


<b>HASTINGS GENERATION PROJECT</b> <b>APP009563</b>	<b>PUBLIC CONSULTATION NO. 2 – SUBMISSION RESPONSE – JULY 2022</b>	
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The EPA conducted a second round of community consultation for the Hastings Generation Project (APP009563). This invitation for submissions was focused on additional information provided by Esso following a Request for Information on the 13<sup>th</sup> of May 2022, as noted below.

EPA received additional information relating to the second Request for Further Information on 15 June 2022. This information has now been uploaded to the Esso Australia Pty Ltd webpage. EPA is now providing an opportunity for the community to send submissions relating to the additional information that has been provided.<sup>1</sup>

Esso can provide the following comments and clarifications for the items raised in the submissions sent to the EPA.

- Submissions on the planning permit application PA2201534 should be directed to the Department of Environment, Land, Water and Planning.
- Esso is unable to provide comment on the activities of other operators, and is therefore unable to respond to any comments or questions related to the reported fire on the Suiso Frontier vessel operated as part of the HESC project.
- Matters regarding Esso’s operations outside of this development licence application should be directed to [EAPL.Regulatory@exxonmobil.com](mailto:EAPL.Regulatory@exxonmobil.com)

## 1. Air Emissions

Information pertaining to Air Emissions associated with the Hastings Generation Project can be sourced from the following documents:

- APP009563 Development Licence Application, Section 8 – Greenhouse Gas Emissions
- APP009563 Development Licence Application, Section 10.1 – Air
- APP009563 Development Licence Application, Attachment 4 – Greenhouse Gas Assessment Report
- APP009563 Development Licence Application, Attachment 6 – Air Quality Impact Assessment
- VOC Emissions Supplementary Info\_040222
- Response to questions raised during public consultation
- APP009563 EPA RFI 13 May 2022
- Ambient Air Screening Report 2019

With a drive to find suitable alternatives to coal, many new power projects across the globe are considering ethane as a primary fuel. Ethane has been used to supplement fuel gas mixtures in gas turbines for many years. Advances in lean burn, low NOx combustion technology, are able to maintain low NOx emissions at 100% ethane. The reference list for operational ethane-only turbines is growing globally and turbine manufacturers including GE, Siemens and Solar have fully qualified their turbines to run on 100% ethane with extensive testing in laboratory and field trials completed. Esso has completed its own technical qualification of combustion technology on 100% ethane fuel gas and are confident that it will achieve and better the emissions targets. The emissions levels will be tested during equipment commissioning and in operation with a continuous emissions monitoring system (CEMS).

Ethane is an ideal fuel for gas turbines, offering a cleaner burning alternative, producing approximately 50% less CO<sub>2</sub> equivalent emissions than coal and with 70% more thermal power than methane.

The proposed site for the Hasting Generation facility is located on land already owned by Esso, industrially zoned and proximate to the source of ethane. It is a natural fit to locate the plant close to the

<sup>1</sup> [Esso Australia Pty Ltd | Environment Protection Authority Victoria \(epa.vic.gov.au\)](https://www.epa.vic.gov.au)



source of supply and a readily available power line infrastructure on already cleared land, as this minimizes disruption to the wider community.

Esso have provided production forecasts with the development licence application and subsequent additional information. These forecasts show demand is expected to increase initially until 2026, and then will steadily decline. This decline is both a function of reduced natural gas supply as Esso's Bass Strait reservoirs deplete, and an expected reduction in demand as Victoria transitions to net zero.

With the power generation facility operational, there would be no requirement to flare ethane in order to supply natural gas to South East Australia, or if an end user of ethane was unable to accept the ethane due to a shutdown or cessation of operations. Flaring would still be a requirement in an emergency situation. In these circumstances the function of the flare is to safely removing gaseous inventory from the process equipment. These types of flaring events are generally short term in nature.

## **2. Noise**

Information pertaining to Noise Emissions associated with the Hastings Generation Project can be sourced from the following documents:

- APP009563 Development Licence Application, Section 10.2 – Noise
- APP009563 Development Licence Application, Attachment 7 – Environmental Noise Impact Assessment
- Response to questions raised during public consultation
- APP009563 EPA RFI 13 May 2022
- Attachment A – Hastings Environmental Noise Impact Assessment, Rev 2
- Attachment B – Hastings Noise Control Addendum
- Attachment C – Hastings Infrasound Addendum

Esso is proposing to install three Solar Titan 130 gas-fired turbine generators. The sound levels provided by Solar for the Hastings Generation facility have been developed from Solar's sampling and testing of operational installations. Esso have also used an independent noise specialist (Wood) to review and analyze the noise maps and expected outputs associated with this facility.

Noises from a gas turbine package are generated by a number of sources including air and exhaust velocities moving through the turbine package and from auxiliary equipment including ventilation and cooling fans. There is no overall noise difference expected between running on natural gas or ethane. The noise levels from the package form part of the equipment supplier guarantees and will be tested during commissioning to ensure they fall within expected levels.

Sound sources for the Hastings Generation project can be found in Table 5 of document *EPA RFFI 13 May 2022*.

Noise modelling was undertaken for the project as a stand-alone source and cumulative impacts associated with surrounding industrial noise sources. Both models showed the sound levels at all of the noise sound receivers (NSRs) was below the most stringent night time criteria.

A number of additional control measures were examined as outlined in Section 6 of the Noise Response in *EPA RFFI 13 May 2022*. If the proposal is unable to meet the noise limits once operational an investigation will be undertaken to determine the source of the unacceptable noise emissions and corrective actions taken.