Scarcity pricing–proposed design

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My comments are related to the overall philosophy, not the detail.

First, I must question the underlying assumption that “electricity is a commodity like any other". These were the words that Lincoln Gould used when he introduced the market. I do not believe that this is the case. I understand that it is elementary economic theory that a market commodity must have price elasticity and an alternative good. There is no doubt that there is no alternative to electricity. You cannot run a computer on gas. Price elasticity is not great because the value of electricity is much greater than its cost. Yet if it were priced at value, our whole economy would probably collapse. I believe that electricity is more akin to roads, water supply and sewage–things that a modern society simply cannot do without and which, in general, are priced at cost.

In the days of the ECNZ and before then, electricity was, in general, priced at its cost. (Except for various political interventions.) Since the electricity market came into being, electricity is priced on the basis of a spot price that bears little relation to the actual cost of generation. When the supply is constrained, price–as we recently saw with Genesis–becomes “a trade-off between greed and guilt."

I also challenge the supposition that the only way of ensuring that we have sufficient reserve capacity is to create enormous price spikes during shortages. I have two problems with this. The first is that it means that anyone supplying reserve power is taking a very large gamble and is, most certainly, in a very risky business. Electricity generation should be a boring, safe, business. The other and even larger problem is that in order to provide the necessary inducement to a very small segment of the market, it delivers huge windfall profits to other generators trading on the spot market. As far as I can see, these windfall profits simply distort the market and result in an increase in the long term hedge price. This does not benefit consumers. So, at the very best, it is a blunt, ill targeted instrument that still leaves those owning reserve generation in a high risk situation.

The document also discusses demand-side management. It is fundamental that, to be really useful, demand side management must be predictable. If the system operator does not know how much load he will be able to shed, all he can do is assume it will be very little and schedule generation that, as it probably turns out, will not be needed. This is inefficient and expensive. Given that windpower will seriously increase the volatility of the market and it will mean that the demands on the non-windpower part of the system will be more and more unpredictable and the winter peak demand period will happen over a longer period of time, predictable demand side management is very important.

New Zealand once had the world's best demand-side management system. Unfortunately, as a direct result of the market, it has been run down and is only operating as it should in the northern part of the South Island. If the Electricity Authority did no more than change the way the market works so that the lines companies and others would have an inducement to make proper use of the ripple

control system, most of the concerns about demand-side management would be solved. It is worth pointing out that, by regulation, houses in New Zealand must have large capacity heavily insulated water heaters. This has been done purely to allow the use of ripple control. Yet by neglecting to design a market that encouraged their use, we have forced consumers to make large investment into something that does not get properly used. If it was used it would be to their benefit.

Overall, the document seems to lack an ability to stand right back and look at the whole situation from the point of view of the consumer. There seems to be a blind belief that what benefits the “market" benefits the consumer. I do not believe that this is the case, purely because electricity is not a market commodity.

Specific comments on section 1.1

2 The document is concerned about forced load shedding yet it has not been used in the last 10 or 15 years. The problem is shortages of supply that do not require full load shedding but, as we cannot predict whether not it will rain, do require the advance use of reserve generation, or in the extreme, conservation in the form of asking people to reduce electricity consumption. I believe that appeals to reduce electricity consumption–provided they are not made too often–are a very reasonable way of managing the situation and far preferable to the high cost solutions proposed in this document. What is far more damaging is that high spot prices force our productive industries to cut back on production and, in some cases, result in reduced income for the very consumers who would be quite happy to take part in an emergency conservation programme.

3 During brief shortages that are created by transmission constraints or a sudden drop in wind generation, the best and obvious solution is to shed water heating load. But, as mentioned before, the amount of load that can be shed must be predictable. This is easily achieved with ripple control. We do not do this. Why not? Why does this document not address this?

During dry years, it is common sense that reserve generation must be brought on early to build up hydro storage for the peak demand periods. But the solutions proposed in this document do not consider this at all. It believes the price is all that counts, not the state of the lakes and whether or not it might rain. It is important to remember that the system operator should always assume that every year will be a dry year until it has demonstrated otherwise. In the “bad old days" the rather crude rule was “the lakes shall be full on 1 April". While this was not particularly rational, it was a step in the right direction. Of course, with such a policy, there was always a risk that it will rain. But that is one of the risks in managing a system to give a reliable supply.

5 As I have already argued, spot prices do not provide an efficient signal. A very large proportion of the signal is squandered and goes into windfall profits for those who do not need them.

6 I do not believe that public conservation campaigns impose costs on consumers anywhere comparable with the cost of a real shortage or the cost of running the power system inefficiently. If you want to build up investor confidence,

the best way is to turn electricity generation into a boring, safe, business. This is easily done with a single buyer market. If it is a safe business, the returns required will be lower and the customers will benefit. They will also benefit from the fact that the system is run efficiently as an integrated whole, not according to the whims of the various energy traders.

8 It is a dream to think that all users could ever react and significantly influence spot prices. If, as I do, you keep a close eye on spot prices you will be well aware that they go up and down at all times of the day night for seemingly incomprehensible reasons. To expect a majority of consumers to keep an eye on spot prices and change their way of life, their way of business and so on, purely to match the vagaries of the market, is ridiculous.

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