



**AUSTRALIAN GOVERNMENT  
ENVIRONMENT PROTECTION AND HERITAGE COUNCIL**

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

**COMMENTS OF  
STIHL PTY LTD**

July 25, 2010

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**COMMENTS OF STIHL PTY LTD**

**1) Introduction**

STIHL Pty. Ltd. Is the Australian subsidiary, with the responsibility for marketing and distribution in Australia, with some minor export to PNG and the Solomon Islands. Australia was the first subsidiary company established by the STIHL Group outside Europe and is currently the sixth largest in annual turnover, employing approximately one hundred staff and generating annual revenues of approximately AUD100M. The company is headquartered in Victoria and has state offices in NSW, Queensland, South Australia, and Western Australia.

The STIHL range of chainsaws and garden care products is only sold through Specialist Dealers - established retailers who carry STIHL products, spare parts and accessories, and has workshop staff trained by STIHL technicians. In this way, consistent, expert service is built into every product sold. It is this commitment to the customer and the product in both pre-delivery and after-sales service that positions STIHL so strongly in the market.

STIHL recognises and accepts its responsibilities as a good corporate citizen. The nature of the equipment STIHL manufactures and its use in the natural environment means operational safety and environmental considerations are ever present. STIHL's concern for safety is paramount and it leads the world in developing safeguards for users and bystanders.

STIHL's commercial interests are inextricably linked with a resource in the natural environment. The company's equipment is widely used in landcare, forest management and arboriculture. STIHL fully supports all scientifically based efforts to conserve the natural resource and to manage it on a sustained yield basis, inline with rational social and economic considerations. Environmental considerations have also influenced the design of STIHL products, to reduce noise and the risk of fire. STIHL actively encourages the planting and cultivation of trees through sponsorship of agro-forestry and community tree-planting programs.

**Euromot** is the European Association of internal Combustion Engine Manufactures. They represent the leading manufactures of internal combustion engines used in a broad range of non-road and marine applications (construction, mining and material handling equipment, trucks and buses, agricultural and forestry equipment , lawn/garden and recreational equipment, commercial marine and sea going vessels, work boats and pleasure boats, rail traction, power generation.)

Euromot has been working for many years with international regulatory bodies, e.g. European Union, the UN economic commission for Europe (ENECE), the UN International Maritime Organisations (IMO) and the Central Commission for the navigation on the Rhine (CCNR). In addition, they are seeking an open and fair dialogue with national governments to provide reliable know-how on advanced internal combustion engine technologies in general and, in particular, on the feasibility of environmental as well as cost effective product regulations. To achieve a pro-active engagement of all stakeholders in international harmonisation of regulations effecting engines and equipment, they coordinate their activities worldwide (USA and Canada, China, India, Japan) with trade associations of the non-road and marine industry sector.

**The Outdoor Power Equipment Institute (OPEI)** is an international trade association representing the \$15 billion landscape, lawn and garden, forestry and utility equipment manufacturing industry. OPEI is committed to ongoing efforts to ensure consumer safety and access to outdoor power equipment in order to maintain and enhance outdoor landscapes. The association serves as an industry advocate on behalf of its members before federal, state and international legislative and regulatory bodies.

OPEI is a recognised Standards Development Organisation for the American National Standards Institute (ANSI) and active internationally through the International Standards Organisation (ISO) in development of safety standards.

## 2) Summary of STIHL Comments

STIHL Pty Ltd strongly supports the need for Australia to adopt environmental requirements for the small non-road spark-ignition engine sector based upon the U.S. EPA regulatory regulations. STIHL Pty Ltd notes that 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 split or selectively adopted without significant influence on product availability.

STIHL Pty Ltd recognises that any legislation must have strong enforcement criteria/penalties for non-compliance. These enforcement rules are found within the U.S. EPA regulations and need to form the underpinning foundation for any legislation adopted in Australia.

## 3) 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 ( $\leq 19$  kw) and large spark ignition engines  $\leq 1.0$  litre in displacement; (ii) large spark ignition engines ( $>19$ kw and  $>1.0$  litre 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 introduced the third phase (Phase III) of emission regulations for these categories.

The exhaust requirements are expressed in the chart below:

| Exhaust Emissions | HC+NO <sub>x</sub> 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 |            |   |

In addition to the exhaust requirements, EPA Phase III includes provisions to regulate the evaporative emissions. This is the first time that evaporative emissions have been regulated for this sector. Unlike the exhaust emission requirements, which apply only to the engine manufacturer, evaporative emissions apply to engine manufacturers, equipment manufacturers, or to component manufacturers, vastly expanding affected parties.

Australia should understand this requirement and consider the potential stakeholders involved. The requirements are expressed in the chart below:

| US EPA Phase III<br>Starting Dates for Evaporative Emission Standards |                            |                             |   |
|---|----------------------------|-----------------------------|---|
| Evaporative Controls  | Class I<br>(Non Hand Held) | Class II<br>(Non Hand Held) | Classes III-V<br>(Hand Held)                      |
| Fuel Hose Permeation<br>15 g/m <sup>2</sup> /day                      | 2009                       | 2009                        | 2012-2016<br>(Cold Weather Fuel Line<br>Phase In) |
| Fuel Tank Permeation<br>15 g/m <sup>2</sup> /day                      | 2012                       | 2011                        | 2009-2013   |
| Running loss  | 2012                       | 2011                        | N/A   |

Any Test laboratory in Australia that audits engine certification or in-fact certifies engines to the US EPA regulation must have the ability to utilise the same U.S. EPA certified test fuel and procedures that are laid down in the EPA regulations.

#### 4) U.S. EPA Exhaust and Evaporative Standard Requirements

In the U.S. the current EPA exhaust emission regulations include very stringent control of exhaust emissions for non-handheld SSI engines.

These stringent emission control levels are only possible when taken in their entirety, including the use of historical manufacturer credits and future averaging, banking, and trading provisions.

There is a misconception that some U.S. manufacturers would sell their high emitting engines in Australia is incorrect. The realities are not based on any facts or survey of information regarding market differences between the U.S. and Australia but rather the premise that engines exported to Australia would not be accounted for in the U.S. ABT system.

If necessary, the U.S. EPA approach to ABT could be applied to products supplied to Australia or a version that only contains AB with no Trading provision. A simple spread sheet like the sample attached from the USA EPA could be an annual requirement from each manufacturer / importer. However, STIHL's recommendation would be to adopt a simpler, administratively lean approach as implemented in Canada also known as the "Canadian model". With the positive experience of the Canadian market the Australia government should adopted this piece of Commonwealth regulation and should not try to reinvent the regulations which have proven to be de facto reliable in praxis.

The evaporative requirements for U.S. EPA Phase III share a number of common attributes between the various non-road spark-ignition categories, but there are also a number of differences that must be recognised to ensure the expected alignment between U.S. and Australian products.

For the non-handheld SSI engine powered equipment segment, the U.S. EPA Phase III evaporative emission requirements currently in the process of being implemented include different component compliance requirements being implemented over time. Controls include permeation controls and running loss controls but not diurnal controls.

The permeation control was implemented initially for fuel lines and is in process of being implemented for fuel tanks over time with several flexibility provisions, including an ABT system. Also, significantly different than the exhaust program, 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 recognise that adoption of the U.S. EPA evaporative requirements **would require adoption of the complete program**, including the flexibility provisions, the component certification provisions, and engine/equipment certification by design.

## 5) Conclusions and Recommendations

STIHL Pty Ltd recommends that the Environment Protection and Heritage Council adopt exhaust and evaporative emission standards for Australia based on the U.S. EPA regulatory compliance requirements including:

- a) all of the flexibility provisions included in the U.S. standards including ABT or AB; Commencing with Phase II in 2012 and aligning with US EPA Phase III and global regulation in 2016.
- b) due to the fact that EPA regulations are manufacturing and not importation based, the implementation schedule for Australia has to take the necessary lead time into account. If the "Canadian Model" would be implemented, a extra 12 months for the implementation of requirements will be needed, due to the fact that extra 4-6 month shipment time is normal and the Australian regulation is planed to be importation / port based.
- c) EPA 1054.701 and 1054.730 requires that all products intended to be labeled with an EPA emission label have to be accounted by the manufacturer in the sales/manufacturing projection, this means also Australian products would be accounted in the US EPA ABT schema of each manufacturer. At the EOYS the manufacturer extracts the products sold outside the US can be subtracted. To avoid misinterpretations we recommend that the regulations should be very specifically linked to 1054.701. Additionally the regulation should state that it is to be seen as identical emission standards and for importation the information on the emission label in 1054.135 plus 18 month should be the base.
- d) that these regulations cover not only the manufacturer, but also the distributors, importers and retailers of Garden Equipment into Australia to ensure emissions compliance at all levels.
- e) that any legislation must have strong enforcement criteria/penalties for non-compliance. These enforcement rules are found within the U.S. EPA regulations and need to form the underpinning foundation for any legislation adopted in Australia.

STIHL Pty Ltd looks forward to working with the Environment Protection and Heritage Council as emission requirements for non-handheld SSI engines are considered and/or adopted for Australia.

In direct response to the questions asked from in the RIS document and the four additional questions asked on your website, STIHL Pty Ltd has the following response:

**1. Sales data for non-road spark ignition engines and equipment – see Sections 3.1.1 and 3.1.2**

***STIHL Comment:***

*Comments have been supplied by the OPEA which we agree with.*

**2. Likely compliance with overseas standards of non-road spark ignition engines and equipment purchased in Australia – see Sections 3.1.1 and 3.1.2**

***STIHL Comment:***

*STIHL Pty Ltd confirms that the majority of product that is imported into the country by the STIHL members is likely to be compliant with either US EPA or EU exhaust gas regulations.*

**3. Purchase costs of compliant and non-compliant non-road spark ignition engines and equipment – see Section 3.3.2**

***STIHL Comment:***

*It's a known fact that emissions control technology costs proportionally more than non compliant products, as we the STIHL are already providing compliant products EPA Phase II (see point 2 above) therefore there is an impact on cost, which is already being incurred in the market place now. The report incorrectly stated that there was 90.000 four stroke chainsaws sold into the market place in-fact NO SUCH product is available in the world.. Additionally we wish to respond to the statement regarding pricing and emissions compliance. Costs are based on performance and technology; we have doubts that the STIHL data can be interpreted to match this statement of the RIS report. EPA Phase III would add significant cost to everyone due to the high cost on new technology (due to the fact that EPA Phase III is not rolled out yet it is difficult to quantify the increased additional cost)*

**4. Methodology for determining emissions performance of compliant and noncompliant non-road spark ignition engines and equipment – see Section 7.2**

***STIHL Comment:***

*STIHL Pty Ltd are not experts on the methodology and therefore can not comment on the validity however the cross section of equipment used in the study was very narrow*

**5. Methodology for determining health costs of emissions from non-compliant non-road spark ignition engines and equipment – see Section 7.2**

***STIHL Comment:***

*STIHL Pty Ltd are not experts on the methodology and therefore can not comment on the validity. The cross section of equipment used in the study was very narrow; it has to be inline with the methodology used to analyze other sectors.*



## 6. Costs of implementing different policy scenarios – see Table 7.4

### **STIHL Comment:**

*STIHL Pty Ltd does not agree with either of the scenarios. There is not a lot of difference in NPV; the longer we wait the worse the situation is.*

*We need to protect our borders from imports that that can not be sold in other countries that now have emissions legislation in place.*

*If for example you introduced, EPA Phase II with ABT it could be implemented in 2012 or earlier, dependent on National legislation.*

*The administrative costs of running such an ABT program can be summarized by the experience from Overseas:*

- *USA 20 million engines 2 fulltime people, most administrative burden on industry*
- *Europe 18 million engines 50 fulltime people, because of administrative burden of EU regulations*

## 7. Feasibility and associated costs for industry to meet US emission standards through phased and non-phased approaches on various starting dates – see Section 7.4.2.

### **STIHL Comment:**

*The difference between phased and non phased costing is not great; however the availability of technology i.e. Evaporative compliance EPA Phase III might pose a timing issue.*

*e.g. some facets of the EPA evaporative regulations will be only rolled out fully in 2016*

### **4 Additional questions from the website**

In addition to the issues raised in the RIS, views were sought on the following specific issues:

#### **1. What is the likely impact of adopting US emission standards on the purchase price for each type of relevant product?**

##### **STIHL Comment:**

*For STIHL Pty Ltd the likelihood of excessive price increases is not considered relevant. (only if you adopt EPA Phase II with ABT, EPA Phase III would have a significant cost impact if implemented as recommended in the RIS)*

#### **2. What is the likely impact of adopting US emission standards on consumer demand for each type of relevant product?**

##### **STIHL Comment:**

*There will be little or negligible effect in the market in Australia (only if you adopt EPA Phase II with ABT, EPA Phase III would have significant impact on availability of product if implemented as recommended in the RIS)*

#### **3. What is the likely impact of adopting US emission standards on consumer choice for each type of relevant product, i.e., if US standards were adopted, which products would be removed from the market?**

##### **STIHL Comment:**

*Non compliant product will be removed from the market; however there will still be a broad choice of compliant product available.*

#### **4. What are impacts to manufacturers and distributors of meeting US Final Rule standards through a phased approach in comparison with a non-phased approach?**

##### **STIHL Comment:**

*Difference between phased and non phased costing not great, however the availability of technology i.e. Evaporative compliance EPA Phase III might pose a timing issue.*



Submission made on behalf of STIHL Pty Ltd

A handwritten signature in black ink, appearing to be 'Rob Baker'.

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**Rob Baker**

Signature of authorised person  
**Technical Manager**