Plume rise assessments - draft Advisory Circular 139.E-02 v1.0

# Overview

## The purpose of this advisory circular (AC) is to:

* provide a standard method of determining the probability of an aircraft experiencing turbulence when flying in the vicinity of a facility emitting a vertical exhaust plume
* ensure that the impact of plumes can be assessed in a consistent and reliable way
* provide guidance to stakeholders involved in the approval, design and operation of facilities with vertical exhaust plumes to assess the potential hazard from a plume to aircraft operations
* provide guidance to stakeholders on the plume rise assessment process.

AC 139.E-02 v1.0 incorporates the use of the Exhaust Plume Analyzer (EPA) tool developed by the MITRE Corporation for the United States’ Federal Aviation Administration (US FAA) and explains how the EPA tool has been adapted for consistency with Australian legislation.

## This AC will be of interest to:

* land use planning authorities including local councils, State/Territory planning agencies and the Department of Infrastructure, Transport, Regional Development and Communications
* aerodrome operators
* aircraft operators
* proponents of facilities that emit plumes such as power stations and road tunnels.

## **Why your views matter**

CASA recognises the valuable contribution that community and industry consultation makes to the regulatory development process. For this reason, we are seeking feedback on whether the draft AC provides adequate guidance on:

* the process to obtain advice from CASA on the potential for a plume rise proposal to create risk to the safety of aircraft operations
* the process CASA follows to assess plume rises.

This is the third revision of the AC relating to the conduct of plume rise assessments and replaces AC 139-05 v3.0 – Plume rise assessments issued in January 2019.

## **Documents for review**

All documents related to this consultation are in the ‘related’ section at the bottom of the page. A copy of the draft AC is provided below as well as appearing on the designated page of the survey. There is also an MS Word copy of the online survey to make it easy for you to peruse or coordinate feedback within your organisation.

Please submit your feedback through the Consultation Hub using the survey provided. If you are unable to provide feedback this way, please contact us for advice through regulatoryconsultation@casa.gov.au.

## **What happens next**

At the end of the response period for public comment, we will review each comment and submission received. We will make all submissions publicly available on our website, unless you request your submission remain confidential. We will also publish a Summary of Consultation which summarises the feedback received, outlines any intended changes and details our plans for the AC.

# Give Us Your Views [Appears on the overview page at the bottom]

[Online Survey](https://consultation.casa.gov.au/regulatory-program/pp1816us/consultation/) [This link is on the front page of the survey and takes you to the survey questions]

**Related**

## **Related Links**

[Forms and templates](https://www.casa.gov.au/search-centre/forms-and-templates)

## **Related Documents**

List of documents to attach to the consultation

* Draft AC 139.E-02 v1.0 – Plume rise assessments
* Application for an operational assessment of a proposed plume rise (Form 1247)
* MS Word copy of online consultation

# Audience & Interest groups

**Audience**

* Air operators
* Flight training organisations
* Pilots
* Air traffic service providers
* Aviation Meteorology
* Sport aviation bodies & prospective ASAOs
* Aerodrome owner/operators
* Aerial work operators
* Land Use Planning Authorities
* Proponents of facilities that emit plumes

**Interest**

* CASA aerodrome inspectorate
* Airspace and infrastructure
* In-house training for CASA FOIs

# Page 1. About this consultation

This consultation asks for your feedback on the draft AC 139.E-02 v1.0*.*

We will ask you for:

* **personal information**, such as your name, any organisation you represent, and your email address
* **your consent** to publish your submission
* **your responses** to the proposed changes in the guidance
* **any comments** you may want to provide
* **demographic information** to help us understand your interest in the regulations

Our [website](https://www.casa.gov.au/rules/changing-rules/consultation-industry-and-public) contains more information on making a submission and what we do with your feedback.

# Page 2. Personal Information

## First name

*(Required)*

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## Last name

*(Required)*

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## Email

*If you enter your email address you will automatically receive an acknowledgement email when you submit your response.*

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## Do your views officially represent those of an organisation?

*(Required)*

*Please select only one item*

[ ]  Yes, I am authorised to submit feedback on behalf of an organisation

[ ]  No, these are my personal views.

If yes, please specify the name of your organisation.

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## Which of the following best describes the group you represent?

*Please select only one item*

[ ]  Aerodrome owner/operator

[ ]  Aircraft owner/operator

[ ]  Pilot

[ ]  Land Use Planning Authority

[ ]  Proponent of facility that emits plumes

[ ]  Other

Please specify “Other” if selected.

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# Page 3. Consent to publish Submission

To provide transparency and promote debate, we intend to publish all responses to this consultation. This may include both detailed responses/submissions in full and aggregated data drawn from the responses received.

Where you consent to publication, we will include:

* **your last name**, if the submission is made by you as an individual or
* **the name of the organisation** on whose behalf the submission has been made
* **your responses** and comments

We **will not** include any other personal or demographic information in a published

response.

Do you give permission for your response to be published?

*(Required)*

*Please select only one item*

[ ]  Yes - I give permission for my response/submission to be published.

[ ]  No - I would like my response/submission to remain confidential but understand that de-identified aggregate data may be published.

[ ]  I am a CASA officer.

# Page 4. Draft AC 139.E-02 v1.0 – Plume rise assessments – feedback

**Question 1.** Do you think this AC is fit for purpose?

*Radio buttons*

[ ]  Yes

[ ]  Yes but with changes (please be specific)

[ ]  No (please explain why)

[ ]  Not my area of expertise/not applicable

Comments

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**Question 2.** Can you think of any reason why using the EPA tool to assess a plume rise would not be acceptable?

*Radio buttons*

[ ]  Yes (please explain why)

[ ]  No

[ ]  Not my area of expertise/not applicable

Comments

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**Question 3.** Do you have any concerns with not assessing the impact on aircraft safety of light turbulence created by a plume rise?

*Radio buttons*

[ ]  Yes (please explain why)

[ ]  No

[ ]  Not my area of expertise/not applicable

Comments

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**Question 4.** Do you have any suggestions for streamlining the process for obtaining CASA advice on plume rise proposals?

*Radio buttons*

[ ]  Yes (please provide suggestions below)

[ ]  No

[ ]  Not my area of expertise/not applicable

Comments

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**Question 5.** Do you have any actual or hypothetical plume rise proposals you would like CASA to assess with the aim of understanding the way the EPA tool is used?

CASA encourages respondents to submit this data using Application for an operational assessment of a proposed plume rise (Form 1247).

 *Radio buttons*

[ ]  Yes (see advice below)

[ ]  No

[ ]  Not my area of expertise/not applicable

If you have selected **‘Yes’**, please provide details using **Application for an operational assessment of a proposed plume rise (Form 1247) (**accessible through the CASA website on the [Forms and templates](https://www.casa.gov.au/search-centre/forms-and-templates) page**)**, to the Airspace Protection mailbox - Airspace.Protection@casa.gov.au and include in the subject line ‘Consultation - Draft AC - Plume Rise Assessments - Form 1247’. For your convenience, we have attached Form 1247 to the overview page of this consultation under the **Related** heading.

Comments

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**General comments**

Please provide any further comments you may have on draft AC 139.E-02 v1.0 in the comments box below.

**Comments**

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