Senate Standing Committee on Economics
Parliament House
Canberra ACT 2600

11 May 2015

Dear Sir/Madam

Please find attached the Truck Industry Council's submission to the Senate Inquiry into the Future of Australia's Automotive Industry.

Should the Senate committee choose to discuss this submission further with the companies named in the submission I would be happy to facilitate this outcome. The managing directors of IVECO, PACCAR and Volvo Group Australia have expressed an interest in speaking to the Committee about the nature and scope of truck manufacturing currently being conducted in Australia.

Yours sincerely

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Senate Standing Committee on Economics –
Inquiry into The Future of Australia's Automotive Industry.

Submission by the Truck Industry Council Australia May 2015

The Truck Industry Council (TIC) is the peak industry body representing manufacturers and distributors of heavy commercial vehicles (that is, with Gross Vehicle Mass above 3,500 kg) in Australia.

Membership of TIC is inclusive of all truck manufacturers and importers/distributors in Australia and currently consists of:

- 9 truck manufacturers/distributors representing 17 brands
- 3 engine and component suppliers.

TIC welcomes the Senate's deliberations upon the automotive industry noting in this case the review will consider the important role played by all sectors of the automotive industry. A common misconception in public policy terms is that the "Automotive Industry" consists of the three passenger car manufacturers and their component suppliers. TIC contends that the Australian automotive industry is far broader in scope than the narrow view focussed entirely on GM-Holden, Toyota Australia and Ford Australia. TIC would encourage the Senate Committee to embrace all sectors of the automotive space not just the car sector as has been the experience to date when similar inquiries have been conducted, for example, the Productivity Commission's inquiry into Australia's Automotive Manufacturing Industry (2014) and the 2008 Bracks review of the sector. Automotive means not only car but truck too.

The purpose of this document is threefold.

- Firstly, this document focuses on the Australian truck industry, and more specifically truck manufacturing and includes the complementary role of secondary manufacturers of truck bodies and equipment.
- Secondly, this document seeks to create awareness that Australia possesses a viable truck manufacturing capability; and
- Thirdly, this document proposes a policy option that could be considered to ensure Australia's future capacity to engage in advanced manufacturing while at the same time modernising Australia's old truck fleet making the fleet safer, cleaner and greener for the essential task of distributing the nation's freight task.

In terms of truck manufacturing Australia has a great story to tell.

In 1983, Senator John Button (Button Car Plan) informed Australian truck manufacturers to stand on their own two feet as there would be no industry transition plan for this sector like that experience by the car industry over the last three decades.

The result: Australia, in 2015, has three viable truck manufacturers designing, engineering, testing, developing, and manufacturing trucks at three major locations without Federal Government assistance. These manufactures, IVECO and PACCAR (Kenworth) in Melbourne and VGA (Volvo and Mack) in Brisbane, have survived and prospered without the assistance afforded to the car sector. They are great examples of how product can be manufactured here in Australia. Their success is based upon being in tune with the needs of their customers. Trucks built in Australia are tailor made for customers whose needs are unique and vary based upon the task they want their truck to perform. Forty-eight (48) per cent of the heavy trucks sold in 2014, some 5,100 units, were designed and manufactured at these three plants. These trucks can be 26 metre B-Doubles operating on the nation's highways with a gross combination mass approaching 70 tonnes, road trains operating in remote areas with a gross vehicle mass up to 150 tonnes or specialist vehicles such as in mining applications operating up to a staggering 300 tonnes.

The Australian Truck Market

The Australian "Truck" market consists of non-passenger carrying vehicles with a Gross Vehicle Mass of more than 3,500 kg.

In 2014 total truck sales, as reported through the T-Mark Truck Market database (managed by TIC), were 30,630 units. This figure compares with the record year of 2007 which posted 38,131 unit sales. Since the GFC sales have consistently been at least 20 percent lower for each subsequent year accentuating the point that the market has not recovered to pre GFC sales figures and shows no real signs of doing so out to 2020. The immediate effect of this statistic is the ageing of the Australian truck fleet which in turn has significant social and economic impacts.

The T-Mark database is broken down into the primary segments of:

- **Light Duty** (LD, being trucks with a GVM 3,501 to 8,000 kg),
- **Light Duty Van** (LDV, being van bodies freight vehicles with GVM 3,501 to 8,000kg),
- **Medium Duty** (MD, being 2-axle trucks with a GVM above 8,000 kg and with a gross combined mass or GCM of less than 39,000kg), and,
- **Heavy Duty** (HD, with 3 or more axle, or with 2 axles and a GCM above 39,000kg).

The highest volume post GFC has been in the HD segment, with 11,379 sales in 2012. The segment comprises a range of rigid and articulated trucks. The Australian-built trucks are almost entirely represented in the HD segment, of which half are locally manufactured. The locally built representation generally increases as load capacity increases, such that TIC estimates over 80 per cent of the heaviest capacity articulated trucks (i.e. > 90t) use Australian-manufactured prime movers. The importance of the role played by Australian based truck manufacturers is evident in this statistic.

Australian Manufacturing of Trucks and Local Content

Today's vehicles of all sizes are complex products which require multiple levels of primary design input, comprising thousands of components large and small, sourced from multiple suppliers. There is a similarity between Australian passenger car and truck manufacturing in that

they both comprise:

- The resources and some first level (original) design from their large multi-national vehicle producing parent company;
- Significant local design input and adaptation activities;
- Local "in-house" manufacturing operations with a high labour component; and,
- Componentry of various complexities sourced from a variety of locations, both local and overseas suppliers.

However unlike the majority of local passenger car manufacturing, a number of locally manufactured trucks have Australian unique (locally designed) platforms/models.

Despite the fact that no diesel engines or heavy vehicle transmissions are designed or built in Australia, the labour component, local design input and high number of smaller locally produced components (such as cabin, fuel tanks, chassis frame, electrical harnesses, sleeper cabins, wheel guards, turntables, truck bodies and other specialist equipment) ensures that the local content by value of trucks produced in Australia is typically higher than that achieved by Australian passenger cars.

Local Australian truck manufacture comprises two specific types:

Type 1: The truck manufacturer builds the basic truck, often referred to as cab chassis.

The following describes the form of Type 1 truck manufacturing that occurs by brand and model in Australia:

1) The **IVECO** plant in Melbourne's south-east at **Dandenong**, Victoria, has produced over 235,000 trucks since 1952, initially under the International Harvester brand. IVECO, the commercial and specialist vehicle arm of the Fiat Group, acquired the existing facility in 1991. IVECO Australia employs around 600 staff nationally; most of which are based at either the Dandenong manufacturing site or the adjoining corporate headquarters. IVECO conducts regular testing and development across Australia, and in particular at the heavy vehicle proving ground at Anglesea, Victoria.

- **The ACCO Range.** The longest serving model range produced at the plant is an entirely in-house design, first sold in 1972 but with numerous enhancements and updates over the years. It derived its name from the acronym for Australian Constructed Cab-Over. Total ACCO production is now approaching 80,000 units. It uses an Australian-designed and built cab (with sheet steel pressed and welded on site), on chassis rails stamped and formed locally, using imported engines, transmissions and axles. Glass, wiring, cab trim, batteries, fuel tanks, air tanks, steps and a variety of small components are locally sourced. Wheels and tyres are mostly imported. Local content by value in the finished product is estimated to be well in excess of 70 per cent.

- **The Powerstar Range.** IVECO Australia has designed a conventional style heavy truck range from a European cabin, with the choice of European or US-sourced engines and transmissions. During manufacture, the imported cabin is extensively modified with locally stamped and manufactured components welded and added before the "hybrid" Euro/Australian cabin is locally painted and then trimmed with both locally sourced and imported components. Finally the "hybrid" cabin is married to a locally designed and produced bonnet, while chassis rails, fuel tanks, battery boxes and many other parts are locally produced. The concept, detail design, research and development, testing, design of variations to suit different applications and powertrains, has all been performed locally. Estimated local content for this range is greater than 60 per cent.
- **The Stralis Range.** The Stralis range of cab-over-engine heavy duty trucks is one of the most popular in Europe. For the Australian market, the Stralis specifications are overhauled and redesigned locally to suit our higher average speeds, mass capacities and hotter climatic conditions. While the Stralis range has the lowest local content of the locally produced IVECO range, it still features many components that are sourced locally, and of course the final assembly is performed at Dandenong to suit local customer requirements.

2) The **Kenworth** manufacturing plant in Melbourne's eastern suburb of **Bayswater** has been operating since 1971. Kenworth is part of the global PACCAR group, and has produced over 54,000 trucks at this plant. Direct employment at the site is in the order of 800 people, featuring a mix of permanent and casual labour according to market demand. All Kenworth models sold in Australia are locally manufactured and have a high level of local design content, including the unique cab designs that are configured to meet the requirements of the Australian market. Detailed design activities are done locally to address specific Australian loading, vehicle layout and engine cooling requirements. Cabs are constructed locally from raw materials that include sheet metal, fabrications and various composites. Chassis frame rails are drilled locally. The engine and transmission are imported in base form and dressed locally. Axles are imported and locally dressed with wheel-end equipment. The local content by value of each model is estimated to exceed 60 per cent. While Kenworth has an impressive in-house capacity to design a "custom build" truck from scratch, there is a standard range of locally developed products offered, which customers can tailor to their requirements. Some examples are:

- **The K200 range**. The K200 (and its predecessors K108, K104 and K100) range of heavy duty cab-over-engine trucks is Australia's most popular B-Double prime mover range. The K200 is a design unique to Australia. Kenworth Australia has continually developed the K200 series so that it is most suitable for Australia's unique B-Double length and mass requirements.
- **The T359 and T409 range**. These conventional cabin trucks are designed for a variety of vocations including concrete mixers, tippers and semi-trailers.
- **The T609 range**. This is a full size conventional cab prime mover suited to on-highway B-Doubles and road trains that is designed for maximum aerodynamic efficiency.
- **The T909 range**. This is Kenworth's heavy duty on-road prime mover employed in road train and livestock applications.

- **The C5 range.** The C5 range is designed to suit on and off-road applications in the most severe conditions. It is often specified for the heaviest load applications on private mine sites and where many other trucks would not survive.

3) The **Volvo Group** plant in Brisbane's south-western suburb of **Wacol**, Queensland manufactures Volvo and Mack brand trucks. The plant first opened in 1971, producing Volvo heavy duty trucks, while Mack truck production was moved from another facility in Brisbane to Wacol in 2002, following the Volvo Group integration of the Mack brand. The Wacol plant has produced over 52,500 trucks of both brands to date, with direct employment at the plant and for headquarters and support staff in the order of 900 people. As with other local manufacturers, Volvo and Mack trucks bear visual resemblance to their counterparts sold overseas, however the local models are extensively redesigned to suit Australian conditions and vocations. Examples are:

- **The Volvo FM range.** These trucks are fitted with engines from 11 to 13 litres, for a variety of vocational purposes, including B-Double operations. The FM range engines and transmissions are imported from Sweden. The detail design, configuration for Australian weights and dimensions, fuel tanks, brackets, wiring and other components are all locally manufactured and fitted. The chassis rails are cut and drilled at Wacol. Local content is estimated to be between 50-60 per cent.
- **The Volvo FH range.** These heavy trucks are fitted with engines in the 13 to 16 litre range, at up to 700 HP, and used mainly for long combinations, such as B-Doubles and road trains. The local content and degree of design variation is similar to the FM range, with more local input for specialist applications.
- **The Mack Metroliner range.** These vocational trucks are fitted with North American sourced engines of 8-10 Litres and mainly automatic transmissions, but with a high degree of local design input. As with the Volvo trucks, cabins are imported, however their installation and modification to suit Australian needs is extensive. Local content by value is between 50 and 60 per cent.
- **The Mack Granite and Trident series.** This Granite range is designed for tipper and heavier vocational applications, while the Trident is an on-road prime mover specification for single and B-Double trailers. Both use an imported 13-litre engine rated at up to 535 HP. Method of construction and local content is similar to the Metroliner range.
- **The Mack Superliner range.** The Superliner is Mack's full size heavy duty prime mover for high mass B-Double, road train and livestock applications. It uses an imported 16-Litre engine rated at up to 685 HP. Local content and detail design is extensive to suit Australian conditions.
- **The Mack Titan.** The Titan is Mack's heaviest duty truck, suitable for many severe duty mining and off-road applications as well as the heaviest on-road duties. It uses an imported 16-Litre engine rated at up to 685 HP.

In every case of Australian manufactured trucks with the exception of the IVECO Stralis, their local content by value exceeds their imported content which is one distinguishable attribute that characterises them as locally manufactured rather than merely assembled. Other differentiators between the two terms are identified in the table below:

Criteria	**Assembler**	**Manufacturer**
Local Styling Content	Low	High
Local Engineering Design	Low	High
Field Test Validation	Limited local	Extensive local
Bench Test Validation	None local	Some local
Components	Imported CKD or SKD	Locally made fabrications, castings, fibreglass, injection mouldings, extrusions, machined parts etc.
Local Supplier Development	Limited	Extensive
Local Supplier Tooling	None	Extensive

On this basis, all trucks built by IVECO, PACCAR or Volvo/Mack are by definition locally "manufactured".

The level of automation on a truck production line is usually far less than is seen on many high volume car plants, allowing for a high degree of customisation to suit the end task of the vehicle. Consequently, a heavy truck plant can be profitable when production levels are in the order of 1,000 units per annum, with each unit value (retail cost) averaging more than A$150,000.

In 2014, the number of trucks produced at Dandenong, Bayswater and Wacol combined was 5,102 units. Importantly, and despite a diverse level of competition from imported products, local production represented 48 per cent of total truck sales in the Heavy Duty segment.

Type 2: Second manufacturer fits the truck with the equipment required by the operator.

A key feature of the Australian truck industry is that trucks sold, whether locally manufactured or imported, require a significant value input of ancillary equipment, truck body and perhaps one or more trailers to complete its on-road configuration. This secondary manufacturing process applies to over 95% of trucks sold in Australia upwards of 29,000 vehicles.

On a rigid truck, this could be a specialist body such as a tipper / dump unit, liquid tanker, cargo carrying body with curtain sides, concrete mixer or refrigerated van. If the truck is to be used as an articulated vehicle pulling one or more trailers, it will be fitted with towing equipment including a turntable, rear wheel guards and electrical connectors. The value of this additional equipment can sometimes exceed the value of the truck cab-chassis, especially if the truck is the front component in a B-Double or road train combination, or a rigid truck with a specialist body such as a garbage compactor or street sweeper.

Whether the truck is a rigid or articulated vehicle, it is not suitable for on-road use in the vast majority of cases until the second stage of manufacture is completed.

Some examples are:

- A heavy-duty prime mover built for B-Double use, and costing approximately $250,000 will require a "fifth wheel" coupling and other equipment fitted by the selling dealer, and then will be linked to two general freight locally manufactured trailers valued at $250,000 for the two trailer set. If the trailers are liquid tankers, they can be valued at more than $300,000.
- A heavy-duty rigid 8x4 configuration truck cab-chassis costing $180,000 can be fitted with a concrete mixer body costing $50,000.
- A medium-duty rigid truck cab-chassis costing $80,000 requires fitment of a locally manufactured cargo body costing $25,000.
- A medium-duty rigid truck cab-chassis costing $70,000 can be fitted with locally manufactured elevated work platform equipment and body costing over $80,000.
- A medium-duty rigid truck cab-chassis costing $70,000 can be fitted with a street sweeper body costing over $100,000.

There are hundreds of second-stage manufacturing companies in Australia, from major trailer manufacturers and tanker builders to the smaller companies making everything from specialist bodies to hydraulics for tippers, garbage collectors, etc. TIC notes that IBIS World (April 2014) estimates that this sector employs over 3,600 people.

Employment

Truck manufacture in Australia as outlined above is a major employer of skilled and semi-skilled people (trade, engineering, electronic and information technology) with total employment of approximately 32,730 employed in disciplines such as:

- Local Truck Manufacturing/Assembly 1,370
- Importing and Distribution of Trucks 1,300
- Suppliers/Dealers (Sales, Service and Spare Parts) 26,450; and
- Equipment and Body Builders (Trailer, Tanker, Tippers and Secondary Manufacturers) 3,610

Beyond the three manufacturers identified above there are specialist manufacturers who build trucks typically for off road and mining application and while not members of the Truck Industry Council these organisations employ up to 2,640 people (IBIS World, April 2014).

Standards

Since 2011, Trucks are required to meet a superior environmental standard to that currently required of passenger cars, and must meet similar safety standards as passenger cars. The process and regulations are the same with the need to meet Australian Design Rules in accordance with the Motor Vehicles Standards Act 1989. TIC participates in the development of Australian Design Rules and Vehicle Standards Regulations in conjunction with the Federal Department of Infrastructure, the National Transport Commission and the National Heavy Vehicle Regulator.

Research and Development (R&D)

There is significant local research and development being carried out by local truck manufacturers in Australia. Primary R&D applies to developing and testing truck cabs to ECE Regulation 29 – cab strength standards, and in meeting ADR 84/00 (ECE Regulation 93) – front under-run protection. These standards are also applied to all imported trucks above 12.0 tonnes GVM. Primary R&D is also carried out to ensure that overseas-developed engines and emissions control systems will work in Australia's unique operational conditions. In particular, airflow and cooling systems are carefully designed and adapted to ensure the vehicle will operate adequately in the temperatures and at the heavy loads and relatively high speeds encountered in Australia. The testing phase of this type of R&D can be as long as three years in advance of changes to emissions standards.

Secondary R&D applies to the development, manufacture and testing of vehicles to meet the unique requirements of the mining and resources industries in Australia. As an example, local truck manufacturing is producing vehicles with 10 trailers operating up to 300 tonnes GCM. In addition to the prime mover, a second engine is fitted into one of the trailers to provide additional power. These vehicles are at the leading edge of technology, and superior to vehicles produced anywhere else in the world.

Summary

The truck manufacturing operations in Australia, including research and development, are making a major contribution to the national economy by moving over 150 billion tonne-km of freight each year. In addition they are major suppliers to Australia's resources, defence and emergency services sectors, providing specialist vehicles necessary to their unique requirements.

Truck manufacturing in Australia meets the world's best practice in terms of safety and environmental protection by adherence to the latest international standards. It is a major employer of skilled and semi-skilled workers, whose skills are either retained within the industry or transferred to other manufacturing sectors.

Policy Considerations

Australia has an old truck fleet. There is a strategic imperative for Australia to have a modern truck fleet.

The average age of the truck fleet in 2010 was 13.7 years with recent trends confirming this age is increasing (reaching 13.84 years by January 2014). The 2010 average compares with France 6.4 years; North America 6.7 years; U.K. 7.8 years; Canada and Japan 9.2 years. According to the ABS January 2014 Motor Vehicle Census, Australia has 174,543 trucks (30% of the fleet) that are pre-1996. These vehicles have no emission standards, have less safety features than a more modern truck and are less productive.

TIC has identified that the average age of the truck fleet has led to a shortfall in meeting the government's road safety and environmental objectives. TIC's National Truck Plan proposes a five-year government-led fully funded economic mechanism (investment allowances) that would result in a younger national truck fleet which is safer, more productive, cleaner and greener. In

addition this initiative ensures Australia's future capacity to engage in local advanced truck manufacturing.

The Truck Industry Council calls for the modernisation of the nation's truck fleet. This objective could be achieved by means of an investment allowance to accelerate the adoption of new ADR 80/03 diesel only trucks and the use of more new alternatively fuelled and powered (ADR 80/03 PLUS) trucks into the Australian market.

Through the reprioritisation of the Fuel Tax Credit Rebate Scheme currently payable to all on-highway truck operators irrespective of the emission standard of the truck either a fully funded (revenue positive) program or a majority funded program of incentives, depending on the investment allowance option adopted, would result in $5.96 B in benefits to the Australian community between 2015 and 2025.

The benefits of implementing this modernisation program are identified through the avoided health costs associated with noxious emissions ($1,881.6 Million Median), cost savings to the community through avoided fatalities due to safer and more productive trucks ($153.1 Million Median), reduced carbon dioxide emissions due to higher productivity rates of modern trucks ($49.5 Million), and direct operator cost savings ($3880.1 Million Median). These benefits are highlighted in Table 1.

Table 1 Cost / **Benefit Calculations**

Benefit Description	$Million		
	Low Range Estimate	Median Range Estimate	High Range Estimate
Avoided Health Costs	881.1	1,881.6	2,949.5
Avoided Fatalities	114.4	153.1	180.8
Reduced CO_2	37.3	49.5	58.4
Operator Direct savings	2,859.8	3,880.1	4,581.9
Totals	**3,892.6**	**5,964.3**	**7,770.6**

Thank you for the opportunity to contribute to this Senate Inquiry. TIC trusts that the information supplied is of benefit in your deliberations.