



A number of questions have been raised during the public consultation phase of the Hastings Generation Project Development Licence Application. These were forwarded to Esso from the EPA on the 13 April 2022. In addition three separate submissions on the Project were made and forwarded via the EPA:

- Hastings Coastal Advisory Group (HCAG) – 10 April 2022
- Unknown – 11 April 2022
- Save Westernport Inc – 14 April 2022

The following is a response to the raised questions. They have been grouped by topic as a number of questions raised are similar in nature.

The Project has also received queries from the community via the Esso email address provided within the Development Licence Application. For these queries, Esso has responded directly to the person or organization.

1. Noise Emissions

Number	Question	Source
1	Do you expect there will be any "infra-sound" emanating from the facility as a result of your proposed activity	EPA email – 13 April 2022

Response

Infrasound is generally considered to be sound at frequencies less than 20 Hz and is often described as inaudible.

Infrasound is generated by a range of natural sources, including waves on the coastline, waterfalls and wind. It is also generated by a wide range of engineered sources such as industrial processes, vehicles, air conditioning and wind farms.

An assessment was conducted, comparing the low frequency sound power levels of the exhaust stack for the three Titan 130 gas turbines, as proposed for the Project, against the outdoor low frequency threshold criterion from *EPA Victoria Noise Guidelines: Assessing low frequency noise – Publication 1996 June 2021*. These threshold levels are based off the UK DEFRA (Department for Environment, Food and Rural Affairs) criteria, accounting for façade noise adjustments and are considered guidelines rather than compliance limits.

The sound levels were modelled for the closest noise sensitive receiver (NSR1), which is located at 11 Cemetery Road, Hastings; approximately 700m to the south west of the project area. The results are shown in Table 1-1.

Table 1-1 Low Frequency Sound Power Levels for the Hastings Generation Project

		One-third Octave Frequency Levels					
		Leq (dB)	6.3 Hz dB	8 Hz dB	10Hz dB	12.5Hz dB	16Hz dB
Threshold Levels	Leq (dB)	-	-	92	89	86	77
NSR1 – sound pressure level from Exhaust stack	Leq (dB)	44.7	49.7	50.7	53.6	52.6	50.5
Baseline - Background Levels	Leq (dB)	-	-	-	60.0	65.2	62.9
NSR1 – sound pressure level from Exhaust stack + Baseline levels	Leq (dB)	44.7	49.7	50.7	60.9	65.4	63.1

The results indicate that infrasound from the gas turbines will be less than the baseline background levels measured by Wood during the Environmental Noise Impact Assessment (refer to DL Attachment 7) and the EPA threshold criteria. When the combined sound from background sources and the stack is still less

than the threshold levels. Therefore significant infrasound is not anticipated to emanate from the HGP facility.

Number	Question	Source
26	What noise impacts does the project have on residential homes around Hastings? Concern that 24 hour operations will create sound levels over 100 dBA.	Submission – 11 April 2022

Response

Modelling of noise levels from the project was undertaken at four sensitive receptors, closest to the Project. All of the locations are residential premises. For the full details of the noise modelling and assessment undertaken refer to the Environmental Noise Impact Assessment submitted with the Development Licence Application (refer to DL Attachment 7).

The background noise levels were compared to the night-time zoning levels and the applicable night-time noise limits have been calculated in accordance with the *Noise Limit and Assessment Protocol for the Control of Noise from Commercial, Industrial and Trade Premises and Entertainment Venues*, Part 1A, Section 1. Noise Limits – urban area method, Clause 5. The Project’s noise limits are shown in Table 26-1.

Noise emissions have been predicted under weather conditions which would be favourable for noise propagation from the facility to the nearest residences, and are outlined in Table 26-2.

Table 26-1: Project's Night-time Noise Limits

Noise Sensitive Receptor	Background Noise Level dB(A)	Night-time Zoning Level dB(A)	Night-time Noise Limit dB(A)
1	37	55	49
2	35	41	41
3	37	42	42
4	37	43	43

Table 26-2: Meteorological Model Inputs for Adverse Weather Conditions

Input	Adverse Conditions
Wind speed (m/s)	3
Wind direction	Source to receiver
Pasquill-Gifford stability class (atmospheric stability)	F
Humidity (%)	50

Input	Adverse Conditions
Temperature (degrees Celsius)	15
Air pressure (mbar)	1013.3

During operations noise is expected to be generated from the following equipment:

- Solar Titan 130 power generation package, including enclosure; enclosure ventilation; turbine air system; and combustion outlet system
- Lube oil cooler
- Fuel gas skid
- Instrument air compressor
- Water purification pumps
- Transformers

Noise levels that would be generated at the noise sensitive receptors during adverse weather conditions is summarized in Table 26-3.

Table 26-3: Predicted Noise Levels from the HG Project

Noise Sensitive Receptor	Night-time Noise Limit, dB(A)	Predicted Noise Level, dB(A)
1	49	46
2	41	34
3	42	34
4	43	31

It can be seen that during adverse weather conditions, or worst-case scenario, the Project’s noise levels will cause negligible intrusion into the nearest noise sensitive receptors or residential properties; and will comply with EPA noise limits.

Number	Question	Source
34	Has noise modelling considered worst case conditions for wind speed and temperature, thus having a greater impact upon residences and businesses?	Submission – 11 April 2022

Response

Refer to Number 26, above.

Noise modelling of the operation of the facility has taken into account worst case conditions for noise propagation, to provide the most conservative predictions of resultant noise levels at residences and businesses.

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2. Greenhouse Gas Emissions

Number	Question	Source
2	From a climate change perspective, it is better to leave fossil fuels in the ground rather than burning them, as proposed in your activity. Is there any possibility the additional gas cannot be burned (e.g., reducing overall production of the gas)?	EPA email – 13 April 2022

Response

As examined in the *Project Alternatives* document (DL Attachment 3) submitted with the Development Licence Application ethane gas is a by-product of natural gas and oil production.

Supply of natural gas from the Longford plant to the state of Victoria is considered to be an essential service under the *Essential Services Act 1958*, and this will remain the case for the near future. According to DELWP approximately 2 million households [1] out of the existing 2.5 million households in Victoria [2] are residential gas customers. Esso supplies 80% of the Victorian gas market.

For this essential service to continue there needs to be a continued means of utilizing products that are produced with the natural gas, in this case ethane.

It is not possible to supply natural gas to Victoria in the short to medium term without dealing with the ethane by-product. The project has a life of 8 to 12 years.

Number	Question	Source
9, 37, 47	Did Esso/ExxonMobil consider the Mornington Peninsula Shire “Climate Emergency Plan” and how would this ethane project comply with the Plan? https://www.mornpen.vic.gov.au/About-Us/Strategies-Plans-Policies/Strategy-Plan-Listing/Climate-Emergency-Plan	EPA email – 13 April 2022 Save Western Port – 14 April 2022
23	Demonstration compliance with Mornington Peninsula Shire Council’s <i>Ensuring Our Future: Our Climate Emergency Response</i> 25 August 2020	Submission – 11 April 2022

Response to 9, 23, 37 and 47

The Emergency Climate Plan has been developed to provide regional targets to reduce greenhouse gas emissions on the Mornington Peninsula. Targets have been developed in response to the Victorian Government’s:

- interim targets for greenhouse gas emissions
- zero emissions vehicle roadmap
- recycling Victoria policy

A total of 7 targets have been developed and progress against these are reported annually in the Climate Emergency Plan progress report. The inaugural report was issued for 2021. The following table shows how the project aligns with the objectives of the Climate Emergency Plan.



Target	Project
<p>1. Leadership and governance – led by Climate Oversight Group Climate Oversight Group to be formed in 2022</p>	<p>Esso are members of the following community groups.</p> <ul style="list-style-type: none"> • Committee for Mornington Peninsula • Western Port Community Liaison Committee
<p>2. Increased climate advocacy Shire to develop shared advocacy goals</p>	<p>Esso and the Project have undertaken consultation with Council and community on project’s impacts.</p>
<p>3. Zero carbon energy Goal of reaching 200MW of renewable energy by 2030 45% complete.</p>	<p>Project will have a life span of 8-12 years, with peak generation to occur by 2026 and a sharp decline in power generation from 2028 onwards.</p>
<p>4. Resilient and adaptive community By 2025, community resilience will be strengthened by maximising social connections and meaningful engagements to increase understanding of climate change risks.</p>	<p>Greenhouse gas emissions and climate change risks are identified and addressed in the Development Licence application and through the Planning Permit application process.</p> <p>Project has undertaken and will continue to undertake community consultation.</p>
<p>5. Sustainable travel and transport By 2030, transport emissions will be reduced by 50% on 2018 levels.</p>	<p>During operations, the project is anticipating a maximum of 6 personnel working at the site. In addition, deliveries and offsite transportation are anticipated to be approximately 1 truck per week. The project will have a negligible impact on existing traffic movements in the Shire.</p>
<p>6. Sustainable land use and natural environment 10% of the 1 million tonnes of atmospheric carbon sequestration through terrestrial and aquatic plantings and improved soil conditions has been achieved.</p>	<p>The project is situated on a site previously cleared for industrial purposes. Land clearing will be limited to 0.857 hectares of native vegetation, predominantly associated with the requirements of bushfire management under the Bushfire Management Overlay planning provisions.</p> <p>Native vegetation clearing will be managed via a planning permit application and vegetation offsets.</p>
<p>7. Circular economy and zero waste By 2030, zero waste will go to landfill and 100% of resources will be recovered and reused.</p>	<p>Small quantities of waste will be generated by the project, as outlined in the Development Licence application.</p>

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Number	Question	Source
10, 49	Would this proposed ethane project at Long Island Point increase the amount of greenhouse gas emissions on the Mornington Peninsula from current levels?	EPA email – 13 April 2022
24	Find a solution to excess ethane production at Long Island Point that does not increase greenhouse gas emissions on the Mornington Peninsula or cause other adverse impacts on our environment. Greenhouse gases must not be transferred from Altona to the Mornington Peninsula.	Submission – 11 April 2022
38	How can we be certain that this project will not simply result in the transfer of emissions from the current location in Altona to the Mornington Peninsula	Save Western Port – 14 April 2022

Response to 10, 24, 38 and 49

Greenhouse gas emissions from human activities strengthen the global greenhouse gas effect, causing climate change [3]. In 2015 the Paris Agreement (the international treaty of climate change) was adopted by 196 countries. The Paris Agreement’s long-term temperature goal is to keep the rise in mean global temperature to below 2°C above pre-industrial levels, and preferably limit the increase to 1.5°C, recognising this would substantially reduce the effects of climate change.

Australia reports its greenhouse gas emissions (National Inventory Report), annually, to the United Nations Framework Convention on Climate Change (UNFCCC). The data contained in this report is collected under the National Greenhouse and Energy Reporting (NGER) scheme.

The State and Territory Greenhouse Gas Inventories are a disaggregation of the data contained in the National Inventory Report [4]. In Victoria, this data is used to develop the annual *Victorian Greenhouse Gas Emissions Report*.

Esso is a contributing corporation under the NGER scheme, reporting greenhouse gas emissions annually.

The Development Licence application reviewed the project’s emissions against the latest Victorian greenhouse emissions report [5], and noted that maximum greenhouse gas emissions generated from the project are 0.2% of the State’s emissions. The project is expected to see a significant drop in emissions from 2028 onwards.

The Development Licence application outlines the overall impact on greenhouse gas emissions in Section 8. The project is projected to reduce overall emissions in Victoria through offsets of reduced emissions from ethylene manufacture and coal power generation.

ExxonMobil have established a number of greenhouse gas emission reductions goals for 2025 and 2030, to help the company achieve net zero emissions by 2050 and these are shown in the following table. ExxonMobil’s *Advancing Climate Solutions 2022 Progress Report* [6] have shown that the company is on target to exceed its 2025 reduction plans, in 2021 [7].

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Parameter	2025	2030
Reduction in corporate-wide greenhouse gas intensity		20-30%
Reduction in corporate-wide methane intensity	40-50%	70-80%
Reduction in upstream greenhouse gas intensity	15-20%	40-50%
Reduction in corporate-wide flaring intensity	35-45%	60-70%

Note – intensity reduction goals are measured against 2016 intensity rates

Since 2017, ExxonMobil Australia has reduced its emissions in Victoria by 26% and its flaring intensity by 22%. Opportunities for further reductions include investment in lower-emissions technologies, such as carbon capture, manufacturing efficiencies and advanced biofuels. In April, 2022, ExxonMobil announced it was undertaking early front-end-engineering design studies to determine the potential for carbon capture and storage to reduce greenhouse gas emissions for multiple industries in the Gippsland Basin. [8]

Number	Question	Source
11, 50	What is the maximum amount of greenhouse gas emissions that could potentially be generated per annum by this ethane project?	EPA email – 13 April 2022

Response to 11 and 50

The maximum greenhouse gas emissions are expected to occur in 2026, generating 195,652 tonnes of carbon dioxide equivalent per year. (Refer to Development Licence Application, Section 8.1.1, Table 11).

Number	Question	Source
12, 51	What is the maximum amount of ethane that could be used per day by this project (e.g. 500 tonnes of ethane per day) and how would this daily throughput information be made available to the public, Mornington Peninsula Shire Council and EPA Victoria?	EPA email – 13 April 2022
33	What is the maximum ethane quantity per day? If greater than 189 tonnes per day, air modelling needs to be reviewed.	Submission – 11 April 2022

Response to 12, 33 and 51

Gas volumes are constantly fluctuating based on the demand from customers. Thus the volume of ethane gas will also be in a state of flux. Therefore, ethane gas consumption rates are calculated on an annual daily average. The maximum annual average rate of ethane consumption for the project is 189 tonnes per day.

It is estimated that peak consumption will occur in 2026, with a total of 69,135 tonnes of ethane for the year. The following table shows the predicted quantities of ethane gas consumption associated with the project. (Refer to Development Licence Application, Section 8.1.1, Table 11).



Year	Annual daily average quantity of ethane (t/d)	Annual quantity of ethane (t/y)	Power generation (MWh/y)
2023	182	66,390	282,984
2024	182	66,453	283,253
2025	168	61,368	261,578
2026	189	69,135	294,686
2027	174	63,449	270,452
2028	95	34,744	148,094
2029	90	32,885	140,173
2030	58	21,037	89,670
2031	50	18,317	78,074
2032	23	8,234	35,098
2033	8	3,054	13,019

Esso is a registered corporation for the National Greenhouse and Energy Reporting scheme, and as such is required to report, annually, its greenhouse emissions and energy consumption. Corporate greenhouse gas emission results are publicly available.

In addition, as a licensed Operator under the Environment Protection Act 2017, the project will be required to report environmental performance on an annual basis as outlined in its Operating Licence conditions.

Number	Question	Source
13, 51	Will certified carbon offsets be required by Esso in order to reduce/remove CO2 emissions from this ethane project below 200,000 tonnes per annum?	EPA email – 13 April 2022

Response to 13 and 51

Offsets are not required to ensure project emissions are below 200,000 tonnes per annum

Number	Question	Source
32	Comparison of greenhouse gas emissions from the project should be reviewed against wind and solar power generation.	Submission – 11 April 2022



Response

IPCC have assessed the lifecycle greenhouse gas emissions from select electricity supply technologies [9] as shown below.

Table 32-1: Lifecycle greenhouse gas emissions for select electricity supply technologies

Fuel source	Life Cycle Greenhouse Gas Emissions (gCO _{2e} /kWh) [9]		
	Minimum	Median	Maximum
Coal	740	820	910
Gas	410	490	650
Solar PV – utility scale	18	48	180
Solar PV – rooftop	26	41	60
Wind offshore	8	12	35
Wind onshore	7	11	56

3. Air Pollution

Number	Question	Source
14, 52	Would Esso support the establishment of a new EPA Victoria air quality monitoring station based at Long Island Point to accurately measure air quality and air pollutants around Hastings?	EPA email – 13 April 2022

Response to 14 and 52

Should the EPA install an air quality monitoring station based at Long Island Point, Esso would have no objection.

Number	Question	Source
25	Do nitrogen oxides, carbon monoxide, volatile organic compounds and particulates exceed the scheduled premises threshold over a twelve month period?	Submission – 11 April 2022

Response

The project has applied for a Development Licence in accordance with the *Environment Protection Act 2017*. As identified in the Development Licence application, the project is seeking approval for the following scheduled activities, as outlined in Schedule 1 of the *Environment Protection (Scheduled Premises) Regulation 2017*:

- K01 – Power Station
- L01 – General Emissions to Air

The project does not exceed EPA Environmental Reference Standards, Ambient Air Quality criteria as detailed in the *Guideline for Assessing and Minimising Air Pollution in Victoria* (EPA Publication 1961) or State Environment Protection Policy (Air Quality Management) criteria for carbon monoxide (CO), sulphur dioxide (SO₂), nitrogen dioxide (NO₂), particular matter less than 10 microns (PM₁₀) and less than 2.5 microns (PM_{2.5}). (Refer to Development Licence Application, Section 10.1.1, Table 21).

Table 25-1: Predicted ground level concentrations of air pollutants from the Hastings Generation Project

Indicator	Predicted maximum Ground Level Concentrations (including background levels) µg/m ³	HGP's predicted ground level concentrations µg/m ³	Criterion µg/m ³
NO _x 1-hour average 99.9 th percentile	44.6	5.1	150
NO ₂ annual average	11.47	0.17	28
CO 8-hour average	577.8	7.8	10,310

Indicator	Predicted maximum Ground Level Concentrations (including background levels) $\mu\text{g}/\text{m}^3$	HGP's predicted ground level concentrations $\mu\text{g}/\text{m}^3$	Criterion $\mu\text{g}/\text{m}^3$
SO ₂ 1-hour 99.9 th percentile	8.0	0.11	260
PM _{2.5} max 24-hour average	11.0	0.82	25
PM _{2.5} max annual average	7.95	0.05	8
VOC 1-hour 99.9 th percentile	5.9*	5.9	-

Note * - background concentration was not available

A separate examination of VOC emissions against EPA threshold levels found the project did not exceed the acceptance criteria as shown below (refer to VOC Emissions Supplementary Info_040222).

Table 25-2: Predicted ground level concentrations of VOCs from the Hastings Generation Project

Indicator	Predicted maximum Ground Level Concentrations $\mu\text{g}/\text{m}^3$	Criterion $\mu\text{g}/\text{m}^3$
VOC (total) 1-hour 99.9 th percentile	5.9	-
Ethane 1-hour 99.9 th percentile	4.3	-
Formaldehyde 1-hour 99.9 th percentile	1.1	87
Benzene 1-hour 99.9 th percentile	0.5	580

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Number	Question	Source
35	Odours from volatile organic compounds may reach nearby residents depending on weather conditions despite modelling predictions.	Submission – 11 April 2022

Response

Refer to Table 25-2, above.

Odours associated with sulphur oxides (SO_x) are minimized by removing sulphides from the gas stream. This process will occur at LIP before delivery at the power plant. The “sweet gas” delivered to the power plant has negligible quantities of sulphur dioxide (SO₂) (0.00001%). (Refer to Development Licence Application, Section 7.2.3, Table 9).

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4. Public Consultation

Number	Question	Source
3, 42	Will there be additional consultation on the project	EPA email – 13 April 2022
4, 43	Could you please tell me how many public meetings or forums have been held to inform local residents and community groups about this ethane project?	EPA email – 13 April 2022
5, 44	When and where were these public meetings held for the general public?	EPA email – 13 April 2022
22	Demonstrate community consultation conducted as part of project complies with EPA Publication 1145.1	Submission – 11 April 2022
29	What consultation has the project undertaken for the general public, including information sessions?	Submission – 11 April 2022

Response to 3, 4, 5, 22, 29, 42, 43 and 44

Esso have been an active member of the Hastings community since 1970. During this tenure Esso have undertaken to communicate with the local community through a number of forums, such as community meetings, the media and our website, as well as dialogue with government representatives.

For this project, we advised the community of our plans at our annual community forum in September and through a letter drop to local residents. Since then we have provided regular updates in the *Western Port News*, to the Mornington Peninsula Council and via our website and monthly newsletters.

The project will continue to keep the community updated on the project's progress through the aforementioned methods.

Number	Question	Source
6, 45	Will EPA Victoria be holding a Conference of Interested Persons (s236) community meeting regarding this proposed ethane project?	EPA email – 13 April 2022

Response to 6 and 45

The project will have a public information session at the Sanctuary Inn, Conference Room on the 5th of May from 4.30pm till 6.30pm.

Esso have advertised this event through the *Western Port News*, letter drops to neighbouring residents and the Esso website. In addition the project has sent invitations to any persons / organisations that have expressed an interest in the project, Bunurong Land Council, Mornington Peninsula Council, DELWP and EPA.

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Number	Question	Source
7, 46	Could you please provide copies of public consultation information and material distributed to inform the general public about this ethane project before March 2022?	EPA email – 13 April 2022

Response to 7 and 46

See attached.

Number	Question	Source
30	Esso updates in Western Port News and Development Licence application list different email addresses for community members to contact regarding project. Clarify that issues raised through either email address, are recorded as part of project’s community engagement process.	Submission – 11 April 2022

Response

Community members can use either email address as both mail inboxes are monitored regularly. All community concerns and questions will be responded to and recorded as part of our engagement process using either email address.

Number	Question	Source
40	Can Save Westernport be added to Project’s Stakeholders list?	Save Westernport – 14 April 2022

Response

Save Westernport have been added to the Project’s Stakeholder list and invited to the Project’s community information session planned for 5 May 2022.

Number	Question	Source
41	Mornington Peninsula Council were unaware of the Project	Submission – 11 April 2022
55	Did Esso consult with MPSC or Bass Coast Shire Council?	Save Western Port – 14 April 2022

Response to 41 and 55

The Hastings Generation Project lies within the Mornington Peninsula Council’s boundaries.

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Representatives of the Mornington Peninsula Council were present during Esso’s community meeting in September 2021.

Esso have held Project presentations with the Mornington Peninsula Council in 2021, prior to submitting regulatory approval applications.

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5. Flaring

Number	Question	Source
15	What are the causes or reasons for flaring and black smoke at Long Island Point?	HCAG submission – 10 April 2022
16	How often do flaring events occur at Long Island Point and what is the duration of each flaring event?	HCAG submission – 10 April 2022
17	What is the chemical composition of the flares and black smoke at Long Island Point?	HCAG submission – 10 April 2022
18	What amounts of greenhouse gas emissions are emitted during flaring events at Long Island Point?	HCAG submission – 10 April 2022
19	Are there any potential human health impacts due to flaring?	HCAG submission – 10 April 2022
20	Are there any potential adverse impacts from flaring on the local environment around Long Island Point?	HCAG submission – 10 April 2022
21	How are flaring event notifications communicated to local residents, MP Council, EPA Victoria, etc?	HCAG submission – 10 April 2022
36	How many times will Esso’s LIP facility be ‘updated’, while the non-compliant practice of flaring is allowed to continue?	Save Western Port – 14 April 2022

Response to Number 15-21 and 36

The Hastings Generation facility will not have a flare.

All hydrocarbon piping will be able to be depressurised to a relief and blowdown system. The relief location will be an atmospheric vent (not flares). The release vent is a single vent at height. The release of unburnt hydrocarbons will be minimized by minimizing volumes required to be depressurised during regular maintenance activities and generator trips. Bulk depressurisation of the facility during a prolonged shutdown (inclusive of the ethane supply piping from LIP) will be managed from the LIP facility end so that the unburnt hydrocarbon is not released to atmosphere but is routed back into the LIP system. The volume of ethane sent to the vent during generator shutdown as production fluctuates is expected to be in the order of 1 litre (less than 0.5 kilograms of ethane) per event.



Ethane will also be routed to the relief blowdown system during periods of emergency shutdown. It is anticipated that the volume of gas vented during this time would be approximately 10 kilograms; and it is estimated that not more than one emergency shutdown would eventuate in a year.

During a routine shut down for maintenance a small quantity of ethane would be sent to vent, again in the order of 1 litre per shutdown.

[Flaring](#) at LIP is necessary for the continued safe operations of the plant. The flare allows Esso to control pressure within the plant by burning excess hydrocarbons, including ethane, butane and propane, and is only used on those rare occasions when our customer is unable to accept ethane or when our operations experience a process upset due to planned or unplanned maintenance.

As part of our commitment to safe operations, we share information of planned flaring events on our website and notify regulators and local representatives.

During a temporary flaring event, we also adjust our operational process as much as possible to minimise flaring and restore the plant to normal operations as quickly and safely as possible.

The flare is operated and managed in accordance with our EPA licence and minimises any impact on the environment by safely burning excess gases. Our safe management of the flare poses no danger to health. However, we understand that the smoke associated with flaring can be concerning, which is why Esso is investing more than \$120 million to develop the ethane generation project.

This project involves the installation of three small, modern, low emissions, efficient ethane power generation units, and will utilise the best available emissions reduction technology to convert excess ethane gas at Long Island Point into electricity to power Victorian homes.

Esso Australia plans to reduce the potential for future flaring at Long Island Point by directing excess ethane to the power generation units, rather than the flare, while at the same time generating electricity for Victoria and enabling us to maintain our reliable supply of gas to Australia's east coast. The project will also feature enhanced air monitoring, which, in addition to our plant's current air pollution detection protocols and systems, will ensure that we can continue to quickly respond in the event of any production upsets.

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6. Biodiversity

Number	Question	Source
27, 56	<p><i>The Vision for the Fourth Ramsar Strategic Plan 2016 – 2024 states:</i></p> <p><i>Wetlands are conserved, wisely used, restored and their benefits are recognised and valued by all</i></p> <p>Don't believe burning of excess ethane is a “wise use” near a Ramsar wetland nor could it be considered “sustainable development”.</p>	<p>Submission – 11 April 2022</p> <p>Save Western Port – 14 April 2022</p>

Response to 27 and 56

The Ramsar Convention aims to halt the worldwide loss of wetlands. Member countries can nominate sites containing representative, rare or unique wetlands, or that are important for conserving biological diversity. Western Port was nominated in 1982, twelve years after Esso commenced operations at LIP. To add a wetland to the Ramsar List there needs to be clear evidence that the site is internationally important by providing adequate justification that the site meets at least one of the Ramsar criteria. Western Port met three Ramsar criteria [10], being:

- Criteria for waterfowl:
 - 1a – regularly supports 10,000 ducks, geese and swans, or 10,000 coots or 20,000 shorebirds;
 - 1b – regularly supports 1% of the individuals in a population of one species or subspecies of waterfowl
- Criterion based on representative wetlands:
 - 3 – a particularly good example of a specific type of wetland characteristic of it region.

The mechanisms against which change in ecological character is regularly assessed via comparison with Limits of Acceptable Change (LAC). Under the Western Port Ramsar Site Management Plan, seven LACs have been identified. It was found that Western Port exceeded or meet all LACs, with the exception of wetland bathymetry as there was no current data available on the extent of intertidal mudflat area [10]. The LACs are:

1. No loss of intertidal mudflat area (270 km²) – **insufficient data**
2. Total seagrass extent will not decline below 5400 hectares for a period of greater than 10 continuous years – **met**
3. Total saltmarsh extent will not decline below 850 hectares – **met**
4. Total mangrove extent will not decline below 900 hectares – **met**
5. Abundance of waterbirds will not decline below the following - **met**
 - a. Total waterbirds – 12,000
 - b. Migratory waders – 5,300
 - c. Australasian waders – 800
 - d. Ducks – 500
 - e. Fishers – 550
 - f. Gulls – 1,600
 - g. Large wading birds – 980
 - h. Swans – 1,600
6. Abundance of eastern curlew, curlew sandpiper and fairy tern will not decline below 1% of the populations stated in the most recent Wetlands International Populations estimates. Presence of



bar-tailed godwit, lesser sand plovers and red knot in at least three out of every five years –
exceeded for curlew sandpiper; met for all other species.

7. Australian grayling continues to be supported in one or more of the catchments draining into Western Port – **met.**

The main threat / stressor identified by DELWP [10] from industry to the Western Port Ramsar Site was increased noise, leading to reduced populations. The project's noise levels have been assessed to be below the EPA threshold criteria (Refer to DL Attachment 7). Direct habitat removal of saltmarsh and mangroves was also considered a significant threat. Vegetation removal associated with the project is minor (less than 1 hectare of native vegetation), not within the RAMSAR area, and does not include mangroves or saltmarsh.

It is anticipated that the project will pose a low risk to Western Port. (Refer to DL Attachment 11 Environment and Human Health Risk Assessment).

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7. Other Approvals

Number	Question	Source
8, 48	Has Esso/ExxonMobil applied to the Australian Energy Market Operator (AEMO) to register as a Generator of electricity to the National Electricity Market (NEM)?	EPA email – 13 April 2022

Response to 8 and 48

As part of the network service provider connection process, Esso are working with United Energy (the network service provider for Hastings) and AEMO.

The application to register as a generator of electricity with AEMO is expected to be submitted in July 2022.

Number	Question	Source
28	Why isn't an EES required for the project?	Submission – 11 April 2022

Response

Esso Australia have consulted with DELWP to determine if the project could have a significant effect on the environment, as detailed within the *Ministerial Guidelines for Assessment of Environmental Effects, 2006*.

This involved an examination of the Project's likelihood of triggering the Environmental Effects Statement assessment criteria. It was found that the Project did not trigger the assessment criteria. This was communicated and acknowledged by DELWP.

Number	Question	Source
53	Why isn't an EPBC Referral required for the project?	Save Western Port – 14 April 2022

Response

The Project has undertaken an EPBC Self-Assessment, utilising the Protected Matters Search Tool and the *Matters of National Environmental Significance: Significant Impact Guidelines*. It was found that the Project did not trigger the assessment criteria.

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8. Project Rationale

Number	Question	Source
39	Qenos stated that ethane will run out in 2025, this project is expected to remain in operation till 2033. Does this project extend the life of Esso's operations in the Bass Strait?	Save Western Port – 14 April 2022

Response

Esso are proposing this project to utilise an under subscribed by-product of current operations in a responsible manner that minimize its impact upon the environment and the community. As shown in the response to Question 2, two million households in Victoria (or 80%) currently used natural gas for space heating, cooking, and/or water heating. Esso supplies 80% of this market.

The Project is not able to comment on another organization operations. Media releases made in May 2021, regarding Qenos' closure (DL Attachment 3) referred to shutting down 50% of their ethylene production or 1 ethylene train. Esso currently continue to supply ethane gas from LIP to Altona, though at a reduced capacity.

The Project Alternatives report (DL Attachment 3) has shown that ethane gas production is expected to peak in 2026.

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- [11] ISO, "ISO 7196:1995 Acoustics - Frequency -weighting characteristics for infrasound measurements," International Organisation for Standardization, 1995.

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Attachment 1 – Hastings Generation Project Public Consultation Materials