EnergyWatch

The Newsletter of the Sustainable Energy Forum

Facilitating the use of energy for economic, environmental and social sustainability

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SEF meets the Minister of Energy

Some twenty Forum members met the Minister of Energy, Pete Hodgson, on 21 February for a wide-ranging discussion of energy matters. The meeting was followed by the SEF AGM. We give here the Minister's and SEF's prepared statements; a summary of topics; the AGM Minutes; and the retiring and new Convener's Reports

Open Letter to the Sustainable Energy Forum Discussion Roundtable

Hon Pete Hodgson **Minister of Energy**

The Government is committed to a sustainable energy future. New Zealand can and must make progress towards a sustainable energy future. To do so we must change course; comprehensively, permanently and soon.

Climate change

The Government believes that New Zealand needs to improve its record in greenhouse gas control. The Government is currently in the initial stages of the process leading to ratification of the Kyoto Protocol. We will be keeping a close eye on the progress of the international discussions this year, with a view to making good this Governments commitment to ratify the Kyoto Protocol as soon as that is appropriate. Measures we can make progress on immediately to address climate change include increased public education programmes, greater investment in public transport and stronger measures on energy efficiency and renewable energy.

Energy efficiency

Energy efficiency is at the heart of the Governments energy policy. The Government wishes to shift the emphasis of the policy debate from supply issues to how we use energy more efficiently.

New Zealand does not currently use energy efficiently enough. To secure the gains from improved energy efficiency many complex causes of energy inefficiency will need to be tackled. The scope to improve energy efficiency, economically, is very large.

The Government recognises that energy efficiency improvements can: help reduce New Zealand's CO_2 emissions, increase employment, foster competitive advantages, decrease the need for energy imports and raise the health and comfort level of New Zealanders.

To achieve this the Government's policy agenda singles out the following activities for early attention:

- funding energy efficiency programmes for State houses, pensioner units, schools, rest homes and the like
- recommencing the Energy Saver Fund to support community based energy efficiency programmes

SEF Conference
8 – 9 July 2000
Dunedin

This year's Conference is part of the Dunedin International Science Festival.
For details see page 11 or:
www.physics.otago.ac.nz/sef2000

- raising energy efficiency standards, starting with the NZ Building Code
- setting performance standards for new and emerging energy efficient technologies and appliances
- developing labeling for certain appliances—thus empowering consumers to make informed purchase choices
- undertaking public education initiatives on the value of energy efficiency and ensuring that the issue is adequately covered in the school curriculum
- addressing the issue of fixed charges because the incentives they give make firewood, gas or energy efficiency less attractive
- encouraging the progressive introduction of efficient technologies such as co-generation.

The Government is particularly keen to provide leadership by making sure that our own energy efficiency house is in order.

I intend to widen the functions of the Energy Efficiency and Conservation Authority (EECA) to involve more policy analysis and more advocacy, including the development of strategies under the Energy Efficiency Bill which has strong Government support.

Renewable energy

The Government takes a comprehensive policy approach to renewable energy. The approach, to be refined with input from EECA and other parties, will include actions and analysis to:

- increase research into renewable energy (including biomass) and energy efficiency
- foster greater pre-commercial development of renewable energy and energy efficiency technologies
- provide support for wind energy (e.g. ensure that the pricing arrangements of Transpower and others do not impede uptake of this technology)
- promote the development of technologically reliable remote area power systems (RAPS) which will be particularly important to remote rural areas
- encourage development of efficient New Zealand produced renewable energy systems.

We see a bright future for renewable energy technologies.

Key energy related policies in transport

The New Zealand Transport Strategy will provide a number of clear objectives in transport. These include: the integration of environmental, economic and social goals—especially transport's relationship with the environment—and recognition that an efficient transport system requires the best mix of all transport modes.

Policies influencing investment in land transport —both road and public transit—will impact on energy use.

Public transport should be subsidised to reflect its true economic and environmental benefits and be given high priority by Transit NZ and Transfund. Policy options, such as initiatives akin to Corporate Average Fuel Economy (CAFE) standards should be investigated.

The rapid dissemination of advanced electric, fuel cell, hybrid and purpose-built gas vehicle technologies will be encouraged, predominantly through Government procurement policies.

Traffic management techniques such as bus lanes, traffic calming and congestion pricing to reduce traffic emissions from busy roads will be investigated. In a similar vein, closer integration of local public transport through such overseas practices as train/bus/taxi links is required.

Other policies affecting energy use

The Government recognises that there are important linkages between urban sustainability, environmental, energy and transport policies. The urban environment requires greater attention at a national level. We can not leave the market to solve problems of over-dependence on private cars and inadequate public transport, provision of infrastructure and urban sprawl.

New Zealand must also confront the issue of waste. Cleaner production, including the adoption of energy efficient and renewable energy technologies, will inevitably reduce New Zealand's level of pollution. The approach taken so far has under-emphasised the role of waste reduction and minimisation schemes.

New century, new policy?

Ken Piddington

SEF is encouraged by the commitments in Labour's policy, which include support for a revived Energy Efficiency Bill, and by the decision to ratify the Kyoto Protocol. We believe that these two pillars can provide the foundation for a progressive redirection of energy policy in the years ahead. There are several elements we hope to see brought into a coherent strategy on sustainable energy for New Zealand. Some of these are listed below.

Widened scope for the Energy Efficiency Bill

The original Bill was considerably amended and narrowed down in scope. We would like to see the link between efficiency and the encouragement of renewable energy alternatives reintroduced. This should form the rationale for the redirection of FORST funding, already announced in Labour's policy. SEF will also aim to promote debate on the options by exploring this central link at SEF 2000, in Dunedin in July.

Kyoto implementation

Industry lobbies from the last century will continue to oppose GHG reductions which affect them directly. SEF would like to see an even-handed approach which relies as much on incentives for non-carbon energy technologies as on direct charges, either in the form of a carbon tax or through an emissions trading regime. We would welcome open debate on the form these incentives might take.

The guiding principle should be that new non-carbon investments are treated at least as favourably as investments in oil and gas exploration. There is no rationale for the state to be assisting the search for fuels which will increase in price as a result of global trends in the decades ahead. There is every rationale to ease the lumpy initial investment needed to exploit NZ's vast renewable reservoir, where costs will be on a downward trend.

Distributed resources

(This affects the electricity sector most directly, but we shall raise some of the implications for the transport sector at the meeting)

The issue of renewables is linked not only to energy efficiency, but also to the overall pattern of generation and distribution. In this century, the function of the grid will change. Embedded generation in local distribution networks will becomes a dominant feature. This will help to shave peaks and to create greater security of supply. The cap on generation by local distributors should be raised. Net metering should be available as of right.

Socially and politically, the implications for remote rural communities will be very important. Research is already under way by IRL and also at Massey which will identify the specific needs of various remote communities. More work should be done for remote Maori communities and offshore islands. NZ is well-placed to link into international initiatives (such as the installation of 100 RAPS in the European Union) and with the extensive programmes already launched in Australia.

Transport

This does not appear to rate a high priority in the Government's programme (outside Auckland). The huge growth in vehicle emissions does however mean that Kyoto implementation has to include strong signals in the transport sector. There are problems:

- Transfund criteria do not create opportunities for investing in alternatives to private individual vehicle use
- Public transport is unable to offer a good service because of congestion and lack of integration
- As the Japanese fleet turns over to new technology in the next 5-10 years we will see a flood of inefficient and dirty vehicles into the country
- Externalities of vehicle use are at least $3 billion/year, but are nowhere recovered. This is equal to about 7.5 cents/kilometre.

A solution may be to empower local authorities to recover congestion costs by a proxy, for example by taxing the provision of parking spaces. Money raised in this way could be eligible for a matching contribution from Transfund, so that non-vehicular investments can be made. Another option would be to have block grants for regional authorities, who would then compete for the most efficient use of the funds. The region achieving the highest switch from vehicle use would be eligible for further support from central government.

Technology uptake

A series of actions will be needed, in addition to financial incentives, to speed the introduction of

new technologies. The adoption of energy efficiency standards, including building standards, free access to information and educational opportunities will all be important. Only some of this activity need be the task of central government other actions can be shared by local and regional government and the private sector.

One option would be for an electricity SOE to take on the role of technology leader for renewables, in return for acceptance by the Government that this will mean a lower dividend. Another possibility is to adopt targets for the uptake of new renewable sources; this would probably be an essential part of the strategy to implement Kyoto.

Monitoring

In a phase of technological transition, Government should ensure that the monitoring function is properly carried out (including monitoring of international trends). EECA could have this role clearly written into its revised mandate.

Discussion

Some of the points raised with the Minister (or by the Minister, we make no distinction) are given below:

- The biggest immediate gains are from energy efficiency.
- Renewable energy promotes energy efficiency, but energy efficiency does not necessarily promote renewables.
- Subsidies are not necessarily bad.
- Subsidies are easy to cut off.
- Are we going to need new gas to avoid using coal for electricity generation?
- In Vaxjo, Sweden, they grit the roads after snow, but concentrate on the footpaths and cycle tracks first.
- Distributed small-scale resources could be developed using distributed financing (or by utilities investment).
- Huntly could be turned off when not needed, but make sure the distributed sources are efficient: wind farms, not diesel generators.
- The marginal cost of CO_2 abatement is US$ 30/tonne.
- Energy efficiency brings extra savings through reduced transmission losses.
- Immediate results are important in the initial stages. The Energy Efficiency Bill is a good place to start.
- We need to build a state sector: what resources and hardware are needed? Where do we want to be, and how do we get there? The Parliamentary Commissioner for the Environment has kept the best of the civil service going.
- Industry is interested in changes—but doesn't want a carbon tax.
- In a small country, making the markets big enough to function can be a problem.
- TransPower will tend to lose monopoly with distributed resources.
- Develop a sustainability mindset: we will be serious about energy efficiency when 4x4s go.
- Like drink-drive, we need a target and a champion.

Texaco quits global warming group

The industry group that led the fight against a treaty to curb global warming has lost another member: Texaco has quit the Global Climate Coalition. The oil giant is the third Fortune 500 to quit the group in recent months, joining Ford and Daimler/Chrysler. The coalition has been an aggressive critic of scientific studies linking global warming to emissions from fossil fuels. However, support for the group has been fading in recent years. BP/Amoco, Royal Dutch Shell and Dow Chemical have all quit the group since 1997. Texaco quit. CNN

Sustainable Energy Forum Inc

Minutes of the 2000 AGM

Held at the Quaker Meeting House, Moncrieff Street, Wellington at 17.15 on Monday 21 February 2000.

Present:
John Blakeley, Rob Bishop, Godfrey Bridger Tracy Dyson, Steve Goldthorpe, Nigel Issacs, Ken Piddington (Convener), Molly Melhuish, Robbie Morrison, Peter Pinder, Ian Shearer, Ralph Sims, Simon Terry, Fiona Weightman, Arthur Williamson, Kerry Wood (minutes)

Proxies:
Held by the Convener: Mohammad Afzal, Pamela Dawber, Noeline Gannaway, Janet Holm, Chris Horne, John Peet, Dai Redshaw, Nigel Stace
Held by Molly Melhuish: George Katzer
Held by Kerry Wood: Viola Palmer

Apologies:
Mohammad Afzal, Mark Bachels, Pamela Dawber, George Katzer, Graham White

Proposed/seconded

Welcome:

Ken welcomed members of the meeting.

Minutes of the last meeting:

Minutes of the previous Annual General Meeting on 25 November 1998 were taken as read and approved. Ian/Fiona

Minutes of the Special General Meeting held on 8 April 1999 were taken as read and approved. Ian/Kerry

Ian reported that the rules changes made at the Special General Meeting have now been formally approved by the Companies Office, and we can move on to seek a tax exemption.

Convener's report:

Ken gave a Convener's Report: a copy is attached. Agreed that the report be received. Molly/Peter

Financial Report:

A draft financial report was distributed, and a copy is attached *(but is not printed in this edition of EnergyWatch)*. This and earlier financial reports can now be finalised as soon as our tax status has been established with IRD. The balance at present is about $ 7400.

Agreed that the accounts be received on this basis. Kerry/Ken

Election of Conveners:

Ralph was nominated as Convener. Ian/Peter

Ralph accepted nomination on the understanding that he will have very little opportunity to contribute for the next six months. The retiring Convener offered ongoing assistance. Ralph was declared elected, with acclamation.

Committee:

It was noted that Management Committee shall comprise 9-12 members, plus any co-opted members. Elected members serve for three years. AGMs are held at a maximum interval of 15 month and the last AGM was on 25 November 1998. This means that no AGM was held in 1999. It was therefore agreed that committee members will serve a nominal additional year. On this basis the present members are:

Mary Dillon	Elected 1995	Retiring
Brian Farrell	Elected 1996	Retiring
Wayne Taitoko	Elected 1996	Retiring
Fiona Weightman	Elected 1996	Retiring
Mohammad Afzal	Elected 1997	Retiring
Richard Ball	Elected 1997	Retiring
Ralph Sims	Elected 1997	Retiring
Ian Shearer	Elected 1998	Until 2002
Molly Melhuish	Elected 1998	Until 2002
Cornelius Ebskamp	Elected 1998	Retired
Kerry Wood	Elected 1998	Until 2002

Those standing for election are:

Richard Ball	3 years
John Blakeley	2 years
Robbie Morrison	3 years
Ken Piddington	3 years
Hedi Mardon	3 years
Fiona Weightman	2 years
Steve Goldthorpe	3 years

These nominations were proposed, accepted and declared elected. Ian/Molly

Any other business:

Peter expressed a preference for holding the AGM mid-week: it makes hitchhiking easier.

John asked who we are trying to influence: the movers and shakers, or New Zealanders as a

whole? Discussion centered on pursuing both objectives, but in practice more the movers and shakers because of cost. It was suggested that we try to issue more press statements, and seek to place articles in papers like the Independent. The ECO Newsletter is another option.

The meeting closed at 18.40.

(The meeting started earlier than the advertised time of 18.30, on the basis that everybody known to be coming had arrived. This proved justified because no one arrived for the advertised time)

Convener's Report

Ken Piddington (Convener up to 21 February)

Tena tatou katoa!

It has been a spotty year for the Forum, with a number of the usual frustrations slowing us down in 1999. Funds were, however, adequate to maintain part-time office support throughout the year, and July 1999 saw us holding our first conference in Auckland. (It was later confirmed that on the dates of the conference, vehicle pollution in the metropolitan area exceeded WHO maxima, which helped to underscore the major transport problems in the isthmus, and the messages we were trying to get across)

Indeed, it has been a year in which we have seen a major shift in the credibility of the SEF message; evidence on climate change has increased, dramatized by the spring tides lapping over Tuvalu this weekend, new vehicle technology is getting a lot of attention in the corporate world and—even though some would discount it as a gesture—BP opened its first solar-powered bowser plazzo on the Southern Motorway at Manurewa.

Looking back over the past twelve months, it seems bizarre that for much of the time the reform process in the electricity sector kept on grinding, with its advocates still mouthing the *mantra* of a spent ideology. The defining moment in this long saga was surely the point at which Minister Bradford finally reached for the armoury of heavy regulation—only to have that option foreclosed by an eroding level of parliamentary support. The rest is history—in every sense.

We had a good conference in Auckland, with strong support from local and regional government and other sponsors. Attendance was not as high as expected, partly because of the 'Bombay Barrier' effect and the expense involved for out South Island members. The Proceedings show that the SEF tradition of intense debate was nevertheless sustained, and we explored a wide range of sustainable management issues that are approaching crisis point in the wider Auckland region.

The Proceedings also contain the transcript of the video link arranged during the conference with Bob Watson, Chairman of the Inter-Governmental Panel on Climate Change. This was set up with the help of Greenpeace International, since Bob was in Amsterdam and could use the facilities at their headquarters —just a week before they updated their ageing technology. Despite the jerkiness of Bob's image, we had an outstanding presentation which has been frequently replayed for audiences round the country.

In the flesh, we had Professor Peter Newman from Perth at the conference opening session, as well as the Mayor of Auckland for the traditional panel discussion with a political focus. This time, we left national politics out of it, and concentrated on the local politics of Auckland instead. All in all, a very different conference from those that preceded it, and a reinforcement for those who have argued that SEF is primarily an annual event; with lobbying efforts in Wellington and the episodic issues of EnergyWatch a secondary function.

As I come to the end of my Convener ship. I would certainly agree that SEF cannot expect to grow beyond these limitations without an adequate funding base. It may be the time for a new assault on fund-raising, possibly in the context of a five year plan for growth and expansion into areas that we have talked about over the last five years, but with no prospect of doing very much. I am sure that the new Management Committee would be glad to make the transition into a more dynamic programme.

Which brings me to the 1999 General Election and the profound shift in the political atmosphere which it has created. For SEF, one could argue that the success of the Labour/Alliance coalition was one half of the equation. The other half clearly was the last-minute success of The Greens, and the influence they are already bringing to the political scene. We learn already, for example, that the Energy Efficiency Bill is being worked on

to restore Jeanette Fitzsimons' original vision and we look forward to the details. We have also learned that the Government will move to ratify the Kyoto Protocol, and that real signals will at last be sent to the business sector about the need to reduce New Zealand's appalling levels of greenhouse emissions.

We begin the New Year/century/millennium therefore on a note of optimism. This is reflected in the fact that we have as Minister of Energy someone who has been regularly associated with SEF events and who is willing to sit down with us to discuss the issues. We might wish that Pete Hodgson had been less heavily burdened—his letterhead shows no less than ten portfolio functions! On the other hand, this may mean that we can be of positive assistance to him in offering ideas and pushing for solutions that now appear to be within political reach.

Inevitably, I have mixed feelings in stepping aside from the Convener's role at such an exciting time. I will remain involved in SEF and hope to contribute to the Forum's programme in the months and years ahead. But I could tell that after 6 years of pushing water uphill, the energy was sometimes lacking (others may have noticed too). A group which focuses on sustainable energy surely needs to have this quality in its management group!

I also believe that all organisations need a rotation of the front row from time to time. SEF for me had reached that point. For my part, that are other projects (including a book) which have stuck on the back burner for too long. Legend also has it that there are trout out there waiting to be hooked!

I will look forward to seeing everyone at the SEF 2000 event in Dunedin in July. For now, let me just thank everyone for allowing me to enjoy the experience of teamwork and innovative thinking during the formative years.

All good wishes to the SEF family!

Web news

A new search engine dedicated to climate change information is now available, at:

http://www.ClimateArk.org

The Time for Sustainable Energy has come

Ralph Sims (Convener from 21 February)

These are exciting times for the Sustainable Energy Forum:

- Jeanette Fitzsimons' Energy Efficiency and Conservation Bill is progressing through its final stages in Parliament.

- The Parliamentary Commissioner for the Environment published his Energy report, *Getting more from less* which is highly critical of previous government energy policies (or rather lack of them!). It is compulsory reading for all SEF members as we couldn't have written it better ourselves. Copies are available at no charge from the PCE office, e-mail (pce@pce.govt.nz).

- The new Minister of Energy, Pete Hodgson, appears to be very supportive of any realistic and practical initiatives to encourage Energy Efficiency and Renewables. His views expounded at the recent meeting SEF held with him in Wellington are outlined in this issue.

- The climate change debate continues, albeit slowly at times, but there are signs locally and internationally that a changing mindset by policy makers and businesses is evolving. Du Pont aiming to source 10% of its energy supplies from renewables is a good example.

- The Minister for the Environment, Marian Hobbs, recently confirmed that policy is being developed within the government to ensure New Zealand honours its commitment under the Kyoto protocol. She even mentioned public transport!

- The future role for EECA will no doubt be strengthened as a result of all these activities, although exactly what this will involve is unclear at this stage.

- Investment in R and D into Sustainable Energy by both FORST and industry should increase. The full proceedings of the Forest Research, EECA and Massey University "Renewables Energy Research Showcase Seminar" held late last year are now available.

- Internationally the momentum for Sustainable Energy is accelerating. For example the UK has just announced a 10% Renewable Energy

Obligation on electricity suppliers.

It seems that many of the issues that the Sustainable Energy Forum has vigorously debated and fought for during much of the last decade are now coming to fruition. So it is with some excitement, but much trepidation, that I have agreed to take over the Convenor's role from Ken Piddington who has expressed a wish to step down—though we have worked closely as a team over the last year or two and I am pleased to say that Ken has every intention that this should continue.

Ken has been the Peter Blake, Michael Fay and Russell Coutts of SEF since his role of convener began in 1994. He has been dedicated to the cause, raised the sponsorship funds; been a natural leader but always remained very much a team member; sought the challenges; steered SEF well into at times fairly strong head winds; and now it seems he has won the races too—though perhaps not by a clear 5-0 margin quite yet. (But unlike Michael Fay he has also kept SEF out of the court rooms, in spite of some vigorous campaigns!)

I am perhaps the Dean Barker of SEF, eager to learn but somewhat apprehensive about taking over the Convenor's role following such great past success. I have much yet to learn from Ken's political and ambassadorial skills which have served SEF so well; his true understanding of Maori treaty issues and their culture; his ability to find his way around the Wellington circuit and open the doors of key personnel there; and his stamina in continuing to seek sponsorship to keep SEF going.

Ken has been the essence of SEF following the first conference held at CIT, Lower Hutt in 1993 and I am sure you will join with me in thanking him for the huge amount of time, effort and dedication he has put towards the cause over this long and often frustrating period (with Max Bradford being the Dennis Connor of the piece!).

So where to now for SEF?

- We have once again an enthusiastic and supportive committee.

- We have the annual SEF Conference coming up in Dunedin in June with the organisers well on top of it already—so I hope you can support their efforts by attending.

- We have a government that may well revolutionise things on the energy scene quite quickly. I think the SEF role may now well change to become one more of advocacy, advice and education rather than perhaps the political lobbying role it has focused on, out of necessity, in the past .

I am looking forward to the next year or so as Convenor. I cannot imagine maintaining the role successfully for as long as Ken has achieved, and I did make it clear at the AGM that because of my current commitments just at present, and knowing I will be overseas for the World Renewable Energy Conference at the time of the SEF conference, I cannot do a proper job till at least the second half of the year. So I am grateful that Ken has agreed to continue as Co-Convenor in the meantime.

There is still much yet to do, but it seems to me that the time has come to get Sustainable Energy into everyones' daily lives. It will be an interesting year.

Ministerial enquiry into the Electricity Industry:

Terms of Reference

Background

1. Electricity is a necessity. The performance of our economy and the welfare of New Zealanders require our electricity industry to operate efficiently and effectively. Businesses, including land-based industries, need reliable low-cost electricity to remain competitive and households need reliable low-cost electricity to enhance their quality of life.

2. There have been many changes to the structure of the electricity industry since the mid-1980s. Recent reforms include the split of ECNZ into three state-owned enterprises and the requirement that local power companies separate the ownership of their line and energy businesses.

Ministerial Inquiry

3 The Government's objective is to ensure that electricity is delivered in an efficient, reliable and environmentally sustainable manner to all classes of consumer.

4 The Government considers that an Inquiry is now required to examine whether the current regulatory arrangements for the transmission, distribution, wholesale and retail sectors are best

suited to achieving this objective. It has therefore decided to establish a Ministerial Inquiry to explore these issues.

Terms of Reference

5 The Inquiry shall:

a) Assess the extent to which the current regulatory regime meets the Government's objective for electricity, with a focus on the matters for particular comment listed below.

b) If the current arrangements do not achieve the Government's objective for electricity, make recommendations for any amendments to policy and the regulatory framework that will assist in achieving the Government's objective.

c) In developing recommendations, assess the costs and benefits of key options by reference to the Government's objective.

d) In making this assessment, take due regard of:

i) New Zealand's progress to date in the provision of electricity services, including by comparison with progress made in other relevant countries;
ii) regulatory developments in other countries;
iii) relevant theoretical perspectives on the regulation of the electricity industry;
iv) the impact of new technologies;
v) the impact of any options on investment in electricity infrastructure and services;
vi) environmental impacts;
vii) any factors specific to the New Zealand regulatory framework;
viii) any proposals for industry self-regulation;
ix) any proposals for changes to relevant legislation (such as the Commerce Act).

e) Comment on the detailed implementation requirements of any recommendations, for example, any required legislation or regulations.

Matters for particular comment

6 In responding to its terms of reference, the Ministerial Inquiry shall make particular comment on the following issues:

Transmission and distribution

a) whether changes are required to the regulatory regime for transmission and distribution to ensure efficient prices and service delivery;

b) whether asset valuations and efficiency assessments should form part of the regulatory regime;

c) whether the existing information disclosure regulations provide adequate and reliable information for assessing the performance of transmission and distribution companies;

d) whether the present incentives for ensuring system security in transmission and distribution are appropriate.;

Wholesale market

e) whether the efficiency of the wholesale market is jeopardised by its voluntary nature and/or the extent of vertical integration between generation and retail;

f) whether market governance should allow for greater participation by smaller players and end users;

g) whether opportunities for demand-side participation in the wholesale market should be increased;

Retail

h) whether there are barriers to entry by new retailers that restrict the development of retail competition;

i) whether there is a need for the Government to facilitate or require the development of standard arrangements between retailers for consumer switching, and/or standard contracts between retailers and distribution line owners for the use of distribution networks;

j) whether the Government should constrain the use of fixed charges, taking into account economic efficiency, energy efficiency, interfuel competition, and equity considerations;

k) whether there is a need for the Government to facilitate or require the development of standard arrangements between retailers and consumers to promote consumers' interests.

Process

7) The Inquiry team will:

a) obtain relevant expertise, including consultancy and secretariat services, to assist it to examine issues covered by the Inquiry;

b) examine first-hand the experiences and regulatory arrangements of selected overseas countries which have introduced competition into their electricity industries and which have similar institutional frameworks to New Zealand;

c) invite public submissions and hold public hearings on submissions; and

d) report regularly to the Minister of Energy on progress with the Inquiry.

Reporting date

8) The Inquiry shall report to the Minister of Energy by 12 June 2000.

Kyoto Ratification?

Prime Minister Helen Clark confirmed that the Government is aiming to ratify the Kyoto Protocol this year. This will commit New Zealand to reducing its greenhouse gases to 1990 levels within a decade. This could put New Zealand ahead of other developed countries as none have ratified the protocol to date. It has been ratified by 22 undeveloped countries. Helen Clark said, "We would like to see it this year. We've got quite a reputation for NZ to overcome. It did get the fossil of the (day) award last year from the non-governmental groups from being so slow on these issues. We want to change that reputation."

New Zealand won the fossil award from the Climate Action Network, for increasing its carbon dioxide emissions by 30%, after promising a 5% reduction.

Bigger and better

New wind turbine designs are expected to bring the average new turbine capacity to 1.0 MW within a few years, with single units of up to 5 - 6 MW installed by 2006. A limitation is blade design. A 750 kW turbine has blades weighing about 2 tonnes, but a 2 MW unit has roughly 4 tonne blades and a 3 MW unit 8 - 9 tonnes. Skilled labour is needed for blade construction, and worker output is proportional to blade mass not area. Wind Directions

A 50 m blade—for a 100 m rotor—is a transport problem. When will we see blades with flanged joints at mid-span, like the wing of a DC-3? EW

Saving money by not using Electricity

Molly Melhuish
Public Power Campaign

Electricity supply is a game for big business. Decisions to build power stations and transmission lines commit tens or hundreds of millions of dollars at a time. If there is not enough capacity, we run short of electricity for a little while, and there is huge pressure to build more capacity to prevent it happening again. Then prices rise. Consumers feel powerless to control this process—and so far they are right. This is costing money New Zealand can no longer afford. Far more electricity would be available, at lower cost, if we could give the right incentives for a million people to spend a few dollars or a few hundred dollars to stop draughts, insulate the house, or buy energy efficient appliances. Even more worthwhile would be ten million decisions to switch off water heaters or other appliances at exactly the right time—for just a few hours in the year.

But the electricity industry makes profits by selling electricity, not saving it. And so far there is no way to tell small consumers about the few hours a year when the electricity they buy costs a dollar or more per kilowatt-hour to supply. A good deal of the time, electricity costs nothing at all to supply, beyond the required return on capital including depreciation. (This of course is always true, even for a solar water heater)

The electricity inquiry may miss this point entirely (see the terms of reference above). So far it deals with the business side of the industry, not the consumer side. In devising regulations, it would help any lines company that wants to expand to work to convince the regulator that to provide reliable supply they will have to add new capacity—and here is what they intend to charge the consumer for it. Even if a regulator believes this is simply empire-building, there is usually no option but to agree.

There is a better way! The era of big power stations and huge transmission lines is past. The thousands of cheaper ways to generate or save energy are ready to deploy—or installed already. All we need is to give the right incentives. Generically, these are called 'distributed resources,' because they are distributed far and wide, often right on consumers' premises.

Distributed resources include wood stoves, gas appliances and solar water heaters. They include storage heaters for water or space heat, and all forms of ripple control. They include all investments which improve energy efficiency. And small-scale electricity generation: wind and water turbines, small diesel generators, and photovoltaic panels.

Each of these technologies is cheaper than traditional electricity at certain times and in certain places. Few if any are cheaper all the time. The trick is to match the use of distributed resources with the cost of electricity supply—to give incentives for the consumer to use the cheaper option whenever they decide it is worth their while.

Some of this job has been done already. A small number of industrial consumers now are paid to switch off particular energy-hungry processes when power is costly to supply. But the small consumers who represent well over half the power industry's costs have no incentive to adapt to changes in the cost of supply.

This is a matter not for regulation but for enterprise. Already one lines company, Orion (formerly Southpower), gives a strong pricing signal which has allowed it to defer spending on costly distribution and transmission assets. It notifies its customers (who are a small number of retailers) of up to a hundred hours per year that are most costly to supply, and charges $1 per kWh during those hours. It charges correspondingly less for the remaining 8660 hours per year. As a result, the total cost of supply averaged over the year is reduced—and the charges to the retailers are reduced accordingly. An enterprising retailer could attract customers by passing some of those benefits on.

There are new power meters and new software systems available now in New Zealand which can make this kind of savings available to more and more consumers. But to make them an attractive commercial proposition, we need to prevent the regulated companies from building surplus capacity and forcing their consumers to pay for it.

The electricity inquiry needs to lead incentives for distributed resources to be used whenever they are cheaper than conventional electricity. This will be better environmentally as well as cheaper overall for consumers. Although prices per kWh will be higher in some places and at some times, the power bills, taken overall, will be lower. Everybody will win—except the empire-builders.

Sustainable Energy Forum Conference

Dunedin, 8 – 9 July 2000

SEF is holding its seventh conference this July in Dunedin. The two-day event, to be held at Otago University, also forms part of the Dunedin International Science Festival. The conference theme is integrating energy systems.

On Saturday 8 July the programme is aimed at the general public and is free. It looks at local responses. The Public Forum at the end of the day will debate the findings of the Ministerial Inquiry into the Electricity Industry, which should have just been released.

Sunday 9 July the programme requires registration: costs are $35 unwaged, $55 waged, $ 75 Corporate. It looks at national policy issues.

Conference organisers are using the web to disseminate information about the conference:

www.physics.otago.ac.nz/sef2000

Or drop a line to the conference office:

SEF 2000
c/- Energy Management Programme
Otago University
PO Box 56
Dunedin

The conference is being organised jointly by Dunedin renewable energy enthusiasts and the SEF management committee, with assistance from the Otago University Energy Management programme and the Dunedin International Science Festival office.

Renewable Energy Conferences & Events

From Energy Information Services

Renewable energy conferences are booming around the world. Now is the time to plan that world trip to prepare for the future business opportunities that are available. If you would like more details on any of these events, please use the web or email address link provided. If a

link is not listed or you want a phone/fax number please call Energy Information Services. Care is taken on adding events to this list but we accept no responsibility for incorrect information which is provided in good faith. Email requests for additions to your event to this list, which can be copied freely by not-for-profit organisations.

Energy Information Services
P O Box 576, Wellington, New Zealand.
Phone 0800-65-46-36 or 04-586 2003,
Fax 04-586 2004
shearer@express.co.nz

March 19-22, 2000. Christchurch, NZ
2000 NZ Petroleum Conference.
(crown.minerals@moc.govt.nz)

March 23, 2000 EECA, Energy Wise Awards.

March 27, 7.30 pm Wellington.
ATLA meeting on Earthbuilding in the Sahara.
(www.converge.org.nz/atla/index.html)

April 24, 7.30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

April 25-26, 2000 Washington DC, USA
Innovative Policy Solutions to Global Climate Change
Co-hosts: The Pew Center on Global Climate Change
The Royal Institute of International Affairs

April 27-28, 2000. Gippsland, La Trobe Valley, Australia
AUSWEA 00 - First Conference of Australian Wind Energy Association.
More info: REAP@REAP.com.au

May 1-5, 2000. Glasgow, UK.
16th European PV Solar Energy Conference & Exhibition.
(www.wip.tnet.de)

May 22, 7-30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

May 25, 2000 Wellington
NZ Wind Energy Association Conference
(www.windenergy.org.nz)

May 28 10 June 2000. Kyushu-Tohoku, Japan.
World Geothermal Congress 2000
(www.wgc.or.jp)

June 5, 2000 World Environment Day

June 5-9, 2000. Sevilla, Spain
Biomass for Energy & Industry - 1st World Conference & Technology Exhibition.
(www.etaflorence.it)

16-17 June, 2000. Auckland, NZ
EEA Annual Conference - "A Sustainable Energy Future: The Engineers Challenge"
(www.eea.co.nz)

June 19-22, 2000. Copenhagen, Denmark.
Eurosun 2000 3rd ISES-Europe Solar Congress
(info@danvak.dk)

June 26, 7-30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

July 2-4, 2000. Brighton, UK
Renewable Energy 2000, Congress & Exhibition
(rob.schulp@reedexpo.co.uk)

July 8-9, 2000 Dunedin
SEF 2000, *See previous page*

July 23-28, 2000. Las Vegas, USA
ENERGEX 2000: A global energy forum on greenhouse gases and climate change.

July 24, 7.30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

August 1-6, 2000 Conservation Week

August 8-11, 2000. Charlotte, North Carolina, USA.
HydroVision 2000
(www.hydrovision2000.com)

August 28, 7.30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

September 17-22, 2000. Anchorage, Alaska, USA
28th IEEE PV Specialist Conference,
(john-benner@nrel.gov)

September 17-22, 2000. Mexico City, Mexico.
ISES, Millennium Solar Forum 2000.
(ises2000@maxatl.cie.unam.mx)

September 25-27, 2000. Kassel, Germany
Wind Power for 21st Century, an EWEA 2000 Conference.
The challenge of high wind power penetration for new energy markets. (www.wip-munich.de)

September 25, 7.30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

October 6, 2000 World Habitat Day

October 25-28, 2000. Toulouse, France.
Solar Millennium Conference.
(observ.re@wanadoo.fr)

November 1-4, 2000 Waikato, NZ
National Hui on Sustainable Communities.
(stevehart@wave.co.nz)

November 27, 7.30 pm Wellington.
ATLA meeting
(www.converge.org.nz/atla/index.html)

Spring 2001. Denmark
EWEA 2001 Conference
(www.ewea.org)

October 21-25, 2001. Buenos Aires, Argentina.
18th WEC Challenges of the new Millennium.
(18th-wec@congresosint.com.ar)

November 25-December 2, 2001. Adelaide, Australia
ISES, Solar World Congress.
(http://www.eastend.com.au/solar)

Getting more from less

A landmark report from the Parliamentary Commissioner for the Environment

The timing of this document, tabled in Parliament on 21 February, could hardly have been better. It is a refreshing and honest review of New Zealand's performance in achieving efficiency of energy use. As the title suggests, there is a large economic dividend to be derived from a renewed attack on the many areas in which we lag behind, from building standards to appliance labeling.

For a new government, which nailed its colours to the mast of sustainable development on the day the Labour-Alliance Coalition was formally announced, this report offers a ready-made action plan. It shows that there are many areas in which progress could be made and sets out six elements for a coherent Energy Efficiency Policy:

1 Establish and maintain an effective market structure
2 Help market actors recognize their best interest and act on it
3 Focus market interest on energy efficiency
4 Ensure access to good technology
5 Develop and maintain a supportive institutional framework
6 Act to ensure continuity.

This is a constructive model to apply in a situation which can be crudely described as market failure. The authors of the PCE report have been careful to document international experience, both to show how far New Zealand will have to move in order to meet its obligations under the Kyoto Protocol, and also to demonstrate that we are not alone in facing major obstacles to energy efficiency. Diplomatically, they soft-pedal the critical tone of recent reports by OECD and the IEA, while making it clear that our international report card has been saying for a while, *should do better next term.*

Now it is over to Pete Hodgson to demonstrate political will. He has already signaled that energy efficiency is the logical starting point for his stewardship of the Energy portfolio. His colleagues have signaled the Governments intention to ratify the Kyoto Protocol. A first test will be the reintroduction of the Energy Efficiency Bill which was so badly mauled by the previous administration. A revitalized EECA may now emerge with full statutory backing as advocated by SEF.

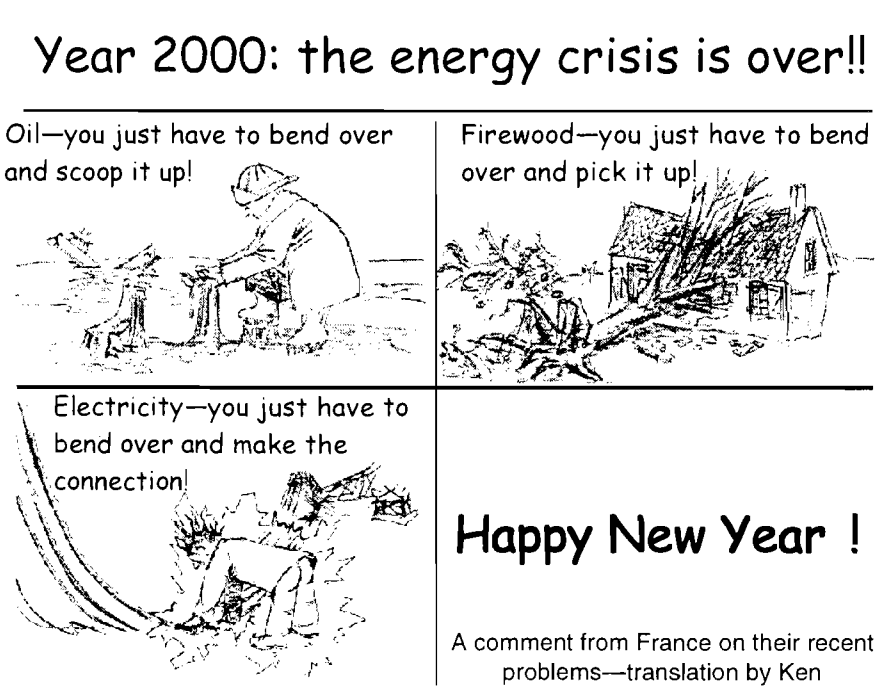
Perhaps the most encouraging sign for Forum members is the clear link which the report establishes between energy efficiency on the one hand, and the introduction of renewable energy technologies which are proven and ready for the market, on the other. From initial discussions with the Minister and others, it is clear that SEF can help by doing further work on the linkages.

Dr Williams has maintained the finest traditions of the PCE office by clarifying the policy options for those in power, and setting out a logical agenda for advocate groups to pursue. This is undoubtedly the best official document to appear on energy issues in the last five years.

Capstone turbines

The Capstone MicroTurbine (partially owned by Fletchers) now has a website at
http://www.capstoneturbine.com/ .

Europe blown to the future



Europeans have never experienced anything quite like their latest bout of weather. The passage of two unprecedented tandem storms in a week left more than 100 people dead from drowning, avalanches and other weather-related causes, including a French farmer buried alive by wind-tossed bales of hay. In France alone there were at least 83 dead. Winds exceeding 200 km/h broke all records in Paris. Meteorologists reported that the force of the winter gales scarcely dissipated as the system swept relentlessly inland from the North Atlantic, spreading a trail of destruction across Britain, France, Germany, Switzerland, Austria and Romania.

Nearly two thirds of France was declared a disaster zone. The country's power grid and rail system each reported upwards of $ 80 million in damage. In the forests of Alsace, along the German border, the storms destroyed more than 2 million m^3 of standing timber—twice the volume cut by loggers in an ordinary year. On the palace grounds at Versailles some 10 000 trees were toppled, including many dating back to the Revolution. Newsweek

Energy Efficiency Bill

Green Co-Leader Jeanette Fitzsimons' Energy Efficiency Bill returned to Parliament in mid-February, eighteen months after it was first introduced, with the support of both Labour and National. The Bill sets out a framework for implementation of energy efficiency measures throughout the economy. Some parts of the Bill deleted by the National government are now to be reintroduced.

Ms Fitzsimons pointed out that the latest energy projections released by the Ministry of Commerce show New Zealand's appalling record on carbon emissions is set to continue, with CO_2 emissions increasing to one third above 1990 levels by 2008., and two thirds by 2020. She said, "This forecast shows that we have no chance of meeting our Kyoto commitments unless we look carefully at the mix of energy sources that we choose to use over the next 20 years."

"New Zealand has an appalling record of increasing greenhouse gas emissions," Ms Fitzsimons said. "Passing the bill would be the first concrete step that New Zealand had taken towards meeting its Kyoto Protocol emission target, since the initial setting up of the Energy Efficiency and Conservation Authority." The predicted increase in coal-generated electricity from 5% in 1998 to 14% of total electricity generation by 2020 would spell disaster for CO_2 emission levels in New Zealand.

On the positive side, Ms Fitzsimons welcomed the report tabled by the Parliamentary Commissioner for the Environment (see page 13), on energy efficiency and renewable energy alternatives. Commissioner Morgan Williams recommended Government departments, ministries, agencies and state-owned enterprises monitor and report on their energy efficiency, with the aim of meeting an overall Government energy efficiency target, for example a 20% improvement by 2005.

(As we went to press the Bill's return to the house was imminent: EW)

When will we ever Learn?

Reflections on the America's Cup, climate change and windshifts in Wellington

Ken Piddington

(First published in the NZ Herald)

So the Cup fever is behind us. Auckland may never be the same again. But for the next little while the Cup Village will be like a deserted movie set. A scene of packing up and departures, followed by the inevitable wrangle on financing —nothing much for the rest of the country to get excited about. For the world outside, the 'City of Sails' has at least established its identity, but that too will fade as the approach of the 2000 Olympics forces the cameras to swivel attention across the Tasman, to another great city of sails—and lots more.

Can Auckland learn anything from the experience of staging such a spectacular event on the apron stage of the Hauraki Gulf? Are there any lessons for communities around the country who have been glued each race day to the TV, waiting with everyone in Auckland for that wind to blow? Back in Wellington, where we know a thing or two about wind, there must be something that a new and enthusiastic Government could take on board as it prepares for the rush of its second 100 days.

Two simple items stand out:

- We all learned about the skill of crews who could make use of every fraction of wind to improve performance
- We also learned how state of the art technology creates a winning boat

New Zealand topped the yachting world in both departments. It is surely bizarre that such proven excellence is applied in such a narrow field—and only once every four years! In global terms it is also strange that the benefits should flow essentially to a very small group of people, attracted for whatever reason to the 'magic' of the Cup. The world out there is mainly below the Hokianga in its standard of living (and well below it in terms of nutrition). That global audience, if it were watching, could only look askance at the billions of dollars invested in the floating spectacle. Even a $3.6 million racehorse looks cheap by comparison!

In the final month of racing, a lot of other things were happening—in Auckland, in Wellington and in the world beyond. Inevitably, they were crowded out from any significant national coverage in the media, and almost lost from sight in Auckland itself... For example, a group of the world's leading climate scientists met in the city in mid-February. Their task was to produce a consensus text for the all-important report of the Inter-Governmental Panel on Climate Change which will be presented to Governments later this year.

They were told by the Minister of Environment at their opening session that New Zealand, after years of inertia, would now move to ratify the Kyoto Protocol. They would also have heard through their networks that Jeanette Fitzsimons' landmark Energy Efficiency Bill is likely to be passed this year by Parliament—its missing teeth having been replaced. Unfortunately, they were probably at the airport when the Parliamentary Commissioner for the Environment tabled a carefully-argued report to show that New Zealand was failing to perform both on energy efficiency and on renewable energy.

There's the essential link. Within our vast reservoir of renewable energy, wind is probably the best immediate resource to draw on. In many parts of the country, mean wind speeds are the stuff that dreams are made of—check the records of those few windfarms that are in operation. With modern technology, we can therefore produce electricity at economic prices. It is intermittent (as we know from the TV shots of the fleet becalmed), but it is also free of carbon.

A government that aims to ratify Kyoto will seek every opportunity to encourage a switch to energy sources which will not add to New Zealand's mounting CO_2 emissions. It may wish to send an economic signal to reflect the fact that wind and other forms of solar energy have this significant advantage. Studies tell us that this could unleash the equivalent of almost a quarter of the electricity now flowing through the grid.

Most experts consider that a hydro-dominated grid creates an ideal 'battery' for windpower generated outside periods of peak demand. In New Zealand, the resource is widely distributed and can be used reasonably close to areas of maximum load. Thus the ultimate advantage to the nation lies in the way we could ease pressure on vulnerable links in the grid (including those around Auckland itself) if we aimed to meet 10-20% of electricity demand from this source.

There are sound economic reasons for accelerating this option. Wind energy is never going to increase in price. With volume, the technology will become cheaper. It will create significant employment out in the regions—this has been solidly documented in Europe. Fossil fuels, on the other hand, will surge in price in the lifetime of today's investments in thermal electricity. The market itself could in effect end up imposing the dreaded carbon tax. Sooner rather than later, this must force a re-examination of incentives for gas and oil exploration in New Zealand. It is very significant that the oil majors themselves are forecasting a huge leap in the share of renewables before 2050.

Where is the spirit of Team New Zealand in all of this? Do we know how to use every fraction of our vast wind resource to improve performance? To create jobs? To diversify regional economies? On the technology side, it must count for something that we have the systems to given optimum dynamic lift to a sailboat—modern wind turbines require the same calculations, the same materials and the same judgment about maximum stress levels.

I remember visiting Perth for a Solar Energy meeting about a year after the event had been staged off Fremantle. The universities and the renewable energy community were highly stimulated by the fit between yachting technology and the scope for Perth to become a centre of excellence in wind and other forms of renewable energy. They were not blind to the emerging Asia/Pacific markets on their doorstep and today Perth has an established reputation for leadership in research and development on renewables. Typically, 40% of the houses in a new subdivision will have solar water heating.

Back in New Zealand, this suggests that there could be a sad irony in the sequel to our yachting success. For if we fail to seize the opportunity, there is no doubt that the Australians will be the winners. They already have an official target for 2% of electricity from renewable sources. Lots is happening over the ditch, and we will see this being marketed to the world during the 'green' Olympics. Perhaps the saddest part is that once again New Zealand expertise has nowhere else to go, and will be recruited in increasing numbers to cross the Tasman and help out.

EnergyWise Awards 2000

EECAs EnergyWise award winners were announced as EnergyWatch went to press.
Award winners are:

Energy Manager:
Denis Agate, University of Auckland.
Also Sally Kipatrick; Andrew Patterson; Raja Mukherjee; Tom Adson; Kees Brinkman; Leonid Itskovitch; Peter Ritchie; Don Cooper; Cornelius Ebskamp.

Industrial/manufacturing sector:
Colgate-Palmolive Ltd.
Highly commended: Fletcher Challenge Energy; Feltex Carpets.

Commercial/services sector:
Thames Hospital, Health Waikato Ltd.
Highly commended: Massey University; Avalon Studios, TVNZ.

Public Sector:
Parliamentary Service.
Highly commended: Christchurch City Council; Auckland District Court Building, Department for Courts; Work and Income NZ.

Smaller Energy Users:
Coldstorage Inernational Ltd and Rongotai College.

Transport Sector
Buses First! Auckland City, Auckland Regional Council, Stagecoach, Bus and Coach Association, and NZ Police.
Highly commended: Teleworking promotion: Unisys NZ Ltd; Kapiti Coast TeleCentre; Auckland Regional Council

Judge's special awards;
Hitesh Patel, EnergyPro Ltd; St Patrick's School, Wainuiomata; Negawatt Resources Ltd.

PV Rebates in Australia

The Australian Commonwealth Government is now offering cash rebates to householders and owners of community use buildings, such as schools, who install grid-connected photovoltaic systems. Rebates are for 50% of capital costs, with a maximum of $A 5500 per system.

Ecovillage News

NZ Energy Demand

A Ministry of Commerce report on energy demand up until 2020 indicates that consumer energy demand will grow by 1.1% pa between 1998 and 2020, for 3% pa GDP growth. This prediction is derived from a partial equilibrium model (confined to the energy sector) which identifies a market clearing price consistent with supply and demand being in balance. Key assumptions are:

- 3% annual GDP growth from 2003 (short-term forecasts are used prior to 2003)
- Current policy settings
- Oil prices fall from around US$ 21 / bbl in 2000 to around US$ 19 / bbl in 2002 before rising to US$ 22/bbl by 2015 and remaining constant thereafter
- Coal prices rise from around $ 2.66/GJ in 1998 to $ 3/GJ in 2010 and are constant thereafter
- New gas discoveries averaging around 80 PJ pa
- Given this gas discovery rate, wholesale gas prices rising to around $ 3.5/GJ by 2010 and to $ 3.9/GJ by 2020
- Gas use by the petrochemicals plants does not continue after existing take-or-pay Maui gas contracts expire: 2003 for the Motunui tranche, and 2005 for the Waitara Valley and ammonia/urea tranches. However, Methanex's recent gas contract with Contact could extend their operations out to 2006/7
- A US$/NZ$ exchange rate of US$ 0.54 to NZ$ 1.

Projected sector growth rates are:

Residential	2.1%
Industrial and commercial	-0.3%
Transport	2.0%

Projected growth rates by energy type are:

Electricity	1.8%
Coal (consumer use)	0.7%
Oil	1.9%
Gas	-2.6%

More details at:
http://www.moc.govt.nz/ran/emisg/emsu/outlook/index.html

NewsRoom

SEF presentation to the Ministerial Electricity Inquiry

The ministerial inquiry into the electricity industry (see page 8) is now at the hearings stage, chaired by David Caygill and with members Susan Wakefield and Stephen Kelly (from Queensland).

A submission on behalf of SEF was presented by Ken Piddington, Ralph Sims and Kerry Wood (though Ken and Ralph were also wearing other hats). In addition SEF members Molly Melhuish and Robbie Morrison made separate presentations as did the NZ Wind Energy Association. EECA, IRL and Transpower were amongst other organisations that supported the future role of Renewable Energy supply systems. Copies of many of these submissions can be found on the web site (www.electricityinquiry.govt.nz).

The SEF submission made it clear that there had been no opportunity to formally approve it by the full SEF membership. Key points raised by Ken, Ralph and Kerry included:

- The threat to rural communities from uneconomic lines after 2013
- The environment not being recognised fully by the market
- End use efficiency not being encouraged sufficiently by the industry
- Consumers receiving poor information to make a rational choice of supplier
- The necessity to consider greenhouse gas emissions when considering the future of the industry and hence to recognise the true benefits of Renewables;
- Future growth in demand to be met by renewables, not oil, coal or gas generation
- Distributed supply will be a future trend (as elsewhere) and lines companies should be given the right to build and own generation capacity using new and emerging renewables and to retail the green power within their distribution network
- Standards and minimum prices to be established to encourage net-metering and embedded generation systems.

The Inquiry panel appeared to be particularly interested in many of the issues raised, judging by

the generous time given and the nature of the questions asked.

In contrast to our three SEF musketeers fighting for the common good, the subsequent session of the hearing involved three 'heavies' of the industry, Natural Gas Corporation, Meridian Energy and Transalta, each with a large pack of suited legal and technical advisors all going into battle. It seemed the Inquiry members acted merely as referees!

The Inquiry team is due to report back to the Minister by June 12th so it will be interesting to see if the relatively low key approach taken by SEF proved more effective.

Renewable Energy Showcase seminar timely

In November 1999, just prior to the election, a Renewable Energy Showcase seminar was organised jointly by EECA, Massey University and Forest Research to encourage government and industry to jointly participate in future research funding. Almost 100 delegates attended the event at Massey, Palmerston North, to hear what is happening in Australia as presented by Phil Harrington of the Australian Greenhouse Office (and with $M 1000 to spend a lot is happening!); an overview of the New Zealand industry; and presentations on bioenergy; wind; fuel cells; anaerobic digestion; solar; and distributed power supplies by 8 research teams that had received funding through the Foundation Research Science and Technology (FRST) that administers the public good science fund.

The main part of the day however was the presentations by the potential 'users' of the research outputs (FRST, Ministry for the Environment, electricity generating company, industry, and Federated Farmers) and the subsequent discussions. General agreement was had that if the Renewable Energy Industry of New Zealand is to progress to become a vibrant sector with major export potential, then significantly more research investment will need to be made. Judging by the rapid progress since the event being made by our Minister of Energy and our Minister of Research Science and Technology (both being the same Pete Hodgson of course) recent publication of the proceedings seems timely.

A full copy of the proceedings, including transcripts of the questions and discussion sessions, has been distributed to those attending. Copies are available for $25 (incl GST) from:
Ralph Sims
Centre for Energy Research
Massey University
Private Bag 11 222
Palmerston North

Sustainable Land Development Handbook

A grant from the Sustainable Management Fund is making it possible to have a set of guidelines adopted for sustainable land development in New Zealand. This is aimed particularly at those who wish to use the latest technology to establish eco-villages and co-housing. Local bodies, together with professional developers, are often not much help when people come up with such initiatives. The new handbook will fill this gap, and is being supported by Standards NZ and Local Government NZ.

One chapter of the Handbook will be devoted to energy, and SEF members will be able to assist in drawing up the text. It is also hoped to hold a workshop on this chapter at the time of the Dunedin Conference. Ken Piddington is chairing the technical committee for the Handbook; please contact him <kenpid@compuserve.com> if you wish to contribute to this exercise. The volume as a whole is being prepared by Lisa Gibellini of Lattey Consultants in Waikanae and the publication date is late 2001.

Car-free days

Italians are being forced to leave their cars at home on Sundays for the next few weeks. The use of private cars has been banned in more than 150 towns and cities in an attempt to reduce atmospheric pollution and to encourage the use of public transport.

After successful experiments earlier this winter in Milan and Turin—both big industrial cities with smog problems—the Sunday car ban has been extended to urban areas all over the country. On one trial day eight cities recorded an average 35% drop in carbon monoxide levels. Ten major cities, including Rome, are closing off the whole city centre. Rome allows free parking on the edges of the no-car zone, and also offers free entry to most museums and archaeological sites.

The car ban will last for 10 hours and public transport is free all day. Surprisingly, in a country which has one of the highest rates of car ownership in the world, four out of five Italians say they are in favour of the Sunday car ban. The environment minister says he will analyse results before deciding whether to make carless Sundays a permanent feature in Italy.

When the bans were in force, Italians poured into city centres to inhale, taste and savour an unprecedented silence and stillness: life without the internal combustion engine. Skating, cycling and strolling Romans reclaimed their cobblestone streets from the automobile on the capital's first car-free Sunday. It was perfect weather for walking the dog or taking a jog, and thousands did just that, thronging uncharacteristically quiet streets. The city—normally pungent with fumes and throbbing to the beat of the internal combustion engine— took on a festive air. "It's wonderful, you can even hear people's footsteps on the cobblestones," said 65-year-old Franco Cianci, strolling with his wife.

A government honeypot of $M 420 encouraged regional capitals and dozens of smaller towns to sign up to the voluntary ban. Smog-related illnesses, including asthma and bronchitis attacks, kill more than 15 000 Italians and cost 16 million working days each year.

After experiencing a car-free day, 80% of those polled thought the experiment should be repeated at least once a week.

Car-free days are becoming a world-wide campaign. Bogota is the first southern hemisphere city to have had a car-free day, on 24 February 2000. Who will be first in New Zealand?

AP, BBC, Guardian Weekly,
Sustrans Discuss

Mini–Whats

Windsparging

Yes, windsparging is here. Sparging is cleaning soil contaminated with hydrocarbons by blowing air underground, to encourage hydrocarbon–eating bacteria. Windsparging—obviously enough—is using wind as the energy source. A system is being used to clean up leakage from an old petrol station in Ontario, at a spot where there is now no power. Sparging is expected to take 2 years, using five air injection wells. Renewable Energy World

Quote Unquote

"We have embarked on an unpredictable global experiment with the climate, an experiment that has just started, but which could end up having consequences which are much more serious than we can imagine.

"The danger posed by climatic changes is becoming widely accepted. However, the full scope of the problem is hardly recognised. Many people imagine that temperatures will just rise slowly, which might not be too bad. However, scientists are increasingly reminding us of the possibility that the global climate can exhibit instabilities.

"Politically speaking, it is rather obvious what is required. The use of fossil fuels must be phased out as quickly as possible."

Danish Minister for Environment and Energy,
Svend Auken, 11/12/1999
<http://www.mem.dk/auken/artikler/experiment.htm>

More oil in Taranaki

A new oil discovery in Taranaki, announced by American independent Swift Energy this month, has the potential to be the largest find in New Zealand. However, Green Co-Leader Jeanette Fitzsimons warned against inappropriate development. The field could help reduce New Zealand's serious balance of payments deficit if developed wisely and slowly, but commercial development for maximum return on investment could accelerate the growth in oil dependency, leaving us even more vulnerable when the field runs dry and world oil prices have risen. In the process, it would tend to stifle energy efficiency, the development of renewable energy sources and alternatives to cars.

NZ Petroleum Production Down, Prices Up

Statistics NZ figures show that New Zealand production of crude petroleum for the December 1999 quarter was 22.2% lower than in the December 1998 quarter. Reduced flows from Maui contributed to the decrease in production. Refined petrol production fell by a similar amount.

The household petrol price index rose 6.3 % in the 12 months to December 1999 quarters.

After adjustment for seasonal variations, electricity generation rose 1.2% between the September 1999 and December 1999 quarters. Very low water levels in the hydro storage lakes for most of the year contributed to an increase of 23.4% in thermal electricity generation in the December 1999 year. However, record rainfall into the South Island lakes in November has resulted in a recent decrease in wholesale power prices.

Continued demand for gas, used in thermal electricity generation and methanol production, has contributed to a rise of 16.4% in production in the year ended December 1999.

Statistics NZ

EnergyWatch

This issue was going to be 16 pages, coming out in March, but in the end it was 20 pages in April. Perhaps that is a measure of the exciting times Ralph mentions on page 7. (Your Editor will be trying for a fee increase)

In future we will try to keep to a more formal timetable: March, June, September and December—unless events drive us to greater frequency.

Return address P O Box 11 152 Wellington