



# Electricity Pricing Review

Comments on Terms of Reference by Electric Power Optimization Centre

<http://www.epoc.org.nz>

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1. EPOC welcomes the opportunity to comment on the terms of reference for the proposed Electricity Pricing Review.
2. In the first instance, a review of the New Zealand electricity market is due. The operation of this market is essentially unchanged from that devised in 1996, and it is timely to review the entire structure of this, ranging from the wholesale market to transmission, distribution and retailing of electricity. EPOC welcomes a frank and open discussion of the merits and drawbacks of the market design and its durability as the world moves to new energy marketplaces that incentivize renewable energy supply, and increased demand-side participation.
3. EPOC welcomes the proposal to extend the scope of the review beyond looking solely at retail prices. There has been much focus in recent years on encouraging retail competition in electricity supply, but the wholesale market has largely been overlooked. It should also be studied as part of a pricing review.
4. EPOC recommends that the review consider pricing in both short-run and long-run contexts. The issues involved are rather different in each case. The appropriateness of electricity prices in the short run hangs very much on the time of use, with (for example) 3am on a Saturday being a very different context from a cold winter evening. In the long run, what matters is the overall average level of prices relative to the investment costs of infrastructure and socialized externalities.
5. EPOC recommends that the review of wholesale prices accounts for existing demand-side management strategies employed by industrial consumers, which have had the effect of suppressing wholesale high prices (and avoiding transmission pricing charges). Moreover, the interaction of spinning reserve and energy prices should be considered in the analysis.

6. EPOC recommends that the scope of the review be extended to specifically cover security of electricity supply. In our view, it is not possible to review the fairness or equity of consumer prices without considering the level of supply security offered, the mechanisms employed to achieve it, and the compensation (if any) for non-supply. In particular, we note that energy shortage risks are currently built into wholesale electricity prices. The study should include evaluating the consumer ability to respond to scarcity and effective use of demand response. The wholesale market in New Zealand is an energy-only market with no day-ahead market, and no capacity market). Like Colombia, New Zealand is hydro dominated, and isolated from neighbouring electricity suppliers, and so faces occasional energy shortage risks, but, unlike Colombia, New Zealand has no firm energy market to insure against these. Security of supply will be important in future years. Currently shortage risks are mitigated by thermal backup (such as Huntly's Rankine units) but these units are nearing retirement. The review should look at institutional mechanisms (like firm-energy auctions) to ensure enough energy is available to guarantee security of supply in dry years.
7. In EPOC's view, the terms of reference of the review should stress the need for sound modelling and data analytics to support any recommendations. Regulation of the New Zealand electricity market (NZEM) over the last 20 years has been light-handed. The development of new analytics tools by the Electricity Authority enables a data-driven approach to market oversight and regulation. Data in the NZEM is plentiful and relatively inexpensive to gather through existing market systems. Whatever the outcome of the review, EPOC supports moves towards a data-driven regime of market oversight and regulation enabling the regulator to act authoritatively in its market governance.
8. The review should be agnostic towards any political policies that seek to define what specific outcomes should be. For example, setting a target to have a 100% renewable electricity system in an average-hydrology year might be very inefficient way of New Zealand meeting its Paris CO2 obligations. While a target of 100% renewable electricity is a useful aspiration, the potentially high costs of delivering the last 5% of emission reductions from electricity might be lower in other sectors of the economy with less costly ways of reducing emissions.

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