29 June 2017

Mr Warwick Anderson
General Manager, Network Finance and Reporting
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

By email: RateOfReturn@aer.gov.au

Dear Mr Anderson

Review of the regulatory treatment of inflation

CitiPower, Powercor, SA Power Networks, and Australian Gas Networks welcome the opportunity to provide a submission in relation to the regulatory treatment of inflation. This submission provides our response to the Australian Energy Regulator's (AER's) *Regulatory Treatment of Inflation Discussion Paper*, which included the Australian Competition and Consumer Commission (ACCC) and AER Working Paper No. 11, *Best estimates of expected inflation: a comparative assessment of four methods.*

In our view, it is critical to ensure the regulatory model utilises the best estimate of expected inflation in order to set an appropriate 'real' cost of capital. Over recent years, where inflation has been at low levels, the current approach to estimating expected inflation has overstated inflation and under-compensated businesses. We are advocating for the use of the best estimate of expected inflation going forward: an estimate that is consistent with prevailing market conditions, which ensures that neither customers nor regulated businesses are disadvantaged in their exposure to inflation.

We support the conclusion of the work undertaken by Cambridge Economic Policy Associates (CEPA), for the Energy Networks Australia (ENA), that the breakeven approach represents the best estimate of expected inflation[1].

On the issue of changes to the regulatory mechanisms to deal with variations in actual inflation from expectations, we are not advocating for change. We view changes to the regulatory framework as significant, particularly given the implications of some of the options available. In particular, we would be highly cautious of changes that affect the status of network infrastructure as an inflation protected asset.

[1] CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 30

If the AER does propose to change the regulatory framework, we would support further analysis and consultation on this complex issue.

The complexity of how the treatment of inflation is applied across the regulatory framework was evident at the AER's recent inflation workshop, where there was a lack of understanding and agreement on how the models operate. We believe further collaborative work is required to ensure there is a shared understanding of the current regime, or issues with it, prior to any solutions being implemented.

Please find our detailed response at Attachment A for your consideration.

We would be pleased to clarify any aspect of this letter or the attached submission. In the first instance please contact Dominic Eaton, from Australian Gas Networks, on (08) 8418 1121.

We look forward to continuing to work constructively with the AER and other stakeholders through this review process.

Yours sincerely

Renate Vogt
General Manager Regulation CitiPower & Powercor

Patrick Makinson
Company Secretary SA Power Networks

Craig de Laine
General Manager Strategy & Regulation Australian Gas Networks

Enclosed: Appendix A – Detailed Response

Appendix A – Detailed Response

1. Summary of the issue

The issues in relation to the estimation of expected inflation, and its role in the regulatory framework, are well known, and set out in Section 2 of the AER's Discussion Paper:

a. The AER begins by estimating the required nominal return on debt and equity;

b. The AER then estimates expected inflation for the forthcoming 10-year period, and deducts that (in the PTRM) before determining allowed revenues; and

c. The AER then increases the RAB (in the RFM) to reflect actual outturn inflation each year.

The effect of this approach is that:

a. If actual inflation turns out to be higher than the AER's estimate of expected inflation, the regulated business will be overcompensated and (symmetrically) customers will experience a loss. In this case, the indexation of the RAB is greater than the deduction for expected inflation so that the resulting nominal return turns out to be higher than the AER's estimate of the required return; and

b. By contrast, if actual inflation turns out to be lower than the AER's estimate of expected inflation, the regulated business will be undercompensated and customers will experience a gain.

The importance of this issue varies in line with the prevailing conditions in the market. When expected inflation is close to 2.5% and actual inflation turns out to be close to 2.5%, the quantum of any under or over compensation is small and attracts little attention. That has been the experience until recent years.

However, in the prevailing market conditions, inflation has been persistently and materially below the 2.5% mid-point, the various methods for estimating expected inflation produce a wider range of estimates, and the quantum at stake is now material. For example, SA Power Networks (SAPN) has modelled a scenario in which the AER sets expected inflation to 2.5% and actual inflation averages 1.78% over the 2016-2020 regulatory control period. SAPN estimates that:

a. Whereas the AER's estimate of the efficient cost of SAPN's debt is $666 million over the regulatory control period (RCP), the interaction of the PTRM, RFM and outturn inflation result in allowed compensation of only $576 million – a shortfall of $90 million; and

b. The AER's estimate of the required return on equity is 7.5%. With actual inflation 0.7% lower than the AER's estimate, the expected nominal return on equity would be expected to be lower by a similar amount, or around 6.8%. However, this $90 million shortfall in return on the efficient cost of debt, flows through to equity holders with the result that, the actual delivered return to equity is a further 1.1% lower at only 5.7%. This is only marginally above the 5.3% estimate of the required return on debt.

These differences are highly material when assessed against SAPN's RAB, which varies between $3.8 billion and $4.7 billion over the relevant period.

The above is an example, where actual inflation has been lower than expected and revenues have not covered SAPN's efficient costs. Indeed, the opposite is also true, where customers are exposed to higher prices as a result of higher than expected actual inflation. However, under the current approach to estimating expected inflation we feel the former scenario is more likely.

2. The focus of this submission

We note that there are two separate issues at play in relation to the AER's approach to inflation:

a. Whether the AER is using the best approach to estimate expected inflation; and

b. Whether the current compensation for inflation in the regulatory framework is appropriate.

The focus of this submission is on the first of these issues. As set out below, our submission is that the AER should seek the best estimate of expected inflation that best reflects the prevailing market conditions. Only if the AER uses the best estimate of inflation in the prevailing conditions will the expected return to equity equal the AER's assessment of the required return on equity.

We consider that there are two elements to obtaining the best estimate of expected inflation:

a. When selecting a method for estimating expected inflation, the overriding criterion should be the selection of the method that provides the best estimate in the prevailing market conditions; and

b. The best estimate of expected inflation should be applied for each year of the RCP. We demonstrate below that, under the AER's current 10-year geometric average approach:

    i. If the expected and actual inflation for the first two years of the RCP is below 2.5% p.a. then a network would not recover its efficient costs even if actual inflation turns out to equal the AER's forecast of inflation in every year of the 10-year forecast period; and

    ii. If the expected and actual inflation for the first two years of the RCP is above 2.5% p.a. then customers would overpay for network services even if actual inflation turns out to be equal to the AER's forecast in every year of the 10-year forecast period.

We do note that even if the AER uses the best possible estimate of expected inflation, there is a risk that actual inflation will turn out to be above or below the AER's forecast. The interaction of the PTRM and RFM results in regulated businesses being over-compensated if actual inflation turns out to be above the AER's forecast and under-compensated if the reverse occurs.

Further, we note that a number of regulated businesses have submitted that changes should be made to the regulatory framework to reduce this mis-match, which arises from the interaction of the AER's regulatory models. Those submissions make the point that, if actual inflation turns out to be below the AER's forecast, the allowed return on debt will be below the AER's assessment of the efficient cost of debt, which appears to be inconsistent with the NER and NGR.

If the AER does intend to change the regulatory framework, further consultation is required given the available various options (and incentives) that this can create.

The focus of this submission is on the issue of the best possible estimate of expected inflation. Our objective is to ensure that the allowed revenues are such that the *expected* return to investors is equal to the AER's assessment of the required return.

3. The quality of a forecast must be assessed in the prevailing market conditions

When determining the best estimate of expected inflation, regard must be had to the prevailing market conditions, not the long-run average market conditions. An approach that provides the best estimate on average over the long run may not provide the best estimate in the prevailing market conditions. For example, a mechanistic approach that produces sensible estimates in stable average market conditions might not also provide reasonable estimates in times of war or financial crises.

That is, an approach that always suggests that expected inflation three years hence is exactly 2.5% might be a good approach in stable average market conditions, and on average over the long run. If we could observe, at many points in time over many years, what investors expected inflation to be three years hence, the average estimate over those years may well be close to 2.5%. But what is required is the best estimate in the *prevailing* market conditions. For example, if current inflation is 1.0%, and if low inflation has been shown to be persistent over time, it seems unlikely that the best estimate in the prevailing market conditions is that the market expects inflation to be back to 2.5% by year 3. That is, there is a difference between an "unconditional" long-run average estimate and an estimate that is "conditional" on the evidence from the prevailing market conditions.

We note that our proposal below requires the AER to produce a best estimate for each year of the RCP. Under this approach, there is no averaging but rather a separate estimate of expected inflation for each year. The AER's current approach produces estimates of precisely 2.5% for years 3 and 4 and 5. Whether this is the best estimate of expected inflation for each of those years should be assessed in light of the prevailing market conditions.

The assumption of reversion to 2.5% by year 3 is not a deliberate, considered or researched methodology - it is purely a result of the RBA only publishing forecasts for 2 years. Reversion to 2.5% by year 3 is purely an 'accidental' outcome due to the lack of a more detailed forecast.

We address this point in more detail in Section 6 below, where we note that CEPA have also recently concluded that the speed of mean reversion is likely to be materially slower than the AER's estimation approach implies.[2]

In summary, it is highly unlikely that the best estimate of what the market expects inflation to be in year 3 is 2.5% whether current inflation expectations for year 1 and 2 are 1% or 2.5% or 4%. We submit that the estimate of expected inflation must be commensurate with the prevailing market conditions and should not be assessed on the basis of long-run average performance over long-run average market conditions.

4. The ACCC/AER Working Paper No.11

We note that Working Paper No.11 (Working Paper) considers only the issue of estimating expected inflation – it does not consider the consequences of actual inflation turning out to differ from expectations.

For the reasons set out above, we submit that the appropriate goal when estimating expected inflation is to produce the best estimate that is commensurate with the prevailing market conditions.

Within this context, we consider the criteria that have been used in the Working Paper to assess different estimation methods:

a. **Relative congruence**. The Working Paper states (Para 21) that *"Relative congruence refers to the relative closeness of correspondence or the relative closeness of similarity of a method's estimator with 10 year market expectations of inflation*". This appears to be a circularity in that the task at hand is to determine which estimate of expected inflation is best. The definition of "relative congruence" seems to imply that there is an observable "best" or "true" expected inflation against which each of the proposed estimation methods can be compared.

[2] CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, pp. 14, 31.

The favoured method would then be that which is closest to or most congruent with this best or true market expectation. However, in our view there are a number of problems with this approach:

i. If there existed a best or true expected inflation figure, against which the various estimation methods could be compared, there would be no need for any of the estimation methods – we would simply use the figure that we know to be best or true. Rather, the reason there are different estimation methods is that there is no observable best or true figure. Thus, there is a logical problem with the relative congruence criteria.

ii. Because there is no objective best or true figure, against which the various estimation methods can be compared, the Working Paper tends to compare estimates from different methods against each other. But if the quality of method A is to be judged by the closeness of its estimates to those from method B, it would seem (logically) that the estimates from method B should simply be adopted. That is, if method B is the standard by which other methods are judged, the evaluator has already implicitly determined that method B is best.

iii. The Working Paper also implements its relative congruence criterion by simply listing various problems and issues that might be raised in relation to each method. There are four problems with this approach:

1. It is not clear how this has anything to do with the Working Paper's own definition of relative congruence, set out above;

2. There is no quantification of the effect that each issue might have on the final estimate, just an enumeration of things that might be issues;

3. It is applied asymmetrically. There is a rich literature that discusses the relative merits of the other approaches, pointing out the strengths and weaknesses of each, and discussing the market conditions and circumstances in which each approach might work best. But there is no literature relating to the AER approach, because that approach is unique to the AER and has not been considered in the literature. The fact that there is more commentary about the other approaches is then interpreted as support for the AER approach. The fact that the AER approach implies an unreasonably fast reversion to the mean when current inflation is relatively high or low is not considered at all; and

4. The analysis all relates to long run averages, rather than an analysis of which approach is likely to produce the best estimate in the prevailing market conditions.

b. **Robustness**. The Working Paper defines an approach to be robust if it properly reflects phenomena that affect inflation expectations. Specifically, (Para 26) an estimation method is said to be robust if *"the estimates do not change significantly if different…estimation methods are applied"*. It is unclear to us how this should be interpreted, but we note that its application appears to overlap significantly with the relative congruence criterion (Para 27).

c. **Transparency and replicability**. We agree that this is important.

d. **Simplicity**. The Working Paper states (Para 30) *that "A method which produces estimates that are simpler to employ is likely to produce better estimates of expected inflation. A simpler method may result in the construction of estimates that require less regulatory (taxpayer) resources and may be more readily verified by all stakeholders"*.

In our view, the inclusion of this criterion is inappropriate. What is required is the best estimate, not a simple estimate that the AER can compute quickly and easily. To the extent that this criterion might result in the adoption of something other than the best estimate of expected inflation in the prevailing market conditions, it should be removed.

For the reasons set out above, we consider that the criteria that have been developed in the Working Paper do not provide the best assessment of the best estimate of expected inflation in the prevailing market conditions. Rather, the Working Paper appears to embark on a different task applying different criteria and adopting a long-run average perspective rather than a prevailing conditions perspective.

In this regard, we endorse the observations in Section 2 of the CEPA report. Specifically, we agree with CEPA's conclusions that:

a. "…*the focus is perhaps weighted too heavily on good regulatory practice (e.g. transparency, replicability, simplicity and elements of robustness), rather than meeting the NGR requirement of using the 'best estimate of expected inflation*'";[3]

b. "…*recovering efficient costs should mean recovering inflation expectations priced into debt and equity*";[4] and

c. "…*a measure should ideally be stable and predictable, but this does not have to be at the cost of using an estimated inflation rate that does not reflect prevailing rates*."[5]

We also endorse CEPA's recommendations that:

a. The appropriate objective is to obtain the best estimate of expected inflation in the prevailing market conditions. CEPA conclude that this requires an estimate that is "*congruent with the regulatory framework*" and "*congruent with the market-expected inflation rate*";[6] and

b. Best regulatory practice requires that the estimate should be "*objective and evidence-based*" and that "*transparency and replicability*" are also important.[7]

We agree with CEPA that simplicity and stability over time are not appropriate objectives and should certainly not override the need to obtain the best possible market-expected inflation expectation.

5. The best estimate of expected inflation

We endorse the conclusion of the CEPA report that the current AER approach does not represent the best estimate of market expected inflation and that:

> *"Our preferred option is breakeven inflation, without an adjustment, which aligns with the regulatory framework, is a market based approach, and is supported by regulatory precedent in Australia and internationally. In our opinion, there are transparent and relatively accessible data sources and methods that can be used to calculate breakeven inflation"*.[8]

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3 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 6.
4 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 6.
5 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 6.
6 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 7.
7 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 7.
8 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 30.

The CEPA report sets out the reasons for this conclusion in the context of the relevant criteria set out above.

As set out below, we submit that, when making a determination, the AER should use this best estimate of market expected inflation for each year of the regulatory control period.

We note that a recent report by CEG also concluded in favour of breakeven inflation.[9] CEG describe why breakeven inflation is so-called:

> *"Break-even inflation is calculated based on the difference in yields between inflation indexed Commonwealth Government Securities (CGS) and nominal CGS. This is termed 'break-even' inflation because that is the inflation expectation at which investors expect the same nominal return from either asset. That is, it is the rate of inflation that, if it actually occurred, would leave investors' indifferent between having purchased a nominal bond versus an inflation indexed bond."* [10]

CEG also note that break-even inflation is a direct measure of inflation expectations in the same bond market that the AER uses to set the nominal rate of return on equity (i.e. the CGS market).

CEG also note that, in the prevailing market conditions, breakeven inflation has provided a better forecast of actual inflation outcomes, relative to the AER's method.

We also endorse CEPA's conclusions in relation to alternative estimation methods, including:

a. **There are plausible explanations for why breakeven inflation estimates reflect expectations better than the current approach.** This includes the central banks reduced ability to affect inflation through monetary policy, global forces bringing about a 'lower for longer' scenario and the broadening of the RBA's remit which places greater weight on financial stability and may mean the RBA targets the lower part of its band.

b. **The issues around breakeven inflation that existed in 2009 are not present.** Since the 2012-13 budget the Australian Office of Financial Management (AOFM) has aimed at ensuring that 10 to 15 per cent of Treasury bonds issued are index-linked. In addition, the overall value of the Commonwealth Bond market has also increased substantially.

c. **Glide path may be an improvement over current approach.** There are clear indications that inflation over the course of the next price control period could remain below the mid-point of the RBA band and as such a more gradual reversion to this target would better reflect market estimates of expected inflation. Historical movements in CPI support inflation persistence (i.e., long periods where 10-year average inflation is above the mid-point of the RBA's target band).[11]

   The AER's current approach sets expected inflation equal to the RBA forecast for years 1 and 2 and to 2.5% in every year thereafter. If an estimate of expected inflation is to be used for each regulatory year, a key question is the reasonableness of assuming reversion to 2.5% by year 3. For example, if inflation is forecasted to be 1% for years 1 and 2, it is obviously less likely to have reverted to 2.5% by year 3 than if it is forecasted to be 2.4% for years 1 and 2. That is, the forecast for year 3 must be commensurate with the prevailing conditions in the market at the beginning of the RCP.

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9 CEG, Best Estimate of Expected Inflation, August 2016.
10 CEG, Best Estimate of Expected Inflation, August 2016, p. 12.
11 CEPA, 2017, *Best Estimate of Inflation Expectations: Assessment of Approaches*, p. 31.

Also relevant here is the fact that the international empirical evidence suggests that central bank interventions have more impact on reducing high inflation than increasing low inflation. Thus, the reversion to the 2.5% mid-point is likely to take longer from a starting point of 1% than from a starting point of 4%.

6. The effect of the AER's 10-year geometric mean

The AER's current approach to expected inflation is to adopt a single figure for each RCP, set to the geometric mean of inflation forecasts for each of the next 10 years. Forecasts for years 1 and 2 are taken from the Reserve Bank of Australia (RBA), and forecasts for years 3 to 10 are all set to 2.5%. This approach produces a single figure that is adopted for every year of the RCP. We show below that such an approach serves to "lock in" under or over compensation when current inflation expectations deviate from the 2.5% mid-point estimate.

The table below illustrates the case where the inflation forecasts are 2.0% for each of years 1 and 2, and then 2.5% thereafter. Actual inflation is assumed to turn out to be equal to the expectation for each year, so there is no mis-match between actual and expected inflation. In this example, the geometric mean inflation figure is 2.4% (shown as 2.39% in the tables), which determines the allowed return for each year.[12]

Year	1	2	3	4	5	6	7	8	9	10
Allowed nominal WACC	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
Expected & actual inflation	2.00%	2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Inflation deduction	2.39%	2.39%	2.39%	2.39%	2.39%	2.50%	2.50%	2.50%	2.50%	2.50%
Allowed real WACC	3.67%	3.67%	3.67%	3.67%	3.67%	3.56%	3.56%	3.56%	3.56%	3.56%
Achieved nominal WACC	5.74%	5.74%	6.26%	6.26%	6.26%	6.15%	6.15%	6.15%	6.15%	6.15%
Difference to allowed nominal WACC	-0.41%	-0.41%	0.11%	0.11%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative difference over RCP	-0.47%					0.00%				

The table above indicates that there is under-compensation in years 1 and 2, followed by over-compensation in years 3 to 5. This is because expected (and in this example, actual) inflation is below the geometric mean in years 1 and 2 and above the geometric mean in years 3 to 5. Thus, the under-compensation in years 1 and 2 starts to be "caught up" in the subsequent years. The problem with this is that everything is re-set at the beginning of the next RCP, so the under-compensation is not fully caught up. It is not possible to catch up the under-compensation within the five-year RCP, because the quantum of under-compensation is driven by ten years of inflation expectations. Therefore:

a. If the expected and actual inflation for the first two years of the RCP is below 2.5% p.a. then a network would not recover its efficient costs even if actual inflation turns out to equal the AER's forecast of inflation in every year of the 10-year forecast period; and
b. If the expected and actual inflation for the first two years of the RCP is above 2.5% p.a. then customers would overpay for network services even if actual inflation turns out to be equal to the AER's forecast in every year of the 10-year forecast period.

[12] In this table, all conversions between real and nominal rates are performed using the standard Fisher relation.

One way to address this issue would be to make an inflation deduction in each year equal to expected inflation for that year, as in the table below. In this case, if actual inflation turns out to be equal to expected inflation, there will be no under or over compensation in any regulatory year.[13]

Year	1	2	3	4	5	6	7	8	9	10
Allowed nominal WACC	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
Expected & actual inflation	2.00%	2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Inflation deduction	2.00%	2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Allowed real WACC	4.07%	4.07%	3.56%	3.56%	3.56%	3.56%	3.56%	3.56%	3.56%	3.56%
Achieved nominal WACC	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
Difference to allowed nominal WACC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative difference over RCP	0.00%					0.00%				

The approach to setting a single estimate of expected inflation for all regulatory years was adopted prior to the AER's current approach to adopting a different estimate for each regulatory year in relation to the allowed return on debt. Thus, setting a different estimate of expected inflation for each regulatory year would be consistent with the approach in relation to the return on debt.

Another advantage of this approach is that it makes the length of the period used to estimate expected inflation a moot point. There is no need to choose between a 5-year or 10-year geometric mean if the approach is to set a single expected inflation estimate for each year of the RCP.

[13] In this table, all conversions between real and nominal rates are performed using the standard Fisher relation.

RESPONSE TO AER QUESTIONS

No.	Question
Questions relating to the method(s) that should be used to estimate expected inflation	
1	Explain why you agree or disagree that the RBA inflation target method is more likely to provide best estimates of expected inflation than swap-implied estimates and bond breakeven estimates?
2	Explain why you agree or disagree that inflation swaps are a more robust and congruent market-based estimate of expected inflation than bond breakeven estimates?
3	Do you agree that we should not rely on swap-implied estimates or bond breakeven estimates? Should we place some weight on estimates from each of the four methods?

Response:

Our view is that the appropriate objective is to produce the best estimate of expected inflation that is commensurate with the prevailing conditions in the market.

We note that this task has recently been performed by CEPA, who conclude in favour of breakeven inflation in Section 4 of their report.
We submit that, when making its determination, the AER should use the best estimate of expected inflation that is available for each year of the RCP.

Conceptual questions relating to the method(s) that should be used to estimate expected inflation	
4	Do you consider that monetary policy has (or is perceived to have) lost its effectiveness in influencing economic activity and as a result inflation expectations?
5	In light of potential anchoring of long-term inflation expectations to the RBA's target band, explain whether you consider we should simply estimate expected inflation based solely on the RBA target band, without adjusting for the RBA's short-term (2-year) inflation forecasts?
6	Provide reasons as to whether or not you agree that the RBA's short-term (2-year) forecasts are likely to outperform private-entity forecasts? If our approach is to continue to combine short-term inflation forecasts with the RBA target band, should we use the RBA's 2-year forecasts or use other survey estimates instead and why?

Response:

We endorse the analysis presented in Section 4.1.2 of the CEPA report, which concludes that reversion to expected inflation of 2.5% is likely to be slower than the AER's current approach implies, and that it is likely to be even slower than average in the prevailing market conditions.

Practical questions relating to breakeven and inflation swap methods	
7	Do you consider that swap-implied estimates are materially affected by various risk premia and biases? If so, do you consider that those biases and premia can be estimated robustly and removed from the swap-implied estimates?
8	Do you consider the limited tenors of indexed CGS are likely to result in the swap-implied forward inflation curve better reflecting the decomposition of market-implied forward inflation rates than the bond breakeven-implied forward inflation curve?
9	Do you consider that bond breakeven estimates are materially affected by various risk premia and biases? If so, do you consider that those biases and premia can be estimated robustly and removed from the bond breakeven estimates?
10	Should we consider survey-based estimates of 10-year inflation, even if the data cannot be publicly reported?

Response:

On these issues, we refer to Section 4 of the CEPA report, which concludes in favour of breakeven inflation.

Questions relating to adjustments to the AER's approach to inflation in the PTRM and RFM	
11	Is there an adjustment to the PTRM that could be made to remove the incentive to insert bias in to the inflation expectation? Does this adjustment still achieve the same inflation compensation outcomes?
12	Should inflation compensation be set in real or nominal terms? Should inflation compensation be set in real or nominal terms at the regulatory asset base level or at the equity and debt level? Explain why your selection is preferable.
13	Are there preferable changes to achieve the appropriate inflation compensation that have regard to the relevant items in the NER, minimise impact to other building blocks and do not reduce regulatory stability and certainty?
14	Are there changes to the inflation lag approaches that can be made that ensure appropriate matching of inflation periods? If so, how are they materially better?

Response:

The focus of this submission is on achieving the best estimate of expected inflation that is commensurate with the prevailing market conditions. Consequently, we make no recommendations in relation to potential changes to the PTRM and RFM. We consider that such changes should be the subject of further detailed consideration and consultation.

Questions relating to adjustments to the AER's approach to inflation in the PTRM and RFM	
15	If changes are made to reduce inflation risk, should the median credit rating or the equity beta be adjusted in the short term? Are there other parameters that also should be adjusted?

Response:

As raised previously in this submission, if the AER does propose to change the regulatory framework, we would support further analysis and consultation on this complex issue. However, we consider it to be highly unlikely that a change to the method used to estimate expected inflation would, of itself, have any material impact on these parameters.

Ultimately, we consider the effect that changes to the PTRM and RFM might have on these parameter estimates to be an empirical question. It is possible that a change to the regulatory model might ultimately have some effect on beta or gearing or credit ratings. In this case, it would become evident in the relevant data. Our view is that no changes should be made to any parameter estimates on the basis of conjecture or speculation, but only after such changes become evident in the relevant data.

In relation to credit ratings and gearing, we note that, under the current regulatory framework, when the regulatory allowance turns out to be materially less than the efficient cost of debt, regulated businesses do not default or seek to restructure the debt, they make adjustments as required to ensure that the debt is serviced. If the regulatory allowance is less than the actual (efficient) cost of servicing that debt, the business cannot continue to operate in the same way it would have had fair compensation been received. Thus, the issue is not that inflation risk is likely to have a material effect on the risk of default, but that it can result in departures from the efficient operation of the firm.

In relation to equity beta, we consider that it is theoretically possible that a change to the regulatory model might ultimately result in an increase or decrease in systematic risk borne by equity holders. In this case, any change would become evident in the relevant data over time. Our view is that no changes should be made to any parameter estimates on the basis of conjecture or speculation about what effect any change might have on the relationship between stock returns and market returns, but only after any such changes become evident in the relevant data.

We also note that the risk of over- or under-compensation, which is borne by the equity holders, will only have an effect on beta if it can be shown to have a systematic or market-related effect on stock returns. That is, it would have to be shown that the under- or overcompensation that resulted from inflation mis-matches (a) had an impact on stock returns (not just cash flows in a given year, but the return on the stock) and that (b) those changes in stock returns were correlated with movements in the broad stock market index.

This would require a method for determining what the return on a particular stock would have been during a particular historical month or week if the AER had been using a different method for estimating expected inflation (or a different method for RAB indexation), which would seem to be a difficult task. This confirms our recommendation to estimate equity betas in the standard way using observable market data.