Submission to the Commerce Commission

on

Input methodologies review: Emerging technology pre-workshop paper

Made on behalf of 19 Electricity Distribution Businesses

PwC submission on behalf of group of 19 EDBs

4 February 2016

Table of contents

Introduction

Overview

1. This submission responds to the Commerce Commission's (Commission) Consultation Paper, "Input methodologies review, Emerging technology pre-workshop paper" released on 30 November 2015 (the Consultation Paper) and follows up on the discussion and positions put forward at the workshop held on 14 December 2015. This submission has been prepared by PricewaterhouseCoopers (PwC) on behalf of the following 19 Electricity Distribution Businesses (EDBs or distributors):

    - Alpine Energy Limited
    - Aurora Energy Limited
    - Buller Electricity Limited
    - Counties Power Limited
    - EA Networks
    - Eastland Network Limited
    - Electricity Invercargill Limited
    - MainPower New Zealand Limited
    - Marlborough Lines Limited
    - Nelson Electricity Limited
    - Network Tasman Limited
    - Network Waitaki Limited
    - Northpower Limited
    - OtagoNet Joint Venture
    - The Lines Company Limited
    - The Power Company Limited
    - Top Energy Limited
    - Waipa Networks Limited
    - Westpower Limited.

2. Together these businesses supply 27% of electricity consumers, maintain 45% of total distribution network length and service 73% of the total network supply area in New Zealand. They include both consumer owned and non-consumer owned businesses, and urban and rural networks located in both the North and South Islands.

3. The Commission has identified the implications of emerging technologies for electricity lines businesses as a key issue to be addressed in the current review of the Input Methodologies (IMs).

4. The Consultation Paper and the workshop were intended to explore and test issues relating to the treatment of emerging technology investments under the IMs. The core aim expressed by the Commission is to answer the question:

Is there a current or future problem with the regulatory treatment of the revenues and costs associated with emerging technology investments in the electricity distribution sector? If so, what changes to the current IMs appear likely to achieve one or more of the following:

- *Promote the Part 4 purpose in s 52A more effectively*
- *Promote the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose)*
- *Significantly reduce compliance costs, other regulatory costs or complexity (without detrimentally affecting the promotion of the s 52A purpose)?*[1]

5. This submission considers the matters raised in the Consultation Paper and at the workshop in the light of this question. This submission primarily responds to the Consultation Paper, but addresses key themes from the workshop where necessary.

6. The EDBs which support this submission wish to register their concern that some EDBs were prevented from attending the workshop. The impact of emerging technologies could have a material effect on all EDBs and accordingly the EDBs which support this submission recommend that all future workshops of this nature are open to all EDBs. We note that the transcript is a poor substitute for being in attendance in person, as it is very difficult to follow a discussion in this form.

7. The EDBs which support this submission also support the submission made by the ENA. The purpose of this submission is to highlight topics of particular interest to the 19 EDBs listed on the previous page.

8. We trust this submission provides useful input to your consultation on the Consultation Paper. We would be happy to answer any questions you may have regarding this submission.

9. The primary contact for this submission is:

Lynne Taylor
Director
PricewaterhouseCoopers
lynne.taylor@nz.pwc.com
09 355 8573

[1] Consultation Paper, paragraph 5.

Summary

10. The following points summarise our views on matters raised in the Consultation Paper and at the workshop. They are discussed more fully in the body of this submission.

What is regulated and how

11. We consider the summary in the Consultation Paper of how electricity lines services are regulated is accurate.

12. The EDBs which support this submission agree with the Commission's interpretation of the definition of electricity lines services. Where assets fall outside the definition of line but can still be used to provide the regulated service EDBs should be permitted to use them for that purpose. This will enable least-cost solutions to be used to provide the regulated service.

13. The EDBs which support this submission agree that the test is, and should be, whether the asset (or cost) is used in providing the regulated service, not whether the asset (or cost) itself is actually within the network or directly involved in the physical conveyance of electricity.

14. The scenarios included in the Consultation Paper were helpful when considering the issues raised by emerging technologies for the IMs. As discussed in more detail below, we agreed with some but not all aspects of the scenarios.

Principles and incentives

15. The current IMs generally provide for a principles-based approach to regulation. The requirements provide scope and flexibility for EDBs to make judgements about the right approach rather than specifying detailed rules that must be followed in all circumstances. This is helpful as it enables EDBs to achieve sensible commercial outcomes when applying the regulatory rules, and it accommodates different business structures.

16. There will always be a need to strike the right balance between flexibility and certainty, but we consider that the current IMs get the balance right even in the face of the current extent of technology change (which is still at an early stage with uncertain uptake rates and market consequences).

17. The EDBs which support this submission have a strong focus on ensuring compliance with Part 4 regulations and anything that improves their ability to comply (e.g. by providing more clarity about the requirements) would assist with that goal. We therefore support the provision of guidance on the treatment of emerging technology investments under the IMs. However, it is essential that this guidance is subject to full consultation and regular review to ensure it is accurate and up to date.

18. It is prudent and reasonable for EDBs to seek to test the network impacts of new technologies through targeted R&D investments before the technologies become widespread on their networks. It would create inefficiencies if Part 4 regulation was to restrict such investments by EDBs.

19. An innovation fund, perhaps similar to Ofgem's Low Carbon Networks Fund, could enable EDBs to bid for funding for network-related research on the condition that, when complete, the research is made available publicly. This could streamline research spending across EDBs as results are shared and made public.

Cost and revenue allocation

20. Some parties at the workshop suggested the cost allocation IM may permit too much of the cost of a shared asset to be allocated to the regulated business.

21. It is important to recognise that cost allocation only applies to a subset of expenditures by any EDB. A clear majority of EDB costs are directly attributable to particular regulated or unregulated services. Cost allocation applies only to corporate overheads and a few other shared costs or assets.

22. Our analysis of information disclosure data demonstrates that EDB investments in shared assets are not material relative to the size of the businesses concerned and we consider ACAM is appropriate in such circumstances. While shared operating costs are more material, only some EDBs are able to apply ACAM for opex, which is the expected outcome. Overall the data does not suggest that the ACAM thresholds are unsuitable.

23. The EDBs which support this submission have real diversity in business structures and in the range and scale of unregulated activities. More prescriptive rules would not fit well for at least some, probably most, of these businesses and would be extremely unwelcome.

24. The Consultation Paper queries whether a revenue allocation IM may be required to address situations where charges for lines services and unregulated services are bundled together. We are not convinced that the current lack of a revenue allocation IM is a problem. A sensible approach may be to use information disclosure to monitor the extent of the issue before determining whether further amendments to the DPP and CPP requirements are needed.

Competition and ring-fencing

25. At the workshop certain participants suggested that EDB investments in emerging technologies (particularly batteries) should be ring-fenced from the regulated businesses. This would create operational inefficiencies and increased administration costs for all EDBs. More prescriptive regulation could even prevent markets in emerging technologies from developing if EDBs are restricted from entering that market.

26. The EDBs which support this submission support a principles-based approach, which is more consistent with the Purpose of Part 4 and will support efficiency, innovation and investment by EDBs, rather than prescriptive ring-fencing of particular investments by EDBs. We also do not consider that it is appropriate to use Part 4 to ring-fence EDB activities from a potentially competitive market – if there is considered to be a problem that requires ring-fencing, the ring-fencing is more suitably done through a policy decision and legislation such as the Electricity Industry Act.

27. Importantly, there is insufficient evidence available at present to determine if a competition problem even exists and it would be inappropriate to implement a solution without considering alternative options and costs and benefits of more regulation. As the technology is still new and the markets still un-developed, we believe that monitoring and guidance is the best approach at this stage and regulating now runs the risk of perverse and unforeseen outcomes.

28. In conclusion the EDBs which support this submission consider that there is little evidence to support a change in the IMs due to emerging technology. The current IMs appear well-designed, based on enduring principles that can appropriately address technology change.

What is regulated and how

How electricity lines services are regulated

29. The Consultation Paper summarises how electricity lines services are regulated and covers the regulation of price and quality for non-exempt EDBs and explains how the appropriate level of prices is determined.

30. The Consultation Paper summarises how IMs are used to determine key building blocks that make up maximum allowable revenues. It notes that EDBs' revenues also include pass-through and recoverable costs including positive and negative financial incentives.

31. The Consultation Paper goes on to describe how costs and asset values that are directly attributable to electricity distribution services must be allocated to the EDB, whereas costs and asset values that are not directly attributable must be allocated using one of the cost allocation methodologies specified in the IMs (the Avoidable Cost Allocation Methodology (ACAM), the Accounting Based Allocation Approach (ABAA) or the Optional Variation to the Accounting Based Allocation Approach (OVABAA)).

32. The Consultation Paper notes there is no revenue allocation IM as, when the IMs were first developed, it was envisaged that costs may be shared between regulated and unregulated services but revenues would all be directly attributable once the costs they are associated with have been allocated.

33. We consider the summary in the Consultation Paper of how electricity lines services are regulated is accurate.

Definition of electricity lines services

34. The key question for a discussion regarding the regulatory treatment of expenditure on emerging technologies is to determine whether investments in these technologies are regulated or not.

35. The scope of the regulated services is set out in the Commerce Act 1986 rather than in the IMs. The Consultation Paper contains a discussion of the legislative definition of electricity lines services.[2] In summary (and with some detail omitted):

    - Electricity lines services means the conveyance of electricity by line.
    - Lines means works that are used for the conveyance of electricity. The term "works" includes fittings that are used or designed for use, or in connection with the conveyance of electricity but excludes any part of an electrical installation.
    - An electrical installation:
        i. includes all fittings beyond the point of supply (or point of consumption where the property does not have a point of supply) that are used to convey electricity or to generate or store electricity
        ii. excludes electrical appliances and any fittings that are used, designed or intended for use in or in association with the conversion, transformation or conveyance of electricity by distribution or transmission lines.

36. This is not the easiest definition to work through and interpret but we consider the meaning is clear.

[2] Pre-workshop paper, paragraphs 57-67

Commission's interpretation

37. The Commission's view is that the definition of line does not exclude particular types of assets (including assets that are part of an electrical installation – i.e. beyond the point of supply or energy storage) from being considered as supporting the regulated service. Assets beyond the point of supply may fall within the scope of the regulated service to the extent they are used by an EDB in conveying electricity by line.

38. The EDBs which support this submission agree with the Commission's interpretation. Where assets fall outside the definition of line but can still be used to provide the regulated service EDBs should be permitted to use them for that purpose. If EDBs were prevented from using certain types of asset they would be prevented from utilising a full suite of options to meet consumer demands for the regulated service. This is likely to create costs as EDBs would be unable to choose the cheapest or most reliable asset in some circumstances and would need to undertake additional compliance steps to demonstrate they are only investing in "permitted" asset types.

39. An interpretation of the definition of lines service that excluded all non-"lines" assets would create perverse outcomes by preventing assets that are used by the regulated business such as office buildings, chairs, financial systems and health and safety management systems from being recorded as regulated assets. This would not make sense.

40. The EDBs which support this submission agree that the test is, and should be, whether the asset (or cost) is used in providing the regulated service, not whether the asset (or cost) itself is actually within the network or directly involved in the physical conveyance of electricity.

41. The Consultation Paper also notes that the IMs do not provide an exhaustive or prescriptive list of types of assets that may be included in the RAB. This is because the Commission recognised that this would run the risk of unintentionally excluding assets that should legitimately be included and the risk of endorsing a list that becomes technologically obsolete. Instead the IMs leave it to EDBs, with audit scrutiny, to determine whether an asset is used to provide electricity distribution services. We agree with this reasoning and approach.

Retailer's interpretation

42. We understand some retailers have suggested that the best way to interpret the definition of electricity lines services is to exclude all parts of an electrical installation (i.e. anything beyond the point of supply) from the regulated service. In particular it has been suggested that EDBs should not own batteries (as part of their regulated business) but should instead purchase battery services from third parties or ring-fenced subsidiaries.[3]

43. We consider that the Commission's interpretation is preferred for the reasons stated above. Also we note clause (b)(iii) of the definition of electrical installation in the Electricity Act 1992 – summarised as sub-bullet ii in paragraph 35 above – clarifies that an electrical installation excludes fittings used in or in association with the conveyance of electricity by line.

44. This submission discusses the practical and economic implications of ring-fencing below. However, from a legal perspective we submit that the view that EDBs should not own batteries but should purchase battery services from third parties or ring-fenced related parties seems contradictory. It does not seem sustainable to argue that, where an activity is excluded from the regulated business, that exclusion only applies to regulated businesses owning the relevant assets but not to those same businesses purchasing services provided by the assets.

[3] Workshop transcript, page 61.

Scenarios

45. The Consultation Paper puts forward three scenarios for identifying whether costs and revenues associated with certain activities would be regulated; all of these scenarios involve the use of battery storage. These scenarios were helpful when considering the issues raised by emerging technologies for the IMs. This section of the submission comments on the assumptions and conclusions made in those scenarios. Broadly, the three scenarios are:

    - Scenario 1: EDB purchases and installs a battery at a zone substation on its network and uses it to provide an alternative to a traditional network upgrade; the battery is metered.
    - Scenario 2: A consumer buys a battery from an EDB and installs it on their premises, behind the meter.
    - Scenario 3: An EDB buys and installs a battery at a consumer's premises, behind the meter.

Comments on scenario assumptions

46. Table 1 below sets out our comments on the scenarios put forward in the Consultation Paper.

Table 1: Comments on the scenarios in the Consultation Paper

Scenario	Comments
1, 2 and 3: Quality	• We agree any revenues received through the quality incentive mechanism as a result of batteries would be regulated. • However, quality of supply is only measured at an HV level. • Battery is only likely to affect quality incentive payments where the battery is located on the HV network. • This revenue will also only be available to non-exempt EDBs. • Any financial incentive benefits from improved quality are temporary only – they will not last beyond the next DPP reset. • Quality of supply considerations will not be the primary reason for EDBs installing batteries. The primary reason is much more likely to be to defer capex.
1, 2 and 3: Opex	• The Consultation Paper considers that the only operating cost associated with the battery is the cost of purchasing energy from the wholesale market. • There are also likely to be maintenance costs associated with the batteries. • For scenario 3, there are likely to be costs from arranging to place the battery at the consumer's premises (e.g. marketing costs, legal costs associated with the contract). • There may also be costs associated with providing services using the batteries. For example, where a battery is used to minimise a consumer's electricity bill this could be by way of pre-settings that direct the discharging of the battery at set times based on expected peak times, or by more dynamic settings or interventions by the EDB. Either way the cost of this will need to be recovered.
1: Metering of the battery	• Where the battery is installed at a substation or somewhere similar on a network, it is not clear that the battery would need to be metered. However, this is unlikely to be material to the question of whether the activity is regulated under Part 4. • If the battery is metered it does not seem that the purchase or sale of electricity by the battery is necessary for the provision of the regulated service so it may best be

Scenario	Comments
	seen as unregulated.
2: General	• We agree this is an entirely unregulated scenario.
3: Purpose	• In scenario 3 the principle use of the battery is to optimise a consumer's bill by managing the times at which they use electricity. • Optimising a consumer's bill is stated to be part of the regulated service and thus the scenario assumes lease payments made by the consumer to the EDB are all treated as regulated revenues. • The EDBs which support this submission disagree. Reducing bills by helping a customer optimise its usage with respect to its time-of-use prices is not obviously a network service. • Unless the EDB bills the consumer directly only a portion of the bill relates to the electricity lines service so it does not make sense that 100% of the revenues from reducing the bill should be allocated to the electricity lines service. • A service to reduce the overall bill is more akin to a competitive home energy management service than the provision of line function services. • For clarity, the EDBs which support this submission do agree that using the battery to avoid or defer network capex and improve reliability of supply is part of the regulated service.

Principles and incentives

Principles-based approach is preferred

47. The current IMs generally provide for a principles-based approach to regulation. For example, the requirements for identifying whether assets are used to provide the regulated service, or for allocating costs and asset values between activities, provide scope and flexibility for EDBs to make judgements about the right approach rather than specifying detailed rules that must be followed in all circumstances. This is helpful as it enables EDBs to achieve sensible commercial outcomes when applying the regulatory rules, and it accommodates different business structures.

48. The EDBs which support this submission agree with the Commission's previous reasons (at the time of the 2010 IM Determination) for not taking an overly prescriptive approach to the cost allocation IM in particular:[4]

> *The purpose of IMs is to promote certainty for suppliers and consumers in relation to the rules and processes applying to regulation under Part 4 (s 52R). A highly prescriptive IM needs to be balanced against flexibility to take into account differences between suppliers' businesses in order to bring outcomes closer to those in workably competitive markets. While some flexibility in outcomes is provided by the cost allocation IM, through the choice of different approaches under certain circumstances, the rules and processes for determining the circumstances in which each approach should apply are specified.*
>
> *The Commission considers a greater level of prescription is not appropriate at this time. ...the transparency provided through cost allocation disclosure and monitoring requirements will provide interested persons with information about how regulated suppliers are allocating their costs. This information will also be available to the Commission when it reviews the cost allocation IM... and determines whether the current balance between flexibility and prescription remains appropriate.*

49. The EDBs which support this submission consider that the Commission's previous reasoning remains appropriate. There will always be a need to strike the right balance between flexibility and certainty, but we consider that the current IMs get the balance right even in the face of the current extent of technology change (which is still at an early stage with uncertain uptake rates and market consequences). Information disclosure will continue to provide the Commission and other interested parties with the ability to monitor for changes and decide whether amendments to the IMs become necessary in future.

50. Our impression from the discussion at the workshop is that some parties may prefer a more rules-based approach where, for example, the Commission could prescribe what types of investments regulated EDBs are and are not permitted to make, or could specify the cost and asset allocators that are to be used.

51. While a regulatory regime that is rules-based would provide more certainty in some areas, we consider that it would most likely have a negative effect on the industry overall. It is likely that a prescriptive set of rules would prevent EDBs from undertaking some activities they would otherwise have done and may prevent or hinder EDBs providing unregulated services. It may also hinder innovation by EDBs, make them less able to adapt to evolving technology or changes in the way electricity consumers use electricity.

---

[4] Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, December 2010, paragraphs 3.2.3 and 3.3.21.

52. The Consultation Paper states that "even if no changes to the IMs are found to be necessary, it may still be worth providing a greater level of guidance than is currently the case."[5] The EDBs which support this submission have a strong focus on ensuring compliance with Part 4 regulations and guidance on this matter would help. The most efficient way to provide guidance would be to use the existing Issues Register process, where EDBs can seek advice on particular, actual, queries and the Commission's responses can be published for all parties to consider.

Incentives for EDBs to innovate

53. It is also important for EDBs to innovate and invest in emerging technologies at least for research and development purposes. It is not controversial that emerging technologies will impact distribution networks in various ways. It is prudent and reasonable for EDBs to seek to test those impacts by targeted R&D investments before the technologies become widespread on their network. This will help with network planning and efficient pricing and should deliver lower-cost networks over time. It would create inefficiencies if Part 4 regulation was to restrict such legitimate investments by EDBs.

54. Emerging technologies may be of particular value to consumers and EDBs in rural areas as a means of providing a cheaper source of supply than long lines serving a few consumers only. Innovation and research may be particularly valuable in rural networks.

55. There are currently limited positive incentives for innovation within the IMs. Also, it may not be most efficient for all 29 EDBs to carry out similar research (e.g. into emerging technology impacts on a network) when learnings could instead be shared across networks. An innovation fund, perhaps similar to Ofgem's Low Carbon Networks Fund, could be a solution. EDBs could bid for funding for network-related research on the condition that, when complete, the research is made available publicly. In theory this could reduce duplicate research spending across EDBs as results are shared and made public. It would also remain open to EDBs to fund research themselves and thus not share the results publicly where that is an EDB's preference.

[5] Consultation Paper, paragraph 42.

Revenue and cost allocation

Cost allocation

56. Some parties at the workshop suggested the cost allocation IM may permit too much of the cost of a shared asset to be allocated to the regulated business.[6] This seemed to be influenced by mistaken perceptions of the scale of cost allocation undertaken by EDBs.

57. It is important to recognise that cost allocation only applies to a subset of expenditures by any EDB. A clear majority of EDB costs are directly attributable to particular regulated or unregulated services. Cost allocation applies only to corporate overheads and a few other shared costs or assets.

58. Our analysis is summarised in the Tables below, sourced from EDB information disclosures.

59. Table 2 shows that, of 29 EDBs, 16-19 of those EDBs reported shared operating costs in the disclosure years 2013-2015. Of these 16-19, 4-5 reported shared opex values that fell below the 15% ACAM opex threshold.[7]

Table 2: EDBs with shared costs and position relative to the ACAM threshold

Disclosure year	Number of EDBs with shared opex	Number of EDBs with shared opex below ACAM opex threshold
2013	19	5
2014	17	4
2015	16	5

60. Table 3 shows that non-directly attributable opex amounted to approximately 20% of total regulated opex in the 2013-2015 disclosure years and slightly more than half of the non-directly attributable opex was allocated to the regulated electricity lines service.

Table 3: Non-directly attributable opex relative to total regulated opex

Disclosure year	Total regulated opex ($000)	Non directly attributable opex ($000)	Non directly attributable opex as % of total reg. opex	Non directly attributable opex allocated to regulated business ($000)	Non directly attributable opex allocated to regulated business as percentage of total regulated opex
2013	481,042	98,582	20.5%	50,340	10.5%
2014	518,317	101,054	19.5%	55,154	10.6%
2015	520,850	103,111	19.8%	53,958	10.4%

61. Table 4 shows that 12-14 EDBs included shared assets in their asset bases in the years 2013-2015 and all of these EDBs fell below the 10% ACAM asset values threshold.

[6] Workshop transcript, page 27.

[7] Note: more than 4-5 EDBs may have used ACAM in these years; which is permitted where their revenues fall below the 20% ACAM revenue threshold.

Table 4: EDBs with shared assets and position relative to ACAM threshold

Disclosure year	Number of EDBs with shared assets	Number of EDBs with shared assets below ACAM asset threshold
2013	13	13
2014	14	14
2015	12	12

62. Table 5 shows that the non-directly attributable asset values across all EDBs are a very small percentage of total asset values.

Table 5: Non-directly attributable asset values as proportion of total RAB

Disclosure year	Total RAB value ($000)	Non directly attributable asset values ($000)	Non directly attributable asset values as % of total RAB
2013	9,636,882	60,823	0.6%
2014	9,984,834	63,355	0.6%
2015	10,252,738	64,158	0.6%

63. From the data above, it is clear that EDB investments in shared assets are not material relative to the size of the businesses concerned. ACAM is appropriate in such circumstances. While shared operating costs are more material, only some EDBs are able to apply ACAM for opex, which is the expected outcome. The data does not suggest that the ACAM thresholds are unsuitable.

64. Meanwhile ACAM may only be applied where unregulated activities are small enough that three materiality thresholds (relating to revenues, opex and asset values) are not exceeded – so, by definition, ACAM only applies where the activities are not material to the EDB. Given that for many businesses the unregulated activities are fairly small, it is unlikely that there would be a material difference in allocated outcomes between ABAA and ACAM for many EDBs.

65. The EDBs which support this submission have real diversity in business structures and in the range and scale of unregulated activities. More prescriptive rules would not fit well for at least some, probably most, of these businesses and would be extremely unwelcome.

66. The use of causal and proxy allocators to allocate costs under the ABAA is appropriate as it enables a suitable allocator to be chosen in relation to the particular costs and business structure. This is subject to audit scrutiny and disclosure. While the OVABAA has never been applied by any EDB, it may become more useful as EDBs undertake new activities that utilise the new technologies and should therefore be retained in the IMs.

67. Overall, the EDBs which support this submission consider the cost allocation IM is appropriate and meets the requirements of the Act. If the Commission were to introduce more prescriptive rules regarding allocation of costs between services it is likely that compliance costs would increase and the Commission may not comply with the requirements of section 52T(3) of the Act – to not unduly deter investments in unregulated services when setting the cost allocation IM.

Revenue allocation

68. The Consultation Paper queries whether a revenue allocation IM may be required to address situations where charges for lines services and unregulated services are bundled together.

69. In relation to revenue allocation, we do not expect a bundling of electricity lines charges and unregulated service charges would be possible for any consumer that is not billed directly by the EDB (the predominant market arrangement is for retailers to bill consumers and pass line charge revenue

to the EDBs; only one EDB currently bills directly). However, it is possible that a capital contribution or other regulated income payment could be received from a consumer in return for products or services that comprise both regulated and unregulated activities.

70. We consider that in most instances bundled revenues are unlikely to occur. Where they do occur we consider that it should generally be straightforward to identify the portion of the revenues associated with the regulated service and the portion of revenues associated with the unregulated service. Revenues that are associated with the regulated service would be recognised as other regulated income (or capital contributions).

71. It is important to recognise that, from an IM perspective, this issue is not new – some EDBs own meters and use them for both regulated and unregulated services without any revenue allocation problems that we are aware of. For metering services, revenue recovered in relation to an asset needs to be aligned to the asset values allocated to the different services and there is no reason to expect a different approach would be taken to emerging technologies.

72. There is no obvious place within the current IMs to create a revenue allocation IM and therefore a new IM may be needed, if this was an issue the Commission wanted to address. A sensible approach may be to use information disclosure to monitor the extent of the issue before determining whether further amendments to the DPP and CPP requirements are needed.

Competition and ring-fencing

Problem definition

73. At the workshop on 14 December certain participants suggested that EDB investments in emerging technologies (particularly batteries) should be ring-fenced from the regulated businesses to ensure a "level playing field" in those markets.[8]

74. The concern driving this suggestion appears to be that electricity retailers or other suppliers would like to provide services like battery storage and electric vehicle charging to consumers and are concerned that EDBs (a) can earn a regulated return on such investments and (b) have better information about where network constraints are and thus where emerging technologies may be most valuable in terms of deferring capex.

75. Before any form of ring-fencing or unbundling is introduced, it is necessary to:

    - clearly identify the problem
    - identify the range of potential options to address the problem
    - establish that ring-fencing is the optimal solution
    - establish that the benefits of ring-fencing outweigh the costs.

76. These steps have not been completed and the EDBs which support this submission are concerned that ring-fencing has been proposed as a solution before a problem has been clearly specified and without considering the costs and benefits or whether other solutions are preferable. Fundamentally we do not agree that demand-management services, including battery-related services, are a sufficiently different market from electricity lines services to justify ring-fencing (at least at the current stage of market development).

77. We are also not entirely clear what service is intended to be ring-fenced. There is considerable overlap between battery services and existing electricity lines services (e.g. load control) that makes it very challenging in practice and in principle to apply ring-fencing here.

78. A specific ring-fencing for battery-related services is technology-specific whereas a principles-based approach would be more consistent with good practice regulation. In a regulated sense, EDBs are most likely to use battery storage to provide demand management services to consumers. At the workshop it seems parties were essentially calling for ring-fencing of the demand management service provided by EDBs.[9] This would be very challenging to implement; for example an EDB provides demand management services using a range of mechanisms including hot water load control and mobile generators (which EDBs have operated for years without any concerns regarding their impact on competition in, say, the mobile generation market). As these can also be used for other services, such as maintaining supply following network outages, it would be extremely difficult to ring-fence these activities.

Legislative options

79. The EDBs which support this submission do not believe that, if this problem exists, it is best addressed under Part 4. Part 4 applies to services where there is little or no competition and little or no likelihood

[8] Workshop transcript, for example pages 15 and 17.

[9] Workshop transcript, page 88.

of a substantial increase in competition.[10] While we do not support the imposition of ring-fencing to emerging technology or other demand-management services (as discussed further below), if it is to be introduced the Electricity Industry Act 2010 (EIA) is an appropriate legislative vehicle to use for this purpose, whereas Part 4 regulation is not.[11]

80. Developing regulations under Part 4 to restrict EDBs' ability to operate in an unregulated market seems inconsistent with the intent of the Act, especially as the cost allocation IM must not unduly deter investment by a regulated supplier in the provision of other goods or services.[12]

Consequences of ring-fencing

81. We note the interest of retailers, and potentially others, in entering the battery storage services market and their concerns that EDBs may be competition for them. We would hope the Commission would dismiss arguments that seek to restrict the entry of some participants out of a market in order to reduce competition for other participants. This would not be in consumers' interests.

82. We are also not sure the effect of ring-fencing would be noticeably different. One plausible outcome from introducing ring-fencing would be for EDBs to establish related parties to provide the battery storage (or other) services back to the EDB. The likely result would be that the cost charged to regulated consumers is the same, but with administration costs added.

83. The administration costs could be substantial. Contact Energy has suggested the arm's-length arrangements specified in the EIA could be a useful precedent in this regard.[13] These include the requirement to have separate Boards, with two independent directors for the different businesses, the requirement that the two businesses may not share managers and restrictions on sharing information between the activities.

84. These restrictions were appropriate for the separation of distribution from generation and retail, but are excessive for the provision of battery storage services, particularly at the small scale that activity will be in the near term.

85. The administrative costs of ring fencing would also be higher in relative terms for smaller EDBs and these costs would be incurred in regions where the scale and likelihood of competition is much smaller than in the larger urban centres.

86. As an analogy, there is competition for field service provision in the larger networks but in many smaller networks EDBs provide this service themselves in-house (or as a related party), partly due to lack of an alternative provider in those network areas.

Conclusion

87. The trade-off facing the Commission is whether:

- to restrict EDB investments in emerging technologies (which may or may not improve competition in markets relating to those technologies, but would certainly increase regulatory costs and reduce scope for EDB innovation); or
- to continue to provide a principles-based set of regulations that enables EDBs to utilise any technology to deliver the regulated service.

---

[10] Section 52.

[11] The EIA already provides clear rules for the ring-fencing of EDB electricity retail and generation activities from the distribution business activities and we consider that this Act would be the most appropriate vehicle for introducing any further industry ring-fencing.

[12] Section 52T(3).

[13] http://www.comcom.govt.nz/dmsdocument/13945

88. The EDBs which support this submission support the principles-based approach, which is more consistent with the Purpose of Part 4 and will support efficiency, innovation and investment by EDBs.

89. There is insufficient evidence available at present to determine if a competition problem even exists. More prescriptive regulation could even prevent markets in emerging technologies from developing if EDBs are restricted from entering that market.

90. As the technology is still new and the markets still un-developed, we believe that monitoring and guidance is the best approach at this stage and regulating now runs the risk of perverse and unforeseen outcomes.

Responses to questions

91. Table 6 responds to questions asked on pages 30-31 of the Consultation Paper.

Table 6: Questions from the Consultation Paper

Question	Response
Do you agree with the contents of this paper? If not, what aspects do you not agree with?	We agree with the Consultation Paper's interpretation of electricity lines services and its description of how regulation is currently applied to EDBs under Part 4. We do not agree with certain aspects of the scenarios put forward by the Commission, as outlined above. In particular, as discussed above, it is not clear that revenues for reducing a consumer's bundled electricity bill should be entirely regulated revenues.
Do you think the current approach of relying on EDBs to determine if what they are doing is part of the electricity lines services is appropriate?	Yes. EDBs are best placed to identify the purpose and use of an asset or activity. Audit scrutiny provides appropriate assurance that judgements regarding what is and is not a regulated activity are correct. Information Disclosure provides transparency of the approaches that are taken.
Do you think the flexibility provided by the availability of three different cost allocation methodologies is appropriate?	Yes. Having each methodology available is useful and enables cost allocation to be tailored to the circumstances of the EDB. ACAM applies where the unregulated services are a relatively small proportion of the total business. OVABAA applies where an unregulated business would be unduly deterred by the application of ABAA. ABAA applies in all other circumstances. Also, the current options for applying ACAM or OVABAA where specified criteria are met are consistent with meeting the Commission's obligations under section 52T(3) to avoid unduly deterring investment by regulated EDBs in unregulated activities.
Do you think that the materiality thresholds for determining which cost allocation methodology should be employed are appropriate?	Yes. These thresholds have been in place since 2010 and we consider that they are appropriate (see discussion above).
Do you think that the rules and processes for determining the circumstances in which OVABAA can be employed are appropriate?	Yes, although one incremental improvement could usefully be made. We consider that an OVABAA should be applied in a manner that provides EDBs with the certainty they need to be able to make investments in unregulated services. Accordingly, and subject to initial

Question	Response
	certification and supporting requirements, this should not be an annual test and EDBs should not be required to re-submit an OVABAA test each year. Instead, at the time the optional variation is initially applied, the directors' certification should specify the number of years over which the OVABAA is expected to be required (i.e. the number of years the unregulated activity is expected to be unduly deterred). This period could be limited, perhaps to 5 or 10 years. In subsequent years, certified annual disclosures could confirm the assessment that an OVABAA is still required; until such time as it is no longer required.
Do you think that the definition of capital contributions is appropriate?	Yes. We are not aware of any concerns that have been raised regarding the current IM definition or its application. We note the concern raised by the Commission at the workshop that certain payments by consumers to EDBs for regulated services may not be captured by lines charges or capital contributions and thus may not be recognised as regulated revenues.[14] We think this concern overlooks other regulated income – any revenue for a regulated business that is not a contribution or lines charge revenue would be captured as other regulated income. We accept that forecasting other regulated income (for the purpose of setting DPP price paths for non-exempt EDBs) may be challenging if EDBs' income from emerging technologies increases, but this is a separate issue that could be addressed at the next DPP reset if it is material. The CPP IM already addresses this issue.
Are you aware of any revenues/costs that are currently treated as regulated (unregulated) when they *may not* and/or *should not* be?	No.
Are you aware of any EDB prices that bundle charges for both regulated and unregulated services, or reasons why such charges might be offered in future?	No. It would be challenging to charge for a bundled service without a direct billing relationship with the consumer – otherwise the EDB would be asking the retailer to pass through a bundled price, including a portion for a service that is not part of the regulated service. It is not clear that this could work in practice. Our expectation is that EDBs would seek to charge for lines services as they do currently and would

[14] Workshop transcript, page 10.

Question	Response
	enter into individual contracts with consumers for unregulated services that are also provided. Information Disclosure already requires disclosure of distribution and transmission price components, as well as pass-through and recoverable costs.
Are you aware of any arrangement where revenue from the supply of electricity lines services would be best treated as a capital contribution?	Where consideration is received for asset construction or enhancement it is appropriately treated as a capital contribution. This should be the case irrespective of the type of asset. Revenues received for regulated services that are not contributions or lines charge revenue can be treated as other regulated income.
Do you think that additional R&D or innovation incentives are needed? And if so, what?	Additional support for smaller EDBs to engage in R&D and innovation may be of assistance. It appears that the need for R&D expenditure is increasing as a result of emerging technologies. This is unlikely to be easily affordable for non-exempt EDBs where price paths are based, broadly, on historical levels of expenditure. Recent initiatives such as the capex wash-up within the IRIS and the energy efficiency incentive allowance have mitigated some disincentives within the DPP settings for investment in energy efficiency and demand-side management. However, more could be done to incentivise EDB investment in energy efficiency and demand-side management. One option, as discussed above, might be an energy efficiency and demand-side management incentive fund, similar to the Low Carbon Networks Fund operated by Ofgem in the United Kingdom.