

Report 2: Subsidy

To: Rail Development Group

From: William Peet [WITHHELD UNDER SECTION 9(2)(a) of the OFFICIAL INFORMATION ACT 1982].

Date: 21 August 2008

Executive Summary

Ministers have directed that the Rail Development Group consider industry structure options and make recommendations to them for approval.

The rail and ferry businesses are driven by a high level of common costs and joint services, where average costs are a long way different from marginal costs. As an example, this makes disaggregation of network services value-destructive, e.g. closing lines resulting in shedding revenue faster than costs. Based on the experience of the last 15 years of private ownership, it appears that a purely commercial rail and ferry organisation will undertake a harvesting strategy.

The starting premise is that no intervention is required where the commercial market is delivering the public policy outcomes sought. The key problem to be resolved prior to setting an appropriate industry structure revolves around the quantum and method of payment for non-commercial activities, whether operating subsidies or funding for investments. Broadly, this can be solved either by a regulated control-based model or by a core services model.

On balance, this paper recommends the core services model which would better incentivise commercial behaviour, minimise localised distortion in the transport market and integrate the organisation in itself and with other parts of Government during the critical period of stabilisation over the next few years. It would have substantial operating separation and transparency obligations, and would retain some legal separation so that future choices are not inhibited.

It is proposed that the subsidy be delivered as a payment towards fixed costs to minimise distortion at a local level.

We also recommend an initial approach of direct funding through Vote: Finance to put rail on a solid footing with a gradual transition to funding being managed through New Zealand Transport Agency when both rail and NZTA are ready.

Recommended Action

I recommend that you:

- 1) **Note** this paper;
- 2) **Recommend to Ministers that they:**
 - a) **Approve** the core services model with purchase of non-commercial outcomes as the subsidy model;
 - b) **Approve** the delivery to be through paying for fixed costs to minimise local distortion; and
 - c) **Approve** the limited public release of this approach.

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Purpose of Report

- 1) We understand that Ministers want to consider final options for the structure of the rail industry.
- 2) This report describes the key issues to consider, various options, the pros and cons of their implementation and a recommended solution.

Nature of the Rail Industry

- 3) The components of the NZ rail and ferry industry owned or supported by the Crown can be viewed as 6 “products”, 4 of which are directly supported by track access, (including the rail component of ferries), and two products that are produced jointly with rail services:
 - a) Freight train services serving the markets of domestic freight forwarding (Kombi), import / export (IMEX) and bulk customers;
 - b) Metro passenger services in Auckland and Wellington, including extended services e.g. Pukekohe and Helensville to Auckland, and Palmerston North and Wairarapa to Wellington;
 - c) Long distance passenger services, primarily servicing domestic and international tourists;
 - d) Heritage rail, primarily introducing people to rail travel and those with interest in steam, servicing a wide range of domestic and international customers;
 - e) Passenger and car transport across Cook Strait; and
 - f) Commercial vehicle transport across Cook Strait.
- 4) The key metrics by unit are below:

Year Ending 30 June 2009 (Based on 2009 Budget)

KiwiRail Freight / Fleet	Interisland Line	Tranz Metro	Tranz Scenic	ONTRACK	Integrated corporate	Total
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[WITHHELD UNDER SECTIONS 9(2)(b)(ii), and 9(2)(i) of the OFFICIAL INFORMATION ACT 1982].

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- 5) There are various commercial property activities that focus on leveraging sites that are integral to rail use following the sale of surplus property 20 years ago.
- 6) While substantial competition exists for the outputs of the freight and passenger business in the transport market, there are no substituting competing rail services for (a)-(c) and little likelihood of any such competition creating value. This issue was addressed by the work done 2001-3 by Treasury with the aid of LEK. We assume for the purpose of this paper that there is no need to re-litigate the issue of exclusivity as rail has not been able to exercise market power in recent times. There is good competition in the interisland passenger, car and CV market,
- 7) The likely outcome of a purely commercial operation is now clear following 15 years of testing:
 - a) None of the (a)-(c) businesses have been commercially sustainable in their own right with current policy settings if network-wide operations are to continue and assets maintained;
 - b) Good tension exists between customers and rail industry because most customers have alternative transport options;
 - c) Good tension within industry – suppliers, divisions, unions;
 - d) Rail ferries will be optimised around the ferry business, rather than around rail freight;
 - e) Separation of the track from the operator (and giving that operator exclusive use) results in increased transaction costs, difficulty in coordinating planning and investment; and
 - f) Any exclusive commercial operator will seek first to gain subsidies and then operate a harvesting strategy, involving minimal investment and eventually leading to staged reductions from the current network to a 1500km network as marginal investment demands become uneconomic.
- 8) The current management of the rail system reflects recent customer demand and the operation of competition (though this may change with the change in fuel costs and carbon intolerance) and has some characteristics of a network, albeit a loosely connected one. However, the economics of running it as a single entity (as opposed to a multiplicity of individual smaller operations) is primarily driven from the dominance of common costs e.g. track maintenance and renewals, locomotive utilisation, operational training standards etc. This is observed worldwide, though many of the benefits in larger countries can sometimes be achieved through sharing of common services – e.g. the emergence of the “mom and pop” operators in the USA mid-west.
- 9) In our view, the degree to which rail operates as a network will be governed by policy settings. It will not be driven by the unsubsidised economics of rail transport alone.
- 10) Most of the railways and road freight operations internationally receive direct and indirect support from Governments. The support ranges from access to cheap or free capital and operating subsidies, especially in metro train services. There are very few (if any) purely commercial rail operations in the world.
- 11) In reality there is a requirement for public subsidies to address the deferred capital expenditure, maintain ongoing capability and invest for growth in rail as part of an integrated transport and infrastructure strategy. The government’s policy outcomes will not be achieved without subsidies.

Current rail funding

- 12) Rail funding could reasonably be described as ad hoc:

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a) Metro:

i) Summary

Item	Auckland	Wellington
Patronage	6,794,108	11,552,453
Cost per passenger	\$ 6.51	\$ 1.92
Fare per person	\$ 2.47	\$ 2.68
Farebox proportion of revenue	28%	58%
<i>Source: Ministry of Transport</i>		

ii) Auckland metro:

- (1) Above track (including track access opex) from a combination of regional rates (in the minority), capital from ARH, and large NZTA subsidies; and
- (2) Below track: capital through 100% funding from Vote: Finance.

iii) Wellington metro:

- (1) Above track (including track access opex via KiwiRail) from a combination of regional rates (in the minority), and large NZTA subsidies; and
- (2) Below track: 30% of capital from 90% NZTA / 10% regional rates and 70% of capital from 100% Vote: Finance.

b) Freight

- i) Interim top-up funding for opex from Vote: Finance;
- ii) Debt funding for renewals, although this will never be realistically recovered from KiwiRail;
- iii) \$200m “free” equity injection from Vote: Finance (now spent or committed);
- iv) Land release debt funding from Vote: Finance;
- v) Alternatives to roading (ATR) funding, though this is somewhat theoretical as no payments have yet been made by NZTA (or its predecessors);
- vi) Toll have received subsidies through three means:
 - (1) Operating cost subsidy by avoiding the full cost of track access as required under contract and independent audit;
 - (2) Capital cost subsidy, through the injection of \$200m of “free” capital (as part of the 2004 deal) without recovery while keeping exclusive access;
 - (3) Financing subsidy, through borrowing for renewals via the NRAA WACC and depreciation charge, although this is only a subsidy to the extent Toll were not held to their contractual obligations to pay;
- vii) ONTRACK and Treasury worked extensively with Toll on subsidy options during 2006-7 and formed the views that:
 - (1) Any commercial operator (privately owned or as SOE) would only provide national services and maintain the network if it were subsidised;
 - (2) Without a long period of hostile negotiations and withdrawal of funding for rail, the likely subsidy would be in the region of \$600-\$700m NPV, excluding track upgrades and any substantive investment in rolling stock or rail ferry capacity;
 - (3) It was unlikely that Toll would pay back much of the renewals loan, as the commercial affordability limit for track access was about [WITHHELD UNDER SECTIONS 9(2)(b)(ii), and 9(2)(i) of the OFFICIAL INFORMATION ACT 1982] per year (consistent with Tranz Rail’s experience), leading to either fewer renewals being done (and the network getting worse) or being in default of their obligations;
- viii) The recent past can be summarised as follows:

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Summary		2006/7 Actual	2007/8 Actual
	ONTRACK's costs		
A	TAC opex	\$ 56,400	\$ 57,264
	TAC WACC & depreciation	\$ 5,652	\$ 13,015
	Subtotal	\$ 62,052	\$ 70,279
B	Paid by Toll		
	TAC opex	\$ 48,000	\$ 48,000
	TAC WACC & depreciation	\$ 5,652	\$ 6,000
	Subtotal	\$ 53,652	\$ 54,000
C	Actual renewals	\$ 65,364	\$ 74,419
D	Toll affordability (approx)	[WITHHELD UNDER SECTIONS 9(2)(b)(ii), and 9(2)(i) of the OFFICIAL INFORMATION ACT 1982].	
E=A+C-D PAYGO commercial shortfall		[WITHHELD UNDER SECTIONS 9(2)(b)(ii), and 9(2)(i) of the OFFICIAL INFORMATION ACT 1982].	

- ix) In our view, it is clear that the PAYGO commercial shortfall for operating a full network would have to be met by a subsidy or an alternative business model pursued;
- c) Public policy:
- i) ONTRACK receives \$3.5m per annum of funding to undertake non-commercial activities, including providing support to the heritage movement.

Outcomes sought from the rail and ferry business

- 13) Any intervention away from a pure commercial model has to drive towards different outcomes to those occurring in the absence of such intervention. From our experience and subject to feedback, the desired outcomes to be achieved appear to be:
- a) Freight:
- i) Baseline
- (1) All lines open with regular rail ferry services, most of the time;
 - (2) Services on all lines, at least weekly;
 - (3) Achieve modal shift to rail from road (as opposed to rail to and from coastal ship, other than at the margin), prioritised according to the value of taking incremental traffic off roads in various corridors (for example shifting NTKs to rail in Auckland-Tauranga are likely to be more valuable than NTKs in Southland in terms of avoided roading costs).
- b) Passenger Metro:
- i) Substantial increase in Auckland as per the Rail Development Plan from the ARC and ARTA, followed by a reduction in the per-head contribution from taxpayers;
 - ii) Moderate increase of services in Wellington as per the GWRC rail upgrade plan;
 - iii) Other commuter services as commercially justified or as supported by NZTA;
- c) Long distance passenger:
- i) Domestic and international tourist services on Christchurch – Greymouth, Christchurch – Picton and Wellington – Auckland;
 - ii) Other services as commercially justified;
 - iii) Non-scheduled heritage train services at a similar level to today at minimum cost;

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- d) Passenger, car and commercial vehicle movement across Cook Strait to continue to be purely commercial; and
 - e) State sector level of compliance – assets, processes and systems in proper state.
- 14) However, note that these products cannot be considered in complete isolation from each other. There are common services (e.g. track, IT etc.) between commuter and freight and investment priorities for each must be considered.

Choice of the broad subsidy delivery model

- 15) As discussed above, operating a “full network” model is not commercially viable.
- 16) From an accounting perspective, the available evidence suggests that commercial revenue from rail freight and ferry services is sufficient to fund operating costs. However, after funding operating costs there is insufficient revenue to:
- a) Provide a return on and return of sunk capital; and
 - b) Support investment in the level of asset renewals needed to address deferred capital expenditure and maintain ongoing operating capability at a level to achieve the government’s desired policy outcomes.
- 17) Deferred expenditure is a key issue for KiwiRail/ONTRACK – the sheer scale of the capital expenditure facing both businesses is in part a function of the burden of catch-up expenditure. The relative economics of rail vs. road and sea mean that relieving the business of the deferred capital expenditure would only go some way to enabling it to be financially sustainable on a stand alone basis.
- 18) In cash flow terms the key issue facing the business is capital costs. There is a significant difference between short run and long run marginal costs – short run marginal costs are relatively low (depending on the increment of service) e.g. the cost of hauling another container is insignificant (assuming wagon availability) but the cost of adding a new locomotive is significantly higher.
- 19) The key issues are how to deliver the subsidies and how much they should be. The overriding principles should be that:
- a) The subsidies should cause the least distortions to the commercial transactions and focus of the business to ensure that subsidies do not become a substitute for maximising the net return from providing services to customers. Decision making should not be influenced by the existence or not of the subsidies and, as far as possible, the business should operate as if it does not receive a subsidy; and
 - b) The subsidies should be minimised with focus placed on efficient spending, avoiding short-term maintenance and capital programmes driven only by available cash.
- 20) One approach could be to focus the operations of the business on maximising year on year growth in EBITDA from commercial operations – subsidies become irrelevant in this context. However, in isolation this approach ignores that given the capital intensive nature of the business, operating decisions must take into account asset utilisation and the impact this has on the allocation of capacity (maximising EBITDA must take into account the capital required to provide the track and rolling stock capacity to deliver the services to generate EBITDA).
- 21) However it is dressed-up, subsidies will involve the Crown providing cash or assets to the business. But there are important behavioural aspects to the subsidies - there is a critical interface between the delivery of the subsidies and how the business is managed and performance is measured and monitored. The performance measurement

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framework should focus decisions on maximising external revenue, minimising costs and using capital efficiently. It should minimise the risk of the subsidies reducing the incentives on management to maximise net revenue from customers. Hence the form in which the subsidies are delivered is important.

22) There is a range of delivery options:

a) "Purchase" of services. There are at least three variants of this:

- i) Regulated utility. Top up to provide revenue sufficient to meet financial performance parameters. This can be characterised as a regulated control-based model involving fully allocated revenues and costs by service and type and with top up revenue by service (i.e. subsidy) to achieve an acceptable rate of return. This approach is heavily dependent on detailed cost information at a sub-product level and requires resource-intensive monitoring on a regular basis.

The current approach to suburban rail has elements of this approach. This experience has illustrated that the approach is not particularly suited to situations where common inputs (track, signalling) produce multiple products. It focuses management behaviour on average costs rather than marginal costs (leading to inefficient outcomes and gaming) and it is hard to introduce commercial efficiency incentives. It probably best fits a Crown agency organisation;

- ii) Purchase of non-commercial services. A core services model, characterised by the commercial activities being operated on an unsubsidised basis and the Crown entering into a contract to "purchase" non-commercial services on a fully-costed, transparent basis.

This approach focuses the subsidy provider on what they want to "buy" over a period of time and this in turn focuses Board and management on maximising efficient commercial outcomes, moderated by the SOE Act requirement to exhibit a strong sense of corporate social responsibility. It therefore allows Ministers to keep control over overall land transport outcomes and specify and adjust, in broad terms, the quantity and quality of outcomes the Government wishes to purchase. It requires much less intensive monitoring and can use the existing SOE model with support provided under the SOE Act:

Section 7: Non-commercial activities:

Where the Crown wishes a State enterprise to provide goods or services to any persons, the Crown and the State enterprise shall enter into an agreement under which the State enterprise will provide the goods or services in return for the payment by the Crown of the whole or part of the price thereof.

- iii) Fixed cost funding. This would involve the Crown providing a fixed amount to fund the business's core fixed operating costs, allowing the business to focus on maximising marginal profit. The scope for gaming the definition of fixed costs could be significant but this could be partially overcome by establishing the fixed cost subsidy ex ante and fixing it for a period (e.g. three years). This would remove the burden of high fixed costs from the business but would have to be accompanied by a rigorous and challenging performance framework to ensure the marginal profit is maximised.

This method is likely to result in the least distortion at a local level.

b) Capital related:

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- i) Providing capital in kind. The Crown would take responsibility for capital expenditure. This is aimed at removing the burden of capital costs and allowing the business to focus on revenue and operating costs. In some respects this is a variant of the fixed cost funding model. However, it will suffer from the problem of suboptimal operating expenditure/capital expenditure trade-offs. The issue will be how to ensure optimisation of capital expenditure and operating decisions if responsibility for capital and operating decisions is separated.
 - ii) Rate of return adjustment. The Crown as owner could provide subsidised capital to the business i.e. accept a rate of return on its capital below a commercial rate of return. Depending on the level of the rate, it could help justify and support new investment but will not fix the deferred capital expenditure issue.
- c) Grant of some form, either unspecified or tagged to specific milestones.
- 23) Each of these approaches involves risk for the Crown to a lesser or greater degree in terms of inefficient use of taxpayer money. The experience with subsidies is it is very difficult to avoid gaming and inefficiency. The key is to have an approach that causes least problems.
- 24) On balance, taking into account the principles outlined earlier suggests that the least distortionary approach overall will be to for the subsidy to proxy as close as possible a commercial arrangement. This suggests that a purchase model involving the Crown “buying” the non-commercial services would be the preferred approach, with delivery through the fixed cost funding model.
- 25) There will need to be a recapitalisation of the entity including both right-sizing the debt and equity, but also a programme of getting the asset base to an appropriate standard for reliable service.
- 26) All of the models require a multi-year commitment to the subsidy. In my view, the 5 year “guarantee” on State Highway funding provides a useful benchmark for this type of commitment.
- 27) If Ministers agree with this approach, further work needs to be carried out to quantify the absolute level of the subsidy and to determine the mechanics of how the subsidy delivery will work.

Detailed subsidy delivery options

- 28) There are a variety of ways to deliver this subsidy to the industry, regardless of form.

Delivery mechanism	Pros	Cons	Recommend for:
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Delivery mechanism	Pros	Cons	Recommend for:
<ul style="list-style-type: none"> Subsidy per unit (tonne or person) 	<ul style="list-style-type: none"> Output-based No need for direct investment Easy to compare projects Although somewhat blunted, keeps pressure on efficiency for benefit of subsidiser and user 	<ul style="list-style-type: none"> Prone to gaming around measurement High cost to monitor compliance Needs to be committed many years in advance (such as 6 year State Highway commitment) Direct distortion at a local level 	<ul style="list-style-type: none"> Freight network upgrades
<ul style="list-style-type: none"> Subsidy % of commercial or user revenue funded from rates or tax 	<ul style="list-style-type: none"> Output-based No need for direct investment Easy to compare projects Although somewhat blunted, keeps pressure on efficiency for benefit of subsidiser and user 	<ul style="list-style-type: none"> Prone to gaming around measurement High cost to monitor compliance Needs to be committed many years in advance (such as 6 year State Highway commitment) Direct distortion at a local level 	<ul style="list-style-type: none"> Metro passenger opex Metro passenger renewals Metro passenger upgrades
<ul style="list-style-type: none"> Injection of free capital 	<ul style="list-style-type: none"> Gets investment underway 	<ul style="list-style-type: none"> Hard to capture surpluses Often hard to justify compared to other priorities 	<ul style="list-style-type: none"> Metro passenger capex One-off catchup work for fleet and network
<ul style="list-style-type: none"> Regulated utility 	<ul style="list-style-type: none"> Well understood (models exist in other sectors) 	<ul style="list-style-type: none"> Determining opening asset value is difficult Hard to set a long enough term to get investment and short enough to retain control Needs sub-product cost and revenue data and negotiation 	<ul style="list-style-type: none"> Not, as high compliance costs

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Delivery mechanism	Pros	Cons	Recommend for:
<ul style="list-style-type: none"> Annual network-wide contract for minimum standards (leaving remainder to operate commercially) 	<ul style="list-style-type: none"> Provides confidence that the baseline standard will be met Does not create direct distortionary effects at a local level Incentive to pursue traffic at the margin exists strongly, without further intervention Incentivises “network” behaviour 	<ul style="list-style-type: none"> Hard to determine quantum initially, though can benchmark and require efficiencies to be gained over time Can encourage excess investment in network periphery – suggests need to maintain flexibility on view of the network and differentiation of minor lines (similar issues in Transpower) 	<ul style="list-style-type: none"> Freight network opex & renewals
<ul style="list-style-type: none"> Subsidised track access charge by line or service (either percentage or flat contribution) 	<ul style="list-style-type: none"> Puts the economic loss in one place for monitoring 	<ul style="list-style-type: none"> Decisions based on where the subsidy is, rather than where the best return is Requires complex analytics to determine “right” level, risky around average vs. marginal cost Prone to complaint from disaffected local competitors Almost meaningless where track supplies multiple products 	<ul style="list-style-type: none"> Not, as incentivises inefficient behaviour

29) Long term, NZTA is the most logical organisation to purchase services from the rail business fund rail freight. However, it appears unlikely that NZTA and MoT will be ready to undertake the analytical work to move away from a road and PT focus for another 2-3 years given their work programme. It would seem logical to utilise a simple method to prioritise rail freight projects in the meantime, based on the lowest subsidy net tonne kilometres (NTK) as adjusted for externalities e.g. congestion, emissions and safety. ONTRACK has undertaken some work already to develop this as a method for prioritisation.

30) We recommend that funding for the initial period is through Vote: Finance with a move over time to NZTA.

Purchase of KiwiRail Holdings

31) NZRC will need to purchase KiwiRail Holdings Limited from the Crown, either on the same (or similar) terms to the Crown’s purchase from Toll or via. [sic] It is assumed that

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any valuation issues relating to the purchase should be reviewed by the Board as part of normal practice, though in the first instance this should be based on advice provided by the proposed establishment unit.

32) The purchase will need to be funded from an injection of equity.