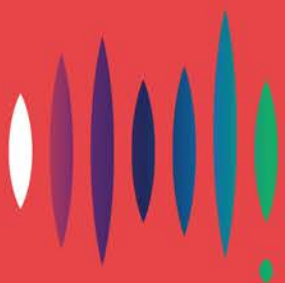


# Regulatory treatment of inflation

Response to AER preliminary position paper  
November 2017



**ENERGY  
CONSUMERS  
AUSTRALIA**

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## Introduction

The Australian Energy Regulator (the AER) is conducting a review of the *Review of expected inflation* (the Review)<sup>1</sup>. In October 2017 the AER published a *Preliminary position paper* (the Paper) for the Review.<sup>2</sup>

This submission is made by Energy Consumers Australia in response to the Paper. Energy Consumers Australia's Senior Economist, David Havyatt, is a member of the AER's Consumer Reference Group but this submission is not made on behalf of that group.

Energy Consumers Australia provided a submission (the Submission) in response to the AER *Discussion paper* issued in April 2017. This submission was supported by reports from Professor John Quiggin and Woollahra Partners.

We also participated in the public forum on 14 June, the technical (modelling) workshop on 9 August, and the workshop held following the release of the *Preliminary position paper* on 31 October (Attachment B)

This response does not repeat in detail the arguments made in our Submission. We do start with a discussion of the policy objectives as many stakeholders have failed to address how their proposal promotes the long term interest of consumers.

We then briefly review the alternative methods considered by the AER and concur with the AER that the current approach is preferable over market based or survey mechanisms.

The bulk of our response then deals with the specifics of the choices made in the current approach. We continue to support the use of the top of the Reserve Bank of Australia (RBA) target inflation range rather than the midpoint for the years following the available RBA forecasts. We also reject suggestions of a glide path.

Energy Consumers Australia appreciates the opportunities the AER has provided stakeholders through the discussion and position papers and forums and workshops.

## Policy objectives

The regulatory framework for the Australian energy system is encompassed by the overarching objective of the Australian Energy Market Agreement: "the promotion of the long term interests of consumers with regard to the price, quality and reliability of electricity and gas services." The objectives of the National Electricity Law (the NEL) and National Gas Law (the NGL) are the National Electricity Objective (the NEO) and the National Gas Objective (the NGO) respectively. Each expresses the objective of the Law as the promotion of the efficient investment in, and operation and use of, energy

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<sup>1</sup> (AER, 2017b)

<sup>2</sup> (AER, 2017a)



services for the long term interests of consumers. Both the Australian Energy Market Commission (the AEMC) and the AER are required to exercise their functions in such a way that will, or is likely to, contribute to the achievement of the objective of the Law.<sup>3</sup>

Notwithstanding the clarity of the regulatory objective, as Professor Quiggin noted in his report that accompanied our Submission, the derivation of the estimated rate of inflation is not purely a technical exercise – it has real consequences for the parties. He also notes that the regulator sees a lot more submissions from asset owners than they do from consumers. He concludes;

*This would be consistent with a regulatory model subject to producer capture, a model which would fail to deliver the objective of delivering electricity efficiently and at the lowest possible cost.*

The Paper notes that the National Electricity Rules (NER) and National Gas Rules (NGR) both require the AER to use a best estimate of expected inflation. The technical focus has tended to address this question by arguing that the 'best' estimate is one that meets criteria of estimation common to econometrics including 'congruence.'

Energy Consumers Australia emphasised this in our Submission. In the conclusion to that submission we wrote:

*The review needs to be guided by the overall objective of the regulatory framework; the promotion of the long term interests of consumers.*

At the October workshop Jim Cox put to the second panel the question of how each presenter's proposition would promote the long term interests of consumers. The panelists seemed to be surprised by the question and seemed to struggle to articulate a response.

As noted by Tom Hird and Stephen Gray at the same workshop, the variable being estimated (expected inflation) is unobservable and hence there is no way of genuinely assessing congruence.

However, this technical fixation is a distraction. The only meaning that can be ascribed to 'best' estimate in the Rules is one that best achieves the objectives of the regulatory regime – the NEO and NGO.

In this context other characteristics of the estimate then become relevant. The first of these is how the estimation technique assigns risk, the second is how the estimation technique otherwise impacts on the incentives to efficient investment.

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<sup>3</sup> For example, in the NEL S88 "The AEMC may only make a Rule if it is satisfied that the Rule will or is likely to contribute to the achievement of the national electricity objective." S16 "The AER must, in performing or exercising an AER economic regulatory function or power, perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the national electricity objective"



## The estimation alternatives

The Paper considers four alternative methods of estimating expected inflation and concludes that the AER should not change its current approach of using a geometric average of the two year Reserve Bank of Australia (RBA) forecast and then a further eight years of the mid-point of the RBA inflation target range.

The consideration of how the estimate of inflation impacts on incentives to invest supports the AER conclusion that the current approach should be retained. One of the most common concerns expressed by investors and by commentators on investor incentives is the question of 'regulatory risk' or 'regulatory uncertainty.' This in general is understood to refer to capricious changes to regulatory policy or treatment. A very good principle for a regulator to pursue is, therefore, a certain degree of conservatism; the hurdle for change to approach should be set high.

A related consideration is that there should be little uncertainty in the outcome of methods used to determine regulatory parameters. The current AER approach is transparent and does not require any market studies to evaluate. Equity investors and lenders to network businesses, in assessing their investment decision, need to understand how the cash flows of the business will be determined by the regulator.

The three alternatives to the AER's existing approach (break-even, swaps and survey methods) do not give investors a means to assess outcome of the estimation method. In addition, the first two methods are dependent on the degree of liquidity in markets. Lack of liquidity was the reason the break-even approach was previously abandoned. Research by the RBA has also highlighted the lack of liquidity in these markets and the tendency for these markets to include an inflation risk premium (Moore, 2016).

As noted by the RBA in its letter to the AER, dated 5 July 2017, the difficulty with surveys is that the information is proprietary. The AER should not use a measure that is not freely available.

The use of a deterministic method to estimate inflation is, therefore, more likely to contribute to the achievement of the NEO or the NGO than any of the alternatives considered.

## The detailed estimation approach

In the application of the deterministic approach the questions are then what the appropriate value is for years that don't use a forecast, what forecast to use and whether there should be a glide path between the two.

In our Submission Energy Consumers Australia proposed the use of the top of the RBA target range (3%) whereas the AER currently uses the midpoint of the range (2.5%).

Professor Quiggin in his report attached to our Submission noted that under rules that guarantee the real rate of return for asset owners, consumers are



exposed to any difference between the actual rate of inflation and the expected rate used in the regulatory process. That is they are exposed to the full risk of inflation.

If the range of inflation relevant to the analysis is bounded within a given range then consumers can be protected from upside risk by setting the regulatory estimate at the upper end of the range. There is such a range, the RBA target band, and the upper end of that is 3%. Therefore, the best estimate for inflation to properly apportion risks is 3%.

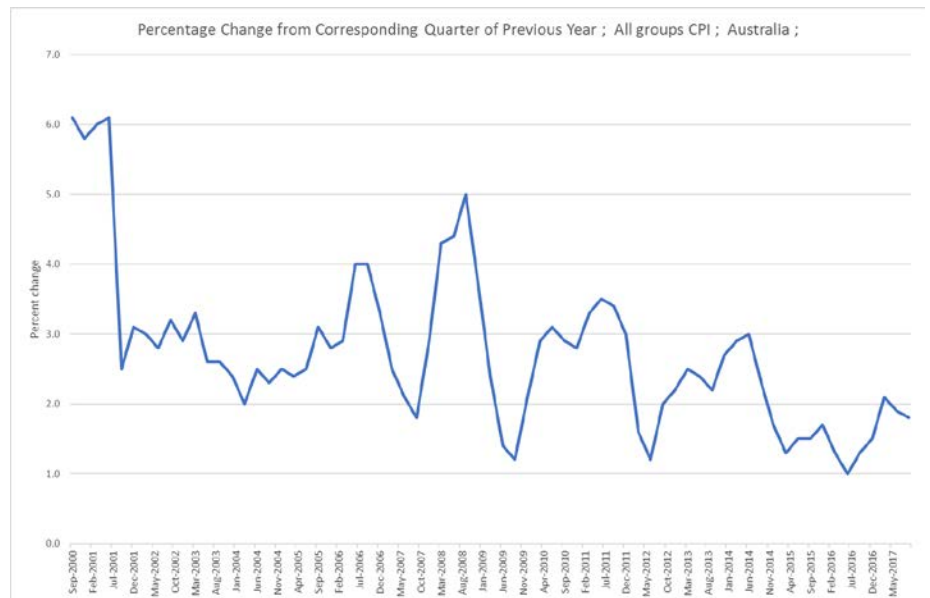
The modelling performed by Woollahra Partners, attached to our Submission, concludes that the inflation risk assumed by consumers by choosing a 2.5% rather than 3% inflation estimate is sizeable.

The RBA two year forecast can be accessed by everybody and is issued by a reputable institution. Energy Consumers Australia supports the ongoing use of this measure for the initial two years.

A glide path has been proposed by some submissions, based on a theory that after inflation has been low or outside the target range it will take time to return to the range.

Figure 1 below shows the percentage change in CPI from the corresponding quarter since 2001. As can be seen the corrections from below target inflation in 2007 and 2009 both exhibited reversion well above the target range.

**Figure 1: Percentage change CPI (Source: ABS 6401.0 Tables 3 and 4)**



Proponents of a change in methodology note the sustained period of below target inflation since 2014 and argue that this is evidence of an 'inflation trap'. This is based on the observation that the RBA's policy mechanisms are more effective in restraining economic activity and hence reducing inflation than they are in stimulating inflation.



This conclusion is, however, based on the invalid assumption of invariant behaviour from the RBA. Inflation targeting has in part been effective because markets anticipate the move of the RBA. This means that market interest rate variations tend to precede the RBA's policy moves.

Markets, acting on evidence of history, have consequently moved on interest rates at the slightest indication of a pick up in activity. This is learned behaviour about the likely behaviour of central banks.

Recently former Reserve Bank of Australia Governor Glenn Stevens has said global investors have become complacent about the risks of a sharp rise in inflation that would have "considerable implications" for financial markets (Shapiro, 2017)

Stevens said central banks would be in a rather difficult position if there was an unexpected pick up in prices. They face a dilemma between deciding whether to tighten fast to retain hard-fought credibility as inflation fighters, or cede to market-led tightening in financial conditions slowing growth.

Given that the RBA is now well aware of the asymmetry of its policy levers, it is more likely than not to act slowly on any price move than quickly. The risk remains that 'market-led tightening' may hold inflation below the target band.

Energy Consumers Australia cannot guarantee the likely response of the RBA, but given the widespread recognition in policy circles of the desirability of a return to target level inflation the RBA should be 'jaw-boning' the market to indicate an appetite for a period of above target inflation.

In the final analysis, post the introduction of inflation targeting there are two discernible periods. The first has oscillations around the midpoint with relatively fast changes. The second is a more persistent outcome close to the lower end of the range. Rational expectation is that policy makers (including the RBA and Treasury) will be exploring the full range of measures to return to the first of these two patterns. It would be an error to assume no policy change.

## Regulatory Treatment of Inflation

### Use in the models

The current consultation has resulted in detailed investigation by stakeholders on the consequence of inflation estimates in the formulas used by the AER in determining revenue allowances.

In submissions, discussion and AER papers these are described as 'models.' This is an unsatisfactory term, because a model is usually thought to be something that is representative of a system. Such models are often specified as systems of equations; but not all systems of equations are models.

The equations used to determine a post tax revenue allowance and to determine the value of assets to roll-forward are deterministic. They are not approximating something that is otherwise happening in a 'real world'; they determine what will happen.





The AER uses a set of Excel workbooks to apply these equations. Excel workbooks are an excellent means of being able to apply the same set of equations repeatedly to different sets of input data.

The presentations to the August workshop demonstrated that the Excel workbooks used by the AER execute the equations as expected. Some presenters highlighted their concerns with the results derived under different input scenarios. None of these, however, revealed anything useful about the estimation of inflation other than to reveal that the outcome was symmetrical for deviations between expected and outturn inflation.

What was surprising was the apparent realisation of network businesses about how the revenue determination framework actually works.

The revenue determination framework determines the revenue that a network will be allowed to return. As noted in the Paper the formulas used provide to the network operator a fixed real return.

Debt finance is issued in nominal terms with a fixed nominal interest rate. A consequence then of providing a fixed real return on all capital is that equity investors are exposed to inflation risk.

However, this has nothing to do with the approach to estimating inflation. To the extent that the framework results in equity investors bearing inflation risk, this is at best an issue for the calculation of the rate of return for equity.

There would be a number of alternative approaches to change this outcome. One would be that if a business can demonstrate that it maintains an investment grade credit rating and that it raises all its debt using a competitive process, then interests payments could be treated as Opex in the calculation. The return for capital would then be restricted to the equity component only.

That is an issue beyond the terms of a review of expected inflation and can be expected to be agitated in the review of the rate of return guideline. Energy Consumers Australia notes, however, that this is an existing risk management position and that as a consequence the equity Beta (determined as it is from market surveys) already includes that risk. This is a point raised by Sapere in its expert report provided to the AER.

The fact that the AER cannot explicitly state how much of the Beta is due to this risk rather than other risks only indicates the difficulty the AER will face in revising the equity Beta down if there are changes to the revenue determination process (such as that referred to above) designed to reduce this risk for equity investors.

## Conclusion

This review of the estimation of inflation has been dominated by submissions from networks and their consultants that have framed the question as merely a technical consideration. The AER, however, is required to be guided by the overall objective of the regulatory framework; the promotion of the long term interests of consumers.





It remains disappointing that stakeholders do not always frame their submissions in these terms.

Energy Consumers Australia has not been persuaded by any other submissions that the proposal to base estimates of inflation on market indicators contributes the achievement of the NEO or the NGO. They introduce uncertainty, and consequently unnecessary, regulatory risk.

The appropriate estimate is to use the RBA target band to provide a consistent measure. Even equity investors make their investment choices on the basis of expected nominal returns, not an implied real return.

Energy Consumers Australia continues to believe that setting estimated inflation at the top of the RBA band appropriately allocates inflation risk to investors, and consequently best promotes the long term interests of consumers.

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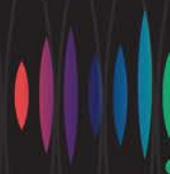
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