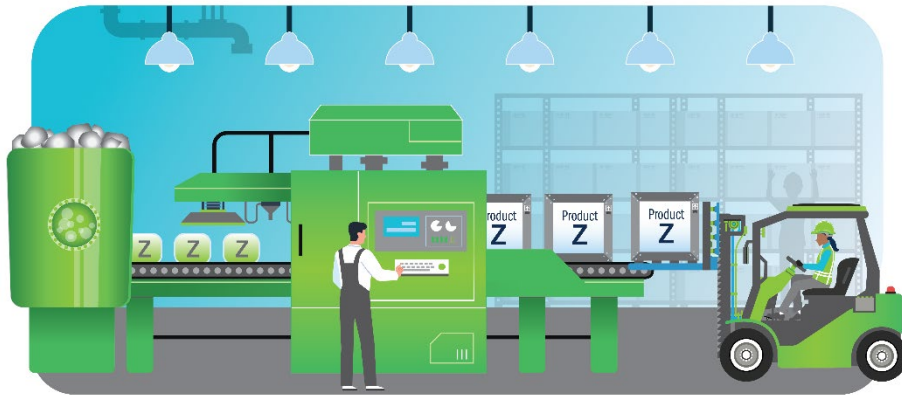




## Request for Proposals



## Recycled Materials Market Development

MRC is seeking market development proposals that demonstrate potential commercialization pathways for promising technologies that use post-consumer mattress materials recovered in recycling processes. The prospective project is envisioned as a **TR level 4-7** demonstration program, typically following proof of concept and/or lab-scale production technology development.

**Issue Date:** May 15, 2024

**Open Call – No Specific Proposal Deadline**

**Mattress Recycling Council**

Attn: Michael Gallagher

[mgallagher@mrc-us.org](mailto:mgallagher@mrc-us.org)

[www.mattressrecyclingcouncil.org](http://www.mattressrecyclingcouncil.org)

## **BACKGROUND**

The [Mattress Recycling Council](#) (MRC) is a 501(c)(3) formed by the mattress industry to operate recycling programs (known as Bye Bye Mattress) in states which have enacted mattress recycling laws.. MRC educates the mattress industry and consumers about these mattress recycling laws and works closely with local governments, waste management professionals, recyclers and others to create an accessible and efficient mattress collection and recycling network.

MRC has recycled over 13 million mattresses since 2015 in its California, Connecticut and Rhode Island state programs. As part of its mission, MRC has established a Research program to increase the recyclability of discarded mattresses by developing new end uses for materials extracted from the deconstruction processes. To sustain future growth, it is vital that new economically viable markets and products for recovered materials be developed.

## **SOLICITATION DETAILS**

MRC is seeking market development proposals that demonstrate potential commercialization pathways for promising technologies that use post-consumer mattress materials recovered in recycling processes.

In this solicitation, MRC is seeking to fund innovative product and process technology development in new markets for the following materials:

- Topic Area 1 – Polyurethane foam
- Topic Area 2 – Quilt panels (the top layer of a mattress)
- Topic Area 3 – Non-woven textiles and shoddy pads (mixed fiber insulating felt layer)
- Topic Area 4 – Spun bond polypropylene
- Topic Area 5 – Latex foam

Information on existing applications for each of these components is provided in MRC's [MRC 2022 Annual Report](#)

## **ELIGIBLE APPLICANTS**

- Public and private businesses. Both U.S.-based and international businesses are eligible to apply. However, they must be in good standing with all applicable U.S. federal, state and local agencies.
- Universities and research institutions.
- Nonprofit entities in good standing with all federal, state and local agencies.

## **PROJECT REQUIREMENTS**

- Proposals must identify at least one target mattress component and at least one specific industrial/commercial scale application.
- Performance requirements for the targeted industrial/commercial application should be clearly stated.
- A letter of support or formal collaborative engagement with a potential end user is strongly encouraged.
- The proposal should detail the steps necessary to access an existing commercial scale process or to develop a new pilot-scale production process.

- The final report must contain an economic analysis and a preliminary business case to justify further development and/or a potential field study with selected component(s).
- Technologies that employ mechanical, chemical and/or thermal reprocessing of recovered materials are in scope.
- Waste-to-energy or incineration concepts will not be considered.
- Basic research and technology development is considered out of scope for this solicitation.
- Proposals that explore further development of existing products or markets that already include mattress components will not be considered.
- Only one proposal per eligible applicant per topic area will be accepted.

## **AWARDS**

MRC anticipates making multiple awards from this RFP with maximum award sizes of \$200,000 per applicant. The objective is to evaluate the technical merit and feasibility of ideas that appear to have commercial scale application potential to support MRC's objectives. Proposals should concentrate on activities that demonstrate the technoeconomic viability of the approach or concept in the target market.

## **MAXIMUM FUNDING**

- Maximum individual award: \$200,000
- Cost share is encouraged but not required. It will be considered in final funding decisions.

## **PRE-APPLICATION SUBMISSION**

MRC will use a two-stage process to identify projects for award. First, interested parties will submit a non-confidential concept paper for internal review by MRC. The pre-application template is attached to this document. It can also be found on the [MRC Research Program](#) website.

Based on merit and alignment to our strategy, the proposers of selected concept papers will be contacted for further discussion. Based on the outcome of these discussions, the applicant may be invited to submit a full proposal for review by MRC.

## **TIMELINE**

This is an open-ended request for proposals. Therefore, prospective proposers are free to submit pre-proposal applications at any time. If the project is selected to move beyond the pre-proposal phase, teams will be asked to submit a full proposal within 6 weeks after notification. All projects must be completed within 18 months of contract execution.

## **FULL PROPOSAL GUIDELINES AND FEEDBACK**

Proposers that are invited to submit a full proposal will provide:

1. Applicant name
2. Applicant contact information — at least 2 contacts
3. A description of the applicant's industry history and experience with similar projects
4. A project description that clearly outlines the impact on the program objective and what steps the applicant will undertake to prove a technical and business case for the new application/product

5. A project work plan and milestone plan
6. A project budget, which includes any matching funds from the applicant, and a clear request for a specific amount of MRC funding
7. Acknowledgement of any potential conflicts of interest with MRC leadership or former employment in the mattress industry
8. Notification of any pending or outstanding judgments or enforcement actions against the applicant, the applicant's organization or its products and services

Pre-proposals must be submitted by email to Mike Gallagher [mgallagher@mrc-us.org](mailto:mgallagher@mrc-us.org). If selected to submit a full proposal, it must be sent in PDF format and should not exceed 10 pages in length, including any attachments or letters of support. Proposals that do not follow application instructions may be considered non-responsive.

For approved projects, MRC will enter into a formal agreement with the innovator, which describes the project plan, deliverables, treatment of confidential information, intellectual property rights, and other terms. MRC is open to working with any organization that proposes a concept that is consistent with MRC's objectives.

MRC intends for the sponsored program to be as transparent as possible, recognizing the need to protect confidential data. Confidential information must be clearly marked as such. MRC may use non-confidential project documentation for California state annual reporting requirements and communication purposes.

Questions and comments regarding this RFP may be emailed to Mike Gallagher [mgallagher@mrc-us.org](mailto:mgallagher@mrc-us.org), Additional information is posted on the [MRC Research Program](#) website.

# Pre-Application Concept Paper Submission Form

*(Please submit Non-confidential Information only)*

<b>Proposer name and title:</b>	
<b>Institution, street address:</b>	
<b>Phone:</b>	
<b>Email:</b>	
<b>Technical challenge being addressed:</b>	
<b>Proposed project title:</b>	
<b>Background/State of the art:</b>	
<b>Graphical abstract</b> <i>(A figure or diagram illustrating the concept):</i>	
<b>Project description</b> <i>(Brief description of the concept and objectives of the proposal, including technical requirements, hypothesis, and novelty with respect to the state of the art in the field. ~500 words or less):</i>	
<b>Proposer team, capabilities, and resources</b> <i>(personnel, equipment, and demonstrated experience in the field including publications and intellectual property):</i>	
<b>Technology Readiness Level (TRL)</b> <i>(1-9, using TRL definition by DOE, <a href="http://en.wikipedia.org/wiki/Technology_readiness_level#Other_definitions_and_uses">http://en.wikipedia.org/wiki/Technology_readiness_level#Other_definitions_and_uses</a>):</i>	
<b>References cited:</b>	