

Comments on submissions by CRA and NERA on EV balances

**Report prepared for Transpower New Zealand
August 2010**





1. Introduction and summary

The Commerce Commission has received a number of submissions in response to the Commission's draft decisions on Input Methodologies and Individual Price-Quality Path for Transpower. Transpower has asked Harding Katz Pty Ltd to comment on the economic arguments presented in the following submissions made on behalf of Contact Energy and Meridian Energy in relation to Transpower's Economic Value (EV) account balances:

- Charles River Associates (CRA) - Balance of the EV Account for Transpower's HVDC Assets, 8 August 2010; and
- National Economic Research Associates (NERA) - Treatment of Operating Costs, A Report for Meridian, 6 August 2010.

The reports from CRA and NERA argue that Transpower's charging arrangements for HVAC and HVDC customers are inconsistent with outcomes that would be expected from a workably competitive market.

To a significant extent the issues raised by CRA and NERA relate to the recent increases in the cost of instantaneous reserve, which is allocated entirely to HVDC customers. The Commerce Commission's decision to disallow the pass-through of Transpower's instantaneous reserve costs has created an unusual set of outcomes whereby:

- Transpower allocates the higher instantaneous reserve costs to HVDC customers as part of the cost of providing the HVDC link; and
- The administrative settlement effectively requires charges to customers to be reduced in order for Transpower to comply with its operating expenditure cap, when total operating expenditure (including reserve costs) exceeds the cap.

In our view, the arguments presented by CRA and NERA exaggerate the extent to which Transpower's charging arrangements reflect a departure from the outcome that would be expected from a workably competitive market. In particular:

- We do not accept CRA's view that the CPI should be considered to be a proxy for the increase in costs that might be observed in a competitive market.
- Contrary to CRA's view, the instantaneous reserve costs actually incurred by Transpower are likely to be consistent with the costs that would be recovered in a competitive market.
- We do not agree with CRA's contention that Transpower's charging methodology cross subsidises HVAC customers.



- In contrast to CRA's view, a standalone service provider would seek to recover the full costs of providing instantaneous reserve. It follows from CRA's discussion that the standalone costs of providing the HVDC link would exceed the costs charged by Transpower.
- NERA claims that an ex post charging arrangement cannot provide any useful pricing signal. In reality, a transparent pricing arrangement can provide an effective signal to customers, even if it is applied after the event.

The remainder of this paper is structured as follows:

- Sections 2 and 3 provide an overview of the CRA report and our commentary.
- Sections 4 and 5 provide an overview of the NERA report and our commentary.

2. Overview of the CRA report

The CRA report is an expert opinion from Mr Andrew Shelley. His terms of reference are:

- To provide an opinion on whether the change in the balances of the 'Economic Value (EV) account' over the period 2007-2009 is consistent with what would be observed in a competitive market;
- To calculate the EV account balances that he considers are consistent with competitive market outcomes; and
- To assess whether the proposed input methodologies for Transpower adequately address issues relevant to the EV balances.

The conclusions of the CRA report are set out in paragraphs 9 to 13 of that report as follows:

9. "The aggregate balance of the EV account over the period 2007-2009 is consistent with the regulatory arrangements specified in the Transpower Thresholds Notice 2008. These arrangements included a cap on the level of operating expenditure that Transpower was able to recover. The annual increase in allowed operating expenditure was limited to the increase in the Consumers' Price Index (CPI), which could be considered to be a proxy for the increase in costs that might be observed in a competitive market.
10. The EV account has been separated into two separate accounts: an HVDC account that relates to the revenues and costs associated with the HVDC link that provides for power transfer between the North Island and the South Island; and an HVAC account that relates to the revenues and costs associated with the rest of the electricity transmission system. I refer to the balances of those accounts



as the “EV account balances”. Until 2007 only the aggregate balance of the two accounts was disclosed publicly.

11. In my opinion the change in the separate HVDC and HVAC EV account balances over the period 2007-2009 is not consistent with the changes that would be observed in a competitive market:
 - 11.1. Although operating costs for both the HVAC system and the HVDC system increased by more than the rate of inflation, the allocation mechanism employed by Transpower resulted in a reduction in costs allocated to HVAC customers. This is in part because Transpower’s calculation included the “instantaneous reserves” costs for the HVDC which the Commission ruled were not recoverable. The resulting cross-subsidisation is not consistent with the outcomes expected in a workably competitive market, where an increase in costs for one class of customers would not result in a decrease in price to another group of customers. The resulting EV account balances are therefore also not consistent with the outcomes expected in a workably competitive market.
 - 11.2 The HVDC EV account balance increases to a level (\$102.8m) that is significantly greater than my estimate of stand-alone costs for the HVDC system (\$65.5m), which is the maximum level of price that would be charged in a workably competitive market. Stand-alone cost is also the price that would be charged if the HVDC system was owned and operated by an independent regulated supplier.
12. In a competitive market prices for a product or service fall between the incremental cost floor and the stand-alone cost ceiling. Given the Commerce Commission’s decision to disallow the recovery of certain increases in costs for the HVDC, I calculate that the HVDC EV balance for 2009 should be a debit balance between \$65.5m and \$75.2m; and
13. In my opinion the proposed input methodologies for Transpower do not adequately address issues relevant to the EV balances. In particular:
 - 13.1. The EV account balances are an asset and how the Commission has adopted a mechanism for recovery of those balances that is equivalent to the recovery of the costs of physical assets. Section 52T(1)(a)(ii) of the Commerce Act 1986 (“the Commerce Act”) requires that there is an input methodology (IM) for the valuation of assets. However, the IM Draft Reasons Paper does not contain a detailed examination of the initial value of assets, but just assumes that the values are reasonable. This assumption may be valid for the RAB where the relevant valuation methodology is precisely specified for the current regulatory period, but it is not valid for the EV account balances, where Transpower was provided with no regulatory guidance on the appropriate approach to cost allocation.
 - 13.2. In my opinion, therefore, the asset valuation IM for Transpower should require the recalculation of the EV account balances in accordance with defined cost allocation principles. Those principles should include that:
 - (1) all costs directly attributable to the HVAC or HVDC should be so allocated;

- (2) consistent with the Instantaneous Reserves Decision, the increase in Instantaneous Reserves due to the removal of Pole 1 should not be recovered; and
 - (3) any allocation should be subject to a stand-alone cost constraint for the HVDC, calculated in accordance with (2) above.
- 13.3. The cost allocation principles should also specify the nature and type of cost allocator that is permissible.
- 13.4. The issues that I have identified in paragraph 11 could occur again in the future given the methodology that Transpower uses to allocate the capped operating expenditure. In my opinion the cost allocation IM should specify the principles that Transpower should apply in allocating costs between the HVAC and HVDC customer classes. These principles should be the same as those I suggest in paragraph 13.2.”

3. Harding Katz comments on the CRA report

The CRA report makes a number of propositions to support its contention that the EV balance for HVDC customers should be lower than that calculated by Transpower. These propositions are:

- (a) In a workably competitive market, the operating costs allocated to HVDC customers should not increase by more than the CPI¹;
- (b) The Commission decided that the increase in HVDC costs was not consistent with the costs that would be recoverable in a competitive market, and allowing recovery of those costs would not provide Transpower with the appropriate incentives to manage risk or invest appropriately²;
- (c) The proposed allocation results in a cross subsidy from HVDC to HVAC customers which is not consistent with the outcome expected in a workably competitive market³;
- (d) The EV account balance for HVDC customers exceeds the standalone costs, which is inconsistent with the outcomes of a workably competitive market⁴; and
- (e) The EV account balances should be treated as part of the regulated asset base. The EV account balances should also be valued appropriately, and

¹ CRA report, paragraphs 9, 79 and 80.

² CRA report, paragraphs 11.1 and 78.

³ CRA report, paragraph 11.1.

⁴ CRA report, paragraphs 11.2 and 85.



under the Commerce Act it is appropriate that competitive market outcomes are the benchmark for that valuation⁵.

We comment on each of these propositions in turn below.

CRA proposition (a): In a workably competitive market, the costs to DC customers should not increase by more than the CPI

We do not agree with CRA's suggestion that it is reasonable to expect charges in a workably competitive market to only increase by CPI.

The CPI is an economy-wide measure of consumer prices. It provides an average measure of consumer price increases with reference to a basket of goods and services. Within that basket of goods and services, some goods and services will exhibit increases that exceed the CPI and others will show lower rates of increase. There is no reason to suppose that sectors in which prices increase by more than the CPI are not 'workably competitive'.

More generally, the output prices in a competitive market will depend on the cost of inputs (i.e. materials, labour and capital) and the rate of productivity improvement. To the extent that the cost of inputs is rising more quickly for a particular industry compared to the economy generally, the price of that industry's output will increase by more than CPI, other things being equal. The complex and dynamic nature of the economy means that particular sectors, and particular goods and services within sectors, will exhibit price increases at different times that are markedly different to the CPI.

In the particular case of Transpower's operating expenditure, the rate of increase in the total of the operating costs that can be allocated to (and recovered from) HVAC and HVDC customers is capped at CPI by the administrative settlement. CRA's concern, therefore, relates to the allocation of operating expenditure between two groups of customers, HVAC customers and HVDC customers. CRA's contention is essentially that the allocation of operating expenditure to both groups should be constrained to the CPI, and that no differential increase would be expected in a competitive market.

CRA's contention would be reasonable if the total costs to Transpower of providing services to HVAC and HVDC customers increased at the same rate. However Transpower's costs of instantaneous reserve have increased markedly from \$1.7 million in 2007 to \$15.8 million in 2008 and \$28.6 million in 2009. The regulatory arrangements allocate the costs of operating the HVDC link to HVDC customers, being the South Island generators⁶:

⁵ CRA report, paragraph 110.

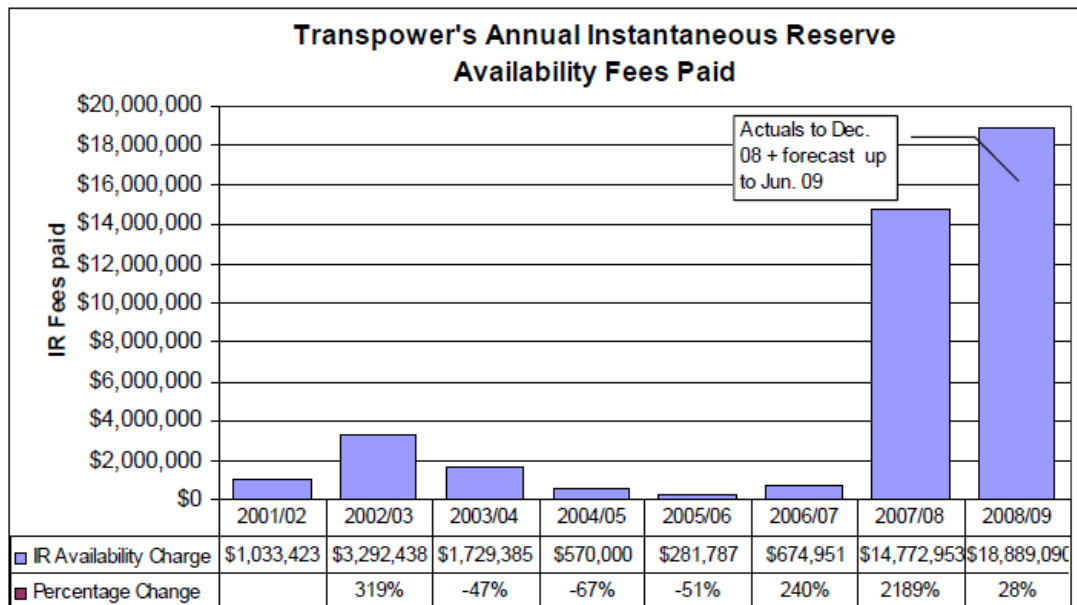
⁶ Commerce Commission, Decision and Reasons for not amending Transpower's administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs, 22 June 2009, paragraph 49.



“The Electricity Commission’s intent is that the charges for operating the HVDC link should be directed only to South Island generators. This is set out clearly in the Transmission Pricing Methodology (developed by Transpower and approved by the Electricity Commission). The Transmission Pricing Methodology, however, only sets the manner in which the charges are allocated to Transpower’s customers. It does not determine what is or is not appropriate for Transpower to include in the determination of its annual HVDC revenue requirement. Scrutiny of Transpower’s revenue requirement falls within the ambit of the Commission, and is subject to the constraints of the settlement agreement.”

As Transpower’s pricing methodology allocates the cost of the HVDC link to HVDC customers (including the HVDC instantaneous reserve costs, which are a cost of providing the HVDC link), there is no basis for CRA’s contention that the operating expenditure amounts attributed to the two different customer groups (HVAC and HVDC) should both increase by the change in the CPI. In fact, the volatility of Transpower’s instantaneous reserve costs since 2001/02 has been well documented. The following figure is reproduced from the Commerce Commission’s Final Decision in relation to the recovery of instantaneous reserve costs.

Figure 2 Transpower's Annual Instantaneous Reserve Availability Fees Paid



It is also worth noting that the cost of instantaneous reserve will depend on the price and volume of the service procured by Transpower as System Operator (where the required volume is determined by the Rules). CRA’s suggestion that the total costs to HVDC customers should be capped at the CPI implicitly (and erroneously) assumes that the volume of instantaneous reserve has remained unchanged. In fact, the volume of instantaneous reserve has increased in recent years to reflect changed operational circumstances.



CRA proposition (b): The Commission decided that the increase in HVDC costs was not consistent with the costs that would be recoverable in a competitive market, and allowing recovery of those costs would not provide Transpower with the appropriate incentives to manage risk or invest appropriately.

Following the administrative settlement between the Commission and Transpower on 13 May 2008, Transpower sought an amendment to the settlement to remove its exposure to instantaneous reserve fees. In particular, Transpower proposed that instantaneous reserve fees should be treated as a pass-through cost. In its Final Decision, the Commission disallowed Transpower's request to treat these costs as a pass-through for the following reasons:⁷

"In summary, this decision is based on the following reasons.

- the Commission does not consider that the increased instantaneous reserve charges result from exceptional and unforeseeable circumstances warranting an amendment to the administrative settlement;
- instantaneous reserve charges are not entirely consistent with the nature of pass-through costs, and, in this instance, are more appropriately allocated to operating expenditure;
- the operating expenditure provision contributes to a balanced treatment of risks and costs, in that Transpower will benefit from costs lower than that allowed in the indexed operating expenditure provision, but also subjects Transpower to the risk of higher costs. Allowing Transpower to pass through additional operating costs, whether unforeseen or not, is inconsistent with the symmetrical nature of the settlement agreed, which explicitly provides that such costs will fall on Transpower's shareholders;
- the intent of the indexed operating expenditure provision is to impose incentives and a discipline on Transpower to manage its costs appropriately;
- pressure on Transpower's profit, should its costs increase, is not an unintended outcome of the settlement. An amount for instantaneous reserve costs had been included in Indexed Opex, and the onus was on Transpower to forecast its risks and costs accurately, and to attempt to manage these costs;
- it would provide undesirable incentives for the future behaviour of Transpower and others in negotiations with the Commission if Transpower's request was agreed to by the Commission (in this instance, because Transpower was aware of the risk of increased costs prior to proposing the settlement accepted by the Commission but did not factor this into its proposal);
- the charging methodology of instantaneous reserve costs set out in the Rules has been designed to provide Transpower with the incentives to manage the risk caused by the services it provides. Transpower is responsible for planning the grid and is in the best position to manage both the risks and associated costs.

⁷

Commerce Commission, Decision and Reasons for not amending Transpower's administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs, 22 June 2009, paragraph 130.



Rules 11.5.1 to 11.5.3 therefore promote the objectives of the Purpose Statement by providing Transpower with the right incentives to innovate and invest in its assets in order to manage the likelihood of its exogenous events;

- Transpower’s decision to limit Pole 1 whilst having no alternative capacity in place has increased both the market reserve requirements and Transpower’s exposure to the costs of meeting them. This is a predictable outcome of having only one pole fully operational, and Transpower was aware of the risks and constraints imposed by the settlement it proposed;
- the magnitude of instantaneous reserves costs alone, while significant, is unlikely to erode Transpower’s financial position materially or affect its credit rating; and
- allowing Transpower to pass through these instantaneous reserve costs would provide poor incentives for Transpower’s future behaviour for investment decisions. Such a decision would not provide regulated entities with the incentives to innovate and invest in their assets and to provide services at a quality that reflects consumer demands for the long-term benefit of consumers.”

The Commission concluded that Transpower should be exposed to the risk of increased instantaneous reserve costs, given the recent administrative settlement between the Commission and Transpower. The Commission’s decision therefore provides strong financial incentives on Transpower to minimise its total operating expenditure, including the costs of instantaneous reserve. Contrary to CRA’s view, the instantaneous reserve costs actually incurred by Transpower are therefore likely to be consistent with the costs that would be recovered in a competitive market.

It is also instructive to note that the Commission’s draft decision on Transpower’s input methodologies proposes that instantaneous reserve (IR) costs be treated as a “recoverable cost”. Paragraph 7.4.20 of the Commission’s draft reasons paper states:

“In summary, while the Commission does not consider that IR availability charges meet the Pass-Through Cost Criteria, it did not consider that the benefits of Transpower bearing the costs (i.e. the cost savings from Transpower’s actions to mitigate the charges) outweighed the unmanageable costs that would be imposed on Transpower. It therefore proposes including IR availability charges as a Recoverable Cost rather than as an opex item.”

The Commerce Commission’s approach to revenue setting under the present administrative settlement (and under the proposed input methodologies) provides Transpower with incentives to ensure that its instantaneous reserve costs are efficient. We understand that Transpower allocates the actual costs of the HVDC link, including instantaneous reserve costs, to HVDC customers, in accordance with clause 2.1.2 of the transmission pricing methodology⁸, which requires the HVDC revenue to be the revenue required to recover the costs of providing the HVDC assets during the pricing year. In our view, the charges levied on HVDC customers are consistent with those that would arise in a workably competitive market.

⁸ Schedule F5 to Section IV of Part F of the Electricity Governance Rules 2003.



An alternative pricing methodology could charge HVDC customers on the basis of forecast costs only, with no EV adjustment to reflect any differences between forecast and actual costs. This alternative pricing methodology would create consistency between the revenue setting process (which is based on forecast costs of the HVDC link) and the pricing methodology. However, a pricing methodology based entirely on forecast costs may fail to provide appropriate pricing signals. In particular, setting charges to HVDC customers on the basis of forecast costs (as opposed to actual costs) would not provide any incentive on this customer group to behave in a manner that minimised costs.

CRA proposition (c): The proposed allocation results in a cross subsidy from HVDC to HVAC customers which is not consistent with the outcome expected in a workably competitive market

CRA comments that⁹:

“Although operating costs for both the HVAC system and the HVDC system increased by more than the rate of inflation, the allocation mechanism employed by Transpower resulted in a reduction in costs allocated to HVAC customers. This is in part because Transpower’s calculation included the “instantaneous reserves” costs for the HVDC which the Commission ruled were not recoverable. The resulting cross-subsidisation is not consistent with the outcomes expected in a workably competitive market, where an increase in costs for one class of customers would not result in a decrease in price to another group of customers. The resulting EV account balances are therefore also not consistent with the outcomes expected in a workably competitive market.”

We note that the Commerce Commission did not conclude that the instantaneous reserves costs allocated to Transpower as owner of the HVDC link were “unrecoverable”, as asserted by CRA, but rather that the reserves costs should not be treated as “pass through” costs. Therefore, the Commission’s decision was that the reserves costs form part of Transpower’s total operating expenditure, and are recoverable within the constraints of the total operating expenditure cap.

As discussed above, charges to HVDC customers reflect the actual costs of providing services to those customers. The outcomes produced by the pricing methodology therefore do not support CRA’s contention that there is a cross-subsidy from HVDC customers to HVAC customers. This is because a cross subsidy can only arise if prices to HVDC customers exceed the costs incurred by Transpower in providing the HVDC link.

We reiterate our earlier view that a workably competitive market would allow a service provider to recover the full costs of providing instantaneous reserve, where these costs have been incurred efficiently. The Commerce Commission’s decision in relation to instantaneous reserve costs did not conclude that Transpower’s costs were inefficient.

⁹ CRA report, paragraph 11.1.



CRA proposition (d): The EV account balance for HVDC customers exceeds the standalone costs, which is inconsistent with the outcomes of a workably competitive market

CRA comments that¹⁰:

“I note at this point that allocating costs to the HVDC link on a stand-alone cost basis is implicitly treating the HVDC link as if it was owned and operated by a separate regulated supplier (i.e., a notional entity other than Transpower). The cost allocations that would occur in a competitive market would not exceed the costs incurred by such a supplier. I understand that given the distinct nature of the HVDC link it would be feasible and practical to implement such arrangements, and this would also be consistent with Transpower’s practice of charging separate prices for the HVAC and HVDC systems.

Given the information in Transpower’s EV calculation (Appendix C) I estimate that the incremental cost for the HVDC system has fallen from \$41.0m in 2007 to \$36.8m in 2008 to \$34.2m in 2009. These figures exclude the increase in ancillary services costs which the Commerce Commission ruled was unrecoverable. It is more difficult to estimate stand-alone costs, as it is necessary to estimate the “admin and general costs” which would be incurred by a company that was only supplying the HVDC system. It is difficult to establish exactly what the magnitude of these costs would be, but I note that most costs related to the HVDC are already included as direct costs and only a relatively simple central administrative structure would be required. It seems unlikely, however, that these costs would exceed \$3m per annum, which is ten times higher than the allocation currently received by the HVDC.”

CRA also concludes that¹¹:

“The HVDC EV account balance increases to a level (\$102.8m) that is significantly greater than my estimate of stand-alone costs for the HVDC system (\$65.5m), which is the maximum level of price that would be charged in a workably competitive market. Stand-alone cost is also the price that would be charged if the HVDC system was owned and operated by an independent regulated supplier.”

We note that CRA’s conclusion appears to contain an error because the \$65.5 million estimate of the EV balance for HVDC customers is based on an incremental cost assessment (CRA’s Approach D), rather than a standalone cost assessment (CRA’s Approach C). CRA’s estimate of the EV balance for HVDC customers based on CRA’s standalone cost assessment is \$75.2 million for 2009.

We also note that CRA’s explanation of the relationship between the EV balance and the standalone cost assessment is potentially confusing. The EV balance for HVDC customers is essentially the cumulative amount owed by HVDC customers which has accrued over a number of years. It is not capped at the annual standalone cost of providing HVDC services. For example, if undercharging has occurred at the rate of

¹⁰ CRA report, paragraphs 84 and 85.

¹¹ CRA report, paragraph 11.2.



20% for 10 years, the EV balance would be 200% of the annual charge. We will return to this issue in further detail below.

CRA's assessment of the standalone costs of providing the HVDC link excludes the increase in instantaneous reserve costs that Transpower had unsuccessfully sought to recover as a pass-through cost. CRA's definition of standalone costs is therefore an interpretation of regulated costs, rather than an assessment of the costs that would be charged by a standalone service provider in a workably competitive market. A standalone service provider would seek to recover the full costs of providing instantaneous reserve, consistent with Transpower's approved pricing methodology. It follows from CRA's discussion of 'admin and general costs' that the standalone costs of providing the HVDC link would exceed the costs charged by Transpower.

Furthermore, we understand that Transpower only allocates the incremental costs of providing the HVDC service to HVDC revenue. As noted above, these costs include instantaneous reserves costs allocated to Transpower as owner of the HVDC link. Given that the HVDC revenue comprises only the incremental costs of providing the HVDC service, the standalone costs of providing the HVDC service would necessarily be greater than those currently allocated by Transpower to HVDC revenue.

Notwithstanding the above discussion, we do not regard CRA's assessment of standalone costs as a practical pricing methodology. As already noted, we also regard the relationship between standalone costs and the EV balance as potentially confusing. We turn to this issue next.

CRA proposition (e): The EV account balances should be treated as part of the regulated asset base. The EV account balances should also be valued appropriately, and under the Commerce Act it is appropriate that the competitive market outcomes are the benchmark for that valuation.

CRA makes the following comments in relation to EV balances¹²:

"I note that the opening value of the RAB (physical assets) at the start of the Administrative Settlement was derived using the ODV methodology, which as I have described in paragraph 41 is based on competitive market outcomes. The EV account balances should also be valued appropriately, and under the Commerce Act it is appropriate that the competitive market outcomes are the benchmark for that valuation.

My analysis in paragraphs 88-95 suggests that the HVDC EV account balance is neither consistent with competitive market outcomes nor consistent with the balance that would have occurred if the HVDC was owned and operated by a stand-alone regulated supplier.

In my opinion, therefore, the asset valuation IM for Transpower should require the recalculation of the EV account balances in accordance with defined cost allocation principles. Those principles should include that:

¹² CRA report, paragraphs 110-112.



- (1) all costs directly attributable to the HVAC or HVDC should be so allocated;
- (2) consistent with the Instantaneous Reserves Decision, the increase in Instantaneous Reserves due to the removal of Pole 1 should not be recovered; and
- (3) any allocation should be subject to a stand-alone cost constraint for the HVDC, calculated in accordance with (2) above.”

As noted above, the EV balance essentially reflects the cumulative amount owed by or owing to a particular group of customers, accrued over a number of years¹³. It is therefore inappropriate to subject the EV balance to a valuation test. In contrast to CRA’s contention, there is no competitive market benchmark for the accrued amount owed by a particular group of customers. The cumulative amount owing depends on the difference between the amounts charged to and paid by the relevant customers over a particular period. Unlike a physical asset, the EV balance cannot be benchmarked by reference, for example, to the efficient costs of replacing an existing asset with its modern equivalent.

In paragraph 112 (quoted above), CRA appears to recognise that its suggested valuation approach essentially requires rules regarding the annual allocation of costs to HVAC and HVDC customers. Our understanding, however, is that Transpower has consistently applied a cost allocation method that gives effect to the Electricity Commission’s intention that the costs of the HVDC link should be borne by HVDC customers¹⁴. From a practical perspective, therefore, CRA is essentially proposing the application, after the event, of a different cost allocation methodology to derive an alternative EV account balance.

We would be surprised if reasonable arguments could not be made for different cost allocation methods. Equally, we would be surprised if HVAC and HVDC customers would agree on any particular allocation, because a gain for one group will produce a corresponding loss for the other. In this context, we would expect Transpower to consistently and transparently apply its agreed methodology for allocating costs between the HVAC and HVDC customers.

CRA also suggests that the EV balance should form part of the regulated asset base. It is not clear why CRA is proposing this change, although the suggestion appears to be linked to the erroneous view that an EV balance can be subject to some form of competitive market valuation. We also note that Transpower and the Commerce Commission have a shared objective of returning EV balances to zero over a period of time. It is doubtful whether the inclusion of EV balances in the regulated asset base would facilitate the achievement of this objective.

¹³ It is noted, however, that prior to 30 June 2006 EV balances also reflect revaluations of the asset base in accordance with the ODV rules..

¹⁴ As noted by the Commerce Commission, Decision and Reasons for not amending Transpower’s administrative settlement to include Instantaneous Reserves Fees as Pass-Through costs, 22 June 2009, paragraph 49.

4. Overview of the NERA report

NERA was asked by Meridian to consider the manner in which Transpower has been allocating operating costs between HVAC and HVDC customers during the period of the administrative settlement. NERA sets out the charging arrangements between HVDC and HVAC customers between 2007 and 2009 in Table 1 of its report, which is reproduced below.

Table 1
Allocation of Operating Costs through the EVA

| | 2007 | | 2008 | | 2009 | |
|---------------------------------------|--------------|-------------|--------------|-------------|--------------|-------------|
| | AC | DC | AC | DC | AC | DC |
| | \$m | \$m | \$m | \$m | \$m | \$m |
| Outturn Opex | | | | | | |
| Maintenance | 110.9 | 11.1 | 126.4 | 8.5 | 135.8 | 8.4 |
| Intercompany | 6.3 | 6 | 6.4 | 5.7 | 11.9 | 5.4 |
| A+G | 50.9 | 0.3 | 52.2 | 0.3 | 54.8 | 0.3 |
| Ancillary Services | 0 | 1.7 | 0 | 15.8 | 0 | 28.6 |
| Total, AC vs. DC (A) | 168.1 | 19.1 | 185 | 30.3 | 202.5 | 42.7 |
| Total Outturn Opex (B) | 187.2 | | 215.3 | | 245.2 | |
| Opex Cap (C) | 199.6 | | 207.6 | | 211.5 | |
| Re-allocation (D) = (B) - (C) | -12.4 | | 7.7 | | 33.7 | |
| Proportion of Outturn Opex | 90% | 10% | 86% | 14% | 83% | 17% |
| Re-allocation (E) | 11.1 | 1.3 | -6.6 | -1.1 | -27.8 | -5.9 |
| Charge to EV Account (A) + (E) | 179.2 | 20.4 | 178.4 | 29.2 | 174.7 | 36.8 |
| Annual % Change in Outturn Opex | - | - | 10.1% | 58.6% | 9.5% | 40.9% |
| Annual % Change in Opex Charge | - | - | -0.5% | 43.5% | -2.1% | 26.1% |
| CPI | | | 4% | | 1.9% | |

NERA makes the following observations regarding the above table¹⁵:

“Table 1 illustrates that between 2007 and 2009, the *outturn* operating costs attributed to AC and DC customers grew significantly. Specifically, outturn AC operating costs increased by 10.1 and 9.5 per cent, respectively in 2008 and 2009, and outturn DC operating costs increased by 58.6 and 40.9 per cent. Although both outturn AC *and* DC operating costs increased over the period, there was divergent movement in the *allocation* of the operating cost allowance, ie, between 2007 and 2009:

- AC customers’ share of the operating cost allowance fell from **90** to **83 per cent**; and
- DC customers’ share of the operating cost allowance increased from **10** to **17 per cent**.

There was a similar discrepancy in the *rate of change* in operating costs allocated by Transpower to the AC and DC EV accounts. The operating costs charged to the DC EV account increased at a rate well in excess of the movement in the CPI

¹⁵ National Economic Research Associates, Treatment of Operating Costs: A Report for Meridian, 6 August 2010, page 6.



over the period, whereas the operating costs charged to the AC EV account declined (notwithstanding the increase in *outturn* AC operating costs). Specifically:

- in 2008, operating costs charged to the DC EV account increased by **43.5 per cent** and operating costs charged to the AC EV account reduced by **0.5 per cent** (compared to a **4 per cent** increase in the CPI); and
- in 2009, operating costs charged to the DC EV account increased by **26.1 per cent** and operating costs charged to the AC EV account reduced by **2.1 per cent** (compared to a **1.9 per cent** increase in the CPI)."

Following further discussion of Transpower's charging arrangements, NERA draws the following conclusions¹⁶:

"In other words, the downward pressure on HVAC charges was not indicative of a reduction in the (efficient) operating costs associated with providing Transmission services to AC customers. Rather, the reduction simply reflects the fact that it was not possible for Transpower to allocate more operating costs to DC customers without reducing the allocation to AC customers. The net result is that Transpower *has not* in fact given effect to the 'causer pays' principle. Rather, it has provided the misleading signal to AC customers that they have caused it to incur *fewer* operating costs over the period, when in fact those costs have increased. Returning to our earlier example, Transpower's approach is analogous to:

- levying a congestion charge on a sub-set of the motorists that elect to travel along a stretch of road during peak periods; and
- making off-setting payments to the remaining motorists that travel along the same stretch of road during peak periods."

NERA's overall conclusions are set out below¹⁷:

"In our opinion, a firm in a workably competitive market would not contemplate the ex-post adjustments that Transpower has undertaken, since:

- the growing proportion of operating costs attributed to DC customers has placed downward pressure on HVAC charges, despite the fact that the operating costs associated with serving these customers has also increased; and
- even if the adjustment provided appropriate price signals (which they do not) they serve no useful purpose since they are provided after the supposed 'cost causing conduct' has taken place, rendering them incapable of enticing desirable behavioural change.

¹⁶ National Economic Research Associates, Treatment of Operating Costs: A Report for Meridian, 6 August 2010, pages 8 and 9.

¹⁷ National Economic Research Associates, Treatment of Operating Costs: A Report for Meridian, 6 August 2010, page 11.



By adopting such an approach Transpower is therefore likely to have reduced allocative efficiency. In our opinion, a firm in a workably competitive market would be more likely to have established separate ex-ante operating cost allowances for AC and DC customers and persevered with those thresholds to provide an enduring price signal. One means of giving effect to this principle would have been to establish separate ex-ante operating cost thresholds for AC and DC customers at the outset of the Administrative Settlement period based on their respective shares of the initial 'base amount' of \$199.61 million, and to have escalated those thresholds annually in line with the CPI."

5. Harding Katz comments on the NERA report

In its report, NERA makes two key criticisms of Transpower's charging arrangements:

- The relative movements in charges to HVAC and HVDC customers are inappropriate because charges to HVDC customers are increasing rapidly, and charges to HVAC customers have reduced; and
- Transpower's charges are inconsistent with the outcome that would be expected in a workably competitive market.

In our view, the charges comparison in Table 1 of the NERA report is affected by the very significant increase in the costs of HVDC instantaneous reserve, which is fully allocated to HVDC customers as a cost of providing the HVDC link. NERA observes that charges to HVDC customers have increased as follows:

- in 2008, operating costs charged to the HVDC EV account increased by 43.5 per cent; and
- in 2009, operating costs charged to the HVDC EV account increased by 26.1 per cent.

However, if the ancillary services costs are excluded from the comparison on the basis that these costs should be directly attributable to HVDC customers, the picture is quite different, as shown in the table below.

| | 2007 | 2008 | 2009 |
|--|------|--------|--------|
| Opex charged to HVDC customers | 20.4 | 29.2 | 36.8 |
| Less ancillary services costs | 1.7 | 15.8 | 28.6 |
| Opex (net of ancillary services) charged to HVDC | 18.7 | 13.4 | 8.2 |
| % change in opex charge for HVDC, (excluding ancillary services) | - | -28.3% | -38.8% |



The table above shows that when ancillary services costs are excluded from the comparison:

- in 2008, operating costs charged to the HVDC EV account decreased by 28.3 per cent; and
- in 2009, operating costs charged to the HVDC EV account decreased by 38.8 per cent.

These reductions compare with modest decreases in charges to HVAC customers of 0.5 per cent and 2.1 per cent in 2008 and 2009, respectively. On the basis of our assessment, if Transpower's charging arrangements excluded ancillary services costs from the allocation process (on the basis that these should be allocated directly to HVDC customers), then charges to HVAC customers would have been slightly lower in 2008 and 2009 than indicated in Table 1 of the NERA report.

These numerical examples illustrate that percentage comparisons between annual charges need to be treated with caution because there are numerous ways of presenting the same data. In addition, there are numerous alternative cost allocation methods, which could benefit HVAC or HVDC customer groups depending on the difference between forecast and actual costs. Consequently, it is unlikely that customer groups will be able to reach a consensus on the best cost allocation method, especially once the outturn data is known.

We agree with NERA's observation that workably competitive markets generally provide price signals to customers that reflect the costs of providing the relevant goods or services. However, we disagree with NERA's view that allocating costs after the event "serves no useful purpose" in terms of providing price signals. We disagree with this view because HVDC customers will be allocated 100% of the cost of the HVDC link (including the costs of HVDC instantaneous reserve), so these customers will be encouraged to take into account the impacts of their behaviour insofar as it affects the costs of the HVDC link. It does not necessarily follow, therefore, that effective pricing signals can only be provided through an ex ante charging arrangement.