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Keston Ruxton
Manager, Market Assessment and Dairy
Regulation Branch
Commerce Commission
Wellington

Via email: regulation.branch@comcom.govt.nz

Dear Commission

Submission on Cost of Capital Update Paper: 30 November 2015

Thank you for the opportunity to provide feedback on the topics raised in the Commerce Commission's (**Commission**) Consultation Paper *Input Methodologies Review. Update on the cost of capital topic* (**Consultation Paper**).

We appreciate the area of cost of capital is a technical area with significant judgements to be made or derived from available information, however, given the potentially significant impact to consumers, it is an important area for the Commission to get right. Below we have provided evidence and commentary regarding issues outlined in the Consultation Paper. Given the breadth of subject matter in this area we have focused on those areas where we see material variation from the Commission's approach or interpretation.

In summary, market information, in particular regulated asset base (RAB) multiples, indicate the cost of capital settings are too high. We recommend the following adjustments be made to the Commission's cost of capital approach for Transpower, electricity distribution and gas pipeline services (Regulated Network Services) to provide outcomes more closely aligned with the Purpose of Part 4 of the Commerce Act:

- 1. Further refining the comparable company set for beta and leverage analysis to a set of companies whose market risk profile more closely aligns to the services being regulated.
- 2. Expand the data set for calculation of debt premium and costs to include bank debt.
- 3. Updating the debt issuance cost estimates for current market conditions and including swap costs associated with issuance.
- 4. Removing the compensation for longer term debt (term credit spread differential or TCSD).
- 5. Revisit whether the change from 75th to 67th percentile WACC has been sufficient to alleviate cost of capital concerns, given transaction metrics from the recent Vector gas asset sale. We recommend moving to a mid-point WACC, which would be both more in line with commercial practice in competitive markets and a fairer cost outcome for consumers of these services.



Market information indicates consumers are paying too much for Regulated Network Services

Contact agrees with the Commission's core framework for its theoretical approach to estimating cost of capital, including the use of the simplified Brennan-Lally version of the Capital Asset Pricing Model (CAPM). In practice we also use this framework. However we are concerned that the estimated parameters in this approach and the use of a 67th percentile are causing the resulting cost of capital to be too high and most importantly, consumers to be paying more than they should be for Regulated Network Services.

The evidence for this can be seen in the historic sale prices for regulated electricity and gas networks in New Zealand. Simshauser (2014) provided the following as a framework for looking at these transactions in his assessment of similar transactions in Australia:

"From a capital markets perspective, an important transaction metric is the 'RAB multiple' achieved on sale date. The RAB Multiple is the asset sale price divided by the approved RAB. In theory, RAB multiples should be exactly 1.0x. That is, when a regulated asset is sold, if the regulatory system was working perfectly and the assets were being run efficiently, asset exchange would occur at the same value as the RAB, with no gain or loss on sale." ¹

In the October 2014 "Amendment to the WACC percentile for price-quality regulation for electricity and lines services and gas pipeline services" Reasons paper the Commission made the following references to historic RAB multiples:

"We note that the observed RAB multiples:.......range on average from 1.2 to 1.4 depending on whether 'other financial obligations' are included in the estimate of enterprise value";

And

"Our RAB multiples analysis suggests the following: There is evidence of excess returns available to investors in regulated utilities."²

As part of the above review process the Commission has adjusted the percentile weighting for cost of capital from 75th to 67th percentile. However, despite the reduction in percentile, the recent Vector gas asset sale in November 2015 shows this evidence of excess returns remains. Available market analyst RAB multiple estimates for the sale of Vector's gas assets were between 1.33 and 1.5x³. That is a 33-50% higher sale price to the Vector shareholders than the approved RAB of these assets.

¹ Simshauser; "From First Place to Last: The National Electricity Market's Policy-Induced 'Energy Market Death Spiral", The Australian Economic Review, vol 47, no. 4 pg 552

 ² Commerce Commission; "Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services. Reasons paper".
 ³ Equity Research on Vector Limited by Deutsche Bank, Credit Suisse and Macquarie dated 9 November 2015



These RAB multiples and excess returns on sale are inconsistent with the Purpose of Part 4 of the Commerce Act. Specifically Section 52A 1(d) being:

"The purpose of this Part is to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—are limited in their ability to extract excessive profits."

Below we provide a summary of analysis and evidence to support change in the Commission's approach to some of its cost of capital parameter estimates. These changes would provide an improved approach for cost of capital estimation. We have also commented on the identified areas of focus in the Consultation Paper.

Analysis and supporting evidence on current cost of capital approach

In the sections below we have reviewed the Commission's October 2014 cost of capital determination for electricity distribution businesses (EDBs) and Transpower, and compared the Commission's WACC parameters to those concluded by our own analysis. The issues identified equally apply to the Commission's previous cost of capital determinations for gas pipeline businesses (GPBs).

1. Concern with the comparator set for asset beta and leverage settings

In the 2010 IM Final Reasons Paper⁵, the Commission described its analysis of asset and equity betas as having six steps:

- "Step 1: identify a sample of relevant comparator firms. This includes:
 - New Zealand firms from the service in question;
 - New Zealand firms from industries with a similar risk profile:
 - o overseas firms from the service in question; and
 - o overseas firms from industries with a similar risk profile.
- Step 2: estimate the equity beta for each firm in the sample;
- Step 3: de-lever each equity beta estimate to get an estimated asset beta for each firm in the sample;
- Step 4: calculate an average asset beta for the sample;
- Step 5: apply any adjustments for regulatory differences or differences in systematic risk across services to the average asset beta for the sample;
- Step 6: re-lever the average asset beta for the sample to an equity beta estimate using the Commission's assumed notional leverage."

The set of comparator firms formed in the first step is then also used for assessment of appropriate leverage for the cost of capital calculation.

Our concern in this area is with the approach to the first step, identifying the relevant comparator firms. Typically for a commercial analysis of this nature we would expect in-

⁴ Commerce Act, section 52A

⁵ Commerce Commission; "Input Methodologies (Electricity Distribution and Gas Pipeline Services). Reasons paper". December 2010 pg 510



depth analysis on the characteristics of each organisation to check for comparability prior to its use in further cost of capital analysis. In its reasons paper the Commission defined 'Comparable' as:

"'Comparable' means firms that have very similar exposure to market risk."

In practice, finding comparable firms requires judgement and some of the difficulties in making such judgement are outlined by the Commission in the above mentioned reasons paper. Our approach (consistent with many other market practitioners including the Australian Energy Regulator⁷) is to pick genuinely comparable companies in the local (or very similar) jurisdictions and then use a small number of genuinely comparable international companies to cross check the data. In an ideal analysis this would produce a set of genuinely comparable firms that:

- provide "electricity or gas network services";
- are regulated in the same or similar regulatory environment to New Zealand;
- have the majority of their operations in similar regulated activities (e.g. not electricity retailing or generation); and
- have sufficient share data to conduct a high quality beta regression analysis.

In practice, this perfect comparator set may not be possible so judgement needs to be made as to which firms should be used, often weighing up the use of firms that show only some of the above characteristics. However, when doing this the quality of comparators is always primary to quantity of comparators (i.e. it is preferred to have a smaller and closer comparable set than a large and less comparable set).

In the Commission's analysis⁸ we observe the use of a Bloomberg index of utilities for choice of comparable firms, with some adjustments for level of stock trading, size of firm and assessment of Bloomberg descriptions. While this provides a set of utility companies we note the variance in operations and industry/regulation structures from the New Zealand Regulated Network Service companies is significant. Our particular concern with this data set is:

- It is very heavily weighted to the US, a market with a very different industry and regulatory structure to New Zealand.
- For many of the firms the provision of regulated electricity and/or gas network services is only a small part of their total assets or operations.
- Many of the businesses are highly diversified across a range of activities, in which case determining the underlying risk profile becomes difficult.

Due to the above we are concerned this set is not a relevant comparator set and is creating error in the Commission's beta and leverage calculations.

⁶ Commerce Commission; "Input Methodologies (Electricity Distribution and Gas Pipeline Services). Reasons paper". December 2010 pg 514

⁷ AER, "Preliminary Decision. Jemena Distribution Decision 2016 to 2020. Attachment 3 – Rate of Return". October 2015 page 3-456

⁸ Commerce Commission; "Input Methodologies (Electricity Distribution and Gas Pipeline Services). Reasons paper". December 2010 pg 514-515



We have undertaken an analysis of a more appropriate comparator set for calculation of cost of capital parameters. The analysis has utilised the large comparator set described by the Commission and refined this through assessment of scope of operations, regulation and industry structure, and proportion of "regulated" operations. This has produced a primary set of comparable companies, being six companies from New Zealand, Australia and the UK and a secondary set of seven US companies. These companies are:

Primary comparator set

- Vector (NZX:VCT)
- Duet Group (ASX:DUE)
- Spark Infrastructure (ASX:SKI)
- SP AusNET (ASX:AST)
- National Grid (LSE:NG)
- Envestra (no longer listed but recent share price information exists)⁹

Secondary comparator set

- Atmos Energy Corporation (NYSE:ATO)
- Eversource Energy (NYSE:ES) (formally Northeast Utilities)
- ITC Holdings Corp. (NYSE:ITC)
- Northwest Natural Gas Company (NYSE:NWN)
- Pepco Holdings, Inc. (NYSE:POM)
- The Laclade Group, Inc (NYSE:LG)
- Unitil Corp. (NYSE:UTL)

The primary comparator set is designed to be the closest comparator companies to provide beta and leverage parameters for cost of capital settings. The secondary comparator set, from US companies, is included for use as a cross check, with the understanding that these vertically integrated companies are expected to have higher beta estimates than pure play energy network firms, as was expressed by The Australian Energy Regulator (AER) in their December 2013 Explanatory Statement Rate of Return Guideline:

"We have conducted our own analysis and found that vertical integration and other activities do increase beta estimates." 10

Resulting beta and leverage estimates, using the Commission's data sets from the December 2010 Reasons paper, for consistency of comparison, are shown below. These provide an asset beta range of 0.18-0.20, from which we derive our asset beta estimate of 0.19¹¹. We believe the comparator set we have derived and the resultant 0.19 asset beta, is appropriate for both electricity and gas transmission and distribution businesses. We note:

• The large difference to the Commission's 0.34 and 0.44 estimates for

⁹ While not current listed, we note there is sufficient recent trading data available for Envestra to continue to use this company in the comparator set

¹⁰ AER, Explanatory statement to the rate of return guideline (appendices), December 2013, pp. 62–63

¹¹ We note this beta analysis was conducted in 2010 and this number may be subject to small change for more recent trading data



- Transpower/EDB's and gas pipeline businesses (GPBs) respectively; and
- The comparator set beta's show no support for a higher beta for GPBs¹². We have found no information in our analysis of the comparator set that would change this result and recommend the Commission focus on market evidence for these settings, aligning the beta for Transpower, EDB's and GPB's at 0.19.

We also note the higher leverage figures that should also be used in tandem with the lower beta for consistency in the cost of capital calculation.

	Be	eta	
Company name	Monthly	Weekly	Leverage
Primary comparator set			
Vector (NZSE:VCT)	0.28	0.25	56%
DUET Group (ASX:DUE)	0.20	0.15	73%
Spark Infrastructure (ASX:SKI)	0.19	0.20	50%
SP AusNet (ASX:AST)	0.16	0.10	46%
National Grid (LSE:NG)	0.24	0.30	48%
Envestra	0.14	0.10	71%
Mean	0.20	0.18	57%
Median	0.20	0.18	53%
Secondary comparator set			
Atmos Energy Corporation (NYSE:ATO)	0.20	0.30	49%
Eversource Energy (NYSE:ES)	0.20	0.20	52%
ITC Holdings Corp. (NY SE:ITC)	0.48	0.49	45%
Northw est Natural Gas Company (NYSE:NWN)	0.15	0.27	37%
Pepco Holdings, Inc. (NYSE:POM)	0.26	0.39	55%
The Laclede Group, Inc. (NYSE:LG)	0.15	0.33	41%
Unitil Corp. (NYSE:UTL)	0.19	0.16	55%
Mean	0.23	0.31	48%
Median	0.20	0.30	49%

While we understand the smaller sample set may produce a risk of greater statistical error, the improved confidence in comparator data is expected to far outweigh this and will ensure firms with very different exposure to market risk are not skewing results. Refer Appendix 1 for highlighted areas of concern in the current comparator set.

We also note the use of a smaller more closely comparable company set by AER. AER define their benchmark efficient entity for beta and leverage analysis as "a pure play, regulated energy network business operating within Australia"¹³. As a comparator set for this benchmark entity they use available data from the following nine companies¹⁴.

¹² Commerce Commission; "Input Methodologies (Electricity Distribution and Gas Pipeline Services). Reasons paper". December 2010 pg 524

¹³ AER, "Preliminary Decision. Jemena Distribution Decision 2016 to 2020. Attachment 3 – Rate of Return". October 2015 page 3-456

¹⁴ AER, "Preliminary Decision. Jemena Distribution Decision 2016 to 2020. Attachment 3 – Rate of Return". October 2015 page 3-457



Table 3-57 Listed entities providing regulated electricity and gas network services operating in Australia

Firm (symbol)	Time/trading period	Sectors
AGL Energy Limited (AGK)	January 1990 – October 2006	Electricity Gas
Alinta (AAN)	October 2000 – August 2007	Gas
APA Group (APA)	June 2000 – present	Gas Minority interest in energy
DUET Group (DUE)	August 2004 – present	Electricity Gas
Envestra Ltd. (ENV)	August 1997 – October 2014	Gas
GasNet (GAS)	December 2001 – November 2006	Gas
Hastings Diversified Utilities Fund (HDF)	December 2004– November 2012	Gas
Spark Infrastructure Group (SKI)	March 2007– present	Electricity
SP AusNet (SPN)	December 2005 – present	Electricity Gas

As part of its currently on-going Jemena Determination 2016-20, AER has provided extensive commentary on its concern in using US companies for comparator analysis¹⁵. This includes the following commentary:

"We do not include international energy network firms in our comparator set for empirical analysis. We consider international energy firms are not suitable comparators in this case, for the following reasons:

- Differences in regulation of businesses, the domestic economy, geography, business cycles, weather and a number of different factors are likely to result in differences between equity beta estimates for similar businesses between countries. It is difficult to assign quantitative impacts to these qualitative factors.
- They may not have the same structure as Australian energy network firms. For example, a number of US comparator businesses identified by the Competition Economists Group (CEG) are vertically integrated. They engage in energy generation, wholesale and retail of energy, as well as other activities distinct from energy distribution and transmission. Some of the firms even engage in telecommunications, real estate development and manufacturing activities. These activities are very different from the benchmark efficient entity, which is a pure play regulated energy network business (operating within Australia). As noted in the Guideline, we consider vertically integrated firms tend to have higher equity beta estimates than pure play energy network firms".

We agree with the conclusions by AER and, while there is greater difficulty finding a domestic comparator set for New Zealand Regulated Network Service companies, we do believe the need exists to be very selective in choosing firms that are truly comparable.

 $^{^{15}}$ AER, "Preliminary Decision. Jemena Distribution Decision 2016 to 2020. Attachment 3 - Rate of Return". October 2015 page 3-459 to 3-468



Further detail of our comparator company analysis can be found in Appendix 1.

2. Retail bonds are only a portion of a typical debt funding book

While transaction data is freely available to assess the cost of debt for retail bond issuance, it should be noted that this is only one portion of a typical debt portfolio. For estimates of the appropriate cost of debt it is important to also consider all forms of debt financing accessible, particularly those that are heavily utilised in practice. From public data we note the use of bank debt funding for many of the Regulated Network Service companies, in particular those that are non-rated/non-listed typically access 100% of funding from banks. Therefore, we see it as appropriate for the Commission to also include other debt cost data (e.g. bank debt costs) as a component for determining the cost of debt.

We have provided in Appendix 2 an extract from the "September 2015 Loan Market Update" report by CBA (which is produced and distributed to their clients on a quarterly basis) on historic and current bank debt issuance and costs in New Zealand. This analysis aligns with Contact's own bank debt costs (included in Appendix 3). Our analysis of this report finds similar credit spreads for investment grade borrowers in the five year bank debt market compared to the retail bond market. However, it should be noted that overall cost of bank debt is expected to be lower due to:

- Borrowers who access the bank market will typically have a range of maturities for their facilities, from 1-5 years, with funding costs reducing by approximately 10-15bp for each year reduction in tenor¹⁶. Current average issuance shown by CBA is approximately 4 years¹⁷ and given the low establishment costs (see below) these facilities are often used as "rolling" facilities to allow companies to capture the cost benefit of shorter term debt.
- Very low establishment costs, between 0-5 bp p.a. (towards the lower end for a borrower that is merely renewing existing facilities).
- The funds being issued as floating debt, so fewer swap contracts are required to match revenue reset periods.
- Borrowers can capitalise on the flexibility of bank facilities by taking advantage of other lower cost funding available e.g. by issuing Commercial Paper (CP) when that market is able to provide cheaper funding than drawing on committed bank facilities. We note several regulated entities have CP programmes. Pricing for CP issuance in January 2016 was18:

		Average margin over	Range of Margins
Rating	Issued (\$m)	BKBM FRA (bp)	Low / High (bp)
A-1+	157	6.3	-2.5 / 13.4
A-1+ ABS	107	26.4	23.0 / 29.0
A-1	18	11.5	4.5 / 18.5
A-2	211	27.0	16 / 35.5

¹⁷ See Appendix 2

¹⁶ See Appendix 2 for detail of cost of three and five year bank debt issuance

¹⁸ Westpac Institutional Bank, "NZ Commercial Paper Market", January 2016



Our own experience is for savings on bank facilities of approximately 50bp p.a. from CP issuance, or 4bp p.a. across our entire debt book¹⁹.

We encourage the Commission to seek copies of the above mentioned and other similar bank reports to complement their own analysis of the cost of debt. This evidence shows:

- Significantly lower debt establishment costs for bank funding, which we have incorporated into our analysis of debt issuance costs below.
- Lower debt premium costs reflecting the reduced costs with average shorter bank debt duration and the benefits of CP issuance. From the above market information we derive a 10bp reduction to debt premium, being:
 - o 4-5bp for CP benefits; and
 - 5-6bp representing the reduction in costs due to average bank issuance tenor of four years (15bp) for a portion of the total funding book (here 30-40%, although as noted earlier this is as high as 100% for many of the Regulated Network Service companies).

2a. Retail Bond credit spreads

We would like to highlight the need to ensure that any sample set used to determine the credit spread component of retail bonds comprises appropriate data points e.g. all else being equal, wholesale bonds will trade at a credit spread wider than the equivalent retail bond and therefore need to be excluded from the sample set of retail bonds. This is demonstrated by analysis of Contact's bonds on issue, with the 2019 Retail Bond trading at an average spread of 15-20 bp lower than its equivalent tenor-adjusted Wholesale Bonds). Some examples of Wholesale Bonds currently trading in the market are:

Wholesale Corporate Bonds currently on issue					
Issuer	Maturity date				
Contact	May-18				
Contact	May-20				
Genesis	Jun-20				
Auckland CC	Jan-25				
Fonterra	Jun-25				
Powerco	Sep-22				
Fonterra	Oct-21				
Mighty River Power	Feb-20				
Fonterra	Oct-22				

-

¹⁹ Contact has \$120 million of CP on issue, about market capacity for an A2 issuer in this market. This comprises 8% of Contact's average total debt since our programme began in early 2014. About 10% of total funding for a hypothetical investment grade issuer is considered a reasonable assumption for the proportion of funding from this market.



3. Debt issuance costs

After reviewing the Commission's 2010 final decision and its cost of capital for the UCLL and UBA reviews (Dec 2015)²⁰ we are concerned that the levels of debt issuance and swap costs are higher than faced by parties in practice. In particular:

- Debt issuance costs have reduced significantly since the Commission's 2010 analysis. This is due to both:
 - the regulatory reforms made with the enactment of the Financial Markets Conducts Act (FMCA) in 2013. In particular the "same class exemption" clause that allows repeat issuers to issue a new bond with only a cleansing notice required (also known as Qualifying Financial Product or QFP). This materially reduces costs for domestic debt issuance as it removes the requirement for a full Product Disclosure Statement; and
 - increasing investor demand through growth in funds under management, including Kiwisaver, market conditions have improved significantly over the last 3-4 years compared with many of the prior assessed transactions which were executed in the few years after the GFC, a time when both execution costs and credit spreads were markedly higher. As can be seen in the table in Appendix 5, most repeat issuers have been able to execute new issuance at attractive spreads without the need to pay brokerage.
- Contact's experience, confirmed by a survey of other Gentailers, is that the actual swap spread cost observed in practice is between zero and 2.5 basis points the latter being cited as the spread for a 15 year interest rate swap (shorter duration swaps use less capital and involve less risk and execution costs, and therefore attract lower spread costs). The interest rate swap market in New Zealand is very competitive, with a number of domestic banks vying for corporates' hedging business. This competitive tension becomes even more pronounced when issuers are also able to leverage capital markets transactions to achieve competitive spreads for the associated hedging. On this basis, an assumed swap spread cost of 2 basis points is more reflective of the market rate.
 - We note swap costs were not included in the Commission's October 2014 cost of capital determination. These are a component of debt issuance costs incurred by firms and we would see these better as part of issuance costs than recovered through operating costs. We have therefore added 2.6bp p.a. to the debt issuance costs for an allowance for these, see Appendix 6 for calculations to derive this figure.

We have gathered evidence of these costs from our own and other S&P-rated issuance post FMCA in Appendix 4 and 5. Assuming issuance of \$150 million (the average volume for rated issuers since enactment of FMCA), a tenor of 5 years, our own costs give a debt premium of 5.7bp p.a. excluding brokerage and 15-25 bp p.a. including brokerage of 0.5-1.0%. Our estimate of debt issuance cost for retail bonds is 7-9bp p.a., based on only two of the eleven observed rated issuers paying brokerage and our own experience in issuing in this market.

²⁰ Commerce Commission; "Cost of capital for the UCLL and UBA pricing reviews". 12 December 2015



When balanced with the bank debt establishment costs provided above (0-5bp p.a.) this provides an overall estimated debt issuance cost of 5bp p.a. This increases to 7.6bp p.a. when swap costs are added. This is significantly lower than the Commission's allowance of 35bp p.a.

4. Compensating for efficiently incurred longer-term debt

We do not believe Regulated Network Service companies need to be compensated for longer term debt decisions. We have come to this conclusion after considering three areas:

- The Commission already uses an appropriate market proxy and the defined regulation period when looking at credit rating, leverage and duration of debt. To vary from this is a choice of the firm around how much maturity risk they want, not a cost consumers should cover.
- Longer duration debt comes with lower per annum debt establishment costs that would offset the higher cost.
- Regulated Network Service companies that choose to fund with shorter (or cheaper)
 debt do not see an additional revenue reduction to offset this. The principle of
 consumers paying for longer term debt and not being reimbursed for shorter debt is
 one sided.

5. The use of the 67th percentile for cost of capital setting

We are concerned about the Commission's use of a 67th percentile weighting for the cost of capital. We understand the substantial work that has been done recently in reassessment of the percentile weighting from 75th to 67th percentile, however, as described earlier in this paper, recent market transactions show the cost of capital settings are still not in line with the Section 4 Purpose. Given this evidence, we encourage the Commission to re-open this aspect of the cost of capital analysis and consider, all else being correct, whether New Zealand consumers should be paying above the average of an appropriate range for these services. The Vector Gas asset sale in November 2015 would suggest these settings are still in favour of the Regulated Network Service companies at a cost to New Zealand consumers.

In non-regulatory analysis we observe the use of WACC ranges and midpoints for valuation but have not observed practitioners using a percentile weighting other than 50%. The move to a midpoint approach would be in line with what we observe as general competitive market practice, more in line with the Part 4 Purpose and a fairer cost outcome for consumers of these services.



Further commentary on identified areas of focus not already addressed

- 6. The use of trailing averages as an alternative to prevailing rates in calculating the risk-free rate and/or debt premium; and
- 7. The use of annual indexation in updating the risk free rate

We agree with the Commission's prior conclusion that the use of prevailing (or current) interest rates better achieve the Part 4 Purpose²¹. However, if industry savings can be made and costs for consumers lowered through the use of other mechanisms that place lower costs on Regulated Network Service companies, then this should be considered. Given evidence of these costs is provided to the Commission on a confidential basis, we have been unable to see and comment on such data. In the absence of this evidence, we have provided in Appendix 6 to this paper, a hypothetical case and structure for such change and resultant cost saving for consumers. We would welcome feedback from the Commission on whether the available evidence would support such a change, and whether the cost/benefit would justify such a change.

If any change were to be considered here we also see the need for a period of transition. The transition should start with prevailing rates with a mechanism such as a 20% annual reset till a full rolling period could be reached. Given interest rates have fallen over the past five years, starting with trailing historic rates now should be avoided as it would simply result in a windfall loss to consumers of Regulated Network Services.

8. The impact of the WACC on incentives to apply for a customised price-quality path

We agree with the conclusion of the Lally paper that there is a problem with WACC incentives when applying for CPP. We also agree the conclusion to investigate a split WACC seemed the most logical of the options provided.

9. Using Black's Simple Discount Rule as a potential cross check for the Simplified Brennan-Lally Capital Asset Pricing Model (SBL-CAPM)

As stated in our prior submission, we agree that a cross check of the SBL-CAPM model would be useful. We encourage the Commission to discuss the modelling parameters appropriate with the Black's Simple Discount Rule with relevant experts in this methodology, ideally the authors of the reports²² (Claudio F. Loderer, John B. Long, and Lokas Roth).

²¹ Commerce Commission: "Input methodologies review. Update paper on the cost of capital topic" 30 November 2015, para 3.17

²² Loderer, Claudio F. and Long, John B. and Roth, Lukas, **Black's Simple Discounting Rule**, 2008 (updated to January 21, 2013). Simon School Working Paper No. FR 08-25, and Loderer, Claudio F. and Long, John B. and Roth, Lukas, **Implementing Fischer Black's Simple Discounting Rule**, Journal of Applied Corporate Finance, Vol. 22, Issue 2, pp. 60-68, Spring 2010. See: http://www.comcom.govt.nz/dmsdocument/13453



Proposed changes to the Commission's approach to setting cost of capital parameters

In summary of the above, we propose the Commission make the following changes to its methodology for calculating cost of capital for Regulated Network Services:

- 1. Narrow its comparator set for beta and leverage analysis to the set of six primary comparator and seven secondary comparator companies described above.
- 2. Expand the data set for calculation of debt premium and costs to include bank debt. This information shows a 10bp lower debt premium, than provided by retail bond premiums, is appropriate.
- 3. Update the cost of debt issuance to 5 bp p.a. and include an allowance for swap costs incurred with debt issuance, our estimate being 2.6bp.
- 4. Remove compensation for longer term debt (TCSD).
- 5. Use the midpoint WACC for Regulated Network Services cost of capital.

The tables below demonstrate the impact of the changes above on the Commission's October 2014 cost of capital determination, which was utilised to calculate both EDB and Transpower revenues for their respective 2015-2020 regulatory periods. For comparative purposes, the adjusted parameters do not consider the impact of "market" changes since the Commission's determination in October 2014, for example a reduction in the risk-free rate and debt premiums in line with market movements since this date.

Parameters	Inputs	
. a.aetc.s	Estimates	Std Error
Risk-free rate	4.09%	
Debt premium	1.65%	0.0015
Leverage	44%	
Asset beta	0.34	
Debt beta	0.00	
TAMRP	7.0%	
Corporate tax rate	28.0%	
Investor tax rate	28.0%	
Debt issuance costs	0.35%	
Equity beta	0.61	
Cost of equity	7.21%	
Cost of debt	6.09%	
Vanilla WACC (mid-point)	6.72%	0.011
Post-tax WACC (mid-point)	5.97%	0.011

Parameters Inputs							
Parameters	Inputs Estimates	Std Error					
Risk-free rate	4.09%	Ju Elloi					
Debt premium	1.55%	0.0015					
Leverage	57%						
Asset beta	0.19						
Debt beta	0.00						
TAMRP	7.0%						
Corporate tax rate	28.0%						
nvestor tax rate	28.0%						
Debt issuance costs	0.08%						
Equity beta	0.45						
Cost of equity	6.09%						
Cost of debt	5.72%						
Vanilla WACC (mid-point)	5.88%	0.011					
Post-tax WACC (mid-point)	4.96%	0.011					

		WA	cc
Percentile	t-stat	Vanilla	Post-tax
25	-0.674	6.00%	5.25%
50	0.000	6.72%	5.97%
67	0.440	7.19%	6.44%
75	0.674	7.44%	6.69%

		W	ACC
Percentile	t-stat	Vanilla	Post-tax
25	-0.674	5.16%	4.24%
50	0.000	5.88%	4.96%
67	0.440	6.35%	5.43%
75	0.674	6.59%	5.68%

The identified changes to the cost of capital parameters, excluding a move to the 50th percentile, result in a reduction in the 67th percentile WACC from 7.19% to 6.35%. These would equate to savings to consumers of these services of more than \$600m over the 5 year regulatory period. In addition, a move to 50th percentile reduces WACC to 5.88%, which would raise savings to consumers to \$1b over 5 years. Savings for consumers of gas services have not been included in these figures and would be additional to these numbers.

The identified changes to WACC parameters proposed in this submission have been based on market evidence and in-depth assessment of comparable companies. Given the magnitude of the WACC's impact on electricity and gas consumers and the market evidence of excess returns by Regulated Network Services companies, we recommend the above



changes are made to the Commission's cost of capital methodologies for future cost of capital determinations.

We would be happy to discuss this paper, evidence and conclusions further with the Commission.

Yours sincerely

Simon Healy GM Commodity Risk and Strategy



Appendix 1: Comparator company analysis

The table in the following three pages shows a summary of our analysis of the comparator companies. Data for these tables has been sourced from Bloomberg, S&P Capital IQ, annual reports/10k filings and company websites. Tables have been colour coded to highlight positive or negative comparator characteristics as follows:

Still listed: Some of the Commission's original comparator set have ceased trading on a stock exchange, these are highlighted in red

Country of operations: Companies with operations in countries with different industry and regulation structure are shown in red

% revenue regulated: The level of revenues from regulated or shadow regulated activities

Elec Networks: If the company does not operate electricity transmission or distribution networks this is shown in red

Gas Networks: If the company does not operate gas transmission or distribution networks this is shown in red

Generation: If the company has electricity generation operations this is shown in red

Retail: If the company has energy retailing operations this is shown in red

Other operations: if the company has other operations this is shown in red. Details of these other operations are shown in pages 19-21.

Note: One Gas Inc. (NYSE:OGS) is also shown in the tables below. This was not part of the Bloomberg indices used by the Commission in 2010, but has subsequently been added to these indices.



	Still	-	% rev	Elec	Gas			
Company name	listed	Country of operations	regulated	network	network	Generation	Retail	Other ops
Horizon Energy	N	NZ	76%	Υ	N	N		Υ
Vector (NZSE:VCT)	Υ	NZ	67%	Υ	Y	N		Y
DUET Group (ASX:DUE)	Υ	AUS	90%	Υ	Y	Υ		Υ
Spark Infrastructure (ASX:SKI)	Υ	AUS	100%	Υ	N	N		N
SP AusNet (ASX:AST)	Υ	AUS	92%	Υ	Y	N		N
APA Group (ASX:APA)	Υ	AUS	21%	N	Y	Υ		Υ
Envestra	N	AUS	100%	N	Y	N		N
Hastings Diversified Utilities	N	AUS	0%	N	Y	N		N
National Grid (LSE:NG)	Υ	UK	96%	Υ	Y	Υ		Υ
AGL Resources Inc. (NYSE:GAS)	Υ	US	74%	N	Y	N	4.5m	Υ
						Y Coal, gas, oil, hydro. 7015		
Allegheny Energy, Inc.	N	US	88%	Υ	N	MW gen capacity	1.5m	N
ALLETE, Inc. (NYSE:ALE)	Υ	US	78%	Υ	Υ	Y Coal, hydro, wind, biomass	170k elec, 12k gas	Y
Alliant Energy Corporation (NYSE:LNT)	Υ	US	96%	Y	Y	Y	1m elec, 420k gas	Y
						Y Coal, solar, wind, nuclear, natural and methane gas.		
Ameren Corporation (NYSE:AEE)	Υ	US	100%	Υ	Υ	hydro, oil	2.4m elec, 900k gas	N
,						Y Coal, lignite, gas, nuclear,		
American Electric Power Co., Inc. (NYSE:AEP)	Υ	US	69%	Υ	N	hydro	5.3m	Υ
Atmos Energy Corporation (NYSE:ATO)	Υ	US	76%	N	Y	N		N
Avangrid, Inc. (NYSE:AGR)	Υ	US	50%	Υ	Y	Y Wind, solar, thermal	3.1m	N
Avista Corp. (NYSE:AVA)	Υ	US and Canada	99%	Υ	Y	Υ	370k elec, 330k gas	Υ
Black Hills Corporation (NYSE:BKH)	Υ	US	94%	Υ	Υ	Υ	205k elec, 580k gas	Υ
CenterPoint Energy, Inc. (NYSE:CNP)	Υ	US	67%	Υ	Υ	N		Υ
Central Vermont Public Service Corp.	N	US	89%	Υ	Υ	Y Hydro, oil	160k	Υ
CH Energy Group Inc.	N	US	100%	Υ	Υ	N	300k elec, 78 gas	N
Chesapeake Utilities Corporation (NYSE:CPK)	Υ	US	60%	Υ	Υ	N		Υ
Cleco Corporation (NYSE:CNL)	Υ	US	95%	Υ	Y	Y Steam, gas, combined	286k elec, gas	N
CMS Energy Corp. (NYSE:CMS)	Υ	US	95%	Υ	Y	Y Coal, gas, hydro, oil, wind		Υ
						Y Gas, fuel oil. 705 MW		
Consolidated Edison, Inc. (NYSE:ED)	Υ	US	91%	Y	Y	capacity	3.4m elec, 1.1m gas	Y
Constellation Energy Group, Inc.	N	US and Canada	22%	Υ	Υ	Y 11,751 MW capacity		Υ
Dominion Resources, Inc. (NYSE:D)	Υ	US	100%	Υ	Υ	Y Coal, nuclear, gas, oil, hydro, renewable	5m	N
DPL Inc.	N	US	95%	Υ	N	Y Coal	880k	N
DTE Energy Company (NYSE:DTE)	Y	US	58%	Υ	Υ	Y Fossil-fuel, hydro, nuclear, other renewable	2.1m elec, 1.2m gas	Υ



	Still		% rev	Elec	Gas			-
Company name	listed	Country of operations	regulated	network	network	Generation	Retail	Other ops
						Y Coal, hydro, gas, oil,		
Duke Energy Corporation (NYSE:DUK)	V	US and Latin America	92%	Υ	V	nuclear. 50k MW capacity in US	7.3m elec, 500k gas - US.	N
Duke Energy Corporation (NYSE.DOK)	T	US and Latin America	92%	T	T	Y Hydro, diesel, gas, nuclear,	03.	IN
Edison International (NYSE:EIX)	Υ	US	100%	Y	N	solar	5m	N
(Y Nuclear, gas, coal, solar,		
El Paso Electric Co. (NYSE:EE)	Υ	US	100%	Υ	N	wind	400k	N
						Y Wind, gas/oil, nuclear, coal,		
Entergy Corporation (NYSE:ETR)	Υ	US	78%	Υ	Υ	hydro. 30k MW capacity	2.8m	Y
Eversource Energy (NYSE:ES)	Υ	US	99%	Υ	Υ	N	3.6m	N
Fueles Comparation (NIVCF, FVC)	V	LIC	200/	Υ	Y	Y Nuclear, fossil, hydro, wind,		Υ
Exelon Corporation (NYSE:EXC)	Y	US	39%	Y	Y	solar Y Fossil, coal, nuclear, oil.		Y
FirstEnergy Corp. (NYSE:FE)	Υ	US	66%	Y	N	gas, wind, solar, hydro	13.5m	Y
r indianoigy corp. (ivi can a)			0070			Y Coal, nuclear, gas, oil,	1010111	
Great Plains Energy Incorporated (NYSE:GXP)	Υ	US	89%	Υ	N	wind. 6.6k MW capacity	840k	N
						Y Wind, solar, geothermal,		
		0	000/	V		wave, hydro, biomass, fuel		.,
Hawaiian Electric Industries Inc. (NYSE:HE)	Υ	US	92%	Υ	N	oils		Y
IdaCorp, Inc. (NYSE:IDA)	Υ	US	88%	Υ	N	Y Hydro, gas, coal.	516k	Υ
Integrys Energy Group, Inc.	Υ	US	98%	Y	Y	N		N
ITC Holdings Corp. (NYSE:ITC)	Υ	US	100%	Y	N	N		N
MGE Energy Inc. (NasdaqGS:MGEE)	Υ	US	99%	Υ	Υ	Y Coal, gas, fuel, oil, wind	143k elec, 149k gas	Υ
National Fuel Gas Company (NYSE:NFG)	Υ	US	57%	N	Υ	N	740k gas	Υ
New Jersey Resources Corp. (NYSE:NJR)	Υ	US	29%	N	Y	N	512k gas	Υ
						Y Gas, oil, solar, coal,		
						petroleum coke, nuclear,		
NextEra Energy, Inc. (NYSE:NEE)	Υ	US and Canada	67%	Υ	N	wind	9m in US	Y
Nicor Inc.	N	US and Caribbean	80%	N	Y	N	2.2m gas in US	Y
NiSource Inc. (NYSE:NI)	V	US	81%	Y	Y	Y Coal, gas, hydro, combined cycle gas	500k elec, 3.5m gas	N
, ,	Y				Y	- J J	Souk elec, s.sm gas	Y
Northwest Natural Gas Company (NYSE:NWN)		US	98%	N		N V (see Lange of Carlo)	4451, 11-2, 0001, 27	
Northwestern Corporation (NYSE:NWE)	Y	US	100%	Y	Y	Y (not specified)	415k elec, 280k gas	N
NSTAR LLC	Υ	US	100%	Υ	Υ	N	1.1m elec, 279k gas	Y
NV Energy, Inc.	N	US	100%	Υ	Y	Y (not specified)	1.3m	N
OGE Energy Corp. (NYSE:OGE)	V	US	100%	Υ	Υ	Y Coal, gas, wind. 6.9k MW capacity		Y
				N	Y	N		Y
ONEOK Inc. (NYSE:OKE)	Y	US	89%		Y			
Pepco Holdings, Inc. (NYSE:POM)		US	94%	Y		N	10	Y
PG&E Corporation (NYSE:PCG)	Υ	US	100%	Υ	Υ	Y Nuclear, hydro, fossil, solar	16m	N
Piedmont Natural Gas Co. Inc. (NYSE:PNY)	Υ	US	100%	N	Υ	N	1m	Y



Company name	Still listed	Country of appretions	% rev	Elec network	Gas	Generation	Retail	Other one
Company name	listed	Country of operations	regulated	network	network	Y Coal, nuclear, gas, oil,	Retail	Other ops
Pinnacle West Capital Corporation (NYSE:PNW)	Υ	US	100%	Υ	N	solar. 6.4k MW Capacity	1.2m	N
						Y Coal, nuclear, gas, solar,		
PNM Resources, Inc. (NYSE:PNM)	Υ	US	100%	Υ	N	geothermal, wind	753k	N
PPL Corporation (NYSE:PPL)	Υ	US and UK	68%	Υ	Υ	Y (not specified)	>2.6m	Υ
						Y Coal, oil, hydro, gas,		
Progress Energy Inc.	N	US	100%	Υ	N	nuclear	3.2m	N
Public Service Enterprise Group Inc.	Y	US	62%	Y	Y	Y Nuclear, coal, gas, oil, renewable		Y
(NYSE:PEG)	T	03	02%	T	T	Y Nuclear, coal, hydro, gas		T T
SCANA Corp. (NYSE:SCG)	Υ	US	74%	Υ	Υ	and oil, biomass	688k elec, 1.3m gas	Y
		US, Mexico, South					l com erec, mem gar	
Sempra Energy (NYSE:SRE)	Υ	America	90%	Υ	Υ	Y Gas, solar, wind	1.4m elec, 6.7m gas	Υ
						Y Thermal, landfill gas-fired,		
South Jersey Industries, Inc. (NYSE:SJI)	Υ	US	56%	Υ	Υ	solar	370k	Υ
Southorn Company (NIVSE:SO)	V	US	100%	V	N	Y Coal, nuclear, oil and gas,		Y
Southern Company (NYSE:SO)	Y Y					hydro	4.0	
Southwest Gas Corporation (NYSE:SWX)		US	65%	N	Υ	N	1.9m	Y
Spectra Energy Corp. (NYSE:SE)	Υ	US and Canada	70%	N	Υ	N V (satisfied) 4.71.889/		Υ
TECO Energy, Inc. (NYSE:TE)	V	US	99%	Y	Υ	Y (not specified). 4.7k MW capacity	700k elec, 863k gas	N
The Empire District Electric Company	1	- 03	9970		-	Сараску	700k elec, 803k gas	IV
(NYSE:EDE)	Υ	US	99%	Υ	Υ	Y Coal, gas, hydro	170k elec, 43.5k gas	Υ
The Laclede Group, Inc. (NYSE:LG)	Y	US	96%	N	Υ	N	1.5m	Υ
Lacious Group, (G.1.20)			0070			Y Coal, landfill gas, solar,		
UGI Corporation (NYSE:UGI)	Υ	US, Europe	31%	Υ	Υ	natural gas	~700k (mainly gas)	Υ
Unitil Corp. (NYSE:UTL)	Υ	US	99%	Υ	Υ	N	103k elec, 78k gas	Υ
UNS Energy Corporation	N	US	83%	Υ	Υ	Y 2.3k MW capacity	506k elec, 150k gas	N
Vectren Corporation (NYSE:VVC)	Y	US	60%	Y	Y	Y Coal, gas, oil, landfilled gas	143k elec, 1m gas	Y
			00/0			Y Coal, gas, oil, hydro, wind,		
WEC Energy Group, Inc. (NYSE:WEC)	Υ	US	99%	Υ	Υ	biomass.	1.1m elec, 11m gas	Υ
						Y Coal, uranium, gas, diesel,		
Westar Energy, Inc. (NYSE:WR)	Υ	US	100%	Υ	N	wind, landfill gas	698k	Y
WGL Holdings Inc. (NYSE:WGL)	Υ	US	49%	Y	Υ	N	138k elec, 143k gas	Y
Vasi Farancia (NVOF VEI)	V	110	000/	V	V	Y Coal, nuclear, hydro, solar,		V
Xcel Energy Inc. (NYSE:XEL)	I	US	99%	Y	Υ	biomass, oil and refuse, wind		
ONE Gas, Inc. (NYSE:OGS)	Υ	US	100%	N	Υ	N	2m	N



Company name	Other
Horizon Energy	Heating, air-conditioning, refrigeration construction and services, electrical services, network maintenance, tree services
Vector (NZSE:VCT)	Gas C&I sales, LPG, Telecommunications, Metering, New Tech
DUET Group (ASX:DUE)	1000MW remote power business, Gas transmission DBP contracted
Spark Infrastructure (ASX:SKI)	
SP AusNet (ASX:AST)	
APA Group (ASX:APA)	Most gas networks contracted rather than regulated, Gas storage, wind farm, other generation assets
Envestra	
Hastings Diversified Utilities	
National Grid (LSE:NG)	LNG import terminal, 15m electricity meters, >50 power stations in US
AGL Resources Inc. (NYSE:GAS)	Gas storage, gas wholesaling
Allegheny Energy, Inc.	
ALLETE, Inc. (NYSE:ALE)	Water
Alliant Energy Corporation (NYSE:LNT)	Freight, barge terminal, transfer and storage services
Ameren Corporation (NYSE:AEE)	
American Electric Power Co., Inc. (NYSE:AEP)	Transports commodities, operates barges and other boats
Atmos Energy Corporation (NYSE:ATO)	
Avangrid, Inc. (NYSE:AGR)	
Avista Corp. (NYSE:AVA)	Metal fabrication of electronics, real estate and emerging tech investments
Black Hills Corporation (NYSE:BKH)	Coal mining, oil and gas exploration, appliance repair
CenterPoint Energy, Inc. (NYSE:CNP)	Gas supplies, gas mgmt services, physical delivery, transportation and storage assets
Central Vermont Public Service Corp.	Electric water heaters, real and personal property services
CH Energy Group Inc.	
Chesapeake Utilities Corporation (NYSE:CPK)	Propane, energy-related merchandise, heating, A/C, plumbing, electrical services, property
Cleco Corporation (NYSE:CNL)	
CMS Energy Corp. (NYSE:CMS)	Unsecured consumer loans for financing home improvements
Consolidated Edison, Inc. (NYSE:ED)	Steam, renewable and energy infrastructure investments
Constellation Energy Group, Inc.	Risk mgmt; energy commodity trading; home improvement; appliances; a/c; plumbing
Dominion Resources, Inc. (NYSE:D)	
DPL Inc.	
DTE Energy Company (NYSE:DTE)	Metallurgical coke; pulverised coal and petroleum coke; steam production; chilled water; wastewater treatment; compressed air supply
Duke Energy Corporation (NYSE:DUK)	
Edison International (NYSE:EIX)	
El Paso Electric Co. (NYSE:EE)	
Entergy Corporation (NYSE:ETR)	Nuclear plant services, incl. operation, decommissioning and other
Eversource Energy (NYSE:ES)	
Exelon Corporation (NYSE:EXC)	Natural gas and oil exploration and production
FirstEnergy Corp. (NYSE:FE)	Engages in unregulated competitive energy activities



Great Plains Energy Incorporated (NYSE:GXP) Hawaiian Electric Industries Inc. (NYSE:HE) Banking and other financial services IdaCorp, Inc. (NYSE:IDA) Real estate investments Integrys Energy Group, Inc. ITC Holdings Corp. (NYSE:ITC) MGE Energy Inc. (NasdaqGS:MGEE) National Fuel Gas Company (NYSE:NFG) Gas and oil exploration and production, gathering, energy marketing
IdaCorp, Inc. (NYSE:IDA) Real estate investments Integrys Energy Group, Inc. ITC Holdings Corp. (NYSE:ITC) MGE Energy Inc. (NasdaqGS:MGEE) Engages in non-regulated energy operations National Fuel Gas Company (NYSE:NFG) Gas and oil exploration and production, gathering, energy marketing
Integrys Energy Group, Inc. ITC Holdings Corp. (NYSE:ITC) MGE Energy Inc. (NasdaqGS:MGEE) National Fuel Gas Company (NYSE:NFG) Gas and oil exploration and production, gathering, energy marketing
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MGE Energy Inc. (NasdaqGS:MGEE) Engages in non-regulated energy operations National Fuel Gas Company (NYSE:NFG) Gas and oil exploration and production, gathering, energy marketing
National Fuel Gas Company (NYSE:NFG) Gas and oil exploration and production, gathering, energy marketing
AL L. D. C. (ANOSAUD)
New Jersey Resources Corp. (NYSE:NJR) Energy mgmt services, gas storage and transportation, clean energy investments, home energy services, real estate.
NextEra Energy, Inc. (NYSE:NEE) Fibre-optic network and dark fibre leases
Nicor Inc. Containerized freight transportation in Caribbean, inland transportation; Energy services
NiSource Inc. (NYSE:NI)
Northwest Natural Gas Company (NYSE:NWN) Gas storage
Northwestern Corporation (NYSE:NWE)
NSTAR LLC Owns and operates wholesale transport network for telecoms providers
NV Energy, Inc.
OGE Energy Corp. (NYSE:OGE) Gas storage, oil gathering
ONEOK Inc. (NYSE:OKE) Gathering, processing, storage of gas, incl. gas liquids.
Pepco Holdings, Inc. (NYSE:POM) Designs, constructs, operates energy projects and distribution generation equipment; chilled water services
PG&E Corporation (NYSE:PCG)
Piedmont Natural Gas Co. Inc. (NYSE:PNY) Gas storage
Pinnacle West Capital Corporation (NYSE:PNW)
PNM Resources, Inc. (NYSE:PNM)
PPL Corporation (NYSE:PPL) Customer-care and back-office services to competitive retail energy suppliers
Progress Energy Inc.
Public Service Enterprise Group Inc.
(NYSE:PEG) Emissions credits, series of energy-related products, appliance services and repairs
SCANA Corp. (NYSE:SCG) Energy-related services, fibre optic telecoms, Ethernet, data centres, tower site construction
Sempra Energy (NYSE:SRE) Propane, liquefied natural gas regasification Provided in the control of the control
South Jersey Industries, Inc. (NYSE:SJI) Provide cooling, heat and emergency power; gas storage, commodities and transportation
Southern Company (NYSE:SO) Digital wireless communication services, fibre optic solutions
Southwest Gas Corporation (NYSE:SWX) Utility and industrial construction and maintenance services Outhwest Gas Corporation (NYSE:SWX)
Spectra Energy Corp. (NYSE:SE) Gas and oil storage, gathering; extracts, fractionates NGLs TEOR TO A CONTROL OF TEXTS AND ADMINISTRAL OF THE PROPERTY OF T
TECO Energy, Inc. (NYSE:TE) The Empire District Electric Company
(NYSE:EDE) Water, fibre optics cable and equipment
The Laclede Group, Inc. (NYSE:LG) Propane, compression of natural gas, oil, real estate, risk mgmt, storage
UGI Corporation (NYSE:UGI) Propane and LPG storage and distribution and related services;



Company name	Other
Unitil Corp. (NYSE:UTL)	Engages in non-regulated energy operations
UNS Energy Corporation	
Vectren Corporation (NYSE:VVC)	Pipeline construction and repairs, energy performance contracting, real estate, leveraged leases
WEC Energy Group, Inc. (NYSE:WEC)	Real estate investments
Westar Energy, Inc. (NYSE:WR)	Provides lighting for streets and highways
WGL Holdings Inc. (NYSE:WGL)	Gas storage; provides clean and energy efficient solutions; upgrades infrastructure; transportation assets
Xcel Energy Inc. (NYSE:XEL)	Developing and leasing pipelines, storage, rental housing projects
ONE Gas, Inc. (NYSE:OGS)	



Appendix 2: Extract from ASB/CBA Loan Market Update: Sep 2015 YTD

Syndicated Loan Market Volume, Purpose and Tenor Analysis

Loan market volumes dropped in YTD Sep 2015 as borrowers opportunistically brought forward refinancing

- Australia and New Zealand 2015YTD loan market volume remains low compared to 2014, however, is in line with 2012 and 2013 levels
 Total volume YTD is US\$67.8bn from 153 transactions, down 22% vs pcp (2014YTD: US\$87.5bn via 190 deals).

 Volume

 Australian borrowers contributed US\$58.2bn via 118 closed deals YTD (2014YTD: US\$71.6bn via 143 deals).

 New Zealand borrowers raised US\$9.5bn via 35 closed deals (2014YTD: US\$15.9bn via 47 deals).

 Transactions continue to close oversubscribed demonstrating strong liquidity in the domestic market.
- Refinancing remains a key driver of activity as borrowers continue to focus on amend & extend structures to extend tenor at favourable pricing.

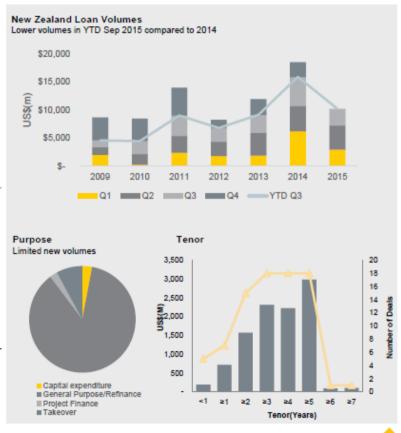
 New money transactions include the Future Schools PPP (NZ\$215m) and the URC acquisition of Griffins (approx. NZ\$740m).

 In Australia greater than usual M&A activity dominated new money volumes in 3Q, raising US\$5bn via 11 transactions between July to September 2015,



 The NZ syndicated bank debt market continues to be predominantly a 4 to 5 year tenor deals representing 51% of volume transacted

representing 40% of M&A volumes raised 2015 YTD



CommonwealthBank

Source: CBA, Thomson Reuters

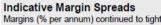


Syndicated Loan Market Pricing and Distribution Analysis

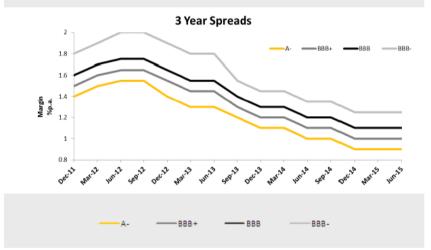
Market stable for pricing and tenor trends

Pricing & **All-in Costs**

- 2Q and 3Q2015 have seen slight pricing pressure in both investment and sub-investment grade margins compared to the levels seen late last year, however, further reductions on bank loan pricing seems unlikely
- Recent equity raisings by Australian major banks, increasing bank cost of funds and increased volatility have seen sharper focus on pricing
- Competitive pressure remains on commitment and upfront fees
- Cross sell has become an increased focus for banks with the downward pricing pressure and increasing cost of funds
- We have seen limited underwritten transactions with the high level of liquidity available.
- All-in cost of loans remains attractive for issuers.



Margins (% per annum) continued to tighten during FY14 and YTD2015

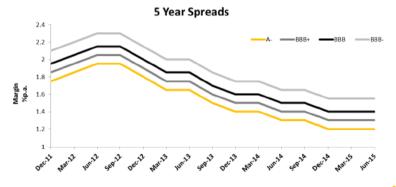




ASB

- Club facilities remain prevalent.
- Notable 3Q syndicated or club transactions include Auckland Council standby lines and Wellington Electricity Distribution Network syndicated transaction





Source: CBA. Thomson Reuters

CommonwealthBank





Appendix 3: Contact bank debt costs and CP issuance costs

[Confidential: Appendix redacted from public version]



Appendix 4: Contact debt issuance costs – 2015 retail bond

[Confidential: Appendix redacted from public version]



Appendix 5: Post FMCA rated repeat issuer retail bond issuance

PDS

QFP

Issuer	Rating	Issue date	PDS/QFP	Secured?	Amount (\$m)	Tenor (years)	Spread	Coupon	Brokerage	Firm	Arranger	JLMs
AIAL	Α-	May-14	QFP	N	150	7	0.90%	5.52%	nil	nil	ANZ	Craigs, ForBarr (Co-Managers)
AkCC	AA	Mar-15	QFP	Y	250	5.5	0.30%	4.02%	nil	nil	ANZ	ANZ, BNZ, CBA, WBC
Fonterra	A (now A-)	Apr-15	QFP	N	350	6.5	0.75%	4.33%	nil	nil	ANZ	ANZ, CBA, BNZ, WBC
GMT	BBB+	Jun-15	QFP	Υ	100	7	1.25%	5.00%	0.50%	0.25%	ANZ	ANZ, Craigs, ForBarr
Transpower	AA-	Jun-15	QFP	N	75	7	0.62%	5.14%	nil	nil	BNZ	none
Contact	BBB	Sep-15	QFP	N	150	6.2	1.15%	4.40%	nil	nil	ANZ	Craigs (Co-Manager)
Sky City	BBB-	Sep-15	PDS	N	125	7	1.33%	4.65%	0.50%	0.50%	WBC	ANZ,WBC,Craigs,FirstNZ
AIAL	A-	Nov-15	QFP	N	100	7	0.95%	4.28%	nil	nil	BNZ	BNZ, WBC (Craigs Co)
Transpower	AA-	Dec-15	QFP	N	75	6.5	0.80%	4.30%	nil	nil	WIE	
Spark	Α-	Dec-15	PDS	N	100	7.25	1.15%	4.51%	nil	nil	ANZ	ANZ,CBA (Craigs Co)
'				Average	148							

Product Disclosure Statement ie: first time issuer under FMCA so full disclosure is required Qualifying Financial Product ie: same class exemption clause applies, so issuer is only required to produce a cleansing statement



Appendix 6: Hypothetical case for debt cost reduction with a transition to a partial annual indexing of debt costs

Best market practice for a regulated company with a 5 year revenue reset (rateset), would be to perfectly hedge the interest rate risk embedded in the rateset process with interest rate exposures associated with a funding portfolio, either through use of derivatives or physical debt instruments, or a combination of both.

Assuming 100% domestic fixed rate bond funding portfolio, this would involve paying fixed for five years on 100% of debt at the start of each 5 year rateset period. All debt would be converted to floating at the time of issuance, and hence create a double swap cost for such debt.

However, assuming an average funding tenor of 5 years, on average 20% (100%/5) of debt would be issued in the year of the rateset, so for that portion of the funding portfolio, the "rateset hedge" could be achieved by just leaving that bond fixed. Using a swap spread cost of 2bp, the allowance for hedging costs should be 0.02% * (1-0.2) * 2 = 0.032% p.a.

In practice we know that only a portion of debt is funded in fixed rate bonds. Therefore, the double swap cost discussed above will only apply to that fixed portion of the portfolio and the "rateset hedge" would be reduced. Assuming 50% of funding is from fixed rate bonds the rateset hedge will fall to 10%. Therefore fixed rate that would need to be swapped would be 40% and the balance (50%) is sourced from floating rate debt. This would generate costs of 0.02% *[(0.4 * 2) + (0.5 * 1)] = 0.026% p.a.

In practice, this methodology would create a significant "crowding" issue with Regulated Network Service companies all seeking to hedge circa 80-90% of their interest rate risk within a narrow window every five years. Note: In reality, regulated entities do not appear to follow this tactic (as evidenced by an average swap/debt ratio of under 80%, rather than the 130-160% level suggested by the above approach).

For this reason, a "smoothed" approach to the rate reset for debt may better allow the Regulated Network Service companies to manage their interest rate risk in a manner more closely aligned to theoretical best market practice and pass savings on to consumers. For example, if 20% of the cost of debt was reset each year, this would allow them to:

- a) execute their desired volume of swaps more easily without creating liquidity issues in the market; and
- b) allow a greater proportion of the interest rate risk management to be achieved through physical fixed rate bond issuance, rather than through receiving and paying in the interest rate derivative market.



If a proportional (20% per annum) annual reset example was followed we note that a five year fixed debt issuance programme would require little hedging, as maturities would match rateset dates. Under this example hedging would only be required on the floating amount. The allowance for interest rate swap costs would drop to 0.02% * 0.5 * 1 = 0.01% pa.