

**AUSTRALIAN GOVERNMENT
ENVIRONMENT PROTECTION AND HERITAGE COUNCIL**

**Reducing Emissions From Non-Road)
Spark Ignition Engines and Equipment)
Consultation Regulation Impact Statement)**

**COMMENTS OF THE
OUTDOOR POWER EQUIPMENT INSTITUTE**

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I. Introduction

The Outdoor Power Equipment Institute (OPEI) appreciates the opportunity to submit comments regarding the Consultation Regulation Impact Statement published by the Non-Road Engines Working Group on behalf of the Environment Protection and Heritage Council, May 2010.

OPEI is the international trade association that represents all the major manufacturers of lawn and garden, utility and forestry equipment, including manufacturers of handheld products (like chainsaws) and ground-supported products (such as lawnmowers) and the engines used to power this equipment. These products maintain and nurture green landscapes and healthy forests, which in turn provide enormous quality of life, health, and environmental benefits, including the sequestration of carbon dioxide and other green house gas emissions.

OPEI has developed and is providing these comments under a cooperative effort with the U.S. based Engine Manufacturers Association (EMA), European based Euromot, and the Australian based Outdoor Power Equipment Association (OPEA).

II. Summary of OPEI Comments

OPEI strongly supports Australian adoption of environmental requirements for the small non-road spark-ignition engine sector based upon the U.S. EPA regulatory regulations. The U.S. EPA regulations provide the most comprehensive requirements regarding both exhaust and evaporative emission controls for the subject engines. However, it is important to

recognize that the U.S. EPA requirements and the products designed, certified, and built to comply with these requirements are a comprehensive package that cannot be bifurcated or selectively adopted without significant influence on product availability. It is also very important to recognize that fuels available in the marketplace between the regions may vary. Test fuels must be aligned in addition to product emission standard requirements for Australia to rely upon the U.S. EPA regulation. There are very important enforcement provisions within the U.S. EPA regulations that Australia could also benefit from if relied upon. These provisions should be considered in Australia's decision for the final regulatory framework.

III. Overview and Background

The U.S. EPA regulations associated with non-road spark ignition engines are segregated into three general categories: (i) small spark ignition engines (≤ 19 kw) and large spark ignition engines ≤ 1.0 liter in displacement; (ii) large spark ignition engines (>19 kw and >1.0 liter in displacement); and (iii) marine spark ignition engines. The small spark ignition (SSI) engine category is further divided to segregate handheld engines/equipment from non-handheld engines/equipment. In 2008, the U.S. EPA promulgated the third phase (Phase 3) of emission regulations for these categories. The exhaust requirements are expressed in the chart below:

| Exhaust Emissions | HC+NOx g/kW-hr | Start Year | Comments |
|-------------------|---|------------|---|
| Class I | 10.0 | 2012 | - No change in CO standards, except for marine generators, which have a 5 g/kW-hr standard. |
| Class II | 8.0 | 2011 | |
| Classes III-V | No changes in exhaust emission standards from EPA Phase 2 | | |

In addition to the exhaust requirements, EPA Phase 3 includes provisions to regulate the evaporative emissions. This is the first time that evaporative emissions have been regulated by EPA for this sector. Unlike the exhaust emission requirements, which apply only to the engine manufacturer, evaporative emissions apply to engine manufacturers, equipment manufacturers, and/or to component manufacturers, vastly expanding affected parties. Australia should give notice to this requirement and consider the potential stakeholders involved. The requirements are expressed in the chart below:

| Starting Dates for Evaporative Emission Standards | | | |
|---|------------------|-------------------|--|
| Evaporative Controls | Class I (NHH) | Class II (NHH) | Classes III-V (HH) |
| Hose Permeation 15 g/m ² /day (except Cold Weather Products) | 2009 | 2009 | 2012 |
| Hose Permeation 290 ramped down to 225 g/m ² /day (Cold Weather Products) | N/A | N/A | 2012-2016 |
| Tank permeation 1.5 g/m ² /day | 2012 | 2011 | 2009-2013 (Depends on volume & product type) |
| Running loss | 2012 | 2011 | N/A |

The ability to utilize U.S. EPA certified engines and equipment in Australia is dependent on the ability to certify on the same fuels relied upon by the U.S. regulation regardless of the gasoline and gasoline blends available in the Australian marketplace. Similarly, engines operating on propane or natural gas must have comparable gas properties for acceptable operation and emission control.

IV. Implementation of Exhaust and Evaporative Standard Requirements

The option outlined in the Consultation Regulation Impact Statement to adopt the U.S. EPA Phase 3 regulations without Averaging, Banking & Trading (AB&T) would greatly limit the availability of products for the Australian market. OPEI does not support this approach and would advise against adoption.

The EPA Phase 3 regulations in the U.S. are in the early stages of implementation and manufacturers are relying upon the AB&T program contained in the regulation to meet the standards. As the implementation goes forward, additional products will be introduced to the market. EPA Phase 3 includes very stringent control of exhaust emissions for Class 1 & 2 (non-handheld) SSI engines. These stringent exhaust emission control levels are only possible when taken in their entirety, including the use of historical manufacturer credits and future AB&T provisions. The EPA Phase 3 evaporative emission requirements currently in process of being implemented include different component compliance requirements being implemented over time. Controls include permeation controls for fuel lines and fuel tanks and running loss controls. Diurnal controls were not included in the U.S. regulation. The permeation control was implemented initially for some fuel lines in 2008 and is in process of being implemented for fuel tanks over time with several flexibility provisions, including an AB&T system. The evaporative program relies significantly on component manufacturer certification to allow engine and equipment manufacturers to certify compliance by design.

It is important for Australia to recognize that adoption of the U.S. EPA regulations would require adoption of the complete program, including the flexibility provisions, the component certification provisions, and engine/equipment certification by design provisions. These flexibility provisions help manufacturers in their product development planning and allocation of engineering and manufacturing resources.

The concern expressed by Australia that U.S. manufacturers would sell their high emitting engines in Australia is unfounded. Section 1068.230(a) of the Phase 3 regulations state that products are not exempt and need an EPA certification when exported "to a country with emission standards identical to ours." While it is true that exports are not included in the U.S. AB&T calculations, it is not reasonable to expect that a disproportionately higher number of high emission product versus low emission product would be provided to the Australian market.

Since Australia has expressed a concern for a complex certification program and specifically the AB&T provisions, a simpler approach, such as adopted by Canada, that requires all products offered in Australia also be certified and marketed in U.S. should be considered.

Some exceptions will be necessary due to technical or market reasons. One such example is engines that power electrical generators which cannot be universally marketed in both the U.S. and Australia because of the difference in frequency requirements. It is not reasonable to expect engine manufacturers to certify engines that are destined for use in 50 hertz electrical generators with U.S. EPA because the engines will not be sold or operated in the U.S. For this unique product segment OPEI recommends that Australia allow manufacturers to certify engines for use in 50 hertz generators based on a combination of U.S. certification of a comparable engine and a demonstration of compliance utilizing the calibration utilized for 50 hertz operation. There may be additional exceptions that will need to be reviewed for current Australian market only products.

Both the exhaust and evaporative requirements of U.S. EPA are explicitly linked to the range of fuels available in the U.S., specifically a range from gasoline without oxygenates to gasoline with a maximum of 10% ethanol or 15% MTBE. The adoption of U.S. EPA standard requirements and harmonized marketing of products is only possible if Australia relies upon the certification fuels contained in the U.S. regulations. U.S. EPA exhaust emission regulations are applicable to engines operation on all fuels, including propane and natural gas. Alignment of emission standards to

include engines operating on these fuels also requires that the fuels that they utilize be aligned.

V. Conclusions and Recommendations

Due to the complexities of the U.S. regulation with all the necessary compliance flexibilities, and the connection between the exhaust and evaporative requirements, OPEI recommends that the Environment Protection and Heritage Council adopt the U.S. EPA exhaust and evaporative emission standards for Australia based on the Canadian model of adoption. Due to the fact that the U.S. EPA Phase 3 regulations are not fully implemented, OPEI recommends starting with exhaust emissions standards based upon EPA Phase 2 exhaust limits beginning in 2012 but within the context of the Phase 3 regulation and a complete transition to EPA Phase 3 Exhaust and Evaporative limits in 2016. Utilizing the “Canadian” approach to regulations would provide Australia with U.S. EPA regulatory compliance requirements. Following this approach, Australia will benefit from: (i) all of the flexibility provisions included in the U.S. standards including AB&T; (ii) alignment of fuels available in the marketplace between the U.S. and Australia; (iii) special provision for “Australian Only” products such as electrical generators with 50 hertz operation that will preclude marketing of common products between the U.S. and Australia; and (iv) the implementation schedule for Australia to provide the necessary lead time for engine and/or equipment manufacturers to align product offerings between the U.S. and Australia.

OPEI looks forward to working with the Environment Protection and Heritage Council as emission requirements for non-road small spark-ignited engines are considered and/or adopted for Australia.