

GUIDELINE FOR APPLICANTS – ENERGY AND GREENHOUSE

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INTRODUCTION

When submitting a works approval or licence application, applicants must ensure that the proposed works meet the requirements of the *Protocol for Environmental Management – Greenhouse gas emissions and energy efficiency in industry* (the PEM).

The PEM targets Victorian businesses subject to the works approval and licensing system that impact the environment in terms of energy consumption and greenhouse gas (GHG) emissions. It aims to ensure the take-up of cost-effective opportunities for greenhouse gas mitigation and promote the integration of greenhouse and energy issues within existing environmental management procedures and programs.

This guideline outlines the information that must be provided in the application and indicates how EPA Victoria will use that information to assess compliance with the PEM.

On receipt, EPA will review the application against the PEM and these guidelines, and check the basic data. This includes checking that all sections are complete and there is evidence of suitable data gathering and analysis.

Applicants should engage with EPA at an early stage and provide a draft application for review. In this

way any shortcomings can be addressed before the application has been formally accepted.

COMPLETING THE APPLICATION

1. Describe the proposed works in relation to energy use and GHG emissions.

This information will describe the proposal and determine to what extent best practice needs to be applied to energy efficiency and GHG emissions.

A general outline of the proposal will normally be included elsewhere in the application; however, the relationship between the proposal and the anticipated impact on energy use and GHG emissions must be specifically discussed.

Other feasible process options, where they exist, and their relative merits in relation to energy and GHG emissions should also be described briefly. The selection of energy source (in other words, fuel type) may be an important issue.

2. Include energy consumption and any non-energy related GHG emissions.

An estimate of annual energy consumption associated with the proposed works must be provided in the application. This includes:

- the quantity of each fuel (and electricity) to be used by the proposed works

- the associated energy use in gigajoules (GJ)
- the associated GHG emissions in CO₂ equivalents (CO₂-e) (calculated using the conversion factors for various energy types published by the Australian Greenhouse Office (AGO)).

Further information is available in the Energy and Greenhouse Management Toolkit module 3, *Calculating energy use and greenhouse emissions*, and the AGO's *Factors and Methods Workbook*.

If the proposed works will result in non-energy related GHG emissions, the estimated quantity of each greenhouse gas should be provided, together with the CO₂-e amounts.

You should ensure that the following points have been considered:

- You have included all on-site energy usage and any non-energy related GHG emissions associated with the works.
- You have used the correct conversion factors to transform data from fuel quantities to GJ and CO₂-e emissions.
- You have included a clear and concise method for estimating the proposed emissions.

3. Discuss best practice for energy use and GHG emissions.

When the proposed works are estimated to use at least 500 gigajoules of energy per annum and give rise to at least 100 tonnes of energy related CO₂-e emissions per annum, you must identify and implement best practice with respect to the energy usage.

When the proposed works are expected to give rise to any non-energy related GHG emissions, you must identify and implement best practice with respect to those emissions.

The application must provide sufficient information to demonstrate that you have investigated and identified best practice, and that you will implement it as far as practicable. To do this, you must satisfy EPA that you have considered the efficiency of the processes and the standard of the proposed technology.

PROCESS EFFICIENCY

You should describe the proposed manufacturing processes, including process flow sheets, material balances and energy use for the various process stages.

You should describe the energy efficiency aspects of the processes, including the types of energy and/or fuels to be used and the reasons for their selection.

You should also provide details of investigations made to determine that these aspects of the proposal represent energy efficiency best practice. The following types of evidence can contribute to this:

- energy benchmarking for the sector, considering different types of process and technology options
- energy benchmarking for the type of process
- references to supplier or other published information supporting the application.

PRACTICES AND TECHNOLOGY

The application should describe the following in relation to practices and technology:

- proposed energy efficiency practices (such as heat recovery, energy use monitoring and management, air conditioner time switches and lighting sensors)
- energy efficiency aspects of the equipment (for example, the use of high-efficiency motors, variable speed drives).

Details of energy-using equipment items with size and capacity, energy rating, and an indicator of energy efficiency level should also be provided.

NON-ENERGY RELATED GHG EMISSIONS

A similar process should be followed for any non-energy related GHG emissions from the proposed works. The application must show that best-practice measures for emission avoidance and management have been investigated and identified, and that feasible best-practice measures will be adopted.

If not already provided, you should describe the manufacturing processes to be employed, including process flow sheets and material balances.

You should then describe the non-energy related GHG emissions arising from the proposal and the investigations made to determine that the proposal represents best practice for these emissions.

Evidence to demonstrate the best-practice aspects of the process may include:

- GHG emission benchmarking for the sector, considering different types of process options and their emission intensities
- GHG emission benchmarking for the type of process
- references to published or supplier information supporting the application.

OTHER RELEVANT CONSIDERATIONS

You should ensure that significant improvement opportunities associated with the application are not overlooked. The compatibility of the proposed works with a site environment improvement plan (if one exists) should be discussed.

If the company has an internal energy management system, you should describe it and comment on its integration with environmental management systems.

An existing EPA licence holder may have an energy/greenhouse action plan that has been approved under the PEM. The application should refer to this action plan and comment on progress with implementation of the plan.

Commenting on these matters can place the application in a broader context and assist EPA in its assessment.

FURTHER ADVICE

Further details about requirements for applicants are provided in EPA publication 824, *Protocol for Environmental Management – Greenhouse gas emissions and energy efficiency in industry*, which is

available for downloading from

www.epa.vic.gov.au/Greenhouse/program.asp

Further advice and information about how to meet these requirements is contained in modules 2, 5 and 7 of the Energy and Greenhouse Management Toolkit that is available for downloading from www.sustainability.vic.gov.au/www/html/1938-energy-and-greenhouse-management-toolkit.asp

Current factors for calculating energy and GHG emissions for various fuels is contained in the Factors and Methods Workbook, published by the Australian Greenhouse Office and available for downloading from www.greenhouse.gov.au/workbook/index.html

Queries may also be directed to your EPA client manager or the Greenhouse Project Officer in your EPA regional office.

NOTE

Where an application contains insufficient information, the Authority will request further information. The application cannot be acted upon until the further information sought is received and accepted as adequate.