



ELECTRICITY PRICE REVIEW

SUBMISSION FORM

How to have your say

We are seeking submissions from the public and industry on our first report into the state of the electricity sector. The report contains a series of questions, which are listed in this form in the order in which they appear. You are free to answer some or all of them.

Where possible, please include evidence (such as facts, figures or relevant examples) to support your views. Please be sure to focus on the question asked and keep each answer short. There are also boxes for you to summarise your key points on Parts three, four and five of the report – we will use these when publishing a summary of responses. There are also boxes to briefly set out potential solutions to issues and concerns raised in the report, and one box at the end for you to include additional information not covered by the other questions.

We would prefer if you completed this form electronically. (The answer boxes will expand as you write.) You can print the form and write your responses. (In that case, expand the boxes before printing. If you still run out of room, continue your responses on an attached piece of paper, but be sure to label it so we know which question it relates to.)

We may contact you if we need to clarify any aspect of your submission.

Email your submission to energymarkets@mbie.govt.nz or post it to:

Electricity Price Review

Secretariat, Ministry of Business, Innovation and Employment

15 Stout Street

PO Box 1473

Wellington 6140

Contact details

| | |
|-------------|----------------------|
| Name | Helen Viggers |
|-------------|----------------------|

| | |
|--|--|
| Organisation | <p style="text-align: center;"> On behalf of He Kainga Oranga/The Housing and Health Research Programme and Professor Diana Sarfati, head of department; Professor Philippa Howden-Chapman; Professor Michael Baker; Dr Julie Bennett; Dr Ramona Tiatia; Dr Anja Mizdrak ; Maddie White; Oliver Robertson; </p> <p style="text-align: center;"> Department of Public Health University of Otago, Wellington </p> |
| Email address or physical address | <p style="text-align: center;"> Helen.viggers@otago.ac.nz </p> |

Use of information

We will use your feedback to help us prepare a report to the Government. This second report will recommend improvements to the structure and conduct of the sector, including to the regulatory framework.

We will publish all submissions in PDF form on the website of the Ministry of Business, Innovation and Employment (MBIE), except any material you identify as confidential or that we consider may be defamatory. By making a submission, we consider you have agreed to publication of your submission unless you clearly specify otherwise.

Release of information

Please indicate on the front of your submission whether it contains confidential information and mark the text accordingly. If your submission includes confidential information, please send us a separate public version of the submission.

Please be aware that all information in submissions is subject to the Official Information Act 1982. If we receive an official information request to release confidential parts of a submission, we will contact the submitter when responding to the request.

Private information

The Privacy Act 1993 establishes certain principles regarding the collection, use and disclosure of information about individuals by various agencies, including MBIE. Any personal information in your submission will be used solely to help develop policy advice for this review. Please clearly indicate in your submission whether you want your name to be excluded from any summary of submissions we may publish.

Permission to reproduce

The copyright owner authorises reproduction of this work, in whole or in part, as long as no charge is being made for the supply of copies, and the integrity and attribution of the work as a publication of MBIE is not interfered with in any way.

Summary of questions

Part three: Consumers and prices

Consumer interests

1. *What are your views on the assessment of consumers' priorities?*

We believe that reticulated electricity is an essential service for most New Zealand households. There are many dwellings without solid fuel burners, gas connections, or integrated solar or wind generation. Reticulated electricity is their only form of energy, and it is the primary form of energy for many more households.

Almost all New Zealand dwellings require energy input at least some of the year in order to be at healthy temperatures. In the 2013 census 79% of households reported using electricity as a source of heat, and nearly half of them reported electricity as their only source of heat (38% of all households).

Homes that are cold and damp can have health consequences for the occupants. Many New Zealand homes are colder than the 18°C recommended by the World Health Organization, and much of the dampness in New Zealand homes is effectively caused by under-heating.

As electricity is an essential service, we believe that the fundamental priority of residential consumers is that electricity is readily available at a price they can easily afford. The "price" however includes both the immediate financial price and the cost of long term externalities such as environmental and social conditions.

Howden-Chapman, P., A. Matheson, J. Crane, H. Viggers, M. Cunningham, T. Blakely, C. Cunningham, A. Woodward, K. Saville-Smith, D. O'Dea, M. Kennedy, M. Baker, N. Waipara, R. Chapman and G. Davie (2007). "Effect of insulating existing houses on health inequality: cluster randomised study in the community." *British Medical Journal* 334(7591): 460-464.

Howden-Chapman, P., N. Pierse, S. Nicholls, J. Gillespie-Bennett, H. Viggers, M. Cunningham, R. Phipps, M. Boulic, P. Fjallstrom, S. Free, R. Chapman, B. Lloyd, K. Wickens, D. Shields, M. Baker, C. Cunningham, A. Woodward, C. Bullen and J. Crane (2008). "Effects of improved home heating on asthma in community dwelling children: randomised controlled trial." *British Medical Journal* 337(7674).

Telfar Barnard, L. (2009). Home Truths and Cool Admissions: New Zealand housing attributes and excess winter hospitalisation. PhD, University of Otago.

Isaacs, N., M. Camilleri, L. Burrough, A. Pollard, K. Saville-Smith, R. Fraser, P. Rossouw and J. Jowett (2010). *Energy Use in New Zealand Households: Final Report on the Household Energy End-use Project (HEEP)*, BRANZ.

Pollard, A. (2018) *Could damp homes be too cold/underheated* BRANZ study report SR389. Judgeford, New Zealand: BRANZ Ltd

2. *What are your views on whether consumers have an effective voice in the electricity sector?*

We do not believe that residential customers currently have an effective voice in the electricity sector. We note that, as discussed later in the review document, there are tensions between how electricity sector costs are divided between industrial, commercial and residential customers. Therefore we believe that it is essential to have residential customers fully represented on advisory groups including those to the Electricity Authority.

In addition we note the need for the residential consumer representatives to be chosen by residential consumer organizations rather than government, the industry or the regulator. It is also an important consumer protection for government/industry/the regulator to **not** have the power to exclude any consumer organization from oversight activities to ensure that those most focused on consumer protection retain access.

Palast, G., J. Oppenheim and T. MacGregor (2003). Democracy and Regulation: How the Public can Govern Essential Services. London/ Ann Arbor, Pluto Press.

3. *What are your views on whether consumers trust the electricity sector to look after their interests?*

We believe that residential consumers should not have to trust the electricity sector to look after their interests, as there should be a regulatory body answerable to residential consumers that ensures residential consumer interests are appropriately valued.

Prices

4. *What are your views on the assessment of the make-up of recent price changes?*

We believe that reticulated electricity is an essential service for most New Zealand households. We believe that the make-up of recent price changes is less important than the fact of the changes. We believe that the much steeper increase in residential prices than commercial or industrial prices is a clear signal that the current system is not working effectively for residential consumers.

5. *What are your views on the assessment of how electricity prices compare internationally?*

Figures 9 and 10 which show that New Zealand's electricity prices are low to middle of the OECD countries show only part of the complexity.

New Zealand households are unusually reliant on electricity as an energy source. In 2008, although New Zealand was 6th cheapest out of 20 countries for electricity prices, because about three-quarters of our domestic energy use was electricity, overall New Zealand households often paid more for a gigawatt of domestic heat than people from other OECD countries. It cost almost one and a half times as much for a domestic customer to buy a gigajoule (GJ) of electrical energy in New Zealand, than it did for a customer in Italy (the most expensive country listed for natural gas) to buy a GJ of energy in the form of natural gas.

In 2016 71% of New Zealand's residential energy was electricity. Only two OECD countries had a higher proportion of residential energy that was electrical than New Zealand- Norway (78%), another country with abundant hydro-electrical resource and

Israel (75%). In comparison in 2016 using purchasing power parities Norway had the cheapest electricity for residential households at \$US86.7 per Mwhr of 33 OECD countries, while NZ was 12th of the 33 at \$195 per MWhr (the price for Israel was not reported). In our view it is more appropriate to compare the costs of residential energy using the mix of resources used in each country, than merely the cost of electricity.

Howden-Chapman, P., H. Viggers, R. Chapman, K. O'Sullivan, L. Telfar Barnard and B. Lloyd (2012). "Tackling cold housing and fuel poverty in New Zealand: A review of policies, research, and health impacts." Energy Policy 49: 134-142.

International Energy Agency Table 21 Electricity prices for households in USD/MWh (using PPPs)
Energy Prices and Taxes: Second Quarter 2018

International Energy Agency World Energy Balances 2018 II 50-II 152

6. *What are your views on the outlook for electricity prices?*

We believe that demand for electricity may well increase in the future, but the size of this increase/decrease will be determined at least partially by such things as intrinsic demand management (in the form of energy efficient dwellings) as well as technology.

Affordability

7. *What are your views on the assessment of the size of the affordability problem?*

We have estimated about a quarter of New Zealand households to be in fuel poverty. A more recent estimate, using administrative sources found that nearly one-third of households had one or more indicators of energy hardship. Although New Zealand does not have the data-sources that allow us to use the current English method of calculating fuel poverty, there is sufficient local evidence that it is a substantial problem.

We note that a single super-annuitant living alone currently has a before tax income of \$24,078.08. With a daily fixed charge of \$0.35 – approximately a low user charge inclusive of GST, being connected to the grid for a year will cost \$126 or 0.5% of their annual income. With a daily fixed charge of \$2.1 – a not expensive non-low user charge being grid connected will cost \$767 or 3.2% of their pre-tax annual income. It is evident that for low income groups the low-fixed user charge option is important for retaining flexibility in their budget.

Howden-Chapman, P., H. Viggers, R. Chapman, K. O'Sullivan, L. Telfar Barnard and B. Lloyd (2012). "Tackling cold housing and fuel poverty in New Zealand: A review of policies, research, and health impacts." *Energy Policy* 49: 134-142.

Stats NZ (2017). *Investigating different measures of energy hardship in New Zealand*. Wellington, New Zealand, Stats NZ Tatauranga Aotearoa.

8. *What are your views of the assessment of the causes of the affordability problem?*

The causes of in-affordable energy services are multi-faceted. They include: poorly designed housing that is difficult to heat, heat sources inefficient and/or that are expensive to run, and low household incomes.

In addition to the more distant causes of the affordability problem are more proximal ones, such as prepayment meters which simultaneously charge domestic customers using them more per kwhr than other domestic customers, and reduce the customer's ability to choose either another plan with the same company or switch between companies.

Successive New Zealand governments have allowed, and even encouraged the dependence on reticulated electricity. There is nothing in the current Building Code that requires new dwellings to have either non-electrical forms of heating, or be sufficiently insulated that no heating is required. Therefore, it is likely that New Zealanders dependence on electrical heating will continue for the foreseeable future.

O'Sullivan, K. C., P. L. Howden-Chapman and G. Fougere (2011). "Making the connection: The relationship between fuel poverty, electricity disconnection, and prepayment metering." *Energy Policy* 39(2): 733-741.

9. *What are your views of the assessment of the outlook for the affordability problem?*

We agree that affordability is a problem that the industry, regulators and the government all have a part in dealing with the affordability problem.

We note that in the United States, as part of the pricing process there has been for many decades a process where regulators and the electricity companies agree on social pricing programs run by the utility companies for the (domestic) consumers in their area. These programmes are not an optional extra run at the discretion of the companies, rather negotiations about them are part of the regulatory process. We consider this could be a way forward for New Zealand.

Palast, G., J. Oppenheim and T. MacGregor (2003). Democracy and Regulation: How the Public can Govern Essential Services. London/ Ann Arbor, Pluto Press.

Summary of feedback on Part three

10. *Please summarise your key points on Part three.*

Reticulated electricity is an essential service for most New Zealand households. Residential consumers have not had an effective voice in the shaping of the electricity sector. This has led to many of their concerns being largely ignored in the sector, and hence to the increasing size of the affordability problem. A prerequisite for a lasting solution for residential customers, is the customers having direct representation in the decisions made running the sector. They should not have to trust the electricity sector; an accountable regulatory body should protect the public interest.

Successive New Zealand governments have allowed, and even encouraged the dependence on reticulated electricity.

A way forward for New Zealand could be similar to many U.S. processes where regulators and the electricity companies agree on social pricing programs run by the utility companies for the (domestic) consumers in their area.

Many aspects of the electricity sector are a natural monopoly (especially in a country the size and shape of New Zealand), and hence an efficient regulatory process is a necessary aspect of ensuring the electricity sector is run for the benefit of all New Zealanders, rather than just the shareholders in electricity companies.

The real and large affordability problem that has developed is at least partially a side-effect of this natural monopoly process.

Solutions to issues and concerns raised in Part three

11. *Please briefly describe any potential solutions to the issues and concerns raised in Part three.*

We consider that residential consumers need dedicated representation by consumer groups at governance levels.

We think that some aspects of the US model of social pricing of essential services should be considered for New Zealand regulations.

In addition we note that the way “consumers” is used in the document is ambiguous – mostly it seemingly implies “residential consumers”, but sometimes “commercial consumers” or “industrial consumers” seem to be included too. As the needs of these three consumer groups are sometimes disparate it would be helpful if the document had been more specific about which consumer group it was referring to in each section. We suggest that the final report is always specific about which group of consumers it is refers to.

Part four: Industry

Generation

12. *What are your views on the assessment of generation sector performance?*

13. *What are your views of the assessment of barriers to competition in the generation sector?*

We note that a market where the five biggest producers account for 90% of the production could be considered an oligopoly. This suggests that there may be barriers to competition.

14. *What are your views on whether current arrangements will ensure sufficient new generation to meet demand?*

Retailing

15. *What are your views on the assessment of retail sector performance?*

We note that part 3 concluded that “retailing charges were the biggest component of residential price rises between 2004 and 2038 (3.5 c/kWh or 30 per cent).” We also note that figure 8 demonstrates that retailing charges are much higher for residential customers than either commercial or industrial customers. We consider these strong markers to indicate that there may be problems with retail sector performance.

Switching

We approve of the effort that the Electricity Authority has exerted to make it easier to switch between retailers.

However we consider that electricity is an essential service, and there are many residential customers who either through lack of ability or lack of inclination do not wish to engage actively with the electricity market. We note that the report suggests between 23% and 42% of residential customers have not switched retailers since 2002. We believe that as electricity is an essential service residential customers should not have to engage actively with the market in order to get a good deal.

In particular we believe that customers who have not actively engaged with the market should not have to pay higher prices in order to give discounts to customers who have engaged with the market, and are offered a new-customer, win-back, or some other discount.

Prompt payment discounts/late payment penalties

We agree that the ‘prompt payment’ discounts of up to 26% are in fact late payment penalties. We suggest that these be reduced to only cover the actual cost of late payments.

Prepayment meters

We strongly believe that households with pre-payment meters should be paying rates no more than those on post-payment systems. We consider that it might be appropriate for people with pre-pay meters to pay lower rates than the post-payment customers due to the guaranteed payment implicit in the pre-purchase of electricity. These households should also be able to switch as easily as other customers between low fixed and standard fixed daily rates.

We would support the elimination of win-back discounts in order to simultaneously:

- Potentially pro-actively lower the costs to all (residential) customers of the retailer as it seeks to ensure its current (residential) customers will not wish to change
- Specifically, not increase the costs to (residential) customers who, for their own reasons, are not active in the electricity market
- Allow the faster expansion of the market share of new-entrant retailers.

Vertical integration

17. *What are your views on the assessment of vertical integration and the contract market?*

18. *What are your views on the assessment of generators' and retailers' profits?*

We believe the absence of sufficiently detailed data to separately analyse whether generators and retailers have been making excessive profits is in itself an indicator of insufficient required reporting in the electricity sector.

We refer to Geoff Betram's submission for the discussion of costs.

Transmission

19. *What are your views on the process, timing and fairness aspects of the transmission pricing methodology?*

We strongly believe that fairness should be part of the Electricity Authority's statutory objectives. Fairness being difficult to achieve does not reduce its desirability as an end-goal. In addition we believe that fairness should be explicitly considered from the standpoint of each of the main customer groups including residential.

Although the comparison of Transpower's profits with the Weighted Average Cost of Capital is somewhat reassuring, consideration should be taken that as electricity is an essential service the revenue stream through Transpower's assets is virtually guaranteed, therefore it is appropriate for investors to have a lower rate of return than on other investments due to its lack of risk.

Palast, G., J. Oppenheim and T. MacGregor (2003). Democracy and Regulation: How the Public can Govern Essential Services. London/ Ann Arbor, Pluto Press.

Distribution

20. *What are your views on the assessment of distributors' profits?*

Similar to the discussion on Transmission we note that although the comparison of distributors profits with the Weighted Average Cost of Capital is somewhat reassuring, consideration should be taken that as electricity is an essential service the revenue stream of the distributors is virtually guaranteed, therefore it is appropriate for investors to have a lower rate of return than on other investments due to the lack of risk.

We agree that there is the potential for cross-subsidization of other businesses owned by the distributors from the monopoly network business. We believe that in order to prevent such cross-subsidization there should be a set of transparent accounts released, at least to the Electricity Authority and preferably to the wider public.

21. *What are your views on the assessment of barriers to greater efficiency for distributors?*

Price Structures

We agree with the need for price structures to begin to reflect to some degree the costs of peak demand. However for many residential consumers, particularly those in rental homes or working several jobs, there may be little opportunity to alter the dwelling or demand shift, and as electricity is an essential service these people must also be catered for. In particular, we believe that every residential customer must have the ability to choose a tariff that will allow them to know in advance how much they will be paying for a unit of electricity – even if they do not have access to the internet.

We suggest that electrical vehicle owners are the obvious place to start as these people are both likely to be technically literate and have a new demand for electricity.

We think it more accurate to say that the current structure of charges is “influencing” than “distorting” decisions about solar generation. We think that residential consumers, who have invested in solar panels could be encouraged to also invest in batteries which would reduce the cold winter evening demand, and the stress on the distribution network.

In addition, we note that there are other technologies which reduce winter peak evening demand such as retrofitted insulation, or dwellings built to nearly-zero-energy standard, or heated with solid fuel burners.

Metering Data

We consider the primary owner of metering data (from smart-meters or any other reading methods) to be the consumer of the electricity. Companies, which own the meters, charge the electricity users for the use of the meters, therefore it is appropriate for the data to be primarily owned by the consumer. Users should not face charges for accessing their own data in a standard format.

In addition, given that reticulated electricity is an essential service, and the need for a functioning electricity network, that in the interests of the country it is appropriate that both:

- appropriately aggregated data are available promptly to distributors to efficiently manage their networks.
- anonymised individual level data is available to government agencies, and appropriately screened other individuals/agencies probably through Statistics New Zealand’s Integrated Data Infrastructure.

We do not believe that any intermediate companies (metering, retailers, lines etc) companies own this data, or have any right to either sell it, or charge for access to it.

We believe that fairness, as well as economic efficiency, should be part of the allocation of distribution costs. In particular we do not believe that it is appropriate for small residential customers to be effectively subsidizing business customers as demonstrated in figures 4 and 5 of the technical paper. Although most of the plotted data fitted inside the bounds of suggested economic efficiency, the clear pattern was for residential customers to pay a greater share of the distribution costs than their share of electricity use, to the reciprocal benefit of the business customers.

Without this fairness objective, there is a danger residential customers may end up subsidizing the business customers, which can be larger and more powerful in both economic and political terms.

23. What are your views on the assessment of challenges facing electricity distribution?

Summary of feedback on Part four

24. Please summarise your key points on Part four.

We believe that as electricity is an essential service it is appropriate for “fairness” to be explicitly considered when allocating costs, rather than solely profit generation or economic efficiency.

To this end:

- **The substantial increase in retailing charges documented in part 3 suggests that competition is not performing adequately at controlling prices.**
- **Residential consumers who do not engage with the market should still receive good pricing**
- **Households with pre-payment meters should not pay more for their energy than those on post-payment schemes, and ideally pay less.**
- **Retailers should not be allowed to attempt to win-back residential customers who have changed company.**
- **The lack of sufficiently detailed data to analyse for generator/retailer excessive profits is an indicator in itself of insufficient regulation in the sector.**
- **The allowable profits in the generation, transmission and distribution sectors should account for their lack of risk as an investment.**
- **The information in metering data should belong primarily to the customer and secondly to New Zealand as a whole, not to the company which owns the meter**
- **Residential customers should pay a smaller proportion of distribution costs than they are currently doing.**

Many aspects of the electricity sector are a natural monopoly (especially in a country the size and shape of New Zealand), and hence an efficient regulatory process is a necessary aspect of ensuring the electricity sector is run for the benefit of all New Zealanders, rather than just the shareholders in electricity companies.

Solutions to issues and concerns raised in Part four

25. Please briefly describe any potential solutions to the issues and concerns raised in Part four.

We strongly believe that fairness should be made part of the Electricity Authority's statutory objectives, and that the three main customer groups – residential, commercial and industrial – are all referred to in the legislation. We believe that other regulations should be considered through a fairness or equity lens including:

- Households with pre-payment meters should not pay more for their energy than those on post-payment schemes, and ideally pay less.
- Retailers should not be allowed to attempt to win-back residential customers who have changed company
- Increased reporting requirements to allow better determination of the profits of sector companies.
- Allowable profits to take account of the lack of risk of the investment
- Redistribution of the distribution costs.

We suggest that metering data are made available, appropriately anonymized through the Integrated Data Infrastructure.

Part five: Technology and regulation

Technology

26. *What are your views on the assessment of the impact of technology on consumers and the electricity industry?*

We believe that, in addition to the technologies mentioned in the first report, it is urgent to simultaneously pursue a programme of aggressive energy conservation, in both the residential and other sectors. It is far more efficient to reduce electricity use through thermal insulation, than to find new ways to generate it.

We encourage the work to make peer-to-peer electricity sales viable.

27. *What are your views on the assessment of the impact of technology on pricing mechanisms and the fairness of prices?*

If enough solar panels and battery systems are installed, then investment in transmission and distribution systems may be able to be reduced. It is important to ensure that only appropriate investment in these systems is encouraged lest they become stranded assets.

28. *What are your views on how emerging technology will affect security of supply, resilience and prices?*

Regulation

29. *What are your views on the assessment of the place of environmental sustainability and fairness in the regulatory system?*

We think that fairness and environmental sustainability should be added to the Electricity Authority's statutory purpose. We note that environmental sustainability is embedded in fairness through intergenerational equity issues, but consider it useful that it is explicitly mentioned also.

In addition, we think that the mandate for the Electricity Authority to promote the good operation of the electricity industry "for the long-term benefit of consumers" should be changed to explicitly mention the three main category of consumers. This is because the three categories of consumer – residential, commercial and industrial –sometimes have conflicting interests, and in the past there has been the apparent capture of the "long-term benefit" objective by industrial and large-scale commercial consumers to the detriment of residential and small-business consumers.

30. *What are your views on the assessment of low fixed charge tariff regulations?*

The low fixed-charge tariff regulations are almost the only social good regulation required of the New Zealand electricity industry. We believe that it is appropriate for an essential service to be regulated to ensure just and inclusive social outcomes. We would not object if the low fixed-user charges were replaced with other regulations encouraging energy conservation and giving social pricing to vulnerable users, however we feel strongly that the regulations should not be removed until a better social justice scheme has been formulated to seamlessly take its place.

Low income consumers

We again note that a single super-annuitant living alone, currently has a before tax income of \$24,078.08. With a daily fixed charge of approximately \$0.35 on a low user charge (GST inclusive) a grid connection for a year costs \$126 or 0.5% of their annual income. With a daily fixed charge of \$2.10, a not expensive, non-low user charge being grid connected will cost \$767 or 3.2% of their pre-tax annual income. It is evident that for low income groups the low-fixed user charge option is important for retaining flexibility in their budget. We believe that any scheme that replaces the low fixed-user charge scheme should have an at least an equivalent effect for households on low incomes.

We note that the regulations were introduced precisely after large rises in daily fixed charges which had a particularly deleterious effect on these consumers.

Consumers with Solar generation

The first report notes that without explicit subsidies for residential solar installations that the uptake has been modest to date in New Zealand. Arguably the low fixed user electricity charges have been the closest thing New Zealand has to a subsidy for distributed solar generation. In addition we note that many households have made their (for them) substantial investment in solar panels on the basis of the benefit from the low user charges, therefore a phase-out of the charges would need to be signaled well in advance. One solution to the peakiness of solar panel users electricity usage would be to encourage them to install batteries to harness their generation.

Low use consumers without solar generation

There are a number of technologies that may contribute to households being low users (such as retro-fitted insulation, or use of solid fuel as a heating source) which strongly reduce that household's winter evening peak energy use. The choice to install these for some residential consumers may have been affected by the low fixed user charges just as much as the decisions of others to install solar generation. Removal of the low fixed user charge would harm these customers.

Low income - high use consumers

Coates (reference 202) who was quoted to demonstrate that 40-45% of low-income consumers had greater than average electricity usage committed the "ecological fallacy" when estimating this using the small area deprivation index. This is because there is substantial variation within the 100-200 people measured in each small-area. The developers noted, when first creating the index that, "Even within the most deprived 10% of small areas, one in ten working aged people (10.8%) have none of the measured personal characteristics of deprivation... Conversely, 4.1% of working aged people in the least deprived 10% of small areas are classified personally as being among the 6.5% most multiply deprived in the country." Thus, it is incorrect to assume that all households in areas with high-deprivation scores are low income households. All that can be said is that households living in areas with high deprivation scores are more likely to be low income than those living in areas with low deprivation scores. We agree that there will be some low income high electricity users, however the data

presented in by Coates in reference 202 gives no feeling for how many there are. Therefore, we think it important to gain accurate data to understand how many low income high use residential customers there actually are, and the level of their use, in order to understand if the low fixed user charges are indeed a large problem for them. We note that one way to do this would be if the electricity metering data were available on the Integrated Data Infrastructure.

Salmond, C. and P. Crampton (2002). "Hetrogeneity of deprivation within very small areas " Journal of Epidemiology and Community Health 56(9): 669-670.

31. *What are your views on the assessment of gaps or overlaps between the regulators?*

Residential electricity is an essential service, and should be regulated accordingly.

32. *What are your views on the assessment of whether the regulatory framework and regulators' workplans enable new technologies and business models to emerge?*

We support the development of peer-to-peer trading.

33. *What are your views on the assessment of other matters for the regulatory framework?*

Residential electricity is an essential service, and should be regulated accordingly.

Summary of feedback on Part five

34. *Please summarise your key points on Part five.*

Residential electricity is an essential service, and should be regulated accordingly. Explicit consideration of fairness and environmental sustainability should be part of the Electricity Authority's mandate.

In addition to the new technology, it is necessary to do a comprehensive rollout of the old technology relating to building energy conservation for electricity to be most efficiently used.

The low fixed-charge tariff regulations are almost the only social good regulation required of the New Zealand electricity industry. We believe that it is appropriate for an essential service to be regulated to ensure just and inclusive social outcomes. The low fixed user tariff regulations should not be repealed unless replaced with other social good regulation encouraging energy conservation and giving social pricing to vulnerable users. There are technologies (such as insulation) which contribute both to low energy use and reduce the winter peak demand. Removal of the low fixed charges tariff would increase the unavoidable part of a single superannuitants electricity bill from 0.5% to 3.2% of their pre-tax annual income. The argument that the regulations are unfair to low income high users should not be further used until better data/analysis demonstrates that the regulations are causing injustices to them.

Solutions to issues and concerns raised in Part five

35. *Please briefly describe any potential solutions to the issues and concerns raised in Part five.*

Residential electricity is an essential service, and should be regulated accordingly.

Explicit consideration of fairness and environmental sustainability should be part of the Electricity Authority's mandate. The mandate for the Electricity Authority to promote the good operation of the electricity industry "for the long-term benefit of consumers" should be changed to explicitly mention the three main category of consumers – residential, commercial and industrial.

In addition to the new technology, it is necessary to do a comprehensive rollout of the old technology relating to building energy conservation in order for electricity to be most efficiently used.

Investigate the actual number of high-electricity-use, low-income households using appropriate methods.

Retain the low fixed-charged tariff regulations unless and until a better other social good regulation encouraging energy conservation and giving social pricing to vulnerable users is developed.

Encourage consumers with solar panels to install batteries.

Additional information

36. Please briefly provide any additional information or comment you would like to include in your submission.

The report is awkwardly siloed and included only some of the relevant concerns. In addition some concerns were placed in odd sections of the document (for instance the important discussion on the ownership of electricity metering data as a relatively minor point in section 20 on the barriers to efficiency for distributors)