



Recycled Materials Market Development

Request for Proposals



Issue Date: January 6, 2022

Open Call – no specific proposal deadline

Mattress Recycling Council

Attn: Michael Gallagher

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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: 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 8 million mattresses across our 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.

MRC is seeking creative research proposals which demonstrate the potential to use hard-to-recycle mattress components in new applications and products as well as in reformulated products. In this solicitation, MRC is seeking to fund development of innovative ideas to kickstart 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 – Shoddy Pads (mixed fiber insulating felt layer)
- Topic Area 4 – Cotton (mote cotton)
- Topic Area 5 – Latex Foam
- Topic Area 6 – Coconut Fiber
- Topic Area 7 – Metal Springs

Information on existing applications for each of these components is provided in MRC's [2020 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.
- 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 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.

- 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.
- Proposals which explore further development of existing products or markets that already include mattress components will not be considered

AWARDS

MRC anticipates making multiple awards from this RFP with maximum award sizes of \$100,000 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 research that will contribute to proving the technical feasibility of the approach or concept in the target market.

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 to our 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

This is an open-ended request for proposals. Therefore, prospective researchers are free to submit pre-proposal applications at any time. 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 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 applicant, the applicant's organization or its products and services

Pre-proposals must be submitted by email to Mike Gallagher mgallagher@mattressrecyclingcouncil.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 research 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 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@mattressrecyclingcouncil.org. Additional information is posted on the [MRC Research Program](#) website.

Pre-Application Concept Paper Submission Form

(Please submit Non-confidential Information only)

Proposer name and title:	
Institution, street address:	
Phone:	
Email:	
Technical challenge being addressed:	
Proposed project title:	
Background/State of the art:	
Graphical abstract (<i>A figure or diagram illustrating the concept</i>):	
Project description (<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>):	
Proposer team, capabilities, and resources (<i>personnel, equipment, and demonstrated experience in the field including publications and intellectual property</i>):	
Technology Readiness Level (TRL) (<i>1-9, using TRL definition by DOE, http://en.wikipedia.org/wiki/Technology_readiness_level#Other_definitions_and_uses</i>):	
References cited:	