



The Sustainable Energy Forum Inc.

**MINISTERIAL REVIEW OF THE ELECTRICITY MARKET
IMPROVING ELECTRICITY MARKET PERFORMANCE DISCUSSION
DOCUMENTS
SUBMISSION TO THE MINISTRY OF ECONOMIC DEVELOPMENT
16 SEPTEMBER 2009**

THIS SUBMISSION

This submission by the Sustainable Energy Forum makes four key points relating to the wholesale electricity market and then makes a number of points relating to the Consolidated Recommendations that were presented in Section 7 of the discussion document.

A. KEY POINTS

1. THE RELATIONSHIP BETWEEN ELECTRICITY PRICE RISES AND THE RATE OF INFLATION

In a recent statement the Minister of Energy, Hon. Gerry Brownlee, has said that "we cannot continue along a path of electricity price increase at double the rate of inflation each year." (Note that this comment would apply to domestic prices only. Wholesale prices and retail prices to commercial and industrial consumers have not increased so markedly).

However, the wholesale electricity market is trying to deal with two very much conflicting objectives at the same time

These are on the one hand trying to ensure that there is an active competitive market for electricity helping to hold down price rises to the rate of inflation **while at the same time** giving a market signal to ensure that future power stations, to meet existing demand or replace ageing existing power stations, are built in time for when they are needed.

If electricity prices are increasing each year at twice the rate of inflation as Mr Brownlee is suggesting, then this probably indicates that the cost of building additional or replacement electricity generating capacity is also rising at the same rate.

If the wholesale electricity market is in future constrained to try and ensure that electricity prices rise at around the annual rate of inflation, then from now on, more and more new electricity generating projects will go "on hold" because it is not economic for them to proceed, and within a few years another major shortage of electricity supply, similar to the one experienced in 1992, could occur.

The solution may be to find new ways of encouraging the building of new power stations, so as to enable wholesale electricity prices to rise more slowly?

2. RATE OF RETURN ON INVESTMENT IN ELECTRICITY GENERATING FACILITIES

Recently there has been considerable pressure from Government Ministers placed on state-owned electricity generating companies, along with other SOEs, to show a better rate of return on their assets.

This may in turn lead to an upward pressure on wholesale electricity prices. However a recent paper by Dunmore, Twist and Penny in the Chartered Accountants Journal (NZ), July 2009, shows that New Zealand's electricity generating assets have been substantially revalued upwards in recent years.

Every time the price of electricity goes up, the generator-retailers want to revalue their assets to reflect the rising electricity price. The return on capital invested as a percentage then becomes lower, and so the pressure then goes on to increase that return again either by cutting costs or by raising electricity prices once more.

This can become a "vicious circle" leading to rising electricity prices.

3. CONSIDERING RESTRUCTURING FOR ASSETS IN ELECTRICITY GENERATION

It would be very disruptive to switch around the assets of the existing SOE electricity generating companies. It may be better to improve the incentives on generators, especially Meridian and Genesis, to contract among themselves to better manage their risks and resources (i.e. to arrange better hedges between each other to cover the difference between dry years and wet years). But the question remains - if this was going to happen in practice and the wholesale electricity market was working properly, why hasn't it been done already within the present electricity market arrangements?

4. WILL MORE RETAIL COMPETITION HELP HOLD DOWN ELECTRICITY PRICES?

The impression has been given in recent speeches by the Minister of Energy that if it is made easier for electricity consumers to switch suppliers, more competition will be created leading to a lowering of electricity prices.

However, the reality is that at the retail end of the electricity market, the profit margins in electricity retailing are limited, and therefore the price differences between retailers are unlikely to be sufficient for a very large number of electricity consumers to want to switch suppliers.

There is an accepted price trigger point which serves as an inertia barrier to people wanting to put themselves through the hassle of changing from one supplier of a product or service to another.

This applies to banks, supermarkets, energy suppliers and other providers of products and services. Some evidence points to this threshold being in the order of 15%; if the advantage is lower than that most people won't take the time and make the effort.

In most cases, the difference in price between electricity suppliers is likely to be less than 15% so there is likely to be little uptake of promotions to switch suppliers, particularly given how quickly energy prices can be changed and cheapest today is not necessarily cheapest tomorrow.

B. COMMENTS ON CONSOLIDATED RECOMMENDATIONS IN THE DISCUSSION DOCUMENT.

1. IMPROVING THE MANAGEMENT OF DRY YEARS

a. General Comments:

- The Discussion Document does not seem to have taken into account the need for co-ordinated management of hydro storage, natural gas availability and coal stockpiles during a developing dry year event, particularly in the January to May period of any given year.
- A study of the dry year situations which developed in 1992, 2001, 2003, 2006 and 2008 shows that in every case, efforts should have been made to start maintaining more storage in the hydro lakes from about December of the previous year, yet virtually nothing was done in each case to preserve storage until about May, which was too late.
- In the days when the electricity system was run as a single entity it was recognised that it was important to have sufficient water in the hydro lakes by around 1 April in any year to ensure that if the rest of the autumn and early winter turned out to be dry, there was less likely to be a shortage. So dry year management should start by January, not when the lakes are already at a low level.
- The Ministerial Review does not appear to have considered the notion that the objective of dry year management is a trade-off between the cost of maintaining sufficient reserve generating capacity; and the costs to the economy (NOT the electricity industry) of an inadequate or excessively expensive supply of electricity during a dry year event.
- Until it is clear that the problem is understood, and that more non-hydro generating capacity is being brought in to maintain hydro storage levels during the January to May period, it is pointless to suggest “band aid” alternatives.

b. Require Retailers to Make Payments to Consumers in the Event of a Public Conservation Campaign or Enforced Power Cuts:

- If these payments are being made by all retailers, they will just be a cost of doing business and passed on to consumers. So consumers will be compensated out of their own pockets! These payments would therefore add to the cost structures of retailers who would have to increase tariffs to recover the costs.
- We therefore question whether the provision of a payment from retailers to consumers is the best solution and would in fact incentivise any behaviour change in retailers/generators.

- We consider that requiring retailers to pay consumers may result in later notification of electricity shortages, which could increase the likelihood of enforced power cuts.

c. Clarify Roles and Responsibilities for Security of Supply:

- This is an implicit acceptance of both market and regulatory failure. It is some improvement on the present position where:
 - (i) having a market means there can't be a shortage; and yet
 - (ii) the Electricity Commission (EC) is responsible for making sure that a shortage will not develop.

So the present arrangement is schizophrenic!

- SEF agrees that there is confusion at present over who has responsibility for ensuring security of supply and SEF supports the better clarification of roles and responsibilities.
- In any re-assignment of the roles of the Electricity Commission (EC) it is important that **responsibilities are still clearly defined**. An example would be spilling water unnecessarily from hydro reservoirs, while still burning natural gas or coal at thermal power stations, which is an anathema to anybody who believes in sustainability. It is very important that a role be maintained of having oversight of any spilling or water from hydro reservoirs.

d. Phase Out the Reserve Energy Mechanism and Reassign the Whirinaki Power Station to a SOE or Sell It.

- SEF considers that the New Zealand public would expect the Government to act in times of electricity crisis and that the action of the Government being able to access reserve energy is reassuring to the public.
- A particular issue here is the future role of the original Huntly power station and the cost of maintaining some of these generating units to maintain sufficient reserve energy supply.
- Reassigning the Whirinaki power station to a SOE will run into a particular problem that the power station at present sits on land owned by Contact Energy. So unless Contact is prepared to sell the site, the only practicable buyer is Contact, unless the plant is to be removed to another site (which may be a good idea anyway).

e. Develop improved provisions for access to “reserve water” in lakes in dry year emergencies, including compensating affected communities and improving environmental outcomes:

- This means getting conditions attached to resource consents changed. Whatever other merits this may have, **improved environmental outcomes seem hard to see**. The existing conditions are the result of compromises.
- Lakes where there are physical opportunities to increase storage are:

Taupo	reduce minimum level, dredge the lake outlet.
Waikaremoana	raise the maximum back to its original natural level.
Tekapo	rebuild intake from lake into deeper water to enable drawdown.
Pukaki	allow drawdown to canal level.
Hawea	reinstate original range, both higher maximum and lower minimum.
Te Anau	small additional drawdown might be possible.
Manapouri	forget it.

- Every one of these will meet strong opposition, and to date, the electricity companies have not seriously considered trying. Emergency legislation to enable additional drawdown is certainly not a good option and, as noted above, better management of storage in the hydro lakes in the January to April period each year is a much better solution.
- SEF therefore questions whether in an emergency situation accessing water below absolute minimum levels is the best solution to overcome dry year shortages.
- SEF considers that a combination of better management of storage levels in the hydro lakes as a dry year situation develops, plus having sufficient reserve generation capacity available to minimise electricity shortages, is the best solution.
- SEF considers reserve electricity generation capacity should always be used in preference to accessing water below absolute minimum levels, given the environmental effects that may result from using this water.

2. RESTRAINING THE COSTS OF GENERATION

a. Evaluate Developing a National Environmental Standard for Small-scale Distributed Generation (DG).

- SEF strongly supports the development of a National Environmental Standard.
- However, the problem for small scale DG is not environmental; it is the commercial terms of connection to the public electricity supply. Complexity of requirements is as big a problem as money.
- SEF believes that feed in tariffs is the best way to ensure that small scale electricity generation connected to the grid is economic.

3. TO IMPROVE WHOLESALE AND RETAIL COMPETITION AND HELP RESTRAIN PRICES.

a. Restructure some of the SOE generator-retailers (by transferring SOE assets).

- SEF believes that nothing is going to be achieved by shifting assets around. There is a logic to the original allocation of generating assets that the Ministerial Advisory Group does not appear to have looked at. Imposing structural changes like these will be demoralising for the SOEs with damaging effects.

- Therefore SEF does not support restructuring of assets. This would be disruptive and costly – with benefits that are unknown and at best marginal. Also, some of the generators have developed a particular brand which would be destroyed.
- Involving Solid Energy (SE) is a particularly bad idea. SE is a specialist mining business and should not be given a mix of functions.
- Breaking up Huntly between different companies will not work well. It would involve duplicating facilities on the site and the rebalance would be only temporary anyway. The coal fired station is 30 years old and will be retiring over the next 10 years. One unit seems to have retired already. Option 3 would leave Genesis as a small runt of a company in a few years time.

4. FACILITATE GREATER DEMAND-SIDE PARTICIPATION IN THE WHOLESALE ELECTRICITY MARKET.

a. Rundown of the Ripple Control System

- SEF strongly supports greater demand-side participation in the wholesale electricity market but not necessarily the recommendations made in the Ministerial Review Report.
- What New Zealand really needs is better demand-side management of electricity, which is not necessarily the same thing as demand-side management in the wholesale electricity market.
- Over the last twenty years or so the electricity market has allowed the running down of our ripple control system which used to be one of the best demand-side management systems internationally.
- If this ripple control system was still working as well today as it used to, it would have much better managed the short term price spikes which have recently been experienced, by shedding hot water loading instead of starting up the Whirinaki Power Station.
- The objective of demand-side management should be to reduce costs to the consumer, not to increase the profits of the generators during short term price spikes.
- As recently as 3 September 2009, it was noted that Whirinaki again started burning diesel fuel instead of more load being shed from water heaters.
- SEF asks why is this the case? Is it a technical reason that the ripple control system has been allowed to run down over recent years, or is it simply too politically unattractive to restrict water heating so that people may run the risk of having cold baths or showers?
- However, to anybody who believes in the principles of sustainability, it is sheer lunacy that we are sometimes burning diesel fuel at Whirinaki which is very expensive and with high carbon dioxide emissions, rather than better using the ripple control system to shed load. Is there something fundamentally wrong with the electricity market that this

has been allowed to happen, and that the ripple control system has been allowed to run down?

- b. Ensure that guidelines and standards on smart meters provide for (or allow upgrades for) energy efficiency capability, open access communications, customer switching and the development of smart networks**
- SEF strongly supports this recommendation and believes that there should now be a moratorium on installing so-called “smart meters” which cannot meet the proposed guidelines and standards.

Submitted on behalf of the Sustainable Forum Inc. by:

Tim Jones
Convenor
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