29 July 2020

Mr Warwick Anderson
General Manager, Networks Finance and Reporting
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Dear Mr Anderson

Ausgrid welcomes the opportunity to provide this submission to the AER's inflation review. We appreciate the AER initiating the review in response to changing economic circumstances that may influence how inflation is treated in the regulatory framework.

The national electricity market (NEM) is in the midst of an unprecedented transformation which has potential to change the way customers use energy, drive down prices for customers and contribute to the decarbonisation of the Australian economy. It is critical that the right policy settings are in place for networks to respond to this energy transformation and provide customers with desired outcomes.

We are firmly of the view that the current framework does not deliver the best outcome for either customers or shareholders. This is because the framework creates windfall gains and losses for both customers and equity holders from period to period. The low interest, low inflation economic environment we are currently experiencing is exacerbating this and risks distorting investment decisions at the most critical point in the transformation of the NEM.

We have also come to the view that the AER's inflation framework is too heavily reliant on one source for its inflation forecast, and that using a 10 year average reduces the ability of the forecast to reflect the economic conditions pertinent to the five years of the regulatory period.

Our proposed solution limits the volatility of windfall gains and losses for customers to the equity component of rate of return. We also recommend some weighting of market-based inflation forecasts with a five year forecast horizon to determine inflation expectations. This approach:

- Reduces the risk for both customers and shareholders of actual inflation being different to forecast, thereby ensuring a more efficient outcome for both parties; and
- Maintains the NPV=0 principle.

It is good regulatory practice for approaches to adapt to changes in the economic environment where it is warranted, especially when these changes contribute to the National Electricity Objective and National Gas Objective. If you would like to discuss our submission in more detail, please contact Fiona McAnally on ██████████ or ████████████████████

Yours sincerely

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Rob Amphlett Lewis
Chief Customer Officer

Ausgrid Submission
AER Inflation Review
July 2020

Introduction

Ausgrid welcomes the opportunity to make a submission to the AER's inflation review. We agree with the AER that there have recently been movements in the data and information associated with inflation and its application to the regulatory framework[1].

Economic conditions have continued to change since the 2017 inflation review. Even before the impact of COVID-19, there were signs that assumptions underpinning the AER's approach to inflation, such as the Reserve Bank's (RBA) ability to achieve its targeted inflation outcomes through monetary policy, were not holding anymore.

In our view, there are two key issues to address in this review:

1. Is it appropriate to target real returns plus actual inflation outcomes?
2. Does the current framework deliver a forecast of inflation that approximates expectations of future inflation?

If the answer to either of these questions is no, we believe there is a compelling case to amend the inflation framework.

We are at a critical juncture in the transformation of the energy sector, with changes in the NEM over the next 5 to 10 years likely to have long term impacts for customers. For example, over the coming years there is an emerging need to invest in the capabilities required to efficiently integrate distributed energy resources (DER). Investing in the capability to flexibly respond to extreme weather risks is also an emerging need for networks, as global mean temperatures continue to rise. The right policy settings for networks need to be in place for this energy transformation.

The following sections outline our analysis of the above questions. Based on the evidence, we conclude that the AER's current approach to inflation does not achieve its intended outcome and there is a clear case to change the framework. In forming this view we have taken advice from John Earwaker of First Economics whose report we have provided with this submission.

In our submission we propose solutions we believe are reasonable and implementable, as well as being consistent with the National Electricity Objective (NEO) and National Gas Objective (NGO). We have considered impacts to customers in the formulation of our recommendations and consider that they do not increase volatility or average revenues. They reduce the extent to which deviations from forecasts cause windfall gains and losses for customers and shareholders, who sit on either side of an unnecessary risk.

Ausgrid also supports the submission made by Energy Networks Australia (ENA) on behalf of energy networks.

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[1] AER, Discussion paper: Regulatory treatment of inflation, May 2020, p13.

1. Is it appropriate to target real returns plus actual inflation outcomes?

The framework targets the delivery of the initial real rate of return plus actual inflation outcomes, ex ante[2]. This means that if a real return on equity of 5% is targeted, regardless of the inflation outcomes in comparison to the estimate, the real rate of return at the end of the period will be 5%. This occurs through the operation of the CPI-X control mechanism which backs out estimated inflation and replaces it with actual inflation on an annual basis.

As Sapere concluded in its report, the current framework does deliver a real rate of return[3]. This can also be demonstrated in the AER's model[4] published to assist with this review, which shows that different combinations of expected and actual inflation outcomes generally provide similar overall rates of return and returns on equity over 70 years.

However, targeting the real rate of return assumes that both debt and equity are inherently real assets in nature. If they are not, targeting a real return will result in windfall transfers to and from equity when inflation differs from estimate. It is assumed that this will even out over the life of the asset as there will be periods of under or overcompensation that offset each other to be NPV neutral in the long term.

However, there are two issues with this logic:

1. The framework delivers a real rate of return, but network businesses issue and are required to make interest payments on nominal debt; and

2. Sustained periods of under-compensation to equity, even if NPV neutral, do not align with the realities of financing networking businesses and continued investment to promote network efficiency.
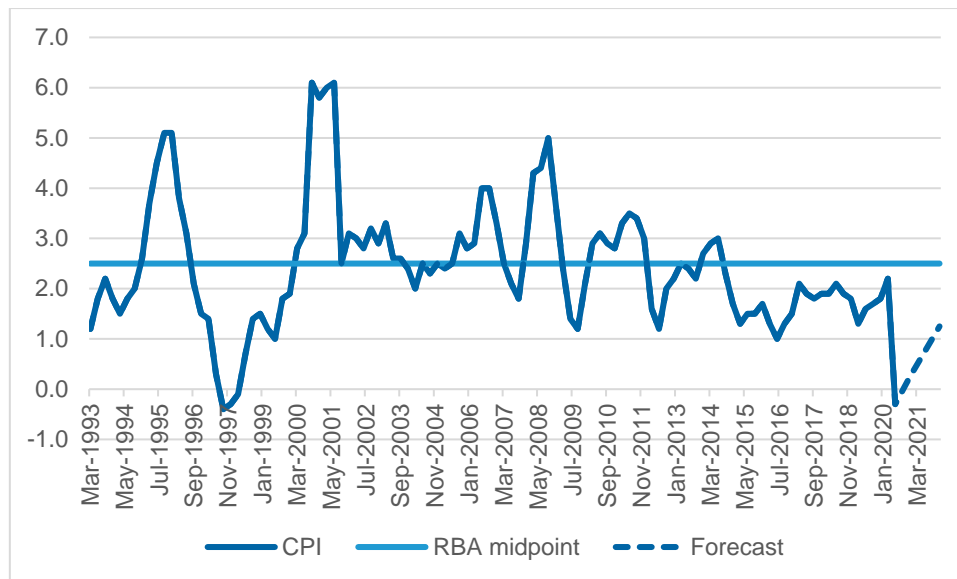
The framework targeting long term NPV neutrality had not been an issue from 1999 to around 2015 because the under and over estimation of inflation was not severe and was more symmetrical above and below the estimate. Also, the methodology for estimating inflation expectations was more closely aligned to market expectations. So, the amount being deducted from revenues to avoid double counting of regulatory asset base (RAB) indexation would not vary significantly from the amount being added to the RAB over the five year regulatory period.

Figure 1 shows CPI since 1993, when inflation targeting began, and the midpoint of the RBA target. Inflation fluctuates above and below the target in short, sharp bursts until 2015.

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[2] AER, Discussion paper: Regulatory treatment of inflation, May 2020, p11.
[3] Sapere, Target return and inflation: input to the AER inflation review 2020, 30 June 2020, p v.
[4] https://www.aer.gov.au/system/files/AER%20-%20Inflation%20review%202020%20-%20Simulator%20-%20June%202020.xlsm

Figure 1: CPI since 1993

Source: ABS and RBA

A period of lower than estimated inflation has now persisted for many years and is expected to continue into the future (see section 2 for further discussion on this matter). We are expecting more than 10 years of inflation below that dictated by the current methodology, leading to long term asymmetry.

The consequence of this mismatch is that network shareholders are consistently covering debt costs from cash returns as shown in the Table 1. Debt is paid in nominal dollars which means equity subsidises the cash required to pay debt within period while taking the full benefit of indexation in future periods.

Table 1: Under recovery of debt costs FY20

Item	%	Calculation
Nominal return on equity	5.70	As per decision
Inflation estimate	2.42	As per decision
Allowed real return on equity	3.20	(1+5.70%)/(1+2.42%)-1
Cash transfer to debt	(3.64)	-2.42%*60/40 (adjustment for gearing)
Cash return to equity	(0.44)	3.20%-3.64%

To illustrate the impact, we can break down the return on asset allowed in Ausgrid's final determination in April 2019 and compare it to the benchmark interest cost, as shown in Table 2 below.

Table 2: Return on asset and interest costs final decision FY20-24

Item	$m nominal
Total return on capital	4,559
Less RAB indexation	(2,015)
Cash return	2,545
Less interest costs	(2,666)
Cash shortfall	(121)

The cash return provided over the five year period is $121 million short of the benchmark efficient interest costs that must be paid by Ausgrid.

A slightly different way to demonstrate this is to extrapolate a profit and loss statement in the final decision PTRM as shown in Table 3.

Table 3: Implied NPAT Ausgrid final decision FY20-24*

Item	FY20	FY21	FY22	FY23	FY24	Total
Revenue (building block)	1,193	1,573	1,627	1,674	1,685	7,752
Less expenses	474	485	499	513	527	2,499
Less revenue adjustment	-310	20	20	21	21	-227
Less depreciation	483	528	569	607	615	2,802
EBIT	545	540	539	533	521	2,678
Less interest expense	540	540	537	529	520	2,666
Less tax expense	68	56	64	71	63	322
NPAT	-63	-57	-61	-66	-62	-309
Add value of imputation credits**	40	33	37	41	37	189
Adjusted NPAT	-23	-24	-24	-25	-25	-121

*Sums together distribution and transmission decisions
** The adjustment for imputation credits is made to show the final outcome to shareholders assumed in the framework. This adjustment does not appear in the financial statements of businesses as it accrues separately to the shareholder.

The negative NPAT is also evident in the recent decisions for Endeavour, Essential, SAPN, Energex and Ergon Energy.

The impact of this under-recovery in the short to medium term is that equity holders receive real returns well below the AER's allowance within the regulatory period, and in the absence of outperformance of the benchmark cost allowances would incur a net loss over the five year period.

The AER acknowledged this outcome in its June 2020 final decisions for SAPN, Energex and Endeavour. The AER indicated that looking only at the negative profits failed to take into account the cash flow available to businesses from borrowing more to maintain gearing[5].

Some stakeholders believe it to be appropriate for networks to incur losses at various times over the life of long lived assets. However, this is incongruent with the reality of annual assessments for credit ratings and debt covenants, which do not take into account that there may be a recovery of cash returns in the long term. The recovery of cash returns is also uncertain and does not include any time value of money benefit for losses incurred.

Cash flow availability from increased borrowing does not affect the profit and loss statement. Credit metrics and covenants are assessed annually based on actual profit and loss performance year on year. Future RAB indexation does not form part of the equation. The cash shortfalls being incurred year after year are accumulating. The financeability of network businesses is being significantly impacted by these cash shortfalls.

The negative profit outcome for recent determinations was observed by Sapere and it was noted that a negative cash return on equity could indicate an underlying inconsistency in in the inputs to estimate WACC and inflation[6]. We agree with this observation.

The AER's published simulation model demonstrates that regardless of inflation outcomes, the expected real rate of return is achieved over time. However, because the framework does not consider outcomes to return on equity, the potential flow-on effect to credit metrics and covenants is not contemplated. This could give rise to unintended consequences. For example, rating downgrades would increase funding costs, or, decisions could be made to move to inefficient capital structures in an attempt to maintain a rating or avoid a covenant breach.

If the simulation model included the actual implied EBIT and NPAT outcomes for each year we could analyse the impact on profit and loss statements and assess the reasonableness of a network's real financial position during a period of extended below estimated inflation. In its absence, we have extended the calculations used in Table 3 by inputting actual inflation at an average of 1% lower than expected for the current regulatory period. First year revenue is maintained at AER's estimate of 2.42% to account for the first year effect. The outputs are in Table 4.

Table 4: Implied five year NPAT based on outturn inflation

Item	Total
Revenue (building block)	7,591
Less expenses	2,449
Less revenue adjustment	-229
Less depreciation	2,744
EBIT	2,627
Less interest expense	2,666

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[5] AER, Final Decision Energex Distribution Determination 2020 to 2025, Attachment 3 Rate of Return, June 2020, 3-24.

[6] Sapere, Target return and inflation: input to the AER inflation review 2020, 30 June 2020, p 28.

Less tax expense	316
NPAT	-354

We have not included the imputation credits because as noted at Table 3, these do not form part of the profit and loss statement of the business and therefore cannot be counted in the credit metric or covenant calculations. The NPAT averages to a $70 million loss each year of the regulatory period. Further detail of the impacts is provided in our confidential submission.

It is important to note that customers face the other side of these fluctuations. During periods of higher than expected inflation network shareholders earn higher than estimated returns to equity, and in those periods higher prices are borne by customers.

Notwithstanding that different combinations of expected and actual inflation outcomes generally provide similar overall returns on equity over the long term, a net loss to investors over the next 5 to 10 years will distort investment decisions at the most critical point in the transformation of the NEM. This is likely to disrupt the efficiency of the transition to the energy market of the future and could have long term consequences for customers.

Our conclusion is that the current framework is not as robust to the unusual economic conditions of recent years as it could be. We believe there is another option that achieves a neutral NPV outcome and reduces both risk and volatility for customers and shareholders.

Hybrid model

There appears to be a general consensus that real return on equity is the most appropriate compensation to network shareholders. Most investors in network businesses seek long term, stable, inflation linked returns that preserve the purchasing power of their investment. It is therefore on balance considered not unreasonable to target a real rate of return on equity.

However, debt has different characteristics for network businesses. The AER estimates the efficient cost of debt on a nominal basis. Debt is contracted and paid in nominal terms, and in the Australian context the link to inflation cannot be managed efficiently through financial instruments because the market for corporate inflation linked debt is effectively non-existent. Banks are not looking to add to the small books they already have, and if they were to facilitate a trade the issuance margins are so expensive as to be an inefficient and highly costly way to manage.

The AER acknowledges this in its methodology to set debt costs under the rate of return instrument, which uses a nominal framework to set a nominal return on debt based on the actual practice of network businesses. If it were efficient to raise inflation linked debt, networks would do so in response to being exposed to being compensated for debt in the same way. However, networks cannot do so, as the market does not exist.

For these reasons we disagree with the view that it is reasonable to target a real rate of return (and by extension real return on debt) because networks should bear the risk of financing decisions[7]. Networks do not take a business decision to issue nominal debt, they

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[7] AER, Regulatory treatment of inflation: Final position, December 2017, p88.

do so because there is no reasonable choice to do otherwise. Businesses can and do depart from the benchmark efficient decision made by the AER with respect to tenor, fixed or floating, gearing etc and manage the associated risks. It therefore follows that they bear the risk and reward for those decisions.

The natural conclusion is for debt to be treated according to its underlying characteristic as a nominal cost, and compensation for this cost to be based on the efficient nominal cost determined by the AER under the rate of return instrument.

This aligns with the 10 year trailing average approach to setting the benchmark debt allowance. The AER and various customer groups agreed that it was appropriate for debt allowances to align with actual debt financing practices of businesses. The AER also stated that it was important for debt allowances to align with the expected return on debt within each period in order to avoid under and over compensation year on year[8].

We propose that the AER and customer groups' objective be given effect to by indexing the RAB by 40% actual inflation and 60% forecast inflation. Like the current methodology, this is also NPV neutral but reduces the risk of under and over compensation for both customers and network shareholders.

Impacts to customers have been considered in the formulation of this approach. The simulation analysis provided in the ENA submission demonstrates that the proposed hybrid does not increase average revenues or variability in revenues (and by extension prices) compared to the current framework.

Risk allocation

It has been suggested that a hybrid model changes the risk profile between shareholders and customers by transferring risk from businesses to customers. For the reasons outlined below, this is not the case.

Shareholders and customers share the same risk within a regulatory period, i.e. that actual inflation will deviate from expected inflation, but on opposite sides. If inflation is higher than expected within a regulatory period, shareholders gain through a higher return on equity. If inflation is lower than expected within a regulatory period, customers gain through lower prices.

Therefore, a change to the framework that removes the risk of inflation being higher or lower than expected on the debt component means that efficient debt costs are covered and neither shareholders nor customers carry the under or over allowance of debt costs from period to period. It does not change the overall risk profile for networks or customers, or transfer risk from networks to customers or vice versa. It mitigates risk on the debt costs for both parties. On this basis we do not believe that there should be any compensating change to the risk profile accounted for in the rate of return.

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[8] AER, December 2013, Final Rate of Return Guideline: Explanatory Statement, p 109.

It should also be noted that this change would reduce future windfall gains to networks. The equity losses accruing to networks during this low inflation period (manifested by under-recovery of real return on equity) will be locked in for 60% of the RAB and cannot be recovered in the future during periods of higher than expected inflation.

2. Does the current framework deliver a forecast of inflation that approximates market expectation of future inflation?

The hybrid model alleviates the problem that equity holders or customers pay more or less than the efficient cost of debt in each regulatory period. However, this problem is exacerbated by the AER's current approach to estimating inflation.

The current methodology is to forecast inflation over a 10-year period by taking the geometric average of two years of the RBA's headline forecast rate and the midpoint of the RBA's inflation target window (2.5%) for each of the remaining eight years. The 10-year forecast horizon used to forecast inflation is intended to match the forecast horizon used in the nominal return on capital calculations[9].

RBA forecasts

Our concern is that the assumption that CPI will return to the midpoint of the RBA's target range within two years needs to be reconsidered in the current economic environment. We understand the reasoning behind the methodology and agree that it had been reasonably effective for a period of time. Since inflation targeting began there was a general expectation in the economy that the RBA would manage price levels and keep them at or near the target.

However, economies are not operating according to conventional theory and the traditional levers to increase inflation from the extended lows we have seen over recent years have been ineffective. Extensive quantitative easing has not had any inflationary effect, and the RBA has stated several times that it will not reduce interest rates any lower than the current rate of 0.25%[10]. The RBA has stated:
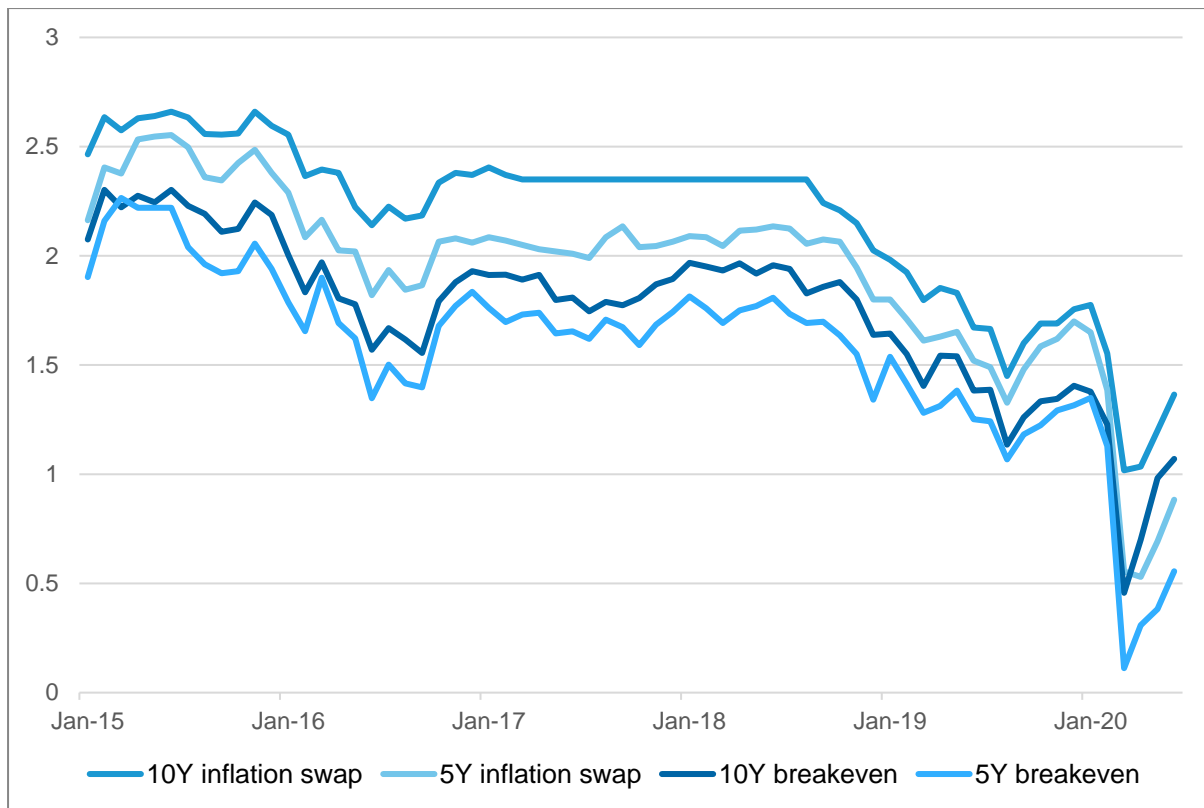
> "…that it will not increase the cash rate target until progress is being made towards full employment and it is confident that inflation will be sustainably within the 2–3 per cent target band. Given the outlook for the Australian economy, this means that the cash rate is unlikely to be increased for an extended period of time."[11]

This statement aligns with expectations in financial markets that inflation will stay well below 2% for both five and 10 year terms, as shown in Figure 2.

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[9] AER, Regulatory treatment of inflation: Final position, December 2017, p22.
[10] For example, https://www.afr.com/policy/economy/lowe-rules-out-negative-rates-for-australia-20200521-p54vao;
https://www.news.com.au/finance/economy/interest-rates/rba-interest-rates-rates-on-hold-at-record-low-of-025/news-story/45534a52a02967a78396584b5d2edd52
[11] RBA, Statement on Monetary Policy, May 2020, p 2.

Figure 2: Five and 10 year swaps and bond breakeven

Source: Bloomberg. Note data not available on 10 year inflation swaps between March 2017 – August 2018

The Deloitte report[12] commissioned by the AER purported that the current inflation forecasting approach is still the most appropriate based on the criteria of congruence, robustness, transparency and replicability and simplicity. Deloitte's main conclusion was that inflation expectations did not appear to have de-anchored from the RBA's target range[13]. This appeared to be based on a literature review of reports that preceded the current economic conditions, a limitation that was also recognised by Deloitte but did not hold any weight in their ultimate conclusion.

Given the importance of the inflation estimation to both customers and network shareholders, the AER should give some weight to market implied inflation forecasts, specifically inflation swaps. There is a detailed analysis of the merits of inflation swaps being used in this context in the ENA submission and attached CEG report.

Forecast horizon

We do not agree that it necessarily follows that the term of the debt needs to be matched to the term of the inflation forecast. This is because the purpose of the inflation forecast is to

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[12] Deloitte, Review of the regulatory treatment of inflation, 30 June 2020.
[13] Deloitte, Review of the regulatory treatment of inflation, 30 June 2020, p 31.

deduct the portion of the return that is provided through RAB indexation over the five years of the regulatory period.

If the same rate was deducted from revenues for years six to 10 of the 10 year horizon it would make sense, but inflation is reset with a new forecast at the next regulatory period. The weighting given to 2.5% for years six to 10 of the geometric average means the shortfall/gain of the difference between the first two years forecasts and remaining years is never recovered/repaid. A 10 year geometric average is deducted from revenue, but a five year geometric average is added back. This shows that even if the inflation outturn is exactly the same as the estimate, a 10 year inflation forecast does not deliver actual inflation outcomes.

Table 5: Inflation returned to RAB if estimates are correct

Year	1	2	3	4	5	6	7	8	9	10	GA*
Estimate	1.0%	1.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.25%
Actual	1.0%	1.5%	2.5%	2.5%	2.5%						2.00%

*Geometric average

The consequence of this is that equity holders do not receive the nominal return on debt even if the forecast of inflation is correct.

We note that IPART uses an averaging period equivalent to the regulatory period (four years) in its decisions for regulated water utilities, while maintaining a 10 year trailing average debt calculation[14].

Therefore, we are of the view that the estimation of the amount to be deducted from the RAB in a period should be aligned with the calculation of the amount that is to be returned to the RAB in that period. Whether the AER accepts a change to include market based estimates or chooses to maintain its current RBA methodology to estimating inflation, we submit that the estimation horizon or averaging period should be set to five years rather than 10.

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[14] IPART, Review of prices for Water NSW Greater Sydney from July 1 2020.

Thank you

Ausgrid