

**Submission on the Commerce Commission's  
Initial Observations on Forecasts Disclosed  
by 29 Electricity Distributors  
in March 2013**

From Scanpower Ltd

23 December 2013

## Terms of Reference

This submission is made by Scanpower Ltd, an electricity distribution business, in response to the Commerce Commission's workshop covering the Commission's release of *"Initial Observations – summary and analysis of the information disclosed by electricity distributors and network expenditure modelling"*.

Scanpower is a small distributor (2<sup>nd</sup> smallest by connection numbers) and a customer trust owned company. Accordingly it is subject to the Part 4 Information Disclosure requirements but has some exemptions with respect to price path regulations.

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## Initial Observations

1. Scanpower is concerned that the content presented and the observations being inferred in the “*Initial Observations*” are driven by the design of the process in which they were collated rather than being a reasonable representation of facts that can be validly compared in the manner they are being presented.
2. Scanpower found the experience of completing the Commission’s disclosure templates degraded by the following quality control issues:
  - The information requested was ambiguous in terms of definition.
  - The consistency in each distributor’s interpretation of what was required.
  - The varying ability of each distributor to supply data of good quality.
3. The information supplied from each distributor has not been through a process of sufficient quality assurance for consistency and accuracy, and as a result is largely meaningless and invalid for the comparative information purposes that the Commission is presenting to public.
4. This process is potentially harming the reputation of distributors and in Scanpower’s opinion it fails to deliver accurately and fairly on the Part 4 purpose for the information is required to be disclosed.
5. This exercise has been of negative value for Scanpower’s stakeholders.
6. It appears to Scanpower that the Commission is attempting to shift Information Disclosure towards Price Path Determination objectives. These objectives are not applicable to all distributors and therefore distributors are divergent in their approach to asset management.
7. The Commission is attempting to create a “one model fits all” approach to how companies manage their network assets – this is contradictory to the principles of good asset management and the information being requested is beyond the intended scope of the disclosure regulations.
8. The data requested, particularly with regard to disaggregation by asset type, expenditure driver, expenditure class, lacks relevance for some companies and results in loss of significance or misleading results. Model definitions that do not fit well with a particular company may result in data being forced to fit with potentially invalid results.
9. It is particularly challenging to create a model of sufficient accuracy for small price path exempt distributors because their business models are not constrained by those regulations. It is suggested that attempting to get a model that fits all is impracticable and serves no benefit for exempt distributors. Consequently they should be exempt from this requirement or have flexibility applied to the information they are required to complete in the disclosure template.

10. It is noted that Commission has the regulatory scope to grant exemption and/or alternative disclosure regimes.
11. The Commission has also indicated it is looking at what incentives distributors have under Part 4 to innovate and invest, improve efficiency and quality such that benefits are shared with consumers and stakeholders. In the case of trust owned distributors these objectives are inherent to our business model and sharing benefits is automatic.
12. However, where the Commission seeks to artificially stimulate these behaviours with incentives it should be wary of creating models and a disclosure regime that is as open as the current proposals are to being gamed by playing to the rules. The opportunity to gain incentives will not be overlooked by some of the larger, non-trust owned companies within the industry.

### **Asset Management Plans**

13. The regulatory prescription and Commission's view of what constitutes good asset management is out of date with the PAS55 standard now internationally recognised as best practice. The Commission's assessment of compliance, which appears to be being developing in a biased direction towards price regulation objectives, is diverging from this established asset management process.
14. The Commission appears intent on dictating the business models, asset planning drivers and practices deployed in asset management instead of letting companies derive their own strategies from first principles through robust business planning that considers the interests of their stakeholders.
15. It is suggested that a publicly published asset management plan compliant with PAS55 certified, and externally audited as such, is a sufficient method of compliance with regard to Information Disclosure.

### **Expenditure Forecasts**

16. The asset management process follows a bottom up approach to forecasting expenditure. This has to marry into the company's business planning and budgeting process which is a top down exercise. PAS55 specifies this coordinated mix of methodologies – the key issue is not allowing the asset management process to dominate business planning to a point where “the tail is wagging the dog”.
17. Short term operations determine what is actually done or not done relative to the various plans. If revenue, cash-flow, or resourcing changes throughout a period, the plan is reassessed and changed in the interests of delivering on the business objectives ahead of asset management objectives. If asset provisioning and development isn't required per plan, then the optimal solution may change, which can result in radical change to the Asset

Management Plan. The disclosure requirements do not cater for the multiple option scenarios that are the reality in actual operating circumstances.

18. Trying to attach significance to variation as an indicator of the quality of planning is a nonsense – asset management is not a silo within a company’s operations.
19. The Commissions observations on expenditure forecasts lack the following normalisations:
20. A common definition of capital and operating expenditure between companies; Companies have considerable discretion in how they classify expenditure – the Commission hasn’t defined how this is to be reported consistently. Further the choice which of the Commission’s driver category they choose to allocate expenditure to is also somewhat arbitrary.
21. For example, a pole can be replaced as a capital or operational job and this decision can be inconsistently changed from month to month depending on revenues, budgets, etc.
22. A pole might be replaced because it is old. Old poles tend to be in poor condition so the replacement might equally be justified as a condition issue not an age issue. The same pole might actually be being replaced because of a safety objective such as, a policy driving a “no climbing of wooden poles” practice, with the result being its replacement with a different asset.
23. Risk assessment will weight and prioritise all these factors; however the Commission’s model does not allow a mix of drivers and so it is all lumped into a single expenditure category – usually the easiest to justify. This may lead to inaccurate observations like the Commissions statement “renewals are the largest driver of expenditure” – this may in fact be driven by the Commission’s spreadsheets and company expediency with regard to achieving compliance.
24. Growth is another category of expenditure where the variance between companies is the main issue with regard to comparative information. Long term forecasts have two components; base load growth, which can be extrapolated (but not far with any accuracy), and new major loads, which cannot and are not visible to the asset management planning process much beyond 2-3 years.
25. Major new loads tend to exceed remaining network capacity and if so, can trigger a cascade of network wide capacity upgrades. They can also trigger other developments such as an upgrade of security standard and/or system voltage. These issues typically result in a bow-wave profile for network development expenditure. This is more a case of having to be conservative (optimistic) when it comes to risk management of the uncertainty of growth and its exponential characteristic than the so called “wall of wire”.

26. The funding risk needs to be signalled but there are no guidelines on what levels of certainty should be applied – the asset management plan prescription is a little too deterministic – resulting in a single plan, usually optimistic in its timing forecast (to manage risk) and almost certainly the present single scenario will never happen in reality. We are then asked to account for why it didn't happen to plan.
27. Base load growth is typically very low but the relationship to growth in expenditure is not necessarily linear or consistent across distributors. For example, a large customer may disconnect and be replaced by 10 smaller customers elsewhere creating a net nil increase in system demand and/or revenue. However those 10 new connections may be in a different location requiring considerable upgrade to supply.
28. The Commissions observations claim that renewal is the biggest driver of network expenditure. This conclusion is itself a clear indicator that Commission's model is flawed. Growth is exponential – if capacity upgrades are necessary every 30 years say then the corresponding growth rate is 2.33%. If assets have a 60 year life asset reaching their renewal phase will represent 25% of asset base that has built over that 60 years to service growth. If the growth rate is 5% then the asset base will double size every 14 years i.e. be 16 times bigger after 60 years. The error in forecasts (particularly those being extrapolated) compounds similarly.
29. All other expenditure categories are very subjective in terms of different practices and policies applied by different distributors. For example, are services lines and transformers provisioned as works or customer owned asset and who pays for it? This represents approximately 15% of supply asset value. There are also different standards with regard to reliability and safety and accordingly different justification processes and funding policies. The material impacts of these differences grossly outweigh and limit the accuracy of data collated by the Commission.

## Network Scale

30. Scanpower does not consider that growth in network length, nor population growth, provide an accurate indication of changing network scale within a network and they do not translate consistently across all networks. Load density in terms of kWh delivered per km of network length would likely give a better indication of investment requirement. Both low density and high density networks will present a higher investment requirement and this can be used to normalise networks of different characteristics.
31. Operating expenditure also shares similar issues with the disaggregation required for disclosure not matching the company business plan – that is, the disclosure is an artificial construct that may not be consistently mapped from year to year as the business plan changes.
32. In companies that are fully integrated, resources may shift between cost centres yet the resource funding (budget) can remain in its planned allocations as this is irrelevant for

management needs (e.g. field crews that move between a network and contracting division). Revenues can also be aggregated as not all divisions within company need be treated as independent business units or profit centres (e.g. an internal contracting unit that undertakes external chargeable work).

33. These matters are often irrelevant to company operations and strategic objectives and therefore are only disaggregated for disclosure. This information does not necessarily give any indication of company performance with regard to delivery on its strategic objectives, stakeholder promises, or customer service. Other distributors will have a different set of objectives meaningful to their stakeholders.
34. The Commission noted a number of companies displayed step changes in 2012. It suggested this is the result of the change the Commission has made in the disclosure requirements, the different responses to interpreting those changes and effort made to align with previous disclosures.

## **Input Price Drivers**

35. The Commission's presented observations that show a wide variation in company expectation with regard to input price increases. It is suggested that the variance is mostly related to different interpretations of what being asked for. Many companies do not model input pricing change – they can't do it better than CPI and it is largely immaterial over the period of their business planning cycle.

## **Disaggregation**

36. In accordance with PAS55 asset management strategy and objectives are derived from the company strategic and business plans. These aren't the same from network to network nor fixed for comparison from year to year and it is inappropriate for the regulator to dictate what this shall be.
37. For example, Scanpower's customers and stakeholders are not that concerned with prices and reliability. They value our role in economic development, retaining businesses, jobs and population in the community. Our strategy does not seek to improve reliability or increase prices. 50% of revenue is not earned by our network and we share those benefits fully with our customers. We do not fit the Commission's model of a narrow "lines business only operation" but we are managing our assets competently to the satisfaction of our customers.
38. Disaggregation by asset type and customer type is an unnecessary exercise in Scanpower's case. We have no sub-transmission system so much of the Commission's spreadsheets cannot be populated.

39. Quantities also lose significance. For example, we only have 11km of cable so if faults were broken down by feeder, voltage, and cause, there would be instances where we have never had faults so nothing can be concluded about how well we managed it.
40. The level of detail being sought by the Commission is excessive and non-material to the point that it is driving a misleading representation of Scanpower's performance with regard to the purpose of Part 4. This is a costly exercise delivering no value to our consumers.

### **Three High Level Drivers**

41. The Commission claims that its observations prove that it has correctly determined the drivers of expenditure. Scanpower recommends consideration that the results reflect the answers the questions were biased towards obtaining and the outcomes those in the industry seeking to influence the Commission have had success with.
42. Ownership costs – these costs can be driven by assets not owned by the distributor. LV faults on service lines for example. Different networks apply different policies with respect to repair and renewal cost recovery.
43. Capacity – better guidelines on what is expected with regard to headroom risk issues such as, leading build, customer commitment, and outage penalties. Upgrades have brown field costs while historic data is largely green field. A standard approach to an investment test and capital contribution may be helpful. Capacity is exponential in nature – this characteristic appears to be missing from the calibration of the Commission's model.
44. The asset management strategy will drive expenditure category – these should not be dictated and will not necessarily correlate with expenditure in other networks.
45. What seems to be missing from the list are the services, support and care we provide to consumers that aren't an obligation, asset related or commercial in their application but rated very highly by the consumer in terms of our value to them. Value and benefit delivered to community is a major driver to Scanpower. The Commission's perspective of service, quality, and efficiency fail to consider the fundamentals of our prime mission and justification for our existence. The Commission's role is controlling negative monopoly behaviours – why are the positive behaviours with respect to what our customers and stakeholder demand ignored and discouraged?
46. Another consideration excluded is the assumption that our businesses will remain unchanged from the solutions delivered historically. A technology change, (for example the cost of PV falling below the cost of grid supply) can happen suddenly and would radically change our business. Scanpower has opted to manage this risk by adopting an asset management strategy of no network reinforcement via line builds/upgrades. This will significantly impact drivers such as asset ownership costs and capacity. Non-lines solutions developed in response might actually be delivered by a business unit outside the regulated lines business (for example, investing in generation).



47. It is becoming increasingly difficult for Scanpower, as it pursues growth and development in accordance with its own strategic plan to fit the Commission's narrow business definition. Small NZ companies can be innovative and responsive to change but this being impeded by unnecessary regulation in direct opposition to the outcomes intended by Part 4.
48. The Commission's model takes a historic view and assumes "business as usual" – the key point about forecasting is that it should be forwards looking. It does not appear to be incentivising the behaviours the stated purpose of the disclosure regulated is seeking to encourage.
49. Weaknesses with the application of these drivers are:
- Usefulness is dependent on the level of steady state a network may be in with regard to a mature asset base and life cycle position. It is necessary to consider whole of life costs not just historic costs.
  - Original data with regard to asset age is of low quality requiring the asset population survival probability density function to be discovered before future costs can be predicted.
  - The impact of past maintenance strategies, design practices, etc. also has to be discovered.
  - The sustaining of the status quo in terms of optimal solution is not desirable. It is unlikely that we will replace like for like- for example, replacing wooden poles with concrete. Non-network solutions may require the business definition to be changed.
  - The model is limited to first order thinking. For example the optimal renewal strategy may be to replace 20% of poles at their 80% life then replace the remaining 80% when the conductor reaches its service life end.
  - Cross-coupling between the drivers is not modelled. For example, ownership driven expenditure will alter asset health and asset health improvement will sustain capacity (avoiding the need to de-rate asset capacity for example).
  - By the end of the life cycle the significance of historic solutions is very minor in terms the exponential growth that has occurred in asset base. Once an investment has been justified and made, the scope for improvement is limited and largely a matter of history. Achieving better efficiency is a matter of choosing a better solution for the future – not sustaining the past.
50. The combined impact of these weaknesses is that a naive model used to regulate may drive sub-optimal outcomes while the greatly superior collective experience and judgement of those involved in asset management strategy development is being distracted filling in spreadsheets of low value.
51. As with capital expenditure, the driver receiving the majority of operating expenditure is largely the outcome of choosing the present option that is easiest to justify. The results reflect different interpretations of what belongs to different drivers, ignoring the weighting with which each driver influences priorities, whether to treat as capex or opex, and whether

the respondent has been influenced by trying to maintain continuity with previous disclosures under different requirements.

52. In short, it would be preferable for the Commerce Commission to limit its oversight to enforcing recognised best practice rather than attempting to develop and implement home grown solutions that “back seat” drive line businesses or let some line businesses “back seat” drive its disclosure regime.
53. As a minimum some more robust data definitions and a more objective and consistent method of assessing data maturity would be desirable.

## **Disaggregating Techniques**

54. PAS55 provides sufficient guidelines as to technique and quality. The key factor is developing a whole of life cost model. The solution required for the next 50 years will be different to the historical solution hence the necessity to drive asset management strategy from the company’s strategic plan. At some point existing implementations become sub-optimal and the strategy for their management will change – that is models are bespoke, project by project in time and do not lend themselves to templating by asset. Assets don’t exist in isolation - we are dealing with systems engineering. Forecasts based on fixed inflexible models do not deliver a useful result beyond 3-5 years.

## **Asset Health and Criticality**

55. Scanpower is concerned about the role Commission appears to be targeting with regard to asset health indicators and criticality in regard to expenditure drivers and forecasting. In particular, taking a lead from overseas regulators. The strategies being applied by UK companies, for example, should not be confused with best practice. Internationally NZ companies benchmark well in their asset management practices. The practices deployed overseas are more likely to be the outcome of the regulatory regime applied to them. Further scales are very significantly larger.
56. Asset lives are largely determined by the specifications they are designed and built to and the operating conditions throughout their service lives relative the conditions designed for. Maintenance sustains serviceability it does not normally result in an extended life.
57. Scanpower’s experience with life extension expenditure is that this delays the onset of survival roll-off but does not extend it. That is, you compress the period in which the asset must be replaced, making it more difficult to pre-empt in-service failure without more expenditure on health checks, create a peak in renewal costs and fail to reduce or avoid the cost of replacement. The strategy is not sustainable and eventually the same amount of replacement cost is incurred except that you have now spent extra on your assets (which was presumably targeted on the basis of asset health and criticality) i.e. risking continued operation of your worse assets, in the most critical roles, outside the manufacturer’s intentions.

58. Scanpower's interpretation is that the UK best performing network operator has played to the rules, applied exactly this strategy, shown an unsustainable cost saving and been rewarded with an incentive payment.
59. Every asset has an optimal replacement time in terms of life cycle cost. If you replace it early it costs more, if you replace it late it costs more. For critical assets there is a case for early replacement (which doesn't cost any more than late replacement but delivers better service outcomes) based on adding the cost of service failure into the risk model.
60. One of the weaknesses of the Commission's proposed modelling it does not apply total life cycle costs in its assessment of replacement cost.
61. A better strategy than life extension practices, however might be to simply relocate assets to less critical roles as they approach the survival roll-off e.g. a lower loaded area or one where there is redundancy for security purposes.
62. Further, the standards for manufacture are tried and proven in terms of optimal solution i.e. the right cost quality trade-off. A transmission operator may for example, apply a standard for transformer supply that is higher than the IEC standard. This delivers them a 33% increase in longevity for a 40% increase in price. Presumably the lower cost efficiency is justified on a higher service performance basis. However, this in fact is taking a bigger risk that the asset will survive the conditions they are being operated in and sustaining the asset population at an older age – higher risk for less benefit from newer assets.
63. Scanpower considers that assessment of companies at this very detailed level of asset management strategy is not something the Commission needs to be targeting. A survey to determine what the industry consensus is on best practices however would be helpful and hopefully drive some standardisation into the industry improving the Commission's ability to compare distributors.
64. The ISO 38000 Risk Management prescription is a useful direction in this regard – it coordinates well with PAS55, ISO 7900 PSMS and other regulatory influences on distributors.

## **Concluding Remarks**

65. In Scanpower's opinion the Initial Observations as prepared and presented by the Commerce Commission are a product of the disclosure formats imposed by the Commission and the lack of good quality controls around the data collation process. They do not deliver a meaningful, useful, or fair representation and comparison of line company performance.
66. Distributors not only have significant variation in the nature of their networks and asset base, but they also have a diverse range of business objectives and the associated business structures put in place to meet those objectives. These facts invalidate the assumptions being applied to the "one model fits all" approach being applied by the Commission.

67. Further, it appears that the use of the Information Disclosures is being shifted away from their intended purpose towards a role in price path determination. This is an application that is not relevant for exempt companies. This action devalues the Information Disclosures for Scanpower's owners/customers and is a costly distraction to Scanpower's business. We do not consider this a reasonable or justified approach on the Commissions behalf in terms of the regulation concerning information disclosure.
68. Scanpower suggests that the most meaningful mechanism for the commission to ensure distributor compliance with the information disclosure regulation and for the purpose of reassuring stakeholders that their electricity supply is being appropriately managed, is to require demonstration that their asset management practices comply with an internationally recognised best practice standard which can be certified and/or audited by an external independent approved agency. That is, no subjective interpretation or representation on the Commission behalf.
69. The Commission has the regulatory scope the amend compliance definition and/or exempt companies from the prescribed default regulation.



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