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12 Cooper Street
Karori
Wellington 6012

Miriam Dean QC
Chair, Electricity Price Review
energymarkets@mbie.govt.nz
Wellington.

**SECOND SUBMISSION IN RESPONSE TO FIRST REPORT OF THE REVIEW PANEL:
GENTAILERS' PROFITS**

1. My name is Ivo Geoffrey Bertram. I hold a doctorate in Economics from the University of Oxford. Since retiring from the School of Economics and Finance at Victoria University of Wellington in 2009 I have been a Senior Associate at the University's Institute for Governance and Policy Studies (formerly the Institute for Policy Studies).
2. This submission is directed to the following sections of the First Report:
 - The paragraph headed “generation and retailing charges” on page 22;
 - The paragraph regarding dry-year backup generation on page 35 (second paragraph from top of page);
 - The section on “financial performance and profits of generators and retailers” pages 45 – 46
 - In particular the statement on page 46 that “we have not identified any evidence to indicate generator-retailer profits are excessive compared to underlying costs”.
3. Over the past four decades I have published extensively on the economics of the New Zealand electricity industry, including two detailed analyses of the history of industry changes since the mid-1980s¹.

¹ “Restructuring of the New Zealand Electricity Sector, 1984-2005”, in *International experience in restructured electricity markets: What works, what does not, and why?*, edited by F.P. Sioshansi and W. Pfaffenberger, Amsterdam: Elsevier, 2006, chapter 7, pp. 203-234; and “Weak regulation, rising margins, and asset revaluations: New Zealand's failing experiment in electricity reform”, Chapter 21 in F.P. Sioshansi (ed) *Evolution of Global Electricity Markets: New Paradigms, New Challenges, New Approaches*, Amsterdam: Elsevier Academic Press, 2013. Both these are available from me on request; photocopies can be accessed on my website at <http://www.geoffbertram.com/fileadmin/publications/Sioshansichapter.pdf> and <http://www.geoffbertram.com/fileadmin/publications/Sioshansi%202013%20book%20chapter.pdf>.

4. Since the 1980s I have written numerous reports², conference papers³, seminar presentations⁴, commentaries⁵, articles⁶, and book chapters⁷ on the subject of rents in electricity generation and the mechanisms available for changing the distribution of those rents amongst asset owners, consumers, and Government.

² Geoff Bertram, "Rents in the Energy Sector", in *Royal Commission on Social Policy: The April Report*, Wellington: Government Printer, 1988, Volume IV pages 293-325; Geoff Bertram, Ian Dempster, Stephen Gale and Simon Terry, *Hydro New Zealand: Providing for Progressive Pricing of Electricity*, Simon Terry Associates report for a consortium including Tasman Pulp and Paper, BHP New Zealand Steel, Enerco, Southpower, and Consumers Institute, March 1992; Geoff Bertram and Simon Terry, *Hydro New Zealand" A Bridge to Progressive Pricing of Electricity*, contract report for Southpower and Minister of Energy, July 1994.

³ *Valuation and Depreciation of Fixed Assets*, paper presented to Fourth Annual Effective Local Government Asset Management Conference, Auckland, 17 April 2001; *The Influence of Direct Contracts with Generators on Pool Prices*, paper presented to Conference on Electricity Pricing and Purchasing, Wellington, 14-15 April 1992 ; *Restructuring of the New Zealand Electricity Market, 1987 - 2005* presented at International Association for Energy Economics Conference Taipei June 20015; *Distributed generation, market power, and foreclosure in New Zealand*, paper for Institute of Policy Studies symposium 'Breaking Dependence on Fossil Fuels by 2020: Is this a Desirable and Realistic Goal for New Zealand?' , July 2006; *A Stocktake of Profitability and Investment Performance in the New Zealand Electricity Market After Two Decades* , paper to International Association for Energy Economics Conference, Stockholm, June 2011;

⁴ Presentation to WEA/DEUN seminar on the household energy affordability, 7 November 2012, <http://www.geoffbertram.com/fileadmin/publications/WEA%20and%20DEUN%20seminar%20November%202012.pdf> ; *Paths not taken in electricity restructuring: alternatives to the asset sale programme*, Institute of Policy Studies seminar 13 April 2013, ; *Asset revaluations, price gouging, and barriers to entry: the state of play in electricity sector non-regulation* presentation to IGPS symposium on proposals to restructure the electricity market, Wellington May 2013, <http://www.geoffbertram.com/fileadmin/publications/Asset%20valuations,%20price%20gouging,%20and%20barriers%20for%20website.pdf> ; *Asset values, rents, and the single buyer proposal for the New Zealand electricity sector*, seminar at Auckland University Economics Department, April 2014, <http://www.geoffbertram.com/fileadmin/publications/Auckland%20seminar%2011%20April%202014.pdf> ; *Neoliberalism and Energy Poverty: Why corporatisation, deregulation and privatisation doubled the cost of electricity for New Zealand households*, Continuing Education Centennial Lecture at Victoria University of Wellington, October 2015, http://www.geoffbertram.com/fileadmin/publications/How%20neoliberalism%20doubled%20the%20price%20of%20electricity_01.pdf ; .

⁵ "Comalco and Manapouri", *Victoria Economic Commentaries* Vol.8 No 2 September 1991, pp.81-88; "Reconciling Social Obligations and Commercial Expectations in Pricing the Outputs of Government Agencies", *Victoria Economic Commentaries* Vol.10 No 1 March 1993, pp.46-56; "Pricing as an Integral Part of Electricity Reform", *Victoria Economic Commentaries* Vol.10 No 1, March 1993, pp.69-77; "Efficiency and Equity: Securing Pareto Gains in Electricity Generation", *Victoria Economic Commentaries* Vol.12 No 2, September 1995, pp.25-32; "Another approach to state asset sales programme" *Dominion Post* 31 March 2012, <http://www.geoffbertram.com/fileadmin/publications/Dompost%20article.pdf> ; "Tighter Rein Urged on Asset Revaluations" *Dominion Post* 29 April 2013 p.A9, http://www.geoffbertram.com/fileadmin/publications/Dominion%20Post%20article%20on%20asset%20revaluations%20in%20electricity%20April%202013_02.pdf ; "History of power charges pure fiction". *New Zealand Herald*, January 30 2014, <http://www.geoffbertram.com/fileadmin/publications/History%20of%20power%20charges%20pure%20fiction.pdf> ; *Electricity supply and poverty in New Zealand* Briefing paper for Policy Observatory, Auckland Institute of Technology, 2014, <http://briefingpapers.co.nz/electricity-supply-and-poverty-in-new-zealand/>

⁶ "Non-Linear Pricing Theory: the Case of Wholesale Electricity Pricing in New Zealand", *New Zealand Economic Papers* 30(1):87-108, 1996.

⁷ See footnote 1 above.

5. The distribution of rents amongst asset owners, government and consumers lies at the heart of the longstanding debate over the pricing of wholesale, and hence retail, electricity in New Zealand. Four separate categories of rent arise in the generation and retailing of electricity in New Zealand:

- Differential (Ricardian) rents accrue to generators that are able to exploit especially productive natural resources (basically hydro);
- Carbon rents accrue to renewables-based generators when a carbon tax or emission trading scheme raises the costs of fossil-fuel-based generators and those generators are on the margin of the market;
- Oligopolistic rents arise from strategic manipulation of the market by the small group of large generators;
- Market-power rents are secured at retail level by vertically-integrated firms charging inflated mark-ups on the wholesale price.

Differential rent

6. Electricity generation in this country is a classic example of what is described in the economics literature as an increasing-cost industry. Whereas the textbook model of perfect competition under constant returns portrays all productive units as arrayed side by side, with each unit producing at the minimum point of its average cost curve and all units at the same level of price and cost (including normal profit), in an increasing-cost industry the producing units are arrayed in ascending order of cost to form an upward-sloping industry supply curve.
7. Under these conditions, infra-marginal producers have costs below the supply cost of the marginal producer, and when the market price is set at a level that just sustains the marginal producer, all infra-marginal producers will secure differential rent, equal to each producer's difference between total revenue and the competitive price. (Further rents associated with non-competitive prices are discussed below.)
8. A common situation in which differential rent arises is where some producers have access to especially productive natural resources that are in limited supply and hence not freely available to other competing producers or to new entrants. Such is the case with hydroelectric generating sites on New Zealand lakes and rivers.
9. Simply having possession of a favourable generation site does not in itself, of course, guarantee rent for the owner. Fixed capital – dams, turbine houses, generators, switchyards and control gear must all be combined with a hydro site to render it productive, and the resulting package of fixed factors of production - capital and land - must be able to supply electricity at a cost below that of the marginal generator.
10. “Cost” in this case means the actual resources that must be deployed, period by period, to sustain production of the good or service. A hydro generator must therefore cover the costs of operation and maintenance plus the requirements for whatever ongoing new investment in fixed assets is needed to keep the station operating. Generators

which have inherited assets whose costs were long ago sunk and fully written-off will have especially low economic costs, because the assets are specific and have no alternative value significantly greater than scrap value.

11. To pay for that ongoing investment requirement, and (when dealing with commercial entities) to provide a return on funds actually committed, some margin of revenue over prime operating cost will be needed, corresponding to the idea of a normal rate of profit for the owner. Adding that margin to operating costs yields the producer's supply price, and thereby locates it on the industry supply curve. All revenues over and above that supply price are pure differential rent, insofar as the industry is competitive.
12. Because differential rent accrues under competitive market conditions, it is not a market failure of the sort associated with the exercise of market power, and is not eliminated by the promotion of competition. It is an unearned increment received solely due to ownership of inframarginal production units. There are no efficiency gains flowing from rent, nor are there any efficiency losses incurred if rent is taken away. The question of whether it is socially desirable for rent to remain in the hands of the rentier is an old one, and it lies outside the realm of discourse of institutions such as the Electricity Authority.
13. The Electricity Authority's mandate is restricted to issues of competition and allocative efficiency, and does not include fairness – which is the heading under which differential rent and property rights need to be considered. The Authority's Memorandum of Understanding with the Ministry of Business, Innovation and Employment, dated 17 August 2016⁸ and updating an earlier MoU with the Ministry of Economic Development, is explicit on this point: "Consideration of fairness or equity issues is not part of the Authority's objective or functions. The Act provides for the Minister of Energy and Resources to recommend the Governor-General make regulations relating to domestic and small business consumers for fairness reasons, after consulting with the Minister of Consumer Affairs and obtaining and considering advice from the Authority (section 113)."
14. The disposition of the rents accruing to hydro generators by virtue of their resource endowment, location, and interaction with the Wholesale Electricity Market as currently organised, is therefore a matter for the Government of the day, and some recommendation on this matter should be forthcoming in this Price Review's advice to the Minister of Energy and Resources concerning the fairness of the prevailing price regime.
15. Because differential rents perform no allocative function, lump-sum transfers from the owner(s) of a rent-yielding asset to Government (via taxes) or to consumers of its product (via contracts or multipart pricing) have no effect on the production of the good or service in question, nor on the incentives to produce and invest at the margin of the market.

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<https://www.ea.govt.nz/about-us/strategic-planning-and-reporting/mous/>

16. The taxation literature makes clear that insofar as there are equity concerns about the distribution of inframarginal surpluses in an increasing-cost industry, due to pricing at the margin of the market, lump-sum taxation is an efficient means of capturing and transferring any undesirable rents⁹. That is, equity goals can be advanced without encroaching on productive efficiency.
17. The opposite issue arises with natural-monopoly (decreasing-cost) industries such as distribution networks, which would operate at a loss if forced to price at marginal cost. In providing for revenue recovery on the part of those networks, the imposition on consumers of lump-sum charges to cover fixed costs is common, combined with a variable price set at or near the marginal cost. The case for lump-sum transfer of rents from hydro generators to consumers is exactly symmetrical. In one case (networks) the lump sum is from consumers to producers; in the other (generation) it would be the other way.
18. It is ironic that New Zealand policymakers and regulators have never hesitated to allow lump-sum fixed charges to be taken from consumers by natural monopoly networks, but have never insisted on lump-sum transfers from rent-receiving generators to ordinary consumers. This systematic bias in favour of industry against consumers, which boils down pretty much to favouring the rich and powerful against the poor and vulnerable, has been deeply embedded in New Zealand energy policy since 1986, and has had catastrophic consequences in terms of entrenching energy poverty in this country. One would have hoped that such a conspicuous policy bias would catch the eye of an inquiry whose terms of reference direct it to comment on matters of fairness.
19. Successive Governments have been happy to bank large dividends funded from generation rents, and to ignore or reject repeated calls for lump-sum redistribution to hold down final electricity prices to consumers. Large private-sector electricity users, in contrast, have always been keenly aware of the opportunity to use long-term contracts as a means of locking in favourable prices, effectively securing to themselves lump-sum transfers of rent. Most conspicuous are the contracts held by the Tiwai Point aluminium smelter, which have always stood as the model for what could have been put in place to protect consumers before the generation assets were separated, corporatised, and privatised.
20. The 1992 “Hydro New Zealand” proposal, of which I was a co-author, advocated the setting-up of a long-term contract for delivery of 20,000 GWh annually at a price of 2 cents per kilowatt-hour, with the benefits distributed to final consumers through a voucher scheme operated by a central trust. That study pointed out that¹⁰ “Average electricity prices ... do not need to rise to the cost of new generation to provide [an efficient price] signal.... A progressive wholesale price can be achieved by means of a very long-term contract which caps the price at which ECNZ can sell a specified quantity of its output.”

⁹ See, e.g., Peter A. Diamond and James A. Mirrlees, “Optimal Taxation and Public Production I: Production Efficiency”, *American Economic Review* vol. 61, issue 1, pp.8-27, 1971, p.9.

¹⁰ Geoff Bertram Ian Dempster, Stephen Gale and Simon Terry, *Hydro New Zealand: Providing for Progressive Pricing of Electricity*, Wellington: Electricity Reform Coalition, March 1992, p.p.1-2.

21. Several other proposals for vesting contracts¹¹ were put forward in the early 1990s in debates over the design of the Wholesale Electricity Market, but were not adopted. The Labour and Green Parties in 2013 proposed a similar idea, with a single buyer (New Zealand Power) that would have held long-term contracts with generators. That policy did not survive the defeat of those parties at the 2014 general election.
22. The transformation of the former state-owned generators to Mixed Ownership companies has now removed the option of using section 7 of the State-Owned Enterprises Act 1986 to require the generators to enter into such contracts for the benefit of household consumers. Under the current ownership model, the generators have no incentive to yield up any of their rents via the contract route except when strong countervailing power can be exercised (as continues to be the case with the Tiwai Point smelter).
23. Some avenues nevertheless remain open by which the Government could impose lump-sum levies on the generators. One of these is water royalties (to which the hydro generators have been exposed since exemptions, granted in 1987, expired in 2013), which could be hypothecated to fund subsidies to help low-income households pay their electricity bills, as seems to be foreshadowed on page 46 of the First Report. Another would be legislation to compel the generators to enter into long-term low-price wholesale contracts.
24. Other potential policy measures include re-nationalisation of the hydro assets, with a return to the philosophy that historically governed their construction and operation. Repeated assurances from Government ministers during the 1990s that corporatisation and privatisation would not lead to higher prices for consumers have proven hollow – but those statements do serve to dismiss any notion of a “regulatory compact” that might be claimed to have legitimised price-gouging and asset revaluation by the post-1999 generator-retailers.

Carbon rents

25. The Emissions Trading Scheme imposes on all carbon-emitting generators the obligation to acquire and surrender emission units sufficient to cover their emissions. This raises the costs of generation units that are reliant on coal, gas, oil or geothermal energy. Whenever an ETS-affected generator is on the market margin, its carbon costs are added to the competitive price, thereby raising the revenues (but not the costs) of large

¹¹ Vesting contracts have been used in Singapore since 2004 as a means mitigating generator market power; see https://www.ema.gov.sg/cmsmedia/Licensees/faq_vc.pdf and Frontier Economics, *Review of Vesting Contracts Regime: A Report Prepared for the Energy Market Authority*, May 2016, [https://www.google.com/url?q=https://www.ema.gov.sg/cmsmedia/Consultations/Electricity/review%2520of%2520vesting%2520contract%2520regime%2520\(2016\)/Frontier%2520Economics%2520Review%2520of%2520Vesting%2520Contract%2520Regime%2520-%2520Draft%2520Report.pdf&sa=U&ved=0ahUKEwjJ76-p3YneAhWJbbwKHUGVDbsQFggdMAK&client=internal-uds-cse&cx=010068747601753342889:pqwnbq6bbwi&usg=AOvVaw1VkjYeCbDTVnvv2C4jTRq](https://www.google.com/url?q=https://www.ema.gov.sg/cmsmedia/Consultations/Electricity/review%2520of%2520vesting%2520contract%2520regime%2520(2016)/Frontier%2520Economics%2520Review%2520of%2520Vesting%2520Contract%2520Regime%2520-%2520Draft%2520Report.pdf&sa=U&ved=0ahUKEwjJ76-p3YneAhWJbbwKHUGVDbsQFggdMAK&client=internal-uds-cse&cx=010068747601753342889:pqwnbq6bbwi&usg=AOvVaw1VkjYeCbDTVnvv2C4jTRq). That report notes, *inter alia*, (p.xii) that as an alternative to vesting contracts, “general behavioural obligations on generator bidding have proved problematic in Australia and New Zealand”.

hydro, wind, and potentially solar, generators. These extra revenues are pure rents, performing no allocative or productive function, but requiring consumers to pay full carbon charges on the non-carbon-emitting generators which account for the bulk of total supply.

26. Besides being transparently unfair, this arrangement is completely at odds with the incentives required for a transition towards a zero-carbon New Zealand economy. By driving up the supply price of renewable generation, the current market structure disincentivises the required transition away from fossil fuels in industry, home heating and transport, while yielding windfall rents to the hydro and wind generators.
27. I drew attention to this market distortion in 1996¹², and again in 2010 in joint work with Simon Terry¹³. There has been, to my knowledge at least, no effort made by policymakers or the industry to remove this perverse incentive.

Market manipulation rents

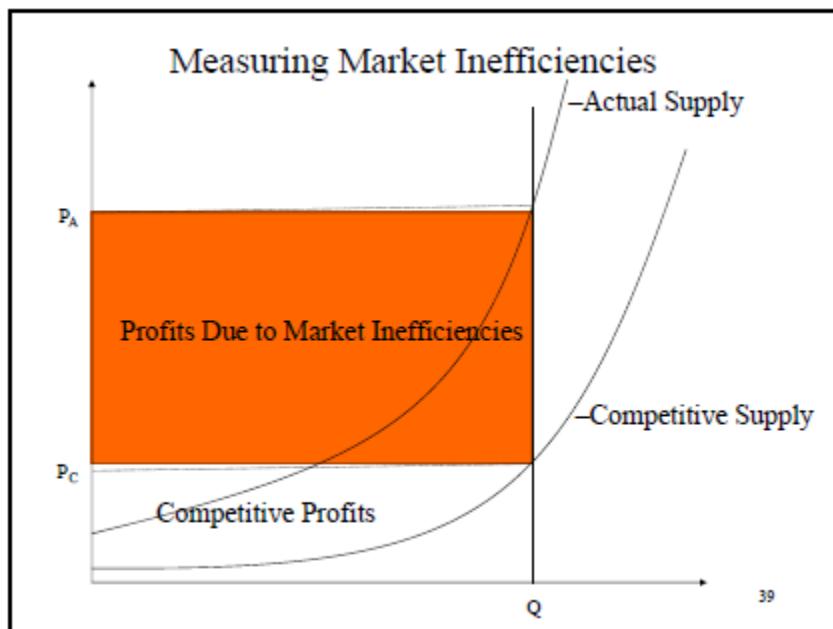
28. The design of the New Zealand energy-only spot market has always had clear potential to be manipulated by the large generators, as a way to protect and increase their rents on inframarginal generating units. Because all major generators are paid the price set by the offer of the marginal generator, they have strong incentives to collude to ensure that (i) the margin is always occupied by a high-cost unit, and (ii) demand pressure continually presses against that high-cost margin. Strategies to achieve this include
 - keeping demand high and pushing hard against limited supply - this arguably accounts for recent collective action by generators to keep the Tiwai Point smelter open and expanding;
 - bidding plant into the market at above true marginal cost;
 - maintaining fossil-fuelled generation on the margin, thus both leveraging off the relatively high running costs of such plant, and gaining additional rents whenever carbon charges are imposed on the fossil-fuelled units (see above) – arguably, this helps to account for the collective action by the large generators to keep the Huntly coal-fired units alive;
 - holding back on construction of large-scale renewables that could drive the marginal offer price down to zero and thus squeeze out hydro rents – hence, arguably, the fact that 2.3 GW of wind generation capacity consented since 2000 has never been built, of which 1.6 GW represents consented sites being held idle by large generators.¹⁴

¹² "Non-Linear Pricing Theory: the Case of Wholesale Electricity Pricing in New Zealand", *New Zealand Economic Papers* 30(1):87-108, 1996, p.107.

¹³ Geoff Bertram and Simon Terry, *The Carbon Challenge: New Zealand's Emissions Trading Scheme*, Wellington: Bridget Williams Books, 2010, section 6.2.4 pp.90-91.

¹⁴ New Zealand Wind Energy Association (2018) Consented Wind Farms, <http://www.windenergy.org.nz/consented-wind-farms>.

- pushing forward plans that put CCGT and OCT plants on the margin in the name of security while moving to block rooftop solar and other distributed renewables
29. Rents that are created by strategic bidding behaviour that causes the spot-market outcome to differ from a competitive benchmark are monopoly rents, as distinct from pure differential rents, and have consequences for economic efficiency as well as for equity. The diagram below¹⁵ schematically indicates the way in which incumbent generators, by pushing up the market supply curve (and specifically the marginal supply) can secure excess profits relative to a perfectly-competitive benchmark.



30. Recent work by Dr Stephen Poletti¹⁶ has estimated that on average over the period 2010-2016, monopolistic rent of this sort accounted for 36% of the total market revenue received by generators. Measures to force down the marginal offers that determine the market price could therefore make a considerable potential contribution to bringing down the wholesale price of electricity.
31. Only once has Government policy seriously threatened to put downward pressure on the marginal supply price. That was when, following the 2003 dry-year crisis, it spent

¹⁵ Taken from Frank A. Wolak, *Are the electricity supply industry challenges New Zealand faces any different from those in other hydro-dominated markets?* Presentation to Institute for the Study of Competition and Regulation, Victoria University of Wellington, 2013, slide 39.

¹⁶ Stephen A. Poletti, *Market Power in the NZ wholesale market 2010-2016* University of Auckland Business School Working Paper, September 2018, <https://cdn.auckland.ac.nz/assets/business/about/our-research/research-institutes-and-centres/energy-centre/reports/Market%20Power%20in%20the%20NZ%20wholesale%20market%202010-2016.pdf>.

Wolak, F., (2009) *An Assessment of the Performance of the New Zealand Wholesale Electricity Market (public version)*, Report to the Commerce Commission 2009, <http://www.comcom.govt.nz/investigation-reports/>, found excess profits of a similar order of magnitude for the period 2001-2007.

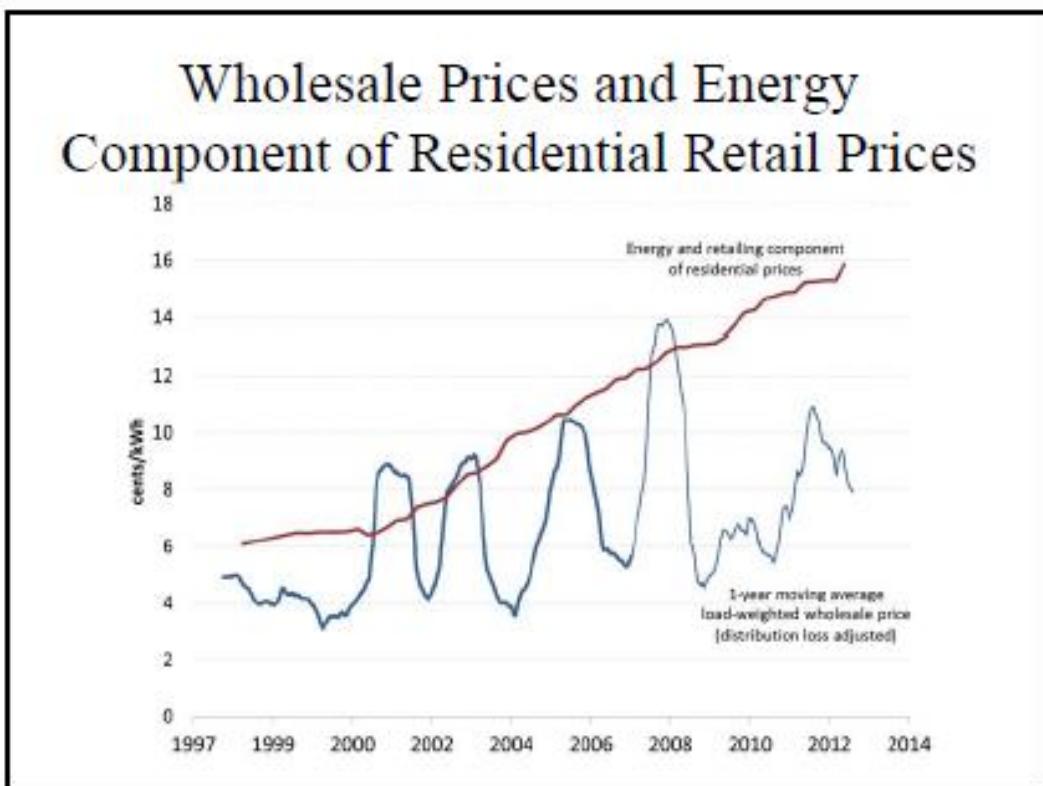
\$150 million to construct a diesel-fired generation plant at Whirinaki, to provide a reserve margin of supply. The plant came onto the margin of the market in June 2004 and was quickly subjected to gaming by the incumbent generators. First they successfully demanded that the station be constrained to run only when the spot price exceeded \$200 per MWh (though subsequently in 2005 two of them demanded that the station run below \$200 at a time when its doing so would raise their profits). Then in 2008, when the station's capacity was offered into the market at below its fuel cost, and the Government proposed a block levy on the industry to fund the shortfall, Whirinaki imposed a *de facto* price-cap that limited hydro and monopolistic rents. The industry then successfully lobbied for the station to be sold off, leaving the Government again with no direct leverage on the margin of the market.

32. Big players in the generation sector have thus been repeatedly opportunistic, and sometimes apparently collusive, in acting to hold the marginal cost of supply up as the means of maximising their rents at the expense of consumers. The potential for anti-competitive behaviour, given the market structure, is substantial. The incentive for established industry players to block competition for their market from distributed renewables – rooftop solar, small hydro, wind – is equally obvious.
33. The interests of consumers would be better served by policies that brought down the high benchmark price set by the marginal offer, whether by directly forcing down the marginal price, or by abandoning the energy-only market design in favour of a more differentiated arrangement that could involve, for example, one-off contracts to underwrite construction of generation units on the margin of supply, without loading their full costs onto the market-wide energy price.
34. Large-scale market entry by wind and solar from both grid-connected and distributed operators could cut the marginal energy price. Similarly a large marginal thermal plant on the Whirinaki model, funded by an industry levy and built either by Government itself or under a Government contract, could again cap the spot price while providing security of supply. (Funding by a lump-sum levy would reflect the fact that the benefit of having such a plant lies in the combination of a capped spot price coupled with improved security, both of which would benefit consumers.)
35. With the margin capped, the energy-only market could then deliver lower rents to the hydro generators, with lower dividends for their shareholders (including Government) – one way to get the sort of competitive pressure that really works, as distinct from the charade of the “What’s my number?” campaign.

Retail markups

36. Vertical integration of generation with retailing in 1999 was a major policy error that has had wide-ranging negative impacts ever since, via the “double marginalisation” process familiar from the Industrial Organisation literature.
37. The annual financial statements of the generator-retailer companies show rapidly escalating “costs” and margins in their retail activities, which have been restricted only slightly by the “What’s My Number” campaign.

38. The chart below¹⁷ shows the steady rise of the energy retail price relative to the wholesale price over the years 2000-2013, as the big generator-retailers locked in their stranglehold on the retail market. It would be useful to have that chart extended through to 2018 to reveal the extent to which increased retail competition may have compressed the monopoly margin of the vertically-integrated suppliers, as distinct from merely limiting its increase.



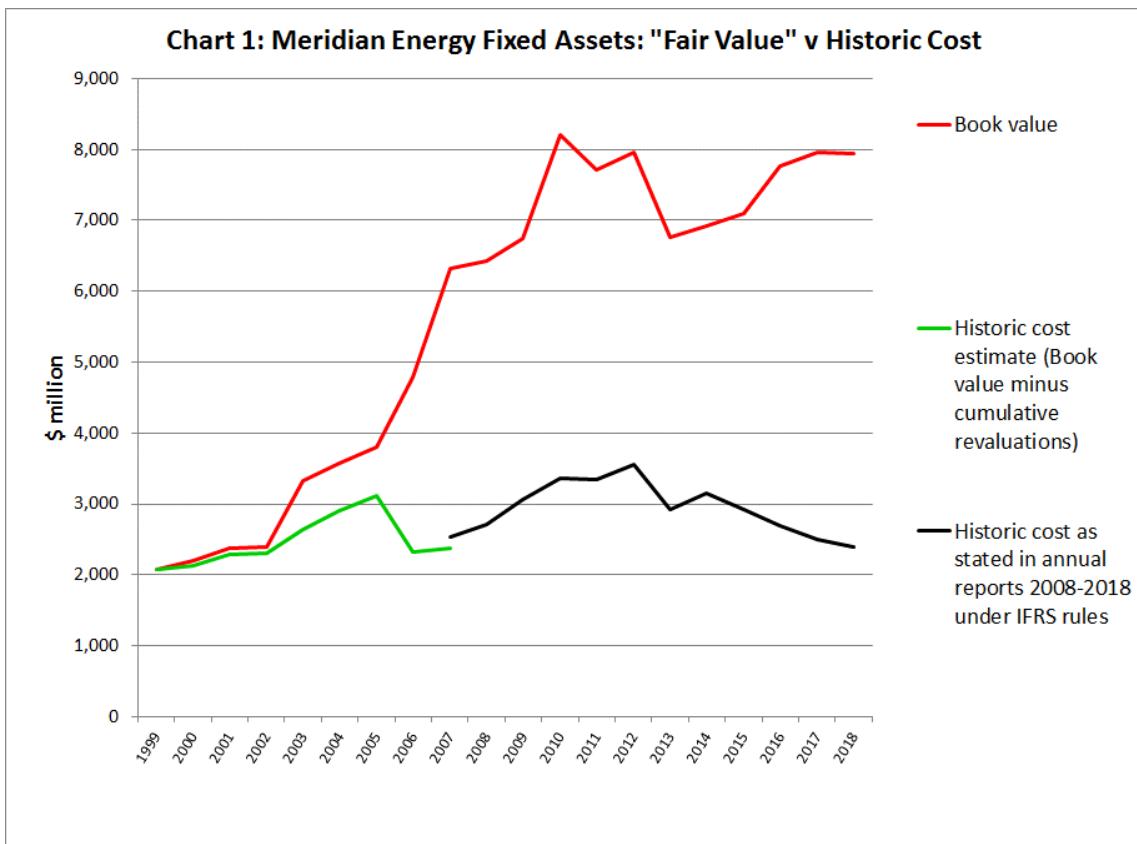
Excess profits

39. This brings me to the data on profitability during two decades of experience with the restructured generation/retail sector. The Price Review in its First Report has settled for some very general remarks on the free cashflows of generation companies, shown in Figure 20 on page 46 of the First Report.
40. The question supposedly addressed in that section of the Report is whether generator-retailer profits are excessive “compared to underlying costs”. Free cashflows on their own, however, do not provide an answer to this question, and the discussion on pages 7-8 of the Technical Report does not add any substantial treatment of costs versus revenue. All that can really be gleaned from Figure 20 is that between the demise of ECNZ and the full-blown bedded-down market from 2006 on, free cashflows jumped by

¹⁷ Frank A. Wolak, *Are the electricity supply industry challenges New Zealand faces any different from those in other hydro-dominated markets?* Presentation to Institute for the Study of Competition and Regulation, Victoria University of Wellington, 2013, slide 6.

something over half a billion dollars a year in real terms. No explanation for this remarkable jump in profits is offered, nor any justification for the claim that no excess profits are indicated by the cashflow chart.

41. Free cashflows in fact are likely to underestimate the scale of rent-taking. One of the key stylised facts of the New Zealand electricity sector is that corporatisation/privatisation around the turn of the century was quickly followed by a surge in operating costs, strongly indicative of increased rents being dispersed via wasteful expenditure.
42. A note in Figure 20 alleges a lack of data for the years between 1999 and 2003. This is surprising, given that Contact Energy produced annual financial statements throughout this period, and that the three SOEs and one former distributor (Trustpower) which took over ECNZ's remaining generation assets at 31 March 1999 have all published regular financial statements starting from that date, which remain on the public record.
43. The absence from Figure 20 of data for ECNZ prior to 1996 is also unfortunate. The transition from the previous NZED/ECNZ model of community-oriented provision of electricity at average cost took place over the decade from 1986 to 1996, and much of the new revenue-cost margin was established by then.
44. The alleged impossibility of separating generation from retail activities seems rather exaggerated in the First Report. It is true that several of the generator/retailers publish segmental information that fails to separate the two, but the annual reports of Meridian and Trustpower do provide disaggregated segmental reporting, and case studies of those would be of interest.
45. In my own work on the generation/retail operators I have used two indicators of whether profits are excessive. The first is a comparison between the book value of fixed assets and their historic cost. The second looks directly at the relationship between operating costs and revenues.
46. As the book value of fixed assets is based on "fair value" accounting, the gap between book value and historic cost indicates the extent to which actual and expected profits (free cashflows) have a discounted present value greater than the depreciated actual investment costs of the business.
47. As a typical example, Chart 1 below shows the comparison between book value (DCF "fair value") and historic cost for Meridian Energy, from its establishment in March 1999 to the latest available figures at June 30 2018. Starting from an asset valuation of \$2.075 billion at the time of vesting (31 March 1999) the book value had risen to \$7.94 billion by June 2018. Of this \$5.1 billion increase, \$0.3 billion was accounted for by the historic-cost process of investment and depreciation, and \$4.8 billion was due to asset revaluations, reflecting the dramatic increase in profitability over the decade 1999-2009.



48. It would be a useful contribution to understanding of the electricity industry's profit performance if the Price Review could lay out, in its final report, a clear explanation of the reasons why "fair value" has diverged so sharply and steadily from historic cost.
49. It would similarly be useful for public understanding if the final report could include a review of the detailed cost and revenue information contained in the company annual reports since 1990. The First Report's statement on page 46 that "we have not identified any evidence to indicate generator-retailer profits are excessive compared to underlying costs" has been made in complete isolation from any apparent effort to report on, and analyse, profits and costs, beyond the free-cashflow chart in Figure 20. At this point the Review seems to me to have failed to engage properly with the rich array of data on the public record.
50. The provisional finding that there have been no excessive profits taken therefore lacks credibility as it stands.

Yours sincerely

Geoff Bertram
Senior Associate,
Institute for Governance and Policy Studies
Victoria University of Wellington.