



## ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OLEM-2023-0451; FRL-11466-01-OLEM]

### Waste Reduction Model (WARM) Version 16: Request for Public Comment

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of availability.

**SUMMARY:** The Environmental Protection Agency (EPA) has released the Waste Reduction Model (WARM) version 16 and its supporting documentation, along with the WARM v16 methodology external peer review report and the WARM v16 data quality assessment report. WARM is a tool that estimates the potential greenhouse gas emissions, energy savings and economic impacts of baseline and alternative waste management practices of materials. This Notice is inviting public comment on WARM v16 and its supporting documentation from a broad range of individuals and organizations. The EPA will consider the public comments received to inform future improvements to WARM.

**DATES:** Comments must be submitted on or before [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

#### **ADDRESSES:**

*Written Comments:* Submit your written comments, identified by Docket ID No. EPA-HQ-OLEM-2023-0451, through the Federal eRulemaking Portal at <https://www.regulations.gov/>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. Additional instructions on commenting or visiting the docket, along with more information about dockets generally,

is available at: <https://www.epa.gov/dockets>.

*Instructions:* All submissions received must include the Docket ID No. EPA-HQ-OLEM-2023-0451 for this notice. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments, see the “Public Participation” heading of the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FURTHER INFORMATION CONTACT:**

Priscilla Halloran, Resource Conservation and Sustainability Division, Office of Resource Conservation and Recovery, Office of Land and Emergency Management, Mail Code 5306T, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: 202-566-0311, or Kimberly Cochran (same address); telephone number: 202-566-0308; email address:

[orcrWARMquestions@epa.gov](mailto:orcrWARMquestions@epa.gov). For more information on WARM, please visit <https://epa.gov/warm>.

**SUPPLEMENTARY INFORMATION:**

**I. Public Participation**

Response to this request for public comment is voluntary. Submit your comments, identified by Docket ID No. EPA-HQ-OLEM-2023-0451, at <https://www.regulations.gov/> (our preferred method), or the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The Environmental Protection Agency may publish any comment received to its public docket. Responses to this request for public comment may be submitted by a single party or a team. Responses will only be accepted using Microsoft Word (.docx) or Adobe PDF (.pdf) file formats. The response document should contain the following:

- Two clearly delineated sections: (1) Cover page with company name and contact information; and (2) responses by topic and/or that address specific EPA

questions.

- 1-inch margins (top, bottom, and sides).
- Times New Roman and 12-point font.

Comments containing references, studies, research, and other empirical data that are not widely published should include copies or electronic links to the referenced materials. Do not submit to EPA's docket at <https://www.regulations.gov> any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). Please visit: <https://www.epa.gov/dockets> for additional submission methods; the full EPA public comment policy; information about CBI, PBI, or multimedia submissions; and general guidance on making effective comments. No confidential and/or business proprietary information, copyrighted information, or personally identifiable information should be submitted in response to this notice.

*Privacy Note:* All comments received from members of the public will be available for public viewing on *Regulations.gov*. In accordance with FAR 15.202(3), responses to this notice are not offers and cannot be accepted by the Federal Government to form a binding contract. Additionally, those submitting responses are solely responsible for all expenses associated with response preparation.

## **II. General Information**

### **A. What is the purpose of this request for public comment?**

The EPA will use the feedback and information received through this public comment process, along with findings of the external peer review and data quality assessment, to

inform future improvements to WARM.

The Environmental Protection Agency launched the Waste Reduction Model (WARM) in 1998. WARM has been updated and expanded fifteen times since its launch in 1998. In 2022 and 2023, WARM underwent an external peer review and a data quality assessment as part of the EPA's on-going efforts to ensure WARM's scientific integrity. (Reports are available in the docket EPA-HQ-OLEM-2023-0451 and on the web at <https://epa.gov/warm>.)

The EPA created WARM to provide high-level comparisons of potential greenhouse gas (GHG) emissions reductions, energy savings, and economic impacts (labor hours, wages and taxes when considering different materials management practices. Materials management practices include - source reduction, recycling, anaerobic digestion, combustion, composting and landfilling.

WARM models 61 materials commonly found in municipal solid waste (MSW) and construction and demolition debris (C&D), including aluminum cans, glass, paper, plastics, organics (including food waste) and building materials.

WARM is a comparative tool rather than a comprehensive measurement tool. WARM was not developed for and, as such, should not be used for final site-specific materials management decisions, when other human health and environmental impacts of the different management methods may need to be considered (such as air pollution, water pollution, noise, etc.). It also should not be used for developing GhG inventories, which need to establish a baseline and measure reductions over time on an annual basis for an entity.

### **III. Request for Information**

The Environmental Protection Agency requests public comment on WARM v16 and its supporting documentation from a broad range of individuals and organizations with an understanding of and interest in tools and models related to life cycle materials

management, such as: federal, state, tribal, territorial, and local governments; industry; researchers; academia; non-profit organizations; community groups; individuals and international organizations. EPA is interested in receiving input on the following:

- How can the scientific rigor and adherence to modeling best practices and assumptions in WARM regarding biogenic carbon emissions, carbon storage in forests, soils, and landfills, and utility offsets from combustion be improved?
- How can WARM better align with best practices in climate change modeling and assumptions?
- How can the alignment of data, assumptions, and model components in WARM with real market practices be improved?
- In assessing WARM, how well do the modeled management practices represent the diversity of practices typically used in the United States?
- When evaluating WARM, how accurately does it depict the common secondary use of recycled materials in the United States?
- What recommendations can be made for enhancing the clarity, transparency, relevance, and usability of WARM and its accompanying documentation?
- Are there any studies or data sources that are relevant to WARM but are currently not integrated, and how could their inclusion be beneficial for future development?

- What are the potential advantages and disadvantages of conducting future WARM model development in a more publicly accessible development environment, such as GitHub, to encourage increased transparency and public involvement?
- What are the potential advantages and disadvantages of the EPA considering the use of readily available data from public sources (such as the Federal LCA Commons) in WARM, especially the use of non-waste management data, to enhance data consistency, accessibility and reliability across federal government life cycle work?

The Environmental Protection Agency will use feedback and information received through this public comment, the external peer review and the data quality assessment to inform future improvements to WARM. Please identify the question(s) you are responding to when submitting your comments.

#### **IV. Disclaimer and Important Note**

This request for public comment is issued solely for information, research and planning purposes and does not constitute a Request for Proposals (RFP) or a Request for Applications (RFA). Responding to this notice will not give any advantage to or preclude any organization or individual in any subsequently issued solicitation, RFP, or RFA. Any future development activities related to this activity will be announced separately. This notice does not represent any award commitment on the part of the U.S. Government, nor does it obligate the Government to pay for costs incurred in the preparation and submission of any responses.

Dated: December 13, 2023.

**Carolyn Hoskinson,**

*Director,*

*Office of Resource Conservation and Recovery.*

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