

# Review of incentive schemes

Response to AER CESS Position Paper

09 September 2022

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## Key messages

- » The CESS is fit for purpose and has **provided networks with strong incentives to achieve efficiency gains**, thereby **benefiting all customers**.
- » ENA therefore strongly **supports the AER’s preliminary position to retain the CESS and its 30 per cent default sharing ratio**. Continued and consistent application of the incentive schemes provide networks with the confidence to invest in programs that reduce future costs or improve future service levels for customers.
- » ENA also **supports the introduction of greater transparency requirements** for networks on actual and forecast capex, which will further complement recent reforms to the AER’s assessment toolkit.
- » The **case for introducing a variable CESS rate to address a ‘regulatory proposal of concern’ has not been made** → without strong evidence indicating that there is a widespread problem that requires a scheme change, or without allowing sufficient time to observe the full impact of the recent reforms made to AER assessment methods and supporting processes, it is unclear how consumers would benefit in the long-term from redesigning the CESS.
- » **Application of a variable CESS rate will weaken incentives** to deliver efficiencies and has the **potential for perverse incentives and unintended consequences** that are not in consumers’ best interests.
- » ENA strongly **recommends that the AER address any business specific issues in a targeted and proportionate manner using its expanded regulatory toolkit** → thereby maintaining regime stability, transparency and accountability, and promoting strong and continuous exploration by networks of potential efficiencies that will benefit customers.

## 1 Overview

Energy Networks Australia (ENA) appreciates the opportunity to respond to the Australian Energy Regulator’s (AER) Position Paper on the capital expenditure sharing scheme (CESS) as part of its incentive scheme review.<sup>1</sup>

ENA is the national industry body representing Australia’s electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

ENA strongly supports the AER’s preliminary position to retain the CESS as it has been successful in providing incentives to networks to incur efficient capital expenditure (**capex**), thereby providing material

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<sup>1</sup> AER, [Review of incentives schemes: Options for the Capital Expenditure Sharing Scheme – Position Paper](#), August 2022.

benefits to consumers. ENA also strongly supports the AER's preliminary position to retain the 30 per cent CESS default sharing ratio.

Continued and consistent application of the incentive schemes provide networks with the confidence to invest in programs that reduce future costs or improve future service levels for customers.

To further complement the AER's significant investment in its regulatory assessment tools that are now well-developed, ENA also supports the introduction of greater transparency requirements for networks on actual and forecast capex, and we encourage a high degree of engagement and collaboration between networks and the AER to develop and define what these requirements are prior to the draft report.

The case for introducing a variable CESS rate to address a 'regulatory proposal of concern' has not been made, with actual data instead demonstrating that capex has lowered over time and the difference between allowance and actual capex has narrowed significantly. Without strong evidence indicating that there is a widespread problem that requires a scheme change, or without allowing sufficient time to observe the full impact of the recent reforms made to AER assessment methods and supporting processes, it is unclear how consumers would benefit in the long-term from redesigning the CESS.

Application of a variable CESS rate will weaken incentives to deliver efficiencies and has the potential for perverse incentives and unintended consequences that are not in consumers' best interests.

Instead, we strongly recommend further consideration of how the AER's expanded regulatory toolkit can be used to address any business specific issues in a targeted and proportionate manner, thereby maintaining regime stability, transparency and accountability, and promoting strong and continuous exploration by networks of potential efficiencies that will benefit customers.

## 2 Benefits of the CESS

The AER's incentive schemes enhance the overall regulatory framework by ensuring that networks have a strengthened and constant incentive to continually lower their costs and improve service performance.

The CESS was developed as part of the AER's Better Regulation program and remedied the issue with the regulatory framework that efficiency incentives for capital investment reduced in each year of the regulatory period. Pre-CESS, networks' incentives were strongest in the first year of the regulatory period, whilst in the final year there were no rewards or penalties for networks under/overspending their capex allowances.

The CESS provides networks with financial incentives to undertake efficient capex over time, to ensure that only efficient capex is added to the regulatory asset base. The scheme is intentionally designed so that consumers receive the majority of the benefits, with consumers retaining 70 per cent of the present value of all capital cost underspends.

### 2.1 Balanced independent assessment

In assessing the effectiveness of incentive schemes, it is important to consider not only the benefits to networks of the schemes (in the form of incentive payments) but also the benefits that consumers receive from networks responding to the AER's incentives.

As part of submissions to the AER's prior Discussion Paper<sup>2</sup>, ENA engaged HoustonKemp to provide an independent estimate of the consumer and network benefits of the AER's incentive schemes, including the CESS.<sup>3</sup> HoustonKemp quantified the benefits to consumers generated by networks due to the operation of the CESS, the efficiency benefit sharing scheme, and the service target performance incentive scheme (distribution).

The CESS was first applied by the AER in 2015-16, and HoustonKemp has found that the CESS has delivered consumer benefits (present value terms \$2020) of:

- » \$2.7 billion to electricity-only consumers (70 per cent of the total electricity CESS gains),
- » \$28 million to consumers that receive a gas service (70 per cent of the total gas CESS gains), and
- » on an average per customer basis, \$269 for customers with both an electricity and gas service, which is equivalent to just over 2 months of network charges.<sup>4</sup>

HoustonKemp's analysis compares actual outturn expenditure with the ex-ante regulatory allowances set by the AER. The AER's expenditure allowances are an independent estimate of a network's expected efficient expenditure and may be above or below outturn efficient cost levels. The AER revises its tools and techniques to set networks' expenditure allowances at a level that is just enough to cover the prudent and efficient cost of delivering network services.

HoustonKemp highlight that the adoption of the AER's expenditure allowances as the yardstick against which efficiency gains are measured in their analysis is unlikely to materially impact their conclusion that the incentive schemes have led to material gains for consumers.

For more information on HoustonKemp's report, refer to **Appendix A** for a fact sheet that includes answers to frequently asked questions on the independent report.

## 2.2 Delivering for customers

The AER is concerned that in addition to incentivising efficiency gains, the CESS has the potential to also reward underspends that are not genuine efficiency gains (due to forecast error).

The AER do, however, acknowledge that by definition, a forecast capex allowance determined by the regulator as efficient for a network to incur can never be a fully accurate representation of what a network might need to incur during a five-year regulatory control period.<sup>5</sup> The AER's allowance may be above *or* below outturn efficient cost levels.

When observing actual data trends, capex has clearly lowered over time and the difference between allowance and actual capex has narrowed significantly since the introduction of the CESS, as demonstrated in **Figure 1** below.

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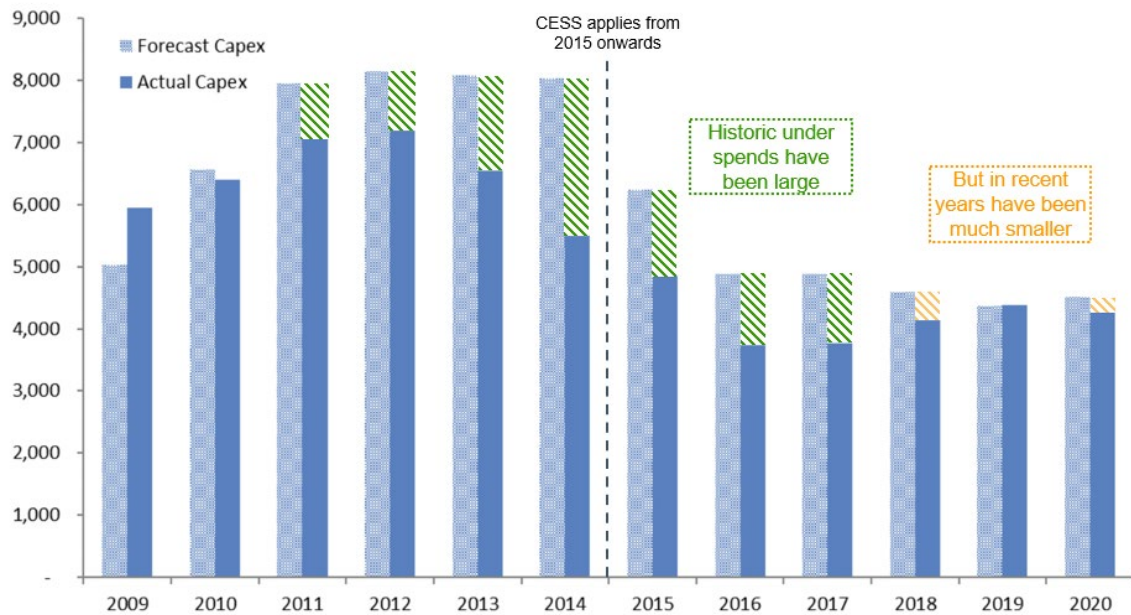
<sup>2</sup> AER, [Discussion Paper: Review of incentive schemes for networks](#), December 2021.

<sup>3</sup> HoustonKemp, [Consumer benefits resulting from the AER's incentive schemes](#), March 2022.

<sup>4</sup> HoustonKemp, [Consumer benefits resulting from the AER's incentive schemes](#), March 2022, page 9.

<sup>5</sup> AER, [Review of incentives schemes: Options for the Capital Expenditure Sharing Scheme – Position Paper](#), August 2022, page 7.

**Figure 1: Forecast and actual capex (electricity distribution)**



Source: Figure 18, [AER Discussion Paper](#)

ENA therefore strongly supports the AER’s Position Paper conclusions that:

- » the AER has invested significantly in the regulatory tools over the years that are used to assess and determine a network’s expenditure forecasts (allowance).
- » the CESS has provided networks with strong incentives to achieve efficiency gains *and* has delivered significant efficiency gains, and
- » consumers have benefited from reductions in network expenditures and revenues over time, in part due to the CESS.

**Box 1: ENA key position**

In support of the AER’s conclusion that the data collected strongly suggests that the CESS has worked well to provide incentives for networks to incur efficient capex [i.e., it is achieving its purpose], ENA:

- » strongly **supports the AER’s preliminary position that the CESS should not be abolished**, and
- » strongly **supports the AER’s preliminary position to retain the 30 per cent default sharing ratio**.

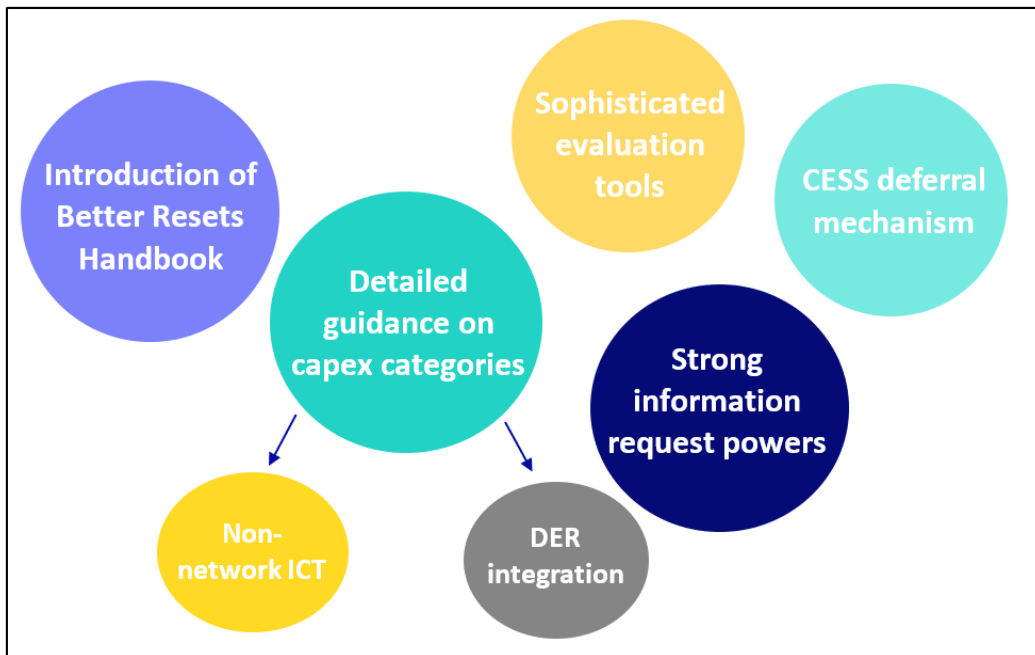
### 3 AER’s assessment toolkit

The AER has developed its regulatory assessment tools over time, thereby improving the overall accuracy of allowance setting and reducing the information asymmetry between the AER and networks.

#### 3.1 Continuous improvement

As demonstrated in **Figure 2** below, the AER has developed over time a diverse toolkit to assess and determine a networks expenditure allowance.

Figure 2: AER's assessment toolkit



The AER's assessment toolkit includes:

- » **sophisticated evaluation tools** – such as category specific forecasting models (e.g., repex model), economic benchmarking, top-down trend analysis, and targeted bottom-up analysis of a network's capex programs and projects,
- » **detailed guidance on capex categories** – the AER's evaluation tools are supplemented by recent additional detailed guidance on major capital expenditure categories including guidance notes on non-network ICT capex and distributed energy resource (**DER**) integration expenditure,

- » **strong information request powers** – the information request process between the formal submission gateways of the regulatory determination process is extensive and affords the AER the opportunity to request additional information if it needs to better understand a network’s expenditure and internal decisions. For example, CitiPower, Powercor and United Energy’s recent regulatory determination process involved responding to 2,500 separate AER questions.
- » **Better Resets Handbook** – the only recently released Handbook will facilitate the sharing of better-quality information that can be used by the AER to confirm its understanding of network performance and future expenditure requirements, and
- » **CESS deferral mechanism:** the CESS has also been designed to allow the AER to reduce CESS rewards where it identifies that the network has deferred a material amount of capital expenditure between regulatory periods, which, as demonstrated in **Box 2**, has been utilised effectively in recent regulatory determinations.

### Box 2: CESS adjustments for deferrals

AER/networks have made a **CESS adjustment for deferred capex** in the following decisions:

- » Powerlink: \$18 million in deferred capex [2022-27 DD]
- » Powercor: \$51 million in deferred capex [2021-26 FD]
- » Jemena: \$9 million in deferred capex [2021-26 FD]
- » Ergon Energy: \$63 million in deferred capex [2020-25 FD]
- » AusNet (D): \$14 million in deferred capex [2019-24 FD]
- » Transgrid: \$40 million in deferred capex [2018-23 FD]

Notwithstanding these recent reforms, ENA does support the AER’s preliminary position to introduce greater transparency requirements for networks on actual and forecast capex, and we encourage a high degree of engagement and collaboration between networks and the AER to develop and define what these requirements are prior to the draft report. The requirements should focus on enabling transparency of explanations of the drivers of underspends rather than a detailed line by line data collection that costs customers more without commensurate benefit.

In terms of the greater transparency requirements discussed, ENA recognises it is incumbent on network businesses to be able to explain to customers how actual capex outcomes in one regulatory control period relate to forecasts in a regulatory proposal for the following period. Networks’ engagement with customer panels on capex outcomes during a regulatory control period also supports this.

These additional transparency requirements will further enhance the AER’s Better Resets Handbook expectations and annual AER external releases such as the Network Performance Report. For the benefit of consumers and all industry stakeholders, ENA encourages the AER to expand its analysis and discussion of the CESS and other incentive schemes in future Network Performance Reports.

### Box 3: ENA key position

To further complement the AER’s significant investment in its regulatory assessment tools that are now well-developed, ENA:

- » **supports the introduction of greater transparency requirements** for networks on actual and forecast capex, and we **encourage a high degree of engagement and collaboration between networks and the AER to develop and define what these requirements are** prior to the draft report.



## 4 Introduction of a variable CESS rate

The AER is proposing to retain the 30 per cent default sharing rate but, to address a ‘regulatory proposal of concern’, the AER is considering weakening incentives to achieve capex efficiencies by applying the CESS with a 20 per cent sharing ratio under a:

- » Bright line test #1 (10/10 thresholds),
- » Bright line test #2 (tiered incentive rate),
- » “Pure” principles-based approach, or
- » “Hybrid” approach (bright line with right of reply).

### 4.1 Case for reform has not been made

Despite the AER recognising that the accuracy of its allowance setting has improved overall over time, the AER expresses a concern that this improvement has not yet been realised for each network.

Recent reforms, however, demonstrate the increased sophistication of the AER’s assessment of capex forecasts, which we can see evidenced in the actual data. Furthermore, the full positive impact of these reforms will be borne out in future regulatory determinations, but *their future expected impact should be taken into consideration* when assessing the effectiveness of, and the need for changing, the CESS.

If there are concerns with the setting of approved capex allowances, then ENA supports a targeted approach to address this directly, rather than indirectly through a potential variable application of the CESS, leaving the primary concern unaddressed.

Where incentive schemes have been introduced with the goal of impacting long-term investment decision-making, and they appear to be operating effectively to the benefit of consumers, there should be a ‘high bar’ for change and a preference for stability.

Without strong evidence indicating that there is a widespread problem that requires a scheme change, or without allowing sufficient time to observe the full impact of the recent reforms made to AER assessment methods and supporting processes, it is unclear how consumers would benefit in the long-term from redesigning the CESS.

The Position Paper suggests that a lower CESS rate would reduce networks’ incentives for efficiency and management effort devoted to reducing costs, which would translate to higher capex and a higher regulatory asset base over time. While consumers would not pay as much in incentive payments with a lower rate, the trade-off, acknowledged by the AER, may be a short versus longer term one where lower CESS payments reduce prices now at the cost of higher costs in the future.<sup>6</sup>

Therefore, instead of introducing a variable CESS rate, we instead strongly recommend further consideration of how the AER’s expanded regulatory toolkit can be used to address any business specific

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<sup>6</sup> AER, [Review of incentives schemes: Options for the Capital Expenditure Sharing Scheme – Position Paper](#), August 2022, page 14.

issues in a targeted and proportionate manner. This approach will maintain regime stability and promote strong and continuous exploration by networks of potential efficiencies, which will benefit customers.

**Box 4: ENA key position**

The **case for reforming the CESS has not been made**, and therefore ENA:

- » **does not support the introduction of a variable sharing ratio** to address a ‘regulatory proposal of concern’, and instead
- » **strongly recommends that the AER address any business specific issues in a targeted and proportionate manner** using its expanded regulatory toolkit.

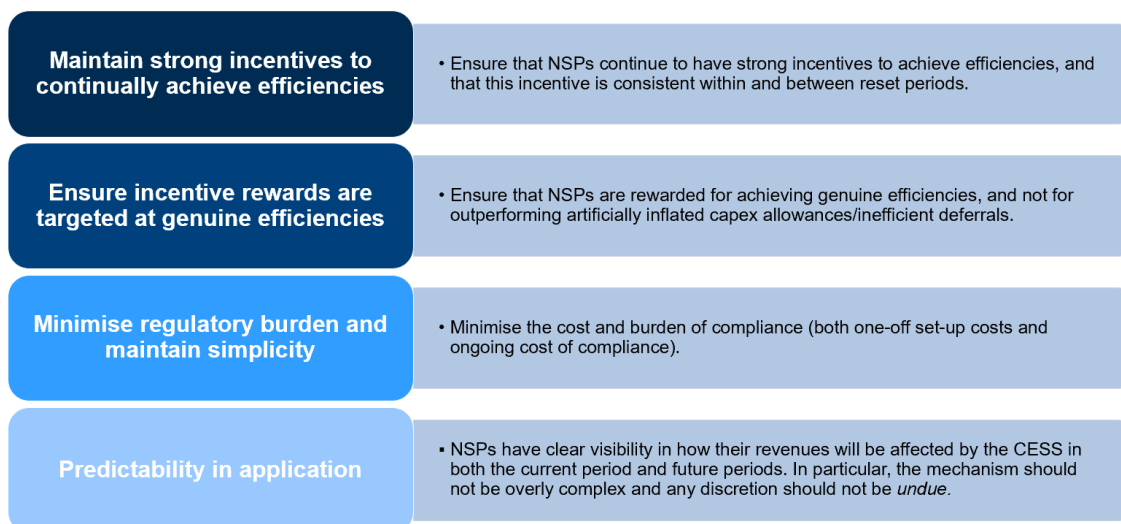
## 5 Variable CESS rate design considerations

The application of a variable CESS rate will weaken incentives to deliver efficiencies and has the potential for perverse incentives and unintended consequences that are not in consumers’ best interests. It is therefore important that the potential design and implementation of any variable CESS rate option is given further consideration to best mitigate against this.

### 5.1 Assessment criteria for CESS reforms

When considering potential reforms, it is useful to have a set of assessment criteria to guide the assessment of the pros and cons of different options. **Figure 3** below provides a proposed set of key desired outcomes from any reform to ensure that customers benefit.

**Figure 3: Assessment criteria for CESS reforms – key desired outcomes**



Source: NERA, *Review of AER’s potential variable rate CESS options*, September 2022

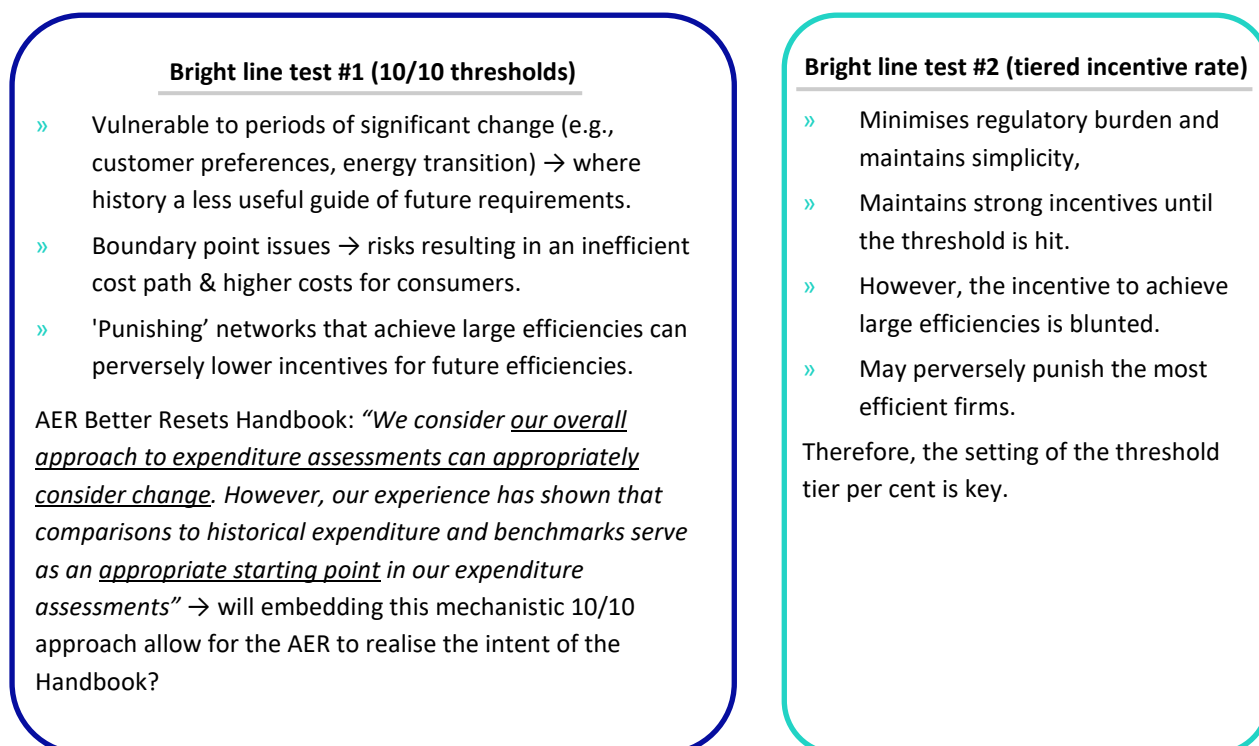
### 5.2 Assessing the options

ENA has engaged NERA to assess the potential options being considered by the AER, with a focus on design considerations and potential perverse incentives/unintended consequences. NERA’s focus is on

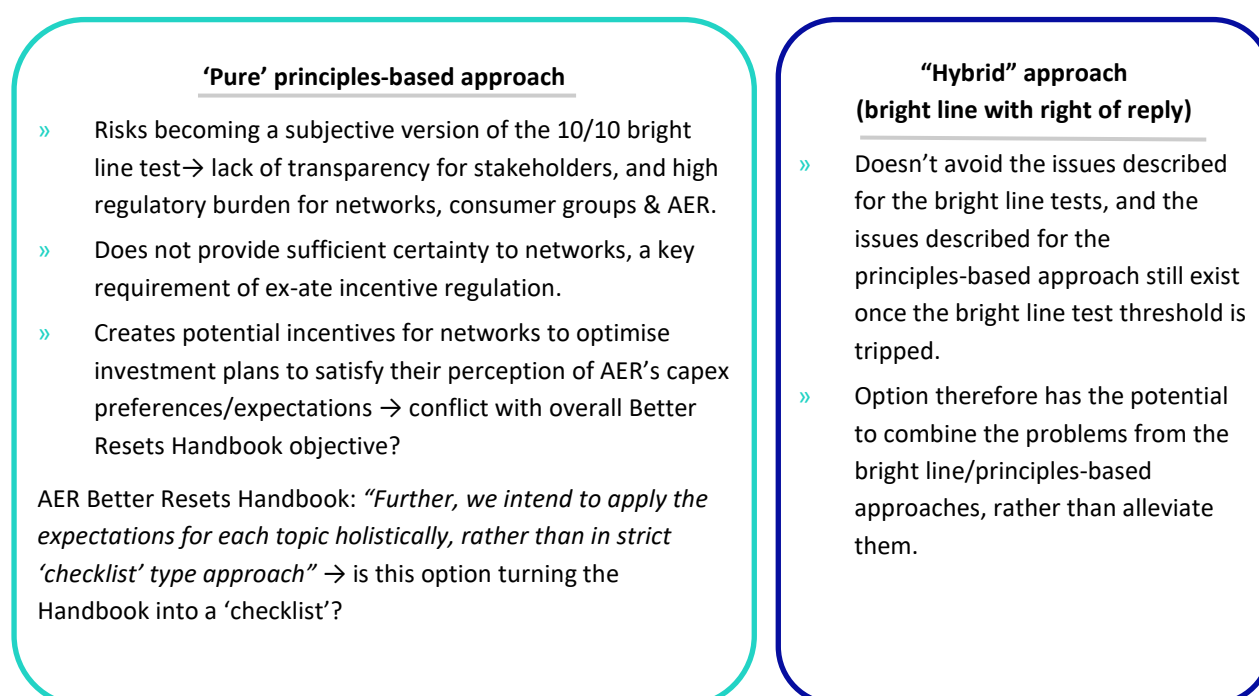
the *structure* of the variable CESS rate mechanisms, rather than the level of the rates or the specific thresholds chosen.

**Figure 4** and **Figure 5** below provide a high-level summary of key findings on each of the AER’s potential variable CESS rate options, with detailed design feedback provided in NERA’s report found at **Appendix B**.

**Figure 4: Bright line tests – assessment**



**Figure 5: Principles-based approaches – assessment**



The figures above highlight that the design of incentive schemes matter and there is the potential for perverse incentives and unintended consequences that are ultimately not in consumers' best interests that therefore need to be mitigated against to the greatest extent possible if the AER deems (and provides strong evidence) that reform is necessary.

Out of the potential variable CESS rate options, the AER's bright line test #2 option (tiered incentive rate) performs well from the perspective of minimising regulatory burden and maintaining simplicity. It also has predictability in application by nature of it being a "bright line" test and maintains strong incentives until the threshold is hit.

However, under this option, the incentive to achieve large efficiencies is blunted. Indeed, this option may perversely punish the most efficient firms. This therefore makes it important to not set the threshold "too low". The rationale for the proposed 10 percent threshold is unclear at this stage, and further consideration should be given as to what an appropriate threshold level is.

#### **Box 5: ENA key position**

*If the case for reform is made*, with strong supporting evidence that it is in the long-term interests of customers, then ENA:

- » **supports the AER further considering the design of the tiered incentive rate option**, including how best to set an appropriate threshold level.

# Appendix A | HoustonKemp Fact Sheet: Consumer benefits resulting from the AER's incentive schemes

## Consumer benefits resulting from the AER's incentive schemes

Energy Networks Australia has asked HoustonKemp to provide an independent estimate of the consumer benefits that have arisen (and are expected to continue to accrue in future) from networks responding to the incentive schemes that form part of the Australian Energy Regulator's overall regulatory framework.

This fact sheet includes answers to frequently asked questions on the report.<sup>1</sup> For more information, you can find the report [here](#).

### Report's key findings

#### 1. What are the benefits to consumers identified in this report?

- The report estimates consumer benefits of \$13.4 billion in 2020 present value (PV) terms from the application of the following three key incentive schemes between 2006 and 2020:
  - > the Efficiency Benefit Sharing Scheme (EBSS) that encourages networks to operate their network more efficiently;
  - > the Capital Expenditure Sharing Scheme (CESS) that incentivises networks to undertake efficient network investments; and
  - > the reliability component of the Service Target Performance Incentive Scheme (STPIS) for electricity distribution networks that provides incentives to improve service quality, where value is based on AER's estimate of the customer value of improved reliability.
- Consumers retain 72 per cent (\$13.4 billion) of total benefits (\$18.6 billion) arising from these incentive schemes. This equates to \$1,466 (PV, 2020) for an electricity and gas customer, or \$1,290 (PV, 2020) for an electricity only customer.
- These consumer benefits arise from both lower than anticipated network prices and improved network reliability.

#### 2. What is meant by 'consumer benefits are \$1,466 in present value (2020)'?

- The report calculates benefits to consumers, due to lower anticipated costs and better distribution network reliability, since 2006 and continuing into the future. In other words, \$100 today is more valuable than \$100 in the future, a discount rate is used to bring benefits and costs that occur at different times to a common value in 2020 (ie, their present value). The \$1,466 in customer benefits is calculated using a 6 per cent discount rate.
- Therefore, \$1,466 represents the present value to an electricity and gas customer, as at 30 June 2020, of consumer benefits from networks' spending less (than the AER's forecast of efficient expenditure) and improving electricity distribution reliability through time, including the benefits that consumers will receive into the future.

#### 3. Does the \$1,466 represent the benefits already received by consumers?

- A cost saving or improvement in network reliability today benefits consumers now and into the future. The \$1,466 represents the sum of benefits, in present value terms (2020), from incentive schemes between 2006 and 2020, noting the estimated benefits do not consider future potential efficiency gains by networks.
- Some of the \$1,466 in benefits have already been received by consumers, while the remainder is locked in by the regulatory framework and will benefit consumers in the future.
- We count benefits to consumers in the future since future network costs will be lower than they otherwise would have been, and future reliability will be higher than it otherwise would have been.

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<sup>1</sup> HoustonKemp, *Consumer benefits resulting from the AER's incentive schemes: A report for Energy Networks Australia*, 8 March 2022.

#### 4. Why do the incentive schemes reward networks for efficiency improvements?

- Incentive schemes provide a financial reward to networks that minimise the cost, and improve the quality, of network services today. Continued and consistent application of incentive schemes also provides networks with the confidence to invest in programs that reduce the future costs (or improve future service levels) of network services. Incentive schemes are used in regulatory frameworks applied in Australia and countries such as the United Kingdom, New Zealand and Europe.
- Further, the incentive schemes are symmetric, meaning that there are penalties imposed on networks for cost increases and/or reduced reliability, that mirror the rewards provided under the schemes. Symmetric incentive schemes drive businesses to make efficient trade-offs between different types of expenditure and between service levels and costs. The schemes are intentionally designed so that consumers receive the majority of any benefits.

### Report's scope and methodology

#### 1. Which networks does this report analyse?

- The analysis covers electricity transmission and distribution networks operating in the national electricity market.<sup>2</sup> The analysis also includes regulated gas distribution networks operating in the national gas market.

#### 2. What incentive schemes were assessed?

- The report has quantified the benefits from:
  - > operating expenditure performance through the Efficiency Benefits Sharing Scheme (EBSS);
  - > capital expenditure performance through the Capital Expenditure Sharing Scheme (CESS); and
  - > changes in the number and length of interruptions on electricity distribution networks through the reliability component of the Service Target Performance Incentive Scheme (STPIS) for electricity distribution networks.
- The report also discusses other aspects of the regulatory regime that have an impact on a network's incentive to reduce costs or improve service quality.

#### 3. Why were the expenditure allowances set by the AER used as a benchmark for network expenditure?

- The analysis in the report compares actual outturn expenditure with the expenditure allowances set by the AER.
- The AER's expenditure allowances are an independent and informed estimate of a network's expected efficient expenditure. The AER constantly revises its tools and techniques to set networks' expenditure allowances at a level that is just enough to cover the efficient cost of delivering network services.

#### 4. Why was a 6 per cent discount rate used?

- A 6 per cent discount rate was used by the AER when it first set up the incentive schemes.
- We consider that using a 6 per cent discount rate gives a conservative estimate of the total consumer benefits.
- Alternatively, we could use a discount rate equal to the annual average real rate of return earned by networks. This discount rate would result in the present value (2020) of consumer benefits growing from \$13.4 billion (6 per cent discount rate) to \$22.3 billion (industry annual average real rate of return).

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<sup>2</sup> Noting that Power and Water Corporation of the Northern Territory does not operate within the national electricity market.

## Incentive-based regulation

### 1. What is incentive-based regulation?

- Incentive-based regulation involves the setting of a network's revenues, for a fixed period of time, independent of the actual cost of providing network services. This provides powerful short-term financial rewards for regulated businesses to lower costs and improve service levels, as well as penalties for networks when costs rise and/or service deteriorates.
- All Australian regulators adopt some form of incentive-based regulation when setting the prices or revenues of monopoly infrastructure.

### 2. Why do incentive schemes apply to electricity and gas networks?

- Electricity and gas networks are generally monopolies which means customers can't take their business elsewhere. Without market forces to drive efficiency improvements, the AER's incentive schemes replace competitive market outcomes by providing financial incentives for networks to continuously reduce costs and improve service outcomes.

### 3. How do the incentive schemes benefit consumers?

- The incentive schemes provide the following two broad sources of consumer benefit:
  - > reductions in the costs of network services, both today and in the future, by encouraging networks to deliver network services in the most efficient possible manner and to innovate in ways that lower the future costs of network services; and
  - > improvements in the quality of network services, that increase the value consumers receive from network services.

### 4. Why do networks consistently underspend their expenditure allowances? Shouldn't the expenditure allowances set by the AER be lower?

- Networks consistently underspending their expenditure allowances suggests that incentive-based regulation is working. That is, networks are responding to the incentive schemes and implementing efficiency improvements (and making efficient trade-offs between service quality and expenditure) that mean they underspend their allowances and improve service quality. In turn, this leads to lower expenditure allowances in future periods.
- Therefore, incentive schemes encourage networks to invest and innovate to allow them to deliver services in the future at lower cost (and/or higher service level) than can be done today.
- The AER is continually expanding and refining its expenditure assessment techniques and tools so that the expenditure allowances are the best estimate, at the time, of a network's efficient costs.

### 5. Do customers pay in advance for efficiency gains?

- Customers do not pay in advance for network efficiency gains –any incentive payments paid by customers to networks occur after a network has either reduced its costs or improved service levels.
  - > Consumers of networks that improve their efficiency (by lowering costs) will continue to pay a price based on the AER determined efficient costs until the end of the regulatory period. In the following regulatory period, customer prices will reflect the network's new lower operating and/or capital costs together with an incentive reward so that consumers retain most of the benefits of the expenditure efficiency gain.
  - > Consumers of networks that improve their efficiency (by increasing reliability) immediately gain the benefit of a more reliable network service. However, following the independent verification of the reliability improvement, the incentive schemes provide a financial reward to networks although customers retain most of the benefits of the reliability improvement.



## Appendix B | NERA Report: Review of AER's potential variable rate CESS options

**NERA**

ECONOMIC CONSULTING



# **Review of the AER's potential variable rate CESS options**

Energy Networks Australia

9 September 2022

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# 1. Introduction and Summary

1. The objective of the capital expenditure sharing scheme (CESS) is to provide network service providers (NSPs) with an incentive to undertake efficient capital expenditure (capex) during a regulatory control period. It does this by rewarding NSPs for spending less capex than their allowance during a regulatory control period. More specifically, by giving a fixed reward of 30% of any efficiencies, with consumers receiving 70% of the benefits (the 30% is referred to as the “incentive rate”). This fixed incentive rate ensures NSPs have a constant incentive to achieve efficiencies throughout the regulatory period, regardless of when the efficiencies occur.<sup>1</sup>
2. On 2 December 2021 the AER released a discussion paper for its review of the expenditure incentive schemes applying to regulated electricity and gas networks (the “discussion paper”).<sup>2</sup> Subsequent to this, on 11 August 2022, the AER published a position paper (the “position paper”) proposing to retain the default 30% incentive rate but considering possible variable rate options to reform the CESS.<sup>3</sup>
3. The CESS variable rate options that the AER is exploring are:
  - a. **“principles-based approach”**: poorly justified regulatory proposals receive a lower incentive rate of 20%;
  - b. Two “bright line” options:
    - i. **Bright line #1 – 10/10 test**: if an NSP underspends its capex allowance by more than 10% and then seeks a step-up in capex in the next regulatory period of more than 10%, it would receive a lower incentive rate of 20%.
    - ii. **Bright line #2 – tiered incentive rate**: NSPs have an incentive rate of 30% for the first 10% of savings and 20% thereafter.
  - c. **Hybrid of principles-based approach and a bright line**: a bright line test combined with the opportunity for a network to make the case for why a lower sharing ratio should not be applied.
4. We have been engaged by Energy Networks Australia (ENA) to assess these options, with a focus on design considerations and potential perverse incentives/unintended consequences. In this sense, we are highlighting issues the AER should be aware of when considering whether and how it might reform the CESS. Our focus is on the *structure* of the variable rate mechanisms, rather than the level of the rates or the specific thresholds chosen. We do however note that there appears to be no specific basis or evidence for the 10% threshold chosen.
5. To approach this task, we:
  - a. Set out four criteria, that we believe define the desirable properties of any reform to the CESS, such that consumers would not be worse off from the change; and
  - b. Discuss each of the CESS reforms put forward by the AER, using these criteria to highlight the risks of applying each option.

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<sup>1</sup> In the absence of the CESS, because the regulatory asset base is reset based on actual capex at the beginning of each new regulatory period, NSPs have a lower incentive to achieve efficiencies near the end of a regulatory period as compared to the beginning.

<sup>2</sup> AER, *Review of incentives schemes: Discussion paper*, December 2021 (“Discussion paper”).

<sup>3</sup> AER, *Review of incentives schemes: Options for the Capital Expenditure Sharing Scheme Position paper*, August 2022 (“Position paper”).

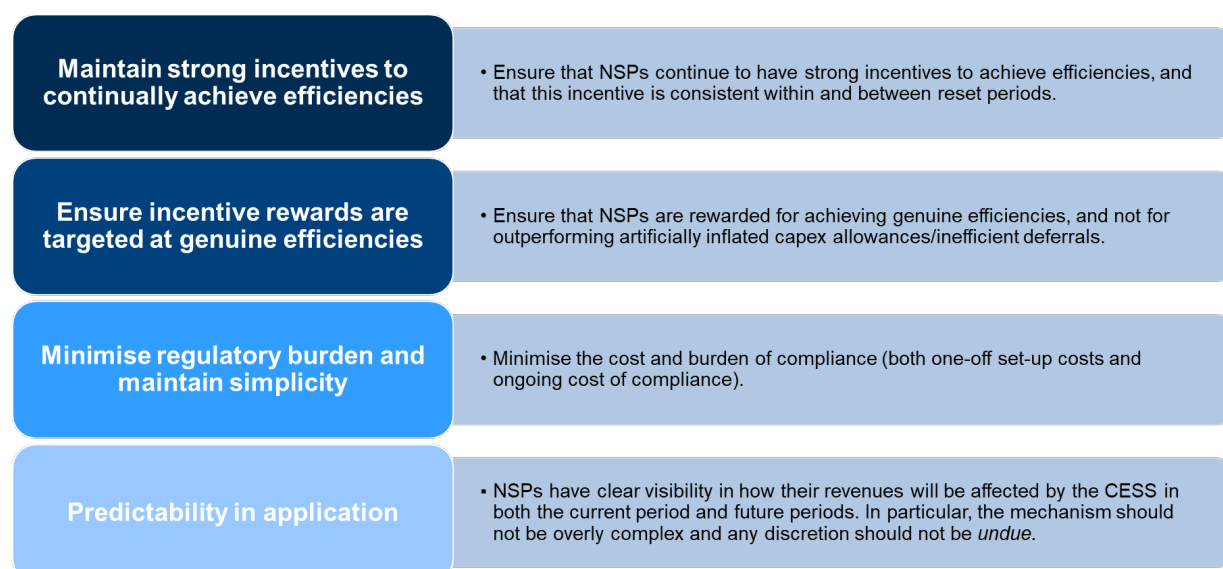
6. A summary of our assessment of each of the AER's variable rate options is as follows:
  - a. **Bright line #1 – 10/10:** This option is premised on historic expenditure being a good guide to future needs, and thus is inappropriate during periods of change/transition as it can punish networks that need to increase their capex in response to consumer demands. Further, it will perversely provide lower incentives to find efficiency when capex spending is high, which is contrary to consumer interests. Linking forward looking incentive rates to past underspending also risks “boundary effects” whereby firms near the 10% threshold may be incentivised to achieve fewer efficiencies to avoid tripping the threshold, thus resulting in higher long-term costs for consumers. It may also prevent NSPs from consistently achieving high efficiencies, which is not in consumer interests.
  - b. **Bright line #2 – tiered incentive rate:** This option maintains strong incentives until the 10% threshold is hit. While this option mitigates against large underspends which are not genuine efficiencies, the cost of this is the incentive to achieve large efficiencies is blunted. Indeed, this option may perversely punish the most efficient firms. This makes it important to not set the threshold “too low” (or “too high”).
  - c. **Pure principles-based approach:** By nature of being a subjective test, there is a risk that the principles-based approach does not provide sufficient certainty in application and that this uncertainty has the potential to increase costs to the detriment of consumers. Further, NSPs may be incentivised to optimise proposals towards NSP perceptions of the AER's preferences, rather than consumer preferences. The potentially subjective nature of the assessment may also lead to concerns about the arbitrariness of penalties/rewards, which could erode NSP trust in the system and not provide sufficient transparency for stakeholders. In a similar vein, the AER may only be able to assess *relative* performance, which could result in the “least best” NSP being arbitrarily punished. Overall, there is a risk the principles-based approach becomes a subjective version of the 10/10 thresholds but with higher costs.
  - d. **Hybrid – bright line with right of reply:** This approach would, in a regulatory burden sense, be better than a pure principles-based approach as the AER would only be required to make a subjective assessment in cases where the bright line test is tripped. However, it doesn't avoid the issues already described for the bright line tests and in fact is likely to exacerbate them, as NSPs won't have certainty about what will happen if the threshold is triggered. In addition, the issues described for the principles-based approach still exist once the threshold is tripped, suggesting that this option has the potential to combine the problems from the bright line/principles-based approaches, rather than alleviate them.
7. Our overall view is that if there is evidence of a material forecasting-error problem that needs to be solved, then of the AER's options, the bright line #2 - tiered incentive rate performs best against our criteria. This is because it:
  - a. Is mechanistic, and thus minimises regulatory burden, maintains simplicity, and provides certainty to NSPs;
  - b. Avoids the potential subjectivity/arbitrariness of a principles-based approach, and thus is predictable in its application;
  - c. Provides strong efficiency incentives until the threshold is hit, while still addressing concerns about large underspends that may not be genuine efficiency gains; and
  - d. Only applies *within* a period, so avoids the problems caused by linking periods such as the boundary point issue or a step change in capex requirements.
8. However, this mechanism is not costless as it would blunt incentives for large efficiencies and punish the most efficient firms, so should only be implemented if there is sufficiently strong evidence of a material widespread problem. Furthermore, these costs highlight the importance of

having an evidential foundation for selecting the threshold, as they are exacerbated if the threshold is set “too low”.

## 2. Objectives of CESS reform

9. The AER is concerned that in addition to incentivising efficiency gains, the CESS is also rewarding underspends that are not genuine efficiency gains (due to over-forecasting or forecast error/external changes in circumstances). The AER is thus attempting to limit the extent to which over-forecasting and forecast error is rewarded without deterring genuine efficiencies.
10. When considering potential reforms, it is useful to have a set of assessment criteria to guide the assessment of the pros and cons of different options. Pros and cons in this context should be focused on the long term interests of consumers. Below, in Figure 1, we set out a series of criteria that describe what in our view should be the key desired outcomes from any CESS reform, such that consumers will be better off from the change.

**Figure 1: Assessment criteria for CESS reforms**



11. Our assessment criteria illustrate the following trade-offs when considering reforms to the CESS:
  - a. Efforts to separate genuine efficiencies from forecast error may require complexity and regulatory burden; and
  - b. Efforts to introduce nuance may add undue regulatory discretion, which can introduce subjectivity (and therefore uncertainty) and other distortions from strategic behaviour.
12. Put simply, an overly narrow focus on designing reforms that eliminate rewards for any potential forecast error could come at the expense of blunting incentives for efficiency, increasing regulatory burden and causing uncertainty, which would not be in consumers interests. Thus, the AER should take a balanced approach that recognises these tensions and, while not the subject of this report, the AER should also provide sufficiently strong evidence that there is a problem to solve.

### 3. Bright line #1: 10/10 thresholds

**Description:** The AER maintains a default incentive rate of 30%. This default rate, however, is reduced to 20% if the NSP triggers the following two thresholds:

1. Underspend in the previous period exceeds 10%
2. The NSP asks for more than a 10% increase (“step-up”) compared to its actual expenditure in the previous period.

13. By nature of being mechanistic, the 10/10 performs well from the perspective of minimising regulatory burden and maintaining simplicity. It also has predictability in application by nature of it being a “bright line” test (subject to the discussion in paragraphs 19 - 21 below). However, the AER would still have discretion to change the thresholds over time. If this is not done retrospectively and is done as part of a consultation process, this discretion is not a problem in and of itself.
14. By linking the forward looking incentive rate to performance in the previous regulatory period and whether the NSP has requested a step-up in their forward looking capex allowance, this option implicitly assumes that capex requirements will be relatively stable over time. That is to say, it assumes future capex needs are related to past capex needs. This may only be true for a small subset of recurring capex. Therefore, this option is vulnerable to periods of significant change where history may be a less useful guide for future requirements.
15. There are likely to be numerous prudent and efficient scenarios where capex requirements are not stable between periods and thus 10/10 threshold would be tripped as a result of efficient behaviour by NSPs. In particular, the following are examples of a “step-up” in capex that could plausibly have been preceded by the NSP achieving efficiencies in relation to other capex.
  - a. **The service consumers demand from NSPs changes:** An NSP is forecasting substantial load growth from existing customers in the next regulatory period and thus needs to invest in reinforcing the network. NSP expenditure to support Australia’s decarbonisation goals and changes in consumer preferences as a result of the broader energy transition are likely to be particularly pertinent in this regard. Some examples of how this might occur:
    - i. A combination of increased EV penetration and consumer preferences for home fast charging require a step-up in capex to reinforce the network at a local level.
    - ii. Behind the meter solar penetration continues to increase and networks need to invest to provide hosting capacity; and
    - iii. More general electrification of the economy increases the load on electricity networks, requiring a step-up in capacity to accommodate the increased load.
  - b. **Cyclical asset replacements:** A large amount of aging assets reach the end of their life at the same time and thus a large amount of capex is needed in the next regulatory period for renewals.
  - c. **Growth in network footprint:** An NSP in a growing area is expecting substantial new connections in the following period. This issue is exacerbated for smaller NSPs where the size and lumpiness of network investments may much more easily trigger the 10% step-up threshold.
  - d. **Greenfields transmission:** TNSPs may be required to undertake large greenfield investments to support the energy transition. For example, interconnectors or building out the grid in areas with abundant renewable energy resources.



16. Providing a lower incentive rate in these scenarios is unlikely to be in consumers' interests as NSPs will be provided with a lower incentive to find capex efficiencies during periods of particularly high and socially valuable capex.
17. The 10/10 thresholds could also cause a "boundary effect", whereby an NSP whose potential efficiencies in the current period are greater than, but close to, the 10% threshold (e.g., 11%) may be disincentivised to pursue additional efficiencies in order to maintain the 30% incentive in the next period. This then risks resulting in an inefficient cost path and higher costs to consumers over time. This boundary effect is stronger, and thus has greater implications for consumers in terms of higher future costs, the greater the required capex is in the future.
18. This mechanism also has the potential to punish the most efficient and innovative firms by giving lower future incentive rates to those firms that achieve the largest efficiencies. Giving these firms a lower incentive in the next period may mean they achieve fewer efficiencies next period, which is not in consumers' interests.
19. As a final point we note that it is not clear from the AER's current description at what point the 10% step up would be measured. In the discussion paper the AER describes the second limb of the 10/10 as follows:
 

*...in its regulatory proposal sought an increase of more than 10 per cent compared to its actual expenditure in the previous regulatory control period [emphasis added]*
20. NSPs have multiple touch points with the AER and consumers with respect to what they are seeking. In particular, one could read this description broadly to include the initial draft proposal, the initial proposal, and the revised proposal. Without clarity on the point at which the step-up is measured, this is not a "bright line". It would also seem perverse if the 10% step-up was measured early in the proposal refinement proposal, as this would be the point when NSPs have the least certainty over their future expenditure requirements.
21. The use of the word "sought" suggests that the AER is envisaging the 10% step-up is measured based on the NSP proposal, rather than the allowance ultimately approved. This however raises another issue – what if the AER approves an allowance that is a step-up of greater than 10%? This could lead to the odd situation where the AER considers a >10% step-up allowance to be prudent and efficient but penalises the NSP regardless.

## 4. Bright line #2: tiered incentive rate

**Description:** The default rate of 30% applies for the first 10% of underspending and a lower rate of 20% applies for any underspending exceeding 10%. For example, an underspend of 15% receives a 30% rate on the first 10% of underspending and then a 20% rate on the remaining 5%.

22. By nature of being mechanistic, the tiered incentive rate performs well from the perspective of minimising regulatory burden and maintaining simplicity. It also has predictability in application by nature of it being a "bright line" test, however, the AER would still have discretion to change the threshold over time. If this is not done retrospectively and is done as part of a consultation process, this discretion is not a problem in and of itself.
23. The assumed intent behind the tiered rate is to address large underspends that are not plausibly genuine efficiency gains by providing a lower incentive rate, *within a regulatory period*, once a threshold is passed. The tiered rate therefore differs from the 10/10 in that it doesn't link the regulatory periods – rather it deals with the perceived problem in the period it occurs. The tiered rate is therefore not subject to "boundary point" type issues described above.

24. A benefit of the tiered rate is that it provides strong efficiency incentives for the first 10% of underspending. However, by its nature, the tiered rate implies weaker efficiency incentives for any additional underspending over 10% (i.e., once the lower rate kicks in). The implication is that the tiered rate blunts the incentive to achieve very large efficiencies.
25. Along these lines, this mechanism may perversely punish the most efficient firms. That is, a highly efficient firm (that can achieve efficiencies > 10%) receives a lower marginal rate than a relatively less efficient firm.<sup>4</sup>
26. Because of this, it makes the selection of the threshold incredibly important. If the threshold is set “too low” then socially desirable efficiencies (which will benefit consumers) may be deterred as a result of inappropriately blunt incentives. But equally, if the threshold is set “too high”, the threshold will not bind. Thus, more work is required around the threshold for this bright line or the 10/10.

## 5. “Pure” Principles-based approach

**Description:** Assess an NSP against certain principles and criteria (e.g., from the Better Resets Handbook) to determine whether a 20% rate should apply. These principles could include a top-down assessment of actual vs. forecast capex; evidence of rigorous cost-benefit analysis; genuine consumer engagement; among other criteria.

27. It is possible that in adopting a principles-based approach, the AER doesn’t provide sufficient certainty in application. This would occur if the process and criteria are subjective, which in some sense they will be by definition since the AER has separately identified “bright-line” reform options. This uncertainty is problematic to the extent that it lowers efficiency, to the detriment of consumers. More specifically, uncertainty is likely to lower efficiency if NSPs:
  - a. Are unsure how their proposal and past efficiencies will be treated, then this uncertainty is likely to blunt the incentive to be efficient. In other words, NSPs essentially face lower incentives if they are unsure of whether they will be rewarded for expending costly effort;
  - b. Optimise their investment plans to satisfy their perception of the AER’s preferences/expectation. This would cause inefficiencies to the extent that the AER’s preferences differ from consumers. For example, it is plausible that the AER may find it more difficult to assess plans that are less generic but more ambitious (and so benefit consumers). If these plans are more likely to receive a lower incentive rate, then NSPs will account for this risk by submitting more generic plans. As an example, an NSP could submit a plan that focuses on cost efficiency for existing services (if it thought the AER would look favourably upon this) rather than increasing investment to provide new services. This is unlikely to be in consumers’ interests, particularly in periods of significant change.
28. In addition, if NSPs are unsure how their proposal will be treated, this uncertainty is likely to result in increased regulatory burden and transaction costs. This uncertainty could be partly addressed by making the principles-based approach as objective as possible, but this equally risks the approach becoming a “box ticking” exercise, which the Better Resets Handbook is explicitly trying to avoid.<sup>5</sup>

<sup>4</sup> Given efficiencies are likely to become progressively more expensive from a managerial effort perspective, if one wasn’t concerned about over-forecasting it would actually be optimal to have a rate structure that *increases* the marginal rate as more efficacies are achieved.

<sup>5</sup> “Further, we intend to apply the expectations for each topic holistically, rather than in strict ‘checklist’ type approach”. AER, *Publication of Better Resets Handbook*, 9 December 2021, p.3

29. If the principles-based approach involves a comparison of actual and forecast capex in the previous regulatory period, as the AER suggests, there is a risk that the principles-based approach becomes a subjective version of the 10/10 thresholds. Accordingly, the same possible inefficiencies from linking periods would apply (e.g., the “boundary effect”, see paragraph 17). A difference is that if there is uncertainty about whether the “threshold” will be triggered, this could have a similar effect to having a lower threshold. I.e., “around 10%” may be worse than a bright line of 10%.
30. Taken at face value, focusing on the other aspects of the Better Resets Handbook, such as consumer engagement, rigorous cost-benefits analysis, etc., may hold intuitive appeal but will likely result in significant implementation issues in practice. In particular, it could lead to differences in treatment which appear arbitrary and cause inefficiencies by incentivizing strategic behaviour.
31. Regarding differences in treatment, the subjective nature of the approach is likely to cause fairness concerns if NSPs in similar positions receive different incentive rates. This fairness concern extends to consumers, as arbitrary outcomes for networks will flow through to arbitrary outcomes for consumers in different network areas. For example, the subjective nature of the test could mean two firms with the same expenditure pattern (regarding historic underspend/step up in forecast) are treated differently, and it may not be transparently obvious why one firm received a lower sharing rate. For example, two firms with the same expenditure pattern could receive different rates based on:
  - a. How the AER perceives their business plans
  - b. If one firm can successfully enter the “early signals pathway”
32. In general, perceptions of arbitrariness may erode the relationship between NSPs and the regulator. While the AER may attempt to address perceptions of arbitrariness through a policy of transparency (i.e., setting out the reasons for their decisions); the wider issue is that transparency cannot resolve arbitrariness caused by subjective judgements. That is, it may not always be clear what precisely led to a difference in treatment.
33. A related point is that some good regulatory proposals may not be rewarded, and instead will be punished, as it is plausible that the AER may only be able to assess plan quality on a relative rather than absolute basis. That is, in the absence of objective criteria, it may be impossible for the AER to assess a plan based on its merits and instead it will need to assess plans by comparison to other plans. Which is to say, the AER would engage in a subjective ranking exercise. Such comparisons could be punitive to the “least best” plan (from the AER’s perspective) in a scenario, in which all NSPs are simultaneously submitting ambitious plans ahead of a step change. Whether this issue arises in practice depends on the design of a principles-based approach.
34. Last, in terms of incentives to achieve efficiencies, it should be clear that strong incentives are only maintained for those NSPs that receive the 30% rate and do not perceive that they are at risk of a lower future rate if they underspend by “too much”. Therefore, weaker incentives apply to those NSPs that receive the 20% rate.

## 6. Hybrid: bright line with right of reply

**Description:** Not yet clearly specified. The AER, however, provided the example<sup>6</sup> of first applying a bright line test and then providing an NSP that triggered the threshold(s) the opportunity to make the case for maintaining the default rate. We interpret this as a sequential approach. That is, bright line and then provide the NSP with a “right of reply”.

35. The primary difference between the hybrid approach and the bright line tests is what happens when the bright line threshold is tripped – under the hybrid approach there is a second “right of reply” stage.
36. However, when a firm expects to exceed the bright-line threshold, all of the concerns raised for the bright line approaches apply.
37. Because this approach doesn’t avoid the issues described for the bright line tests, and because the issues described for the approach still exist once the bright line threshold is tripped, this option has the potential to combine the problems from the bright line/principles-based approaches, rather than alleviate them.

## 7. Conclusion

38. If there is strong evidence that there is a material problem to be solved, then our view is that (of the options the AER has put forward) the bright line test #2 performs best according to the criteria of our assessment framework. In particular:
  - a. The tiered incentive rate performs well from the perspective of minimising regulatory burden, maintaining simplicity, and providing certainty to NSPs. By nature of being mechanistic, a benefit of both bright line tests lies in their objectivity.
  - b. By comparison, the principles-based approach is potentially subjective, which could lead to various unintended consequences, such as strategic behaviour and perceived arbitrariness in outcomes;
  - c. A key benefit of the tiered rate is that it provides strong efficiency incentives until the threshold is met. At the same time, the tiered rate can address large underspends that may not be genuine efficiency gains by providing a lower incentive rate; and
  - d. The tiered rate only applies *within* a period, which avoids the problems caused by linking periods such as the boundary point issue or a step change in capex requirements.
39. However, absent strong evidence of a material problem, bright line test #2 (and the other options) are likely to be detrimental to consumers by imposing costs without producing any benefits. In the case of the bright line #2, these costs are to blunt the incentive to achieve large efficiencies and to punish the most efficient NSPs.
40. Therefore, regardless of the options chosen, the AER should provide solid justification for the reasoning behind the selected thresholds. If the threshold is set “too low” then socially desirable efficiencies (which will benefit consumers) will be deterred. But equally, if the threshold is set “too high”, the threshold will not bind.

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<sup>6</sup> This example was provided at the AER’s Stakeholder Forum on the CESS Position Paper, held on 26 August 2022,

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