

# Health and Science Research

## Request for Proposals

### TOPIC

## Management of Waste Materials from Reduced-Risk Products: Issues and Solutions

Issue date	Monday, February 6, 2023
Closing date	Friday, March 10, 2023
Closing time	12:00 noon, UK Time
Submit proposals to	(See submission instructions in RFP)
Financing instrument	Grant
Financing amount	Amount consistent with proposal and work plan. Paid in US dollars
Financing duration	Maximum of 12 months, consistent with proposal and work plan
Contact information	<a href="mailto:support@smokefreeworld.org">support@smokefreeworld.org</a>

## **Background**

The number of individuals using Reduced Risk Products (RRPs) such as electronic cigarettes has increased from approximately 7 million in 2011 to about 82 million in 2021, with an expected increase in the foreseeable future.<sup>1 2</sup> Despite the promising benefit for human health from harm-reduction effects, these technology-based devices may require more sophisticated waste management systems to minimize the impact of their disposal on the environment.<sup>3 4</sup>

RRPs present a distinct environmental concern since they generate up to three different types of waste: (1) biohazardous substances, such as nicotine residues, heavy metals, and other compounds; (2) electronic waste, such as circuits and lithium batteries; and (3) plastic waste from the device body and disposable components.<sup>5</sup>

While these types of toxic waste are not new, RRP-derived waste could create unique challenges. One problem is the relatively short life span of these devices, which may lead to the creation of large quantities of waste. Another challenge is that the recommended separate disposal of e-waste and biohazardous waste may be logistically difficult to achieve due to device designs and consumer habits.<sup>6</sup> Moreover, the increasing popularity of single-use, disposable RRP may exacerbate these two problems.<sup>7</sup>

Addressing these issues is imperative so that adverse effects on the environment from RRP can be prevented. However, there is a dearth of scientific analysis and potential solutions for this emerging dilemma. The Foundation for a Smoke-Free World, Inc. (“the Foundation”) is committed to researching the environmental effects of RRP waste materials<sup>8</sup> and to this end, is seeking research proposals for examining these effects.

## **Objective**

The Foundation will support research to investigate the following: effects of RRP disposal on the environment (e.g., soil, water, and air); the impact of RRP-related environmental hazards on people and

other living creatures; the state of technological solutions to the environmental hazards posed by RRP; and potential private and public policies that could diminish the environmental risk from RRP. Applicants are expected to complete the study within the stipulated period.

Suggested topics include (but are not limited to) the following:

- Estimation (simulation) of current and future environmental burden of RRP
- Consumer knowledge of the environmental hazards of RRP and their attitudes toward safe disposal
- Current and potential technological solutions to the environmental hazards of RRP, and assessment of their costs and benefits
- Current and potential public policy solutions to the environmental hazards of RRP, and assessment of their costs and benefits

The research areas listed above are only a few examples that could fit with the Foundation's mission and are not meant to be exhaustive. The Foundation encourages applicants to propose innovative and creative research questions that will advance knowledge about the environmental hazards of RRP.

The Foundation is open to methodologies best suited to the applicant's chosen area(s) of research. However, the proposal must demonstrate a complete understanding of the research area and include a rationale for using the particular methodology. The research may cover one or more areas according to the expertise and capacity of the respective applicant. When appropriate, investigators may investigate the nature and scope of the problem in relation to the waste produced by other technologies and the waste management issues that combustible cigarettes already have created.

The findings of funded research should be submitted to a peer-reviewed academic journal for publication. The applicant should establish a comprehensive plan to disseminate the new information through effective channels. The final product(s) should include suggestions for further action based on the findings as well as recommendations for future research areas.

## Eligibility

Eligible institutions include academic, health-related, research, and science centers and institutions, and other collaborating centers and institutions with experience in related subject areas such as environmental health, epidemiology, behavioral health, public health, or clinical studies.

Proposals should be submitted by entities registered in their country of origin with the ability to accept research grants from not-for-profit foundations incorporated in the United States.

## Estimated Budget and Duration

**Duration:** The scope of the proposed project should determine the project duration. Maximum duration should not exceed 12 months.

**Budget:** Application budgets consistent with proposal and work plan.

## Evaluation Criteria

Applications must describe how the research will make a novel contribution, the scientific plausibility of the research question, and the likely validity of the proposed methodology.

The following criteria will be used to evaluate submissions:

- The significance of the research question within the context of RRP waste-related issues and solutions
- The innovation of the research strategy
- The scientific adequacy of the proposed data and methodology.
- The expertise and prior experience of the applicant, including demonstrated experience on similar projects
- Adequate physical and intellectual resources to meet the objectives of the proposed research
- Dissemination plans

- Cost vis-à-vis significance and contribution
- Key organizational documents provided to the Foundation as part of the due diligence process, as outlined in [Grant Policies and Procedures](#)

The Foundation will prioritize proposals that demonstrate a commitment to our values, including diversity, equity, and inclusion, and that provide the Foundation with the opportunity to interact with diverse teams, bringing a range of perspectives.

## **Submission Instructions**

Applications should be submitted through the Foundation’s online portal, which can be accessed [here](#). This link will start the new application form. Upon clicking the link, you will be prompted to log in, and then taken to the application form.

The application form has links to three templates, which are also listed here for your convenience:

- [Proposal template](#)
- [Budget template](#)
- [Work plan template](#)

You may save your application at any time by using the Save & Finish Later button at the end of each page. To return to an in-progress application, [log in to the portal](#). A list of application portal FAQs can be found [here](#). If you have any technical issues, please contact the grants management team via [support@smokefreeworld.org](mailto:support@smokefreeworld.org) and we will be happy to help.

## **Key Information**

The Foundation may disclose proposals, documents, communications, and associated materials submitted in response to this RFP to its employees, consultants, legal counsel, and contractors. The applicant should carefully consider the content of submitted materials if there is any concern about the

impact of disclosure of confidential or proprietary information. Although submissions will not be disclosed publicly during the evaluation process, all funded projects (scoping and final awards) will be made public. The Foundation will work with awardees to ensure that any materials made public will not disclose protected information.

To be considered for an award, the applicant agrees that the Foundation may:

- Amend or cancel the RFP, in whole or in part, at any time
- Extend the deadline for submitting responses
- Determine whether a response does or does not substantially comply with the requirements of the RFP
- Issue multiple awards

The applicant must ensure that it has responded to the RFP with complete honesty and accuracy. If information in the applicant's response changes, the applicant will supplement its response in writing with any deletions, additions, or changes within five days of the change. Any material misrepresentation, including omissions, may disqualify the applicant from consideration for an award.

## **About Foundation for a Smoke-Free World**

The Foundation for a Smoke-Free World is an independent, US nonprofit [501\(c\)\(3\)](#) private foundation with the purpose of improving global health by ending smoking in this generation. The Foundation focuses its grantmaking in three broad categories: health and science research, agricultural diversification, and industry transformation. Funded by annual gifts from PMI Global Services Inc. ("PMI"), the Foundation is independent from PMI and operates in a manner that ensures its independence from the influence of any commercial entity. Under the Foundation's [Pledge Agreement](#) with PMI and [bylaws](#), PMI and the tobacco industry are precluded from having any control or influence over how the Foundation spends its funds or focuses its activities. For more information about the Foundation, please visit [www.smokefreeworld.org](http://www.smokefreeworld.org).

## References

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<sup>1</sup> Statista. *E-cigarettes—worldwide: Statista market forecast*. (n.d.). Accessed January 24, 2023.

<https://www.statista.com/outlook/cmo/tobacco-products/e-cigarettes/worldwide>

Harm Reduction (GSTHR). *82 million vapers worldwide in 2021: The GSTHR estimate*. (2022, February). <https://gsthr.org/briefing-papers/82-million-vapers-worldwide-in-2021-the-gsthr-estimate/>

<sup>3</sup> McNeill, A., Brose, L., Calder, R., Hitchman, S., Hajek, P., & McRobbie, H. (2015). *E-cigarettes: An evidence update. A report commissioned by Public Health England*. Semantic Scholar.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/733022/E-cigarettes\\_an\\_evidence\\_update\\_A\\_report\\_commissioned\\_by\\_Public\\_Health\\_England\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/733022/E-cigarettes_an_evidence_update_A_report_commissioned_by_Public_Health_England_FINAL.pdf)

<sup>4</sup> Hartmann-Boyce, J., Lindson, N., Butler, A. R., McRobbie, H., Bullen, C., Begh, R., Theodoulou, A., Notley, C., Rigotti, N. A., Turner, T., Fanshawe, T. R., & Hajek, P. (2022). Electronic cigarettes for smoking cessation. *The Cochrane database of systematic reviews*, *11*(11), CD010216. [doi.org/10.1002/14651858.CD010216.pub7](https://doi.org/10.1002/14651858.CD010216.pub7)

<sup>5</sup> Environmental Protection Agency (EPA). Opinion letter on e-liquid as hazardous waste: Determination regarding the hazardous waste status of e-cigarettes under the Resource Conservation and Recovery Act (RCRA). (2015, May 8).

<https://rcrapublic.epa.gov/files/14850.pdf>

<sup>6</sup> Truth Initiative. (2021, March 8). *A toxic, plastic problem: E-cigarette waste and the environment*.

<https://truthinitiative.org/research-resources/harmful-effects-tobacco/toxic-plastic-problem-e-cigarette-waste-and-environment>

<sup>7</sup> CDC Foundation. *Monitoring U.S. e-cigarette sales: National trends*. (2022).

<https://www.cdcfoundation.org/programs/monitoring-e-cigarette-use-among-youth#:~:text=In%202021%2C%20290.4%20million%20units,151.4%20to%20215.5%20million%20units.>

<sup>8</sup> Foundation for a Smoke-Free World. *Foundation Governance Documents: Certificate of Incorporation*. (2017).

[https://www.smokefreeworld.org/wp-content/uploads/2019/10/certificate\\_of\\_incorporation.pdf](https://www.smokefreeworld.org/wp-content/uploads/2019/10/certificate_of_incorporation.pdf)