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**Tasmanian Freight Schemes
Parameter Review October 2011**

Bureau of Infrastructure, Transport and Regional Economics

Tasmanian Freight Schemes Parameter Review

October 2011

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Foreword

This Bureau of Infrastructure, Transport and Regional Economics report outlines the results of a scheduled review of the parameters underpinning the Tasmanian Freight Equalisation Scheme and Tasmanian Wheat Freight Scheme for the period 1 July 2007 to 30 June 2010.

Tim Risbey and Mark Cregan prepared this report. Steve Manders (Sinclair Knight Merz Pty Ltd) assisted with freight data and in the review of the operation of the Schemes. The Tasmanian Transport Programs team within Surface Transport Policy provided valuable input and advice.

Gary Dolman
Head of Bureau
October 2011

At a glance

- Shippers were paid \$292 million under the Tasmanian Freight Equalisation Scheme (TFES) for more than 452 000 TEUs of eligible freight shipped between 1 July 2007 and 30 June 2010.
- Preliminary TFES claims data for 2009–10 shows that:
 - Shippers were paid \$78.19 million for more than 118 000 twenty-foot equivalent units (TEUs) shipped between 1 July 2009 and 30 June 2010.
 - Northbound claims were approximately three quarters of total TEUs.
 - Containerised wheat shipped to Tasmania totalled 1366 TEUs with TFES payments to shippers of \$1.14 million (4.5 per cent of southbound TEUs).
- Road freight rates have increased more than non-bulk Tasmanian sea rates since 1996–97, reducing the sea freight disadvantage for many Bass Strait shippers. Over the last three years the sea freight disadvantage has reduced further—from \$653 per TEU for dry freight in 2006–07 to \$549 per TEU in 2009–10.
- Shippers were paid \$1.26 million for 60 916 tonnes of bulk wheat shipped under the Tasmanian Wheat Freight Scheme between 1 July 2007 and 30 June 2010. There were no claims for bulk wheat shipped in 2009–10.
- Higher loading and unloading charges for bulk wheat since 2006–07 have increased shipping costs compared to bulk rail, increasing the disadvantage.
- BITRE suggests key TFES parameters (currently 1996–97 parameters) be rebased to 2010–11 market rates and road freight benchmarks as follows:
 - \$578 per TEU dry freight Road Freight Equivalent rate (RFE) (currently \$281 per TEU).
 - \$635 per TEU refrigerated RFE rate (currently \$309 per TEU).
 - 20 per cent high density discount (currently 40 per cent).
 - A 2.6 stowage factor for high density freight (currently 1.1).
- BITRE suggests the intrastate TFES parameters (currently 2006–07 parameters) be updated as follows:
 - \$775 per TEU dry freight RFE for King Island (currently \$675 per TEU).
 - \$297 per TEU dry freight RFE for the Furneaux Group of Islands (currently \$259 per TEU).
- These Road Freight Equivalent rates and median wharf-to-wharf freight rates for full container claim data suggest sea freight cost disadvantages for 2010–11 of:
 - \$549 per TEU for dry freight (down from \$671 per TEU in 1996–97).
 - \$502 per TEU for refrigerated freight (down from \$671 per TEU in 1996–97).

- \$460 per TEU for dry freight King Island–Tasmania (up from \$275 per TEU 2006–07).
- \$1203 per TEU for dry freight for Furneaux Group–Tasmania (down from \$1601 per TEU in 2006–07).
- Revising TFES parameters to reflect 2009–10 road freight rates and benchmarks would significantly reduce payments to most shippers. Payments for freight shipped between 1 July 2007 and 30 June 2010 may have fallen up to \$97 million if 2009–10 parameters (except the suggested stowage factor) had applied.
- Over the 3 years claims for small loads accounted for 50 per cent of TFES claim line items—a proxy for assessor workload—and less than 2 per cent of payments.
- A flat rate of \$650 per TEU may have provided a similar level of total TFES payments from 2007–08 to 2009–10 (assuming no high density discount and no changes in claim patterns).
- BITRE suggests a TWFS rate of \$29.90 per tonne of bulk wheat, equivalent to \$717.60 for a 24 tonne container of wheat. The current maximum rate of TWFS assistance for bulk wheat is \$20.65 per tonne.

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Executive summary

This report presents results of the Bureau of Infrastructure, Transport and Regional Economics' 2010 parameter review of the Tasmanian Freight Equalisation Scheme (TFES) and the Tasmanian Wheat Freight Scheme (TWFS).

The TFES operates according to Ministerial Directions (2008) using parameters recommended by the TFES Review Authority (1998). The TWFS operates under separate Ministerial Directions approved on 25 January 2006.

Tasmanian Freight Equalisation Scheme

Shippers were paid \$292 million under the TFES for more than 452 000 TEUs of eligible freight shipped between 1 July 2007 and 30 June 2010.

Preliminary data for 2009–10¹ shows shippers were paid \$78.19 million for 118 000 twenty-foot equivalent units (TEUs) shipped between 1 July 2009 and 30 June 2010. BITRE estimates that claims lodged after 28 July 2010 for freight shipped between 1 July 2009 and 30 June 2010 will add \$30 million to total 2009–10 payments.

Of the total, northbound claims (75 per cent of TEUs) received \$58.17 million. Major commodities were newsprint, prepared vegetables and paper.

Southbound claims (25 per cent of TEUs) received \$20.02 million. Major commodities were wood pulp, fodder/straw or pellets, and barley.

How the TFES works

Under the TFES, a shipper's wharf-to-wharf freight bill on a northern Tasmania–Victoria basis—less the Road Freight Equivalent—determines how much assistance an individual shipper may be paid (the 'sea freight disadvantage') *before* adjustment for the heavy freight discount and Scheme incentive structure.

The Scheme incentive structure means that shippers with significantly higher freight costs are not paid for their full 'sea freight disadvantage', with the maximum TFES payment currently capped at \$855 per twenty-foot equivalent unit (\$755 per twenty-foot equivalent unit plus the intermodal allowance of \$100).

¹ Centrelink claims data as at 28 July 2010.

TFES 2009–10 parameter estimates

Door-to-door parameters

Where claims are made on a door-to-door basis, the freight bill is converted to a wharf-to-wharf basis by subtracting fixed parameters. BITRE has re-estimated these door-to-wharf and wharf-to-door parameters using TFES claims data.

BITRE suggests revised door-to-wharf and wharf-to-door parameters of \$222 per TEU for each end of the journey (\$444 for a door-to-door shipment). This compares with the current parameters of \$230 per TEU (\$460 for a door-to-door shipment).

TEI Door-to-door and Wharf-to-wharf costs and adjustment factors, 2009–10

Door-to-door freight cost	1 554
Wharf-to-wharf freight cost	1 110
Door-to-door parameter	444
Door-to-wharf or Wharf-to-door adjustment factor	222

Note: Tasmania to Victoria and Victoria to northern Tasmania (G and S) routes full container load shipments for large shippers claiming more than five full container loads per year.

Scaling factors

Where required, scaling factors are used to adjust the wharf-to-wharf freight bill to a northern Tasmania to Victoria basis.

While BITRE has re-estimated scaling factors using the general approach of the TFES Review Authority (1998), a three year average is used to reduce year-on-year volatility evident on routes with low claim volumes (BITRE 2008).

Routes with significant changes in scaling factors include South Australia and the Northern Territory, where scaling factors decreased.

Road freight equivalent parameters

The key benchmark underpinning the TFES calculation of shippers' sea freight disadvantage is the notional cost of shipping the same amount of freight 420 kilometres by road on the mainland—this is the 'road freight equivalent'.

BITRE has used a road benchmark based on B-double trucks carrying three TEUs to estimate the land transport freight equivalent for the TFES Road Freight Equivalent parameter (BITRE 2008). BITRE suggests 2009–10 Road Freight Equivalent rates for the mainland-Tasmania TFES of:

- \$578 per twenty-foot equivalent unit for dry freight, the 'road limit equivalent' for an ambient temperature dry container with a net payload of 11.5 tonnes (currently \$281 per twenty-foot equivalent unit based on 1996–97 values).
- \$635 per twenty-foot equivalent unit for refrigerated freight, a 10 per cent premium on ambient temperature freight (currently \$309 per twenty-foot equivalent unit based on 1996–97 values).

These estimates assume a 30 per cent average level of empty running (where this includes a truck operating empty or partially loaded).

While most of the TFES parameters for the intrastate component are the same as the mainland Scheme, the Road Freight Equivalent parameters are based on freight rates for a semi-trailer in Tasmania and the respective distances from Tasmania (BITRE 2008).

BITRE suggests that the King Island and Furneaux Group (KIFG) Road Freight Equivalent parameters for 2009–10 of:

- \$775 per TEU dry freight for King Island (currently \$675 per TEU).
- \$297 per TEU dry freight Road Freight Equivalent for the Furneaux Group of Islands (currently \$259 per TEU).

Sea freight disadvantage

The Road Freight Equivalent is deducted from the shippers' wharf-to-wharf freight cost to calculate the sea freight disadvantage.

BITRE's estimates of Road Freight Equivalent rates and median wharf-to-wharf freight rates suggest that the sea freight cost disadvantages for 2010–11 were:

- \$549 per TEU for dry freight (\$671 per TEU in 1996–97).
- \$502 per TEU for refrigerated freight (\$671 per TEU in 1996–97).
- \$460 per TEU for dry freight King Island–Tasmania (\$275 per TEU 2006–07).
- \$1203 per TEU for dry freight Furneaux Group–Tasmania (\$1601 per TEU 2006–07).

TE2 Median sea freight disadvantage 2009–10 and 1996–97, dollars per TEU

		BITRE estimates 2009–10		TFES Review Authority 1996–97	
		Dry	Reefer	Dry	Reefer
Median wharf-to-wharf sea freight rate	(A)	1 127	1 137	952	980
Road Freight Equivalent	(B)	578	635	281	309
Median sea freight disadvantage	(A–B)	549	502	671	671

Note: BITRE has used the population of all wharf-to-wharf shippers shipping more than five TEUs per annum and all the door-to-door FCL shippers to estimate the median sea freight rate. TFES Review Authority (1998) stated that it used the combined population of shippers shipping more than five TEU per annum and all door-to-door shippers, but did not report wharf-to-wharf freight rates which have been calculated by adding the sea freight disadvantage to the Road Freight Equivalent rates.

Source: BITRE; RFE based on SKM freight rates; TFES Review Authority (1998).

**TE3 Sea freight disadvantage for King Island and Flinders Island to and from
Tasmania 2009–10, dollars per TEU**

	BITRE estimates 2009–10		BITRE estimates 2006–07	
	King Island– Devonport	Flinders Island– Bridport	King Island– Devonport	Flinders Island– Bridport
Sea freight cost	1 235	1 500	950	1 860
Road equivalent cost / TEU	775	297	675	259
Sea freight cost disadvantage	460	1 203	275	1 601

Notes: Assumes 15 tonnes per TEU.
Source: BITRE estimates based on SKM (2010); BITRE (2008).

Incentive structure

The median sea freight disadvantage is used to determine shipper class boundaries, which in turn determine how quickly assistance is reduced as the level of sea freight disadvantage increases.

BITRE re-estimated shipper class boundaries using the suggested 2009–10 parameters.

If the BITRE's suggested parameters were adopted, then the new maximum rate of assistance would be \$618 per twenty-foot equivalent unit (\$718 per twenty-foot equivalent unit including a \$100 allowance for intermodal costs). This is based on the median sea freight disadvantage of \$549 per twenty-foot equivalent unit.

The current maximum assistance is \$755 per twenty-foot equivalent unit under the current Scheme (\$855 including the \$100 intermodal allowance).

Reduced rate of assistance for high density freight

Shippers of eligible heavy, or high density, freight receive a reduced rate of TFES assistance to reflect the higher road transport costs for heavy freight.

This recognises the sea freight disadvantage is less for heavy containers as they are more expensive than lighter boxes to move by road, but generally have the same sea freight rate.

Where freight is identified as 'high density' the Ministerial Directions (2008) state that the shipper should receive a 40 per cent reduction in the standard assistance per TEU. Freight is classified as 'high density' when the stowage factor is 1.1 cubic metres per tonne or less.

To calculate stowage factors both tonnes and volumes are needed. In approximately 20 per cent of claim line items shippers do not declare either tonnes or volumes, and it is therefore not possible to calculate a stowage factor to determine eligibility for the full or reduced rate of TFES assistance. This creates the potential for both over and under payments.

BITRE (2008) concluded that the 40 per cent rate of discount and stowage factor of 1.1 cubic metres per tonne are no longer appropriate benchmarks as freight markets have changed significantly since 1996. It suggested that the new benchmark should be a B-double carrying 3 TEUs with a stowage factor of 2.6 cubic metres per tonnes or less.

BITRE suggests that:

- High density freight should continue to receive a reduced rate of assistance.
- The discount for heavy freight, based on B-double road rates, should be 20 per cent (currently 40 per cent).
- The heavy freight discount apply at cargo stowage factors of 2.6 cubic metres per tonne or less (currently 1.1 cubic metres per tonne or less).

While shippers who currently receive the reduced rate of assistance would benefit from this lower rate, increasing the stowage factor from 1.1 to 2.6 would significantly increase the number of shipments classified as high density, reducing TFES payments to this second group of shippers.

Small claims

There is no minimum threshold for TFES payments for claims made for eligible freight. Claims for relatively small loads account for a large proportion of claim line items—a proxy for assessor workload—and a very small proportion of total TFES payments.

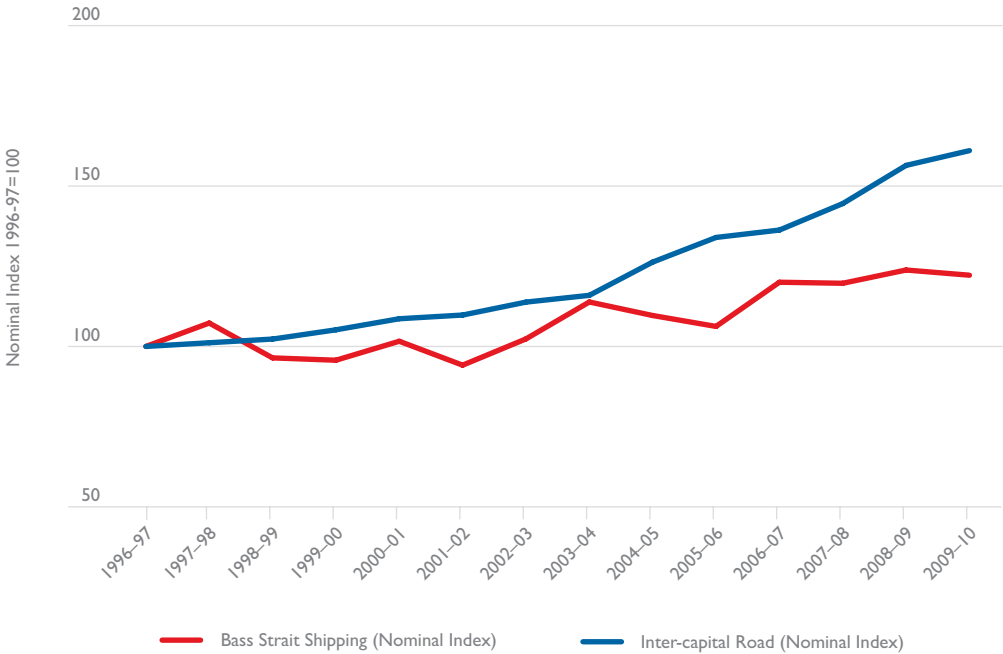
Over the period 1 July 2007 to 30 June 2010, more than 50 per cent of the claim line items accounted for less than 2 per cent of TFES payments.

Expenditure implications of updating the TFES parameters

Updating TFES parameters to reflect 2009–10 road freight rates and benchmarks would significantly reduce payments to most shippers.

This is because mainland road freight rates have increased more than non-bulk Tasmanian sea rates since 1996–97, reducing the sea freight disadvantage (as calculated by the TFES) for many Bass Strait shippers (Figure E1).

FEI Nominal freight rate indices: road and Bass Strait shipping, 1996 to 2010



Note: Estimated Bass Strait freight rates are weighted average nominal freight rates per tonne for wharf-to-wharf full container loads in the TFES database. The inter-capital road rates series assume zero empty running, giving indicative rate trends for full loads. BITRE assumes 30 per cent average under-utilisation for B-double to estimate freight benchmark, reflecting actual loads on trucks based on weigh-in-motion data. Average utilisation rates may have changed since 1996–97.

Source: BITRE Information Sheet 28, BITRE estimates based on TFES data and Transeco (2010).

If the suggested 2009–10 parameters—other than the stowage factor—had applied for eligible freight shipped between 1 July 2007 and 30 June 2010, BITRE estimates that:

- TFES payments may have been reduced by up to \$97 million.
- If the higher stowage factor of 2.6 had applied then this would have further reduced aggregate TFES payments.

This reduction is larger than previously estimated by BITRE (2008). Over the last three years the non-bulk sea freight disadvantage has reduced further—from \$653 per TEU for dry freight in 2006–07 to \$549 per TEU in 2009–10.

Consequently, if BITRE's (2008) suggested 2006–07 parameters had applied over the last three years—other than the stowage factor—then TFES payments may have been reduced by \$64 million dollars.

These values are estimates only and assume no change in shipper or claimant behaviour; and give a general indication only of the likely change in expenditure.

BITRE notes that a flat rate of \$650 per TEU—assuming no high density discount and no changes in claim patterns—may have provided a similar level of total TFES payments from 2007–08 to 2009–10.

Tasmanian Wheat Freight Scheme

Under the TWFS, the maximum rate of assistance for bulk wheat is \$20.65 per tonne. The annual subsidy is also capped at \$1.05 million.

Between 1 July 2007 and 30 June 2010 shippers were paid \$1.26 million for 60 916 tonnes of bulk wheat shipped under the Tasmanian Wheat Freight Scheme. There were no TWFS claims for bulk wheat shipped in 2009–10.

Higher loading and unloading charges for bulk wheat have significantly increased sea shipping costs since 2006–07.

BITRE suggests a TWFS payment of \$29.90 per tonne of bulk wheat, equivalent to \$717.60 for a 24 tonne container of wheat (current rate up to \$20.65 per tonne). This compares to BITRE's (2008) suggested TWFS payment of \$11.90 per tonne for 2006–07.

Containerised wheat shipped to Tasmania in 2009–10 totalled 1366 TEUs with payments to shippers of \$1.14 million (4.5 per cent of southbound TEUs). The average TFES payment for containerised wheat was \$35.86 per tonne in 2009–10.

If BITRE's suggested TFES parameters for 2009–10 had applied, then TFES payments for 2009–10 may have been reduced to \$0.92 million (with an average TFES payment per tonne of containerised wheat of \$30.88 per tonne).

CHAPTER I

Tasmanian Freight Schemes

History

Tasmanian Freight Equalisation Scheme

The Tasmanian Freight Equalisation Scheme (TFES) was originally introduced in July 1976. The Government's objective was to alleviate the freight cost disadvantage incurred by shippers of eligible non-bulk goods moved between the mainland and Tasmania by sea (Productivity Commission 2006).

The TFES and its subsidy rates have undergone review on several occasions, notably in 1985 and 1998. The 1998 review (the Nixon Report) was conducted by the TFES Review Authority (1998) chaired by the Honourable Peter Nixon (AO).

On the 1st July 2008 the Australian Government extended the Tasmanian Freight Equalisation Scheme to include intrastate sea freight shipped between King Island and the main island of Tasmania, and between Flinders Island and the main island of Tasmania.

This was further extended on 16 November 2008 to include shipments of freight between any island in the Furneaux Group and the main island of Tasmania. The intrastate component has become known as the King Island and Furneaux Group (KIFG) intrastate component. Since 16 November 2008 the eligible sea freight routes for the TFES intrastate component are between:

- any port on King Island and any port on the main island of Tasmania; and
- any port in the Furneaux Group and any port on the main island of Tasmania.

The Ministerial Directions summarise the aim of the Scheme as:

The aim of the Scheme is to assist in alleviating the sea freight cost disadvantage incurred by the shippers of eligible non-bulk goods moved by sea between:

- the mainland of Australia and Tasmania; and
- King Island and the main island of Tasmania; and
- Flinders Island and the main island of Tasmania.

The current Schemes (1998) operate under Ministerial Directions (July 2008), with the major change being the introduction of intrastate freight movement eligibility for King Island and Flinders Island (the Furneaux Group of Islands).

Eligibility to claim assistance under the TFES is limited to persons (including partnerships, companies and other bodies) that actually incur the costs of shipping the eligible goods.

The Department of Infrastructure and Transport (formerly the Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG)) is responsible for funding and policy issues associated with the TFES. Funding is demand-driven and expenditure is uncapped.

Administrative matters, such as the processing of claims for assistance, are handled by Tasmanian Transport Programs (part of Centrelink).

Tasmanian Wheat Freight Scheme

In the 1950s the Second Marketing Plan enacted a special arrangement, the Tasmanian Wheat Freight Levy (TWFL), to deal with costs associated with shipping wheat to Tasmania. This arrangement remained largely unchanged until 1989 when the Australian Government deregulated domestic wheat marketing arrangements and established a transitional arrangement, the Tasmanian Wheat Freight Subsidy Scheme.

The 1989 Tasmanian Wheat Freight Subsidy Scheme subsidised the cost of bulk shipments of wheat from the mainland to Tasmania by sea. Under the Tasmanian Wheat Freight Subsidy Scheme, a shipper may have been eligible for a subsidy in respect of the wharf-to-wharf freight costs of a shipment of bulk wheat by sea from the mainland to Tasmania.

The Tasmanian Wheat Freight Scheme (TWFS) came into effect on 1 July 2004. The TWFS was established to subsidise the cost of bulk shipments of wheat from the mainland to Tasmania by sea. It operates under separate Ministerial Directions approved by the Minister for Local Government, Territories and Roads on 25 January 2006 (DOTARS 2006c). Funding is capped at \$1.05 million per financial year.

Productivity Commission review and Government response

On 21 March 2006 the former Australian Government referred the arrangements for subsidising containerised and bulk shipping between the mainland and Tasmania to the Productivity Commission. The Commission was asked to report on the merits and weaknesses of the current arrangements for subsidising containerised and bulk shipping between the mainland and Tasmania and provide recommendations on an appropriate future approach and/or arrangements.

The Productivity Commission made a series of findings and recommendations to improve the operation of the Schemes (Productivity Commission 2006).

The former Australian Government (2007) responded to the report by recognising that Tasmanian producers can be at a freight cost disadvantage when competing in mainland markets by not having land access to the mainland States and Territories.

How the current Schemes work

Tasmanian Freight Equalisation Scheme

The Tasmanian Freight Equalisation Scheme is based on the concept of sea freight cost disadvantage. The sea freight disadvantage is the increase in cost directly resulting from moving freight by sea across Bass Strait.

Sea freight disadvantage

The TFES Review Authority (1998, pp. 4–5) recognised that a gap was likely to exist between the actual cost of the trans-Bass Strait freight task and a comparable land freight equivalent. This gap arose through the absence of a land bridge and the inability to use either road or rail transport.

The Productivity Commission (2006, p. xvi-xvii) concluded that sea freight was inherently more expensive, relative to road freight, over shorter distances such as Bass Strait, and that additional sources of sea freight cost disadvantage arise from:

- Specialised packaging requirements.
- Intermodal transfers.
- Significant capital investments required to improve the efficiency of shipping services.
- The costs of freight consolidation.
- Reliance on shipping requiring higher input inventories and the capacity to store additional output.
- The need for greater investment in transport infrastructure (such as trailers and containers), given the longer shipping turn-around times.

The Commission also noted that other factors could widen the relative freight cost disadvantage:

- Cabotage and coastal shipping regulation that adversely affects shipping costs.
- Any under-recovery of heavy vehicle road freight costs incurred by mainland producers.

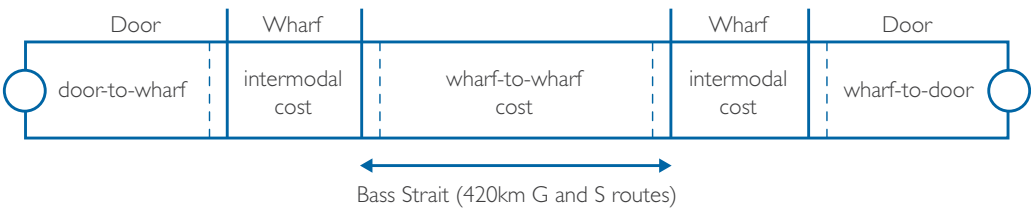
Structure of the TFES

A key calculation is a shipper's notional wharf-to-wharf freight cost disadvantage. This is equivalent to the shipper's notional wharf-to-wharf freight cost less the road freight equivalent cost, plus the fixed intermodal cost.

Under the current TFES, most shippers do not receive the entire sea freight cost disadvantage. Figure 1 summarises the concepts underpinning the TFES.

FI Conceptual model and structure of the TFES

Sea journey



Road journey



Note: G and S routes are Victoria–northern Tasmania.

Source: BITRE based on TFES Review Authority (1998) and Ministerial Directions (DITRDLG 2008).

The TFES uses a number of defined parameters to estimate the notional sea freight cost disadvantage:

- The Door-to-wharf parameter is applied to door-to-wharf, wharf-to-door or door-to-door freight bills to estimate a notional wharf-to-wharf freight cost.
- Wharf-to-wharf sea freight cost disadvantage is calculated by subtracting the Road Freight Equivalent parameter from the notional wharf-to-wharf sea freight cost.
- The Intermodal cost parameter is added. This is a \$50 transfer allowance per TEU for each intermodal movement—a total \$100 per twenty-foot equivalent unit (TEU).
- An incentive structure is applied to the sea freight cost disadvantage to promote cost containment.

Road Freight Equivalent

The TFES Review Authority defined the road freight equivalent (RFE) cost as the cost of transporting one TEU by road over a distance equivalent to the sea distance between northern Tasmania and Victoria. The Authority considered road to be the mode most likely to be adopted in the presence of a land bridge.

As the sea transport cost is based on the wharf gate-to-wharf gate (wharf-to-wharf) cost, the road freight equivalent is estimated on a comparable basis by incorporating the line haul component only. It therefore excludes the cost of local collection and delivery (Figure 1).

The TFES Review Authority defined wharf-to-wharf costs as the blue water, container hire, stevedoring and wharfage charges (TFES Review Authority 1998, p. 12).

The notional wharf-to-wharf freight cost is the shipper's freight cost on a wharf-to-wharf basis for a standard 6.1 metre container (a twenty-foot equivalent unit, or TEU), less the applicable GST component of the freight bill.

Adjustment for local delivery costs

The current TFES allows shippers to submit claims on a door-to-door, door-to-wharf, wharf-to-door or wharf-to-wharf basis.

Where claims are not submitted on a wharf-to-wharf basis, the freight bill is adjusted by subtracting a fixed amount per TEU equivalent for each door-to-wharf or wharf-to-door movement to estimate the notional wharf-to-wharf equivalent freight bill.²

Scaling rates to a Victoria–northern Tasmania basis

The notional wharf-to-wharf freight cost is expressed in terms of the cost for northern Tasmania–Victoria (Route G) or Victoria–northern Tasmania (Route S).

Where claims are submitted for other routes, scaling factors are used to adjust freight bills for these routes to a northern Tasmania and Victoria (routes G and S) equivalent basis. TFES claims for eligible freight shipped between Victoria and northern Tasmania (G and S routes) represented 77 per cent of all TEUs and 78 per cent of payments in 2009–10 (BITRE analysis of TFES database).

This scaling of freight bills reflects the focus of TFES on the disadvantage imposed by the need to use sea transport across Bass Strait. When cargo is moved between points on the mainland³ before or after the Bass Strait sector, the transport options for Tasmanian shippers are the same as those available to other shippers.

Intermodal cost

The TFES Review Authority defined intermodal cost as the unavoidable transfer costs between the ship and land transport when cargo is moved by sea between northern Tasmania and Victoria—these costs are in addition to the blue water, container hire, stevedoring and wharfage charges (1998, p. 12).

Incentive structure

In its 1998 Advisory Opinion, the TFES Review Authority stated that payment of the full notional amount of assistance would weaken incentives to minimise freight bills (TFES Review Authority 1998, p. 25).

The TFES Review Authority therefore recommended that the assistance payable to a shipper incorporate an adjustment to promote cost containment.

² To a maximum of \$460 per TEU for a door-to-wharf claim.

³ Under the Ministerial Directions (2008) scaling factors do not apply to southern Tasmania–KIFG. If freight rates were scaled for southern Tasmanian routes this may reduce payments to some shippers.

The TFES therefore specifies that the shippers' sea freight cost disadvantage be adjusted in order to provide an incentive for shippers to minimise freight rates.

The Ministerial Directions (2008) identifies four classes of shippers, and that these shipper classes receive the following proportions of the notional wharf-to-wharf freight cost disadvantage:

- 100 per cent of the first \$335.50 per TEU (Class 1 shipper); plus
- 75 per cent for the second \$335.50 per TEU (that is, up to the median wharf-to-wharf disadvantage of \$671.00⁴) (Class 2 shipper); plus
- 50 per cent for the third \$335.50 (that is, up to \$1006.50) per TEU (Class 3 shipper); plus
- nil for amounts above \$1006.50 per TEU (Class 4 shipper).

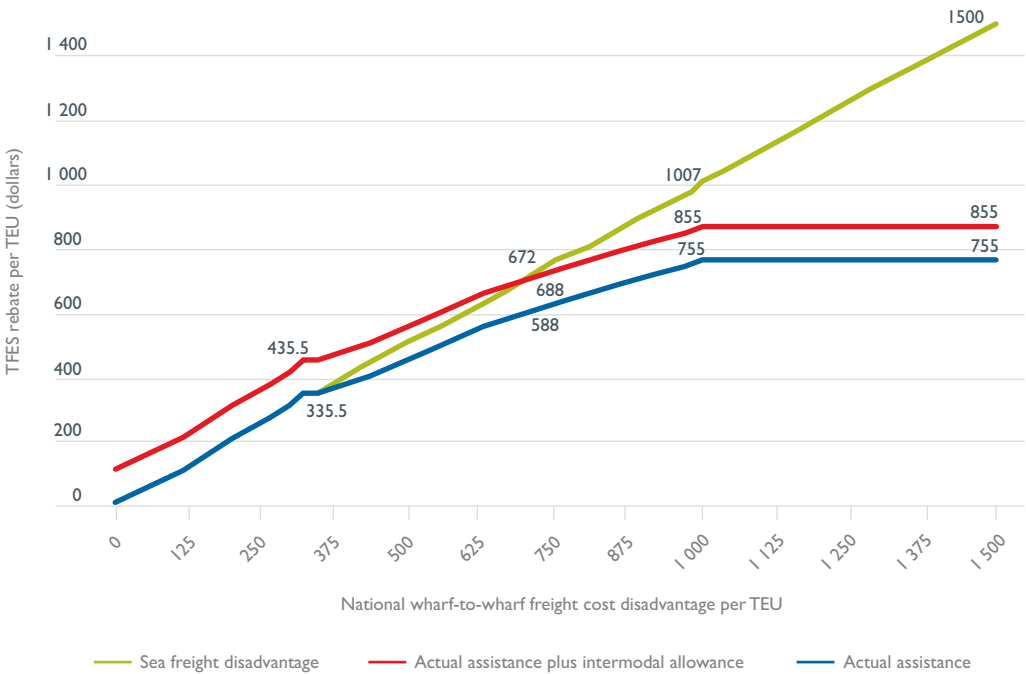
Assistance payable for a standard TEU

The actual assistance payable is the shipper's calculated sea freight cost disadvantage less an adjustment to provide an incentive to minimise freight rates, plus the fixed allowance for intermodal costs.

The relationship between sea freight cost disadvantage and actual assistance payable is represented in Figure 2. The maximum assistance payable (which occurs with a notional wharf-to-wharf freight cost disadvantage of \$1006.51) is \$855 per TEU. This is \$755 per TEU for a class 4 shipper plus the intermodal allowance of \$100 per TEU.

⁴ As recommended by the TFES Review Authority (1998).

F2 **Current TFES freight cost disadvantage and actual assistance for a standard TEU**



Source: Productivity Commission (2006).

High density adjustment

Under the current TFES parameters, the assistance payable to cargo classified as heavy or high density is 60 per cent of the standard weight assistance (that is, a discount of 40 per cent on the standard rate of assistance).

For the purposes of the Scheme, freight with an efficient cargo stowage factor of 1.1 cubic metres per tonne or less is classified as 'high density'.

What goods are eligible for TFES assistance?

The TFES comprises a northbound component and a southbound component (DOTARS 2006a, p. 3). It excludes assistance to goods that are:

- shipped as air cargo, except in special circumstances;
- shipped as bulk cargo; or
- intended to be shipped out of Australia, unless they undergo a manufacturing process on the mainland prior to export.

The northbound component of the TFES covers eligible⁵ goods that are produced or manufactured in Tasmania for permanent use or for sale on the mainland of Australia.

The southbound component of the TFES covers eligible non-consumer raw materials, machinery and equipment. It applies to persons engaged in the manufacturing, mining, agriculture, forestry and fishing industries in Tasmania. The Ministerial Directions (DITRDLG 2008) also identify goods that are not eligible for assistance under the southbound component:

- fuels and lubricants;
- goods of Tasmanian origin;
- building and construction materials/equipment;
- certain motor vehicles;
- imports via the Australian mainland that have not undergone a subsequent manufacturing process prior to shipment to Tasmania.

In addition to the northbound and southbound components, the TFES provides assistance for shipping equipment used by professional entertainers and sportspersons. There is also assistance for shipping Tasmanian-based brood mares and their progeny in specific circumstances.

Charitable organisations are eligible to receive the full sea freight disadvantage (clause 15.3). That is, they are not subject to the adjustment intended to provide an incentive for shippers to minimise freight rates.

The intrastate component of the TFES covers eligible⁶ goods that are produced or manufactured in Tasmania for permanent use or for sale on King Island and the Furneaux Group of Islands, as well as eligible goods that are produced or manufactured in King Island or the Furneaux Group of islands for permanent use or for sale in Tasmania.

The intrastate component of the TFES also covers eligible non-consumer raw materials, machinery or equipment manufactured or produced in Tasmania (or King Island and the Furneaux Group of islands) for use in King Island or the Furneaux Group of Islands (for use in Tasmania).

Tasmanian Wheat Freight Scheme

Assistance for bulk wheat under the Tasmanian Wheat Freight Scheme (TWFS) is paid at a flat rate per tonne, or the shipper's total 'wharf-to-wharf' costs, whichever is the lesser. Funding for the TWFS is capped at \$1.05 million.

⁵ A Schedule attached to the Ministerial Directions (DOTARS 2006a) identifies a list of goods that are eligible for assistance under the northbound component. There is also provision for the Minister or Secretary to consider applications for the inclusion of other goods.

⁶ A Schedule attached to the Ministerial Directions (DOTARS 2006a) identifies 77 goods that are eligible for assistance under the northbound component. There is also provision for the Minister or Secretary to consider applications for the inclusion of other goods.

The Productivity Commission concluded with respect to the TWFS that:

The uptake of assistance under this scheme has been very small and, despite freight rates for bulk shipping often being cheaper; there were no claims during 2005–06. Participants advised that this is because the net freight cost is lower if wheat is shipped in containers at subsidised rates under the TFES (2006, p.12).

The TWFS is unchanged since the Ministerial Directions approved on 25 January 2006.

CHAPTER 2

Freight shipped and freight rates

Tasmanian Freight Equalisation Scheme

As at 28 July 2010, shippers had made TFES claims for more than 452 000 TEUs of eligible freight and received over \$292 million in subsidy payments for freight shipped between 1 July 2007 and 30 June 2010.

The number of claim line items processed by Centrelink for freight shipped in this period was just over 514 000.

Preliminary⁷ data for 2009–10 show shippers made TFES claims for more than 118 000 TEUs of eligible freight shipped as at 28 July 2010. These claims had received \$78.2 million in assistance (Table 1). BITRE estimates that claims lodged after 28 July 2010 for freight shipped between 1 July 2009 and 30 June 2010 will add \$30 million to this total.

In 2009–10 northbound TFES claims—74.5 per cent of total TEUs assisted—received \$58.2 million in TFES payments. Major northbound commodities were:

- newsprint (19 per cent of northbound TEUs assisted);
- frozen/processed/prepared vegetables (13 per cent); and
- paper (8.6 per cent).

In 2009–10 southbound claims—25.4 per cent of all TEUs assisted—received \$20.0 million in TFES payments. The main southbound commodities were:

- wood pulp or other fibrous cellulosic material (11.8 per cent of southbound TEUs assisted);
- raw vegetable material (fodder/straw or pellets) (9.3 per cent); and
- barley (8 per cent).

Preliminary TFES data shows that claims paid for containerised wheat shipped in 2009–10 were 31 760 tonnes (1366 TEUs), receiving \$1.1 million in TFES payments. This represented 4.5 per cent of southbound TEUs assisted.

Preliminary TFES data for containerised wheat shipped between 2007–08 to 2009–10 inclusive shows that claims totalling 141 886 tonnes (5945 TEUs) were paid \$4.9 million.

⁷ Data for 2009–10 and 2008–09 are preliminary as claims can be lodged up to two years after shipment. BITRE estimates that 30 to 40 per cent of claims for 2009–10 and 5 to 10 per cent of claims for 2008–09 may not have been lodged and/or processed as at 28 July 2010, with a small number of claims likely to be outstanding for previous years.

TI TFES claim lines, TEU's and payments by commodity category, 2007–08 to 2009–10

Year ending June	Claim line items	Total TEUs	Total payments (\$'000)
2007–08	188 703	169 419	107 017
Agriculture, forestry and fishery products	28 287	26 983	21 487
Ores and minerals; electricity, gas and water	55 592	37 612	21 505
Food products, beverages, tobacco, textiles, apparel, leather products	70 648	45 382	34 297
Other transportable goods: not metal/machinery/equipment	18 699	53 209	26 006
Metal products, machinery and equipment	15 325	5 980	3 593
Sportspersons, Professional Entertainers, Racehorses	152	252	129
2008–09 a	185 407	164 805	107 253
Agriculture, forestry and fishery products	28 245	23 983	19 233
Ores and minerals; electricity, gas and water	36 807	29 311	17 785
Food products, beverages, tobacco, textiles, apparel, leather products	70 316	51 633	38 526
Other transportable goods: not metal/machinery/equipment	25 353	50 966	25 683
Metal products, machinery and equipment	24 530	8 590	5 869
Sportspersons, Professional Entertainers, Racehorses	156	321	157
2009–10 a	139 971	118 651	78 191
Agriculture, forestry and fishery products	22 877	21 089	17 094
Ores and minerals; electricity, gas and water	1 283	1 740	890
Food products, beverages, tobacco, textiles, apparel, leather products	57 807	39 155	29 311
Other transportable goods: not metal/machinery/equipment	29 065	51 824	27 972
Metal products, machinery and equipment	28 885	4 746	2 872
Sportspersons, Professional Entertainers, Racehorses	54	97	52

a Shipments for relevant year, not claims paid, as shippers can lodge claims up to two years after a shipment. Trade summarised as TEUs. Excludes claim line items with nil payments. Data rounded to whole units. Estimated values presented in this table may differ to actual values paid. TFES claims data was provided by Centrelink as at 28 July 2010 and is therefore preliminary. Based on previous years, BITRE expects 30–40 per cent of claims for freight shipped in 2009–10 and 5–10 per cent of claims for 2008–09 were yet to be lodged or processed as at 28 July 2010. A small number of claims for 2007–08 may also not have been finalised as at 28 July 2010.

Source: BITRE analysis of TFES database.

T2 TEUs and payments by direction and route 2007–08 to 2009–10

Direction and Route	2007–08		2008–09 ^a		2009–10 ^a	
	Total TEUs	Payments (\$'000)	Total TEUs	Payments (\$'000)	Total TEUs	Payments (\$'000)
Northbound	122 680	78 134	122 474	79 920	88 504	58 167
northern Tasmania to Victoria	92 309	59 969	92 147	61 342	66 171	44 314
southern Tasmania to Victoria	6 026	4 384	5 378	3 910	4 372	3 298
northern Tasmania to Western Australia	10 948	3 781	9 554	3 526	6 761	2 106
northern Tasmania to New South Wales	3 512	2 695	3 928	2 995	2 996	2 325
northern Tasmania to Queensland	3 346	2 359	4 099	2 477	3 310	2 297
southern Tasmania to New South Wales	2 615	2 030	2 903	2 235	1 944	1 550
southern Tasmania to Queensland	1 317	1 056	1 429	1 144	881	728
northern Tasmania to South Australia	1 162	844	1 043	799	932	717
southern Tasmania to South Australia	852	636	983	766	511	390
southern Tasmania to Western Australia	430	341	649	526	351	298
main island of Tasmania to Furneaux Islands	0	0	88	55	186	96
main island of Tasmania to King Island	0	0	149	95	81	45
northern Tasmania to Northern Territory	147	26	88	22	1	0
southern Tasmania to Northern Territory	15	12	37	29	6	5
Southbound	46 740	28 883	42 331	27 333	30 147	20 023
Victoria to northern Tasmania	40 999	25 342	36 193	23 308	25 238	16 624
Victoria to southern Tasmania	3 082	2 078	2 818	1 882	1 764	1 152
Queensland to southern Tasmania	675	460	753	546	723	542
New South Wales to northern Tasmania	906	361	1 024	518	688	326
Furneaux Islands to main island of Tasmania	0	0	328	275	1 006	849
King Island to main island of Tasmania	0	0	238	193	335	283
South Australia to northern Tasmania	124	86	306	212	134	88
Queensland to northern Tasmania	272	132	324	183	76	36
Western Australia to northern Tasmania	384	226	81	49	72	44
New South Wales to southern Tasmania	126	73	145	82	84	60
Western Australia to southern Tasmania	117	88	52	35	3	2
South Australia to southern Tasmania	54	37	68	50	24	17
Northern Territory to southern Tasmania	0	0	0	0	0	0
Northern Territory to northern Tasmania	0	0	0	0	0	0
Total	169 419	107 017	164 805	107 253	118 651	78 191

^a Shipments for relevant year; not claims paid, as shippers can lodge claims up to two years after a shipment. Trade summarised as TEUs. Excludes claim line items with nil payments. Data rounded to whole units. Estimated values presented in this table may differ to actual values paid. TFES claims data was provided by Centrelink as at 28 July 2010 and is therefore preliminary. Based on previous years, BITRE expects 30–40 per cent of claims for freight shipped in 2009–10 and 5–10 per cent of claims for 2008–09 were yet to be lodged or processed as at 28 July 2010. A small number of claims for 2007–08 may also not have been finalised as at 28 July 2010.

Source: BITRE analysis of TFES database.

Tasmanian Wheat Freight Scheme

Table 3 provides details of both bulk and containerised wheat claims to Tasmania from 1999–00 to 2009–10.

There were no claims under the TWFS for bulk wheat shipped in 2005–06. Bulk wheat shipments resumed in 2006–07 with 31 242 tonnes, increasing to 40 571 tonnes in 2007–08, then decreased to 20 345 tonnes in 2008–09.

There were no TWFS claims for bulk wheat shipped in 2009–10.

TWFS assistance paid for bulk wheat since 2004–05 has been less than the annual cap of \$1.05 million and all shippers therefore received the maximum subsidy for bulk wheat of \$20.65 per tonne.

The TWFS subsidy as a proportion of bulk freight costs was just under 40 per cent of total shipping costs between 2007–08 and 2009–10 (Table 3). This proportion has fallen from 78 per cent of shipping costs in 1999–00.

Preliminary data for claims paid for containerised wheat under the TFES totalled 61 460 tonnes in 2007–08, decreasing to 31 760 tonnes in 2009–10 respectively (Table 3). The average TFES subsidy for containerised wheat was \$35.86 per tonne in 2009–10.

T3 Bulk and containerised wheat shipments to Tasmania, 1999–00 to 2009–10, tonnages and subsidy paid

	99–00	00–01	01–02	02–03	03–04	04–05	05–06	06–07	07–08	08–09	09–10
Bulk wheat (TWFS)											
Shipped tonnes	41 653	49 071	52 300	49 998	62 774	27 433	0 ^a	31 242 ^b	40 571	20 345	0 ^a
Subsidy (\$m)	0.96	1.12	1.02	1.08	1.02	0.57	0	0.65	0.84	0.42	0
—\$ per tonne	22.96	22.76	19.54	21.59	16.33	20.65	—	20.65	20.65	20.65	—
—prop. of cost	78	74	62	68	49	54	—	50	39	37	—
Containerised wheat (TFES)											
Shipped tonnes	10 621	3652	9118	5589	10 695	34 813 ^d	69 780 ^d	52 777 ^d	61 460 ^d	48 666 ^d	31 760 ^d
Subsidy (\$m)	0.24	0.08	0.18	0.12	0.182	0.96	2.07	1.70	2.12	1.62	1.14
—\$ per tonne ^c	22.96	22.76	19.54	21.59	16.33	27.50	29.66	32.16	34.55	33.37	35.86
—prop. of cost	48	41	38	48	48	48	50	53	44	46	45

^a There were no TWFS claims for bulk wheat shipped in 2005–06 and 2009–10.

^b Bulk wheat tonnes based on date shipped.

^c Assumes 24 tonnes of wheat per container.

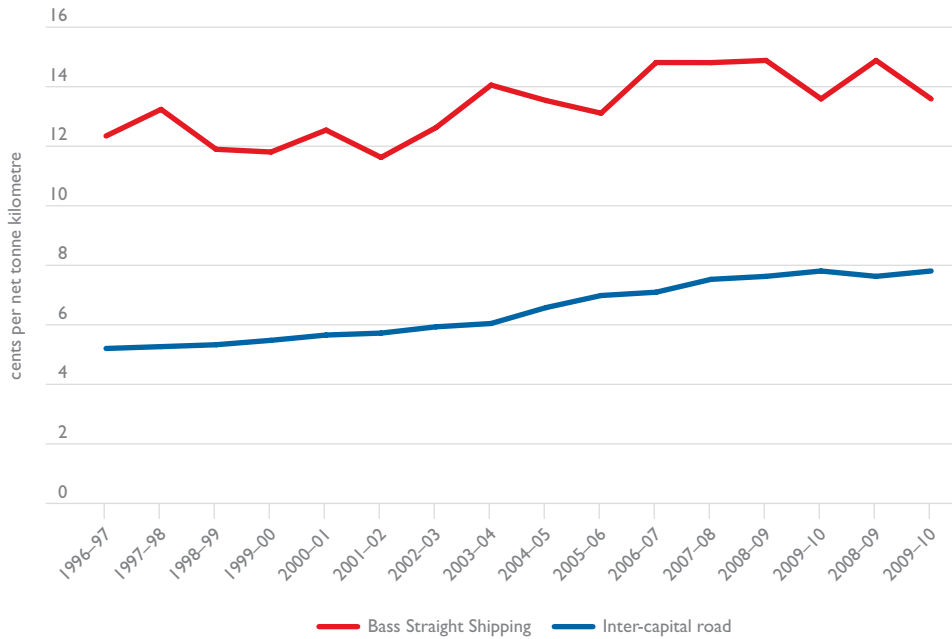
^d Preliminary TFES claims data for 2007–08 to 2009–10. Containerised wheat tonnage and subsidy payments based on date shipped (2004–05 to 2009–10) and not date of claim payment.

Source: TFES database; DITRDLG personal communications and BITRE analysis.

Non-bulk freight rates since 1996–97

Figure 3 compares nominal non-bulk freight rates for Tasmania–mainland sea transport with inter-capital road transport. Growth in road freight costs since 1996–97 has outstripped the growth in containerised sea freight costs, reducing the actual sea freight disadvantage for many Bass Strait shippers. The main reason for the higher growth in road freight rates is increasing fuel and driver costs (SKM 2010).

F3 Nominal freight rates: road and Bass Strait shipping, 1996 to 2010

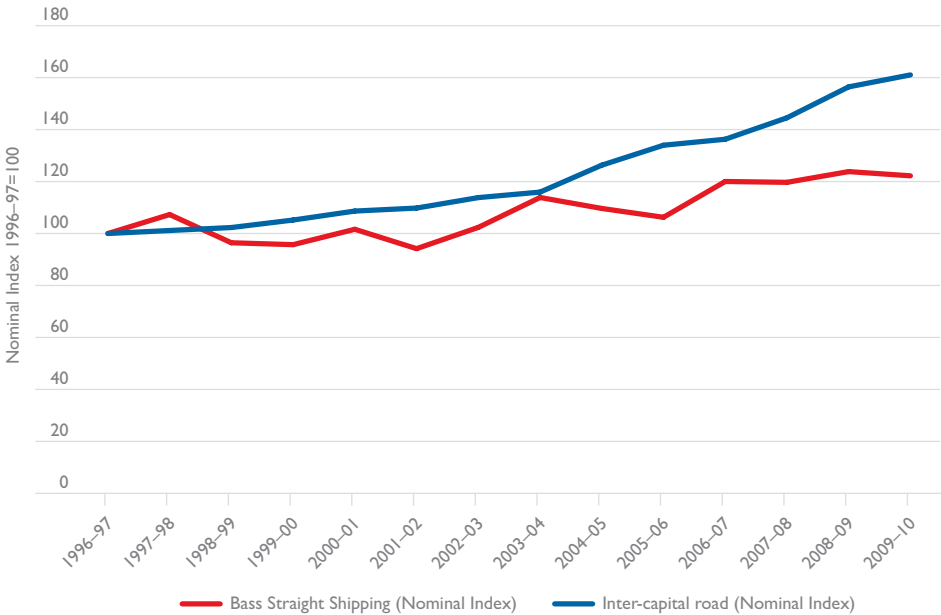


Note: Estimated Bass Strait freight rates are weighted average nominal freight rates per tonne for wharf-to-wharf full container loads in the TFES database. Inter-capital road rates assume no empty running.

Source: BITRE Information Sheet 28, BITRE estimates based on TFES data and Transeco 2010.

Figure 4 illustrates this trend using a nominal index. Road freight rates had increased 24.8 per cent more than sea freight rates by 2007–08. By 2009–10 this difference had increased to 38.8 per cent.

F4 **Nominal freight rate indices: road and Bass Strait shipping, 1996 to 2010**



Note: Estimated Bass Strait freight rates are weighted average nominal freight rates per tonne for wharf-to-wharf full container loads in the TFES database. Inter-capital road rates assume zero empty running.

Source: BITRE Information Sheet 28, BITRE Estimates based on TFES data and SKM 2010 Road Rates.

CHAPTER 3

Tasmanian Freight Equalisation Scheme parameter estimates

This chapter presents BITRE's 2009–10 parameter estimates for the TFES. The mainland–Tasmania parameter estimates are presented first, followed by the intrastate components of the Scheme.

Mainland parameters

Door-to-wharf and Wharf-to-door parameters

BITRE has estimated new values for the Door-to-wharf (DW) and Wharf-to-door (WD) parameters using the 2009–10 TFES claims data.

Table 4 gives the difference between median door-to-door (DD) freight costs and median wharf-to-wharf (WW) freight costs for all shippers shipping more than five TEUs on the northern Tasmania–Victoria routes (G and S) in 2009–10.

T4 **Median full container load freight costs and estimated 2009–10 adjustment factors, dollars**

Door-to-door freight cost	1 554
Wharf-to-wharf freight cost	1 110
Door-to-door adjustment factor	444
Door-to-wharf or Wharf-to-door adjustment factor	222

Note: Based on TFES claims data for northern Tasmania–Victoria (G and S routes) for full container load shipments by shippers who ship more than 5 full containers per year.

Source: BITRE.

Scaling factors

Scaling factors are used to adjust freight bills for those routes other than the northern Tasmania and Victoria equivalent basis (that is, for all routes other than the G and S routes).

This scaling of freight bills reflects the focus of TFES on the disadvantage imposed by the need to use sea transport across Bass Strait. When cargo is moved between points on the mainland⁸

⁸ Under the Ministerial Directions (2008) scaling factors do not apply to southern Tasmania–KIFG. If freight rates were scaled for southern Tasmanian routes this may reduce payments to some shippers.

before or after the Bass Strait sector, the transport options for Tasmanian shippers are the same as those available to other shippers.

BITRE has re-estimated scaling factors using the same approach as the TFES Review Authority (1998), which scaled freight bills based on the reported *door-to-door* costs on other routes relative to the average door-to-door costs on Victoria–northern Tasmania routes.

Table 5 reports BITRE's estimates of scaling factors using claims data for 2007–08 to 2009–10.

T5 Average door-to-door freight rates for 2007–08 to 2009–10 and scaling factors estimates for 2009–10

Route	Route code	Average door-to-door freight cost (\$)				Scaling factor				Advisory Opinion 1996–97
		2007–08	2008–09	2009–10	3 Year Average	2007–08	2008–09	2009–10	3 Year Average	
northern Tasmania to/from										
Victoria	G & S	1 631	1 758	1 745	1 711	1.0	1.0	1.0	1.0	1.0
New South Wales	H & T	2 797	2 816	2 789	2 800	1.7	1.6	1.6	1.6	1.8
South Australia	I & U	2 396	2 358	2 421	2 392	1.5	1.3	1.4	1.4	1.5
Queensland	J & V	3 308	3 258	3 301	3 289	2.0	1.9	1.9	1.9	2.4
Western Australia	K & W	2 534	2 433	3 938	2 968	1.6	1.4	2.3	1.7	2.5
Northern Territory	L & X	10 628	11 096	13 795	11 840	6.5	6.3	7.9	6.9	6.8
southern Tasmania to/from										
Victoria	A & M	2 096	2 091	1 981	2 056	1.3	1.2	1.1	1.2	1.3
New South Wales	B & N	2 683	3 234	2 833	2 917	1.6	1.8	1.6	1.7	1.9
South Australia	C & O	3 565	3 359	3 117	3 347	2.2	1.9	1.8	2.0	1.3
Queensland	D & P	2 820	3 072	2 870	2 921	1.7	1.7	1.6	1.7	2.2
Western Australia	E & Q	3 818	3 117	3 519	3 485	2.3	1.8	2.0	2.0	2.4
Northern Territory	F & R	8 569	12 504	9 280	10 118	5.3	7.1	5.3	5.9	4.6

Notes: Full container load, door-to-door shipments only.

Source: BITRE analysis of TFES database.

Containerised sea freight disadvantage

The TFES Review Authority (1998) stated it had tried to balance conflicting needs in establishing a 'typical' sea freight cost disadvantage as a reference point for determining assistance:

- On the one hand, the use of average freight rates per TEU is likely to be unsatisfactory because of the very heavy influence of a few very large shippers who enjoy low freight rates and account for a high proportion of all TEUs shipped. On the other hand, the use of 'median shipper' can also have undesirable effects.
- The TFES database reveals... there are a significant number of shippers who apparently ship only one or two full containers per year of non reefer freight on a wharf-to-wharf basis at high freight rates. Their inclusion... is distortive because they skew the distribution.

In order to balance these influences, the TFES Authority took the population of wharf-to-wharf shippers as all those who ship five TEUs or more annually on a full container load basis. To these were added the population of all door-to-door shippers, both reefer and non reefer; after notional adjustments had been made for door-to-wharf and wharf-to-door costs (TFES Authority 1998, p.29).

BITRE estimated the sea freight disadvantage for 2009–10 by calculating the median notional wharf-to-wharf freight rate then subtracting the 'Road Freight Equivalent' rate to obtain the respective sea freight disadvantage.

BITRE has calculated median wharf-to-wharf freight rates paid by shippers who shipped five or more TEUs annually on a full container load basis plus all the door-to-door shippers with full container loads (table 6).

T6 Median wharf-to-wharf freight rates, 2007–08 to 2009–10

	07–08	08–09	09–10
Median			
Dry Shipments	1 166	1 121	1 127
Reefer Shipments	1 143	1 124	1 137
Dry & Reefer Shipments	1 158	1 121	1 133

Note: Median rates calculated using claims data for all wharf-to-wharf shippers who shipped more than 5 full container loads per annum plus all door-to-door full container load shippers on Victoria-northern Tasmania (G and S) routes.

Source: BITRE analysis of TFES claims database.

Road Freight Equivalent

BITRE has used the same methodology as BITRE (2008) to calculate the Road Freight Equivalent. BITRE (2008) used a cents-per-net tonne kilometre B-double freight rate to estimate a Road Freight Equivalent (RFE) rate for 2007–08. This rate assumed 30 per cent empty running (that is, the average level of under-utilisation). The average level of under-utilisation has a significant effect on the sea freight cost disadvantage.

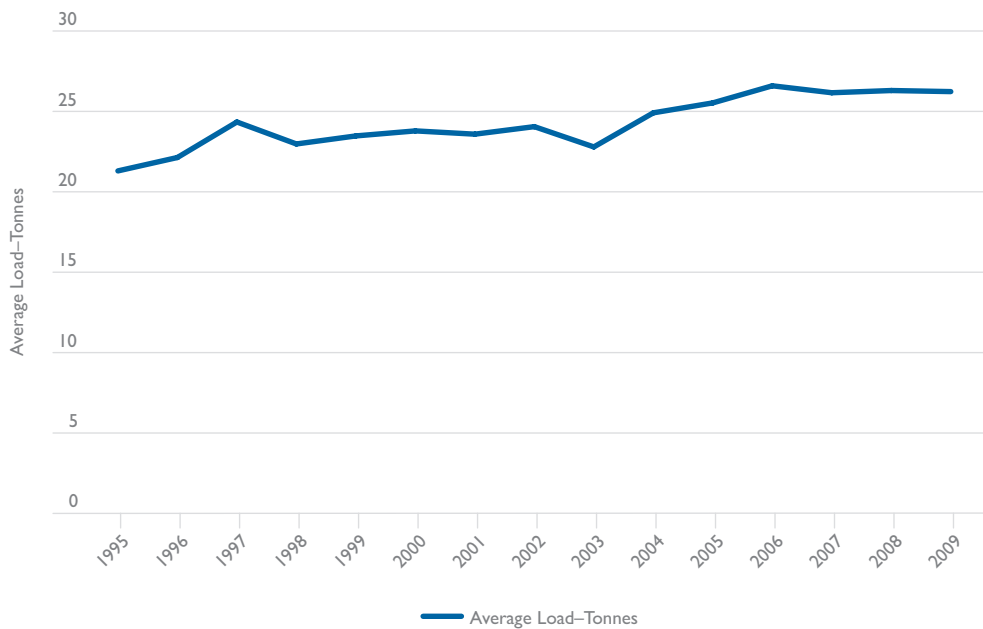
Updated freight rates for B-double were based on rates provided by SKM (2010). SKM suggested that a reduced rate of 20 per cent under-utilisation for B-doubles may now be appropriate.

In order to determine the appropriate level of operating empty, BITRE analysed weigh-in-motion (WIM) data to assess whether there had been any significant changes in the under-utilisation rate for B-doubles over the last three years. WIM data contains weight measurements for heavy vehicles while travelling on the road network. Data is available for a number of WIM stations from 1995 to 2009. Average loads were observed for B-double vehicles on a number of routes: Melbourne–Adelaide, Melbourne–Brisbane, Sydney–Adelaide, Sydney–Brisbane and Sydney–Melbourne.

WIM data are based on weight (or tonnage) measurements only and it is important to note that the heavy vehicle loads may reach capacity on a volume basis before reaching capacity on a weight basis. That is, this does not allow for full trucks carrying low density cargo that do not reach maximum payload limits. Average loads were also weighted against total tonnages carried by road freight vehicles on the routes selected. Total road freight tonnages are available in BTRE (2006).

Figure 5 shows that for the previous five years average weights have been relatively stable at around 26 tonnes per vehicle.

F5 Average load carried by B-double heavy vehicles



Source: BITRE analysis of weigh-in-motion data.

The tare weight of a B-double is around 23–24 tonnes. Under general mass limits (GML), a B-double could potentially carry up to 39.5 tonnes (that is, 62.5 tonnes–23 tonnes) payload. B-doubles with road-friendly suspensions can weigh up to 68 tonnes under higher mass limits (HML), which would imply a maximum payload of around 44 tonnes. BITRE has assumed a maximum payload for a B-double of 39 tonnes.

This suggests that approximately one third of potential carrying capacity on average may not be utilised. BITRE has therefore used a 30 per cent operating empty assumption (the same as

used by BITRE 2008) to estimate average freight rates for B-double heavy vehicles, rather than 20 per cent suggested by SKM (2010).

Adjusting SKM (2010) freight rates for a 30 per cent under utilisation rate gives a road freight equivalent cost for a B-double carrying three TEUs averaging 11.5 tonnes net (13 tonnes gross) of 11.99 cents per net tonne kilometre. This gives a freight rate of \$50.34 per tonne for a 420 kilometre distance.

BITRE therefore suggests a 2009–10 Road Freight Equivalent rate for dry freight of \$578 per TEU, based on the 'road limit equivalent' for an ambient temperature container with a net payload of 11.5 tonnes. This is based on the benchmark adopted by BITRE (2008) of a standard container with a 13 tonne gross mass.⁹ This permits three TEUs totalling 39 tonnes, the road mass payload limit for modern low tare B-doubles (SKM 2008, 2010).

This Road Freight Equivalent rate for dry freight of \$578 per TEU for 2009–10 compares to the current TFES RFE of \$281 per twenty-foot equivalent unit based on 1996–97 road freight rates and a two TEU benchmark.

SKM (2010) suggest a 10 per cent loading for refrigerated road freight compared with dry road freight. A 10 per cent premium results in a road freight equivalent rate for reefer freight of \$635 per TEU.

Sea freight disadvantage

The containerised sea freight disadvantage is calculated by subtracting the Road Freight Equivalent from the median wharf-to-wharf sea freight rate for 2009–10. The estimates of containerised sea freight disadvantage is given in Table 7.

The level of sea freight disadvantage for dry freight has decreased from \$671 (1996–97 parameters) to \$549 in 2009–10.

T7 Median sea freight disadvantage, nominal dollars per TEU

		BITRE estimates 2009–10		TFES Review Authority 1996–97	
		Dry	Reefer	Dry	Reefer
Median wharf-to-wharf sea freight rate	(A)	1 127	1 137	952	980
Road Freight Equivalent	(B)	578	635	281	309
Median sea freight disadvantage	(A–B)	549	502	671	671

Note: BITRE has used the population of all wharf-to-wharf shippers shipping more than five TEUs per annum and all the door-to-door full container load shippers to estimate the median sea freight rate. TFES Review Authority states that it used the combined population of shippers shipping more than five TEU per annum and all door-to-door shippers. TFES Review Authority did not report values for wharf-to-wharf freight rates, these rates have been calculated by adding the sea freight disadvantage to the RFE rates to give wharf-to-wharf freight rates per TEU.

Source: BITRE; RFE based on SKM freight rates; TFES Review Authority (1998).

⁹ 13 tonnes gross mass is less than half the maximum container weight implied by the current stowage factor of 1.1 cubic metres per tonne specified in the Ministerial Directions (2008). A stowage factor of 1.1 cubic metres per tonne equates to a container carrying 27.3 tonnes in a standard TEU. This would give a gross container weight of 28.8 tonnes (assuming container tare mass of at least 1.5 tonnes), higher than typical maximum gross weight for a standard 20 foot container of 24 tonnes.

Incentive structure

Shippers do not necessarily receive the full containerised sea freight cost disadvantage as payments are subjected to an incentive structure originally intended to encourage efficiency.

Shipper class boundaries provide a step down phasing out of assistance as a shipper's measured sea freight disadvantage increases. Shipper class boundaries are calculated using the median sea freight disadvantage (\$549 per TEU) for dry freight.

Table 8 gives new boundaries for BITRE's 2009–10 containerised sea freight disadvantage, excluding the intermodal allowance.

T8 Shipper class boundaries for sea freight disadvantage and maximum payments, 2009–10 parameter estimates.

Shipper classes	Lower Limit	Upper limit	Maximum (\$)
Class 1	0	274.5	100 per cent freight cost disadvantage 274.5
Class 2	274.51	549	Plus 75 per cent freight cost disadvantage 480
Class 3	549.01	823.5	Plus 50 per cent freight cost disadvantage 618
Class 4	823.51	No Limit	No refund for freight cost disadvantage 618

Source: BITRE analysis.

Intermodal parameter

All eligible shippers currently receive a fixed intermodal allowance. The intermodal cost allowance incorporates the unavoidable intermodal costs that are incurred by a shipper moving goods by sea between northern Tasmania and Victoria.

The TFES Review Authority initially set the fixed intermodal cost at \$50 per twenty-foot equivalent unit (TEU) for each end of the journey—that is, a total of \$100 per TEU. This figure was based on information obtained from a sample of shippers (TFES Review Authority 1998, p. 12).

BITRE (2008) acknowledged that some shippers do incur higher costs because of the sea journey that are not included in the total sea freight rate paid. These may include:

- specialised packaging needed to prepare goods for sea freight that would not be needed on a hypothetical road journey.
- higher loading and unloading costs¹⁰ as loading containers may be more labour intensive than pallets on tautliner trucks.
- greater inventory holdings due to slower journey times and lower reliability.

BITRE (2008) suggested that the intermodal allowance of \$100 per TEU be retained, as analysis of data provided by two large shippers¹¹ indicated that the quantifiable, incremental

¹⁰ This may include any higher loading/unloading costs due to the packing/unpacking of pallets into containers, but not other costs associated with less than full container loads.

¹¹ DITRD LG requested information from stakeholders on the scope and magnitude of costs over and above the wharf-to-wharf freight rate that would support the continued payment of an intermodal allowance. Two large shippers provided indicative confidential data on some of these additional costs (BITRE 2008).

costs that were attributable to the need for a sea journey was at least \$50 and \$86 per TEU respectively.¹² It is not known if this level is representative of the majority of shippers.

BITRE suggests that the \$100 per TEU intermodal allowance be retained.

High density discount

Heavy, or high density, freight is more expensive to freight by road than standard, or low density, freight (Productivity Commission 2006).

The TFES Review Authority recommended that assistance for high density freight should be less than that associated with standard freight, and that this should be implemented as a discount to the standard assistance rather than a separate 'heavy freight' road freight equivalent.

The current Scheme reduces the standard assistance rate by 40 per cent for heavy, or high density, freight to reflect the higher land freight equivalent cost. This recognises that the sea freight disadvantage is less for heavy containers which are more expensive than lighter boxes to move by road and rail, but generally have the same sea freight rate.

For the purpose of the TFES, cargo with a stowage factor of 1.1 cubic meters per tonne or less is classified as 'high density'.

To calculate stowage factors both tonnes and volumes are needed. In approximately 20 per cent of claim line items shippers do not declare either tonnes or volumes, and it is therefore not possible to calculate stowage factors to determine eligibility for the reduced rate of TFES assistance. This creates the potential for both over-payment and/or under-payment of TFES subsidy.

BITRE analysis of Centrelink data identifying high density claims paid for freight shipped between 1 July 2007 and 30 June 2010 indicates that:

- 40 999 TEUs (9.0 per cent of total TEUs) of claims were paid the reduced level of assistance. Total payments were \$17.13 million (a reduction of \$11.42 million on the standard rate of assistance).
- 1015 high density claim line items did not declare a weight value. Excluding these missing values, claims for high density freight totalled approximately 823 000 tonnes over the three year period.

BITRE suggests that a discount for heavy freight continue to apply to the rate of assistance for a standard TEU.

The current stowage factor of 1.1 cubic metres per tonne equates to a container carrying 27.3 tonnes in a standard TEU. This would give a gross container weight of 28.8 tonnes (assuming container tare mass of at least 1.5 tonnes), higher than typical maximum gross weight for a standard 20 foot container of 24 tonnes.

SKM (2008) states that a typical B-double can carry three TEU, but is limited to about 39 tonnes per truck. BITRE (2008) estimated the Road Freight Equivalent freight rate for a TEU of net

¹² Excludes costs of local pickup and delivery; costs that would also have been incurred on a hypothetical door-to-door road journey; costs due to the relative inefficiency of containers compared to pallets (already captured by using the net rather than gross container weight in the RFE benchmark); and higher inventory/warehouse costs (these reflect factors such as company policy making it difficult to identify the incremental cost due to the sea journey).

weight of 11.5 tonnes (13 tonnes gross including 1.5 tonnes tare for the container). This benchmark means that a total of three containers weighing 13 tonnes gross can be carried by a B-double with a gross mass limit of 39 tonnes.

According to SKM (2008), standard twenty-foot containers have volumes of approximately 30 cubic metres, giving a stowage density of 2.6 cubic metres per tonne for contents of 11.5 tonnes (30 cubic metres/11.5 tonnes payload). The loaded box will have a cargo density of 2.3 cubic metres per tonne (that is, 30 cubic metres/13 tonnes gross).

BITRE therefore suggests the heavy freight discount apply at cargo stowage factors of 2.6 cubic metres or less per tonne. Increasing the cargo stowage factor to 2.6 cubic metres per tonne would increase the number of shipments receiving the heavy freight discount, reducing the amount of assistance paid.

BITRE recalculated indicative discount levels for heavy (between 11.5 tonnes and 18 tonnes net) and very heavy (greater than 18 tonnes net) containers for a B-double truck (Table 9). These reference weights were obtained from the 2009–10 TFES dataset for full container load high density claims. The costs of transporting two heavy containers of 14.5 tonnes net and one very heavy container of 22.2 tonnes net are compared to the RFE reference of a B-double carrying three TEU of 11.5 tonnes net.

T9 Discount for high density freight

	Road freight equivalent reference	Contents weight between 11.5 and 18 tonnes	Contents weight greater than 18 tonnes
Average net weight (tonnes per TEU)	11.5	14.5	22.2
Average gross weight (tonnes per TEU) a	13	16.0	23.7
Maximum number containers on a B double	3	2	1
Total net freight on a B double (tonnes)	34.5	29.0	22.2
Total gross freight on a B double (tonnes) b	39.0	32.0	23.7
Rate per net tonne kilometre (\$)	57	68	88
Disadvantage over RFE reference (net)	na	19 per cent	55 per cent
Rate per gross tonne kilometre (\$)	50	61	83
Disadvantage RFE reference (gross)	na	39 per cent	88 per cent

a Assumes container tare of 1.5 tonnes.

b Maximum B double gross weight is 39 tonnes.

Source: BITRE; SKM (2008, 2010) freight rates for B-doubles.

Table 9 gives road cost estimates for a typical B-double carrying:

- three containers with an average net weight of 11.5 tonnes or less per full TEU.
- two containers with an average net weight of 14.5 tonnes—the average for those claims averaging between a net weight of 11.5 and 18 tonnes per full TEU.
- one container weighing 22.2 tonnes—the average weight per TEU for claims where a full TEU weighed more than 18 tonnes.

The maximum gross weight for a 20 foot container for sea loading is typically 24 tonnes (SKM 2008). While a discount of 60 per cent may apply to very heavy boxes carried on a B double—given only one TEU with a gross weight exceeding 18 tonnes can be legally carried—very

heavy boxes make up the bulk of the full container load claims for 2009–10, accounting for 87 per cent of FCL high density claims.

Very heavy boxes with a gross weight exceeding 18 tonnes are more likely to be carried on semi-trailers which have a maximum payload of 25 tonnes (SKM 2010). This suggests a discount for very heavy freight of 17 per cent based on SKM's current rate for a semi-trailer of around 14 cents per net tonne kilometre.

BITRE's suggested discount for heavy freight in 2009–10 is 20 per cent.

Intrastate parameters

The estimated level of sea freight disadvantage for freight in the King Island and Furneaux Group (KIFG) intrastate component of the TFES differs from the Tasmania–mainland component of the Scheme.

This is due to the shorter shipping distances and different nature of Tasmanian freight market—both affecting the Road Freight Equivalent—and different freight rates.

Road freight equivalents for the KIFG

SKM suggest that Road Freight Equivalents for movements to and from Tasmania be based on the typical freight configuration used in Tasmania. This is a semitrailer with a trailer length around 19 metres and carrying capacity around 23 tonnes, with gross mass up to 42.5 tonnes. The typical road freight rates for this configuration in Tasmania are around 17.23 cents per net tonne kilometre (SKM 2010).

The shipping distances involved in these operations are shown in Table 10.

T10 Bass Strait shipping distances

To/from	Bell Bay	Bridport	Burnie	Devonport	King Island	Welshpool
Melbourne	455km	–	405km	445m	285km	–
King Island	–	–	–	300km	–	–
Flinders Island	–	115km	–	–	–	230km

Source: SKM.

Based on the freight rate for a Tasmanian semitrailer and shipping distances in Table 10, BITRE suggests road freight equivalent costs for 2009–10 of:

- \$51.70 per tonne for the 300 kilometre distance between King Island and Devonport. This gives a Road Freight Equivalent rate of \$775 for a 15 tonne dry freight TEU (currently \$675 per TEU).
- \$19.82 per tonne for the 115 kilometre distance between Flinders Island and Bridport. This gives a Road Freight Equivalent rate of \$297 for a 15 tonne dry freight TEU (currently \$259 per TEU).

BITRE analysis of the limited volume of claims data for King Island and Flinders Island for 2008–09 and 2009–10 suggests that, on average, weights are heavier than 15 tonnes per TEU.

This suggests that the Road Freight Equivalent rate may be under-estimated, overstating the level of sea freight disadvantage.

Freight rates to and from Tasmania

BITRE analysis of the limited claims data for King Island and Flinders Island for 2008–09 and 2009–10 indicates a wide variation in rates across commodity types. The small number of full container load claims—other than fertiliser claims for which rates are substantially higher than average—mean it is not possible to use claims data to determine an appropriate full container load rates benchmark.

Table 11 gives sea freight rates for the most common movements between King Island–Devonport, and Flinders Island–Bridport provided by SKM (2010). Sea freight rates between King Island/Flinders Island and Tasmania are substantially higher than rates between northern Tasmania and Victoria. Services are also less frequent.¹³

While the gap in freight rates between the Islands has narrowed, freight rates between Tasmania and Flinders Island are still higher than between Tasmania and King Island.

T 11 Freight rates Tasmania to/from King Island and Flinders Island, June 2010

	Distance (kilometres)	Southbound	c/ntk	Northbound	c/ntk
		Freight rate/unit		Freight rate/unit	
20 foot containers:					
- King Island–Devonport	300	\$1 235/box	29.40	na	na
- Flinders Island–Bridport	115	\$1 500/box	86.95	\$1 500/box	86.95
Livestock a , b (Flinders Island)					
Cows and steers	115	\$65.00/head	161.49	\$65.00/head	161.49
Sheep	115	\$6.50/head	125.60	\$6.50/head	125.60

a Livestock is a very important factor in the trade for Flinders Island. According to SKM (2008) livestock freight rates of around double those for containerised goods are not unusual due to the greater time and effort required in loading, unloading, feeding and cleaning.

b Livestock freight rates are estimates based on 350 kilograms for a cow or steer; 45 kilograms for a sheep and published scheduled shipping rates. Calculations for cents per net tonne kilometre (c/ntk) are based on 15 tonnes per TEU.

Source: SKM (2010).

Sea freight disadvantage

The estimated sea freight disadvantages for 2009–10 are:

- \$460 per TEU between King Island and Devonport (\$275 per TEU in 2007).
- \$1 203 per TEU between Flinders Island and Bridport (\$1 601 per TEU in 2007).

¹³ King Island receives a weekly service from the Sea Road Mersey. The Flinders Island once a week service from Bridport operated by Southern Shipping ceased when Southern Shipping went into receivership in 2009. Furneaux Freight began operating between Bridport and Flinders Island early in 2010 using the Furneaux Navigator and Matthew Flinders III. Furneaux Freight also sails between Welshpool and Flinders Island approximately every three weeks. LD Marine also offers a weekly service between Bell Bay and Flinders Island with the Statesman (SKM, 2010).

These estimates of the sea freight disadvantage compare with BITRE's estimate for mainland–Tasmania freight of \$624 per TEU for 2009–10 (Table 12).

**T12 Sea freight disadvantage for King Island and Flinders Island to and from
Tasmania 2010, dollars**

	King Island–Devonport	Flinders Island–Bridport
Sea freight cost	1 235	1 500
Road equivalent cost / TEU	775	297
Sea freight cost disadvantage	460	1 203

Notes: Assumes 15 tonnes per TEU.
Source: BITRE estimates based on SKM (2010) freight rate data.

CHAPTER 4

Tasmanian Wheat Freight Scheme

The Tasmanian Wheat Freight Scheme (TWFS) addresses sea freight cost disadvantage for *bulk* wheat shipments by providing up to a maximum rate of assistance per tonne of bulk wheat.

Shippers can claim a subsidy for wheat under either the TWFS or the Tasmanian Freight Equalisation Scheme (TFES), where the latter is assessed using the formulae and parameters set out in the Ministerial Directions (DITRDLG 2008).

The Productivity Commission (2006, p.18) observed that including containerised wheat shipments in the TFES has resulted in substantial growth in containerised shipments and—reflecting the higher cost of this mode of transport—an increase in the rate of subsidy per tonne of wheat shipped.¹⁴

Bulk wheat freight costs

Bulk wheat freight costs for the purposes of the TWFS are defined as the costs to a shipper of a contract of carriage and include any handling, loading or discharging charges to or from a ship incidental to the contract of carriage.

These freight costs do not include (DOTARS 2006b):

- the land transport costs incurred outside the terminal area;
- the cost of storage or warehousing at the ports of loading or discharge, any quarantine costs;
- any insurance costs;
- accounting fees or charges, or charges relating to the issuing of accounts or invoices; or
- any GST payable by the shipper.

Trends in bulk wheat freight rates

The Productivity Commission considered that rail freight was the most appropriate proxy for sea freight costs (2006, pp. 120–121).

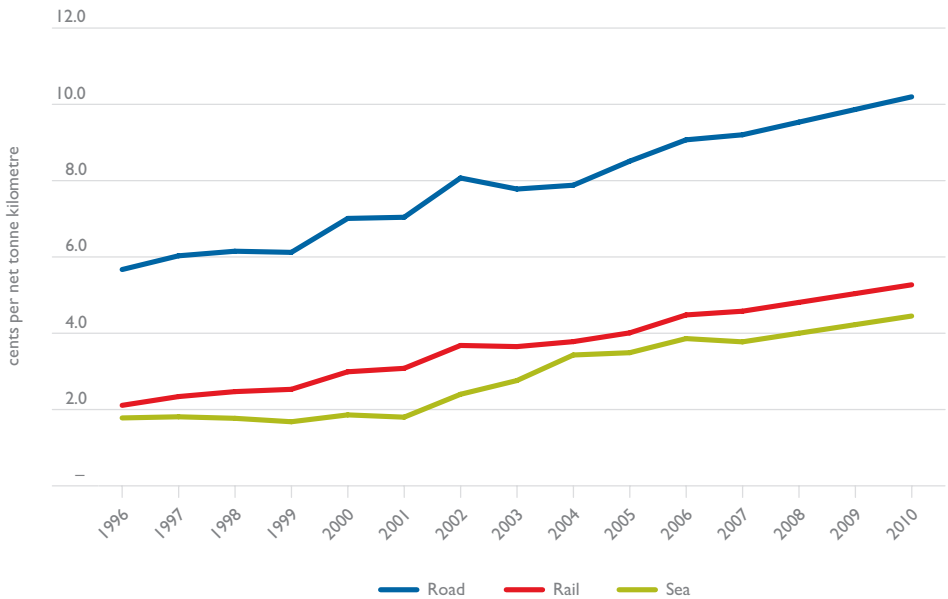
¹⁴ The former Australian Government accepted the Productivity Commission (2006) recommendation that unprocessed wheat should only be eligible for subsidy under the TWFS—this would mean that future wheat shipments would receive a fixed rate of assistance per tonne irrespective of how wheat is shipped, however the assistance available for both containerised and bulk wheat shipments has been unchanged since 2006.

Rail rates vary according to the length of the haul, the size of the task, the extent of other rail traffic on the line,¹⁵ and the standard and condition of the rail line. The latter affects efficiency through impacts on train size, axle loading limits, speed of operation (SKM 2008).

Rates for movement of wheat from major growing areas to export ports are shown in Figure 6. Since 1996 average bulk grain freight rates on major grain routes—between 200 to 400 kilometres—for rail and sea have more than doubled in nominal terms.

Despite this, bulk rail and sea grain freight rates are still less than half road freight rates.

F6 **Nominal average grain freight rates for major Australian routes by mode, 1996 to 2010¹**



¹ Freight rates for 2009–10 are as at June 2010. Rates for previous years are as at December of that year.
Source: SKM freight rate database.

According to SKM (2010), due to widespread drought over the past few years there have been reduced volumes of grain transported in all areas except Western Australia. Asciano—owner of Pacific National, Australia’s dominant rail operator, particularly in Victoria, NSW and Tasmania—has reduced grain services in Victoria and NSW. Despite the higher costs per tonne there has been a substantial shift to road transport of grain due to smaller volumes suiting road and reductions in rail services.

¹⁵ Higher traffic volumes share fixed costs over more tonnes.

Bass Strait wheat freight rates

TWFS claims for bulk wheat shipped to Tasmania show that the average cost—including loading and unloading—was \$41.30 per tonne in 2006–07. This increased to \$55.10 per tonne in 2008–09. There were no bulk wheat shipments in 2009–10.

Only a small number of TWFS claims were paid over the three years, predominantly for bulk wheat shipments from Port Lincoln to Devonport.

The nominal average cost per tonne for bulk wheat increased 33.3 per cent between 2006–07 and 2008–09 due to increased loading and unloading costs. TWFS claims data shows that both loading costs and unloading costs increased by approximately \$8 per tonne between 2006–07 and 2008–09. Over the same period average shipping costs did not change significantly despite a change in vessel and reduction in the average size of shipments from approximately 7000 tonnes to 5300 tonnes per shipment.

BITRE analysis of TFES claims data gives an average freight rate for containerised wheat of \$1489 per TEU across Bass Strait in 2009–10, or \$62.06 per tonne for a 24 tonne container of wheat.

Estimating a rail freight equivalent

SKM (2008) suggest that the relevant comparisons for a rail transport equivalent to the 420 kilometres across Bass Strait are the rail rate levels expected for New South Wales/Victoria to Geelong and New South Wales/Victoria to Melbourne. This is an average 6.0 cents per net tonne kilometre for 2010—slightly less than 2006 (SKM 2008).

BITRE therefore suggests a rail freight equivalent for the TWFS of \$25.20 per tonne (6.0 cents per net tonne kilometre over a distance of 420 kilometres).

Sea freight disadvantage

Table 13 summarises the sea freight disadvantage for bulk wheat compared to bulk rail for distances of 420 kilometres.

BITRE suggests a subsidy rate for wheat of \$29.90 per tonne (\$11.90 in 2006–07), equivalent to \$717.60 for a 24 tonne container of wheat. This compares to BITRE's (2008) suggested TWFS payment of \$11.90 per tonne for 2006–07.

According to SKM (2008), road tends to be more cost effective than rail for journeys of 420 kilometres except where very large volumes of heavy containers are moved between two rail connected terminals. Typical rail *container* rates for similar journeys are approximately 8.75 cents per net tonne kilometre, or \$36.75 per tonne (compared with an estimated \$25.20 per tonne for bulk rail rates).

T13 Sea freight cost disadvantage for wheat, dollars per tonne

	2009–10	2006–07
Sea freight rate a	55.10 b	41.30
Rail equivalent rate	25.20	29.40
Sea cost disadvantage	29.90	11.90

a Container rates per tonne calculated using an average of 24 tonnes per container;
b There were no bulk wheat claims for 2009–10 and the rate for 2009–10 has been estimated using all bulk wheat claims for 2008–09.
Source: BITRE estimates based on SKM rates data; BITRE (2008).

CHAPTER 5

Expenditure implications of updating the Freight scheme parameters

BITRE's suggested updated parameters for 2009–10 are shown in Table 14, along with BITRE (2008) and the current Scheme parameters (1996–97).

T14 Key TFES parameters, 1996–97, 2006–07 and 2009–10

	1996–97 parameters (current)	2006–07 parameter estimates	2009–10 parameter estimates
Road Freight Equivalent (dry freight)	281	507	578
Road Freight Equivalent (reefer freight)	309	558	635
Door-to-door adjustment parameter	460	Na	444
Door-to-wharf / Wharf-to-door adjustment parameters	230	Na	222
Wharf-to-wharf sea freight cost disadvantage	671	653	549
Intermodal costs allowance	100	100	100 ^a
High density adjustment factor	0.6	0.8	0.9

^a BITRE suggests that the intermodal cost allowance of \$100 per TEU be retained, given BITRE (2008) analysis showing costs for two large shippers of at least \$50 and \$86 per TEU respectively.

Source: BITRE analysis of TFES Database; BITRE (2008)

The suggested parameters for the intrastate TFES component are shown in Table 15.

T15 TFES intrastate parameters estimates, 2006–07 and 2009–10

	2006–07 parameters (current)	2009–10 parameter estimates
King Island		
Road Freight Equivalent (dry freight)	675	775
Road Freight Equivalent (reefer freight)	742	852
Furneaux Group		
Road Freight Equivalent (dry freight)	259	297
Road Freight Equivalent (reefer freight)	285	327

Source: BITRE estimates.

If BITRE's suggested 2009–10 TFES parameters—other than the high density stowage factor and revised route scaling factors—had applied over the last three years, then TFES payments may have been reduced by up to \$97.3 million (Table 16).

This reduction is larger than previously estimated by BITRE (2008). If the 2006–07 parameters had applied over the last three years, then TFES payments may have been reduced by \$64 million dollars.

These values are estimates only and assume no change in shipper or claimant behaviour; and give a general indication only of the likely change in expenditure.

It is important to note that if the parameters were changed then the expected savings would not be fully realised for a number of years. There is a general 'lag' of a number of years where shippers may take up to two years to lodge their claims and a further twelve months for the claims to be processed and paid.

T16 TFES payments by year of shipment, current and revised parameters, 1996–97, 2006–07 and 2009–10 (million dollars)

Year of shipment	1996–97 parameters (TFES Review Authority 1998)	2006–07 parameters (BITRE 2008)	Difference	2009–10 parameters	Difference
	TFES payments ^a	Estimated payments	2006–07 to 1996–97	Estimated payments	2009–10 to 1996–97
2007–08	107.02	82.45	–24.56	70.33	–36.68
2008–09	107.25	83.76	–23.49	71.73	–35.53
2009–10	78.19	61.66	–16.53	53.08	–25.11
Three year total	292.46	227.88	–64.58	195.14	–97.32

Note:

^a TFES claims data as at 28 July 2010 summarised by date of shipment. Data is incomplete for 2007–08 to 2009–10. Based on previous years, BITRE expects that 30–40 per cent of claims for freight shipped in 2009–10 and 5–10 per cent of claims for 2008–09 are yet to be lodged or processed. A small number of claims for 2007–08 are also likely yet to be processed.

Source: BITRE analysis of TFES database.

Flat rate payments

The Productivity Commission (2006) suggested a flat rate per TEU payment to ease the complexity and administrative burden of the TFES.

Table 17 shows payments for a flat rate of \$650 per TEU and a High Density Flat Rate of \$390 per TEU. The total payment for a flat rate of \$650 per TEU—without any high density adjustment—is also shown. A flat rate of \$650 would approximate the equivalent total spend over the three years from 2007–08 to 2009–10.

T17 **TFES estimated payments—current and flat rates, 1996–97, 2006–07 and 2009–10 (million dollars)**

All Claims – Date Shipped	1996–97 Parameters (Current) Actual payments by date shipped	Flat Rate \$650 with HD Flat Rate \$390 Estimated payments	Flat Rate \$650 Estimated payments
2007–08	107.02	106.21	110.12
2008–09	107.25	102.55	107.12
2009–10	78.19	74.95	77.12
Three year total	292.46	283.71	294.37

Note: Estimated values presented in this table may differ to actual values paid. 2009–10 data is incomplete, BITRE expect up to 40 per cent of claims for the year are either yet to be lodged or processed. 2008–09 data may also be incomplete, BITRE expect up to 10 per cent of claims for the year are either yet to be lodged or processed. BITRE expect a small amount of claims for 2007–08 are also yet to be processed.

Source: BITRE analysis of TFES database.

Different flat rates mean different levels of total payments depending on the TEU shipped. One way to look at the level of assistance for shipments is to compare current payments to a flat rate payment and the estimated wharf-to-wharf freight costs (Table 18). Data is illustrated as per cent shares for all shipments made during 2008–09 (for claims data as at 28 July 2010) rather than 2009–10 to provide a more complete picture of the likely impacts of a flat rate on shipper payments.

T18 **Indicative impact of a TFES flat rate on shipper payments, 2008–09 (per cent)**

Flat rate (\$ per TEU)	Shipments that may receive more than their wharf-to- wharf freight cost.		Shipments that may receive more than their current payment.		Shipments that may receive more than 0.5 of their wharf-to-wharf freight cost.	
	TEUs	Claim Lines	TEUs	Claim Lines	TEUs	Claim Lines
300	0.0	0.1	2.5	0.8	7.9	1.5
400	0.5	0.4	10.4	2.0	33.3	5.8
450	1.0	0.5	15.3	3.0	38.7	8.2
500	5.6	0.8	29.6	5.0	44.2	11.8
525	6.1	0.9	33.8	23.2	48.7	14.6
550	6.3	1.2	36.7	24.6	52.2	16.9
560	6.4	1.2	37.1	25.0	53.9	17.9
565	6.4	1.2	38.0	25.3	56.7	19.1
600	7.9	1.5	40.5	26.8	60.4	24.5
650	13.4	2.3	43.7	29.5	76.2	30.5
700	25.1	2.8	47.9	34.2	83.2	36.2
Totals 2008–09	100.0	100.0	100.0	100.0	100.0	100.0

Note: Estimated values presented in this table may differ to actual values paid. BITRE expect that a significant number of claims for 2008–09 were either yet to be lodged or processed as at 28 July 2010.

Source: BITRE analysis of TFES Database

Table 18 shows that at a flat rate of \$700, about a quarter of claims (in terms of TEUs) would receive more than their wharf-to-wharf freight cost, with 48 per cent of TEU claims likely to receive more than under the current Scheme and approximately 83 per cent of TEU claims receiving over half of the wharf-to-wharf freight cost.

Claims distribution

There is no minimum threshold for TFES payments for claims made for eligible freight. Over the three year period more than 50 per cent of the claim line items accounted for less than 2 per cent of TFES payments (Table 19).

Table 19 illustrates that approximately 40 per cent of claim line items received 0.7 per cent of TFES payments. Many of these claim line items received payments of a few dollars or less. The average payment for claims line items in the 0.05 TEU or less group (Table 19)—accounting for over 200 000 line items—was \$10.

T19 TFES payments and claim lines by distribution, 2007–08 to 2009–10

	2007–08		2008–09		2009–10		Total (3 Years)		Claim Lines (No.)
	Payments (\$'000)	Claim Lines (No.)	Payments (\$'000)	Claim Lines (No.)	Payments (\$'000)	Claim Lines (No.)	Payments (\$'000)	Claim Lines (No.)	
From 0 to 0.05 TEU	781.8	75 776	771.0	74 302	530.3	52 344	2 083.0	202 422	
> 0.05 <= 0.1 TEU	1 235.6	24 881	1 240.5	24 961	917.3	18 591	3 393.3	68 433	
> 0.1 <= 0.15 TEU	1 084.2	12 530	1 000.7	11 383	811.5	9 248	2 896.4	33 161	
> 0.15 <= 0.2 TEU	868.4	6 926	789.4	6 219	594.5	4 619	2 252.2	17 764	
> 0.2 <= 0.5 TEU	3 270.0	15 009	3 299.8	15 146	2 333.6	10 266	8 903.3	40 421	
> 0.5 <= 1 TEU	23 280.0	33 879	22 566.0	32 699	20 586.6	29 359	66 432.5	95 937	
Greater than 1 TEU	76 496.9	19 702	77 585.8	20 697	52 416.8	15 544	206 499.5	55 943	
Total	107 016.7	188 703	107 252.9	185 407	78 190.7	139 971	292 460.2	514 081	
	Proportion (%)								
From 0 to 0.05 TEU	0.7	40.2	0.7	40.1	0.7	37.4	0.7	39.4	
> 0.05 <= 0.1 TEU	1.2	13.2	1.2	13.5	1.2	13.3	1.2	13.3	
> 0.1 <= 0.15 TEU	1.0	6.6	0.9	6.1	1.0	6.6	1.0	6.5	
> 0.15 <= 0.2 TEU	0.8	3.7	0.7	3.4	0.8	3.3	0.8	3.5	
> 0.2 <= 0.5 TEU	3.1	8.0	3.1	8.2	3.0	7.3	0.0	7.9	
> 0.5 <= 1 TEU	21.8	18.0	21.0	17.6	26.3	21.0	22.7	18.7	
Greater than 1 TEU	71.5	10.4	72.3	11.2	67.0	11.1	70.6	10.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Source: BITRE analysis of TFES database

Abbreviations

BTRE	Bureau of Transport and Regional Economics
BITRE	Bureau of Infrastructure, Transport and Regional Economics (formerly the Bureau of Transport and Regional Economics)
c/ntk	cents per net tonne kilometre
DITRLG	Department of Infrastructure, Transport, Regional Development and Local Government (formerly the Department of Transport and Regional Services)
DD	Door-to-door
DW	Door-to-wharf
DOTARS	Department of Transport and Regional Services
KIFG	King Island and Furneaux Group
ntk	Net tonne kilometre
RFE	Road freight equivalent
SKM	Sinclair Knight Merz
TEU	Twenty-foot equivalent unit
TFES	Tasmanian Freight Equalisation Scheme
TWFS	Tasmanian Wheat Freight Scheme
WD	Wharf-to-door
WW	Wharf-to-wharf

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