



**Cummins**

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24 February 2006

The Secretary  
Senate Rural and Regional Affairs and Transport  
Parliament House  
Canberra ACT 2600

By email

Dear Sir/Madam,

### **Inquiry into Australia's future oil supply and alternative transport fuels**

As a major stakeholder in the Australian Road transport agenda, Cummins Inc. (Australia) is pleased to provide the attached submission in response to the Senate's call for submissions to the above Inquiry.

As detailed in our submission, Cummins has substantial experience in the development of natural gas engine technologies for heavy duty vehicles – both in Australia and overseas markets.

We believe that there is a substantial opportunity for the Australian Government to develop a policy agenda (and supporting programs) that assists industry in accelerating the development of alternative fuel and vehicle technologies.

Should you require clarification of any of the material presented in our submission, please contact Michael Knowles (Automotive Business Manager) on (03) 9765 3054

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Gino Butera'.

Gino Butera  
**Managing Director**  
**Cummins South Pacific**



## **Parliament of Australia (Senate)**

Inquiry into Australia's future oil supply and alternative  
transport fuels  
Inquiry submission

February 2006

*Prepared by*

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*Prepared for*

Senate Rural and Regional Affairs and Transport  
Parliament House  
Canberra

## **Submission by Cummins Inc. (Australia)**

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### **1. Introduction**

In October 2005, the Australian Senate considered a request for the conduct of an Inquiry into Australia's future oil supply and alternative transport fuels.

It is understood that this request was formally referred to the Senate Rural and Regional Affairs and Transport Committee for investigation on 29 November 2005. The Terms of Reference of this Inquiry are listed as follows:

*To inquire into Australia's future oil supply and alternative transport fuels, with particular reference to:*

- a. projections of oil production and demand in Australia and globally and the implications for availability and pricing of transport fuels in Australia;*
- b. potential of new sources of oil and alternative transport fuels to meet a significant share of Australia's fuel demands, taking into account technological developments and environmental and economic costs;*
- c. flow-on economic and social impacts in Australia from continuing rises in the price of transport fuel and potential reductions in oil supply; and*
- d. options for reducing Australia's transport fuel demands.*

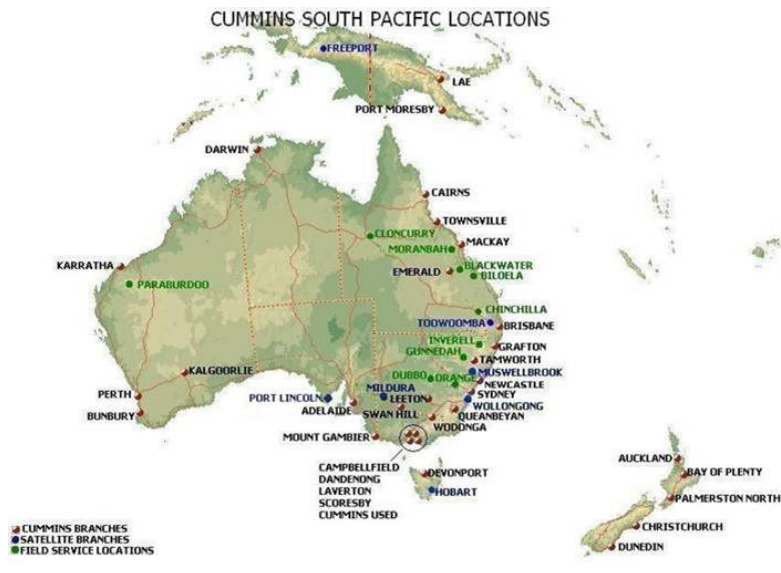
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### **2. About Cummins Inc.**

Cummins Inc. is a global power leader. The corporation comprises complementary business units that design, manufacture, distribute and service engines and related technologies such as fuel systems, controls, air handling, cooling, filtration, emission solutions, electrics and electrical generators.

We operate in 160 countries and territories, via 550 company-owned and distributor locations and employ over 28,000 employees world-wide.

Cummins has had an Australian presence for over 40 years and currently employ 1500 people in this country. We operate from 30 company-owned locations throughout metropolitan and regional Australia, as shown below. Cummins also distributes through over 100 dealers operating throughout Australia.



*Above: Cummins substantial company owned distribution network in the South Pacific.*

### 3. Our interest in the Inquiry agenda

Cummins has a primary interest in the issues being considered by the inquiry, given that the long term viability of our products is closely linked to the future relationship between global oil supply and demand, and the ability of alternative fuels to offset any imbalances in this supply/demand relationship in the future.

Our interest is reflected in the fact that we are recognized as a pioneer in the development of new technologies for medium and heavy duty vehicles. Our commitment to the development of alternative fuelled products is demonstrated by the fact that:

- Cummins has a significant joint venture with Westport Innovations – Cummins Westport Inc. (Vancouver, Canada) to develop and manufacture natural gas engines for distribution throughout the Cummins global network. The joint venture currently has more than 12,000 gas engines in operation around the world (see web site: [www.cumminswestport.com](http://www.cumminswestport.com))
- In Australia, for more than 15 years, Cummins has partnered with selected fleet operators and the Australian Greenhouse Office to quantify the real-world economic and environmental benefits of using natural gas in heavy transport. These partnerships include recent projects with SITA Environmental Solutions and Cleanaway in Perth and a planned project with Boral Ltd. in NSW (details of these projects can be provided to the Inquiry on request).

As a consequence, Cummins' experience with alternative fuels is more than just a policy commitment. We have committed (and will continue to commit) significant resources to the development of gas engine technologies via collaborative projects with fleet operators and the Australian Greenhouse Office. Our aim is to develop alternative fuelled engines that will deliver positive economic and environmental outcomes for our customers, at the lowest possible cost.

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## 4. Specific responses to Inquiry terms of reference

The following sub-sections provide a summary of our position with respect to the Inquiry Terms of Reference.

### 4.1. Projections of oil production and demand in Australia and globally and the implications for the availability and pricing of transport fuels in Australia.

- There appears to be considerable uncertainty about the likely timing and magnitude of the future relationship – even the experts do not appear to agree.
- On the one hand, advocates of the *early peak oil* scenario suggest that we are likely to see a shortage in oil supplies in the next 10 to 15 years, resulting in increased oil prices for passenger and commercial transport. Some examples of these arguments can be found via the following links:
  - <http://trendlines.ca/economic.htm>
  - [http://en.wikipedia.org/wiki/Peak\\_oil](http://en.wikipedia.org/wiki/Peak_oil)
  - <http://www.peakoil.net/>
- On the other hand, reputable energy industry analysts suggest that we are unlikely to experience a ‘crisis’ in the foreseeable future, with oil producers expected to increase refinery capacity to accommodate increased demand. Some examples of these arguments include:
  - [http://www.eia.doe.gov/pub/oil\\_gas/petroleum/feature\\_articles/2004/worldoilsupply/oilsupply04.html](http://www.eia.doe.gov/pub/oil_gas/petroleum/feature_articles/2004/worldoilsupply/oilsupply04.html)
  - <http://www.cia.gov/cia/reports/globaltrends2015/>
- What is clear is that fuel prices have increased significantly in the past 12-18 months. There also appears to be consensus amongst industry analysts that these prices are unlikely to drop substantially in the foreseeable future. An example of this consensus is provided by:
  - <http://magma.nationalgeographic.com/ngm/0406/feature5/index.html>
  - <http://www.wtrg.com/prices.htm>
- While there is a supply risk at a global level, Australia’s decreasing level of oil self-sufficiency suggests that the Australian community will be even more vulnerable to the economic and social impacts of rising oil prices beyond 2010 (see *CSIRO Transport & Energy Sector Outlook to 2020* at <http://www.det.csiro.au/> )

### 4.2. Potential of new sources of oil and alternative transport fuels to meet a significant share of Australia’s fuel demands, taking into account technological developments and environmental and economic costs.

- Cummins strongly suggest that it would be prudent to develop a cohesive national approach that provides incentives for the progressive development of alternative fuels to wholesale diesel use in Australian transport – a form of *insurance* against rising fuel prices and the flow on effects to the trucking industry, their customers, and the wider community.

- Of the alternatives available, Cummins believes that natural gas provides one of the most realistic options for reducing wholesale reliance on petroleum-based fuels in Australia.
- Cummins has explored other fuels such as Biodiesel and is a leading international participant in forums and groups developing alternate technologies for transportation. But for Australia, Cummins believes that natural gas provides the most viable alternative when considering:
  - highest levels of vehicle performance
  - engine durability and dependability
  - lowest cost of operation
  - gas supply and demand and self-sufficiency
  - optimising air quality and greenhouse benefits (total life cycle)
- As an abundant indigenous resource, the use of natural gas is also likely to provide Australia with an opportunity to realize significant macro-economic benefits, including the possibility of creating a natural gas powered vehicle, export industry to the South Pacific region.
- Experience with real-world commercial demonstration projects (in partnership with the Australian Government) has also shown that this technology is now market ready and can deliver real-world economic benefits to operators and environmental benefits to the community (details of these projects can be provided on request).

#### **4.3. Flow-on economic and social impacts in Australia from continuing rises in the price of transport fuel and potential reductions in oil supply**

- Cummins recognizes that increased fuel prices are likely to result in significant flow-on economic and social impacts for the Australian community, but believes that there are others who are in a better position to provide authoritative comment in this area.
- We are, however, already starting to see the impact of increased prices within the Australian heavy vehicle fleet community. The majority of truck operators in Australia are small, family owned businesses (operating fleets of up to five vehicles). These operators have experienced significant financial pressures in the face of rising fuel costs – struggling to pass on these inflationary pressures to their customers. In the last 12 months, this pressure has resulted in an increase in the number of bankruptcies in the trucking community (See *ATA Response to the Australian Government Regulation Taskforce of November 2005* and refer to keynote address at the recent *Trucks in Action* conference in Warragul in February 2006).

#### 4.4. Options for reducing Australia's transport fuel demands

- Cummins recognizes that the supplementation of fuel supply with the progressive adoption of alternative fuels is only one strategy for dealing with any future gap between fuel supply and fuel demand in Australia – reducing the demand for commercial and passenger travel is another. Cummins, however, is not in a position to provide a view with respect to the merits or otherwise of strategies to reduce travel demand in Australia.

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### 5. Developing alternative fuels and engine technologies will require government assistance

- Cummins recognizes that the government has been supporting the development of gas powered heavy vehicles since 2000, with the introduction of the Alternative Fuels Conversion Program and the Compressed Natural Gas Infrastructure Program. These programs have created a positive environment that has facilitated the development of natural gas engines for the heavy vehicle industry – but such action requires concerted action over a substantial period of time.
- Cummins has developed market-ready technologies. While these products are currently restricted to mid-range engines (up to 300 HP), we are continuing to develop options to broaden our range. These products have found application in both urban transit (buses) and transport (trucks).
- Growth in alternative fuel adoption for transport could be facilitated by two actions from government. First the establishment of voluntary targets for the substitution of alternative fuels for conventional fuels in transport. A good model could be the adoption of a framework similar to that used by the European Union and Californian Air Resources Board in the United States. These frameworks specify substitution targets for biofuels, natural gas and hydrogen – although in this submission we restrict our comments to the merits of natural gas.  
[http://europa.eu.int/comm/energy\\_transport/livrevert/final/report\\_en.pdf](http://europa.eu.int/comm/energy_transport/livrevert/final/report_en.pdf)  
<http://www.arb.ca.gov/homepage.htm>  
[http://www.eere.energy.gov/cleancities/ccn/archive/2\\_4federal.html](http://www.eere.energy.gov/cleancities/ccn/archive/2_4federal.html)
- Second, the development of a policy framework to support the growth of the industry by providing financial incentives and supporting programs for:
  - engine manufacturers to develop an increased number of natural gas engines for *heavy duty* vehicle application in Australia.
  - truck chassis manufacturers to modify existing manufacturing facilities to accommodate natural gas engines down the production line.
  - financial assistance to vehicle service and support distributors to modify heavy vehicle workshop infrastructure to accommodate gas certification requirements.
  - continuation of the capital grants for heavy vehicle operators under the Alternative Fuels Conversion Program being conducted by the Australian Greenhouse Office.

- the development of natural gas refueling infrastructure. We believe that the most realistic way of developing this infrastructure is to embrace a corridor approach that provides assistance for a small number of strategic LNG (liquid natural gas) refueling facilities in and between cities, and the development of CNG (compressed natural gas) refueling facilities within cities. Cummins has observed significant interest in the refuse/compactor industry in both LNG and CNG based product but the latter is constrained by current axle weight restrictions (see below).
- concessions in length and mass regulations for trucks operating with natural gas. These concessions are not sought for payload, but are required to allow increased chassis dimensions and axle weights to accommodate gas tanks and components

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## 6. Conclusions

1. There is considerable uncertainty about the likely future relationship between global oil supply and global oil demand – even the experts cannot agree on the likely future scenario. What is certain is that global oil prices have increased substantially in the past 18 months, significantly increasing the price of transport fuels in Australia. These increases are likely to be sustained into the foreseeable future.
2. Australia's oil self sufficiency is likely to decline significantly between now and 2020, making our economy more vulnerable to the potential economic and social impacts of rising fuel prices for transport.
3. There are signs that rising fuel prices are already starting to affect the heavy vehicle industry. These signs include an increasing rate of bankruptcies amongst small, family owned heavy vehicle operations in the past 12 months.
4. The adoption of natural gas for transport - an indigenous resource - potentially provides an opportunity for Australia to cushion itself against the full impact of rising oil prices. In addition, the heavy vehicle industry has developed market-ready gas engine technology - with the assistance of programs such as the Alternative Fuels Conversion Program administered by the Australian Greenhouse Office.
5. The realization of this opportunity is likely to be best attained by adopting a cohesive approach to the development of alternative fuels such as natural gas. Such an approach could include: (a) the articulation of targets for preferred alternative fuels (best suiting the Australian market) and, (b) the creation of a positive environment that fosters the growth of the infant alternative fuels industry via incentives and industry programs.
6. Cummins Australia has already demonstrated a commitment to support the growth of alternative fuel technologies and will continue this commitment into the future. We look forward to working with considered government programs to help capitalize on a significant opportunity to reduce Australia's increasing level of exposure to fluctuations in global oil prices.