

Deloitte Access Economics

Economic impacts of the proposed Shipping Reform Package

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Headline findings

- The analysis presented in this report demonstrates that changed licensing arrangements proposed under the Australian Government's shipping reform package, *Stronger Shipping for a Stronger Economy*, will lead to an increase in the cost of coastal shipping and, by extension, freight rates of up to 16%.
- A variety of factors, such as the competitiveness of downstream industries and the scope for import competition, suggest that these cost increases are likely to be borne predominantly by the users of coastal sea freight. Not only will this diminish competitiveness, it will also bear negatively and potentially significantly on future investment decisions.
- The precise magnitude of the long term economic impacts is difficult to determine given the myriad of factors at play. However, the modelling undertaken here suggests that, in net present value terms, the aggregate impact on gross domestic product over the period to 2025 will be between -\$242 million and -\$466 million.
- The associated loss of employment over the long term is, in net terms, relatively modest at up to 200 full time equivalent employees. Much of the displaced labour is absorbed in other sectors, given the relatively tight labour market conditions that currently characterise the Australian economy. However, in the immediate term, the displacement is considerably higher, with an estimated peak loss of 570 FTE employees.

Executive Summary

The size of the Australian shipping fleet has been in decline for almost two decades. From a fleet of 55 major vessels in 1995 there are just 22 vessels remaining in the Australian fleet today. However, despite this decline, Australian industries reliant on sea freight – the ‘consumers’ of shipping services – have generally been well served by an industry increasingly reliant on foreign registered vessels operating to and from Australia and along the Australian coast.

In relation to coastal shipping specifically, foreign registered vessels operating on Single Voyage Permits and Continuous Voyage Permits presently perform around 30 per cent of the Australian domestic coastal shipping task.

The proposed shipping reform package, *Stronger Shipping for a Stronger Economy*, aims to revitalise the Australian shipping industry, although the underlying rationale for this revitalisation has not been clearly articulated. Overall, there does not appear to be a robust underlying public policy basis to the reforms that have been put forward. Certainly, from an economic efficiency perspective, it is not apparent that they would be welfare enhancing. While a Regulation Impact Statement was prepared to support the policy development and evaluation process, the findings of the underpinning analysis – which suggest that the greater the realisation of the policy intent, the greater the net economic costs – have not featured heavily in the policy decision making. Among other things, this reflects recent changes to the RIS review process, which have reduced the emphasis on the expected net economic impacts.

In any instance, a strong case for the proposed new licensing arrangements, which will potentially significantly restrict access to coastal shipping by foreign vessels, has not been established. Indeed, trends witnessed over the last two decades suggest that, by virtue of higher labour costs, Australia does not enjoy a comparative advantage in shipping. Irrespective, the impacts of the proposed new licensing arrangements have not been closely examined, particularly insofar as they affect industries reliant on bulk coastal sea freight.

The analysis presented in this report demonstrates that changed licensing arrangements will lead to an increase in the cost of coastal shipping and, by extension, freight rates of up to 16%.

The generally competitive nature of the industries downstream from the key users of bulk sea freight and the scope for import substitution mean that scope to pass on these cost increases is minimal. For logistical and cost reasons, the potential to switch to other modes of transport – road or rail – is similarly low.

If these costs are absorbed by the users of bulk sea freight, there will be impacts on operating margins; if they are passed through, competitiveness will be diminished. As a consequence, two flow-on impacts are likely:

- First, a level of substitution will occur whereby intermediate inputs are imported rather than produced domestically. This will vary across commodities based on the significance of sea freight in overall production costs and profit margins of the industry. In the face of the rising value of the Australian dollar, import substitution is becoming

an increasingly likely option. Equally, if the Australian dollar moderates, these pressures will become less acute.

- Second, future investment is likely to proceed at a depressed rate and hence future output in affected sectors will grow more slowly; potentially not at all.

The precise magnitude of these impacts is difficult to determine given the myriad of factors at play. The impacts rest heavily on the commercial decisions of a range of industry players and, for a variety of reasons, these are challenging to determine before the fact.

The modelling undertaken here, which draws heavily on industry data, finds that the phasing out of temporary permits has the potential to lead to a fall in GDP of between \$40 and \$82 million in 2015, decreasing to \$25 and \$49 million in 2025 as structural adjustment occurs throughout the economy. **In NPV terms, the aggregate cost to the economy over the period to 2025 is estimated at between \$242 and \$466 million.**

The significance of these impacts is heightened when placed in the context of size of these sectors. For example, the combined annual revenue of the three members of the Cement Industry Federation is \$2.1 billion.

The associated loss of employment over the long term is, in net terms, relatively modest at up to 200 full time equivalent employees. Much of the displaced labour is absorbed in other sectors, given the relatively tight labour market conditions that currently characterise the Australian economy. However, in the immediate term, the displacement is considerably higher, with an estimated peak loss of 570 FTE employees.

Given the factors that cannot be reliably captured in the modelling, such as wage pressures generated by the increased demand for domestic mariners and reduced competition and flexibility in the coastal shipping sector, the actual impact of the reforms may in fact exceed this. However, it should be noted that, given the uncertainty in relation to the nature, origin and magnitude of the productivity gains agreed between the Maritime Union of Australian and the Government, these impacts have been excluded from the analysis.

The findings from the Regulation Impact Statement that accompanied the reforms indicate that the greater the realisation of the intended impacts of the reforms, the greater the net economic loss to the Australian economy. The modelling and analysis presented in this report supports this finding, indicating that the greater the shift toward domestic vessels on the coastal trade, the greater the likelihood that domestic production is foregone in preference to imports and hence the greater the adverse impacts on sectors reliant on coastal sea freight. On this basis, the findings of this analysis suggest that, in relation to access to the coastal trade, the proposed reforms would move the sector further away from regulatory arrangements which, until recently, served the Australian economy well.

Deloitte Access Economics

1 Introduction

In September 2011, the Federal government announced the details of its shipping industry reform package, *Stronger Shipping for a Stronger Economy*. The reform package was announced following a multi-staged process involving an inquiry commencing in 2008 by the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government, a government commitment to reform in August 2010 and a subsequent process for industry and stakeholders to provide input to the reform process. The *Stronger Shipping for a Stronger Economy* package was announced shortly after a Regulation Impact Statement into the major components of the package was released by the Department of Infrastructure and Transport. The reform package is scheduled to commence in July 2012, subject to the passage of its legislative reform components through the Parliament.

Broadly speaking, the reform package aims to revitalise the Australian shipping industry, a sector that has been in relative decline in the face of more attractive shipping conditions in a number of overseas economies. There are four main tenets to the *Stronger Shipping for a Stronger Economy* package. These are:

- The creation of an Australian International Shipping Register (AISR) which will bring crewing arrangements into line with some international practices, removing a competitive disadvantage currently faced by Australian-flagged vessels when operating on international routes;
- Tax reform – providing financial incentives for Australian-flagged vessels;
- A new licensing regime; and
- A workforce skills development forum under which Australian operated vessels provide greater support for crew skills development.

Of the reforms, the proposal to amend existing arrangements in relation to the shipping industry licencing regime is of most concern to users of bulk coastal freight and it is this aspect of the reforms which is the focus here. Industries reliant on bulk coastal freight include cement, alumina, iron ore, steel, bauxite, fertiliser, sugar, soda ash and retort coke. Key to the licencing reform package is a proposal to change the minimum mandatory employment conditions under which maritime workers on the coastal trades must be paid. A further consequence of a reformed licencing regime may be a loss of availability of vessels and, by extension, a reduction in the level of competition in the sector.

A shift in the wages and conditions paid to employees on the coastal trade is likely to have significant impacts on the sector itself and also on related upstream and downstream industries. Downstream industries face the prospect of higher freight costs, with flow-on impacts to their margins and/or competitiveness. In many cases, scope to substitute other forms of transport for sea freight is limited by the bulk, low value nature of the commodities impacted.

While the negative impacts of these reforms are likely to be significant, they will affect different parts of the economy in different ways. At high level, the parts of the Australian economy that are most reliant on the coastal trade are those that are most likely to feel the

impact of these reforms. Within the users of the coastal trade, those that currently rely on vessels using foreign labour will be most heavily impacted; vessels engaging Australian employees are not directly impacted by these reforms. However, notwithstanding the analysis presented in the Regulation Impact Statement, it is not evident that the impact of the new licensing regime on downstream industries has been closely considered or systematically analysed.

Accordingly, Deloitte Access Economics has been engaged by the Cement Industry Federation, on behalf of a wider group of industries reliant on bulk sea freight, to analyse the economic impacts of the reforms on these industries and the economy more broadly. The other companies and industry associations involved with the engagement include CSR, Penrice, Pacific Carbon, Minerals Council of Australia and the Fertiliser Industry Federation. The Business Council of Australia and the National Bulk Commodities Group have also provided in-kind support to the project.

1.1 Approach to the analysis

Deloitte Access Economics has taken a structured approach to this assignment which has involved the following broad stages:

- Step One: An initial desktop review was undertaken to examine the Australian coastal shipping industry and the reform proposal, the characteristics of industries reliant on bulk coastal freight and literature pertaining to the likely impacts of the proposed reforms.
- Step Two: An industry workshop was held with representatives of a range of industries which stand to be directly impacted by the reforms. The workshop provided an opportunity to consult industry stakeholders on their understanding of the reforms and to test and validated the commercial and operational impacts that the reforms are likely to have.
- Step Three: Data was sourced in order to provide the basis for key inputs into the financial and Computable General Equilibrium (CGE) modelling components of the study. Data was sourced, on a confidential basis, from industrial users of the coastal trades and from publicly available data. Finally, data was inputted into financial and CGE models to provide a quantitative analysis of the likely impacts of the reform proposal.

1.2 Overview of this report

The remainder of this report is structured as follows:

- Chapter Two: Background to the report including the definition of the bulk coastal shipping industry, its major users, the current and proposed regulatory framework impacting coastal shipping
- Chapter Three: Discusses the operational and commercial impacts of the proposed reform package on major users of the coastal trades.
- Chapter Four: Explains the likely financial and operational impacts on the users of the coastal trade including the findings of the financial and CGE modelling undertaken.

- Chapter Five: Presents the findings and implications of our study and potential changes that could be made to the government's reform proposal. In addition, other impacts, not included in the modelling, are considered and discussed.

2 Background

2.1 Coastal bulk freight industry

2.1.1 Characterising the industry

Australia's coastal bulk freight industry is responsible for the movement of bulk cargo between Australian ports. As a sector, coastal bulk freight is estimated to be responsible for around 25 per cent of Australia's domestic freight task and 89 per cent of the interstate bulk freight movements.^{1 2}

The coastal bulk freight sector is comprised of vessels registered in Australia and foreign registered vessels operating under licence and permit arrangements. A number of foreign vessels engage in coastal bulk freight activities at the conclusion or commencement of voyages varying cargo to or from Australian ports – a process known as the triangular trades.

While the sector is not directly involved in the export of commodities, the industry plays an integral role in the production process of many exports. Approximately 60 per cent of the coastal shipping task is comprised of dry-bulk goods and approximately 26 per cent is liquid bulk goods, with the remainder being non-bulk goods and passengers.³ Major goods moved by coastal bulk freight include alumina/bauxite, iron ore, coal, crude oil, oil products and liquid petroleum gas. The coastal bulk freight industry is noted for being relatively cheap (due to its fuel efficiency) and safe for the movement of goods. For this reason, the coastal trade commonly enjoys a competitive advantage over alternative bulk freight options such as road and rail – particularly in the movement of low-value bulk commodities.

2.1.2 Reliance on the coastal trade

As previously noted, the coastal bulk freight industry is critical to Australia's domestic freight task, particularly to the movement of bulk freight. The industry provides vital services to industries such as:

- Oil and gas production;
- Iron ore and bauxite mining;
- Petroleum refining;
- Steel and alumina production; and

¹ Department of Infrastructure and Transport, (2011), "Regulation Impact Statement: Reforming Australia's Shipping", Commonwealth Government, Canberra.

² Australia Institute, (2008) as cited in Cement Industry Federation (2011) "Terms of reference: Impact of the Government's Proposed 'Shipping Reform Package' on Australian businesses dependent on coastal bulk freight operations," Melbourne.

³ Department of Infrastructure and Transport, (2011), "Regulation Impact Statement: Reforming Australia's Shipping", Commonwealth Government, Canberra.

- Other commodities produced in smaller quantities as discussed in this report.⁴

As noted (above), the major competitors of the industry are rail and road freight. However, it is unclear to what degree these modes of transport provide a competitive and practical alternative to coastal bulk freight. Within the freight sector, it is recognised that modal choice depends on a number of factors including price, timeliness and reliability, availability (frequency) and flexibility of service, suitability of mode for product and pick-up and delivery times falling within preferred windows of time for transport customers.⁵

In other cases, lack of proximity to port or rail facilities, makes these modes unavailable or simply impractical. Deloitte Access Economics understands through consultations with dry bulk users of coastal trade that, with some exceptions, a range of these factors would prevent them from being able to engage road or rail freight as a practical substitute to coastal shipping. Industry operators cited both price and lack of availability of service as the major reasons why road and rail are not practical alternatives to the coastal trade.

2.1.3 Licensing arrangements for coastal shipping

Under the *Navigation Act 1912*, a ship has to be licenced to operate the Australian coast. To be licenced, the vessel has to be registered in Australia or foreign registered. Australian registered vessels are given, subject to availability and suitability, first preference to carry inter-state or intra-state cargoes. Seafarers employed on these vessels are remunerated in accordance the *Seagoing Industry Award (SIA)*.

Up until late 2010, the SIA was registered with the Australian Industrial Relations Commission (AIRC) and conditions of employment outside of salaries and leave were negotiated with employers and registered in an enterprise bargaining agreement (EBA) format with the AIRC. However, new remuneration arrangements were put in place starting 1 January 2011 to take into account award modernisation legislation. Consequently the wages paid to crews on licenced ships are now determined by Fair Work Australia (FWA) and registered under SIA Part A or through individually negotiated EBAs.

The *Navigation Act 1912 (s286)* permits foreign flagged ship operators to apply for permits, either Single Voyage Permits (SVPs) or Continuous Voyage Permits (CVPs), to carry excess or special parcels of cargoes provided they meet the following conditions:

- there is no suitable licenced ship available for the shipping task; or
- the service carried out by licenced ships is inadequate; and
- it is considered to be desirable and in the public interest that an unlicensed ship be allowed to undertake that shipping task.⁶

Up to late 2010, crews on these vessels were remunerated at International Transport Federation (ITF) market rates. However, consistent with the situation for Australian registered vessels, new remuneration arrangements were put in place starting 1 January 2011 as part of the Award modernisation process. Consequently, wages paid to crews on

⁴ IBISWorld, (2011), "IBIS World Industry Report: Coastal Water Transport in Australia," IBIS World.

⁵ Meyrick and Associates, (2007), "International and Domestic Shipping and Ports Study".

⁶ Department of Infrastructure and Transport, (2012), "Coasting Trades Licences and Permits", retrieved from <http://www.infrastructure.gov.au/maritime/freight/licences/index.aspx> on 24 January 2012.

foreign flagged vessels trading on the Australian coast under SVPs or CVPs are now remunerated in accordance with the provisions of the *Fair Work Act 2010*. The FWA Full Bench determined these wage rates to be known as SIA Part B rates.

From 1 July 2012, if the proposed reform Bills are passed without amendment, the following arrangements will apply for dry bulk shippers:

- The crews on Australian registered General Licensed vessels will be paid SIA Part A wages plus EBA negotiated additions
- Foreign registered licensed vessels will be given five years to transition from foreign registration (flag) to Australian registration. The crews on these vessels will be paid SIA Part A wages plus EBA negotiated additions
- Temporary Licenses will replace Permits – both CVPs and SVPs – and be available to shippers as well as ship operators, masters and agents. Crews on foreign flagged vessels operating under a Temporary License will be paid SIA Part B wages
- Emergency Licenses that will be issued when there is a national emergency. It is assumed that crews will be paid SIA Part A rates for the duration of the emergency license.

2.1.4 Trend in use of temporary permits

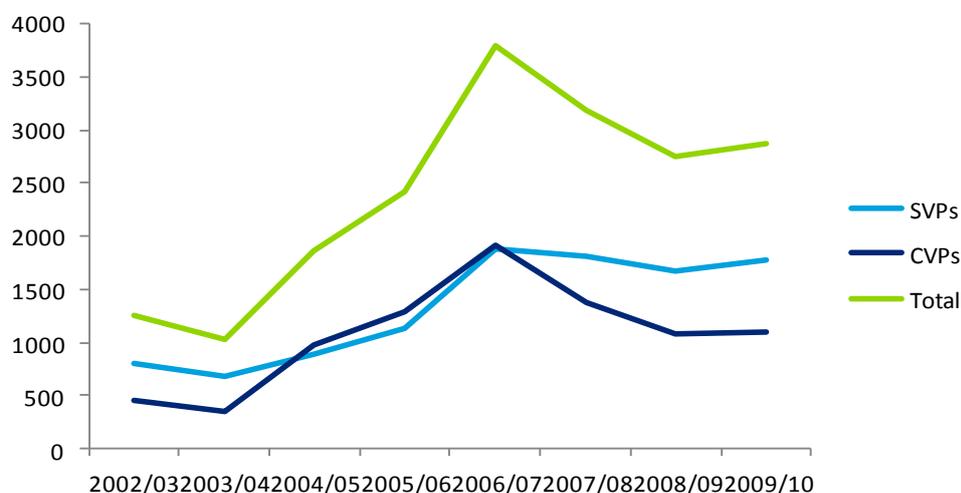
Chart 2.1 illustrates the significant growth in CVPs and SVPs, although not in the dry bulk trade, that has occurred since 2002/03, demonstrating growth of more than 100 per cent over this time. In 2006/07 (the most recent year for which data is available) it was estimated that 29.6 per cent of the coastal trade, by tonnage, was transported by vessels operating under a SVP or CVP, though this varies markedly across commodities.⁷ It is understood this has stayed relatively constant over the recent period, though more recent data is not publicly available.

The increasing utilisation of SVPs and CVPs over the last decade can be attributed to a number of factors:

- The cost advantages enjoyed by these vessels (see discussion below).
- The limited availability of Australian vessels, particularly for specialised freight tasks.

⁷ Department of Infrastructure, Transport, Regional Development and Local Government, (2008), "Submission to House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government: Review of Shipping Policy and Regulation", Commonwealth Government, Canberra.

Chart 2.1: Use of SVPs and CVPs in the Australian coastal trade



2.1.4.2 Wages and crewing

A critical difference between a vessel operating in the coastal trade under an Australian licence and a SVP or CVP is the minimum mandatory conditions under which it is stipulated that seafarers must be employed. As outlined above, until 1 January 2011, ships granted a SVP or CVP were not required to meet conditions of the *Navigation Act 1912* including the payment of Australian wages. Instead, crews were paid ITF market rates, which are superior to the wage rate and conditions set out by the ITF.

On 1 January 2011, this was changed so that all vessels operating in Australian waters had to conform to minimum wage standards set out in the SIA Part B with exceptions being granted to vessels for one voyage on the Australian coast each year. The ITF instrument sets out the minimum wage rate in addition to a guaranteed number of overtime hours and an associated overtime rate and annual leave provisions. Because of the world-wide shortage of seafarers, particularly skilled seafarers, crews have been able to negotiate an enhanced wage structure, which is referred to as ITF market rates. ITF market rates vary, but known examples indicate that they are around 26 per cent greater than basic ITF rates.

Similar to the ITF agreement, the Award establishes the minimum mandatory conditions for employment, including wage rates, for employees in the coastal trades. It operates under the *Fair Work Act 2009*. The Award is split into two components; part B – which applies to unlicensed vessels – provides fewer and less generous conditions and a lower wage rate than Part A, which applies to licensed vessels. Part B of the Award provides for a more generous wage rate to the ITF market rates in addition to a more generous set of arrangements apply to working weekends, public holidays and annual leave entitlements resulting in the total cost of employment on Part B of the Award being as much as twice the ITF market rate cost.

Part A of the Award provides a similar daily wage rate, but contains substantially more generous provisions; seafarers accrue leave at a rate of approximately one day of leave for each day worked in addition to a range of other benefits for eligible employees including handling allowances, disturbance of sleep allowances, meal allowances and study allowances. These arrangements have effectively meant that Australian vessels operating in

the coastal bulk freight industry, being bound to operate according to Part A of the Award, have operated at some degree of competitive disadvantage to foreign vessels operating on SVPs and CVPs which paid their crews ITF market rates prior to 1 January 2011 and SIA Part B rates from 1 January 2011.

2.2 The proposed Shipping Reform Package

2.2.1 *Stronger Shipping for a Stronger Economy*

An inquiry held in 2008 by the Federal Parliament's House of Representatives Committee on Infrastructure, Transport, Regional Development and Local Government ('the Committee') found, among other things, in its *Rebuilding Australia's Coastal Shipping Industry* report a number of competitive pressures on Australia's shipping industry.

In response to the findings of the Committee, the Minister released a discussion paper, '*Reforming Australia's Shipping*', in December 2010 outlining the Federal Government's view regarding where reform could take place to make the Australian shipping industry more viable in future. Receipt of public responses to the discussion paper concluded in January 2011. In September 2011, the Federal Government announced its intention to reform the shipping industry taking into account the views received from stakeholders. The Government's reform package, *Stronger Shipping for a Stronger Economy*, due to commence in July 2012, involves four key reforms:

- The creation of an Australian International Shipping Register (AISR) which will bring crewing arrangements into line with some international practices, removing a competitive disadvantage currently faced by Australian-flagged vessels when operating on international routes;
- Tax reform – providing financial incentives for Australian-flagged vessels;
- A new licensing regime; and
- A workforce skills development forum under which Australian operated vessels provide greater support for crew skills development.

In addition, there is an in-principle agreement that a productivity compact involving operational cost reductions, productivity gains and a review of minimum manning levels will be supported by the industry and the Maritime Union of Australia. Whether this will translate into tangible productivity gains is unclear.

Within the *Stronger Shipping for a Stronger Economy* package, the proposed licensing regime would likely have the greatest impact on the coastal bulk freight industry.

2.2.1.1 A new licencing regime

In respect of the coastal bulk freight industry, reforms to the current licensing arrangements have been proposed. These include:

- The introduction of General Licences which would allow unrestricted access to the coastal trade operating under one of two sets of conditions:
 - Australian registered vessels could access coastal trade for a period of up to five years. These vessels would also have access to taxation reforms proposed under the reform package.

- Foreign registered vessels operating under permit arrangements at the time the *Coastal Trading (Revitalising Australian Shipping) Bill* is passed by Parliament can apply for a transitional general licence. The transitional general licence would be issued for five years and it is expected that transitional general licence vessels would transition to Australian registration. Seafarers employed on transitional general licence vessels would be paid SIA Part A wages. These vessels would not have access to the taxation incentives available to Australian registered vessels.
- Foreign registered ships that operate under permit in the current regime will have a period of up to five years in which they can transfer to Australian registration and therefore be eligible for a General Licence.
- A new class of licence, to be known as a Temporary Licence, would provide limited access to coastal trade. This would enable foreign flagged ships and those operating under the proposed Australian International Shipping Register to undertake specific trades for up to 12 months and must undertake a defined number of voyages per annum. The number of voyages has yet to be prescribed.
- A new category of Emergency Licence that would cater for ‘one-off’ cargo movements in situations such as natural disaster, supply crises or other emergencies.⁸

The new licencing regime proposal is associated with different minimum mandatory industrial conditions depending on the licence type. It is proposed that:

- Vessels operating under the General Licence would employ Australian or Australian-resident seafarers under the *Seagoing Industry Award - Part A*;
- Vessels operating under a Temporary Licence would employ seafarers under the *Seagoing Industry Award – Part B*; and
- Vessels operating under an Emergency Licence would employ seafarers under the *Seagoing Industry Award – Part A*.

It is suggested that there is an intention of government to severely limit access to the Temporary Licences under the new arrangements.⁹ If this were to occur, this would reverse the situation that has occurred over the last 15 years where the granting of SVPs and CVP has been accepted as a necessity to ensure dry bulk cargoes are shipped domestically at competitive prices.

As noted above, the *Seagoing Industry Award 2010* provides for more generous wages and conditions in Part A than it does in Part B, with this generosity estimated to be in excess of 62%. In light of this, the proposed licensing regime would result in a greater reliance on vessels operating under a General Licence, with associated higher wage costs under Part A of the Award.

⁸ Department of Infrastructure and Transport, (2011), “Regulation Impact Statement: Reforming Australia’s Shipping”, Commonwealth Government, Canberra.

⁹ Department of Infrastructure and Transport, (2010), “Reforming Australia’s Shipping: A Discussion Paper for Stakeholder Consultation,” Commonwealth Government, Canberra.

Table 2.1: Comparison of present and proposed licensing arrangements

Present Licensing Arrangement	Industrial Agreement	Crew	Proposed Licensing Arrangement	Crew	Industrial Agreement
Australian registered vessel	Seagoing Industry Award 2010 – Part A	Australian (or earning Australian rates)	General Licence or AISR	Australian or Foreign	Seagoing Industry Award 2010 – Part A
			General Licence - Transitional	Foreign	
Foreign registered vessel operating under an SVP	Seagoing Industry Award 2010 – Part B*	Foreign	Temporary Licence	Foreign	Seagoing Industry Award 2010 – Part B
Foreign registered vessel operating under a CVP	Seagoing Industry Award 2010 – Part B*	Foreign	Temporary Licence	Foreign	Seagoing Industry Award 2010 – Part B
			Emergency Licence	Foreign	Seagoing Industry Award 2010 – Part A

* Vessels operating under an SVP or CVP may undertake one voyage per year in Australian waters while employing workers under the ITF Agreement.

2.2.2 Industry views

Broadly speaking, there appears to be support among industry stakeholders for the Government's AISR, taxation and workforce training and development proposals as outlined in *Stronger Shipping for a Stronger Economy*. However, there are concerns among stakeholders about the commercial and operational impacts of reforms to the current permit regime – to be known as Temporary Licences. Specifically, it is suggested that proposals to abolish SVPs and CVPs will have detrimental impacts on users of coastal bulk freight. However, to date, these impacts have not been systematically assessed.

Some of the key views from industry are set out below:

- Ports Australia, representing Australian port operators has argued that the licensing reforms may lead to a situation whereby the presence of foreign flagged vessels is deterred with no increase in Australian licensed vessels occurring, thereby leaving a shortage of available vessels to perform Australia's coastal bulk freight task.¹⁰
- Similarly, BlueScope Steel, a major user of coastal bulk freight services also identified that changing the present arrangements by removing access to SVPs would have a potentially detrimental impact on its operations given its present reliance on vessels engaged in triangular trades.¹¹

¹⁰ Ports Australia, (2011), "Submission on Reforming Australian Shipping", Ports Australia.

¹¹ Fitsirois, P, (2011) as cited in Australian Logistics Council, (2011) "Response to Reforming Australia's Shipping Discussion Paper", Australian Logistics Council.

- Shipping Australia has suggested that there is often “no viable business case” to operate an Australian licensed ship where foreign flagged ships using SVPs are currently engaged. On this basis, they predict that licensing reform may lead to price increases and the substitution of existing coastal bulk freight services for road and rail services.¹²
- The Australian Shipowners Association, while generally supportive of the Government’s reform package, has expressed concern about the additional employment costs associated with the reform.¹³
- The Business Council of Australia, a peak business organisation, has called for the Productivity Commission to review the proposed reform package, including to model its broader economic impacts.¹⁴
- A number of organisations, for example, the National Bulk Commodities Group, have stated that while they support revitalising the shipping industry they do not believe that applying restrictions to competition is the best approach to achieving this.¹⁵

2.2.3 Regulation Impact Statement

A Regulation Impact Statement (RIS) was prepared in August 2011 by the Department of Transport and Infrastructure to examine the impacts of the Government’s proposed reform package over a twenty year period commencing in 2012. The RIS considered four different scenarios that may result from the adoption of the proposed reforms:

- Scenario A – whereby no replacement of foreign temporary licensed ships with Australian ships takes place, no ships are registered under the AISR and the same quantities of freight carried by permit ships at present are carried by temporary licence ships.
- Scenario B – Australian ships gain an additional 10 per cent of ‘other dry bulk’, petroleum products and other liquid bulk sectors, the quantity of freight carried by Australian ships rises linearly for the first five years and remains constant after that, AISR ships are used in the triangular trade carrying coastal freight and coal to Asia, AISR ships carry a one-third share of coastal freight carried on triangular voyages with foreign ships accounting for the other two-thirds.
- Scenario C – As for Scenario B but Australian ships gain 20 per cent of the total freight tonnage in the ‘other dry bulk’, petroleum products and ‘other liquid bulk’ sectors and AISR ships achieve two-thirds shares of the bauxite and iron-ore triangular trades.
- Scenario D – The use of foreign ships in the ‘other dry bulk’, petroleum products and ‘other liquid bulk’ sectors is phased out altogether over the first five years, the quantities of freight carried by foreign Temporary Licence ships fall linearly to zero over the period to 2016/17 and remain at zero thereafter and AISR ships gain all bauxite and iron ore triangular trades.¹⁶

¹² Shipping Australia Limited, (2011), “Shipping Australia’s submission on Reforming Australia’s shipping: A Discussion paper for stakeholder consultation”, Shipping Australia Limited.

¹³ Australian Shipowners Association, (2011), “Australian Shipping: Time to Act,” Australian Shipowners Association.

¹⁴ Business Council of Australia, (2011), Submission to the Department of Infrastructure and Transport on Reforming Australia’s Shipping, Business Council of Australia.

¹⁵ National Bulk Commodities Group, (2011), “Response to exposure draft of Coastal Shipping Bill 2011 and Coastal Trading (Consequential Amendments and Transitional Provisions) Bill 2012,” National Bulk Commodities Group.

¹⁶ Department of Infrastructure and Transport, (2011), “Regulation Impact Statement: Reforming Australia’s Shipping”, Commonwealth Government, Canberra, pp iii-iv.

In short, Scenario A represents the status quo in relation to granting foreign ships temporary permits/licences with crews paid SIA Part B wages, whereas Scenario D represents the complete phasing out of temporary licences after five years, with Scenarios B and C representing a situation close to Scenario A only Australian flagged vessels gain a small portion (an additional 10-20 per cent) of total freight tonnage from temporary licenced vessels after five years.

The RIS also considered the impacts of other aspects of the reform package including productivity gains under the negotiated compact between industry and unions and proposed changes to taxation arrangements – these were held constant across all scenarios. The results of the analysis are presented in the table below.

Table 2.2: Findings from the Regulation Impact Statement

Scenario	Net Present Value of economic benefits
Scenario A	\$192 million
Scenario B	\$116 million
Scenario C	\$42 million
Scenario D	(\$202 million)

As the results in the table suggest, net benefits are highest under Scenario A and lowest under Scenario D. Scenario A reflects the full benefit of the negotiated productivity gains and changes in taxation arrangements. Under the other scenarios, however, this benefit is offset – to an increasing degree – by the negative impacts associated with the restriction in temporary licences/permits. *That is, the greater the realisation of the intended impacts of the reforms, the greater the net economic loss.*

According to the RIS authors, Scenarios B and C should be considered the most realistic of all the scenarios, i.e. a situation where Australian flagged vessels gain a small portion (an additional 10-20 per cent) of total freight tonnage from temporary licenced vessels after five years. The results are also regarded by the authors as indicative given uncertainties around key assumptions. One key assumption is the benefit associated with productivity gains, which represents the most significant component of the total estimate of economic benefits under each Scenario.

The RIS concludes by reiterating the case for Australian shipping industry reform and outlines a number of key benefits associated with the Government’s reform proposal. In particular, the conclusion states:

“The regulatory reforms propose a more modern approach to regulating shipping that provides support to Australian registered vessels but while they are strictly inconsistent with [National Competition Policy] still continue reasonable and transparent access to coastal trades by foreign vessels.” (Department of Transport and Infrastructure, Reforming Australia’s Shipping: Regulation Impact Statement).

3 Operational impacts on the dry bulk sector

3.1 The dry bulk sector and the proposed reforms

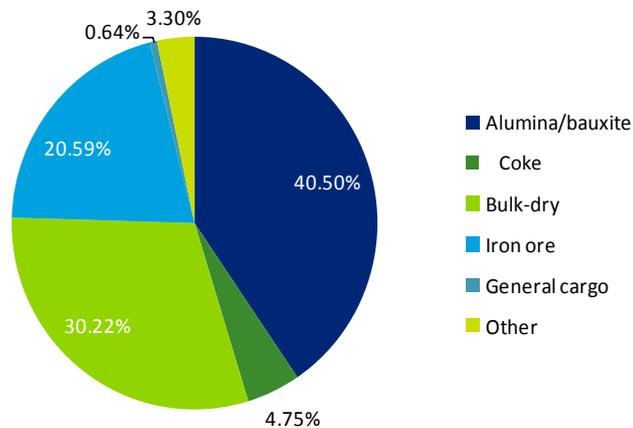
Dry bulk users of the coastal trade are concerned that the new licensing arrangements proposed under the Federal Government's *Stronger Shipping for a Stronger Economy* reform package will impact them at an operational and financial level. As noted above, around one-third of bulk coastal trade is moved by vessels operating under CVPs or SVPs.¹⁷

Users of the coastal trade will be financially impacted by an upward shift in minimum wage rates from Part B to Part A of the Award which would flow through to freight rates for affected vessels. They may also be impacted at an operational level by a reduction in the supply and availability of vessels operating in the coastal trade under the CVP and SVP regime and transition to Temporary Licenses, which will become more difficult to acquire given the proposed restrictions the legislation is designed to impose.

Critically, the impacts of the Government's reform package will not be felt uniformly across all users of the coastal trade. The discussion below explores the impacts of the government's reforms across dry-bulk users of the coastal trade.

A small number of commodities make up the majority of the dry bulk coastal trade. This includes alumina/bauxite, iron ore and coke (Chart 3.1 illustrates the major commodity types moved on the coastal trade in 2004-05). Commodities traded in smaller volumes include grain, cement, forest products, fertiliser, sugar, steel products, gypsum, soda ash and retort coke.

¹⁷ Department of Infrastructure, Transport, Regional Development and Local Government, (2008), "Submission to House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government: Review of Shipping Policy and Regulation", Commonwealth Government, Canberra.

Chart 3.1: Dry-bulk transported on the coastal trade, by volume

Source: Bureau of Infrastructure, Transport and Regional Economics

The unique operational arrangements that exist within the different users of dry bulk will determine the extent to which they are impacted by the government's reform package. From consultations with industry, it is understood that the major concerns held by users of dry bulk are in relation to an escalation of wage costs if the granting of temporary licences is restricted and a lack of availability and flexibility of vessels under the proposed new licensing regime. In addition, any new changes affecting wage costs would be on the back of the significant increase that occurred on 1 January 2011 when crew rates shifted from ITF market rates to SIA Part B rates.

3.2 Major routes, vessels and ports

Table 3.1 illustrates the most common routes for vessels using SVPs and CVPs in 2009-10. At high level, users of vessels that travel on these routes are most likely to be impacted by the shift in wages rates from Part B to Part A of the Award.

Table 3.1: Permit usage for selected coastal routes, 2009-10

Route	Freight transported on permits ('000 tonnes)	Number of voyages
Port Hedland-Port Kembla	3,097.3	24
Gladstone-Newcastle	1,393.3	28
Hastings-Sydney/Botany Bay/Kurnell	922.7	34
Port Bonython – Sydney/Botany Bay/Kurnell	801.4	16
Gladstone- Brisbane	641	56
Dampier – Port Kembla	404.4	3
Gladstone – Townsville	386.7	22
Miner Bay/Groote Eylandt – Bell Bay/Launceston	372.9	9
Melbourne – Perth Fremantle/Kwinana	353.7	257
Gladstone-Bell Bay/Launceston	328.6	13
Perth/Fremantle/Kwinana – Adelaide	262.2	74
Sydney/Botany Bay/Kurnell – Perth/ Fremantle/Kwinana	229.6	108
Thevenard-Brisbane	208.3	10
Perth/Fremantle/Kwinana – Sydney/Botany Bay/Kurnell	183.6	70
Port Latta – Port Kembla	175.4	4
Thevenard – Sydney/Botany Bay/ Kurnell	169.0	7
Adelaide- Melbourne	161.7	7
Port Kembla- Whyalla	161.2	5
Geelong – Brisbane	158.7	68
Perth/Fremantle/Kwinana – Melbourne	154.6	129
Other	4,492.3	1912
Total	15,058.6	2856

Source: Bureau of Infrastructure, Transport and Regional Economics, (2010), “Australian Sea Freight, 2009-10,” Commonwealth Government, Canberra.

Note: Pacific Carbon also makes 21 shipments per year from Newcastle to Bell Bay

3.2.2 Vessels on the coastal trade

Vessels of all sizes are used in the coastal trade, catering for a range of needs of coastal trade users. Vessels are typically categorised into the following size groups:

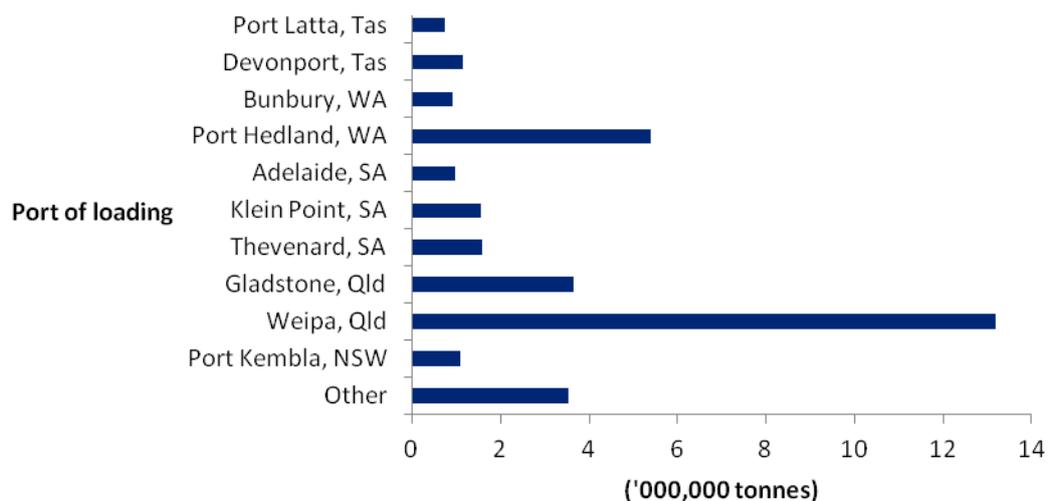
- Cape size: typically carrying in excess of 80,000 deadweight tonnes (DWT) are used in the movement of coal and iron ore in the coastal trade.
- Panamax: can carry between 60,000 DWT and 75,000 DWT and are typically used in the bauxite and alumina trade.
- Handymax: can carry between 30,000 DWT and 60,000 DWT.

- Handysize: can carry up to 30,000 DWT and would typically carry products such as cement, sugar and fertiliser on coastal routes.
 - The majority of vessels operating under CVPs and SVPs are handysize vessels.
- Minibulker: can carry around 5,000 DWT to 7,000 DWT and would typically carry products such as soda ash.

3.2.3 Common dry bulk ports

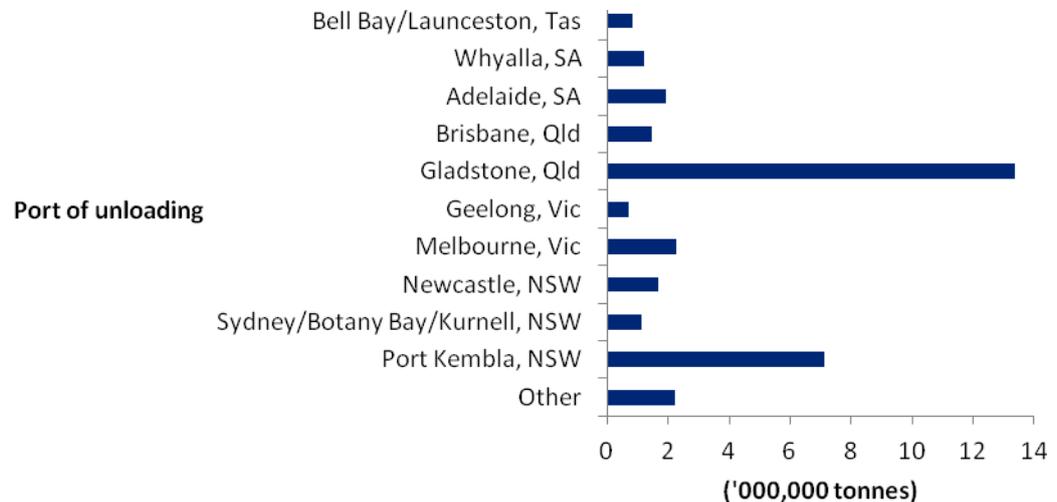
Chart 3.2 and Chart 3.3 illustrate the most frequently used Australian ports for the loading and discharge of dry bulk moved on the coastal trade. The large quantity product being loaded at the Port of Weipa reflects the significant movement of Bauxite from Weipa to Gladstone which has been estimated to account for up to 24% of coastal trade. This is reflected in Chart 3.3. Gladstone is also used as a key port of loading to move alumina to both Brisbane and Newcastle. Large movement at Port Hedland reflects the movement of iron ore which accounts for approximately 20% of the coastal trade.

Chart 3.2: Top 10 Australian ports by loading of coastal trade dry-bulk



Source: Bureau of Infrastructure, Transport and Regional Economics, Australian Sea Freight, 2009-10

Chart 3.3 reflects the significant discharge of bauxite that takes place at Gladstone with product received from Weipa. Port Kembla receives the majority of its dry bulk in the form of iron ore from Port Hedland.

Chart 3.3: Top 10 Australian ports by discharge of coastal trade dry-bulk

Source: Bureau of Infrastructure, Transport and Regional Economics, (2010), "Australian Sea Freight, 2009-10," Commonwealth Government, Canberra.

3.3 Major dry bulk commodities

Consultations with key operators who rely on the movement of dry bulk in the coastal trades have suggested that the following commodities will be impacted by the government's reforms:

- Cement
- Iron ore
- Manufactured steel
- Sugar cane
- Cement
- Gypsum
- Alumina/bauxite
- Soda ash
- Retort Coke
- Fertiliser.

The following section discusses the nature of these industries, their reliance on the coastal trades and their level of competition with overseas based producers.¹⁸

¹⁸ The data and information presented throughout this section draws on data and information from IBISWorld, the Bureau of Infrastructure, Transport and Regional Economics and the Australian Bureau of Agriculture and Resource Economics.

3.3.1 Cement

Use	Cement is the 'glue' that binds aggregates together to form concrete, a primary input into most building and construction projects.
Users	Cement is used primarily by the concrete and aggregates industry, other downstream users include domestic and trades users.
Producers	Cement Australia, Adelaide Brighton, Boral
Revenue	Revenue in cement manufacturing exceeds \$2 Billion annually.
Growth	Growth is closely connected with general economic growth and is expected to remain steady over the coming five year period.
Locations	Integrated clinker and cement production facilities are located near limestone mines at Gladstone (Qld), Berrima and Maldon (NSW), Waurm Ponds (VIC), Angaston and Birkenhead (SA), Kwinana/Munster (WA), Railton (Tas).
Major coastal routes	Major movements occur from Devonport to Melbourne, Sydney and Newcastle, From Adelaide to Melbourne and Brisbane, and from Gladstone to Brisbane, Townsville and Sydney. Both cement and clinker are shipped on these coastal routes.
Trade	Almost all cement produced in Australia is consumed domestically. Production is supplemented by imports which are approaching 20% of the total cement market of 11 million tonnes annually.
Other	Cement is recognised by the Australian Government as unable to pass on cost increases under the <i>Jobs and Competitiveness program of the Clean Energy Act 2011</i>

3.3.2 Gypsum

Use	Its main use is in the manufacture of plaster products including wall and ceiling boards, mouldings and blocks for construction use. It is also a key ingredient in cement production. A third use of gypsum include for agricultural purposes with agricultural gypsum being able to treat sodic soils and as an ingredient in Portland cement
Users	Plasterboard manufacturers, cement manufacturers and downstream producers of related products.
Producers	GRA.
Revenue	It is estimated that the value of the gypsum mining sector would exceed \$33 million in 2010-11.
Growth	Demand has been historically volatile on a state and sector level but is generally smoothed by differing levels of demand intensity over different sectors. Demand is dependent on building sector activity and farm sector activity and is forecast to remain steady over the coming years, consistent with building sector activity.
Locations	South Australia accounts for the overwhelming majority of Australia's Gypsum production. Queensland and Western Australia are also producers of Gypsum.. ¹⁹
Major coastal routes	Major movements of gypsum are from Thevenard to cement production centres which exist in all states of Australia. Additional coastal routes are necessitated by demand from plasterboard manufacturing facilities in Melbourne, Sydney and Brisbane.
Trade	It is estimated that 10% of Australia's production of gypsum is exported, mainly to New Zealand. A potential import threat to the local industry is gypsum produced in Asian economies, including Thailand. Import competition from Asia has led to an increasing number of Perth based users sourcing gypsum from Thailand. ²⁰
Other	Intermodal substation is generally not a viable option due to the location of gypsum mines. ²¹

¹⁹ IBISWorld, (2011), "IBIS World Industry Reports: Salt and Other Mineral Mining in Australia," IBISWorld.

²⁰ Industry source.

²¹ Industry source.

3.3.3 Bauxite

Use	Bauxite is an aluminium ore and is the main source of the world's aluminium. Australia is the world's largest producer of bauxite. Most bauxite (86%) is refined into alumina locally.
Users	Bauxite is often used by the firms that mine it.
Producers	Queensland Alumina, Alcoa of Australia, Rio Tinto, BHP Billiton.
Revenue	The bauxite mining industry is expected to generate revenue of \$1.91 billion in 2011-12.
Growth	The bauxite mining industry has shown strong growth since the early 1990s with future growth prospects being positive and expected to be driven by strong and growing demand from China.
Locations	Over 60% of bauxite mining taking place in Western Australia with approximately 30% taking place in Queensland.
Major coastal routes	Major routes are Weipa to Gladstone (24% of the coastal trade), Gladstone to Brisbane (2% of the coastal trade), Gladstone to Newcastle (2% of the coastal trade). Bauxite/alumina trade accounts for over 40% of dry bulk coastal trade in Australia. Of this, permits vessels accounted for 9.5 per cent of trade in 2006/07.
Trade	Imports of bauxite are said to be negligible with approximately \$5 million worth of bauxite forecast to be imported in 2011-12 . Exports of bauxite are approximately 13.7% of Australian production. Of the export market, China, Italy and Japan account for over 80% of purchases.
Other	Demand for bauxite is strongly correlated to demand for aluminium. Due to the substitutability of aluminium, demand for bauxite is said to be relatively price sensitive.

3.3.4 Alumina

Use	Alumina is significant in the production of aluminium metal and as an abrasive. Its uses include in construction, packaging, motor vehicle production and aerospace production.
Users	The major users of alumina are aluminium smelters, accounting for 93% of demand on a global basis.
Producers	Major operators are Alcoa, Rio Tinto and BHP Billiton.
Revenue	The sector is expected to generate \$6.44 billion in 2010-11.
Growth	The sector has experienced decline in recent years, with a reduction in annual revenue averaging 2.6% since 2005-06. Despite this, production growth has been consistent from the early 1990s and is forecast to continue through to 2015-16.
Locations	The majority of alumina production takes place in Western Australia (61.4%) with smaller amounts being produced in Queensland (26.3%) and the Northern Territory (12.3%).
Major coastal routes	The product moves from Fremantle and Bunbury to Portland and Geelong, comprising 2.3% of coastal trade. ²² Other routes include trade from Gladstone to New South Wales, Gladstone to Tasmania and Gove to Newcastle. Bauxite/alumina trade accounts for over 40% of dry bulk coastal trade in Australia. Of this, permits vessels accounted for 9.5 per cent of trade in 2006/07.
Trade Exports	Exports of alumina generate around 85% of revenue for the sector. Imports of alumina are negligible.

²² Department of Infrastructure, Transport, Regional Development and Local Government, (2009), "Road and rail freight: competitors or complements?": Information sheet 34, Commonwealth Government, Canberra.

3.3.5 Iron ore

Use Iron	Iron ore is used as a key raw material for the production of steel. Steel is a centrally important construction material around the world. Key steel using industries are construction, motor vehicle manufacturing, shipbuilding and plant and equipment manufacturing.
Users	The majority of Australian produced iron ore is exported to steel producers overseas. The only local users of iron ore are OneSteel and BlueScope Steel.
Producers	Rio Tinto, BHP Billiton, Fortescue Metals Group.
Revenue	2011-12 revenues are expected to be \$73.2 billion.
Growth	Industry revenue is expected to grow by 26.7% in 2011-12 and grew by 55.9% in 2010-11. Its growth forecasts are strong beyond this. Production levels have shown continued and strong growth since the early 2000s and are forecast to continue to be strong to 2015-16.
Locations	Almost 97% of iron ore is produced in Western Australia with the remainder being in South Australia and Tasmania.
Major coastal routes	Iron ore is moved from the Pilbara to Port Kembla and Whyalla, comprising up to 20% of coastal trade. In 2006/07 permit vessels carried approximately 59.3 per cent of Australia's iron ore.
Trade	Almost all (95%) of Australia's iron ore production is exported. The main destinations are China, Japan, Taiwan and South Korea. A small quantity of iron ore is imported from India.
Other	The industry is noted for being reliant on access to rail and port facilities.

3.3.6 Sugar

Use	In Australia, sugar cane is used to produce raw sugar, refined sugar and by-products of the refining process such as molasses. Australian sugar mills are some of the largest and most efficient in the world.
Users	Australia is the 3 rd largest exporter of raw sugar in the world. The majority of Australia's raw sugar is exported (80%). The balance is processed through Australia's four sugar refineries. The largest refiner is Sugar Australia which sells the CSR brand and is the major exporter. White sugar exports comprise 21% of Australian white sugar production. Domestic consumption comprises food and beverages use at 82% of demand, 13% retail by supermarket chains and food service (5%).
Producers	The majority of growers are small farm producers of which there are about 3,800 in operation. Sugar cane is harvested at the farm level and is moved to sugar mills, the next stage in the production process.
Revenue	The sugarcane growing industry is expected to generate revenue of \$1.32 billion in 2011-12. Typical revenue ranges for the sugar refining sector are from \$1.5b to \$2.5b depending on seasonal production and global prices.
Growth	There is little opportunity to expand the industry due to land constraints. Production will largely be determined by seasonal factors. Production levels are forecast to be flat through to 2015-16.
Locations	Sugar in Australia is grown between Grafton in northern New South Wales and Mossman in northern Queensland. It is supplied to 24 mills through six bulk storage ports at Cairns, Innisfail, Townsville, Mackay, Bundaberg and Lucinda playing a role in the sector. Almost 94% of producers are based in Queensland.
Major coastal routes	The major coastal route for raw sugar is from Ports in Queensland to Sugar Australia's refinery located at Yarraville, Melbourne. Refined sugar is shipped from Mackay to Sydney.

Trade	Australia exports around 80% of raw sugar with major export destinations being South Korea, Indonesia, Japan, Malaysia, New Zealand, Taiwan. Recently imported product has been imported into Western Australia with industry sources suggesting the Fair Work Act has increased the price of local sugar.
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3.3.7 Iron/steel products

Use	Steel products are used in the production of roads, railways and buildings. Virtually all Australian raw steel is converted into products such as steel slabs, plates, rods, bars, wire, coated products and long products.
Users	Steel is used mainly in the construction sector (56.1%), mining and rail industries (15%) and vehicle and machinery industries (14.5%).
Producers	BlueScope Steel and OneSteel.
Revenue	The Iron and steel manufacturing industry is expected to generate revenue of \$8.3 billion in 2011-12.
Growth	Industry revenue is expected to fall sharply in 2011-12 from previous years, following an average annual rate of decline of 13.2% since 2006-07.
Locations	Over 70% of steel is produced in NSW, with smaller quantities being produced in South Australia (16.5%) and Victoria (10%).
Major coastal routes	A major route of steel slab product is from Port Kembla to Hastings. Handymax vessels are likely to be used.
Trade	Blue Scope Steel recently elected to close one of its two Port Kembla blast furnaces due to being unable to export profitably from the facility. This sees BlueScope Steel exit the export market. The sector is presently impacted by high iron ore prices and a high Australian dollar limiting export opportunities. Additionally, many Australian produced steel products are incompatible with overseas design specifications. Exports are expected to account for 9% of the industry's revenue in 2011-12. Over the coming five years, the sector is expected to face greater import competition from regional producers. In 2011-12, imported product is expected to satisfy around 22% of domestic demand.

Other BlueScope Steel has recently closed one of its two blast furnaces at Port Kembla, NSW.

3.3.8 Fertilisers

Use	Fertilisers are used in agriculture to promote or enhance plant growth and can include chemical fertiliser, mined fertiliser and organic fertiliser. In the context of coastal shipping, relevant fertilisers shipped domestically are single superphosphate (SSP), granulated ammonium sulphate (Gran-am), diammonium phosphate (DAP) and monoammonium phosphate (MAP).
Users	Australian farmers use fertiliser with levels of demand dependent on seasonal variables such as rainfall. Phosphate fertilisers are used for dairy farming, horticulture and broadacre cropping, accounting for 20% of the market. Nitrogen based fertilisers cater for demand from cereal and grain clubs, accounting for 45% of the market. Other users include mining companies and sugarcane growers.
Producers	Wesfarmers and Incitec Pivot. A third producer/manufacturer of fertiliser is Impact Fertilisers.
Revenue	The industry is anticipated to generate revenue of \$3.5 billion in 2011-12.
Growth	In 2011-12, the industry is anticipated to grow by 3%. Growth prospects for the industry are dependent on opportunities for capturing new export markets which are expected to become available.
Locations	Over two-thirds of fertiliser products are produced in Victoria (23%), New South Wales (22%) and Queensland (22%) with smaller levels of production occurring in Western Australia (16%) and South Australia (13%). A smaller quantity of SPP fertiliser is produced in Risdon, Tasmania.

Major coastal routes	Fertilisers are used in agriculture to promote or enhance plant growth and can include chemical fertiliser, mined fertiliser and organic fertiliser. In the context of coastal shipping, relevant fertilisers shipped domestically are single superphosphate (SSP), granulated ammonium sulphate (Gran-am), diammonium phosphate (DAP) and monoammonium phosphate (MAP).
Trade	Approximately half of Australia's fertilisers are imported. Of these, potassium fertiliser is entirely imported from overseas, nitrogen fertilisers are 60% imported from overseas and approximately one-third of phosphate fertilisers are imported. Import levels have varied significantly over the recent past from \$923 million in 2006-07 to \$1.9 billion in 2008-09. Domestic demand for fertiliser product is estimated to be \$4.6 billion and the domestic users demand more product than is produced locally ensuring continued demand for imported product. Import penetration of the domestic market is forecast to continue to be around one-third through to 2016-17. Major countries of import origin are the United States, China, Qatar and Mexico. Australia will export approximately \$390 million worth of fertiliser in 2011-12. At present, Australian producers are competitive on quality, however due to price sensitivity of farm users, the product is perceived to be price sensitive where a significant gap occurs between domestic and overseas produced fertiliser.

3.3.9 Retort coke

Use	Bituminous coal is processed into retort coke used as a reductant or recarburizer in the production of alloys and steel.
Users	Retort coke is used by smaller sized mini mills and Ferroalloy producers with 90% of production to local markets.
Producers	Pacific Carbon.
Revenue	
Growth	
Locations	Newcastle, NSW.

Major coastal routes	Retort coke is shipped from Newcastle to other domestic locations, including Bell Bay.
Trade	There are no barriers to import substitution with users being able to substitute for overseas products, with China being a potential alternative source.
Other	Retort coke is a low-value product, meaning that increases in transport costs will have a proportionately greater impact on the industry. Production volumes are lower in comparison with small vessels being utilized as the producer has a limited area in which to store stock.

3.3.10 Soda ash

Use	Soda ash is a vital ingredient in the production of a number of products including glass containers, glass for construction and housing, washing powders, water treatment and mining.
Users	Manufacturers of glass products, such as flat glass and bottles are the major users of soda ash in Australia.
Producers	Penrice Soda Holdings is Australia's only producer of soda ash. Soda Ash is produced in Adelaide, South Australia at an integrated production plant. Penrice competes with producers of imported soda ash.
Revenue	Sales revenue of \$152.9M was reported in Penrice's 2010/2011 Annual Report.
Growth	The Australian soda ash market is stable with market growth currently coming from the mining sector.
Locations	Osborne, South Australia.
Major coastal routes	Osborne in South Australia to Newcastle in New South Wales.
Trade	There is strong competition from overseas producers of soda ash.

Other

Although the majority of manufactured soda ash is transported direct to customers by road freight, industry sources have said that existing coastal trade routes cannot be substituted for road and rail given the availability and competitiveness of suitable intermodal transport and the financial impost this would create.

4 Analysing the reform impacts

4.1 Conceptualising the economic impacts

As discussed previously, of the individual aspects of the proposed reforms to Australia's shipping industry, the largest economic impact is likely to result from the new temporary licencing regime. While other aspects of the package may impact indirectly – the tax concessions, for example, may affect the rate of uptake of vessel registration under the Australian flag – their effects will be considerably more minor relative to the proposed licencing arrangements.

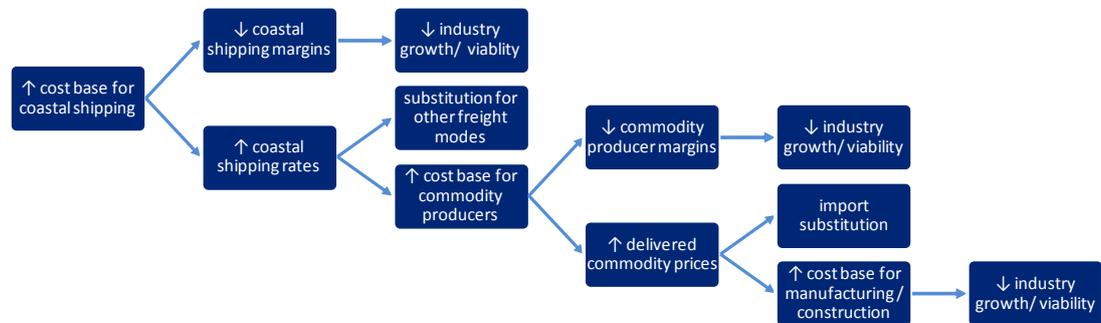
The intent of the licencing reforms is to limit access to Temporary Licences under the new arrangements, potentially altogether. If this were to eventuate – as the modelling here assumes it does – current users of bulk coastal freight would have no option but to use vessels under a General Licence, where crew wages and conditions are based on Part A of the *Seagoing Industry Award 2010* rather than Part B of the Award, as is the case for ships operating under a Temporary Permit.

From an economic perspective, this represents an increase in labour costs to shipping companies that currently service the coastal trades in Australia, as their ability to use vessels operating under temporary permits with lower labour costs may be restricted. For the purposes of this analysis, temporary licences are assumed to be progressively restricted over a period of five years, reaching full restriction after that – consistent with the path adopted in the Regulation Impact Statement.

4.1.1 Overview of the economic flow-ons

The flow-on implications of such an increase in labour costs in the coastal shipping industry would depend on a number of factors, as depicted in the schematic below, and set out in the dot points that follow.

Figure 4.1: Overview of the economic flow ons



- The degree to which the labour cost increase impacts the overall cost base of vessels operating the coastal trades.
 - This is dependent on the average unit increase in wages costs (that is, the change in labour costs per day) and the proportion of total for which labour costs account.
- The degree to which the cost increase is absorbed within the margins of relevant shipping companies or passed on through higher freight rates for coastal trades.
 - This is dependent on the degree of competition in the coastal shipping industry (and across modes of transport) as well as the nature of demand for coastal shipping services. The lower the level of competition and the more inelastic the demand for coastal shipping services, the greater the likelihood that cost increases are passed through to freight rates.
- The degree to which freight cost increases impact the overall cost base of bulk commodities shipped domestically.
 - As well as the magnitude of the unit cost increase and the degree of pass through, this is dependent on the proportion of the cost base that is accounted for by freight costs.
- The degree to which freight rate increases can be passed on by the users of coastal sea freight (i.e. to downstream markets).
 - This is dependent on the level of competition in the market (including the scope for import substitution) and the nature of demand in the downstream market. The greater the level of competition (and the greater the scope for import substitution) and the more inelastic the demand in downstream markets, the greater the likelihood that these cost increases cannot be passed on.
- The operating margins of the users of bulk sea freight and the extent to which any absorbed cost increase impacts viability.
 - This would depend on the business model for the bulk commodity in question and the level of competition in the market for that commodity

- The extent to which any pass through from bulk commodity prices impacts downstream markets (i.e. manufacturing, construction, etc).
 - As with upstream markets, this would depend on the level of competition, the business model of operators and the availability of substitutes.

This highlights the myriad of potential flow-on impacts of the new licencing regime and the factors that are likely to influence them, such as the nature of the cost base or level of competition in the market for the impacted good or service. Broadly speaking, these factors, and therefore the resulting flow-on impacts, will vary depending on the bulk commodity in question and the location of the bulk coastal freight user's production facility.

Discussions with industry and shipping experts suggest that the key commodities shipped domestically using vessels operating on temporary permits (or temporary licences under the proposed regime) are:

- Soda ash (shipped from Adelaide to Newcastle)
- Retort coke (shipped from Newcastle to Bell Bay and Adelaide)
- Gypsum (shipped from Thevenard to all major Australian ports except Perth)
- Fertiliser (shipped on various routes throughout Australia)
- Cement (shipped on various routes throughout Australia)
- Clinker (shipped from Birkenhead to Brisbane)
- Raw sugar (shipped from various Queensland ports to Melbourne).

It is noted that other producers of other bulk commodities such as bauxite, alumina, iron ore, steel products and liquid bulks are also users of bulk coastal freight. Indeed, as the data presented in Section 2 demonstrates, it is these commodities that represent the large majority of Australia's coastal shipping task. However, discussions with industry and shipping experts suggest that these commodities are far less reliant on vessels operating under temporary licences. As such, the focus here is on those commodities outlined above, as it is here that the economic impact of the changed licensing arrangements is expected to be greatest.

The aim of the economic analysis conducted for this project was to model these flow-on impacts with consideration of the differences between each of the commodities listed above.

4.2 Approach to the analysis

In broad terms, the approach to this analysis has involved the following key steps:

1. *Establishment of the conceptual framework* – this involved a process of conceptually mapping all the potential economic impacts of the proposed shipping reforms, including in relation to the different commodities and downstream industries likely to be affected, and validating the results with industry and shipping experts. The resulting framework is outlined In Section 4.1.
2. *Sourcing of data for the analysis* – this involved desktop research of publicly available information, a workshop with representatives from industries dependent on bulk coastal sea freight and more detailed one-on-one discussions with users of bulk

coastal sea freight (particularly those that regularly use vessels operating under the current Continuous Voyage Permit and Single Voyage Permit arrangements).

3. *Economic modelling* – this involved the development of a model to capture the direct financial impacts of the proposed shipping reforms (including in relation to freight rates on different routes and commodity prices/volumes), the outputs of which were subsequently fed into the Deloitte Access Economics' Computable General Equilibrium Model to determine the broader economy-wide impacts of the proposed reforms.

The financial and economic analyses are outlined in more detail in the following sections.

4.3 Modelling the direct financial impacts

4.3.1 Overview of the methodology

In order to estimate the financial impacts of the proposed licencing regime, two financial models were created: one which modelled shipping costs for different representative vessels and voyages; and the other which modelled costs and revenues for the different bulk commodities listed in Section 4.1.

The financial model of the shipping sector was employed to estimate impacts on relevant freight rates and the commodity model was used to estimate impacts on delivered prices and/or gross margins for each commodity, based on the outputs of the shipping model. The intent of these two models was to reflect the framework outlined in Section 4.1.

The broad steps for calculating impacts using these two models are outlined as follows:

- Estimate daily crew costs based on rates under Part B and Part A Award rates (inclusive of EBA costs) for different representative vessels
- Estimate non-labour costs for different representative vessels and voyages
- Estimate total costs for different representative vessels and voyages under Part B and Part A Award rates
- Estimate the increase in the freight rate for different representative vessels and voyages, based on an increase in crewing rates from Part B rates to Part A (inclusive of EBA costs) rates
- Based on the increase in the freight rate, estimate the increase in the delivered price of each commodity
- Compare the resulting delivered prices with the delivered prices of competing producers/suppliers (including imports) for each commodity to determine the extent to which production is likely to shift to alternative sources (i.e. imports).
- Estimate overall impacts across all of the commodities included in the model.

This model was developed in collaboration with the National Bulk Commodities Group with assistance from a shipping industry expert. The inputs were based on publicly available information and expert knowledge. The model includes items for labour, fuel, diesel fuel, port and non-wage operating costs.

The commodity model was developed based on information obtained through the workshop and one-on-one discussions with industry representatives. In particular, information was obtained separately for each commodity in relation to:

- key coastal routes used for shipping;
- the vessels / shipping companies used;
- the total volume shipped domestically per year on vessels under a temporary permit;
- the average freight rate paid on key coastal routes;
- the delivered price of each commodity in different locations;
- the delivered price of competing imports into the same locations and prices for alternative freight modes (road or rail).

This information was supplemented with publicly available information on commodity production levels/prices, industry value added for relevant industries and production forecasts for the different commodities.

It is important to note that the information gathered through the workshop and one-on-one discussions with industry representatives was provided on a commercial in confidence basis. As such, it is not possible to provide the detail of that information in this report. However, it is possible to outline the information more broadly across all the commodities as a whole, as provided in the following table.

Table 4.1: Broad outline of inputs to the commodity model

Description of input	Information obtained
Total volume of these commodities shipped per year on vessels operating under a temporary permit	Upwards of 2.4 million tonnes
Freight rates	\$19-\$65 per tonne
Total cost of shipping these commodities domestically	Approximately \$77 million per year
Total delivered value of these commodities when shipped domestically on temporary permits	Approximately \$600 million per year

4.3.2 Financial impacts in the coastal bulk freight industry

Based on the results of the shipping model, labour costs would increase by between 60 per cent and 100 per cent per day and, as a result of this, **freight rates applicable to the commodities and voyages included in the analysis would increase by between 10 and 16 per cent**, depending on the commodity and voyage in question, if the granting of temporary licences was fully restricted (see Table 4.2, below).

Table 4.2: Total ship costs for select voyages

Voyage	Vessel	Total cost for temporary licensed vessels	Total cost for general licence vessels	% difference in crew costs	% difference in total costs
Adelaide to Newcastle	Mini Bulker	\$187,746	\$206,286	61%	10%
Portland to Newcastle	Handysize	\$232,748	\$270,314	99%	16%
Gladstone to Brisbane	Handysize	\$122,480	\$136,529	96%	11%
Birkenhead to Brisbane	Handysize	\$267,782	\$299,894	96%	12%
Mackay to Melbourne	Handysize	\$294,688	\$328,080	99%	11%
Thevenard to Brisbane	Handysize	\$277,691	\$311,083	99%	12%
Newcastle to Bell Bay	Mini Bulker	\$87,389	\$95,816	61%	10%

This is based on the assumption that the full cost of moving from vessels paying Part B rates to vessels paying Part A (inclusive of EBA costs) rates will be passed on to users of bulk coastal freight through higher freight rates. Based on discussion with industry, this is regarded as the most likely outcome in light of the fact that competition in the coastal shipping industry will be significantly diminished in the absence of competing foreign flagged ships, thus allowing shipping companies to pass on any cost increases without the threat of being undercut by competing foreign vessels.

4.3.3 Financial impacts in industries reliant on the coastal bulk freight industry

Based on the results of the shipping model, **the 10 to 16 per cent increase in the freight cost would result in a \$10.6 million increase in domestic shipping costs across all the commodities and freight routes included in the analysis.** This would **increase the delivered price of these commodities of up to five per cent.** Although such price increases may not appear large, in some instances the increase in freight costs represents a sizable proportion of the gross margin for the affected commodities. Equally, as the discussion below notes, many of the affected commodities face direct, or at least potential, competition from imports. Indeed, in some instances, import prices are already below domestic prices.

For each of the commodities and freight routes included in the analysis, the cost of road or rail freight was higher than the cost of shipping – even after the 10 to 16 per cent increase – or was not an option due to location etc (e.g. for those freighting commodity out of Tasmania to other states). As such, intermodal substitution is not regarded as an option for managing the freight cost increase for these commodity producers.

For many of the commodities and freight routes included in the analysis, the delivered price of competing imports was comparable even before the increase in the delivered price of locally produced product. This is mainly due to the current high exchange rate, which makes imports cheaper, and the current low international shipping rates, which makes the cost of importing goods cheaper. In light of this, the potential for these commodity producers to pass on the cost of the increased freight rate is regarded as minimal and the likelihood of substitution to imports high.

That said, in many cases, the industries' thin margins mean the scope to absorb a cost increase is limited. The ultimate outcome therefore is one where either (i) producers absorb cost increases and reduce output (partially or wholly) as production becomes unviable; or (ii) increase prices (pass on the cost impacts) to maintain margins. In the case of the latter, an increase in the domestic prices raises the probability that these intermediate commodities will be imported rather than supplied domestically. As the discussion throughout other parts of this report notes, the scope of import substitution is in many instances high.

Regardless of which of these impacts prevails (in practice, it is likely to be a combination of the two), domestic production is likely to be curtailed – either production becomes less viable; or Australian product becomes less competitive. Over time, these impacts also point to a reduced level of investment in domestic production capacity in Australia. While existing investments are in many cases 'sunk' and hence likely to be run down (rather than immediately decommissioned), the incentives for investment in new capacity will be significantly diminished.

To reiterate points made above, in determining the extent to which domestic production declines as a result of the proposed reforms, a number of considerations have been taken into account:

- **Industry margins** – the relationship between the policy-induced cost increase and industries' operating margins.
 - Industry stakeholders were in general sensitive with respect to the provision of this information and, as such, reliance has predominantly been on ABS data which, of course, will not perfectly reflect the circumstances of individual businesses.
- **Price differentials** – the relationship between the domestic price of the intermediate commodities under consideration and the (potential) import price.
 - The quality of this data varied across commodities.
- **Stakeholder views** – inputs from stakeholders in each individual industry regarding how their business would be impacted and, in particular, whether substitution to imports was likely.

Ultimately, the data and information available – together with the inherent commercial uncertainties – mean the magnitude of these impacts cannot be known with precision. Reflecting this, the modelling results reported below present two key scenarios, representing a lower bound and a higher, though not necessarily upper, bound. The lower bound assumes the impacts occur primarily at the margin – that is, that the percentage change in domestic prices leads to a marginal reduction in domestic production (effectively a shift down the supply curve). The higher scenario reflects the fact that for several of the most directly affected commodities – where import prices are already below domestic

prices and where the impact of the reforms are most pronounced – the affects are likely to be more than merely at the margin; they will affect the industry’s viability altogether.

4.4 Modelling the economy-wide impacts

4.4.1 Methodology

The economic impacts have been modelled utilising Deloitte Access Economics in-house general equilibrium model, DAE-RGEM. DAE-RGEM is a large scale, dynamic, multi-region, multi-commodity computable general equilibrium model of the world economy. The model allows policy analysis in a single, robust, integrated economic framework. This model projects changes in macroeconomic aggregates such as GDP, employment, export volumes, investment and private consumption. At the sectoral level, detailed results such as output, exports, imports and employment are also produced.

The model is primarily based on input-output or social accounting matrices, as a means of describing how the Australian economy is linked through production, consumption, trade and investment flows. For example, it considers:

- direct linkages between industries and countries through purchases and sales of each other’s goods and services; and
- indirect linkages through mechanisms such as the collective competition for available resources, such as labour, that operates in an economy-wide or global context.

Compared with the alternative tools of analysis, the strength of the CGE model lies in its ability to capture not simply the unconstrained effects of a proposal or policy change – which are likely to be a crude approximation of its net impacts – but to provide a comprehensive assessment of the full suite of flow-on impacts in a single, robust, integrated economic framework.

In employing DAE-RGEM, the analysis conducted here takes the outputs from the financial impact modelling and utilises these as inputs to the model. For each of the affected industries, two key impacts are modelled:

- an increase in the cost of domestic production (equivalent to a reduction in margin), based on the outputs of the financial modelling, as described above; and
- a substitution of imports for domestic production. This substitution is assumed to ramp up over the period to 2015, as temporary permits are increasingly restricted, to a level that reflects the outputs of the financial modelling. Thereafter, this is compounded by future growth also being foregone.
 - Output forecasts were generated for each commodity within the scope of the analysis, based on projections from the Australian Bureau of Agriculture and Resource Economics and Deloitte Access Economics’ in-house forecasting models.

4.4.2 Modelling results

The results of Deloitte Access Economics’ economy-wide modelling indicate that, compared with the relatively modest size of the directly affected industries, the impacts on the Australian economy are relatively large.

Over the period to 2015, the impacts emerge gradually on the assumption that temporary licences are progressively restricted over five years. Taking account of both the direct impacts on the affected sectors and the impacts in related up- and down-stream industries, the aggregate economic impact of the proposed new licensing arrangements increases from between \$12 and \$22 million in Gross Domestic Product (GDP) in 2012 to \$40 and \$82 million in GDP by 2015. These impacts fall not merely on the directly affected manufacturing sectors, but also further downstream as the impacts of foregone domestic production flow through interlinked sectors and industries.

The associated loss of employment over the long term is, in net terms, relatively modest at up to 200 full time equivalent employees. However, in the immediate term, the displacement is considerably higher, with an estimated peak loss of 570 FTE employees.

The modest size of the long term employment loss (relative to the loss of GDP) reflects the fact that the supply of labour in the Australian economy is assumed to be relatively inelastic and hence that most of the labour market adjustment occurs through wages. With the unemployment rate assumed to remain relatively low, workers who lose employment as a result of the reform are in many cases absorbed, over time, by other sectors. The more material impact of the reform is on investment, which is dampened and in many cases shifted offshore.

Beyond 2015, though the magnitude of the direct impacts increases (i.e. increasing amounts of potential future production is foregone), structural adjustment throughout the economy means that the impacts fall marginally over time. That is, resources which are displaced from affected sectors are, over time, deployed productively in other sectors. In 2025, the annual impact on GDP is estimated at between \$25 and \$49 million. Again, it should be noted that these estimates relate solely to the impact of the proposed new licensing regime. While the taxation incentives may influence the rate of uptake of vessel registration under the Australian flag, the assumption here is that temporary permits are progressively restricted over the period to 2015 – consistent with the path adopted in the Regulation Impact Statement.

Over the period from 2012 to 2025, the aggregate economic impact, in net present value (NPV) terms is estimated at between \$242 million and \$466 million in GDP. While these figures may be modest in the context of the overall size of the Australian economy, they are considerably more significant relative to the size of the affected industries. For example, the combined annual revenue of the three members of the Cement Industry Federation is \$2.1 billion.

While it is stated that there is an in-principle agreement between the Maritime Union of Australia and the Australian Government in relation to improvements in labour productivity as part of the Package, there is considerable uncertainty in relation to how – and indeed whether – these gains will be realised. In light of this uncertainty, these impacts have not been included in the analysis here. Naturally, any improvements in productivity would have positive impacts on the Australian economy.

4.4.3 Comparison with the Regulation Impact Statement analysis

As outlined in Chapter 2, the impacts of the proposed shipping reforms were also assessed by the Department of Transport and Infrastructure as part of a Regulation Impact

Statement (RIS) prepared in August 2011.²³ Key differences between the RIS analysis and the economic analysis in this chapter are outlined below.

4.4.3.1 Outline of RIS approach

For the purposes of the RIS, the impacts of the proposed shipping reform package were assessed using cost-benefit framework. This analysis was undertaken by the Bureau of Infrastructure, Transport and Regional Economics (BITRE). The approach involved quantifying all costs and benefits likely to arise as a result of the reforms, including the benefits of the taxation measures, the benefits of the agreed productivity compact and the costs of the new licencing system (including the phase out of temporary permits). Annual costs and benefits were estimated over a 20 year timeframe (2011-12 to 2030-31) and summarised in net present value (NPV) terms using a 7 per cent real discount rate. Commodities included in the analysis were bauxite, iron ore, 'other' dry bulk (e.g. cement and fertiliser), petroleum and 'other' liquid bulk.

The outputs of the analysis were used to determine whether, and to what degree, the overall benefits of the proposed reform package outweigh the costs. The results of the analysis were also used to estimate the impact on employment of Australian seafarers, based on the difference in the numbers of Australian berths per 1000 tonnes of freight carried between the base case and policy cases. The analysis captured impacts arising from all aspects of the proposed reforms, including those affecting both the coastal and international bulk shipping industries.

To deal with uncertainty over the degree to which temporary permits might be restricted under the new system, the RIS modelling includes four scenarios with different assumptions on this question. Scenario A represents the status quo in relation to granting foreign ships temporary permits/licences with crews paid SIA Part B wages, whereas Scenario D represents the complete phasing out of temporary licences after five years, with Scenarios B and C representing a situation close to Scenario A only Australian flagged vessels gain a small portion (an additional 10-20 per cent) of total freight tonnage from temporary licenced vessels after five years.

4.4.3.2 Methodological differences

As well as differences in scope – the analysis presented here is limited to the impacts of the proposed new licensing regime rather than all facets of the reforms – there are also some key methodological differences between the RIS and the modelling undertaken by Deloitte Access Economics, which bear on the comparability of the two sets of results.

The modelling presented in the RIS focuses solely on the direct, or first-round impact of the reforms; it does not consider any economic flow-ons stemming from this. In contrast, the analysis outlined in this report uses computable general equilibrium (CGE) modelling to estimate the impact of the proposed shipping reforms on the Australian economy more broadly. This modelling was augmented with financial modelling to estimate direct financial impacts on the bulk coastal freight industry and industries reliant on bulk coastal shipping. Commodities included in the analysis were soda ash, retort coke, gypsum, fertiliser, cement, clinker and raw sugar. The analysis focusses on impacts affecting the bulk coastal

²³ Department of Infrastructure and Transport, (2011) *op cit*.

shipping industry. As such, it does not factor in impacts affecting the international bulk shipping industry.

In summary, key differences between the two analyses are:

- **Analytical technique** – the analysis in this report uses CGE modelling which aims to estimate net impacts across all sectors in the economy, whereas the RIS analysis employs a cost-benefit analysis which aims to estimate net impacts only within those sectors immediately affected (i.e. the shipping and relevant bulk commodity sectors).
- **Scope of analysis** – the analysis in this report focusses on impacts affecting the bulk coastal shipping industry, and solely on the impacts of the proposed new licensing regime, whereas the RIS also includes impacts on the international bulk shipping industry and the other aspects of the reforms.
- **Commodities included** – the analysis in this report focusses only on a subset of dry bulk commodities likely to be impacted the most under the proposed reforms, whereas the RIS analysis also includes bauxite, iron ore and liquid bulks.
- **Timeframe of analysis** – the analysis in this report is undertaken over a 15 year timeframe, whereas the RIS analysis is undertaken over 20 years.
- **Shipping cost modelling** – the analysis in this report models shipping costs that are specific to the voyages and ship types in question, whereas the RIS analysis uses a more generalised model of shipping costs (discussed below).

4.4.3.3 Comparing results

The differences outlined above, make a direct comparison of the RIS results with the modelling presented here, are challenging. Despite this, aspects of the modelling are comparable, including the modules of the CBA and financial model that calculate costs associated with the phase out of temporary permits. Both involve the modelling of shipping costs and both provide an aggregate estimate of the total cost to industry of phasing out temporary permits.

The results of the RIS analysis suggest a net cost of \$80 million (NPV) in the ‘other dry bulk’ market segment under Scenario D, which reflects a complete phase out of Temporary Licenses after five years. Note, however, that this estimate is net of the benefits associated with the proposed taxation arrangements and the productivity compact, which are assumed to be the same across all scenarios.

Therefore, in order to calculate the total cost under Scenario D it is necessary to subtract the value of the benefit under Scenario A, which is estimated to be \$130 million (NPV). Based on this calculation, the RIS analysis suggests the complete phase out of temporary permits after five years would have an economic cost estimated to be \$210 million (NPV) over 20 years. When converted into a financial cost using the approach implied in the RIS, this figure becomes \$233 million (NPV) over 20 years.²⁴

²⁴ The RIS states that “Wages and conditions for Australian seagoing labour are believed to be above opportunity costs”. In CBAs, a ‘shadow price’ is used in cases where market prices differ from opportunity costs. “Financial crew costs for Australian seafarers have been multiplied by a shadow price factor of 0.9 to obtain economic crew costs.” p.58.

The results of the financial analysis outlined in this chapter suggest an increase in annual freight costs in the order of \$10.6 million, on the assumption that temporary permits are completely restricted after five years. When using the same approach to calculating NPV estimates adopted in the RIS, this annual figure can be represented as \$130 million (NPV) over 20 years.

A comparison of the \$233 million (NPV) cost estimate from the RIS analysis with the \$130 million (NPV) from the analysis outlined in this chapter suggests a large disparity in the estimates of increased shipping costs between the two studies. This disparity is explained by differences in the approach to modelling shipping costs between the two analyses.

In particular, the model used in this analysis is based on a set of definite, time specific, designated voyages that would typically occur under the temporary licence/permit system and, so, replicates the costs associated with those voyages. In contrast, the model used for the RIS analysis takes a less specific approach by factoring in ship operating costs incurred over an entire year. Differences also exist in the inputs used to develop the cost estimates.

Given that the costing approach used in this report is specific to the voyages typically used to transport the bulk commodities in question, this approach is regarded as being more robust and relevant for the purpose of this analysis.

5 Further considerations

Consultations with industry have suggested that a range of other impacts may result from the government's reform package, in addition to those impacts modelled and discussed earlier. Although these impacts have not been modelled, they may nevertheless have considerable impacts on the industry, and the industry's stakeholders more broadly.

5.1.1 Competition impacts

As noted earlier, one consequence of changing the licensing regime for foreign vessels operating in the coastal trade may be a reduction in the number of vessels permitted to operate in the coastal trade. At this stage, it is unclear what the guidelines would be for the granting of temporary licenses and considerable discretion remains with the Minister as to which vessels would be granted Temporary Licences and under what conditions.

Industrial users of the coastal trade believe this may lead to a situation whereby fewer vessels are available. If this were to occur, a reduction in the number of vessels operating in the coastal trade would result in less operational certainty that vessels could be engaged when needed. Further, it may result in ship operators taking advantage of a reduction in supply of vessels by raising prices – that is, competitive pressures may be reduced.

5.1.2 Reduced triangular voyages

Under the present licensing regime, the coastal trade industry, and its users have benefitted from the practice of operating triangular voyages. Triangular voyages typically involve an overseas vessel offloading overseas cargo at a domestic port, running a single voyage on the coastal trade and then returning with a full load to another offshore destination. This practice has been enabled, and has been popular, under the SVPs.

Ship owners and their upstream and downstream users have benefitted from triangular voyages; a steady supply of vessels has been assured keeping downward pressure on prices and also ensuring a reduction in ballast returns (where vessels move without cargo between destinations). Industry users of the coastal trades believe that, as a result of the reforms to the licensing regime, there will be a subsequent reduction in the number of triangular voyages undertaken. If this were to occur, this may have the effect of pushing up shipping prices and reducing the availability of vessels, though it is not clear how material these impacts would be.

5.1.3 Environmental impacts

A direct result of a reduction in the number of foreign vessels permitted to operate in the coastal trades may also generate negative environmental impacts. If a change to the licensing regime resulted in a reduction in the number of triangular trades undertaken, this may result in some duplication of voyages with some unlicensed vessels moving along the Australian coast between ports without carrying cargo. If this were to occur, this would likely result in an unnecessary and inefficient duplication of some coastal services leading to increased use of resources, including fuel and subsequent emissions of greenhouse gases.

5.1.4 Labour scarcity

As outlined in earlier parts of this report, the policy intent of the Government's reform package is the revitalisation of the Australian shipping industry. The revitalisation of the Australian shipping industry is dependent on an increase in the level of both capital and labour resources dedicated to the industry. This is especially the case in relation to the licensing regime and the creation of the AISR, where it is envisaged that Australian vessels will, at least in part, assume the role currently held by foreign vessels.

Industry operators suggest that a key challenge in revitalisation of the Australian shipping industry would be a steady and reliable supply of Australians skilled and available to work in the sector. Certainly, the supply of qualified seafarers is at present limited. Moreover, industry participants are sceptical about the likelihood of a viable domestic maritime workforce emerging, believing that in recent times the industry has suffered from a lack of interest among younger generations (and consequently, like many sectors, an ageing workforce). This may be partially addressed over time through increased workforce training and development – which is a component of the government's package – but this nevertheless relies on individuals opting to pursue a career in the sector.

5.1.5 Productivity compact

As noted earlier, the government has stated that a productivity compact between unions and industry will be instituted to accompany the introduction of the *Stronger Shipping for a Stronger Economy* package. Industry users noted that the details of this compact are yet to be made publicly available. As such the basis for these productivity gains – how and even whether they will be achieved – is unknown. The fact that the findings of the Regulation Impact Statement are premised upon the realisation of this productivity gain, cast a level of uncertainty over the conclusions of its quantitative analysis.

5.1.6 Shipping price agreements

Despite concern among the users of the coastal trade about the changes to the licensing regime that are proposed, some users of the coastal trade identified that these impacts may not be felt for some time. Some industry users of the coastal trade have agreed shipping rates in advance with their shipping provider. Where this has occurred, those operators believed the cost increase would be worn by the shipping provider until the period in which new shipping rates were agreed. Other users of the coastal trade believe that despite having agreed shipping rates in advance, the rates were subject to change where the change could be attributed to regulatory or legislative shocks.

5.1.7 Restricted user flags

This report, and indeed the majority of the discussion around the Government's proposed reforms, has not discussed the prevailing arrangements for foreign ships involved in the coastal trade under state based licensing arrangements. The state of Queensland provides restricted users flags for foreign registered vessels which in effect allow a foreign registered vessel to operate along the coast without obtaining a CVP or SVP from the Australian Government. The Australian Institute of Marine and Power engineers has estimated that

these vessels account for around 15 per of the freight movement along the coastal trade thereby meaning that Australian vessels account for around 50 per cent of movements along the coastal trade – a substantially lower figure than other estimates have provided.²⁵

²⁵ Australian Institute of Marine and Power Engineers, (2011), “Submissions on the Exposure Draft of the Coastal Shipping Bill,” Australian Institute of Marine and Power Engineers.

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