



Explanatory statement

Draft demand management innovation allowance mechanism

Electricity distribution network service providers

August 2017

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Request for submissions

The Australian Energy Regulator (AER) invites interested parties to make written submissions regarding this paper by the close of business **12 October 2017**.

Interested parties should send submissions electronically to: DM@aer.gov.au.

Alternatively, people can mail submissions to:

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We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. We will treat submissions as public documents unless otherwise requested.

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Please direct enquiries about this paper, or about lodging submissions, to DM@aer.gov.au or to Lisa Beckmann on (02) 9230 9164.

Shortened forms and glossary

Shortened form or term	Extended form or definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Allowance Objective	The demand management innovation allowance objective
ARENA	Australian Renewable Energy Agency
AR	Annual smoothed revenue requirement
credible option	Has the meaning given to it in NER clause 5.15.2(a)
current DMIA	The Demand Management Innovation Allowance currently applied as part of the current Demand Management Incentive Scheme under a historical version of NER 6.6.3
demand management	For the purpose of this mechanism, this relates to network demand management. This is the act of modifying the drivers of network demand.
DAPR	Distribution annual planning report
distributor	Distribution network service provider
eligible project	Defined in accordance with subclause 2.2.1 of the draft mechanism
EBSS	Efficiency benefit sharing scheme
indicative approval	Up-front approval of planned expenditure under this mechanism that a distributor seeks under subclause 2.2.2) of the draft mechanism
kVA	A kilovolt -ampere or 1,000 volt-amperes
MAR	Maximum allowed revenue
Mechanism	Demand Management Innovation Allowance Mechanism
MWh	Megawatt hour
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NPV	Net present value
preferred option	Has the meaning given in NER clause 5.17.1(b)
project criteria	The criteria set out under subclause 2.2.1 of the draft mechanism
R&D	Research and development

Shortened form or term	Extended form or definition
RIT-D	Regulatory Investment Test for Distribution
Scheme	Demand Management Incentive Scheme
TEC	Total Environment Centre

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1 Summary

The Demand Management Innovation Allowance Mechanism (the Mechanism) provides an allowance to distribution network service providers (distributors) to undertake innovative projects related to demand management. We are developing the Mechanism pursuant to rule 6.6.3A of the National Electricity Rules (NER). Under rule 6.6.3A, the Mechanism must meet the objective of funding distributors for research and development (R&D) in demand management projects that have the potential to reduce long-term network costs (Allowance Objective). We are developing this Mechanism in tandem with the demand management incentive scheme (Scheme).

The Australian Energy Market Commission (AEMC) made this rule following rule change proposals put forward by the Total Environment Centre (TEC) and the Council of Australian Governments (COAG) Energy Council.

This explanatory statement accompanies the Mechanism. It aims to assist distributors and other stakeholders in understanding the Mechanism. It also explains our considerations in designing the Mechanism, including our consideration of views that stakeholders expressed to us in submissions and other forums.

The draft Mechanism consists of three elements:

- The allowance itself: This includes a fixed amount, common amongst all distributors, with an additional percentage of total allowed revenue. It is calculated as \$200,000 + 0.075% of the relevant distributor's maximum allowed revenue (MAR). We will provide the allowance ex ante in five allotments (one for each year of the regulatory control period). Distributors will recover this amount from customers throughout the regulatory control period. Should the allowance not be spent, we will calculate a carryover amount to be recovered from distributors as a negative pass-through the next regulatory control period. Any overspend of the allowance will be borne by the distributor.
- Project eligibility requirements: These encourage distributors to direct their R&D funding towards projects that will help achieve the Allowance Objective. These require projects be innovative and have the potential to reduce long-term network costs. Innovation, in this context, either means that:
 - a project is based on new or original concepts,
 - involves technology or a technique not previously implemented in the National Electricity Market (NEM), or
 - is focussed on customers in a market segment that has not been exposed to the technology.
- Compliance reporting requirements: These assist us in assessing compliance with the Mechanism and allow industry and consumers to understand the research outcomes and knowledge gained from projects. To facilitate this, each distributor must submit an annual report to us that sets out the amount of allowance claimed, along with specifics of each project funded by the allowance. Each project must have a project specific report capable of being published separately. These reports

must outline the outcomes and methodology applied for each project. We intend to publish these reports on our website, increasing the ease of access for stakeholders, including demand management service providers, distributors and electricity customers.

The quantum of the allowance we are proposing in the draft Mechanism represents a modest increase on the allowance available to distributors under the current Demand Management Innovation Allowance (the current DMIA). The increase is greatest for smaller distributors, who benefit the most from the fixed base available in the new Mechanism. This aims to provide all distributors with an allowance that allows them to undertake useful projects. The scalable allowance means that larger distributors will have the opportunity to undertake innovative projects across their larger networks.

2 About the Mechanism

The Allowance Objective is to provide an allowance to distributors to undertake innovative projects related to demand management.

This section sets out the rationale for such a Mechanism in the context of contributing to the National Electricity Objective (NEO) and the rule requirements.

2.1 Background to the Mechanism

The AEMC's Power of Choice report supported encouraging distributors to have an increased focus on managing demand.¹ In 2012, Frontier Economics estimated the savings from reductions to peak demand alone between \$4.4 and \$11.7 billion dollars by 2022.² The value of innovation by network service providers more broadly has since become a greater focus of industry discussion and research.³ Also, consumer associations have recognised the link between innovation and dynamic efficiency.⁴

We currently operate a Demand Management Incentive Scheme that essentially operates as an ex-ante innovation allowance called the DMIA.⁵ The current DMIA is very similar in its operation to the draft Mechanism.

Following rule change requests from the TEC and the COAG Energy Council, in 2015 the AEMC recognised the value in encouraging innovation in the demand management market. While it directed us to introduce a 'true' incentive scheme (the new Scheme) to encourage wider usage of demand management in efficiently operating electricity distribution networks, it also maintained a dedicated innovation allowance (the Mechanism).⁶

To that end, the AEMC amended rule 6.6.3 and inserted rule 6.6.3A, which directs us to develop and implement the Mechanism in addition to the Scheme. Our development of the Mechanism is subject to requirements, set out in section 2.3 of this explanatory statement.

For the purpose of this Mechanism, demand management means modifying the drivers of network demand. We consider that this broad definition will best aid distributors to explore a wide range of relevant R&D projects.

¹ AEMC, *Final report: Power of choice review*, 30 November 2012, p. 198.

² AEMC, *Power of Choice – Stage 3 demand side participation review*, 2012, p. vi.

³ Energy Networks Australia (ENA), *Network Innovations Discussion Paper*, July 2017, p. 1; ENA and CSIRO, *Electricity network transformation roadmap: Final report*, April 2017.

⁴ Energy Consumers Australia, *Short Submission following Demand Management Options Day*, June 2017, p. 3.

⁵ For example, see AER, *Demand management incentive scheme: Jemena, CitiPower, Powercor, SP AusNet and United Energy, 2011–2015*, April 2009.

⁶ AEMC, *Rule determination: National Electricity Amendment (Demand Management Incentive Scheme) Rule 2015*, August 2015, pp. ii, 4,

2.2 Our rationale for the Mechanism

The Mechanism will operate alongside the new Scheme. The new Scheme and Mechanism will work alongside our incentive regulation framework, which rewards distributors for delivering value to electricity consumers by operating and building their networks at the least cost.

While incentive regulation is important for giving effect to the NEO, we also recognise that R&D can deliver value to consumers in the long term, but produce higher costs in the short term. Bearing this in mind, it is worthwhile acknowledging that regulated monopolies, like distributors, naturally have less of an incentive to conduct R&D than competitive businesses. This is because, all else being equal, they:

- Face lower ‘up-side risk’. Competitive businesses may be more likely to profit from R&D than monopolies as R&D can provide them with a ‘competitive advantage’. Moreover, to the extent that R&D results in future cost reductions, distributors will pass a material portion of these gains onto electricity consumers under our regulatory regime.
- Still face ‘down-side risk’. If R&D costs occur significantly before the benefits, distributors risk being financially penalised from making these decisions under the regulatory regime.

The Scheme and the Mechanism are designed to work together to provide incentives for innovation. The Scheme exposes distributors to ‘up-side risk’ by rewarding demand management when it is used in efficient non-network projects. The Mechanism provides innovation incentives by reducing distributors’ ‘down-side risk’ via an allowance for R&D costs. We consider that the Scheme and Mechanism will increase distributors ‘capacity to explore, trial and deploy new technologies, systems and business processes in a timely manner’. This is something that the ENA has identified as key to delivering customer benefits from R&D.⁷

Along with reducing the risks associated with R&D, the Mechanism also incentivises distributors to share their knowledge and understanding of innovative demand management projects. This is because, in order to access funding under the Mechanism, distributors must share the outcomes of funded R&D projects. This should increase the potential for R&D under the Mechanism to improve consumer outcomes across the NEM as a whole.

We do not intend for distributors to be the main driver of demand management R&D. Many of the innovative technologies and business models that enable effective demand management come from the contestable market. However, distributor-initiated R&D is still important. Increases in intermittent generation, distributed energy resources, and bi-directional electricity flows are creating challenges for electricity networks that demand management can help address. Distributors can be well-placed

⁷ ENA, *Network Innovation Discussion Paper*, July 2017, p. 2.

to address such challenges. They are in unique positions to understand the challenges facing their networks and to formulate the research objective to address these challenges, even if the R&D itself is done in partnership with third parties.

2.3 Giving effect to rule requirements

We are developing a Mechanism that should contribute to the achievement of the NEO, which is:⁸

to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect —

- to price, quality, safety, reliability, and security of supply of electricity; and
- the reliability, safety and security of the national electricity system

The Mechanism will contribute to the achievement of the NEO by applying the Allowance Objective and principles in NER clause 6.6.3A. This requires developing a Mechanism consistent with the Allowance Objective to provide distributors with funding for R&D in demand management projects that have the potential to reduce long-term network costs.

In achieving the Allowance Objective, the NER require we develop and apply the Mechanism to take into account the following principles:

- (a) the Mechanism should be applied in a manner that contributes to the achievement of the Allowance Objective;
- (b) demand management projects should have the potential to deliver ongoing reductions in demand or peak demand, and be innovative and not otherwise efficient and prudent non-network options that a distributor should have provided in its regulatory proposal;
- (c) the level of allowance;
 - i. should be reasonable, considering the long term benefits to retail customers;
 - ii. should provide funding that is not available from another source, including under a relevant distribution determination; and
 - iii. may vary by distributor and over time;
- (d) the allowance may fund demand management projects which occur over a period longer than a regulatory control period;

Any Mechanism we develop and apply must require distributors to publish and report on the nature and results of demand management projects that are the subject of this allowance. We cover this in section 6 of this explanatory statement.

⁸ *National Electricity (South Australia) Act 1996*, Clause 7 of part 1.

We must develop and publish the Mechanism and may, from time to time, amend or replace it in accordance with the distribution consultation procedures.

2.4 Demand management R&D in networks

The Allowance Objective is to fund distributors to undertake R&D in demand management projects that have the potential to reduce long-term network costs.

Given this, we consider 'demand management' under this Mechanism should relate to managing demand on electricity networks. For the purposes of the Mechanism, we define electricity network demand management as the act of modifying the drivers of network demand. In the Scheme, we specified that this should be with the purpose of removing a network constraint as the Scheme is targeting efficient non-network options relating to demand management.

However, since this Mechanism relates to R&D with the potential to reduce long-term network costs, it is possible that projects under the Mechanism will not directly remove a specific network constraint. Rather, these may develop a distributor's capabilities to remove a network constraint in the future—thereby having the potential to reduce long term network costs.

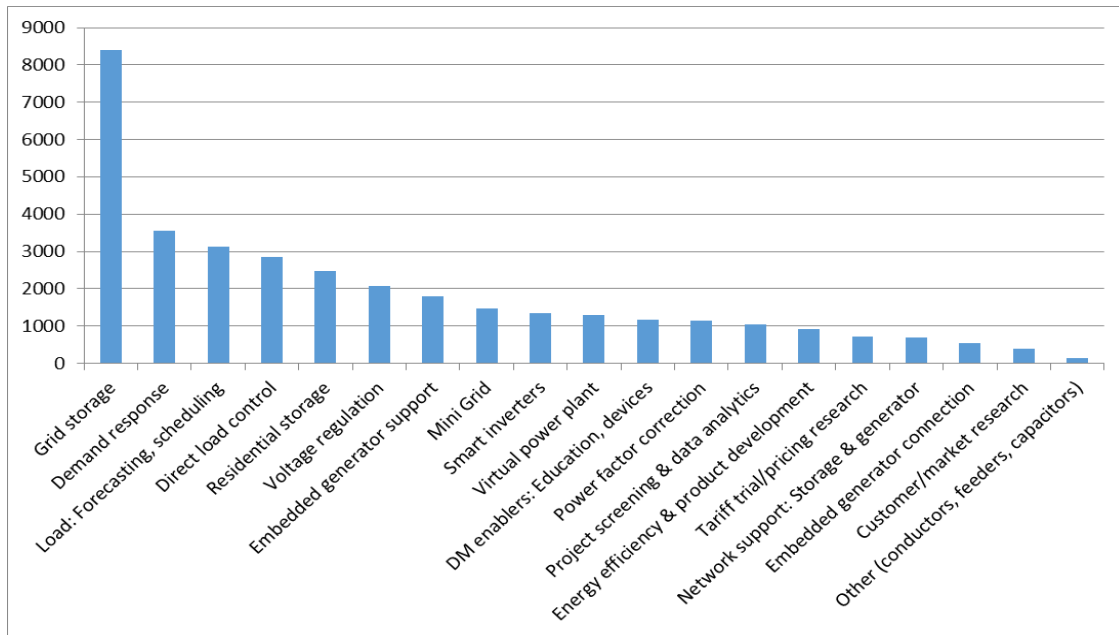
A distributor might modify the drivers of network demand by reducing peak demand or changing the demand profile. This is in contrast to a supply-side action, which entails investment to increase the network capacity to satisfy demand.

Some demand management R&D that distributors have undertaken previously includes:

- Using embedded generators and/or storage to provide network support;
- Trialling mini grids and virtual power plants;
- Trialling different ways to deploy demand response/voluntary load curtailment;
- Conducting tariff trials;
- Applying different methods to screen for demand management solutions, including through stakeholder engagement activities;
- Using network solutions to manage demand on the network, including by installing network assets like smart feeders, conductors and inverters.

Figure 1 below illustrates the diverse range of projects undertaken, but emphasises that grid storage projects made up the largest portion of expenditure by a significant margin.

Figure 1: DMIA spent July 2010 to December 2016 (\$'000, real 2015-16)



Source: AER, Decisions on applications for the demand management innovation allowance, published July 2017, April 2016, April 2015, July 2013 and November 2012. See [https://www.aer.gov.au/networks-pipelines/compliance-reporting?page=1&f\[0\]=field_accr_aer_report_type%3A1203](https://www.aer.gov.au/networks-pipelines/compliance-reporting?page=1&f[0]=field_accr_aer_report_type%3A1203).

3 Insights from stakeholders

There has been substantial stakeholder interest and engagement this project. A variety of stakeholders have shared their valuable insights throughout the Mechanism development process. For instance:

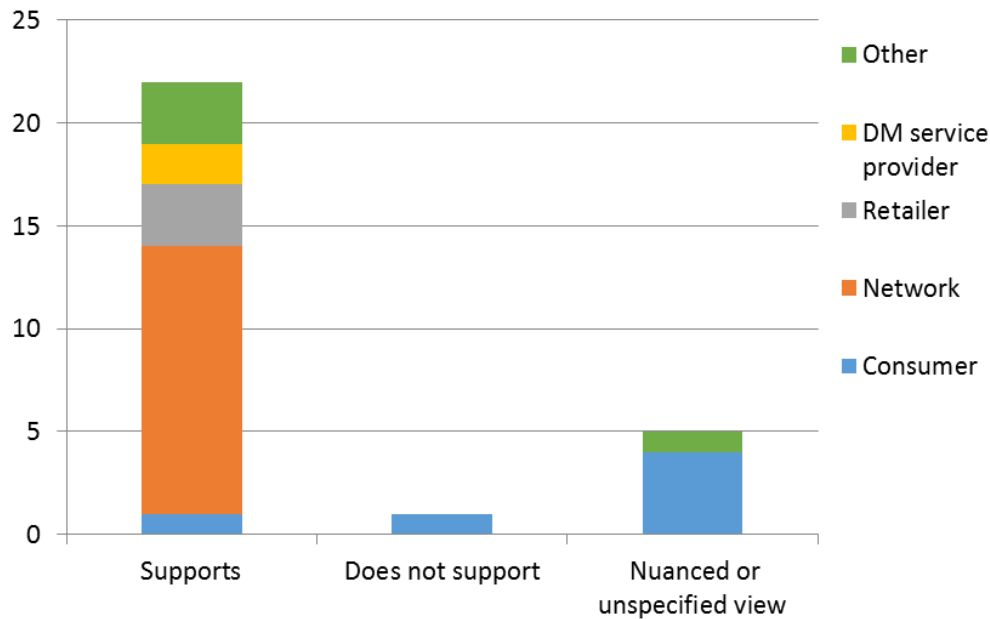
- Prior to the Issues Day, 57 stakeholders responded to a pre-workshop survey by submitting to us their top three issues concerning network demand management and the development of the Scheme and Mechanism.
- 68 stakeholders attended our demand management Issues Day on 20 September 2016. Eight key stakeholders gave presentations and all participants actively brainstormed views and solutions around key issues during 'breakout sessions'.
- 28 stakeholders lodged detailed submissions on a Consultation Paper we published on 4 January 2017.
- 42 stakeholders actively participated in a round table discussion at our demand management Options Day on 6 April 2017.
- 12 stakeholders that attended the Options Day lodged supplementary submissions following the Options Day.
- 51 stakeholders attended a Directions Forum videoconference on 29 June 2017.

Where possible, we have made the material that stakeholders have provided to us publicly available on our website.⁹

Submissions on the Consultation Paper (summarised in figure 2) showed that stakeholders generally supported the introduction of a Mechanism. This sentiment was also clear from the Options Day and Directions Forum. However, while the majority of stakeholders supported the Mechanism as having value, they generally saw the Scheme as the 'main game' for driving efficient demand management in electricity networks.

⁹ More information is available at :<<https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-incentive-scheme-and-innovation-allowance-mechanism/initiation>>.

Figure 2: Support for Mechanism in submissions on Consultation Paper



Source: Submissions on AER, *Consultation Paper: Demand management incentive scheme and innovation allowance mechanism*, January 2017, AER analysis.

Table 1 summarises the different Mechanism design options we discussed in the Consultation Paper. It also summarises our decision on whether or how to apply these options.

Table 1: Different Mechanism designs considered

Mechanism design consulted upon	Decision on whether or how to incorporate into the draft Mechanism
Minor extension to the status quo	Incorporated into the draft Mechanism.
High cap ex-ante allowance	Not directly incorporated in the draft Mechanism. However, the indicative approval process and increase to the quantum of the allowance under the draft Mechanism is consistent with elements of this option.
Bidding to encourage ground-breaking R&D	Not incorporated into the draft Mechanism.
Bidding to encourage market-facilitated R&D	Not incorporated into the draft Mechanism.

Source: AER, *Consultation Paper: Demand management incentive scheme and innovation allowance mechanism*, January 2017.

Figure 3 highlights the level of stakeholder support we received on the options listed in table 1. In their submissions, stakeholders did not appear to have a clear, single preference towards a particular Mechanism design option we presented in the Consultation Paper. Rather, there were diverse and often opposing views.

Figure 3: Level of support for Mechanism options in Consultation Paper

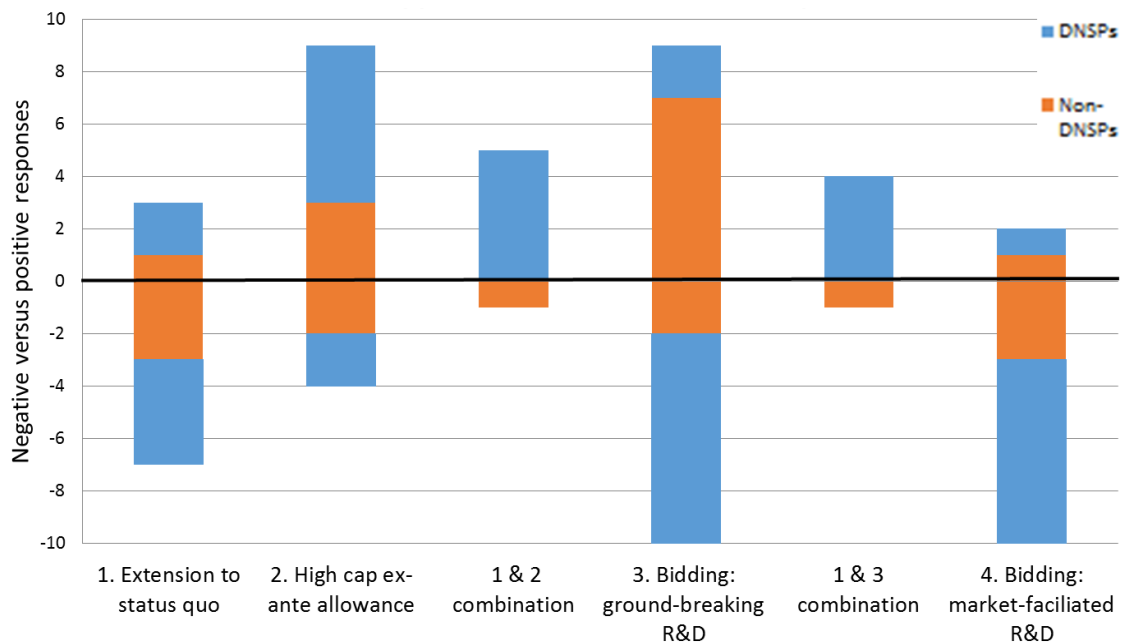


Figure 3 demonstrates that stakeholders had a diverse range of preferences. For instance, overall:

- The extension to the status quo received a net-negative response.
- The high-cap ex-ante allowance received a net-positive response, with positive responses particularly coming from distributors.
- Some distributors proposed combining an extension to the status quo with either a high cap allowance or a bidding option. While we received limited views on these, this is most likely because we did not explicitly request stakeholder views on hybrid options.
- The bidding option that centred on 'ground-breaking R&D' received a strong, divisive response, with non-distributors typically favouring it and distributors typically providing a negative response.
- The competitive bidding option that centred on 'market-facilitated R&D' received a strong, negative response, particularly from distributors.

Despite the diverse range of preferences, there were points of agreement amongst stakeholders. For instance:

- Most stakeholders considered that an increase in the funds available under the Mechanism would help achieve the Allowance Objective.
- Many stakeholders considered that the demand management market was developing at a fast pace and saw value in us implementing a Mechanism (as well as the Scheme) as soon as possible.

- Distributors and demand management providers particularly valued certainty and a low administrative burden, but also saw the benefit of having strong project reporting requirements.¹⁰

Where possible, we have incorporated these broad themes arising from our consultation with stakeholders into our draft Mechanism so that it achieves the following:

- Provides a modest increase to the allowance, particularly for smaller distributors, (see section 4).
- Has a low administrative burden (see sections 4 and 5).
- Has a high level of certainty for distributors (see sections 4 and 5).
- Is transparent (see sections 5 and 6).
- Reduces project duplication and increases the socialisation of knowledge (see section 6).

At the Options Day, stakeholders emphasised that the 'main game' in encouraging efficient demand management outcomes was the Scheme. Imposing an administrative burden that is disproportionate to the role of the Mechanism or the size of its allowance would harm its effectiveness. The draft Mechanism is similar in design to the current DMIA. This approach has the benefit of simplicity, in terms of both implementation and the ongoing procedure. We consider that this low administrative burden meaningfully increases the certainty gained from this approach, as well as the likelihood of it being effectively utilised.

We prefer this approach to the alternative approaches we explored in the Consultation Paper (figure 3). For instance:

- While there was some stakeholder support for a high cap ex-ante allowance, this would necessitate a potentially significant ex-ante assessment process. This, in itself would require significant investments of time and effort from distributors and us. Additionally, it would take more time to establish a relevant guideline that delivered both procedural fairness and value for consumers. Out of practical necessity, this would result in us assessing distributors' R&D proposals once every reset, which would limit the timeliness and the flexibility of the Mechanism.
- While some non-network stakeholders supported bidding to promote ground breaking R&D, this would require a high degree of development and ongoing monitoring to deliver a favourable outcome. We consider that keeping administrative burden low will ultimately encourage distributors to invest more in demand management R&D. We consider that our chosen approach encourages certainty, providing a stable base for innovative projects and ultimately building a stronger demand management market.

¹⁰ ENA, *Submission to the AER's Demand Management Consultation Paper*, 27 February 2017, p. 11.

4 Design of the draft Mechanism

Subclause 2.1.2(a) of the draft Mechanism specifies that our distribution determination will set out how the Mechanism will apply to a distributor in the relevant regulatory control period.

We propose to set the allowance cap for a distributor in the draft Mechanism by applying the formula in equation 1, where 'MAR' is that distributor's maximum allowed revenue in the regulatory control period.

Equation 1: Allowance cap for a regulatory control period

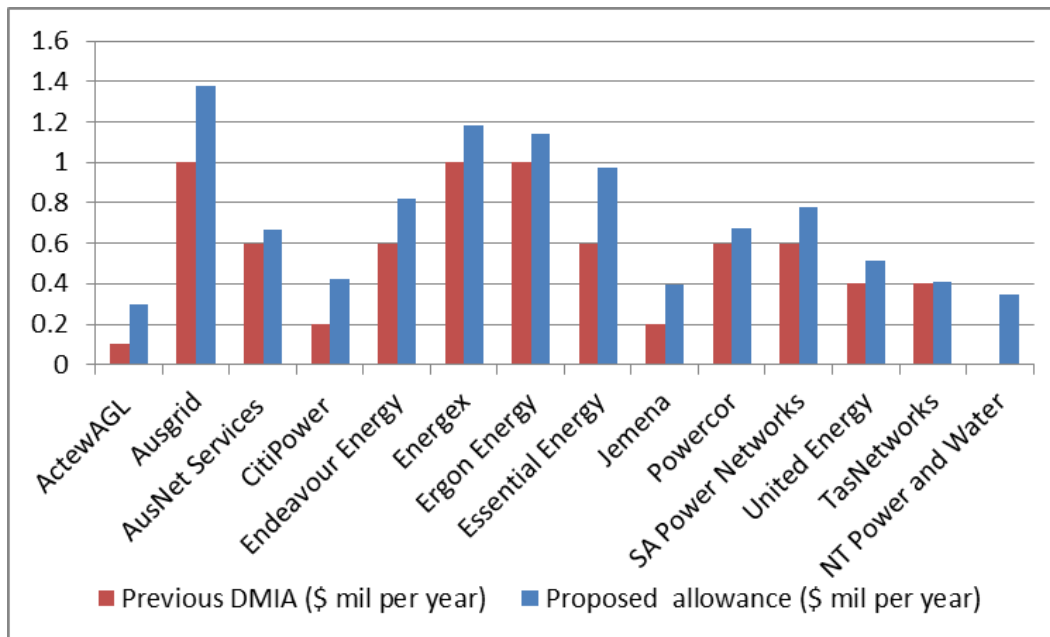
$$\text{Allowance cap} = \$200\,000 + 0.075\% \times \text{MAR}$$

4.1 Allowance cap

The allowance cap represents a modest increase to that set under the current DMIA. Table 2 and figure 4: previous and proposed allowance caps (\$mil/year) the allowance caps under the current DMIA with those proposed under the draft Mechanism, given the same revenue levels.

Table 2: Allowance caps under the old and new allowance

Distributor	2016 MAR (\$mil, nom)	Average MAR/ year (\$mil, nom)	200K + 0.75% MAR = Proposed cap (\$ mil per year)	Previous DMIA (\$ mil per year)	Increase on previous DMIA (%)
ActewAGL	641.6	128.32	0.3	0.1	196
Ausgrid	7867	1573.40	1.4	1	38
AusNet Services	3132.4	626.48	0.7	0.6	12
CitiPower	1503.1	300.62	0.4	0.2	113
Endeavour Energy	4158.2	831.64	0.8	0.6	37
Energex	6557	1311.40	1.2	1	18
Ergon Energy	6266	1253.20	1.1	1	14
Essential Energy	5176	1035.20	1.0	0.6	63
Jemena	1302.1	260.42	0.4	0.2	98
Powercor	3186.1	637.22	0.7	0.6	13
SA Power Networks	3846.9	769.38	0.8	0.6	30
United Energy	2101.3	420.26	0.5	0.4	29
TasNetworks	1410.44	282.09	0.4	0.4	03
NT Power and Water	992.2	198.44	0.3	N/A	N/A

Figure 4: Previous and proposed allowance caps (\$mil/year)

As table 2 shows, the draft Mechanism is proposing, on average, about a 30% higher allowance cap relative to what we have provided under the current DMIA.

This represents a modest increase, which we consider reasonable given that:

- The new Scheme provides greater upside risk for demand management solutions. This means that if a solution works efficiently, then there is a significant incentive available for deploying it. It is therefore prudent to design the Mechanism specifically to mitigate the downside risk that distributors might face when trialling new solutions on their networks and making the incentive available proportionate to the risk faced.
- There is significant stakeholder support for making more money available for innovative projects.¹¹ This includes both rule change proponents (who want to see more innovation in the demand management market) and distributors (who want to undertake larger scale projects). This indicates, as we have previously found, that the current allowance is not sufficiently mitigating the downside risk of investing in innovative R&D projects.

¹¹ AER, *Directions Forum*, June 2017, summary available at: < <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-incentive-scheme-and-innovation-allowance-mechanism/initiation>>.

- Consumers have expressed a willingness to pay for both increased demand management activity and innovation more broadly.¹² The Public Interest Advocacy Centre submitted that the current DMIA has been too modest to promote investment in innovative demand management and indicated that a greater investment may be required to get value for consumers.¹³ Energy Consumers Australia submitted that there was need for more 'dramatic innovation' by networks to achieve price decreases.¹⁴
- There is also some stakeholder support for a modest increase in the available allowance (such as via indexation to the Consumer Price Index).¹⁵ This indicates that some market participants see more limited benefits stemming from this allowance.
- We expect there will often be cases where R&D into network-based demand management will be funded outside of the Mechanism. Due to a number of factors, such as the ring fencing guideline, many demand management projects involve distributors partnering with a third party (for instance, a start-up or academic institution) to test the feasibility of a solution developed by the third party.¹⁶ This favours a smaller allowance, because the downside risk or required funding faced by the distributor is mitigated by or shared due to the involvement of other parties. Therefore, while our increase is modest, it can be used in conjunction with other funding options to widen the scope of the R&D and promote distributor involvement to achieve the Allowance Objective.
- There have been increases to other sources of funding available for demand management R&D which is being accessed by distributors. The Australian Renewable Energy Agency (ARENA) is active in R&D and distributors have participated in projects with ARENA. Recently, the Australian Energy Market Operator (AEMO) has partnered with ARENA to expand R&D in the demand response space.¹⁷

Having evaluated these factors and views, along with the impact on customers and the influence of the new Scheme, we consider that a modest increase to the allowance will best achieve the Allowance Objective. We consider that this solution:

- Provides an incentive that is proportionate to the Allowance Objective;
- Takes account of stakeholder views that the allowance needs to be larger; and
- Mitigates concerns regarding interaction with the new Scheme.

¹² Energy Consumers Australia, *Short Submission following Demand Management Options Day*, June 2017, p. 1.

¹³ Public interest advocacy Centre, *Submission in response to AER Demand Management Incentive Scheme design*, 24 February 2017, p. 3.

¹⁴ Energy Consumers Australia, *Short Submission following Demand Management Options Day*, June 2017, 3.

¹⁵ Red Lumo, *Submission to the AER's Demand Management Consultation Paper*, p. 1.

¹⁶ For example, please see the Bruny Island Battery Trial involving TasNetworks, <http://brunybatterytial.org/>. This trial is discussed in more detail in Section 8 of this explanatory statement.

¹⁷ ARENA, *Demand Response Competitive Round*, July 2017, More information available at: < <https://arena.gov.au/funding/programs/advancing-renewables-program/demandresponse/>>.

This involves a change to the methodology of calculating the allowance cap, which has the effect of modestly increasing the quantum of the allowance. We consider that this is appropriate and reasonable having had regard to the considerations laid out under subsection s6.6.3A(c) of the NER.

4.2 Components of the allowance cap

There are two parts of the allowance cap under the draft Mechanism:

- A \$200,000 base allowance level; and
- A scaling factor of 0.075% of the distributor's MAR.

4.2.1 The base allowance level

The base amount serves as a floor on the allowance. This responds to comments, particularly from smaller distributors that their relatively small allowances prevented them from undertaking some projects.¹⁸ While all distributors requested a higher allowance, this was particularly a problem for small distributors. For instance, Jemena Electricity Networks submitted that fixed costs (such as employee salaries) would consume a large portion of their total allowance, leaving little room for other project costs.¹⁹ We consider that this had the effect of limiting the potential for innovation in the areas serviced by these smaller distributors. Therefore, we consider that having a reasonable base for the allowance cap serves to achieve the Allowance Objective and gives smaller distributors certainty that they can proceed with innovative projects.

4.2.2 The scaling factor

The scaling factor reflects that larger distributors may have more opportunities to trial technology, given the size of their networks. Given that customers have demonstrated a willingness to pay for valuable innovation on the network,²⁰ we see value in providing a sizable allowance. We consider that distributing the impact fairly across consumers best serves this aim. Making the allowance proportional to MAR should keep the Mechanism's cost impact reasonably distributed across customers.²¹

¹⁸ AER, *Directions Forum*, June 2017, summary available at: < <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-incentive-scheme-and-innovation-allowance-mechanism/initiation>>.

¹⁹ Jemena Electricity Networks, *Submission on AER Demand Management Consultation Paper*, February 2017, p. 6

²⁰ Energy Consumers Australia, *Short Submission following Demand Management Options Day*, June 2017, p. 3.

²¹ SAPN, *Submission to AER's Demand Management Consultation Paper*, February 2017, p. 4.

5 Identifying eligible projects

Clause 2.2 of the draft Mechanism defines the type of projects that the Mechanism will apply to ('eligible projects') by setting out project criteria. It allows distributors to seek indicative up-front approval of projects against these project criteria.

5.1 Project criteria

Table 3 summarises the project criteria that a project must meet to be eligible. It also explains how each element will give effect to the NER, and/or how it incorporates stakeholder views. These requirements aim to fulfil our obligations under s6.6.3A of the NER and reflect our consideration of the factors contained within those provisions.

Table 3: Project criteria for eligibility under the Mechanism

Project criterion	Rationale for criterion	Consideration to stakeholder views
Be a demand management project or program	<p>The Allowance Objective requires that projects funded under the Mechanism relate to demand management.</p> <p>We have chosen to define demand management as modifying the drivers of network usage.</p>	<p>Through the consultation process, stakeholders advised that the definition of demand management should be sufficiently broad to encompass a range of applications to incorporate cutting edge technology in a fast moving space. We consider this definition sufficiently broad so that it does not limit innovation under the Mechanism.</p>
<p>Be innovative, in that the project or program is:</p> <ul style="list-style-type: none"> based on new or original concepts, involving technology or techniques that differ from those previously implemented or used in the NEM, or focused on customers in a market segment that significantly differs, from those previously targeted by implementations of the relevant technology, in relevant geographic or demographic characteristics that are likely to affect demand. 	<p>The Allowance Objective requires that projects which receive funding under the Mechanism should be innovative.</p> <p>The goal of this definition is to have projects that receive funding materially add to our understanding of demand management and its potential for technical and/or commercial viability in supporting the distribution network.</p> <p>We chose to define innovation because under the current DMIA, some funds went to projects that were not materially different from previous projects funded under the DMIA. This duplication meant that potentially redundant projects were receiving funding, limiting the</p>	<p>Some stakeholders noted that a prescriptive definition of innovation would hamper the ability of distributors to be genuinely experimental.²²</p> <p>Additionally, other stakeholders, including AEMO, raised that a definition that is too narrow might prevent distributors from testing previously verified technology in different geographic areas, to understand how a diverse range of consumers respond to that implementation.²³</p> <p>We consider the definition in the draft Mechanism strikes the right balance. This is not overly prescriptive, but directs distributors to use the allowance in ways that will build</p>

²² For example, Endeavour Energy, *Submission on Demand Management Consultation Paper*, February 2017, p. 12.

²³ AER, *Directions Forum*, June 2017, summary available at: < <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-incentive-scheme-and-innovation-allowance-mechanism/initiation>>.

	effectiveness of the R&D under the DMIA.	market/industry understanding of demand management.
<p>Have the potential, if proved viable, to reduce long term network costs in that it be designed to:</p> <ul style="list-style-type: none"> • build demand management capability and capacity • explore potentially efficient demand management options 	<p>The Allowance Objective requires that projects funded under the Mechanism have the potential to reduce long-term network costs for consumers.</p> <p>In the context of innovation, we felt it best to define reducing costs in the context of that project's overall ability to contribute to developing the demand management and industry knowledge, rather than a strict adherence to project benefits.</p> <p>This allows distributors to spend the allowance experimentally, while still directing them to implement potentially efficient solutions. Exploring this potential is vital to building market/industry understanding and commercialising solutions.</p>	<p>Some stakeholders suggested that projects be required to demonstrate customer benefits. However, distributors and other stakeholders considered that doing so would dramatically narrow the range of projects they would be able to undertake, undermining the goal to promote innovation in the demand management sector. It is our view that while projects under the Scheme, must directly deliver net benefits, this is not a reasonable expectation for R&D, which has uncertain results by nature.</p>
<p>Not contain costs that are:</p> <ul style="list-style-type: none"> • recoverable under any other jurisdictional incentive scheme, • recoverable under any state or Australian Government scheme, or • included in forecast capital expenditure or operating expenditure approved in the distribution determination. 	<p>The Mechanism is intended to provide funding for innovative solutions that would not otherwise be available. This aims to fund innovation, rather than allowing distributors to recover extra for simply undertaking actions that are otherwise prudent and should be included in their revenue allowances. This clause aims to prevent 'double-dipping' of R&D revenue, thereby increasing the Mechanism's value to electricity consumers.</p>	<p>As this is a requirement of the NER, we did not consult on this issue.</p>

5.2 Option for indicative up-front approval

Clause 2.2.2 of the draft Mechanism sets out that a distributor may seek indicative up-front approval of planned expenditure under the Mechanism —referred to as 'indicative approval'.

During our consultation process, some distributors saw value in implementing a simple Mechanism that would enable them to have certainty when committing projects.²⁴ We consider that extending our usage of the up-front approval process will assist distributors in adapting to the new compliance procedure. This will build on the understanding we have built with distributors over the life of the current DMIA.²⁵

²⁴ SAPN, *Submission following AER's Options Day*, April 2017, p. 5.

²⁵ AER, *Directions Forum*, June 2017, summary available at: < <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-incentive-scheme-and-innovation-allowance-mechanism/initiation>>.

Indicative approval is available under the current DMIA.²⁶ It was not sought for any projects. We also did not deny any projects under the current DMIA. Given the strengthening of the eligibility criteria and the reporting requirements, we consider that distributors may seek indicative approval under the new Mechanism.

To receive indicative approval, a distributor must provide us details of the proposed projects before the end of the first month in the relevant regulatory year. We will then assess the projects and provide an in-principle indication of whether this proposed expenditure is likely to satisfy the project criteria.

This involves an in-principle examination of whether proposed expenditure under the Mechanism is likely to satisfy the Mechanism's criteria when we undertake our ex-post assessment of the allowance spent. This provides greater certainty of what costs distributors are likely to recover under the Mechanism.

This is not an ex-ante assessment process. The Mechanism's official approval process remains an ex-post assessment of the projects' adherence to the project and compliance procedures. This is neither an alternative nor a substitute to the actual ex post assessment that we will subsequently conduct for that particular regulatory year. However, if the distributor's proposed expenditure is approved in principle, and its actual expenditure does not differ in substance and/or form from that envisaged at the beginning of the regulatory year, we would expect to approve that expenditure as part of our ex-post assessment.

²⁶ AER, *Final Decision: Demand Management Incentive Scheme*, Clause 5.7.2.

6 Assessment and compliance reporting

Clause 2.4 of the draft Mechanism specifies that each regulatory year, a distributor will submit a compliance report to us. This report serves two purposes; to allow us to assess compliance with the Mechanism's requirements, as well as form the basis for the socialisation of knowledge gained from the research projects funded under the Mechanism. By using the report in this way, we consider that the burden on distributors will be reasonable.

The compliance report is composed of two carefully designed elements, the overall report and the project specific reports. The reports will be submitted together but must be capable of being published separately. We have chosen to publish the reports separately to increase the usefulness and accessibility of each project report. We consider that if each report is published separately, then third parties can more easily compare and contrast options, while having a complete overall report will enable us to assess the usage of the allowance on a broader scale.

We consider that the burden imposed by these requirements is proportionate and necessary to achieve the Allowance Objective. The requirements for information have increased under the Mechanism, relative to the requirements under the current DMIA. While some may see the new reporting requirements as misaligned with the level of allowance available, we consider that the aim is to provide value beyond the initial monetary investment by a given distributor. Innovation has the potential to provide significant value across the market, as discussed throughout this explanatory statement. For innovation to have an optimal impact in the electricity market, its leanings and benefits should be shared with all participants. By providing a clear means by which this knowledge can be socialised, the Mechanism can help deliver this outcome.

We observed that reporting by distributors under the current DMIA had wide variations in quality.²⁷ This reporting was insufficiently standardised to disperse the knowledge gained from projects and thereby socialise the knowledge gained from many projects. Stakeholders also emphasised that clear, transparent, and consistent measurement of the performance of projects funded under the allowance was crucial.²⁸ The new reporting requirements aim to improve the ability of project reports to deliver information to the broader market in line with the Allowance Objective.

We have also considered distributors' submissions that our requirements should not require duplication of their efforts, which would otherwise make non-network solutions less cost competitive.²⁹ Considering this, we have designed the reporting requirements to target the areas that will provide most benefit to those hoping to understand the

²⁷ AER, *Demand Management Incentive Scheme and Innovation Allowance Mechanism Consultation Paper*, January 2017, p. 63.

²⁸ Institute for Sustainable Futures, *Submission to AER's DM Consultation Paper*, February 2017, p. 28.

²⁹ Endeavour Energy, *Submission on Demand Management Consultation Paper*, February 2017, p. 2.

knowledge gained from projects funded by the Mechanism. Any repetition of data is necessary to properly socialise the gains of projects, and provide reports in a style that is accessible to interested parties. We consider that the reporting requirements laid out in the Mechanism will not impose an unreasonable administrative burden, given that the Mechanism is designed to provide information to the broader market and industry.

6.1 The overall report

Clause 2.3(3) of the draft Mechanism sets out the requirements for compliance reporting. These include project or program specific reports, each capable of being published separately, for each project claimed under the Mechanism, that detail the projects or programs. Compliance reporting requirements also require the distributor submit an overall report containing:

- The total amount of the allowance spent;
- A list and description of each eligible project on which the allowance was spent;
- A summarised explanation of each demand management project which the distributor funded under the Mechanism, demonstrating and justifying the project's compliance against the project criteria.
- Where demand management projects or programs extend across more than one regulatory year of the regulatory control period, information on the actual expenditure on each such project or program in each regulatory year of the regulatory control period; and
- A statement signed by a director of the distributor certifying that the costs of each demand management project:
 - are not recoverable under any other jurisdictional incentive scheme;
 - are not be recoverable under any state or Australian Government scheme; and
 - are not included in forecast capital expenditure or operating expenditure approved in our distribution determination for the regulatory control period under which the Mechanism applies, or under any other incentive scheme in that distribution determination.

These requirements allow us to assess individual project eligibility, as well as the overall spending pattern of the allowance. This information will assist us in determining how much of the allowance has been spent, what projects it has been spent on, and how distributors justify that expense with regard to the Allowance Objective. The expenditure information is required to be provided on a number of levels. The expenditure information must be given for each project on an annual basis. A breakdown of the cumulative expenditure on the project should also form part of the report. This information, considered together, will allow us to track the amount of the allowance distributors are spending. We can then quickly gain a broad outline of the projects a given distributor is undertaking, and what the distributor's plans are for that project.

The report will also require a statement signed by a director of the distributor certifying that costs recovered under the allowance are not recoverable under any other incentive scheme. The NER mandate this, to prevent distributors from 'double dipping' and receiving payment for the project costs twice. These requirements also aim to reserve the allowance for projects that are innovative, and not simply otherwise efficient projects for which the distributor should have made provision in their forecasts. This will help encourage truly innovative projects, rather than otherwise efficient and prudent projects that a distributor should have provided for in its regulatory proposal.³⁰

6.2 Project specific reports

Included in the overall report must be project specific reports. The subordinate clauses to subclause 2.4(3)(d) of the draft Mechanism set out the requirements for these project specific reports.

Distributors will provide us with an overview of the project, setting out:

- the project's nature and scope;
- aims and expectations of the project;
- implementation approach and costs;
- project results to date;
- how the project meets the project criteria in section 2.2.1; and
- any other information that would require an informed observer to understand, evaluate and potentially reproduce the approach used.

These requirements aim to provide specific benefits to industry and market participants. We have chosen to require individual reports for each project to help standardise the quality and presentation of these reports. The report requirements formalise reporting project results, which we identified as a key factor in the high quality project reports delivered under the previous DMIA. This is also true for the implementation approach and costs, which are required to robustly analyse and understand a given project. These requirements should shift the focus of reporting towards the socialisation of knowledge gained from projects to better serve the Allowance Objective.

To cement this focus on third party consideration, we have added the catchall requirement to include other information that would help an informed observer understand and potentially reproduce the approach used.

We consider that these requirements will help us in assessing individual project compliance and in building market understanding of the potential applications for demand management.

³⁰ NER, cl. 6.6.3A (c)(2)(ii).

6.3 Treatment of confidential information

The compliance reporting requirements may include confidential third party information.

If a distributor wishes to redact such information from their report, they must provide two copies of the report to us, one un-redacted and one suitable for publication. The un-redacted version is required for us to assess compliance and the merits of the confidentiality claim. A statement setting out the reasoning for the confidentiality claim must accompany the report. Distributors must provide versions of the overall report and the project specific reports that are suitable for both compliance assessment and publication.

The distributor cannot fully redact the project's aim, methods, implementation, results, analysis and implications. These must be available via the report in a form that provides a reasonable level of information to the industry to further develop and innovate.

These procedures will encourage distributors to be candid where they can be in reports, while protecting information of third parties where appropriate, so that stakeholders can easily access information regarding projects funded under the Mechanism.

6.4 AER use of compliance report

In the first instance, the information provided in a distributor's annual overall report will form the basis, together with associated individual project or program reports, for our assessment of the distributor's compliance with the project criteria, and its entitlement to recover expenditure under the Mechanism. Under both the current DMIA and the new Mechanism, we conduct ex-post reviews of projects to determine their compliance with the project criteria. These compliance-based uses for the report are vital to the ongoing integrity of the Mechanism.

Beyond these compliance uses, this information will assist us in making informed improvements in potential revision/s of this Mechanism

Further, we will compile a report, comparing the performance of all distributors, both in terms of compliance and efficacy. We consider that this report will serve as a helpful resource for the market to understand the development of innovative demand management practices. It will also allow the market to understand which distributors are performing well and are active in this space. Over the long term, we hope that this will help to encourage a culture of innovation in the market. We will also use this report to gain an understanding of the overall direction of demand management in electricity networks.

Finally, we will publish project specific reports separately on our website or an online portal. These publications will allow detailed technical information to be easily accessed by businesses and other interested parties so they can fully understand the testing procedure for a given project.

7 Application of carryover

Clause 2.5 of the draft Mechanism describes the process for passing any underspend of the allowance. Under the Mechanism, distributors will bear any overspends of the allowance.

The carryover process aims to make distributors neutral towards the expenditure profile they take under the Mechanism over the regulatory control period. It entails a revenue adjustment, which is calculated so that the distributor is indifferent in net present value (NPV) terms to the expenditure profile it selects over the regulatory control period. This removes any incentive for the distributor to defer or advance expenditure.

Currently, distribution control mechanisms include a 'k' factor which performs this function. This factor is still appropriate for this purpose, and we do not propose to change it. We are however proposing a more concise version of the formula for calculating the carryover to what we include in the current DMIA. We have also updated this formula to account for the annual updating of the allowed rate of return. However, the purpose and function of the formula has not changed.

Essentially this involves calculating the total allowance spent in a regulatory control period in the last year of that period, and returning any underspend of the allowance to consumers via a negative pass through in the second year of the next regulatory control period. This formula, as presented in equation 2, aims to capture the time value of money in this calculation.

Equation 2: Carryover amount, C for subsequent regulatory control period

$$C = - \left[\sum_{t=1}^N \frac{R_t - A_t}{(1 + r_t)^t} \right] \times \prod_{t=1}^{N+2} (1 + r_t)^t$$

Where:

- C is the total carry over amount.
- t is a regulatory year, which can take the value of integers between 1 and N+2, where N is the number of regulatory years in the distributor's regulatory control period for which the carryover is being calculated.
- R_t is the ex-ante revenue allowance under the Mechanism for regulatory year, t.
- A_t is the expenditure approved ex-post under the Mechanism for regulatory year, t.
- r_t is the allowed rate of return in regulatory year, t. In equation 1, t can take the value of 1 to N+2, with 1 referring to the first regulatory year of the regulatory control period in which the expenditure was incurred, and N+2 referring to the second regulatory year of the subsequent regulatory control period.

In equation 2, $R_t - A_t$ represents the difference between the allowance approved and the allowance spent (the underspend) in regulatory year t . Dividing this by $(1 + r_t)^t$ adjusts this underspend for the time value of money, using the distributor's allowed rate of return for regulatory year t . The sigma notation prompts us to do this for each of the five years of a regulatory control period, and to sum these amounts.

This sum total, shown equation 3, is then presented as a negative amount to be carried over. Since we provide a distributor with its allowance ex-ante, we must subtract its allowance underspends from its total revenue as a negative pass through.

Equation 3: Part 1 of the carryover amount calculation

$$- \left[\sum_{t=1}^N \frac{R_t - A_t}{(1 + r_t)^t} \right]$$

The ultimate outcome of this step is an expression of the differential between the amount spent and the approved allowance. This is presented as a present value at $t = 0$, using the distributor's allowed rate of return as the discount factor.

Table 4 and table 5 provide two worked examples of how we would apply part 1 of the carryover amount calculation, shown in equation 3. In these examples, we have:

- assumed an allowed rate of return of 6.5% for each year of the regulatory control period;
- assumed a constant approved allowance of \$1.4 million, which we consider reflects a realistic approximation of an allowance for a large distributor under our new methodology;
- rounded figures to increase the readability of the table

Table 4 shows the first worked example. In year one of this worked example, the distributor underspends the allowance by \$400,000. The present value of these costs in year one is \$376,000. As there is no further under or overspending of the allowance, the total spend differential is \$376,000.

Table 4: Example 1 —First year underspend (present value at $t = 0$, \$'000)

p=1 (t=)	1	2	3	4	5	Totals at Year 5
Allowance Approved (Rt)	1,400	1,400	1,400	1,400	1,400	7,000
Allowance Spent (At)	1,000	1,400	1,400	1,400	1,400	6,000
Nominal Differential	400	\$0	\$0	\$0	\$0	400
PV of Over/Underspend	376	-	-	-	-	376
Cumulative NPV of over/underspend	376	376	376	376	376	376

Table 5 shows a second worked example. In this example, the distributor again underspends the allowance in year one, but also overspends in year 3. Both times the distributor deviates from the allowance by \$400,000. However, as we adjust for the time value of money, the earlier underspend had a higher present value. Given this, the distributor would have still underspend overall. We would therefore subtract an underspend from the distributor's total revenue as a negative pass through.

Table 5: Example 2 — First year underspend, third year overspend (present value at $t = 0$, \$'000)

Regulatory Period 1	Year 1	Year 2	Year 3	Year 4	Year 5	Totals at Year 5
Allowance Approved (Rt)	1,400	1,400	1,400	1,400	1,400	7,000
Allowance Spent (At)	1,000	1,400	1,800	1,400	1,400	7,000
Nominal Differential	400	0	- 400	0	0	0
PV of Over/Underspend	376	-	- 331	-	-	45
Cumulative NPV of over/underspend	376	376	45	45	45	45

In this worked example the distributor again underspends the allowance in year one, but this time overspends it in year 3. Both times the distributor deviates from the allowance by \$400,000. However, as we adjust for the time cost of money, the earlier underspend (which was retained by the distributor) has a higher present value. This would lead to a larger pass through, as is demonstrated below.

The total cumulative underspends in table 4 and table 5 represent the value inside the bracket of equation 3. To calculate the total carryover amount, we would also need to apply the second part of equation 2, as replicated in equation 4 below.

Equation 4: Part 2 of the carryover amount calculation

$$\times \prod_{t=1}^{N+2} (1 + r_t)^t$$

The step in equation 4 entails taking the overall adjusted underspend (which is a present value at $t = 0$), and converting it to present value as $t = N + 2$. This reflects the year the underspend is passed through — which is the second year of the subsequent regulatory control period. This means the carryover reflects the true value of the underspent money to the distributor, as we have now accounted for the entire time that the underspend has been retained.

The aim of this step is to pass through an amount that reflects the benefits of underspending the allowance in the previous regulatory control period. We consider this is an equitable means of reflecting the value gained from underspending the allowance in each year of the regulatory control period.

The calculation below shows the complete application of equation 2 to the previous example 1. We have used the same assumptions as previously, but have also added the assumption that the allowed rate of return for the second regulatory control period is 7.0%. We have taken the figure, -376,000 from the calculation in table 4.

$$C = - \left[\sum_{t=1}^{N+2} \frac{R_t - A_t}{(1 + r_t)^t} \right] \times \prod_{t=1}^{N+2} (1 + r_t)^t$$

$$C = -376,000 \times [1.065 \times 1.065 \times 1.065 \times 1.065 \times 1.065 \times 1.07 \times 1.07]$$

$$C = -376,000 \times [(1.065)^5(1.07)^2]$$

$$C = -589,798$$

Using the same assumptions, we apply equation 2 to the previous example 2. In this application, we have taken the figure, -45,000 from the calculation in table 5.

$$C = -45,000 \times [1.065 \times 1.065 \times 1.065 \times 1.065 \times 1.065 \times 1.07 \times 1.07]$$

$$C = -45,000 \times [(1.065)^5(1.07)^2]$$

$$C = -70,588$$

Under each of these applications of equation 2, the distributor returns the full value of its underspend to consumers and the NPV of the total underspend becomes zero. This is because we have specifically designed equation 2 to be revenue-neutral.

Table 6 shows a third worked example. In this example, the distributor has underspent its first year allowance, before overspending its third year allowance by \$700,000. This results in an overspend of the total allowance allotted in the regulatory control period by \$300,000 in nominal terms and \$196,000 when adjusted for the time value of money.

Table 6: Example 3 — Allowance overspend (present value at t=0, \$'000)

Regulatory Period 1	Year 1	Year 2	Year 3	Year 4	Year 5	Totals at Year 5
Allowance Approved (Rt)	1,400	1,400	1,400	1,400	1,400	7,000
Allowance Spent (At)	1,000	1,400	2,100	1,400	1,400	7,300
Nominal Differential	400	0	-700	0	0	-300
PV of Over/Underspend	376	-	571	-	-	- 196
Cumulative NPV of over/underspend	376	376	196	196	196	- 196

However, unlike in the first two examples, this overspend will not result in a pass through to customers. This is because, under the Mechanism, distributors have to return allowance underspends to consumers, but have to bear the cost of overspends.

8 Bruny Island worked example

This worked example is based on information provided to us by TasNetworks. This information comes from a project they are undertaking on Bruny Island, in partnership with ARENA and other organisations. The trial involves the installation of up to 40 battery systems on Bruny Island, which will service rooftop solar installations on certain homes. These batteries will be equipped with software that allows them to be coordinated to alleviate congestion, stabilise network voltage, and otherwise allow for optimal use of the installed solar panels. More information about the trial can be found at <http://brunybatterytial.org/>.

Overall project expenditure is estimated at \$8 million. TasNetworks contribution to this cost is \$400,000. The trial runs from March 2017 until mid-2019. We have assumed the annual expenditures, and based TasNetworks' allowance on their 2016 MAR as expressed in table 2. We have also assumed a 6.0% and a 6.5% allowed rate of return for the first and second regulatory control periods respectively. In this example, the Bruny Island trial is the only expenditure funded by the Mechanism for TasNetworks in this regulatory control period.

Table 7: Bruny Island expenditure breakdowns (2017 \$'000)

Regulatory Period 1	2017	2018	2019	Totals at Year 3
Allowance Approved (Rt)	400	400	400	1,200
Allowance Spent (At)	125	125	150	400
PV of Over/Underspend	257	240	204	701
Cumulative NPV of over/underspend	257	497	701	701

Our application of equation 2 below shows a carryover amount of \$1.06 million (nominal) in 2021, which is year two of TasNetworks' subsequent regulatory control period.

$$C = - \left[\sum_{t=1}^{N+2} \frac{R_t - A_t}{(1 + r_t)^t} \right] \times \prod_{t=1}^{N+2} (1 + r_t)^t$$

Taking the cumulative NPV of the underspend from table 7,

$$C = -[701,000] \times \prod_{t=1}^{N+2} (1 + r_t)^t$$

And, taking the allowed rate of return assumptions of 6.0% and a 6.5% for the first and second regulatory control periods respectively,

$$C = -701,000 \times [1.06 \times 1.06 \times 1.06 \times 1.06 \times 1.06 \times 1.065 \times 1.065]$$

$$C = -701,000 \times [(1.06)^5(1.065)^2]$$

$$C = -1,064,012$$

If after the conclusion of the trial, TasNetworks wished to continue the project under the Mechanism, then it would need to meet the requirements of being an eligible project under the Mechanism. This would require it to pass an efficiency assessment among other criteria.