

## Speech: rate of return draft guideline information session

Andrew Reeves, Chairman, Australian Energy Regulator

30 August 2013

### ***Introduction***

Good morning everyone. This is a briefing on the draft rate of return guidelines we are releasing as part of our Better Regulation program.

Briefly, let me give the background to this program. After completing the first round of setting prices for the electricity and gas networks under the 2006 rules, the AER saw the need for changes to better meet the National Energy objective set out in the National Electricity and National Gas Laws. This objective is to promote efficient investment and operation of the networks in the long term interests of consumers. The AER proposed changes to the rules governing the setting of network prices and the Australian Energy Markets Commission, as the rule maker, issued new rules late last year. It included in those rules the requirement that the AER publish a set of guidelines to detail how it will approach the next determinations under the new rules.

Today marks the release of the last of our draft guidelines as part of our Better Regulation program. Prior to today's release of the draft rate of return guideline, we have already published guidelines covering:

- expenditure forecast assessment
- incentives
- shared assets
- consumer engagement and
- confidentiality.

In addition, last week we published our final guideline on the regulatory test which is to be applied to investment to augment distribution networks.

While the focus of today is on rate of return, I will spend a short time setting out the context of our work in Better Regulation. In particular, there are a number of key principles that are the foundation of our Better Regulation program.

First: the need to support necessary and efficient investment. This is central to the National Electricity and Gas Objectives and is set out in the Revenue and Pricing Principles. By providing clear guidance, our Better Regulation Program will support necessary and efficient investment. Once we've developed our positions and set out final guidelines, we would expect future changes to our approach to be by incremental development rather than by significant shifts in position.

There is widespread concern in the community about energy prices and excessive allowances for costs and rates of return have contributed to this. This brings me to our second key driver. Also central to the national electricity and gas objectives is that regulation should promote the long term interests of consumers. We take this as requiring consumers to pay no more than necessary to

promote efficient investment and safe and reliable operation of energy networks. This package of guidelines sets out an approach that explains how we intend to achieve these important objectives.

A third key driver is that where possible our economic regulation should be incentive based. We are not in the business of micro-managing the networks that we regulate, nor would we want to be. Our preference is that we provide incentives for network businesses to operate efficiently. This aligns the interests of both consumers and the businesses as the gains from greater efficiencies are shared.

We will examine the costs of the network businesses and if we consider that they are operating at a satisfactory level, we will use that performance as a basis for forecasts of future needs. But if we test the expenditures and find they are not efficient we will base our forecasts on measures of efficient cost drawn from our benchmark studies and reports. In this way, customers will not pay for excessive costs or poor performance.

A fourth key factor is that the guidelines should be the product of extensive consultation and engagement. To a very significant extent this aim has been achieved. The draft guidelines that we have produced are the result of extensive consultation with all of our stakeholders. Traditionally, in most policy development like this, engagement is limited to exchange of papers, reports and submissions. We have carried out this process using papers as a basis for detailed workshops and discussion with network businesses, customer representatives, investors, lenders and other stakeholders, testing our preliminary views where relevant.

We have also been promoting better engagement between the regulated businesses and their stakeholders- consumer groups in particular. Increased engagement with consumers should lead to outcomes that better reflect the long term interests of consumers.

With these principles in mind, we have developed a cohesive package of reforms to improve the process and tools of economic regulation. At their core these reforms reflect our underlying preference for incentive-based regulation which rewards businesses for efficient performance.

Our draft expenditure incentive guideline published earlier in August proposed stronger incentives for businesses to undertake capex efficiently and for consumers to share in the benefits of efficiency improvements. Under our proposed capital expenditure sharing scheme, businesses are offered equal rewards and penalties for becoming more or less efficient over time. Businesses would be rewarded 30 per cent for underspending on capex and penalised 30 per cent for overspending.

Further, if the business spends more than its allowance and, on review, we decide that the overspend was not efficient, we can exclude all of the inefficient over expenditure from the regulated asset base. The business would not be entitled to a return on that amount. This is in contrast to the current system where all expenditure is rolled into the regulated asset base, and earns a return, whether efficient or not.

The draft guideline sets out further refinements to the existing opex incentives in our efficiency benefit sharing scheme to allow it to operate more effectively with the new capital expenditure sharing scheme and to tie in with our approach to expenditure forecasting.

When we make forecasts, our first step is to look at a business's previous performance. We will assess and where necessary adjust capex and opex forecasts to establish an efficient starting point. Our preference is to look at a business' past spending and behaviour to set its future expenditure allowance—that is, a revealed cost approach. However, if we are not satisfied that past spending was efficient, we'll make adjustments to establish an efficient starting point. Our draft guideline in this area

outlines the types of assessments we'll do to determine efficient expenditure allowances and the information we require from the businesses to do so. By improving our approach to expenditure assessment, we will become better equipped to critically analyse and challenge the proposals put to us by the businesses.

This is where our work on benchmarks comes in. In particular, we are developing consistent definitions of cost categories to enable cost comparisons. We are also developing top down benchmarking techniques, such as total factor productivity and other high-level economic analysis. The techniques used and data collected in this area will form the basis of our annual benchmarking reports beginning in 2014. The purpose of these reports is to describe the relative efficiency of each electricity network business in providing services. In some cases however we may still need to continue to rely on engineering assessments of a business's proposal, or look more closely at particular areas of expenditure where our benchmarking tools suggest this is necessary.

All of these measures are underpinned by an enhanced consumer consultation and engagement framework. Building on the changes that I've already talked about on how we as a regulator seek to engage, we have also published a guideline to set out principles about how businesses might better engage with their customers.

In the same vein, we have also announced the membership of our consumer challenge panel. The thirteen members of the CCP are experts who will provide advice to us to help ensure our decisions on network costs properly incorporate consumer interests and views.

How all these elements of the Better Regulation program fit together is outlined in a new document we are also releasing today. Our Better Regulation reform package update is now available on our website and draws together all of the workstreams. It draws out the highlights of this new regulatory process on which we are now consulting.

### ***Rate of return***

Today marks the start of the consultation on our draft guideline to determining the rate of return. This draft guideline proposes a few significant changes to our current approach.

In summary:

For the cost of equity, we will continue to use the Capital Asset Pricing Model – or CAPM - but in a way that gives greater consideration to the results of other models and information. Rather than using the result from the CAPM in a mechanical and determinative way, we'll use it in an informative way. Importantly we will generate a range for the cost of equity and consider all relevant information in coming to a judgement on the cost of equity. We expect that this is likely to result in a more stable allowance for the cost of equity over time.

The cost of debt will be estimated using an average of the cost of debt for a BBB+ rated benchmark efficient entity, with one-seventh of a notional debt portfolio repriced annually. We propose a benchmark term of debt of seven years. This is a significant change from the current 'on-the-day' approach and we will transition to this new approach over seven years.

We will continue to calculate the overall cost of capital as a weighted average of the cost of debt and cost of equity and propose to weight on a benchmark gearing ratio of 60%.

We propose to increase the value of imputation credits from 0.25 to 0.5. This follows careful consideration of the evidence and better reflects the value of these credits to investors. Imputation credits do not materially affect the WACC directly. However, the increase in their value will reduce our allowance for tax expense in the build-up of allowed efficient costs.

The new approach to the cost of capital will deliver greater price stability and allow us to exercise greater discretion to adjust outcomes consistent with market conditions and practice. It addresses the concerns set out in the AEMC's rule change review and many aspects of the submissions we have received.

I will expand on these changes later in this presentation.

The rate of return is a very important component of the Better Regulation program. It is fundamental to getting regulation right in such a capital-intensive industry – where the return on investment makes up about half of revenue needs for network businesses. Our rate of return guideline will support necessary and efficient investment by explaining how we will exercise our judgement when determining a value in each determination.

### *Background—reform*

Let me give some background to these changes:

There were a range of problems with the approach to setting the rate of return under the old rules. We had different rules for different sectors. The detail in the old rules limited the extent to which we could take into account market conditions. But, perversely, this resulted in substantial fluctuations in the rate of return between decisions.

Under the previous rules there were three different frameworks to setting the rate of return – one for gas pipelines, one for electricity transmission and one for electricity distribution. Our view, supported by the AEMC, is that there is not enough evidence of such significant differences in risks faced by these sectors that different frameworks are justified.

The old rules for the electricity networks were prescriptive. They set out in great detail the approach and parameters that the regulator should adopt, on the notion that this was needed for a stable investment climate. This may have been appropriate in periods of economic stability and consistent economic growth; but it was clearly not appropriate during the disruption of financial markets that came with the GFC.

The prescriptive approach caused particular problems with the estimation of the cost of debt. We were locked into a cost of debt that reflected snap shot market conditions and did not reflect business practices of capital-raising. This resulted in significant variability between the allowances we set for businesses after the onset of the GFC. On the equity side, the old rules primarily relied on the application of one estimation method—the 'Sharpe-Lintner CAPM'.

This also led to substantial movements in the cost of capital from one decision to the next reflecting financial market volatility. For example, our recent Victorian gas decisions allowed a rate of return of a bit more than 7 per cent. For some decisions, such as the NSW electricity network decisions made in 2009, the rate of return exceeded 10 per cent. There were examples where the allowances for the rate of return varied substantially (by more than a percentage point) within a matter of months.

## *New rate of return framework*

The new rules provide a framework that specifically addresses the weaknesses of the old rate of return regime. The new rules allow the AER to set the rate of return on a 'determination by determination' basis for all energy network businesses. There is a consistent approach, with a common rate of return framework applying across electricity distribution, electricity transmission and gas. However, under the new rules, we have greater scope to consider a broader range of material and respond to changing market conditions. We are also required to publish our rate of return guideline every three years. This will allow us to update the guideline to account for advances in finance theory or fundamental shifts in market circumstances.

## *Benchmark efficient entity/rate of return objective*

I'll now outline some of the details of our draft guideline:

Importantly, the focus of the new rules is on the allowed rate of return objective – that is, the AER must provide an overall rate of return that, in the words of the rules is:

'commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk in respect of the provision of regulated services'.

This allows us to consider the rate of return holistically rather than as an aggregation of individual components. The definition of the benchmark entity will help us establish the relevant sample of firms from which we can estimate benchmark efficient financing costs.

Our proposed definition of the benchmark entity is:

A pure play, regulated energy network business operating in Australia.

In this context, a pure play business is one that provides only regulated energy network services. This recognises that a business that offers services unrelated to regulated energy network services would be exposed to a different risk profile. It is important that the benchmark entity operates under Australian conditions of regulation, tax laws, industry structure and the broader economic environment.

In our draft guideline, we propose to adopt a single benchmark entity across gas, electricity, transmission and distribution. The available evidence does not suggest that risks relevant to the rate of return vary significantly between these sectors.

## *Return on equity*

On the cost of equity, we have proposed a framework that allows us to take a range of information into account, rather than being limited to the output of one particular financial model.

In our draft guidelines, we propose to use the Sharpe-Lintner CAPM as a starting point to set a range and point estimate for the return on equity. We have called this approach a foundation model approach. It entails using a foundation model and other information informatively as opposed to determinately. That is no one model or piece of information should determine the cost of equity. Each is assessed for relevance and considered reaching a decision on the cost of equity. However, employing a foundation model will enable stakeholders to estimate our starting point with a reasonable degree of precision. Stakeholders can then form a view on whether any adjustment might be made to our starting point by reviewing the material nominated in our guideline.

This approach places weight on the Sharpe-Lintner CAPM. This reflects our assessment of the relative merits of the various models. The key strengths of the Sharpe-Lintner CAPM are that it is transparent, widely accepted and understood. However, we also recognise the weakness of it and other models of the return on equity. We recognised that there is no perfect model; all models are to some extent, incomplete. Indeed, there is a range of financial models, each of which provide certain insights and have certain limitations. This is something that stakeholders heavily emphasised in their submissions to our consultation paper. Therefore, we propose to use a range of models and methods to inform our cost of equity estimate.

The Framework in the draft guideline sets out a structured approach to considering the various models and other relevant information. First, we have identified the material that may inform our return on equity estimate. Then we've tested this information to decide whether and how it might be used. Some of the information feeds into our estimate of the components of our foundation model, that is the risk free rate, market risk premium and equity beta. Other information will inform our estimation of the return on equity, and still other inform our overall rate of return estimate.

We have proposed to determine the risk free rate in a similar way to which we have in the past. That is, we will continue to calculate the risk free rate from government bonds using a short averaging period.

We propose to determine the equity beta by using both conceptual and empirical analysis. The conceptual analysis examines the underlying risk characteristics for the benchmark entity. The empirical estimates draw on relevant comparator sets and econometric techniques. We have commissioned a consultant to prepare estimates of beta. We expect to publish this consultant's report in September, which will be followed by a period of consultation on the empirical analysis and what an appropriate final point estimate might be.

We will also use the Black CAPM to inform our equity beta point-estimate. The Black CAPM informs us that the Sharpe-Lintner CAPM may under-estimate the return on equity where the equity beta is less than one. We will take this into account when we select the point estimate.

In our final rate of return guideline, we will propose a range for the equity beta and a point estimate from within this range that we are likely to adopt in our determinations.

Estimating the market risk premium is not an easy task as it can't be directly observed. At this stage, we do not propose to set a particular value for the market risk premium in the final guideline. We will set out our approach in the guideline and make the assessment at each determination, we propose to consider a variety of indicators.

This is consistent with our practice over the past five years where we have determined values for the market risk premium in the range of 6.0 to 6.5 per cent. We are continuing to consider and review a range of material on the market risk premium as it becomes available. We will consider this along with market circumstances when determining the market risk premium at each determination.

Now, what information will we consider for the market risk premium? Historical excess returns will continue to be an important part of our forward-looking market risk premium estimate. We will also consider other sources of evidence. For instance, we will consider the results of dividend growth models, survey evidence, implied volatility and other regulator's estimates of the market risk premium to feed into our range and estimate outcomes from the foundation model.

We will assess the results from the foundation model, taking other information into account to estimate the overall return on equity. We will consider the results of the adaptation of the foundation model proposed by Professor Stephen Wright on behalf of the Victorian gas service providers in 2012. Professor Wright's model puts greater weight on longer term indicators to suggest a more stable cost of equity over time. When determining the specific value for the return on equity, we propose to consider other return on equity estimates from takeover and valuation reports, brokers estimates and other regulators. We also propose to consider debt spreads and dividend yields to determine where our point estimate sits within the range established by the foundation model. Further, we propose to check the return on equity against the return on debt so our return on equity estimate remains above our return on debt estimate.

At the time of each determination we will look at the foundation model outputs, and the additional information. We will carefully scrutinise the estimate derived from our foundation model if the additional information supports an alternative estimate. Of course, the strengths and limitations of each source of additional information will guide its informative value and influence our decision.

We consider that this approach would deliver strong guidance on outcomes without being overly mechanistic.

### *Return on debt*

We propose to gradually transition from using a "snapshot" of prevailing rates to adopting a trailing average approach with annual updating of the trailing average. We will take our benchmark for a portfolio of BBB+ bonds with a seven year maturity, and staggered maturity dates. We will transition to this balanced portfolio over a period of seven years, as I'll explain in a moment.

Our current methodology is an 'on the day' approach. This entails estimating the return on debt as the prevailing rate as close as possible to the start of the regulatory control period. Conceptually, such an 'on the day' rate is the best estimate of the cost of debt over the next regulatory period. The 'on the day' rate reflects the return on debt of the benchmark efficient entity, if it raised all its debt just before the start of each regulatory control period. However, we do not consider this constitutes an efficient financing practice. In fact, this would expose the entity to a substantial degree of refinancing risk.

The trailing average approach reflects the average cost of debt if the entity had raised debt regularly over the period. And this approach is consistent with most submissions we received on our consultation paper. Adoption of the trailing average approach to estimation of return on debt is a major change in the regulatory framework. We arrived at this decision through an extensive consultation process and analysis. Such a major change in regulatory approach requires a strong level of commitment from all stakeholders. We would only move away from this approach if there was compelling evidence provided to us in a determination.

We consider that the trailing average model more closely aligns with the efficient debt financing practices of regulated businesses. Further, adopting a trailing average approach with annual updating should more closely align the cost of debt with market conditions.

This approach also smooths movements in the return on debt over a number of years. We expect network businesses and consumers would welcome this increased stability.

It would reduce the quantum of the step change adjustments we have seen at recent resets. We will apply an averaging period of at least 10 consecutive business days to smooth out any short term volatility in the prevailing rates. The averaging period must be within 12 months of the

commencement of a regulatory period. Regulatory gaming is less likely and we propose an arrangement where averaging periods are determined in advance.

Our draft guideline proposes a transitional arrangement consistent with a proposal from Queensland Treasury Corporation and which had broad support. This means that the cost of debt for the entire debt portfolio in the first year of the next determination for each business will be based on the prevailing rates. In the second year, the benchmark entity retires one seventh of its portfolio and replaces it with newly issued 7 year debt and in the third, a further seventh etc. This process would go on until the seventh year when the transition is complete and cost of debt reflects a 7 year trailing average.

This method received the most support from stakeholders throughout our guideline development process. The transition will provide a gradual adjustment to accommodate for any potential discrepancies between the new approach and the reasonable expectations that consumers, service providers and investors may have formed before the rule change. This will minimise any disruptions faced by businesses and consumers. In addition, the approach to transition will avoid some practical issues from the immediate implementation of a trailing average portfolio approach (e.g. some elements of the average would be based on historical information that may not be available and we would need to reach agreement on the historical periods used to calculate the trailing average).

To estimate the return on debt, we will obtain data from an independent third-party data service provider. This is consistent with submissions to our rate of return consultation paper, where many stakeholders preferred an expert source of data that was independent from the regulatory process.

On the credit rating, credit risk for regulated utilities is relatively low. This is because the default risk is small and the risk of credit migrations for utilities is low and stable. We will continue assuming a benchmark credit rating of BBB+ or its equivalent.

On the term of debt, we propose to no longer apply a 10 year term. Rather, we propose a seven year term of debt for the benchmark debt portfolio. While the difference in the term premium is not material, the evidence suggests the average term of debt is likely to be less than 10 years. Further, no independent data providers publish information on the appropriate commercial bonds with 10 year terms. This would have created a large practical difficulty now that we are proposing automatic annual updates of the return on debt.

I should note that we have proposed a debt term of seven years, which differs from our proposed equity term of 10 years. However, we do not consider that consistency between the equity term and debt term is necessary. Our decision to adopt different terms is based on the fact that there are different considerations driving the choice of term for the return on debt and the return on equity. We are proposing a 10 year term of equity on the basis that regulated energy businesses invest in long-lived assets which will generate regular cash flows over a similarly long term. Whereas, we are proposing a 7 year term of debt with consideration to the likely term of debt portfolios of regulated businesses.

### *Overall rate of return*

We will continue to calculate the rate of return as a nominal vanilla weighted average cost of capital (or the nominal vanilla WACC) as required under the Rules. It is also transparent and produces robust outcomes. And at this time we propose to maintain the currently adopted benchmark efficient level of gearing of 60 per cent. The evidence supports this.



## *Imputation credits*

After reviewing more recent data and evidence we have decided to increase the value for imputation credits from 0.25 to 0.5. This better reflects their value to investors.

While imputation credits are an important part of the rate of return, they affect a network business' revenue allowance through its tax liability, rather than through its nominal vanilla WACC. However, imputation credits have a very important relationship with the nominal vanilla WACC. Since eligible investors can use imputation credits to offset their Australian income tax liabilities, these imputation credits are a benefit from owning shares, in addition to any cash dividend or capital gains.

We refer to the estimated value of imputation credits as gamma. In our previous WACC review conducted in 2009, we proposed a set value of 0.65 for gamma. Following a decision from the Australian Competition Tribunal to set gamma to 0.25, we have applied this value without seeking to substantively revisit or review gamma during individual regulatory determinations. The Tribunal process highlighted the need for a complete re-evaluation of gamma. This had not been practical until now because of the time constraints and more limited scope for consultation during individual regulatory determinations.

We propose that gamma should be set to 0.5, adopting a dividend payout ratio of 0.7 and a utilisation rate of 0.7. We have conducted extensive analysis to derive this value and have considered tax data, domestic ownership of Australian equities, tax redemption studies and implied market value studies. We consider our proposed value conveys a better conceptual understanding of imputation credits within the building block model.

## ***Conclusion and implications***

I'll now bring this to a close. So what does this all mean? There will be some elements of our approach that will be very familiar, like the calculation of the risk free rate. For other elements, there will be more significant changes. For example, the transition to a trailing average return on debt with annual updating and our departure from a mechanical application of the Sharpe-Lintner CAPM. Overall, this new approach would allow us to better reflect financial market conditions and actual financial practices. This would lead to more stable rate of return estimates over time.

In some respects what we are considering in the rate of return guideline is an evolution of the current method of estimation. We are conscious of the potential impact of our decisions on investment incentives and the need for reforms to pay due regard to past practice, while still delivering improvements to promote the long term interests of consumers. We look forward to hearing from you on whether you consider we've got that balance right.

The AER will be accepting submissions on the draft rate of return guideline up until the 11th of October. We will continue consulting extensively with consumers, network businesses, investors and financiers to develop the final version of guideline. We look forward to receiving any input you may have. Thanks you for your attention. We will now move to any questions that have been raised while we've been going through our proposal.