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Attachment 4: Revenue and Pricing Methodology

4.1 Executive Summary

For the purposes pricing, Basslink Pty Ltd needs to determine an amount of revenue attributable to use of its transmission system in each of Victoria and Tasmania.

Basslink Pty Ltd recognises that the allocation of Basslink revenue between TasNetworks and AEMO is an issue of significant interest to stakeholders. In preparing this Proposal, Basslink Pty Ltd has considered a number of possible methods for determining this allocation and undertaken consultation with stakeholders. However we recognise that this will be the subject of further consultation and consideration by Basslink Pty Ltd, the AER and many interested stakeholders.

The Rules require that the maximum allowed revenue allocation for a TNSP that isn't a co-ordinating TNSP, like Basslink Pty Ltd, is based on "use". Basslink Pty Ltd notes that this requirement appears to permit a wide range of methodologies for the allocation. While Basslink Pty Ltd's role is to propose a methodology that accords with the Rules, and the AER's role is to make a determination as to whether that methodology accords with the Rules, Basslink Pty Ltd is very cognisant that there is a high level of stakeholder interest in the allocation methodology. This level of interest was clear throughout our stakeholder engagement process (discussed in **Attachment 3**).

As a result of the stakeholder engagement process and feedback, we are proposing for the purpose of this initial submission a pricing methodology based on relative market size. This is calculated using the total number of connections in Tasmania and the number of connections in Victoria. The number of connections reflect a regulated Basslink's role in:

- transferring power between Victoria and Tasmania and vice versa to lower the wholesale market costs to electricity consumers; and
- providing access to additional generation at times of peak demand or other times to avoid shortages of generation resulting in black outs.

We are proposing that the revenue allocation between Victoria and Tasmania will be an issue subject to the ongoing stakeholder engagement that Basslink Pty Ltd is conducting throughout this process recognising that a number of stakeholders are likely to wish to make submissions on this matter.

4.2 Ongoing Stakeholder Engagement

Basslink Pty Ltd will be conducting ongoing stakeholder engagement with respect to the revenue allocation. We will continue to discuss the appropriate method for allocating revenue between Victoria and Tasmania with stakeholders including:

- Governments
- Basslink Regulatory Reference Group
- Representatives of Consumers; and
- The Australian Energy Regulator.

We acknowledge that this stakeholder feedback could influence the nature of the revenue allocation that is included in the AER's draft determination, Basslink Pty Ltd's revised proposal or the AER's Final Determination.

4.3 Pricing Methodology

Legal Obligations

Upon conversion, Basslink Pty Ltd will become a provider of prescribed services in Victoria and Tasmania. In each of these regions, it will be one of several providers of prescribed services.

Where prescribed services within a region are provided by more than one TNSP, there must be a 'Co- ordinating Network Service Provider' (CNSP) appointed by those TNSPs. The role of the CNSP includes:

- the aggregation and allocation of all relevant Aggregate Annual Revenue Requirement (AARR) within the region for the purposes of transmission pricing in the relevant region, based on its pricing methodology;[32]
- collection of AARR on behalf of each TNSP in the region through transmission prices; and
- arranging for payment of TNSPs in the relevant region, reflecting the AARR collected on their behalf.

AEMO is the CNSP for Victoria.[33] It is intended that TasNetworks will be appointed the CNSP for Tasmania.

Each TNSP providing prescribed services within a relevant region must prepare and submit to the AER a pricing methodology which complies with the Pricing Principles for Prescribed Transmission Services (cl 6A.23) and the AER's pricing methodology guidelines.[34] However where a TNSP has appointed a CNSP, its pricing methodology should nominate the CNSP and identify the parts of its proposed pricing methodology which will be dealt with by the CNSP.[35]

For example, Murraylink's approved pricing methodology specifies the parts that are dealt with in the pricing methodologies of ElectraNet and AEMO (the CNSPs in SA and Victoria respectively), which include:

- the calculation of the Annual Service Revenue Requirement (ASRR) for the Victorian and South Australian regions, in accordance with clause 6A.22.2 of the Rules;
- the calculation of attributable cost shares, in accordance with clause 6A.22.3 of the Rules;
- the principles for the allocation of the AARR to categories of prescribed transmission services, in accordance with clause 6A.23.2 of the Rules;
- the principles for the allocation of the ASRR to transmission network connection points, in accordance with clause 6A.23.3 of the Rules; and
- pricing structure principles, in accordance with clause 6A.23.4 of the Rules.

The Murraylink pricing methodology also specifies the portion of its AARR that is recovered by each of ElectraNet and AEMO.

[32] NER cl 6A.29.1(a) and (c).
[33] NER, cl S6A.4.2(k)(5).
[34] NER, cl 6A.10.1(a) and (e).
[35] AER Pricing Methodology Guidelines, cl 2.1(b).

Basslink Pty Ltd's proposed pricing methodology (**Attachment 4.1**) similarly identifies a number of matters that it is intended will be dealt with in the pricing methodologies of AEMO and TasNetworks, as CNSPs for Victoria and Tasmania respectively. Basslink Pty Ltd is continuing to engage with AEMO and TasNetworks regarding CNSP arrangements and how these will be addressed in their respective pricing methodologies.

To facilitate these arrangements between TNSPs in the same region, cl 6A.29.1(b) provides that:

> *Each Transmission Network Service Provider must determine the AARR for its own transmission system assets which are used to provide prescribed transmission services within each region*.

This rule is intended to reflect a 'beneficiary pays' principle.[36] The revenue requirement for a transmission system serving multiple regions is to be allocated between those regions based on the extent to which they benefit from use of the system.

In the case of Basslink, this means that Basslink Pty Ltd needs to determine the AARR for its assets that are used to provide prescribed services in each of Victoria and Tasmania.

Meaning of "Use"

The term "Use" is not actually defined in the Rules. However, the relevant secondary materials indicate that it is intended to reflect a "beneficiary pays" principle to the recovery of revenue requirements.

The extent to which a transmission system is "used" in each region that it serves may not necessarily reflect the location of assets comprising that system. A transmission system may be used to a greater extent in one region (or benefit that region to a greater extent) even if the assets aren't located in that region to the same extent.

The AEMC has noted that, in the case of interconnectors, it may be difficult to precisely identify relative use or benefit, as between the different regions that they serve. This is because interconnectors have certain 'public good' characteristics, delivering a range of benefits broadly across the connected regions. The AEMC has noted:[37]

[36] AEMC, Rule Determination, National Electricity Amendment (Inter-regional transmission charging) Rule 2013, 28 February 2013.
[37] AEMC, Discussion Paper: National Electricity Amendment (Inter-regional transmission charging) Rule 2011, 25 August 2011, p 37.

It is important to note that allocative and dynamic efficiencies can only be achieved if costs are appropriately allocated to causers or beneficiaries of network investment. As the Commission has discussed above, the public good characteristics of transmission means that it may be difficult to isolate the causers of, or beneficiaries from, transmission investment in the shared network. Thus charges set solely on the basis of causation may be problematic because the causal link between individual users' decisions and the incurring of transmission costs may not be clear.

This issue may be particularly relevant for inter-regional transmission assets, which due to their size tend to be subject to significant economies of scale and network externalities, which means the benefit will fall broadly across regions. These benefits may include maintaining reliability and reserve sharing between regions, lowering congestion (in turn leading to reduced trading risks between regions) and enhanced competition. Importantly, these benefits apply regardless of direction of energy flows between regions. Thus, applying cost reflectivity in charging for transmission assets with significant public good characteristics implies that such a charge should be spread broadly across users.

Recognising this, Basslink Pty Ltd has considered a range of different measures (or proxies for) the relative use or benefit obtained from Basslink in each of Victoria and Tasmania.

The AEMC's comments cited above accurately reflect the characteristics of a regulated Basslink in so far as it provides broader 'uses' than purely the transfer of electricity – providing services that improve reliability and reserve sharing between regions, lowering congestion (in turn leading to reduced trading risks between regions) and enhanced competition. In addition, Basslink will be used to control voltage and frequency of electricity transfers to provide network support to the transmission networks of Victoria and Tasmania. We are of the view that his means that the term 'use' should not be restrictively interpreted to mean that the revenue must be allocated on the basis of electricity flows between Tasmania and Victoria.

The AER has interpreted the definition of 'use' more broadly in the past. The AER's approved pricing methodologies for Directlink and Murraylink have revenue allocations based on the physical location of the assets.:

- Notwithstanding that Directlink acts as an interconnector between New South Wales and Queensland, due to the geographic location of the asset (all the network for Directlink is located in New South Wales) the full cost of Directlink is charged to Transgrid.
- Murraylink is physically located in both Victoria and South Australia. The revenue split between South Australia and Victoria is based on the portion of assets located in each state based on asset value.

It is worth noting that for Basslink, Directlink and Murraylink all assets are used in the transfer of power regardless of their physical location.

Considerations for a pricing methodology

Beyond the requirements specifically outlined in the Rules our proposal seeks to contribute to the achievement of the NEO.

The NEO is:

> *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 and reliability and security of supply of electricity*
> - *the reliability, safety and security of the national electricity system*

Some relevant practical considerations when determining an appropriate revenue allocation to encourage the efficient use of Basslink consistent with the NEO are:

- Materiality/Cost significance
- Incentive properties
- Transparency/simplicity

The materiality of the cost of an asset to consumers is directly related to how likely the revenue methodology is to influence the behaviour of customers. The higher the revenue the more consideration that needs to be given to the incentive properties that a particular revenue allocation methodology is creating. Basslink is an asset where there is relatively little impact on demand attributable to the price for its services, and therefore the revenue methodology is unlikely to have any impact on customer choices.

It is important that the customers who ultimately pay for an asset can understand how its revenue recovery works. This requires transparency and for the method to be as easily comprehensible as possible.

Basslink revenue methodology to be considered independently of other projects

As noted above, the rules require that the Maximum Allowed Revenue for an interconnector to be allocated based on use. We further note there is no definitive measure of use for a High Voltage Direct Current interconnector give the different ways they provide value to customers.

The revenue allocation for each interconnector should be expected to consider the circumstances of that interconnector when selecting a revenue allocation methodology that fit within the scope of the National Electricity Rules.

The appropriate methodology for Basslink will not necessarily be the appropriate methodology for other assets. The circumstances of Murraylink and Directlink are not those of Basslink, and it should not be assumed that Basslink will need to have the same revenue methodology. Similarly, the circumstances of Basslink will not be the same as any other project, including any other interconnection asset connecting Tasmania and Victoria. Basslink Pty Ltd notes in this context that it is anticipated that Marinus will have a significantly higher revenue requirement than any of these other interconnector assets previously considered, and these assets would not serve as a precedent for the matters that will be under consideration in respect of Marinus.

The appropriate revenue allocation methodology should reflect the facts relevant to each interconnector, including matters such as impact on customers bills, technical capabilities and services provided to the market.

The Methodologies Considered

Basslink Pty Ltd identified a large number of potential revenue allocation methods that were consistent with the requirements of the Rules that could be considered potentially applicable to Basslink. We discussed the potential methodologies with our RRG. The RRG observed that in seeking to discuss too many methodologies we would not be able to obtain useful stakeholder feedback, and that a number of the options were very similar. The RRG recommended that we reduce the number of methodologies to 2 or 3 (we ultimately selected 3) and make the ones we put forward for stakeholder feedback reflect a genuine choice between alternatives that are materially different to each other in approach.

For the purposes of providing clarity to consumers we described the revenue allocation as required under the rules as “cost sharing”, reflecting consumers understanding that electricity is a cost to them. We then consulted on three different cost sharing options with stakeholders, namely:

- Geographic Method – the cost split would be based on the value of the interconnector assets geographically located in each region. This is the approach the AER took in Murraylink and Directlink,
- Energy Flows – the cost would be split on the basis of energy flows across Basslink in both directions, measured in MWh
- Market Size – the allocation would be based on the number of electricity connections in each jurisdiction.

The cost allocation that results from the application of each of these methodologies is set out in the Tables below.

Table 4.1 – The different methodologies consulted on.

Methodology	Revenue Split Tasmania	Revenue Split Victoria
Geographic split	**45%**	**55%**
Energy Flows	**50%**	**50%**
Market size	**10%**	**90%**

The bill components for residential and small business customers are set out below.

Table 4.2 – Geographic Split Bill Component ($ pa)

Methodology	Tas	Vic
Residential	**35**	**7**
Small Business	**68**	**21**

Table 4.3 – Energy Flows Bill Component ($ pa)

Methodology	Tas	Vic
Residential	**39**	**6**
Small Business	**76**	**19**

Table 4.4 – Market Size Bill Component ($ pa)

Methodology	Tas	Vic
Residential	**8**	**11**
Small Business	**15**	**35**

Our engagement with consumers and stakeholders on cost sharing focussed on how Basslink's costs should be shared between Tasmanian and Victorian consumers.

Consumers indicated a preference for the market size approach to cost sharing, with 75% of all workshop participants and 44% of all survey participants selecting this option:

- Participants across both the workshops and the survey selected the market size option as it was considered the fairest.
- Tasmanian participants were especially supportive of this option and also noted it was fairer as Tasmanians are more likely to have lower incomes than Victorians.

Victorian workshop participants displayed a preference for the market size approach at 53% Victorian survey respondents demonstrated a very slight preference for the energy flows approach, with 36% supporting this option. However, this was very closely followed by a preference for the market size approach at 31%. Additionally, The results of our stakeholder engagement therefore suggest there is strong support for the market size approach across the Victorian and Tasmanian population.

Basslink also consulted with a number of industry stakeholders outside the RRG, and we note in this context that:

- One industry stakeholder noted a preference for either the market size or energy flow options
- another stakeholder noted costs should be allocated based on 'who benefits' from Basslink.

System Protection Scheme

In the forecast operating expenditure chapter (**Attachment 8**) we have discussed the System Protection Scheme that operates in Tasmania. These are arrangements to preserve system

strength, primarily frequency control, of the Tasmania Transmission Network. If it is determined that the costs are to be allocated to Basslink, this may require changes to the pricing methodology to remain consistent with the Rules.

4.5 Proposed Revenue Allocation Methodology in detail

The market size methodology shares the cost of Basslink in proportion to the total customer connections in each state. The underlying premise is that—due to the difficulty in precisely determining relative "use" of (or benefit from) Basslink capacity—it is reasonable and appropriate to use a proxy for relative use. A simple and clear methodology is to assume that each customer connection point, be it in Victoria or Tasmania will use and benefit equally on aggregate over the long term. As such, the methodology requires only to count the number of connection points in Victoria compared to Tasmania to obtain a split.

As the relative proportion of customer connections are likely to change slowly due to differences in population growth rates between the two states, we propose to assess and set a fixed percentage cost split at the start of each regulatory period.

Data on the number of customer connections is not made regularly publicly available by AEMO, so the best source of reliable and regularly available data is the annual reports of the distribution networks. There is only one distribution network in Tasmania (TasNetworks) and five in Victoria (AusNet Services, CitiPower, Jemena, Powercor, and United Energy). In their annual reports for FY2022, TasNetworks reported 295,000 customer connections, compared to the Victorian network's [3.1 million]. This results in a split of 9% of costs being allocated to Tasmania, and 91% to Victoria. We note that if AEMO were to start regularly publishing data on customer connections, we would propose to move to that data for our calculations.

4.6 Bill Component

It is difficult to assess the impact of Basslink becoming a TNSP, as opposed to its current cost impacts on Victorian and Tasmanian consumers. Under the current arrangements, Basslink charges Hydro Tasmania for it services. We assume Hydro Tasmania then recovers the cost of Basslink's services through the price it sets for electricity generation, which it sells to the NEM.

There is no publicly available information, or information available to Basslink Pty Ltd, that indicates how Basslink's costs are recovered by Hydro Tasmania in particular how much is recovered from Tasmania or Victorian consumers. Further, how Hydro Tasmania reflects the reduction inn charges to it is a matter for it and its owner the Government of Tasmania.

However, we can provide an estimate of the component of Basslink Pty Ltd's revenue that will be in a typical customers electricity bill, but we cannot assess how this differs from what consumers currently pay.

Table 4.5 – Bill Component in Tasmania and Victoria ($pa)

State	Victoria	Tasmania
Residential Bill Component	11	8
Small Business Bill Component	35	15

It is difficult for Basslink Pty Ltd to estimate a bill impact for large consumers. This is because of the significant load and relatively few number of customers. A simple c/kWh methodology is unlikely to be a close approximation of the actual Bill impact that will be felt by these customers. Due to their charges being a product of the cost reflective network pricing methodology required to be used by TNSPs which means costs are not evenly distributed across the entire Transmission network.

Bill Impact Methodology

The methodology for calculating the bill impact is to take the Maximum Allowed Revenue as per the proposal set out in Section 4.6 and allocate it between TasNetworks and AEMO in with line the revenue allocation methodology as set out in Section 4.5.

$$Revenue\ allocation\ to\ AEMO\ = Maximum\ Allowed\ Revenue\ x\ AEMO\ revenue\ allocation\ \%$$

Or

$$Revenue\ allocation\ to\ TasNetworks = Maximum\ Allowed\ Revenue\ x\ TasNetworks\ revenue\ allocation\ \%$$

Then we divided the revenue allocations by the total kWh per annum

$$price\ per\ kWh\ Vic\ = \frac{Revenue\ allocation\ to\ AEMO}{Total\ consumption\ Victoria\ (kWh)}$$

Or

$$price\ per\ kWh\ Tas\ = \frac{Revenue\ allocation\ to\ TasNetworks}{Total\ consumption\ Tasmania\ (kWh)}$$

We then multiple that by the typical consumption for a household or small business

$$Bill\ Component\ Vic\ = price\ per\ kWH\ Vic\ \times Typical\ Consumption$$

Or

$$Bill\ Component\ Tas\ = price\ per\ kWH\ Tas\ \times Typical\ Consumption$$

4.6 Building Block Revenue

Smoothed Revenue

Basslink Pty Ltd's smoothed revenue proposal is calculated based on the AER's Post Tax Revenue Model which smooths the revenue based on the present value of the building block revenue discounted using the Weighted Average Cost of Capital calculated using the AER' Rate of Return Instrument.

Table 4.6 – Basslink's smoothed revenue ($m nominal)

	2025/26	2026/27	2027/28	2028/29	2029/30	Total
Smoothed Revenue	109.9	111.1	112.3	113.5	114.7	561.5

Building Block Revenue

Building Block revenue is calculated using the AER's Post Tax revenue based on the inputs contained in the building blocks discussed in more detail in the other chapters of this proposal.

Table 4.7 – Basslink's building block revenue ($m nominal)

	2025/26	2026/27	2027/28	2028/29	2029/30	Total
Return on Capital	45.5	45.2	44.3	43.0	42.0	219.9
Return of Capital (regulatory depreciation)	24.9	26.6	28.7	30.9	29.4	140.6
Operating Expenditure	36.2	38.0	39.0	36.2	33.2	182.7
Revenue Adjustments	-	-	-	-	-	-
Net Tax Allowance	3.3	3.4	3.6	3.8	3.5	17.6
Building Block Revenue	109.9	113.2	115.6	113.9	108.1	560.8