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Review of WaterNSW rural valleys cost shares framework

A report for the Independent Pricing and Regulatory Tribunal of
New South Wales

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Executive summary

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART or the Tribunal) is responsible for setting the maximum prices that WaterNSW can charge its customers for water services. IPART is currently undertaking a review to set maximum prices for WaterNSW's rural bulk water services from 1 July 2026.

As part of this review, IPART will determine cost shares to allocate the prudent and efficient costs of rural bulk water services between water customers and the NSW government (on behalf of other users and the broader community). Since IPART's 2001 bulk water determination, the framework for determining these cost shares has been based on the 'impactor pays' principle. HoustonKemp has been engaged by IPART to undertake a review of the cost shares framework. We have approached this task drawing on the economic principles of cost allocation and our experience with cost allocation practices in regulated infrastructure settings.

Economic principles of cost allocation

A foundational principle for achieving efficient outcomes through pricing is the concept of marginal cost. When prices are set equal to the marginal (or incremental) cost of providing an additional unit of service, then users will consume up to the point where their marginal benefit equals the marginal cost they impose. Setting prices equal to marginal cost is generally called marginal cost pricing.

The principle underlying marginal cost pricing is causal responsibility, ie, all the purchases of any commodity or service should be made to bear the additional costs that are imposed on the economy by the provision of one additional unit. It follows that causal responsibility, and therefore economic efficiency, is a forward-looking concept. This means that sunk costs are not relevant from an economic efficiency perspective because they cannot be avoided through changes in current or future behaviour.

The principle of causal responsibility extends beyond costs borne by direct participants to a transaction to include costs that fall on third parties. Such costs are known as negative externalities in economics. In the presence of negative externalities, efficiency requires that prices and so cost allocation reflect all the marginal costs of production and consumption, not just those borne by the transacting parties.

Although the principle of causal responsibility provides clear guidance for many costs, there are some costs for which no meaningful causal allocation can be identified. In economics, these are referred to as common costs. Common costs arise where an activity or asset provides multiple services jointly, such that its costs do not vary with the provision of any single service or the consumption of any individual user.

Common costs frequently arise in regulated infrastructure services, including rural bulk water services. This reflects the natural monopoly characteristics of such services, which typically involve large, indivisible capital investments, such as dams, that provide multiple services or serve multiple users simultaneously. Where common costs are present, marginal cost pricing alone is insufficient because it does not in and of itself enable the recovery of these shared costs. As a result, common costs must be allocated across users in some manner to ensure that the regulated service is able to recover its efficient costs.

Economic principles establish that, in the presence of common costs, the quantum of costs to be allocated to a particular service should be:

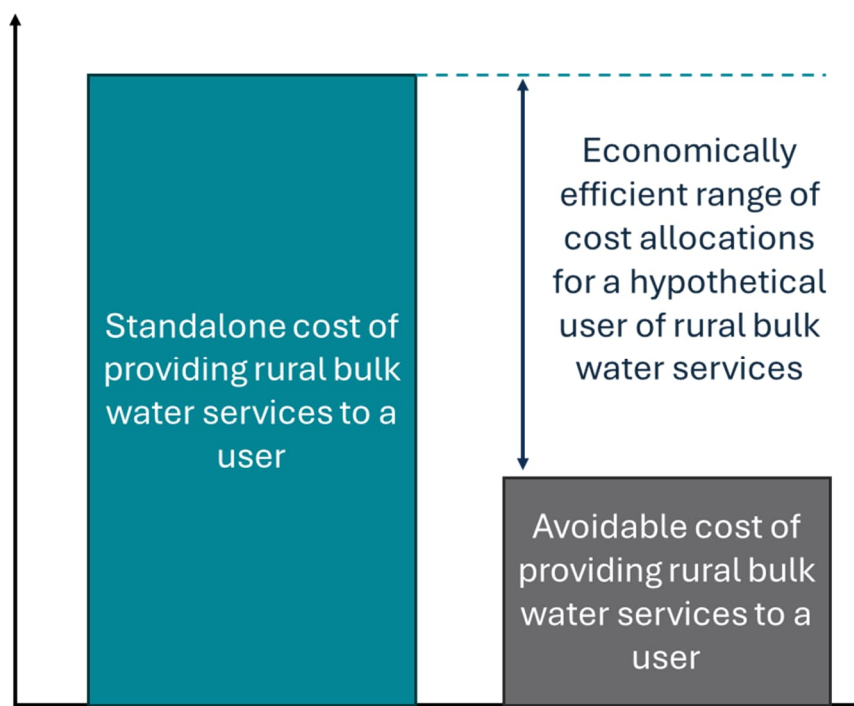
- no less than the avoidable (or incremental) cost of each relevant service, being the cost that could be avoided if that service were not provided, assuming that all other services continue to be provided; and
- no more than the standalone cost of each relevant service, being the total cost of providing that service on its own.

Allocating costs between the bounds of avoidable and standalone cost promotes economic efficiency because:

- costs allocated to each service are at least sufficient to cover the costs causally attributable to providing that service, thereby preventing inefficient cross-subsidies between services; and
- costs allocated to each service do not exceed the standalone cost of the service, thereby preventing inefficient exit or substitution by users seeking lower-cost alternatives.

Figure E1 below illustrates the range of economically efficient cost allocations for a hypothetical user of rural bulk water services. It demonstrates that economic principles define the bounds of efficient cost allocation, but do not prescribe a unique allocation within those bounds.

Figure E1: Economically efficient range of cost allocations for a hypothetical rural bulk water user



Source: HoustonKemp illustration

Assessment of current cost shares framework

IPART's current framework for determining cost shares centres on the impactor pays approach. Under this approach, IPART identifies which parties are potential impactors for each activity undertaken by WaterNSW in supplying bulk water in the rural valleys. The intent is to allocate the efficient costs of these activities to the parties whose actions create the need for the cost to be incurred.

It follows that the impactor pays approach is built around the principle of causal responsibility. In practice, the impactor pays approach aligns closely with the concept of avoidable cost: allocating costs to the parties who create the need for an expenditure is consistent with assigning them the forward-looking costs that would be avoided if they ceased using the service. By its nature, the avoidable cost test requires consideration of a hypothetical scenario in which a user or group of users cease using the service. This approach is known in economics as counterfactual analysis, which IPART employs in applying the impactor pays approach.

Taken together, the focus on causal responsibility and the use of counterfactual analysis means that the existing cost shares framework is well grounded in economic theory. However, the interpretation of the

counterfactual in previous cost share reviews has departed from the typical forward-looking nature of the economic concept of efficiency.

The counterfactual scenario IPART currently uses is a world without high consumptive water use. This counterfactual has historically been interpreted as meaning 'there being no dam built in the first place'. We consider that this characterisation of the counterfactual is in tension with the economic efficiency rationale underpinning the impactor pays approach. In effect, it focuses on costs that could have been avoided in a hypothetical world without high consumptive water use, rather than on the forward-looking costs that can be avoided through changes in current or future behaviour.

The consequence of this approach is that the resulting cost shares reflect a normative judgment about how costs should be allocated, rather than an outcome dictated by economic efficiency alone. By anchoring the counterfactual to the original purpose of dam construction, the framework implicitly assigns ongoing cost responsibility to consumptive users on the basis of historical investment drivers. While such an approach legitimately reflects regulatory judgment, it does not follow directly from economic efficiency considerations.

We observe that the historical discussion of cost shares for rural bulk water services has often been framed as a choice between an impactor pays approach and alternative approaches, such as beneficiary pays. Signalling economic efficiency is an appropriate and important objective for guiding cost shares. However, in the presence of common costs, economic efficiency alone does not determine a unique cost allocation. Rather, allocating costs within the efficient bounds is unavoidably a matter of regulatory judgment.

Accordingly, approaches such as impactor pays and beneficiary pays should not be understood as mutually exclusive alternatives. Instead, they represent different ways of exercising regulatory judgment when allocating common costs. It follows that a key question in designing the cost shares framework is how regulatory judgment should be exercised in a disciplined, defensible manner.

Our proposed cost shares framework

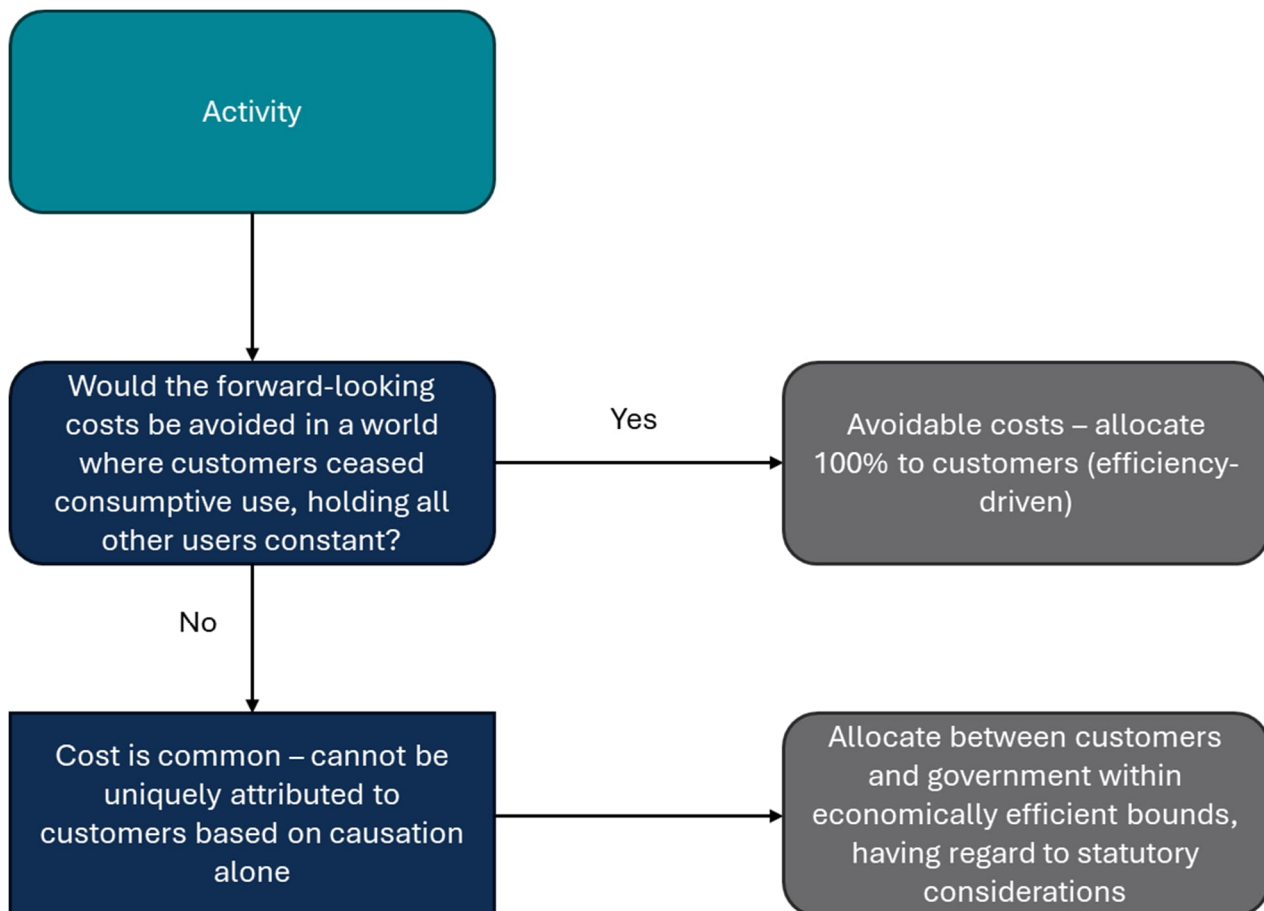
We propose a two-step framework for determining cost shares. The first step applies a forward-looking avoidable cost test, using counterfactual analysis to identify whether the costs of an activity would be avoided in a world in which WaterNSW's consumptive water customers ceased consumption, while all other users remain unchanged. Under this counterfactual, WaterNSW is assumed to continue to own and operate its infrastructure in a prudent and efficient manner to deliver non-consumptive and public-interest services. Where costs are found to be avoidable, they are fully allocated to customers on efficiency grounds.

Where the costs of an activity would not be avoided in that counterfactual world and therefore constitute common costs, the second step involves the exercise of regulatory judgment to allocate those costs within efficient bounds, having regard to IPART's statutory considerations under section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992 (NSW)* (the IPART Act). Such an assessment can be given effect by:

- starting from the existing cost shares as a reference point, since they provide an implicit weighting of efficiency, equity and stakeholder acceptability that has already been tested;
- examining whether circumstances have changed sufficiently to justify a departure from the existing cost shares;
- examining what is driving the expenditure being undertaken for each activity because, even where costs are common, some users or policy objectives may be seen as the primary reason that the activity is occurring;
- developing a reasoned view as to the distribution of benefits from each of WaterNSW's rural bulk water activities; and
- considering WaterNSW's customers' ability to pay and any distributional impacts, such as whether the prices implied by specific cost shares could materially affect customer viability and regional economies.

Figure E2 provides an overview of our proposed cost shares framework.

Figure E2: Overview of proposed cost shares framework



Source: HoustonKemp illustration

Recommended cost shares

We have applied our proposed framework to determine appropriate cost shares for WaterNSW's activities. In determining these cost shares, we have assumed that costs incurred as part of providing rural bulk water services have been allocated to each activity either directly or indirectly, ie, an allocation of overheads.

We have also applied our framework to the activities undertaken by the Murray Darling Basin Authority (MDBA) Joint programs and the Dumaresq-Barwon Border Rivers Commission (BRC) that relate to WaterNSW's share of the NSW government's contribution to the MDBA and the BRC. We have approached this task by broadly mapping the relevant activity to its functionally equivalent WaterNSW activity and applying the corresponding cost share. It would be open to the Tribunal to adopt a different cost share in future reviews where circumstances warrant, such as if the drivers of expenditure or the distribution of benefits diverge materially between the two activities.

Our recommended cost shares are summarised in the tables below. Since the application of regulatory judgment is a key feature of our proposed framework, we have developed ranges for appropriate cost shares where relevant. We note that it is open to the Tribunal to adopt a cost share outside of the proposed ranges depending on its assessment of the various statutory considerations to which it is to have regard.

Table E1: Recommended cost shares for WaterNSW's rural bulk water activities

Activity	Customer share (%)	Government share (%)
Customer support	100	0
Customer billing	100	0
Metering and compliance	100	0
Water delivery and other operations	95-100	0-5
Flood operations	50-80	20-50
Hydrometric monitoring	90	10
Water quality monitoring	80	20
Direct insurances	100	0
Corrective maintenance	95	5
Routine maintenance	95	5
Asset management planning	95	5
Dam safety compliance	50-80	50-20
Dam safety compliance (pre-1997)	0	100
Environmental planning and protection	50-80	20-50
Corporate systems	Cost-weighted average of other shares	Cost-weighted average of other shares
ICD rebates	100	0
Renewals and replacement	95	5
Risk transfer product	100	0

Source: HoustonKemp analysis

Table E2: Recommended cost shares for MDBA and BRC activities

Activity	Customer share (%)	Government share (%)
MDBA		
Asset management strategies	95	5
RMO asset renewal, replacement, operation and maintenance	95	5
Hydrometric monitoring	90	10
Environmental asset renewal, replacement, operation and maintenance	95-100	0-5
Water delivery and river operations	95-100	0-5
BRC		
Bulk water operations	95-100	0-5
Bulk water preventative	95	5
Bulk water corrective	95	5
States' wholesale water sharing management – border rivers	95-100	0-5
Renewals enhancements	95	5

Source: HoustonKemp analysis

1. Introduction

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART or the Tribunal) is responsible for setting the maximum prices that WaterNSW can charge its customers for water services. IPART is currently undertaking a review to set maximum prices for WaterNSW's rural bulk water services from 1 July 2026.

As part of this review, IPART will determine cost shares to allocate the prudent and efficient costs of rural bulk water services between water customers and the NSW government (on behalf of other users and the broader community). Since IPART's 2001 bulk water determination, the framework for determining these cost shares has been based on the 'impactor pays' principle.

Under the impactor pays framework, IPART determines which parties are potential impactors for each activity undertaken by WaterNSW in supplying bulk water in the rural valleys. This approach aims to allocate prudent and efficient costs to those who create the need for those costs to be incurred. It is intended to promote economic efficiency by ensuring water customers face the costs their consumption create, incentivising consumption only where benefits exceed costs.

The impactor pays framework has been subject to considerable scrutiny from stakeholders in recent times. For instance, in response to IPART's May 2025 information paper regarding WaterNSW's rural valley operations, some submissions questioned the current impactor pays approach and called for the NSW government to bear a greater share of the costs for some activities. This included some submissions that cited the inequity of rural customers paying for benefits enjoyed by the wider community. IPART's last major review of the cost shares framework occurred in 2019 and it has undertaken to review the framework as part of the upcoming determination.

In this context, IPART has engaged HoustonKemp to undertake a review of the cost shares framework used to allocate WaterNSW's capital and operating expenditure between water customers and the NSW government for its rural bulk water services. Specifically, we have been asked to:

- recommend whether the impactor pays principle, as implemented by IPART, should be retained, modified or replaced and, if making a recommendation to replace the impactor pays principle provide a detailed methodology and practical examples that demonstrate the suitability of the alternative approach;
- in making any recommendations have regard to alternative approaches including beneficiary pays and an approach similar to the one used by IPART for socially optimal fares in public transport;
- assess the existing cost share framework for WaterNSW and determine whether it is consistent with the objectives of the impactor pays principle;
- assess whether the counterfactual that IPART uses for impactor pays analysis is appropriate and, if not, make recommendations to an alternative;
- recommend changes to enhance the cost share framework to improve its transparency, cost-reflectively and practicality including changes to generalise the framework's application for potential activities and/or externalities that are not directly covered in the existing framework;
- recommend the appropriate shares for WaterNSW's operating expenditure between water users and the NSW government;
- recommend whether the user cost share framework should be retained in its current form for WaterNSW's capital expenditure and, subject to that recommendation:
 - > recommend the appropriate shares for the capital expenditure between water users and the NSW government; or
 - > recommend an alternative approach to allocate the capital expenditure, provide a detailed methodology for the approach and apply it to WaterNSW's efficient capital expenditure; and

- recommend the appropriate cost shares for the underlying operating and capital expenditure activities of the Murray Darling Basin Authority (MDBA) Joint programs and the Dumaresq-Barwon Border Rivers Commission (BRC) that relate to WaterNSW's share of the NSW government's contribution to the MDBA and the BRC.

We have approached each of the above tasks drawing on the economic principles of cost allocation and our experience with cost allocation practices in regulated infrastructure settings.

The remainder of this report is structured as follows:

- section 2 provides an overview of the economic principles of cost allocation;
- section 3 assesses the existing cost shares framework against the economic principles of cost allocation;
- section 4 presents our proposed amended cost shares framework, which we consider will enhance the transparency, cost-reflectivity and practicality of the process;
- section 5 applies our proposed framework to each of WaterNSW's rural bulk water activities and recommends appropriate cost shares; and
- section 6 applies our proposed framework to each of the relevant MDBA and BRC activities.

2. Economic principles of cost allocation

The cost shares framework is, at its core, an exercise in cost allocation. This section provides an overview of the economic principles of cost allocation. It explains that cost allocation should reflect causal responsibility, consistent with economic efficiency. However, where there are common costs present, economic efficiency alone cannot determine a unique cost allocation.

Table 2.1 below provides a glossary of the key economic terms relevant to cost allocation.

Table 2.1: Glossary of economic terms relevant to cost allocation

Term	Definition and relevance to cost allocation
Economic efficiency	Cost allocation is principally concerned with allocative efficiency, which occurs when resources are allocated to their highest value uses. This requires consumers to face the costs their consumption creates, incentivising efficient decisions about whether and how much to consume.
Marginal cost	The additional cost of providing one more unit of a service. When prices are set equal to marginal cost (marginal cost pricing), users will consume up to the point where their marginal benefit equals the marginal cost they impose, achieving economic efficiency.
Avoidable/incremental cost	The cost of providing one additional discrete unit or block of service, or the cost that can be avoided by not providing that unit of block of service. Closely related to marginal cost, noting that marginal cost strictly refers to an infinitesimally small change.
Causal responsibility	The principle that costs should be allocated to those whose actions or consumption create the need for those costs to be incurred.
Negative externality	A cost that falls on third parties who are not direct participants in a transaction.
Social marginal cost	The full cost to society of producing one additional unit of a good or service, including both the private costs borne by transacting parties and any external costs imposed on third parties.
Common costs	Costs that arise where an activity or asset provides multiple services jointly, such that the costs do not vary with the provision of any single service or the consumption of any individual user. These costs cannot be causally attributed to any specific service or user.
Standalone cost	The total cost of providing a particular service on its own, without any other services being provided.

Source: HoustonKemp analysis

2.1 Cost allocation should reflect causal responsibility

Economic efficiency is achieved when resources are allocated to their highest value uses. In the context of regulated infrastructure services, this requires that users face the costs their consumption or use creates, incentivising efficient decisions about whether and how much to consume.

A foundational principle for achieving efficient outcomes through pricing is the concept of marginal cost. When prices are set equal to the marginal (or incremental) cost of providing an additional unit of service, then users will consume up to the point where their marginal benefit equals the marginal cost they impose. Setting prices equal to marginal cost is generally called marginal cost pricing.

The principle underlying marginal cost pricing is causal responsibility. As Alfred Khan explains:¹

All the purchasers of any commodity or service should be made to bear such additional costs – only such, but also all such – as are imposed on the economy by the provision of one additional unit.

Causal responsibility necessarily requires consideration of the time dimension of cost incurrence. While all costs might theoretically be considered avoidable over a sufficiently long time horizon, such an interpretation

¹ Khan, A.E., *The economics of regulation – principles and institutions*, 1988, p 71.

would not promote efficient outcomes. This is because it would include costs that are already sunk and cannot be avoided through changes in current or future behaviour. Put another way, causal responsibility is a forward-looking concept:²

It is for the higher future costs or the decline in future values – not for fixed, historically sunk costs – that the marginal production is causally responsible for; it is only the future, not the past, costs that will be saved if the production is not undertaken.

The principle of causal responsibility extends beyond costs borne by direct participants to a transaction to include costs that fall on third parties. Such costs are known as negative externalities in economics.³ Examples include pollution from production processes or loud music at night.

In the presence of negative externalities, efficiency requires that prices and so cost allocation:⁴

...reflect all the (marginal) costs of production and consumption – not only those borne directly by the transacting parties but also those that may be foisted on outsiders.

When prices reflect only the private marginal cost, consumption will exceed the socially optimal level because users do not face the true resource cost that their consumption or use creates. Allocating costs such that prices reflect the higher social marginal cost 'internalises the externality' so that users face the full social cost of their decisions.

2.2 Economic efficiency does not determine a unique cost allocation

Although the principle of causal responsibility provides clear guidance for many costs, there are some costs for which no meaningful causal allocation can be identified. In economics, these are referred to as common costs.⁵ Common costs arise where an activity or asset provides multiple services jointly, such that its costs do not vary with the provision of any single service or the consumption of any individual user.

Common costs frequently arise in regulated infrastructure services, including rural bulk water services. This reflects the natural monopoly characteristics of such services, which typically involve large, indivisible capital investments, such as dams, that provide multiple services or serve multiple users simultaneously. Where common costs are present, marginal cost pricing alone is insufficient because it does not in and of itself enable the recovery of these shared costs. As a result, common costs must be allocated across users in some manner to ensure that the regulated service is able to recover its efficient costs.

Economic principles establish that, in the presence of common costs, the quantum of costs to be allocated to a particular service should be:⁶

- no less than the avoidable (or incremental) cost of each relevant service; and
- no more than the standalone cost of each relevant service.

The avoidable cost of a particular service is the cost that could be avoided if that service were not provided, assuming that all other services continue to be provided. In this way, avoidable cost is closely linked to marginal cost because it represents the forward-looking costs for which the service is causally responsible.

Avoidable cost therefore forms the lower bound for allocating costs to a service. If the costs (and therefore the price) allocated to a service fall below its avoidable cost, the shortfall must be recovered from users of other services. This gives rise to cross-subsidisation. Allocations below this threshold are problematic from

² Khan, A.E., *The economics of regulation – principles and institutions*, 1988, p 73.

³ Abelson, P., *Public economics – principles and practice*, Third edition, 2012, p 57.

⁴ Khan, A.E., *The economics of regulation – principles and institutions*, 1988, p 69.

⁵ Brown, S.J. and Sibley, D.S., *The theory of public utility pricing*, Cambridge University Press, 1986, p 44.

⁶ Brown, S.J. and Sibley, D.S., *The theory of public utility pricing*, Cambridge University Press, 1986, pp 51-54.

an economic efficiency perspective because, in principle, users of other services would be better off if the service charged less than its avoidable cost were withdrawn.

In practice, the avoidable cost of a service that has costs in common with another service can be calculated in two equivalent ways, ie, it is equal to both:

- the total cost of providing all services less the standalone cost of all other services; and
- the cost that could be avoided if that particular service was no longer provided, assuming all other services continue to be provided.

The standalone cost of a service that has costs in common with another service is the total cost of providing that service on its own. Standalone cost forms the upper bound for allocating costs because, if the costs (and therefore the price) allocated to a service exceed its standalone cost, the users of the service would be charged more than it would cost to deliver the service by another means. Allocations above this threshold are problematic from an economic efficiency perspective because, in principle, the user could obtain the service through another means at a lower cost.

In practice, the standalone cost of a particular service that has costs in common with another service can be calculated in two different ways, ie, as either:

- the total cost of providing only that particular service; and
- the total cost of providing all services for which there are common costs, less the avoidable costs of providing all other services.

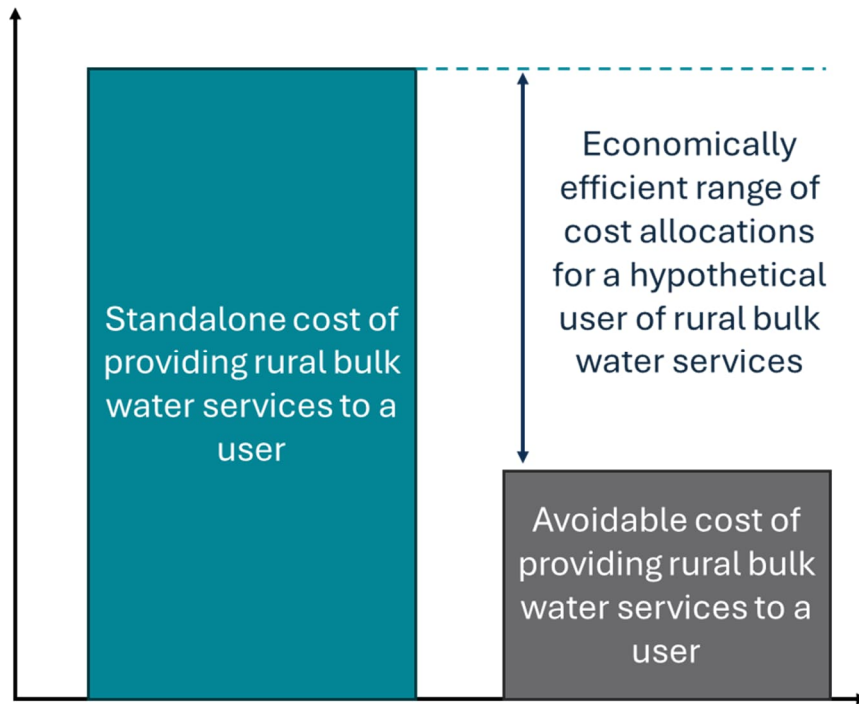
Allocating costs between the bounds of avoidable and standalone cost promotes economic efficiency because:

- costs allocated to each service are at least sufficient to cover the costs causally attributable to providing that service, thereby preventing inefficient cross-subsidies between services; and
- costs allocated to each service do not exceed the standalone cost of the service, thereby preventing inefficient exit or substitution by users seeking lower-cost alternatives.

Figure 2.1 below illustrates the range of economically efficient cost allocations for a hypothetical user of rural bulk water services. It demonstrates that economic principles define the bounds of efficient cost allocation, but do not prescribe a unique allocation within those bounds.



Figure 2.1: Economically efficient range of cost allocations for a hypothetical rural bulk water user



Source: HoustonKemp illustration



3. Assessment of current cost shares framework

This section sets out our assessment of the current cost shares framework, namely the impactor pays approach. We consider the framework to be well grounded in the principles underpinning economic efficiency. However, past applications of the approach have departed from the forward-looking nature of efficiency. Further, because economic efficiency alone does not determine a unique cost allocation, there is scope for the framework to take into account a broader set of considerations beyond impactor pays.

3.1 Framework is well grounded in economic efficiency

IPART's current framework for determining cost shares centres on the impactor pays approach. Under this approach, IPART identifies which parties are potential impactors for each activity undertaken by WaterNSW in supplying bulk water in the rural valleys. The intent is to allocate the efficient costs of these activities to the parties whose actions create the need for the cost to be incurred.

It follows that the impactor pays approach is built around the principle of causal responsibility. As discussed in section 2.1, allocating costs based on causal responsibility is well grounded in economic theory, provided a causal driver can be established as it promotes economic efficiency. In practice, the impactor pays approach aligns closely with the concept of avoidable cost: allocating costs to the parties who create the need for an expenditure is consistent with assigning them the forward-looking costs that would be avoided if they ceased using the service.

Section 2.2 explains that one method for estimating avoidable cost is to determine the costs that could be avoided if a particular service were no longer provided, assuming all other services continue. The same test can be applied at the level of a user or group of users to estimate their avoidable cost. By its nature, the avoidable cost test requires consideration of a hypothetical scenario in which a user or group of users cease using the service. This approach is known in economics as counterfactual analysis. Consistent with the avoidable cost test, IPART employs counterfactual analysis in applying the impactor pays approach.

Taken together, the focus on causal responsibility and the use of counterfactual analysis means that the existing cost shares framework is well grounded in economic efficiency. However, as discussed below, the interpretation of the counterfactual in previous cost share reviews has departed from the forward-looking nature of efficiency.

3.2 Misapplication of the forward-looking efficiency principle

The counterfactual scenario IPART currently uses is a world without high consumptive water use.⁷ The then Tribunal described the key characteristics of this hypothetical world in its final report for the 2019 cost shares review as follows:⁸

In terms of WaterNSW (rural), we saw this [the counterfactual] as a world without the need to physically regulate water sources (eg, build dams). We considered this was appropriate as we found that the initial purpose of the construction of many of the rural dams WaterNSW operates and manages was to support consumptive use, including the development of townships and the agriculture industry.

Consistent with this characterisation of the counterfactual, IPART's consultant in the 2019 review noted that:⁹

⁷ IPART, *WaterNSW rural valleys pricing review 2025-26*, Discussion paper, October 2025, p 21.

⁸ IPART, *Rural water cost shares*, Final report, February 2019, p 23.

⁹ Aither, *Rural water cost sharing review*, Final report, January 2019, p 45.

...our understanding of IPART's counterfactual is that it is based on there being no dam built in the first place.

We consider that this characterisation of the counterfactual is in tension with the economic efficiency rationale underpinning the impactor pays approach. In effect, it focuses on costs that could have been avoided in a hypothetical world without high consumptive water use, rather than on the forward-looking costs that can be avoided through changes in current or future behaviour.

The consequence of this approach is that the resulting cost shares reflect a normative judgment about how costs should be allocated, rather than an outcome dictated by economic efficiency alone. By anchoring the counterfactual to the original purpose of dam construction, the framework implicitly assigns ongoing cost responsibility to consumptive users on the basis of historical investment drivers. While such an approach legitimately reflects regulatory judgment (discussed below), it does not follow directly from economic efficiency considerations.

From an economic efficiency perspective, an appropriate counterfactual for applying the impactor pays approach would instead focus on the costs that could be avoided by changes in current or future behaviour, holding all other services and users constant. In the context of WaterNSW's rural bulk water activities, this would involve identifying which activities would no longer be required if consumptive water use ceased, rather than treating the entire cost of the asset as avoidable. Such a counterfactual aligns with the forward-looking nature of economic efficiency, recognises the presence of common costs, and would inform the lower bound of efficient cost allocation without determining a unique cost share.

3.3 Incorporating broader regulatory considerations

Discussion of cost shares for rural bulk water services has often been framed as a choice between an impactor pays approach and alternative approaches, such as beneficiary pays. By way of example, the then Tribunal stated in the 2019 cost shares review that:¹⁰

We prefer the impactor pays approach over alternative approaches (such as a beneficiary pays approach) as we consider it achieves better efficiency outcomes, as it results in customers facing the full costs of the service they receive. In addition, it is a more practical and transparent method for allocating costs and is consistent with the funding hierarchy that we have used previously for other services.

Signalling economic efficiency is an appropriate and important objective for guiding cost shares. However, as explained in section 2.2, in the presence of common costs it does not determine a unique cost allocation. Rather, economic principles establish a range of allocations that are consistent with efficiency, bounded by avoidable cost at the lower end and standalone cost at the upper end.

Within these bounds, allocating costs is unavoidably a matter of regulatory judgment. This is well recognised in the regulatory economics literature. As Phillips observes:¹¹

...all methods of [cost] allocation rest ultimately on judgment, and the final decision is open to dispute.

Accordingly, approaches such as impactor pays and beneficiary pays should not be understood as mutually exclusive alternatives. Instead, they represent different ways of exercising regulatory judgment when allocating common costs, provided the resulting allocations remain within the efficient range. Beneficiary pays, for instance, can be a legitimate basis for allocating common cost where it reflects the distribution of benefits from the infrastructure, or where broader public policy objectives are relevant.

It follows that a key question in designing the cost shares framework is how regulatory judgment should be exercised in a disciplined, defensible manner. This requires balancing the various objectives that a regulator

¹⁰ IPART, *Rural water cost shares*, Final report, February 2019, p 2.

¹¹ Phillips, C.F., *The regulation of public utilities*, 1993, p 654.

is tasked with pursuing. Such objectives are typically set out in the legislative instruments that give effect to the decision-making authority of the relevant regulator. For instance, the factors that the Tribunal must have regard to in exercising its functions are set out in section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992 (NSW)* (the IPART Act).

Trade-offs between these considerations are unavoidable. For example, a purely cost-causal allocation may promote economic efficiency but lead to undesirable social impacts. For this reason, it is critical that the rationale for cost shares is documented clearly and transparently. Doing so supports cost-reflective outcomes, improves stakeholder understanding of how costs are allocated and enhances the robustness and defensibility of the framework over time.

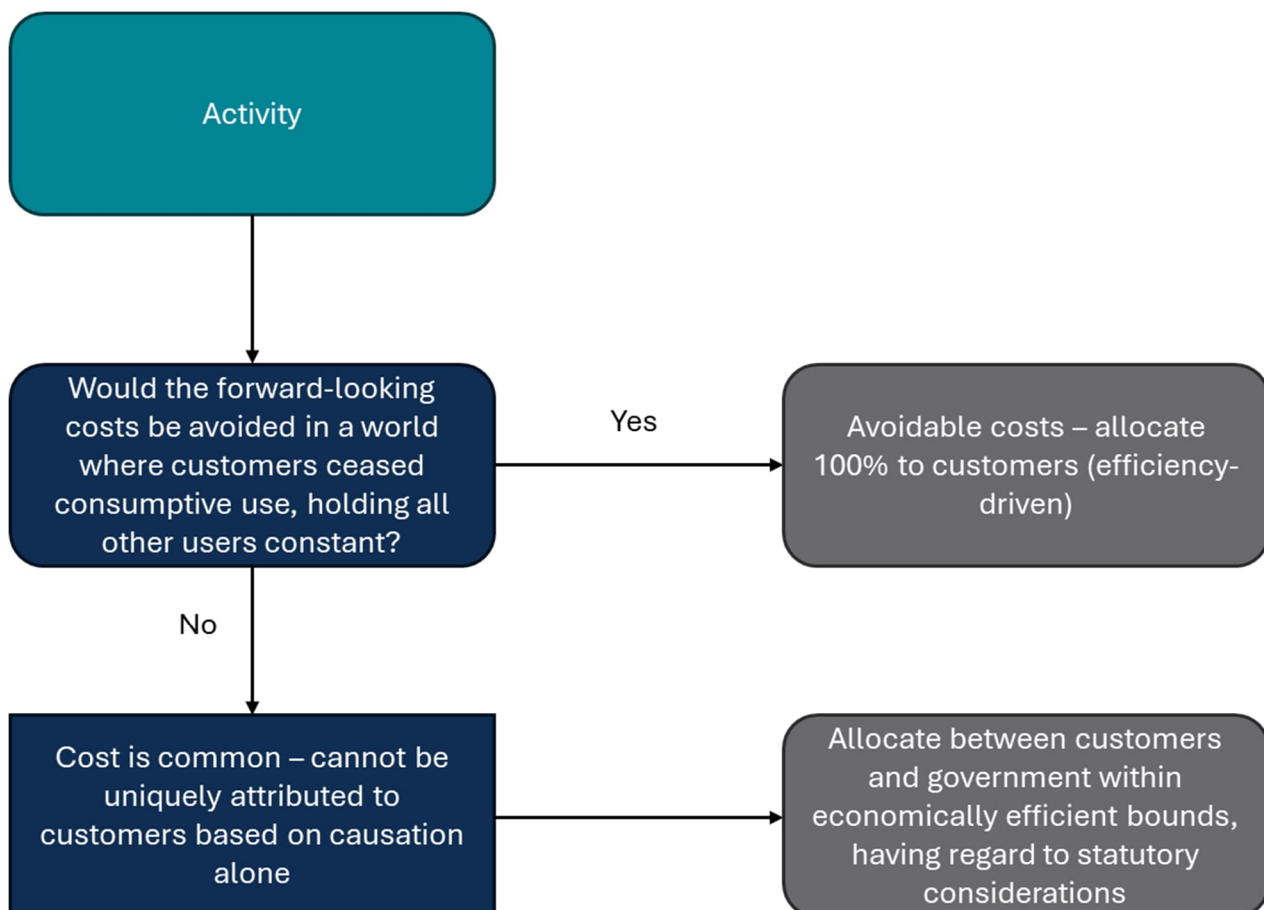
4. Proposed cost shares framework

We propose a two-step framework for determining the cost shares for each of the activities undertaken by WaterNSW in providing rural bulk water services. The first step applies a forward-looking avoidable cost test, using counterfactual analysis to identify whether the costs of an activity would be avoided in a world in which WaterNSW's consumptive water customers ceased consumption, while all other users remain unchanged. Where costs are found to be avoidable, they are fully allocated to customers on efficiency grounds.

Where the costs of an activity would not be avoided in that counterfactual world and therefore constitute common costs, the second step involves the exercise of regulatory judgment to allocate those costs within the efficient bounds, having regard to IPART's statutory considerations.

Our proposed framework is summarised in figure 4.1 below.

Figure 4.1: Overview of proposed cost shares framework



Source: HoustonKemp illustration

4.1 Step 1: Identifying avoidable costs through counterfactual analysis

The first step in our proposed framework is to determine, for each activity undertaken by WaterNSW, whether its forward-looking costs are caused by, and therefore avoidable if, consumptive water use by customers ceased. This assessment is undertaken using a counterfactual that reflects the efficient forward-looking management of the existing infrastructure in the absence of consumptive demand. Under this

counterfactual, WaterNSW is assumed to continue to own and operate its infrastructure in a prudent and efficient manner to deliver non-consumptive and public-interest services.

In applying this counterfactual, we proceed with the assumption that the dam is not decommissioned. Although decommissioning may, in principle, be an option under a forward-looking efficiency framework, for large rural dams we expect that the least cost approach is likely to be ongoing management of the asset through continued operation. This reflects ongoing public interest obligations and the costs and risks associated with decommissioning.

An activity's costs are classified as avoidable by customers if, under our counterfactual, WaterNSW would not need to incur the relevant forward-looking expenditure. Where this is the case, those costs are causally attributable to consumptive water customers and should be fully allocated to them on economic efficiency grounds. Where the forward-looking costs would still be incurred by a prudent and efficient operator under the counterfactual, ie, they are required to support non-consumptive services or broader community objectives, those costs are not avoidable by customers. Such costs are common costs and cannot be uniquely attributed to consumptive users on a causal basis.

In principle, the avoidable cost test could be applied symmetrically to any category of user, including non-consumptive users, by considering a counterfactual in which that category of use ceased while other services and users remain unchanged. However, we have not incorporated these alternative counterfactuals into our framework because, given the nature of rural bulk water infrastructure, it is unlikely in practice that few, if any, activities would be fully avoidable with respect to non-consumptive users.

Large multi-purpose dams were constructed at a scale capable of supporting consumptive use and, once in place, inherently provide a range of joint services to both consumptive and non-consumptive users. The activities required to safely operate and maintain this infrastructure are jointly required and would generally still need to be undertaken even if particular non-consumptive users or beneficiaries were absent. As a result, the relevant expenditure would typically still be incurred by a prudent and efficient operator. These costs therefore constitute common costs and cannot be causally attributed to users through a forward-looking avoidable cost test. This reflects the joint and non-separable nature of the services provided by the infrastructure.

4.2 Step 2: Exercising regulatory judgment over common costs

Once the first step has identified which activities comprise common costs, economic efficiency alone no longer determines how those costs should be shared between customers and the government. Instead, those costs must be allocated within the bounds of economically efficient allocations through the exercise of regulatory judgment.

This judgment should be exercised by reference to the matters IPART is required to consider under section 15 of the IPART Act. Within these constraints, the allocation of common costs should be guided by a structured assessment of relevant policy considerations. Such an assessment can be given effect by:

- starting from the existing cost shares as a reference point, since they provide an implicit weighting of efficiency, equity and stakeholder acceptability that has already been tested;
- examining whether circumstances have changed sufficiently to justify a departure from the existing cost shares;
- examining what is driving the expenditure being undertaken for each activity because, even where costs are common, some users or policy objectives may be seen as the primary reason that the activity is occurring or that costs are changing for that activity;
- developing a reasoned view as to the distribution of benefits from each of WaterNSW's rural bulk water activities; and
- considering WaterNSW's customers' ability to pay and any distributional impacts, such as whether the prices implied by specific cost shares could materially affect customer viability and regional economies.

This structured approach ensures that regulatory judgment is exercised consistently and transparently, with clear reasoning that stakeholders can understand. It recognises that different activities may warrant different allocations depending on their specific characteristics, while maintaining a principled framework for decision-making. It also acknowledges that cost shares can reasonably change over time, as the circumstances of users change and given an assessment of the underlying reasons for changes to common costs funded by users.

4.3 Practical considerations in applying our cost shares framework

In principle, the avoidable cost test should be applied at the level of individual cost components within each activity. This would allow costs that are causally attributable to particular users to be distinguished from those that are common. However, WaterNSW's cost data in relation to each activity is not currently reported in manner that is practicable for applying the avoidable cost test in this way.

Accordingly, we have applied the avoidable cost test at the aggregate activity level. Where an activity would not be undertaken in the counterfactual and its forward-looking costs would therefore be avoided, the activity is treated as avoidable with respect to customers and allocated accordingly under step one of the framework. Where an activity would continue to be undertaken in the counterfactual, its costs are treated as common costs and allocated under step two of the framework.

As a result of these practical constraints, activities that comprise a mix of avoidable and common cost components are classified as common costs. However, the exercise of regulatory judgment under step two may appropriately reflect an assessment of the relative contribution of avoidable and common elements when determining the allocation within the efficient range.

This approach strikes a balance between theoretical rigor and practical application. Importantly, if future improvements in cost reporting enable a more granular assessment of avoidable costs, the proposed framework would remain fit-for-purpose and could be applied at a more disaggregated level without modification.



5. Cost shares for WaterNSW activities

This section applies our proposed framework to determine appropriate cost shares for each of WaterNSW's activities. Since the application of regulatory judgment is a key feature of our proposed framework, we have developed ranges for appropriate cost shares where relevant. We note that is open to the Tribunal to adopt a cost share outside of the proposed ranges depending on its assessment of the various statutory considerations to which it is to have regard.

Table 5.1 summarises our recommended cost shares. In determining these cost shares, we have assumed that costs incurred as part of providing rural bulk water services have been allocated to each activity either directly or indirectly, ie, an allocation of overheads.

Table 5.1: Recommended cost shares WaterNSW's rural bulk water activities

Activity	Customer share (%)	Government share (%)
Customer support	100	0
Customer billing	100	0
Metering and compliance	100	0
Water delivery and other operations	95-100	0-5
Flood operations	50-80	20-50
Hydrometric monitoring	90	10
Water quality monitoring	80	20
Direct insurances	100	0
Corrective maintenance	95	5
Routine maintenance	95	5
Asset management planning	95	5
Dam safety compliance	50-80	50-20
Dam safety compliance (pre-1997)	0	100
Environmental planning and protection	50-80	20-50
Corporate systems	Cost-weighted average of other shares	Cost-weighted average of other shares
ICD rebates	100	0
Renewals and replacement	95	5
Risk transfer product	100	0

Source: *HoustonKemp analysis*

The sections below explain our reasoning underpinning the cost shares for each activity.

5.1 Customer support

Customer support involves the:¹²

...management and administration of the CAG's [customer advisory group], customer education and support materials.

¹² WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

A prudent and efficient operator would not undertake customer-facing activities of this nature in the absence of consumptive demand from customers. The forward-looking costs of this activity would therefore not be incurred. These costs are therefore avoidable, and we recommend a customer share of 100 per cent.

5.2 Customer billing

Customer billing:¹³

...deals with customer enquiries, transaction and complaints services (Helpdesk), invoicing, receipting, debtor management, system administration, postage to collect regulated revenue.

A prudent and efficient operator would not undertake customer-facing activities of this nature in the absence of consumptive demand from customers. The forward-looking costs of this activity would therefore not be incurred. These costs are therefore avoidable, and we recommend a customer share of 100 per cent.

5.3 Metering and compliance

The metering and compliance activity:¹⁴

...deals with customer water ordering, customer water accounting management, customer site surveillance, compliance reporting, meter reading, system management and usage apportionment and licensing issues resolution.

A prudent and efficient operator would not undertake customer-facing activities of this nature in the absence of consumptive demand from customers. To the extent that compliance reporting relates to regulatory obligations for environmental or safety management that would continue in the absence of consumptive use, those costs may be common. However, based on the activity description emphasising customer water accounting and licensing, we consider the driver to be consumptive customers.

We therefore consider the costs of this activity to be avoidable with respect to consumptive water customers. Accordingly, we recommend a customer cost share of 100 per cent on economic efficiency grounds.

In the event that compliance reporting was sufficiently broad so as to include some modest degree of common costs, we note that the activity has historically had a 100 per cent customer share. In our opinion, there is no clear basis on which to justify a change in this share given:

- any common costs would likely be immaterial;
- the predominant driver and beneficiary of compliance reporting is consumptive use; and
- stability in cost shares is valuable where circumstances have not materially changed.

The application of regulatory judgment would therefore also support a customer share of 100 per cent.

5.4 Water delivery and other operations

Water delivery and other operations:¹⁵

...provides services related to water release from dams to customers, works approval and other compliance reporting and use of SCADA and manual work required to release water from dams, weir and regulators. Water release from dams to customers could include normal environmental

¹³ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

¹⁴ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

¹⁵ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

and system flows (includes supplementary flow management), short-term and long-term demand forecasting and resource assessment.

We understand from the 2019 cost share review that the release of water under this activity can also relate to facilitating recreational use of WaterNSW's infrastructure.¹⁶

A prudent and efficient operator would undertake customer-facing activities of this nature in the absence of consumptive demand from customers due to the role of this activity in providing services to non-consumptive users, such as recreational users. However, we expect that some of the costs associated with this activity is likely to be related to the number of water releases and so would be partly avoidable if there was no consumptive demand and so less water releases. In the absence of a forensic analysis of the avoidable costs associated with the provision of this activity for consumptive users, we believe it is reasonable to treat the forward-looking costs of this activity as being comprised of common costs to be allocated.

That said we also believe that in considering the appropriate cost shares, it would be appropriate to take account of any qualitative information supporting the extent to which consumptive users are the principal driver of these costs as compared to non-consumptive users, if available.

The current cost shares for this activity are 95 per cent for customers and 5 per cent for government. In principle, this implies that consumptive users are the principal driver of these costs. To the extent that some of these costs are common, this cost share implies that it is appropriate for these costs to also be recovered from consumptive users. This is consistent with the customer share having been decreased from 100 per cent in the 2019 review due to the small benefits derived by recreational users from this activity.

In our opinion, the question of whether this allocation should be changed turns on the magnitude of recreational benefits relative to the costs of the activity. One way to inform this assessment is through revealed preference. If recreational benefits were large relative to costs, we would expect to observe either users being willing to pay directly for access, or governments investing in recreational facilities independently of the water infrastructure.

In practice, WaterNSW does not charge recreational users and investment in dam infrastructure has not been driven by recreational objectives. This suggests that recreational benefits, while real, are modest relative to the overall cost of operating the system. Accordingly, while some government contribution may be justified to reflect the joint public benefits of this activity, the application of regulatory judgment would support a customer share at the upper end of the feasible range. On this basis, we consider that a customer share of between 95 and 100 per cent is appropriate.

5.5 Flood operations

Flood operations:¹⁷

...provides flood staff training and onsite works required for flood operations.

Applying the avoidable cost test to flood operations requires consideration of when flood operations may be undertaken. We understand from the description of this activity in the 2019 review that flood operations may occur due to:¹⁸

- floods arising from dam failure; or
- floods arising from rainfall.

¹⁶ Aither, *Rural water cost sharing review*, Final report, January 2019, p 38.

¹⁷ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

¹⁸ Aither, *Rural water cost sharing review*, Final report, January 2019, p 40.

Based on these circumstances, we consider that a prudent and efficient operator would undertake expenditure of this nature in the absence of consumptive demand from customers. The forward-looking costs of this activity would therefore be incurred, reflecting the fact that both forms of flood risk would persist. It follows that this activity comprises common costs that must be allocated using regulatory judgment.

The current cost shares for this activity are 80 per cent for customers and 20 per cent for government. The customer share was increased from 50 per cent in the 2019 review because it may be possible to recover costs from downstream communities (beneficiaries of flood operations) from the local water utilities that service them (since these utilities are WaterNSW customers).¹⁹

We consider that under our proposed framework regulatory discretion would not be exercised in this way. Where costs are common, our framework envisages that judgment is exercised by reference to the distribution of benefits, the presence of public goods or externalities, equity considerations and stability by reference to evidence and analysis that reasonably reflect those factors. The possibility that costs could be recovered from a particular group through a separate charging mechanism does not, of itself, provide a principled basis for reallocating costs to a different group whose relationship to the underlying benefits is indirect.

In particular, flood protection benefits are diffuse and are not well proxied by local water utility customers. Further, the existence of a potential downstream recovery mechanism does not support allocating a greater share of flood operations costs to all consumptive water customers.

Rather, the allocation of flood operations costs involves balancing two key considerations. First, the existence and operation of large dams give rise to flood-related risks. It is therefore reasonable for consumptive water customers, who derive ongoing benefit from the infrastructure, to contribute to the costs of managing those risks. Second, flood mitigation delivers substantial public-good benefits to downstream communities and the broader public, supporting a meaningful contribution from government.

Based on these considerations, we recommend an appropriate customer cost share of between 50 to 80 per cent. The point within this range should be informed by other relevant considerations, such as consumptive users' ability to pay and the primary function of the asset. Specifically, for dams that were explicitly built for flood mitigation, the construction of the infrastructure provides evidence about the relative importance of flood benefits to the community and supports a higher government contribution for these dams.

5.6 Hydrometric monitoring

Hydrometric monitoring relates to:²⁰

...the monitoring of the availability and condition of surface water by measuring water level, stream flow, rainfall and key water quality indicators.

We understand that hydrometric monitoring also plays a role in flood mitigation,²¹ reflecting, in particular, the measurement of water levels and stream flow.

A prudent and efficient operator would continue to undertake expenditure of this nature in the absence of consumptive demand from customers and, as such, the costs are common. This reflects the need to safely operate and manage the river system and associated infrastructure.

The current cost shares for this activity are 90 per cent for customers and 10 per cent for government. These shares have remained unchanged in the past two reviews of the cost shares framework. Accordingly,

¹⁹ Aither, *Rural water cost sharing review*, Final report, January 2019, p 73.

²⁰ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

²¹ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

whether to adjust this allocation turns on whether there has been a material change in the drivers of this activity or distribution of benefits.

Hydrometric monitoring delivers benefits to both consumptive water users and the broader community. Consumptive users derive direct and material benefits from the collection of hydrological data, which underpins water availability assessments, allocation decisions, system operation and risk management. The scale, resolution and ongoing nature of monitoring is likely primarily driven by these requirements. While the activity also provides important public-interest benefits, including supporting flood monitoring, a lower level of monitoring would likely be sufficient for these purposes alone.

In our opinion, the existing cost shares broadly reflect this distribution of benefits, with customers bearing the majority of costs consistent with their predominant benefit from operational modelling and allocation management. Without a material change in circumstances or evidence that the current allocation materially misaligns with benefit distribution, there is no clear rationale to depart from the current allocation. We therefore recommend retaining a customer share of 90 per cent for this activity.

5.7 Water quality monitoring

Water quality monitoring provides:²²

...provides the water quality monitoring and reporting for storage water. This includes the Fish River water quality management plan.

A prudent and efficient operator would continue to incur expenditure on water quality monitoring under our counterfactual because it would remain necessary to meet environmental and regulatory obligations, manage public health risks, and support the safe and responsible operation of dams. As such, this activity is a common cost to be allocated.

The current cost share for this activity is 80 per cent for customers and 20 per cent for government. This represents an increase from a 50 per cent customer share applied prior to the 2019 cost shares review.

Water quality monitoring delivers benefits to both consumptive water users and the broader community. The primary driver of monitoring activities is ensuring that storage water meets drinking water standards and operational requirements for consumptive use, particularly for local water utilities.²³ These users derive direct and material benefits from monitoring, including assurance of water quality, support for operational decision-making, and risk management. At the same time, water quality monitoring also supports environmental protection and public health outcomes.

We consider that the scale and intensity of monitoring are largely determined by the requirements associated with consumptive use, particularly drinking water supply. A monitoring program focused solely on environmental and public health objectives would likely be less intensive than the current program. On this basis, we consider that retaining the existing cost share of 80 per cent for customers is consistent with our proposed framework and does not warrant a change in the absence of evidence of material misalignment with benefits or adverse impacts on ability to pay.

5.8 Direct insurances

Direct insurances provide:²⁴

²² WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

²³ The focus of this report is on the cost shares between WaterNSW's customers and government. There may be a separate question as to the appropriate allocation of costs between WaterNSW's customers.

²⁴ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 14.

...insurances such as public liability and building and other asset insurance.

A prudent and efficient operator would continue to incur expenditure on direct insurances under our counterfactual. These costs arise from the existence and ongoing operation of large infrastructure assets and the associated risks to assets, property, safety and third parties. This activity is therefore a common cost.

The current cost share for this activity is 100 per cent for customers. This allocation has been applied historically. In the 2019 review, the allocation was justified on the basis that if WaterNSW's assets did not exist, then the insurance would not be required.²⁵ This reflects the characterisation of IPART's counterfactual as discussed in section 3.2.

There is merit in reevaluating this cost share due to our concerns about the characterisation of IPART's counterfactual in the 2019 review. However, we consider that retaining a full customer allocation remains appropriate and is within the reasonable range of outcomes under our proposed framework.

While public liability and asset insurance mitigate risks that may affect the broader community, we see the primary economic value of insuring WaterNSW's assets lies in preserving the availability and continuity of infrastructure services. Consumptive water customers derive direct, ongoing and material benefits from continued asset availability, including supply reliability, entitlement security and reduced exposure to service disruption.

In the absence of a material change in circumstances, evidence that the current allocation materially misaligns with benefit distribution or compelling equity considerations, we recommend maintaining a customer cost share of 100 per cent.

5.9 Corrective and routine maintenance

Corrective maintenance includes:²⁶

...the breakdown maintenance of assets which provide services to customers and other water users.

Routine maintenance includes:²⁷

...the planned or condition-based maintenance of assets which provide services to customers and other water users.

A prudent and efficient operator would continue to incur expenditure on corrective and routine maintenance without consumptive demand from customers because such maintenance is required to ensure the safe and reliable operation of large infrastructure regardless of the mix of users or purposes the infrastructure serves. These costs are therefore common.

The current cost share for these activities is 95 per cent for customers and 5 per cent for government. The customer share was reduced from 100 per cent as part of the 2019 cost shares review, reflecting that a subset of assets subject to corrective maintenance, eg, public access roads and bridges, do not directly support consumptive water services and primarily provide public-access or broader community benefits.²⁸ At the time of the review, it was estimated that no more than around 10 per cent of corrective and routine maintenance expenditure related to such assets.

²⁵ Aither, *Rural water cost sharing review*, Final report, January 2019, p 91.

²⁶ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

²⁷ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

²⁸ Aither, *Rural water cost sharing review*, Final report, January 2019, p 42.

In our opinion, the existing allocations remain appropriate. While a small proportion of corrective and routine maintenance expenditure relates to assets that predominantly service public or non-consumptive purposes, the majority of expenditure supports assets whose continued availability and safe operation are of direct and material value to consumptive water customers. The adoption of a 95 per cent customer share appropriately reflects this distribution of benefits, while also recognising that the precise proportion of maintenance relating to public-access assets may vary over time and is difficult to quantify precisely.

Without a material change in circumstances or evidence that the proportion of corrective and routine maintenance attributable to non-consumptive assets has materially increased, there is no clear basis to depart from the current allocation. We therefore recommend retaining a customer cost share of 95 per cent for both activities.

5.10 Asset management planning

Asset management planning relates to:²⁹

...asset planning, including safety and maintenance planning, asset condition auditing, operational risk and incident management. It also includes the related procurement, dam safety compliance and operations.

A prudent and efficient operator would continue to undertake asset management planning of this nature under our counterfactual because these activities are required to ensure the safe, reliable and compliant operation of large infrastructure assets and arise from asset ownership and ongoing operation. While the extent of asset management planning activity might be related to the extent to which assets are provided for consumptive users, we do not believe that it would have a material impact on costs. It follows that we believe these costs should be considered as common costs.

The current cost share for this activity is 95 per cent for customers and 5 per cent for government. The customer share was reduced from 100 per cent as part of the 2019 cost shares review, for the same reason discussed above regarding corrective and routine maintenance.

Consistent with the approach adopted for corrective and routine maintenance, we consider that the existing allocation appropriately reflects the distribution of benefits from this activity. Most asset management planning expenditures support the continued availability, safety and reliability of infrastructure relied upon by customers. A modest government contribution appropriately recognises the presence of some non-consumptive and public-interest assets.

In the absence of evidence that the proportion of asset management planning attributable to non-consumptive assets has materially increased, we recommend maintaining a customer cost share of 95 per cent for asset management planning.

5.11 Dam safety compliance

Dam safety compliance includes:³⁰

...dam surveillance and dam safety risk inspections, reviews, audits and associated risk assessments.

A prudent and efficient operator would continue to undertake expenditure related to dam safety compliance in the absence of consumptive demand from customers. This is because these activities are required to manage the safety risks associated with the existence and operation of large dams and are driven by

²⁹ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

³⁰ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 5.

statutory and regulatory requirements, as well as the need to protect downstream communities and the broader public from dam failure risks.

The current cost share for this activity is 80 per cent for customers and 20 per cent for government. The customer share was increased from 50 per cent as part of the 2019 cost shares review.

In our opinion, there are two reasons why it is appropriate to review this cost share. First, the increase in the cost share in 2019 was on the premise that, if there was no dam, there would not be a risk of dam failure, and therefore there would not be a need to meet dam safety requirements.³¹ We explain in section 3.2 that this approach effectively allocates common costs on the basis of historical purpose. It is open to the present Tribunal to consider whether it intends to exercise its regulatory judgment in the same way. Second, there have been changes to the compliance framework in the *Dams Safety Act 2015* that did not take effect until 2019 and, as such, were not factored into previous cost estimates.³² These regulatory changes may have altered the cost drivers and allocation basis for dam safety activities.

Consistent with our discussion of flood operations above, the allocation of dam safety compliance costs turns on the Tribunal's balance of two considerations, ie:

- the existence and operation of large dams give rise to flood-related risks, meaning it is reasonable for consumptive water customers, who derive ongoing benefit from the infrastructure, to contribute to the costs of managing those risks; and
- dam safety contributes to mitigation of flood risk and catastrophic failure, which delivers substantial public-good benefits to downstream communities and the broader public, supporting a meaningful contribution from government.

As above, we recommend an appropriate customer cost share of between 50 to 80 per cent. The point within this range should be informed by other relevant considerations, such as consumptive users' ability to pay and the primary function of the asset. Specifically, for dams that were explicitly built for flood mitigation, the construction of the infrastructure provides evidence about the relative importance of flood benefits to the community and supports a higher government contribution for these dams.

5.12 Dam safety compliance (pre-1997)

This activity relates to the dam surveillance and dam safety inspections, reviews, audits and associated risk assessment based on 1997 standards of service.³³ As set out above, we consider that dam safety compliance costs are not avoidable by consumptive customers and so are a common cost to be allocated using regulatory judgment.

The current cost share for this activity is zero per cent for customers, ie, it is fully allocated to government. This reflects a previous decision by the Tribunal to adopt a 'line-in-the-sand' approach that treats all costs associated with assets complying with pre-1997 standards as a legacy cost. Consistent with this decision, we recommend that the existing cost share for this activity is maintained.

5.13 Environmental protection and planning

Environmental planning and protection provides:³⁴

³¹ Aither, *Rural water cost sharing review*, Final report, January 2019, p 43.

³² WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 5.

³³ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

³⁴ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 10.

...the environmental management which includes strategic and specific planning and assessment, fish passages, carbon neutrality and cold-water pollution.

The nature of this activity indicates that the expenditure relates to addressing negative externalities arising from the development and operation of bulk water infrastructure, including impacts on aquatic ecosystems, water temperature, fish migration and carbon emissions. These effects arise primarily from the existence and operation of the infrastructure itself, rather than the level of consumptive use by individual customers.

It follows that these costs are not avoidable by consumptive water customers because, under the counterfactual that reflects efficient forward-looking management of the existing infrastructure, a prudent and efficient operator would continue to incur this expenditure to manage the environmental consequences of the infrastructure. This activity therefore comprises common costs to be allocated using regulatory judgment.

The current cost share for this activity is 80 per cent for customers and 20 per cent for government. The customer share was increased from 50 per cent as part of the 2019 cost shares review. The rationale for the increase was that costs of this activity could be apportioned by reference to the original purpose of the infrastructure, being consumptive water use for most dams.³⁵

The historical purpose of the infrastructure is one basis on which regulatory judgment may be exercised. However, it is open to the present Tribunal to consider whether it intends to exercise its judgment in the same way. In particular, there is merit in considering whether allocating costs by reference to historical purpose aligns with other relevant considerations, such as the current distribution of benefits from environmental outcomes and the forward-looking drivers of environmental obligations.

On this basis, we consider that an appropriate customer cost share lies within a range of 50 to 80 per cent. The point within this range should be informed by other relevant considerations, including consumptive customers' ability to pay and the extent to which increasing environmental planning and protection requirements reflect broader public-interest objectives.

5.14 Corporate systems

Corporate systems are:³⁶

...responsible for the delivery of information services, major projects and improvement initiatives. Some systems provide services to customers and stakeholders.

It follows from the above definition that corporate systems differ in nature from the other activities undertaken by WaterNSW. Specifically, they represent shared overheads and enabling inputs required for WaterNSW to function as an organisation and deliver its various activities, rather than discrete services. Corporate systems are therefore common costs to be allocated.

We consider that a reasonable and transparent approach is to allocate these costs using a cost-weighted average of activity-level cost shares. Weighting by cost reflects the relative scale of activities supported by corporate systems and avoids giving disproportionate influence to smaller activities. Importantly, allocating corporate systems costs in this manner reflects the exercise of regulatory judgment across all other activities. The resulting average customer share represents an aggregation of the Tribunal's activity-specific judgments made within efficient bounds, weighted for the scale of activity. This provides a coherent basis for allocating shared overheads that align with the broader framework.

³⁵ Aither, *Rural water cost sharing review*, Final report, January 2019, p 43.

³⁶ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

5.15 Irrigation Corporation District (ICD) rebates

ICD rebates are:³⁷

...paid to ICDs based on avoided cost incurred in relation to activity 'customer billing' and 'metering and compliance'.

A prudent and efficient operator would not undertake customer billing or metering and compliance activities under our counterfactual and would therefore not incur the costs that give rise to ICD rebates. These costs are avoidable and, as such, we recommend a customer share of 100 per cent.

5.16 Renewals and replacement

Renewals and replacements relate to:³⁸

...repairs for expected wear and tear and usage of water infrastructure.

A prudent and efficient operator would continue to undertake renewals and replacements under our counterfactual because these activities are required to ensure the safe and reliable operation of large infrastructure assets and arise from asset ownership and ongoing operation. This activity therefore comprises common costs to be allocated.

The current cost share for this activity is 95 per cent for customers and 5 per cent for government. The customer share was reduced from 100 per cent as part of the 2019 cost shares review, for the reasons discussed in relation to corrective and routine maintenance.

Consistent with our approach to other, similar activities, we consider that the existing allocation appropriately reflects the distribution of benefits from this activity. Most renewals and replacements support the continued availability, safety and reliability of infrastructure relied upon by customers. A modest government contribution appropriately recognises the presence of some non-consumptive and public-interest assets.

In the absence of evidence that the proportion of renewals and replacements attributable to non-consumptive assets has materially increased, we recommend maintaining a customer cost share of 95 per cent.

5.17 Risk transfer product

The risk transfer product relates to the:³⁹

...cost of insurance product to manage revenue volatility arising from tariff structure.

WaterNSW only collects regulated revenue from consumptive water customers. In the counterfactual world that reflects the efficient forward-looking management of the existing infrastructure in the absence of consumptive demand, WaterNSW would not face the revenue volatility that this insurance product is designed to manage. The forward-looking costs of this activity would therefore not be incurred and, as such, we recommend a customer cost share of 100 per cent.

³⁷ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 16.

³⁸ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 17.

³⁹ WaterNSW, *Regulated charges for WaterNSW bulk water services from 1 July 2025*, Attachment 25, Proposed user and government cost shares, p 17.

6. Cost shares for MDBA and BRC activities

This section applies our proposed framework to determine appropriate cost shares for the MDBA and BRC activities whose costs are passed through to WaterNSW. We have approached this task by broadly mapping the relevant activity to its functionally equivalent WaterNSW activity and applying the corresponding cost share. It would be open to the Tribunal to adopt a different cost share in future reviews where circumstances warrant, such as if the drivers of expenditure or the distribution of benefits diverge materially between the two activities. Table 6.1 summarises our recommended cost shares.

Table 6.1: Recommended cost shares for MDBA and BRC activities

Activity	Customer share (%)	Government share (%)
MDBA		
Asset management strategies	95	5
RMO asset renewal, replacement, operation and maintenance	95	5
Hydrometric monitoring	90	10
Environmental asset renewal, replacement, operation and maintenance	95-100	0-5
Water delivery and river operations	95-100	0-5
BRC		
Bulk water operations	95-100	0-5
Bulk water preventative	95	5
Bulk water corrective	95	5
States' wholesale water sharing management – border rivers	95-100	0-5
Renewals enhancements	95	5

Source: HoustonKemp analysis

6.1 MDBA activities

This section sets our reasoning for our recommended cost shares for each of the MDBA activities whose costs are recovered via WaterNSW.

6.1.1 Asset management strategies

The asset management strategies activity relates to the MDBAs assurance and oversight role as well as the implementation and maintenance of asset management strategies and plans as required under the MDB Agreement, Asset Agreement and Service Level Agreement for the River Murray Operations (RMO) Joint Venture (JV) assets. The scope of this activity appears to be broadly consistent with the asset management planning activity undertaken by WaterNSW. Accordingly, we recommend applying the same customer cost share of 95 per cent.

6.1.2 RMO asset renewal, replacement and operation and maintenance

This activity relates to the renewal, replacement, operation and maintenance of the RMO JV assets to ensure they are fit-for-purpose, sustainable, cost-effective and managed in an efficient manner. This activity appears to closely align with the water deliver and other operations, maintenance activities and renewals and replacement undertaken by WaterNSW. Accordingly, we recommend applying the same customer cost share of 95 per cent.

6.1.3 Hydrometric monitoring

This activity relates to the operation, maintenance and renewal of a comprehensive hydrometric asset network for RMO system operations. It ensures that the hydrometric assets are fit-for-purpose, sustainable, cost-effective and managed in an efficient manner. This activity aligns with the hydrometric monitoring undertaken by WaterNSW. Accordingly, we recommend applying the same customer cost share of 90 per cent.

6.1.4 Environmental asset renewal, replacement, operation and maintenance

This activity relates to the renewal, replacement, operation and maintenance of the environmental works and measures RMO JV assets for RMO system operations. It ensures that these assets are fit-for-purpose, sustainable, cost-effective and managed in an efficient manner. This activity therefore appears closely aligned with the water delivery and other operations undertaken by WaterNSW, particularly in light of the role of environmental water holders delivering the water necessary for the icon sites. Accordingly, we recommend the same customer cost share of between 95 to 100 per cent.

6.1.5 Water delivery and river operations

This activity relates to the scheduling and release of water from dams, locks and weirs along the River Murray to the South Australia border to meet state water orders. It includes normal river operations, unregulated flow management, flood operations, short-term and long-term demand forecasting and water resource assessment and accounting. It also includes activities to improve and contemporise river operations strategies, rules and processes.

Based on the description above, this activity appears to closely align with the water deliver and other operations activity undertaken by WaterNSW. Accordingly, we recommend applying the same customer cost share of 95 to 100 per cent.

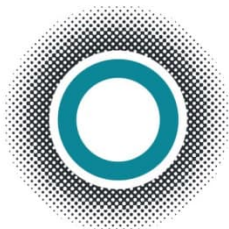
6.2 BRC activities

The BRC activities whose costs are recovered via WaterNSW generally map clearly to a WaterNSW equivalent. Specifically:

- bulk water operations appears to align with water delivery and other operations and, as such, we recommend a customer cost share of between 95-100 per cent;
- bulk water preventative maintenance aligns with WaterNSW's routine maintenance and, as such, we recommend a customer cost share of 95 per cent;
- bulk water corrective maintenance aligns with WaterNSW's corrective maintenance and, as such, we recommend a customer cost share of 95 per cent; and
- renewals and enhancements appears to align with WaterNSW's renewals and replacements and, as such, we recommend a customer cost share of 95 per cent.

The final BRC activity refers to wholesale water sharing management, which relates to the BRC's statutory obligation to determine the quantity of water available at Mingoola Gauging Station into the carrier rivers.⁴⁰ This activity appears to align with WaterNSW's water delivery and other operations and, as such, we recommend a customer cost share of between 95-100 per cent.

⁴⁰ BRC, *Annual report 2024-2025*, p 33.



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