retailers are now; Natural Gas Corporation, Nova Gas (owned by Todd), Enerco (owned by Contact) and TransAlta (purchase their gas from Natural Gas Corporation).

With the sale of Contact the government has now turned its attention to the remaining state owned, Mighty River Power, Genesis and the largest of them all, Meridian Energy. If the present government has the 'numbers' after the election, expect to see an early push to sell these assets.

As you will be aware, TransAlta is locked in its own battle to buy the remaining shares from the community trust so that it is in a strong position to purchase these assets as they become available.

Competition

We recently reviewed the companies which offered the most competition in the retail area as little as a year ago. As an example in the Wellington Region it was Power New Zealand (Auckland) and Southpower (Christchurch) who gave TransAlta the biggest run for their money in this market.

retail arms belong to TransAlta and no longer provide any competition!

Information Disclosure

ECOsystems was recently made aware that a considerable amount of information on network or lines charges are still voluntary under the 'information disclosure' regulations administered by the Ministry of Commerce. These are presently under review and ECOsystems has prepared a written submission suggesting that ALL network charges should be compulsorily disclosed.

If you would like to receive our email industry updates please send an e-mail to econews@ibm.net with "subscribe" as the subject.

Staff News

Don Waddington, who was with ECOsystems from its inception, has returned after a short break to continue servicing our environmental clients.

Frank Buttner who has been installing commercial and domestic heat exchangers for ECOsystems over the past few years will now also be involved in sales and design, replacing Richard Reynard who has recently left us.

If you hear a strange voice on the phone over the summer it will be **Ewan Murdoch**, a recent chemical and process engineering graduate who has been employed to further our research and development with heat exchange.

MERRY CHRISTMAS EVERYONE