



# Developing New End Uses For Recycled Mattress Textiles

## Request for Proposals



**Issue Date:** April 11, 2022

**Pre-Application Submission Deadline:** June 1, 2022

Attn: Michael Gallagher

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[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 to consumers as [Bye Bye Mattress](#)) in states which have enacted mattress recycling laws: California, Connecticut and Rhode Island. 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. Since 2015, MRC has recycled over 10 million mattresses across its state programs.

As part of its mission, MRC sponsors research 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 MRC develop new economically viable markets and products for recovered materials.

In its [2020 California Annual Report](#), MRC reported an overall recycling rate of 77.1%. In early 2021, MRC conducted a [Waste Characterization Study](#) on the remaining 22.9% to determine the types of materials sent to landfill and the reasons why they were landfilled. A key finding was that textiles, particularly nonwoven materials such as mote cotton, spun bond polypropylene and shoddy felt, represent nearly 60% of all waste products. The predominant reason for disposal was a lack of viable end markets for these materials.

MRC is seeking creative research proposals which explore new applications for post-consumer mattress textiles.

## 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 specific industrial/commercial scale application.
- Performance requirements for the targeted industrial/commercial application should be clearly stated.
- Concepts exploring pyrolysis and waste to energy solutions are considered out of scope for this program.
- The proposal should detail the steps necessary to develop a proof-of-principle solution.
- The final report must contain an economic analysis and a preliminary business case to justify further development and/or a potential field study.
- Only one proposal per eligible applicant per topic area will be accepted.
- Applicants are encouraged, but not required, to provide matching funds to the project.
- The research project must be completed within one year of the funding award.

## **AWARDS**

MRC anticipates making multiple awards with maximum award size of \$100,000. 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.

## **MAXIMUM FUNDING**

- Maximum individual award: \$100,000.
- 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 with MRC's research 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**

Pre-proposals are due on or before 5:00 pm EST on June 1, 2022. If the project is selected to move beyond the pre-proposal phase, research teams will be asked to submit a full proposal within 6 weeks after notification. All projects must be completed within one year of research 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 program research objectives and the scope of work to prove a technical and business case for the new application/product
5. A project work plan with clear milestones and deliverables
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 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 and the innovator will enter into a formal agreement, 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 research program to be as transparent as possible while recognizing the need to protect confidential data. Confidential information must be clearly marked as such. MRC may use non-confidential research 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>	