Submission on the Input Methodology Review

Unison Networks Limited

4 August 2016

TABLE OF CONTENTS

1. INTRODUCTION AND EXECUTIVE SUMMARY 3
1.1 Opening comment 3
1.2 Executive Summary 3
1.3 Submission 8
2. FRAMEWORK FOR THE REVIEW 9
2.1 Commission's key points 9
2.2 Unison's response 10
3. TOPIC PAPER 1: FORM OF CONTROL AND RAB INDEXATION 12
3.1 Commission's key points/decisions 12
3.2 Unison's responses 13
4. TOPIC PAPER 3: THE FUTURE IMPACT OF EMERGING TECHNOLOGIES IN THE ENERGY SECTOR 16
4.1 Commission's key points/decisions 16
4.2 Unison's responses 16
5. TOPIC PAPER 4: COST OF CAPITAL ISSUES.. 19
5.1 Unison's responses 19
6. TOPIC PAPER 7: RELATED PARTY TRANSACTIONS.. 20
6.1 Commission's key points/decisions 20
6.2 Unison's responses 20

1. INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Opening comment

1. Unison welcomes the opportunity to submit on the Commerce Commission's *Input methodologies review draft decisions* which were released on 16 June, 2016. In this submission Unison focuses on key issues of interest. We have contributed to the development of the ENA's submissions and support the recommendations in those submissions. Where we are silent on an issue in this submission we are in agreement with the ENA's submission.

1.2 Executive Summary

2. The seven-year input methodology review ("IM Review") provides the Commission with an opportunity to both reaffirm earlier IM decisions (and the principles underpinning those decisions) as well as make changes to IMs that are not achieving their initial objectives or would materially enhance the long term benefits of consumers. In light of these considerations, Unison submits that the Commission has generally struck an appropriate balance between providing investors with certainty by minimising the proposed changes, but making changes to IMs in a number of areas. In this submission we set out areas of agreement and disagreement with the Commission's draft decisions, as well as highlight areas where further analysis is required.

3. Unison has the following key comments on the draft decisions.

Framework for the review

4. Unison welcomes the Commission's statement of the core economic principles under-pinning Part 4 Regulation as follows:

"X19.1. **Real financial capital maintenance** (**FCM**): we provide regulated suppliers the expectation *ex-ante* of earning their risk-adjusted cost of capital (ie, a 'normal return'), which provides suppliers with the opportunity to maintain their financial capital in real terms over time frames longer than a single regulatory period. However, price-quality regulation does not *guarantee* a normal return over the lifetimes of a regulated supplier's assets.

X19.2. **Allocation of risk**: ideally, we allocate particular risks to suppliers or consumers depending on who is best placed to manage the risk, unless doing so would be inconsistent with s 52A.

X19.3. **Asymmetric consequences of over-/under-investment**: we apply FCM recognising the asymmetric consequences to consumers of regulated energy services, over the long term, of under-investment vs over-investment.

5. We welcome the Commission's statement of the key principles, but we are concerned that the Commission considers[1] that these principles do not amount to a regulatory compact. The Commission considers that section 52A is pre-eminent and the principles cannot be construed as setting any form of regulatory compact. Unison contends that the only way that section 52A can be achieved is for investors to believe that there is a credible regulatory compact which the Commission will honour over time.

6. We therefore recommend that the Commission adopt a more conventional regulatory position which is that:

   Commitment to the core economic principles represents a key element of the regulatory compact. Investors must perceive that there is a strong commitment to the principles in order to achieve the objectives in section 52A.

Form of control and RAB indexation

7. Unison supports the Commission's draft decisions to introduce a pure revenue cap, with wash-ups for "unders and overs" indexed at the WACC. We agree that there will be benefits to consumers through avoiding quantity forecast errors in setting the DPP and in removing a barrier to network pricing reform. The Commission has provided significant detail on the implementation of a revenue cap, which is essential to making an informed decision on the merits of different forms of revenue caps relative to price cap approaches.

8. In Unison's view, the Electricity Authority's ("EA's") theoretical observations that revenue caps may blunt the incentives for distribution pricing reform are over-stated. It seems highly likely that distributors will come under significant commercial pressure from alternatives in the short to medium term. Given the high levels of volumetric charges required for residential consumers under the "Low fixed charge tariff" Regulations, it will become essential for distributors to move towards more cost-reflective prices, otherwise volumetric charges will continue to increase as fewer kWh are delivered through the networks. The longer the industry delays pricing reform, the larger the challenge of moving from existing structures, as change is resisted by consumers who have come to rely on avoiding volume-based charges to justify particular investments.

9. Unison submits that the issue is not on distributor incentives for price change, but how to coordinate price reform in a decentralised electricity market, where retailers and meter equipment providers have critical roles in enabling change.

10. Unison supports the ENA's submissions that:

    a) The wash-up mechanism for revenue "unders and overs" should be simple to implement;

    b) There should not be constraints on EDB's being able to under-recover revenues for recovery in future regulatory periods;

[1] E.g., Commerce Commission (2016) *Input methodologies review draft decisions Framework for the IM review* X20

c) We remain concerned that the Commission is not adequately compensating EDBs for the asymmetric risks of catastrophic events. The Commission cites its analysis in Orion's CPP determination that EDBs would only require minor compensation for bearing the risk of catastrophes.[2] Evidence from insurance markets is that it is extremely expensive to transfer the risk of catastrophic events for "transmission and distribution" assets to insurers, such that it is cost-prohibitive to insure for such events. As insurance markets are highly developed, this is a better indicator that the risk/cost of bearing the risk of catastrophes is significantly in excess of the 0.1% of WACC, the Commission computed in the Orion CPP determination.

Unison's preferred approach to managing this issue is for the revenue cap to provide for carry-forward of under-recoveries following a catastrophic event, without adjustment; and

d) There is capability to increase revenues above the revenue cap for large customer capex requirements where these were not anticipated in resetting the DPP. Setting high capital contributions is not likely to be preferred by consumers, even if smoothed over a short period of time, compared to longer term recovery by way of lines charges.

11. Unison does not support the Commission's draft decision to retain the existing approach to RAB indexation:

a) Recent analysis by NZIER[3] indicates that the Reserve Bank (and other forecasters) have had a persistent inflation forecast bias since the start of this decade. This has been highly detrimental to equity holders who shoulder all the inflation forecast risk. If the Commission is to continue with RAB indexation, at the very least, the Commission needs to ensure that CPI forecasts used in setting the DPP are unbiased predictors of inflation;

b) We recommend further consideration should be given to partial indexation of the proportion of the RAB financed by equity. There is no effective market in New Zealand currently for inflation-indexed bonds, so EDBs issue debt in nominal terms. This concentrates the effect of RAB indexation to equity holders, such that real returns to equity-holders are suppressed in the short-term below the required real return. Given the apparent bias in Reserve Bank forecasting, equity-holders cannot be confident that they will be adequately compensated. Accordingly, the Commission's policy of *ex ante* real FCM is not currently being met or expected to be met in future, unless there is evidence of the Reserve Bank significantly improving their inflation forecasting approach to remove bias. Reducing the proportion of the RAB that is indexed to inflation would mitigate the forecast bias risks currently faced by equity-holders.

Emerging technology

12. Unison welcomes the Commission's recognition that although the evidence is "inconclusive", there is greater uncertainty about future demand for network services than in 2010. Unison

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[2] Topic Paper 1, paragraph 131.

[3] http://www.bloomberg.com/news/articles/2015-06-23/rbnz-finds-persistent-bias-overestimating-new-zealand-inflation and http://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2016/2016jun79-10.pdf

supports the Commission's draft decision that there should be opportunity for network businesses to modestly increase depreciation rates, as a precautionary step. The Commission's draft proposal is that this would be achieved by way of individual applications prior to the commencement of a DPP. The Commission provides no detail of what would be required to support an application, however. Unison is concerned that the threshold may be impossibly high if some form of hard "evidence" is required to support the application to accelerate depreciation. If the evidence required is that consumers are able to cost-effectively disconnect from the grid, then it will likely be too late to accelerate depreciation, as further price increases would just compound the reason to disconnect.

13. Unison submits that there is sufficient justification to universally provide for accelerated depreciation from 2020, in anticipation that over the next 25 years (at the outside) ongoing technology developments in solar and battery technologies will provide significant opportunity for many consumers to become largely self-sufficient. In addition, ongoing increases in appliance efficiency will continue to reduce network demands (both through-put and at network peaks). Although electric vehicles may provide new demands, it is unclear whether these will provide off-setting revenue benefits, as prices for vehicle charging during night periods will need to be low to encourage optimal timing of recharge to avoid further investments in peak network capacity.

14. The Commission's proposal is to provide for a 15% reduction in asset lives in order to mitigate the risk that in the long term EDBs may be constrained in the level of charges they can set to recover their costs. It appears the 15% value has been selected on the basis that it would provide a small, but palatable, increase in charges in the short-term. While this approach has merit, Unison submits that the Commission should also consider alternatives such as retaining the asset lives of existing assets, but capping the asset lives of all new assets at a certain number of years (e.g., 25), as this may better address incentives to invest in new assets.

15. Unison submits that accelerating depreciation on assets to better match the economic (as opposed to physical) lives of assets is in the long term interests of consumers. It would:

    a) Ensure EDBs have ongoing incentives to invest and to make optimal trade-offs between capital and maintaining assets;

    b) Ensure better equity between customers, as in the long-term, not all customers will be able to avail themselves of alternative technologies due to the attributes of different properties (e.g., apartments, shaded areas, lack of appropriate roof-space for solar);

    c) Improve economic efficiency by effectively applying Ramsey pricing inter-temporally. In the longer-term as derived demand for network services becomes more elastic, recovery of sunk and fixed costs is likely to have greater impacts on economic efficiency than at present.

16. Unison supports the Commission's view that it would be inappropriate for the Commission to set cost and asset allocation requirements to effectively prevent EDBs from directly utilising new technologies to provide network services. This is a policy issue better addressed under the Electricity Industry Act. While we recognise retailers' concerns about being able to access

"value-streams" associated with network investment deferrals or avoiding investment, Unison submits that this is best addressed through changes in network pricing structures, which more effectively signal the value of network alternatives where there is value in reducing or shifting demand. Unison submits that retailers would be better to invest effort in navigating the difficult challenge of network pricing reform, than seeking to simply lock EDBs out of using alternatives to traditional network investment, especially when such markets are nascent.

17. Based on the analysis contained in Attachment B in the Emerging Technology Topic Paper[4], Unison does not support the Commission's proposal to reduce the revenue threshold for mandatory use of ABAA from 20% to 10%. The Commission appears to have made a number of errors in calculating unregulated revenues (for example, by including capital contributions as revenue), which makes the analysis unsound. Our analysis indicates that if corrections were made to the calculations of Unison's unregulated revenues, the application of ABAA would have less than 1% impact on revenues.

18. Unison supports further disclosures in respect of use of proxy allocators where ABAA is used. This should not result in a large increase in compliance costs and would improve transparency and confidence in the allocation approach. We do not support Management (CFO) certification of the choice of allocators for the reasons set out in ENA's submission.

Weighted Average Cost of Capital (WACC)

19. Unison submits that the proposed changes to WACC, as well as legacy issues from the 2010 WACC decisions are likely to lead to a WACC that does not satisfactorily compensate investors for the cost of capital and the risks they face. In particular:

    a) Despite the small modification for establishing the cost of debt, Unison submits that the Commission's approach of using a (still) narrow window of three months to calculate the cost of debt prior to the regulatory period is likely to lead to potential for substantial errors. It is not prudent debt/interest rate management to align to five-year regulatory cycles. Unison submits that the Commission gives further consideration to the use of trailing averages that align to efficient treasury practices.

    b) Aligned to the preceding point, the term credit spread differential has not provided adequate compensation for EDBs issuing long-term debt.

20. These issues and others are addressed in detail in the ENA submissions and expert reports from CEG.

Related party transactions

21. Unison supports the Commission undertaking further work to review related party transaction rules. This is a complex area; there is inconsistency between the IMs and Information Disclosure; and the rules do not readily apply to some types of transactions.

[4] Topic Paper 3, pages 66-67

22. Pending a further consultation process, Unison recommends that the Commission do further analysis of the mark-up figure used for related party operating expenditure, or consider alternatives to a fixed mark-up depending on the nature of the transaction.

1.3 This submission

23. In the remainder of this submission we elaborate on these key points.

24. Unison's contact person for this submission is Nathan Strong (06 873 9406).

2. FRAMEWORK FOR THE REVIEW

2.1 Commission's key points

25. The Commission sets out that it has applied a decision-making framework to determine if there are elements of the IMs that need to be reviewed as well as determine what changes may be required to elements of the IMs that have been identified for review.

26. The Commission sets out that the following questions have been asked to determine "Review Elements":

X14.1. Is the policy intent behind the IM still relevant and appropriate?

X14.2. Is the current IM achieving that intent?

X14.3. Could the current IM achieve the policy intent better?

X14.4. Could the current IM achieve the policy intent as effectively, but in a way that better promotes s 52R or reduces complexity or compliance costs?

X14.5. Do changes to other IMs require any consequential changes to the IM in question for internal consistency or effectiveness reasons?

27. In assessing the case for change the Commission has considered the following:

"X16. In reaching our draft decisions, we have only proposed changing the current IMs where this appears likely to:

X16.1. promote the Part 4 purpose in s 52A more effectively;

X16.2. promote the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); or

X16.3. significantly reduce compliance costs, other regulatory costs or complexity (without detrimentally affecting the promotion of the s 52A purpose).

X17. We have also considered, where relevant, whether there are alternative solutions to the identified problem with the IM that do not involve changing the IMs as part of the review."

28. In addressing the considerations in paragraphs X16, the Commission has used the following "key economic principles" as follows:

"X19.1. **Real financial capital maintenance (FCM)**: we provide regulated suppliers the expectation ex-ante of earning their risk-adjusted cost of capital (ie, a 'normal return'), which provides suppliers with the opportunity to maintain their financial capital in real terms over time frames longer than a single regulatory period. However, price-quality regulation does not guarantee a normal return over the lifetimes of a regulated supplier's assets.

X19.2. **Allocation of risk**: ideally, we allocate particular risks to suppliers or consumers depending on who is best placed to manage the risk, unless doing so would be inconsistent with s 52A.

X19.3. **Asymmetric consequences of over-/under-investment**: we apply FCM recognising the asymmetric consequences to consumers of regulated energy services, over the long term, of under-investment vs over-investment."

29. In setting out those principles the Commission makes the following key point about whether the key principles amount to a regulatory compact:

X20. We do not agree with submitters that these or any other economic principles amount to a regulatory compact. The key economic principles are subordinate to s 52A and we can only apply them in so far as they assist us to give effect to s 52A. The principles are not an outcome we seek to give effect to in and of themselves; rather, the application of the principles is a means to an outcome – that outcome being promotion of the long-term benefit of consumers in accordance with s 52A.

30. The Commission also indicates that it will progress the development of a wider framework for making IM changes at a later point.

2.2 Unison's responses

31. Firstly, we support the Commission's decision to set out its decision-making framework, as this is a key element of providing investors with confidence that a clear and principled approach has been applied to determining "review elements" and "change elements". We also welcome the Commission's indication that the framework will be further developed to set out when IMs will be considered for change between 7-yearly reviews.

32. Unison also welcomes the Commission's elaboration of the key principles that have been considered in setting the IMs. While we agree with much of the Commission's analysis, we do have some comments in the following paragraphs.

33. With respect to investor's expectations of *ex ante* real-FCM, we agree that this is a cornerstone principle, which "trumps" the risk allocation principle (paragraph 135). The Commission sets out the application of this principle in detail in paragraphs 126 to 127 and we agree with this characterisation.

34. Unison also agrees with the Commission's characterisation that, wherever possible, risks are allocated to the party that can best manage those risks. Appropriate compensation to suppliers for the risks that they bear is necessary and, where consumers are expected to bear risks, we agree their "compensation" is effectively achieved through prices being lower than they otherwise would be.

35. At paragraph 135 the Commission states:

> "As such, the FCM principle has primacy over the risk allocation principle. Under Part 4, consumers ultimately bear most risks over the long term, but there is some scope for ensuring suppliers bear 'within-period' risks that they are better placed to manage where this is consistent with s 52A."

36. With respect to the comment that "consumers ultimately bear **most** risks", Unison notes that from an *ex ante* FCM (or equivalently NPV≥0) perspective, ultimately consumers bear the **costs of all** risks associated with the provision of lines services. This is either through facing the risk directly, or through compensating suppliers for bearing the risk. *Ex post* if a particular risk event occurs, then the party allocated the risk must bear it. Accordingly, Unison submits that paragraph 135 needs further clarification along these lines, so that it is clear that even if an EDB is bearing a "within-period risk", it is being compensated for bearing that risk.

37. We agree with the Commission's analysis that it is better to err on the side of caution when considering impacts on investment incentives as consumers are likely to be more disadvantaged by prices that are insufficient to encourage investment.

38. Where Unison (and the ENA) differs principally from the Commission is on the status of the economic principles as establishing some form of regulatory compact. The Commission argues that section 52A has primacy, such that if the application of the economic principles, did not subsequently give rise to achievement of section 52A, then the Commission could not continue to apply the principles.

39. Unison submits that section 52A can only be achieved if investors perceive there is a credible regulatory compact, such that the Commission will always honour past decisions and commitments, especially where these are being relied upon by EDBs to make investments in an expectation of FCM. As the Commission observes, emerging technologies are changing the landscape for EDBs significantly and, now, more than ever, it is essential that the Commission is perceived to be 100% committed to FCM. For example, if emerging technologies do allow a number of consumers to reduce their reliance on the grid, such that there is partial asset stranding, it is easy to envisage that the Commission will come under pressure to re-introduce "optimisation" or "EV" tests as occurred under the old ODV rules, with EDBs asked to wear uncompensated write-downs of their assets. Application of the economic principles as forming a regulatory compact would dictate that the Commission would reject such pressure, whereas if the Commission considers it is not constrained by the principles and must focus on the long-term interests of consumers from that point in time, then under the Commission's logic it would potentially succumb to the pressure.

40. From Unison's perspective, the Commission's rejection of the economic principles as forming a regulatory compact, is counter to the principles of regulatory economics that regulatory commitment is essential to incentives to invest (and therefore the ability to achieve section 52A). We strongly recommend the Commission reconsider this position, as it significantly impacts on Unison's assessment of what risks it is really bearing, as current stated positions (for example, that consumers bear asset stranding risks) would become meaningless.

3. TOPIC PAPER 1: FORM OF CONTROL AND RAB INDEXATION

3.1 Commission's key points/decisions

41. The Commission has proposed that the form of control be changed to a pure revenue cap, as this would materially reduce the disincentives EDBs face in restructuring prices to price more efficiently. It would also remove a key challenge in resetting the DPP, as experience has shown that there has been a wide variation in out-turn performance of volume forecasts.

42. The Commission asks for comment on a letter from the Electricity Authority ("Authority"), which raises a number of narrow theoretical concerns with incentives under a revenue cap. The Authority expresses concern that under a revenue cap there still may not be incentives to change price structures as distributors will get their revenues anyway, even if there are reductions in demand.

43. Under the revenue cap approach the Commission proposes;

    a) a number of constraints around how the revenue wash-up approach would work, including constraints on EDBs with particular ownership types being able to under-recover in one period and over-recover in future periods and caps that apply following a catastrophic event;

    b) Wash-ups for differences between forecast and actual revenue to be carried forward at the WACC (rather than the cost of debt under the current approach for recoverable cost balances);

    c) No separate treatment for large new connections, as EDBs are able to manage this through capital contributions, including through recovery of capital contributions over time; and

    d) Additional disclosure requirements associated with new connections to ensure EDBs have good incentives to connect new customers.

44. The Commission proposes to keep the current inconsistent treatment of RAB indexation between EDBs and Transpower on the following basis:

    a) The Commission considers that EDBs are able to manage inflation risks because the impact on bankruptcy risk is small and/or EDBs could issue inflation-indexed debt. RAB indexation is consistent with real FCM, based on the evidence the Commission has assessed and Dr Lally's contention that errors are likely to offset over time.

    b) Transpower's approach is consistent with GAAP, there may be revenue shocks associated with a change to an indexed approach, and there may need to be off-setting changes to depreciation rates (as proposed for EDBs to address the emerging technology risk).

3.2 Unison's responses

45. Unison is supportive of the Commission's proposal to move to a pure revenue cap and appreciates the additional detail the Commission provided about how it would implement the new approach.

46. Unison supports the reasons advanced for moving to a pure revenue cap, in terms of addressing volume forecasting risks under a DPP as well as removing the current barrier to distribution pricing reform.

47. In regard to the EA's concerns that a revenue cap may also lack incentives for network pricing reform, we submit that these concerns are not likely to be borne out in reality. The ENA has established a Distribution Pricing Working Group, which is in the process of finalising technical options for pricing reform. There has been broad support and participation in developing the paper, which we will be seeking feedback from other stakeholders on. ENA Members universally recognise the need for reform, and the question is not "should price structures change", but "what is the best approach", and "how will change be achieved given the complexity and fragmentation of the New Zealand electricity market?"

48. The ENA's submission addresses the key design elements proposed by the Commission, including caps on wash-ups where there are:

    a) Major demand shocks from catastrophic events; and

    b) Under-charging policies.

49. The ENA recommends that:

    a) The Commission ensure wash-up mechanism is as simple as possible;

    b) The Commission not include the proposed caps.

50. Unison supports these positions for the following reasons:

    a) We continue to hold the view that under the Commission's policy for EDBs to bear reduced revenues following a catastrophe, there is not adequate compensation for bearing such risks.

    b) There is no low probability, high revenue increase event that is opposite to the impacts of a catastrophic event, so the risk is asymmetric.

    c) Evidence from insurance markets is that the cost of bearing this risk is substantially greater than "less than 0.1% of WACC"[5] which the Commission calculated as the cost of global losses from earthquakes and cyclone wind damage as a proportion of market value of listed companies. Insurance quotes that Unison has received for insurance of "T&D" assets (cables, poles, wires) place the annual cost at between 5-10% of the sum

5 REF

insured, with Unison expected to bear a material deductible for the initial layer of cover. Given insurance markets are globally competitive, this indication of the cost of managing the catastrophe risk indicates that shareholders are holding a material uncompensated risk position.

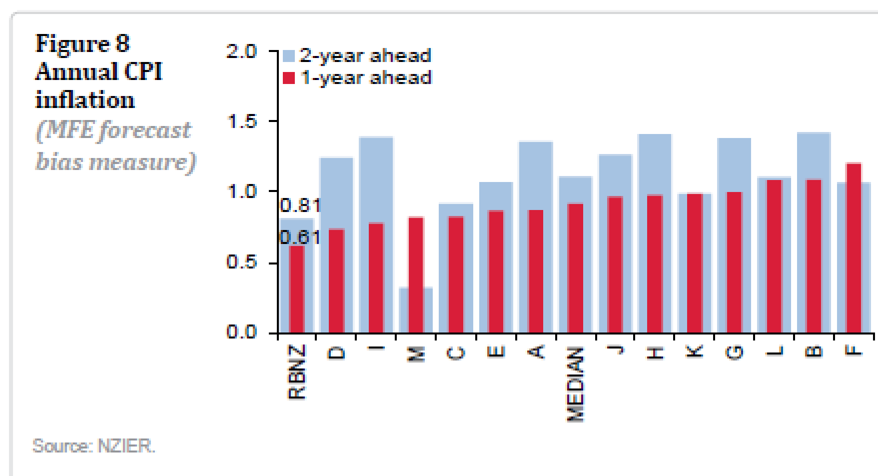
d) In regard to capping the amount that an EDB can carry forward when following a policy of deliberately under-recovering revenue allowances, Unison submits that such a cap is likely to be counter to the interests of the consumers of such EDBs seeking to manage price shocks and smooth prices over time. EDBs facing a cap on deferred revenue recovery would face a "use it or lose it" situation and may therefore be encouraged in the short-term to set prices above what they would prefer. EDBs looking forward may prefer to smooth the effects of WACC declines at forthcoming resets, or time price increases to when local economic conditions may be more attractive. For example, if the Ruataniwha dam proposal goes ahead, this is likely to attract greater economic growth to the Central Hawke's Bay region and a higher population, so it may be preferable for Centralines to recover a greater proportion of revenue in future time periods. It would be against the interests of the current consumer-owners of Centralines to forego the ability to realise value from the existing network in that situation.

51. In regard to RAB indexation, Unison understands the theoretical equivalence of indexing the RAB versus non-indexation from an NPV=0 perspective, and the inflation protection arguments associated with RAB indexation.

52. Nevertheless, from a practical perspective, Unison is concerned that the RAB indexation approach creates undue risks to equity-holders. In particular, the approach to CPI forecasting is having a persistent negative impact on returns, with no evidence that these effects are likely to off-set over time.

53. As set out in ENA's submission, because debt is issued in nominal terms, the effects of inflation forecast error are concentrated solely on equity-holders. In the short-term, equity holders' returns are suppressed below the required real return on equity by the proportion of RAB indexation funded by nominal debt. If there is a short-fall in CPI inflation relative to forecast, while debt holders are immune to this as interest rates are nominal, the effect is magnified for equity-holders. If forecast errors can reasonably be expected to cancel out over time, then this is not necessarily a problem. However, as NZIER has recently established in a report to the Reserve Bank, there has been a persistent bias in over-forecasting CPI inflation, with the mean error of the RBNZ's long-term forecasts almost 1% since the start of this decade. This is shown in the following chart comparing a number of forecasters' CPI forecasting performance:

Figure 1: Comparison of forecasters' CPI forecast performance



Source: RNBZ Bulletin July, 2016, p10

54. The review by NZIER shows that the RBNZ has persistently over-forecast CPI inflation since the start of this decade. Accordingly, in the absence of any evidence that this bias has been corrected with improvements in forecasting techniques, equity-holders can expect under the status quo approach that real FCM will not be achieved. Unison has previously called for CPI forecasting performance to be reviewed, especially in light of the approach to forecasting CPI inflation beyond the RBNZ's forecast time horizon. The findings of the recent NZIER research highlight that this is a serious issue, which needs to be addressed.

55. In light of this new evidence of bias in CPI inflation forecasts by RBNZ, Unison recommends that the Commission consider:

a) At the very least, restricting RAB indexation to CPI to the proportion of the RAB funded by equity in recognition that debt is financed in nominal terms;

b) Investigating approaches to correcting for CPI forecast error, until such time as it can be demonstrated that there is not bias in RBNZ inflation forecasts; and

c) Investigate alternatives to using the RBNZ CPI forecasts, including interpolating from market information on relative yields between inflation-indexed and nominal bonds.

4. TOPIC PAPER 3: THE FUTURE IMPACT OF EMERGING TECHNOLOGIES IN THE ENERGY SECTOR

4.1 Commission's key points/decisions

56. The Commission has identified that since 2010, there has been an increase in uncertainty about the potential for new technologies to significantly impact on EDB's businesses. Although the currently available evidence is inconclusive that new technologies will have an impact on EDBs' abilities to recover their costs over time, the Commission considers a cautious approach would be for provision to be made prior to the DPP reset to reduce asset lives by 15%. EDBs would have to apply for the reduction. This would have a small positive impact on prices in the short-term, but would be offset by lower prices in the long-term in a NPV neutral manner. The Commission has not provided details of the application process.

57. In addition, the Commission does not consider it appropriate for Part 4 regulation to seek to limit EDB's use of new technologies. These issues are more properly addressed by policy-makers. Accordingly, the Commission considers that the current cost and asset allocation IMs are largely appropriate.

58. The Commission has, however, proposed to lower the revenue threshold test for use of ACAM from 20% to 10%. The Commission suggests that this change is required to ensure that EDB's prices are not more than 1-2% higher under ACAM, compared to if ABAA had been used.

4.2 Unison's responses

59. Unison supports the Commission's view that it would be appropriate to take a precautionary stance in regard to the effects of new technology on EDB's ability to recover their costs over the longer term.

60. Given global commitments to reducing fossil fuel emissions, New Zealand is likely to benefit from significant advances in battery storage technology, solar PV generation as well as ongoing improvements in appliance efficiency and demand-side management capability.

61. Conversely, from a network perspective, because New Zealand EDBs are working through a phase of significant renewal and replacement expenditure for aged assets, it seems likely that grid-delivered electricity costs will remain relatively static.

62. Accordingly, Unison submits that mass-market consumers in particular, will increasingly have options and incentives to substitute a large part of their energy requirements to demand-side alternatives, placing significant commercial pressures on EDBs. These pressures will cause EDBs to reform tariff structures, but because of the constraints of the "Low Fixed Charge Tariff" Regulations ("Regulations"), there is only limited potential to send efficient signals of the true fixed cost nature of network services, and consumers will have some form of incentive to implement technology and behavioural changes to avoid network charges, whether they are volumetric, capacity or demand-based pricing approaches. There appears to be little prospect of repeal or change to the Regulations.

63. Unison continues to submit that it is in consumers' long term interests to bring forward cashflows, with slightly higher prices in the short-term and lower prices in the long term to ensure efficient utilisation of the grid. In economic terms, we think that Ramsey pricing considerations would indicate that in the short-term demand will be relatively more inelastic than in the long-term, particularly for mass-market customers who have relatively low energy requirements, but quite peaky demands. In the medium term, cheap battery storage technology will likely enable consumers to arbitrage between different pricing periods, making it commercially difficult to recover network costs. In the transition to widespread adoption of such technologies, there may be quite significant inequity between those that can access such technologies to reduce their contribution towards paying for the network and those that cannot.

64. Unison also notes that most EDB cost allocation models will allocate costs to different customer groups in proportion to relative shares of use of peak capacity; either at system peaks or on an "anytime" basis. Because industrial and commercial customers tend to have better load factors (the ratio of energy to capacity) and potentially limited opportunities for roof-top solar and/or use of batteries, it is quite feasible that higher shares of the common costs of the networks will end up allocated to them, as residential consumers smooth out their load profiles While smoother loads are undoubtedly likely to be beneficial in the longer term, through reducing demands to build peak capacity, in the short-term this may negatively impact on the international competitiveness of the commercial and industrial sectors.

65. As a result of these considerations, we support the Commission's proposal to make an initially modest change in depreciation rates to tilt the profile of cost recovery towards higher revenues now and less later. We think that the Commission should consider universal application of an accelerated depreciation approach, as it is unclear what hard evidence could be produced to model outcomes in 10-20 years, when we expect new technologies to be much cheaper and more effective in providing alternative services.

66. Unison also submits that the Commission should consider alternatives to the 15% across-the-board reductions in asset lives. For a new asset with 45 years expected physical life, reducing this by 15% (6.75 years), would not materially impact on concerns about long-term asset stranding. We think the Commission should model alternatives, such as capping depreciation on new assets at 25 years, whilst retaining the asset lives of existing assets. The ENA's modelling indicates that had this applied at the 2015 reset, this would have increased prices by 2%. Focussing the depreciation approach on new assets may have beneficial impacts in terms of both bringing forward revenue recovery by a modest amount as well as improving incentives to invest in new assets.

67. As the Commission observes, the Authority and retailers have expressed concerns about EDBs' participation in markets where the line is blurred between competitive and non-competitive services. They express concern that EDBs may hinder the development of competitive markets (e.g., for battery services) or reduce the efficiency of those markets.

68. Unison concurs with the Commission that such issues are not Part 4 issues, but are better dealt with by policy-makers under the Electricity Industry Act, which already addresses limits on participation in different function elements of the electricity market. In addition, we think retailers' concerns about accessing value-streams associated with assisting to defer or avoid

network capacity upgrades are best addressed through network pricing reform, whereby EDBs are better able to signal the value of peak demand avoidance in areas of their networks facing constraints.

69. Through analysis of EDB's recent performance, the Commission has identified that the current 20% revenue threshold for when ABAA must apply should be reduced to 10%.

70. In Unison's case, the Commission has made errors in assessing the proportion of unregulated revenue to total revenue. The unregulated revenue figure appears to include capital contributions, which are not revenues for regulatory purposes, and therefore the revenue percentage is substantially overstated, with consequent over-statement of the potential for operating costs to be allocated away from the regulated business based on a revenue split. Based on corrected unregulated revenues, if ABAA was applied on a revenue split basis, we calculate that this would have an impact of around 0.6% on revenues.[6]

71. We have not checked whether similar errors have been made for other EDB's but if this is the case, then we expect if the analysis was corrected, then this would indicate that the 20% threshold remains consistent with the impact of ACAM being less than 2% of revenues.

72. Accordingly, Unison recommends that the Commission correct its analysis, with a likely finding that there is no need to reduce the current 20% revenue threshold.

[6] We note that the red-coding in table B1 is based on the percentage of operating costs that would be reduced on a revenue split basis, not the percentage of revenues that would be reduced, as indicated in the legend below the table. So even if the Commission had the correct unregulated revenue information, the percentage impact on revenues is much less than indicated in the final two columns of table B1 in Attachment B to the emerging technology topic chapter.

5. TOPIC PAPER 4: COST OF CAPITAL ISSUES

5.1 Unison's responses

73. Unison is reliant on the expert advice obtained by the ENA, and refers the Commission to the ENA and CEG submissions for the detailed technical analysis.

74. Unison's key concern with the approach to cost of capital is that the approach to cost of debt, (notwithstanding the proposal to move to a three month measurement window) does not reflect prudent real world funding and interest rate strategies. Using specialist expert treasury advice, Unison seeks to prudently manage its cost of debt through a variety of debt instruments, with significant variances in tenor. Unison's debt includes a substantial tranche of debt issued by way of US Private Placements, with original tenors significantly exceeding the five year term used by the Commission.

75. Accordingly, we continue to advocate that the Commission give further consideration to the use of trailing averages, as recommended in the ENA and CEG reports to better reflect real-world practices.

76. We also note that the Commission provides no compensation for maintaining "headroom" in EDB's debt portfolios. This is vital when considering that EDBs are unable to cost-effectively insure a large proportion of their assets and need to be able to immediately call on material sums in the event of a catastrophic event.

6. TOPIC PAPER 7: RELATED PARTY TRANSACTIONS

6.1 Commission's key points/decisions

77. The Commission is seeking input on the nature of problems with the related party transaction rules and will make decisions about whether further work is required beyond December 2016 to resolve any identified issues.

78. The Commission raises a number of points about related party transactions and their rising prevalence and value, querying whether the policy intent is being achieved.

6.2 Unison's responses

79. Unison agrees with the points made in the ENA's submissions that the review of the related party transaction rules need to start from a first principles basis by establishing what is trying to be achieved with the IMs. We agree with the ENA's submission that the intention should be to provide for the fair recovery of costs at prices that would reflect those achieved in arm's length transactions.

80. Our experience of the related party transaction rules is that primarily there are problems with the inconsistency between the asset valuation related party transaction rules in the IMs and the operating expenditure rules contained in Information Disclosure Regulation. Accordingly, to generate sensible outcomes, Unison's disclosures are based on a letter of comfort from the Commission about consistently consolidating Unison's contracting services arm into the network business across both opex and capex projects. Notional consolidation is currently only provided under the IMs for commissioned assets.

81. While Unison currently finds this situation workable, the current rules force Unison down a path of notional consolidation of Unison Networks and Unison Contracting Services Limited as otherwise the overhead costs of the contracting business would not be recognised. This approach thereby creates a situation where Unison is forced to record as operating expenses a large proportion of costs in the contracting arm, whereas, if those services were provided by a third party contractor, these would be capitalised into capital projects through margins. Unison submits that this creates distortions in the ability to compare performance between EDBs. It may also lead to sub-optimal decisions, especially if EDBs are considering changes to business models – e.g., out-source versus in-house provision, because of changes in whether particular expenses are capitalised or expensed. We think it would be useful to assess whether the application of different options for related party transactions creates consistency across EDBs.

82. In addition, when first considering the different options available for valuing related party opex after the Disclosure requirements were first published, we determined that there was significant variation in business practices in the sample of companies that the Commission used to establish the 17.2% mark-up for related party opex. For example, margins would be different for companies that lease vehicles for particular projects, versus those that own them. Unison therefore submits there is a strong case to review the use of a fixed mark-up across a wide range of related party transactions in any review.

83. Given time available for the remainder of the IM Review, we think that a dedicated workshop, informed by pre-workshop questionnaires may be the most effective way of ensuring the related party transaction rules have a clear policy intent and deliver workable, consistent methods.