
Submission to the Commerce Commission

on

**Initial Observations on
Forecasts Disclosed by 29
Electricity Distributors in
March 2013**

Final Submission

23 December 2013

Made on behalf of 22 Electricity Distribution
Businesses



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Introduction

1. This submission responds to the Commerce Commission's (the Commission's) Consultation Paper entitled "*Initial observations on forecasts disclosed by 29 electricity distributors in March 2013*", dated 29 November 2013 (the Paper).
2. This submission has been prepared by PricewaterhouseCoopers (PwC) on behalf of the following 22 Electricity Distribution Businesses (EDBs).
 - Alpine Energy Limited
 - Aurora Energy Limited
 - Buller Electricity Limited
 - Counties Power Limited
 - Eastland Network Limited
 - EA Networks Limited
 - Electra Limited
 - Electricity Invercargill Limited
 - Horizon Energy Distribution Limited
 - MainPower Limited
 - Marlborough Lines Limited
 - Nelson Electricity Limited
 - Network Tasman Limited
 - Network Waitaki Limited
 - Northpower Limited
 - OtagoNet Joint Venture
 - Scanpower Limited
 - The Lines Company Limited
 - The Power Company Limited
 - Top Energy Limited
 - Waipa Networks Limited
 - Westpower Limited.
3. The Paper sets out the Commission's initial observations on the forecast quantitative asset management information disclosed in March 2013 under the requirements of the Electricity Distribution Information Disclosure Determination 2012 (IDD).
4. In this submission we provide some initial general comments on the consultation and the interface with Information Disclosure (ID) and price quality regulation, before responding to the specific topics covered in the Paper.

Summary of submission

5. In this submission we:
 - Explain that this submission incorporates our initial views on the Paper, and that we expect to contribute further on the topics during 2014.
 - Note that our views primarily focus on information disclosure summary analysis, recognising that asset management forecasts may also be relevant to price-quality regulation.
 - Note that in previous submissions we have proposed that the sequencing of the information disclosure consultations was flawed, in that the information was specified before the approach to summary and analysis was determined. We retain the view that this current consultation on the approach to summary and analysis should have been undertaken before the information

requirements were finalised. We anticipate that more targeted and cost effective information requirements could have been achieved, as a result.

- Suggests that care is required in using the 2013 dataset, for a number of reasons, and that data integrity is paramount in any summary and analysis.
- Recognises the Commission's obligations in terms of summary and analysis of asset management information, but questions whether there are other alternatives which may be more cost effective and better meet the purpose. Possible alternatives include targeted reviews of aspects of AMPs and/or categories of expenditure.
- Note that EDBs' own forecasts should be retained as the primary source of capex and opex data, given the knowledge each EDB has of its network.
- Submit that expenditure models will not fully explain variances between network expenditures. Accordingly EDBs should have an opportunity to respond to any associated output before it is published.
- Comment briefly on the proposals for drivers, categories and models, but note that the ENA's forecasting work group will be providing more comprehensive feedback on these issues in the new year.

Consultation

6. The Paper was released on 29 November 2013, and a workshop was held on 12 December to discuss the initial observations set out in the Paper. The EDBs which support this submission appreciated the opportunity to engage with the Commission on this topic in a workshop session. We support the use of workshops during the Commission's consultation processes where practical.
7. In our view, the three week consultation period is insufficient for comprehensive responses to the range of issues raised in the Paper to be prepared. The EDBs which support his submission are currently focussed on pre Christmas tasks, including asset management planning and 2014 budgets and pricing. The timing of this consultation is therefore difficult. Accordingly this submission presents our initial views on the Paper, and the workshop presentations. With additional time, we would have more opportunity to discuss these issues more comprehensively amongst the group of EDBs, before responding.
8. We understand that the Commission intends to undertake two related consultations in 2014:
 - opex and capex forecasting for the DPP reset
 - further summary and analysis of disclosure information.
9. Given our current constraints, we anticipate providing further input to those consultations in due course.

Initial views

10. Before responding to the questions raised throughout the Paper, we make a number of more general observations about it in the following paragraphs. Our views are primarily focussed on the initial observations set out in the Paper in the context of the Commission's summary and analysis role under ID regulation. While a number of the topics addressed in the Paper are also relevant to resetting the Default Price-Quality Path (DPP), we understand the focus of the Paper is primarily the assessment of asset management information for ID purposes.
11. Part 4 of the Commerce Act requires the Commission to publish summary and analysis of the information disclosed by distributors. The purpose of summary and analysis is to promote a greater understanding of

the performance of each distributor, their relative performance, and the changes in their performance over time.¹

12. In 2012, following consultation, the IDD was published. This included new and amended information disclosure requirements for EDBs. The Paper presents initial observations on some of the data published in March 2013 in accordance with the IDD, namely forecast asset management data. This data was published in conjunction with EDB AMPs and covers the ten year planning period commencing 1 April 2013.
13. The dataset used when preparing the Paper includes historical and forecast capex and opex and historical and forecast network characteristics for each EDB. Given the data requirements were new for 2013, we suggest that some care is required when making observations of the type presented in the Paper. In particular we note the following.
 - The schedules used to capture the forecast data were specified in a manner which suits the ID regime (ie: the same format applies to every EDB). Thus each EDB must manipulate its own information into the standard template formats. This requires interpretation and reallocation of information, and in some circumstances new information to be created. It is expected this process will be refined and improved over time as a greater understanding of the templates emerges, and as EDBs have a chance to manage their own internal information processes with this output format in mind.
 - There was some misunderstanding about the template requirements (for example what was required in the 'constant price' version of the expenditure forecasts). There have also been some errors identified in the March 2013 disclosures since they were disclosed. More clarity will emerge over time to improve consistency and compliance. We encourage the Commission to continue to assist EDBs to better understand its IDD requirements, and note that the initiatives to date in this respect have been well received.
 - The IDD introduced new rules and definitions which have disrupted the historical time series. These include:
 - new related party transaction rules (which have altered how related party opex and capex transactions are valued)
 - new cost allocation methods (which have altered how the regulated business opex and capex is defined with reference to non regulated services)
 - new (more prescriptive) definitions for opex and capex categories and asset categories, which influence how costs and assets are allocated within the regulated service
 - new (more prescriptive) definitions for non financial asset related information.
 - The forecasting schedules which are now required to be included in annual AMP disclosures are not yet fully integrated into each EDB's asset management planning processes. We can expect this to improve over time.
 - The data required in the non financial schedules may not exist within every EDB, possibly not in the format required, or possibly not at all for some classes of assets, or information requirements.
14. We note that the analysis presented in the Paper highlights considerable variance in EDB opex and capex forecasts. Some of this variance will reflect the factors listed above, rather than any fundamental trend in opex or capex. Data integrity is paramount to summary and analysis, and this can be achieved with transparency over data sources and modelling.

¹ As set out in s53B of Part 4 of the Commerce Act

15. We also note that a barrier to understanding of the performance of each distributor is continually changing datasets and the introduction of new data measures which are not clearly defined and understood by EDBs when the dataset is created.

Asset management plans

16. EDBs have disclosed annual AMPs for a number of years as part of ID regulation. Over time the information requirements for regulatory AMPs have increased, become more prescriptive, and a number of compliance reviews have been undertaken by the Commission. It is generally agreed that the current AMPs reflect a higher degree of compliance with the regulatory rules than the earlier versions of them. They also tend to be much larger documents.
17. Under the 2012 IDD, additional information requirements were once again introduced for AMPs, including template schedules for quantitative forecast information and an asset management maturity assessment tool (AMMAT) self assessment schedule. We note that the IDD also introduced an AMP Update option which applies in some years, where EDBs may choose to disclose a 'light' version of an AMP. This assist in managing compliance costs. The quantitative schedules are required for the AMP Update.
18. As noted above, the Commission is required to undertake summary and analysis of disclosure information. The new quantitative AMP schedules are intended to facilitate this task, as it is difficult to assimilate all of the information which is contained in the AMP documents.
19. While the EDBs which support this submission appreciate the challenge for the Commission in this respect, we submit that the importance of the AMP should not be overlooked in the context of ID. AMPs include considerable context and supporting explanation which cannot be fully distilled into quantitative information. They also reflect a bottom up approach, where appropriate, to expenditure forecasts. By definition bottom up approaches will be more detailed, and hence tailored to the needs of a network, than top down approaches.

Purpose of analysis

20. As articulated at the workshop, it is the Commission's view that forecasting models can assist in analysing the large amount of information included in EDB AMP documents. The Commission's considers this is a relatively low cost approach (ie: less costly than undertaking independent reviews of the expenditure forecasts in all 29 AMPs). The Commission does not expect expenditure models to fully explain variances between networks, but AMP documents are expected to play a role in this respect.
21. The Paper focuses mainly on top down models of opex and potential models for capex. The Paper refers to the opex model which was used for the recent DPP reset for non-exempt EDBs and plans to further develop expenditure forecasting techniques for the forthcoming DPP reset.
22. While forecasting expenditure allowances are obviously important for the DPP price path for non-exempt EDBs, we understand the initial observation consultation is made in the context of ID summary and analysis. In our view the Paper doesn't adequately consider these two purposes, and the different requirements of them.
23. The Paper appears to suggest that the Commission plans to develop top down capex and opex models which will forecast capex and opex for each EDB and compare these to the AMP forecasts in order to determine how much of each EDB's own forecast expenditure is 'explained' by the models. If the Commission uses this approach, each EDB should be given the opportunity to explain their variance from the model, before the information is realised to the public.
24. In our view the Paper does not fully explain why this is the preferred approach to summary and analysis of asset management information, or what other alternatives have been considered. EDBs which support this submission are concerned that by not distinguishing appropriately between the DPP reset task, and the ID summary and analysis task, the proposals may not achieve the optimal (ie: the most cost effective) outcome from an ID perspective.

Use of models

25. Our fundamental concern is whether it is appropriate for the Commission to develop parallel, hypothetical capex and opex forecasts when each EDB prepares their own detailed forecasts, using the knowledge they have about their own networks and supply areas.
26. For example, should the models be developed as proposed, it is not clear how the outputs will be used. The Paper suggests that it is expected that there will be ‘unexplained’ variances between the top down model forecasts and an EDB’s own forecasts. What is not clear is what this will mean in practice for an EDB whose own forecasts are either higher or lower than that generated by the model when the Commission presents its summary and analysis.
27. We submit that there is the potential for reputational risk if the Commission presents components of expenditure as ‘unexplained’. There is also risk of unintended consequences where, for an example, to avoid such variances, the model specification starts to influence EDB expenditure plans. In our view this would be an unfortunate outcome, as for the very reasons set out in the Paper; the top down models cannot be expected to accurately reflect all of the circumstances which influence expenditure needs.
28. At the workshop, the potential for reputational risk was discussed. Commission staff acknowledged this concern and explained that the Commission was intending to be careful about how it presented the outcomes of this proposed work stream. We support this intent, and in addition, suggest that EDBs are provided with an opportunity to comment on any draft observations before they are published.
29. We would welcome further opportunity to discuss this issue with the Commission as it continues to develop its approach to ID summary and analysis.
30. The Paper suggests that the drivers proposed are consistent with those identified by distributors in previous consultations including the technical working groups. However in previous submissions we have proposed that the sequencing of the ID consultations was flawed, in that the ID information was specified before the approach to summary and analysis was determined.
31. We retain the view that this current consultation on the approach to summary and analysis should have been undertaken before the ID information requirements were finalised. We anticipate that more targeted and cost effective information requirements could have been achieved, as a result.
32. We also challenge the assumption that distributors have previously identified drivers for this purpose. While the Commission may have had this approach in mind at the time, this was not the focus of our previous responses to the ID consultation.

Alternative approaches to summary and analysis

Previous consultations

33. In 2011, the Commission undertook consultation on its paper “Information Disclosure: Approaches for Understanding EDB and GPB Cost Efficiency”. That paper included 22 questions for submitters to consider. We consider that that consultation is relevant to this Paper, and would appreciate understanding how the Commission has assessed the responses to that earlier consultation, and how these have influenced this current proposal.
34. The Paper suggests that the expenditure drivers proposed for the modelling are consistent with those identified by distributors in previous consultations including the ID technical working groups. While the Commission may have had this approach in mind at the time, this was not the focus of our previous responses to the ID consultation.

Alternative approaches

35. We continue to believe that there has not been a robust debate on the proposed approach to summary and analysis of asset management information. The Paper includes very few references to alternatives that have been considered and the relative pros and cons of alternatives relative to the proposed approach.

36. There is a brief discussion in paragraphs 9-11 of the Paper which notes the previous AMP compliance reviews, the DPP top down opex model and other analytical approaches, Paragraph 11 states:

Other analytical approaches may potentially be suitable in future. Amongst other things, each distributor must describe the approach to risk management, consumer engagement, and the basis for making decisions on planned investments. One option is therefore to review the processes and policies described by distributors.

37. We agree with this potential alternative, and consider it warrants further consideration, particularly given the concerns expressed throughout this submission about the ability of models to fully explain expenditures. We note that the Paper also acknowledges this challenge.

38. Other options include review of targeted components of AMPs. For example, the Paper highlights the planned increase in network replacement expenditure for a number of EDBs. This suggests that network replacement is emerging as an important issue for the industry which may benefit from further analysis by the Commission. As each AMP will contain information relevant to planned network replacements, which are not captured within the template ID schedules, targeted analysis of the AMPs on this topic may generate more meaningful observations for stakeholders than the proposed broad opex and capex top down models.

39. In the following paragraphs we comment on the modelling proposals contained in the Paper.

Materiality of expenditure categories

40. Chapter 2 of the Paper makes observations about the materiality of expenditure categories. This addresses the following.

- Capex and opex (in total)
- Categories of capex
- Categories of opex
- How the value of expenditure (by category) changes over time (in real terms).

41. As noted previously, the time series data is influenced by changes in regulatory rules and definitions, which is evident in the transition from historical data (up to FY12) and forecast data (from FY13).

42. In addition, we note that forecast data is likely to be more accurate in the early part of the planning period. In particular, large one off projects may be omitted from later years of the forecast, as the need for them is not yet known, they are difficult to anticipate, and difficult to cost in advance, before alternatives have been fully considered.

43. We also note that it is common for opex and capex projects and programmes to have multiple purposes, and the IDD requires such projects to be allocated to the category which is the primary driver. This may result in some categories being systematically under or over reported depending on EDBs' ranking of the drivers. Project allocation to the ID categories may also change within the planning period. For example a line rebuild may commence as condition response but transition to safety response due to increased health and safety requirements.

44. We support the intention for the Commission to focus on the most material components of capex and opex in its summary and analysis of ID information.

45. We note that the industry wide statistics presented are heavily influenced by the data for the largest EDBs. We encourage the Commission to consider ways to avoid this bias, and/or to consider alternative approaches which adequately reflect the experiences of smaller EDBs. We suggest that there may be value

in excluding the very largest networks from some of the industry wide analysis that could be presented in the summary and analysis outputs. We note that this technique was used in one of the presentations at the workshop.²

Drivers of each expenditure category

Approach

46. Chapter 3 of the Paper outlines the Commission's initial thoughts regarding the drivers of EDB capex and opex. There was some discussion on this topic at the workshop. We noted some concern about the terminology, and whether the representation of the drivers was accurate. In this respect we note the following.
- The three high-level drivers that are identified in the Paper may be better represented as categories of drivers, ie: within each of these there exist a number of different drivers.
 - The term 'ownership' for the first category of drivers caused some confusion because of the different ownership structures for EDBs within New Zealand. We suggest an alternative 'obligation to supply' category which reflects the contractual relationship between the EDB and its customers (including customer representatives) for electricity supply services. It is these existing contractual relationships which require EDBs to invest in, maintain and operate their networks
 - The Paper cites common network characteristics (at paragraph 60). We suggest the proportion of overhead and underground reticulation, climate and connected load are also relevant characteristics for defining a network.
47. We question the usefulness of attempting to allocate the six categories of capex and six categories of opex across three categories of high-level drivers, particularly as a number of expenditure categories share more than one high-level driver (as per Table 1). This approach seems to add a level of complexity (and debate) that may be able to be avoided by simply focussing on the drivers for each expenditure category in turn.
48. Finally we are concerned that the Paper includes some statements which are not fully explained. For example paragraph 62 refers to the proposed allocation of expenditure categories across drivers, as set out in Table 1. It states "*Our categorisation generally reflects the distributor's own assumption, which is implied by their allocation of expenditure.*" It would be useful if the Commission could explain what allocation of expenditure is referred to and where the distributor's assumptions have been sourced from.

Other drivers

49. The Paper acknowledges some of the challenges in implementing the proposed approach. We agree with many of the challenges identified in the Paper, for example:
- We recognise that a number of other factors will also affect the specific level of expenditure required by each distributor (para 58)
 - However, the measures are likely to be imperfect and it may make sense to consider a suite of them together (para 63)
 - More detailed information on the strength of the relationship would need to be determined empirically from the data (para 74)
50. Another example is changing demands of consumers, for example dairy load where security standards change in response to consumers demand for quality of supply.

² Refer slides 4 and 5 of the Commission's 'Top-down models of operating and capital expenditure' presentation.

51. It is for this reason that we question whether this is a valid approach for ID purposes, particularly given each EDB must make available significant information about its asset management plans and forecasts.
52. The challenge with attempting to define drivers is that, for the purpose of modelling, they are limited to things that can be measured. One of the workshop attendees mentioned the influence of health and safety regulations on EDBs' costs. These are not costs that fall neatly into one or other category of expenditure. They are reflected across all field work (capex and opex) and in support costs (through systems, processes, compliance activities etc). They are not costs that can be explained by a quantified driver. They are also not immaterial.
53. Other examples of drivers which are difficult to quantify include traffic management requirements or resiliency. We are concerned at the proposal to ignore those drivers which cannot be quantified. We believe this compromises the usefulness of the proposal. We submit that this challenge should not be dismissed as readily as it appears is intended.
54. We also note that there may be lags between the expenditure and the measure which is deemed relevant to quantify a driver. This is because not all expenditure is incremental (ie: step changes are required from time to time), and not all expenditure is reflected in short term outcomes (ie: reliability, safety and environmental investments may not be reflected in short term outcomes).
55. We note that the Paper requests feedback on the categories, drivers and measures set out in Chapter 3. We have not included comments on the detailed proposals due to the short consultation period, and our more fundamental concern as to whether this proposal is the most suitable from an ID perspective.
56. We also note that the ENA has a work group currently investigating possible approaches to forecasting capex and opex for DPP purposes, and we are interested in the recommendations of that group which we understand will be available early in 2014.

Top down models of expenditure

Opex model

57. Chapter 4 of the Paper outlines the Commission's existing opex model, which was developed for the purpose of the 2012 DPP price path reset. The model has been updated to include exempt EDBs, and compares each EDB's own opex forecasts with those generated by the model and presented as initial observations. Table 2 in the Paper compares disclosed and modelled network and non network opex forecasts for FY14-FY18. The results illustrate that the modelled forecasts fall within +/-10% of the EDBs' own forecasts for about half of the EDBs.³ It also illustrates that for some EDBs the model significantly over or understates forecast opex relative to the EDBs' own plans.⁴ This suggests that there are large components of forecast opex which are not explained by the existing top down opex model.
58. Table 2 includes an industry total variance which is quite small, especially for network opex. We note that this is not a relevant measure because it includes offsetting positive and negative variances. It is the ability to model opex for individual EDBs which is the objective of the model.
59. We acknowledge that the model was developed for the DPP, which applies a relatively low cost approach to assessing current and future profitability (and hence opex which is one of the inputs to profitability) using an industry wide approach, with some, but not all, data inputs derived from EDB specific data. This model was deemed by the Commission to be a suitable approach to the 2012 DPP reset, however further refinements are currently being investigated for the 2015 DPP.

³ This reflects 15 of 29 EDBs for network opex, 10 of 29 EDBs for non-network opex and 14 of 29 EDBs for total opex.

⁴ The most extreme variances exceed +/-40%, with one as high as 100%. We note that some of the issues with the new asset management schedules identified earlier may have influenced these outcomes.

60. It is relevant that the model has not been developed for ID purposes. For example the opex model does not attempt to assess each category of expenditure or driver included in Chapter 2 of the Paper.

Capex model

61. The Commission did not build a top down capex model for the DPP reset, as a different approach was used. Paragraph 119 Of the Paper indicates that the Commission considers top down capex models could provide an indication of the likely efficiency and appropriateness of the distributors [capex] forecast. The Paper goes on to suggest that different models may be required for different categories of capex.
62. The Paper describes two possible approaches, as follows.
- An adjustment method – using historical expenditure projected forward with adjustments for likely changes. As stated in paragraph 126, developing such a model would require the identification of the impact of a change in the representative drivers on the relevant category of expenditure.
 - An absolute calculation method – estimating absolute value of expenditure based on information on the current and expected performance of the network and unit cost assumptions that would need to be developed.
63. Both approaches present challenges in specifying appropriate data inputs and modelling assumptions. We acknowledge however that there is a possible benefit in developing such inputs and assumptions, in that they in turn could be used by EDBs to assist in developing their own bottom up forecasts of asset management expenditure.
64. Given the variance in capex plans between networks, and over time within each network, it is not immediately obvious that top down capex modelling is a reasonable approach to summary and analysis of network capex. We note that year on year variances in capex are to be expected for small networks, which is a particular challenge for New Zealand relative to other jurisdictions.
65. We understand the ENA's forecast work group is considering capex modelling, and as stated above, is expected to present its findings in early 2014.

Forecast changes in input prices

66. Chapter 5 of the Paper considers EDB forecasts of input price assumptions by comparing real and constant price capex and opex data included in the March 2013 disclosures. The March 2013 disclosures were the first time that EDBs were required to publish both constant price and nominal terms expenditure forecasts. There was some misunderstanding about these requirements and consequently we do not believe they currently provide an accurate view of expected input price inflation.
67. In particular:
- Some EDBs understood that CPI was to be used to convert constant price forecasts to nominal forecasts, despite their views on a range of expected input price measures
 - Some EDBs misunderstood the terms 'constant price' and 'nominal'
 - Some EDBs made errors in applying their input price assumptions when converting constant price forecasts to nominal forecasts.
68. We also note the following challenges in generating accurate nominal forecasts:
- EDB opex and capex is made up of a number of different material, labour and other inputs (such as fuel, utilities, professional fees etc)
 - There are no readily available forecasts of input price indices for EDB sector inputs

- Proxies are often used, such as economy wide price indices, but these are not generally available for the ten year planning period
- The weightings of inputs differ for different types of expenditure (for example the relevance of labour for maintenance vs capex vs support services can be quite different)
- Within each input category there are a number of prices which may influence capex or opex, and these prices may vary in importance for different types of projects and/or assets (for example steel, copper and aluminium commodity prices are all relevant for EDB assets, but some commodities are more relevant for some assets than others)
- Some prices are expressed in USD terms, and forecasts of them are also expressed similarly. This requires USD/NZD exchange rate forecasts in order to apply these prices to EDB expenditure plans
- It is likely there are regional differences in input cost inflation, as currently evidenced in Canterbury.

69. To date the Commission has used forecasts of PPI, LCI and CGPI for DPP reset purposes (although we note that these are not readily available for the entire planning period). The Paper does not include proposals for input price escalation for the purpose of its proposed models. We anticipate engaging further on this issue in forthcoming consultations.

Closing remarks

70. We appreciate the opportunity to comment on the Paper, and look forward to further consultation on the assessment of asset management information and processes in due course. We also note and support the ENA's submission on the Paper.
71. The primary contact for this submission is: Lynne Taylor, Director, PricewaterhouseCoopers, lynne.taylor@nz.pwc.com, 09 355 8573.