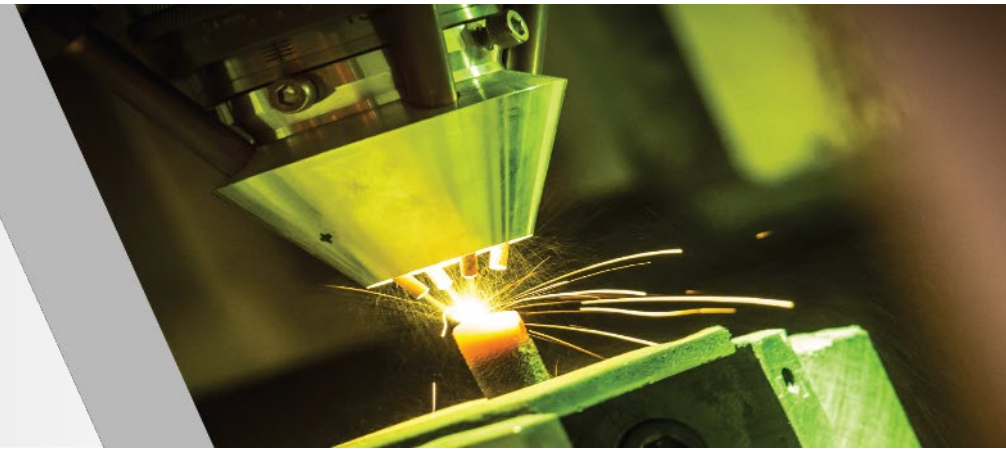
REMADE INSTITUTE

Clean Energy, Innovation & Sustainability

MANUFACTURING A SUSTAINABLE FUTURE



PRELIMINARY

2nd Institute Request for Proposals (RFP)

October 1, 2018

Agenda for the Webinar

Topic	Duration
REMADE Mission, Goals, and Technical Performance Metrics	10 min
Review of RFP Topics	40 min
Questions and Answers	15 min
Proposal Submission Process	40 min
Questions and Answers	15 min

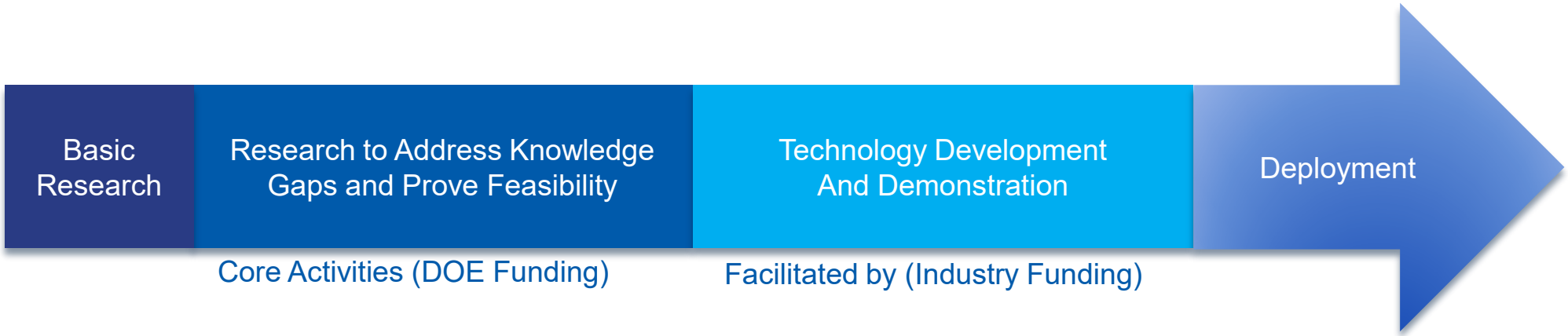
- **As questions arise, type your questions into the chat bar. For participants in the room, please hold your questions until the Q&A. We will review them at the end of each session.**
- **All questions will be posted on the REMADE Website following this webinar**
- **Questions and responses will be updated regularly throughout the proposal submission process**

 Funding provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.

Our mission.

Enable the early stage applied research and development of key industrial platform technologies that could dramatically reduce the embodied energy and carbon emissions associated with industrial-scale materials production and processing.

Eliminate and/or mitigate technical and economic barriers that prevent greater material recycling, recovery, remanufacturing, & reuse.



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Institute Objective
Reduce embodied energy and carbon emissions

REMADE STRATEGIC GOALS

Yr 1

Yr 5

Enable greater utilization of secondary feedstocks which require less energy to produce for key materials

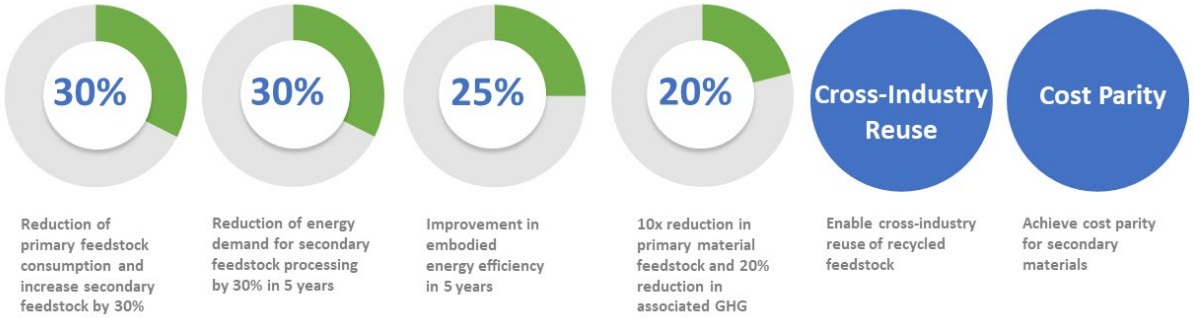
Secondary Feedstock

Primary Feedstock

Reduce primary materials consumption (and energy lost when they are landfilled) while achieving better than cost and energy parity for key secondary materials

Promote widespread application of new technologies across multiple industries that expand material recycling, recovery, remanufacturing and reuse in US manufacturing

REMADE TECHNICAL PERFORMANCE METRICS



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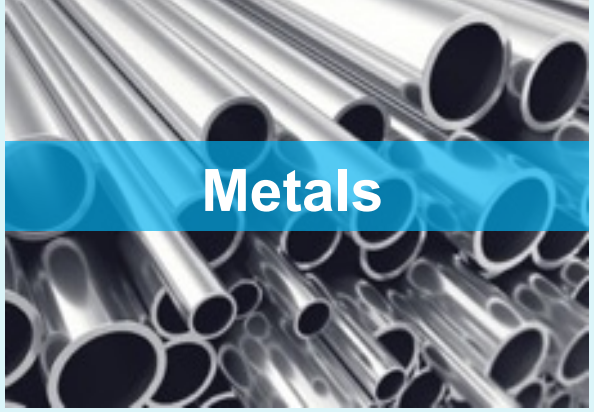
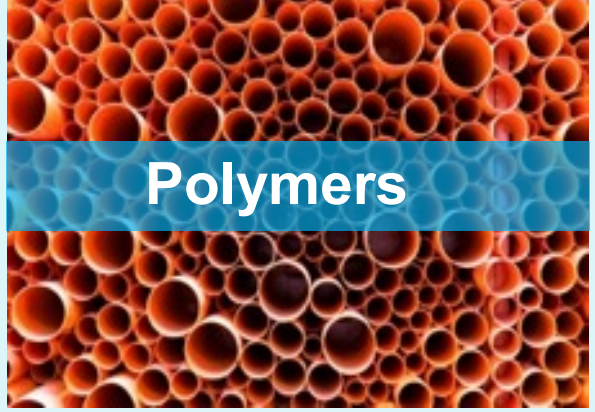




4 MATERIAL CLASSES

TECHNOLOGY FOCUS AREAS ORGANIZED AROUND 5 NODES DESIGNED TO ADDRESS CROSS-CUTTING CHALLENGES

SYSTEM ANALYSIS & INTEGRATION

Data collection, standardization, metrics, and tools for understanding material flow

DESIGN FOR REUSE & DISASSEMBLY

Design tools to improve material utilization and reuse at End-of-Life (EOL)

MANUFACTURING MATERIALS OPTIMIZATION

Technologies to reduce in-process losses, reuse scrap materials, and utilize secondary feedstocks in manufacturing

REMANUFACTURING / EOL REUSE

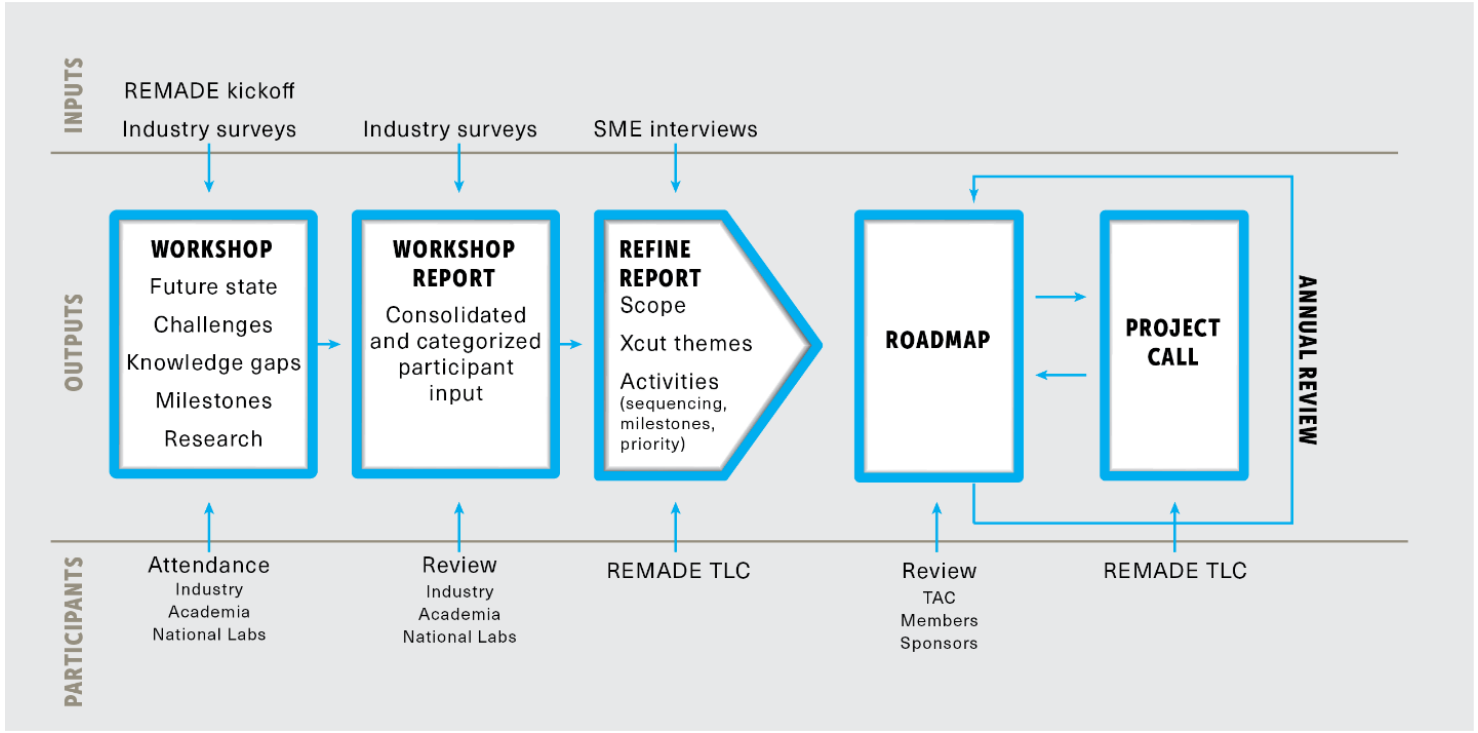
Efficient and cost effective technologies for cleaning, component restoration, condition assessment, and reverse logistics

RECYCLING & RECOVERY

Rapid gathering, identification, sorting, separation, contaminant removal, reprocessing and disposal

REMADE Members (as of 10/1/2018)

Development of the First RFP



Update on RFP Release

As of Oct 1, 2018, REMADE Institute and the Advanced Manufacturing Office are working together to finalize the RFP Process and Topics.

The information included in this presentation should be considered preliminary for informational purposes only.

Final terms will be communicated through the official RFP release and shared with members via REMADE newsletter and posted to remadeinstitute.org

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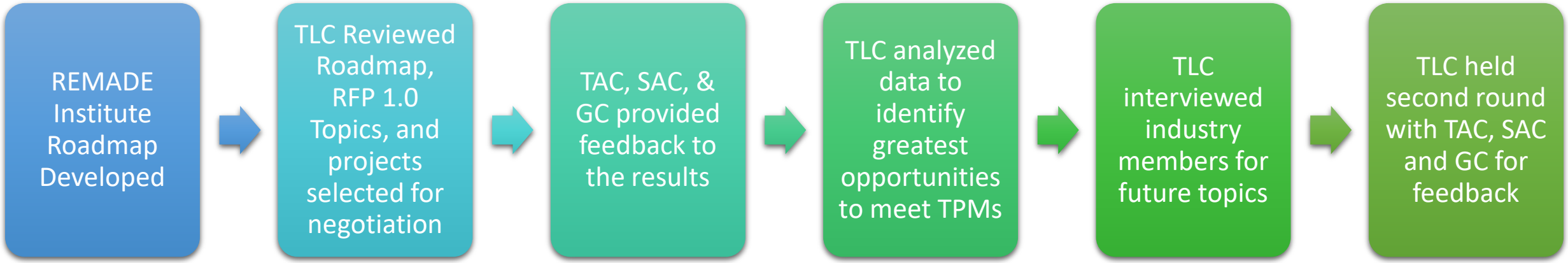
Development of the Second RFP



Recommendations from the TAC, SAC, and GC that influenced the Second RFP

- Identifying roadmap activities were too broad
- Need to understand underlying economics of material classes and/or applications
- Impact the China Import Scrap Ban was having on the recycling industry

(Preliminary)

Preliminary RFP Topics

Systems Analysis and Integration

SA-1 Develop a Systems-level Techno-economic Model to Identify Strategies to Increase Domestic Recycling by 15% and Profitably Grow Domestic Recycling Capacity in the Face of Global Scrap Market Disruptions. *(Exploratory only)*

Design for Re-X

DE-1 Development of Engineering Tools to Generate Design for Re-X Alternatives that Reduce Energy, Emissions, and Material Consumption and Promote Material Recovery/Reuse at End-of-life *(Exploratory or Full)*

Materials Manufacturing Optimization

MM-1 Identification of Processing Changes that Would Allow Manufacturers Increase Their Use of Secondary Feedstocks *(Exploratory only)*

MM-2 Development of Processing Approaches to Increase Secondary Feedstock Content by 20%, Reuse 10% of Scrap Generated During Manufacturing, and Reduce In-Process Losses by 15% for REMADE-Relevant Materials *(Full only)*

Remanufacturing and End-of-life Reuse

RM-1 Increasing Component Reuse by 10% and Extending the End-of-life (EOL) During Remanufacturing Through Development of Cost-effective Processes to Repair Damaged Components *(Exploratory or Full)*

Recycling and Recovery

RR-1 Improving the Recovery Rate of Metals, Polymers, Fibers, and E-waste by up to 20% through Development of Cost-effective Material Sorting Technologies *(Exploratory or Full)*

RR-2 Pathways to Increase Recovery and/or Reduce Energy Intensity by 25% through Development of Cost-Effective Methods to Clean and Purify Scrap Materials *(Exploratory or Full)*

RR-3 Approaches for Increasing the Recycled Content in Polymer, Fiber, and E-waste Feedstocks by 15% *(Exploratory or Full)*

RR-4 Doubling the Recycling Rate of Polymer Waste Streams Through Chemical Recycling (and Recycling using Solvents) *(Exploratory or Full)*

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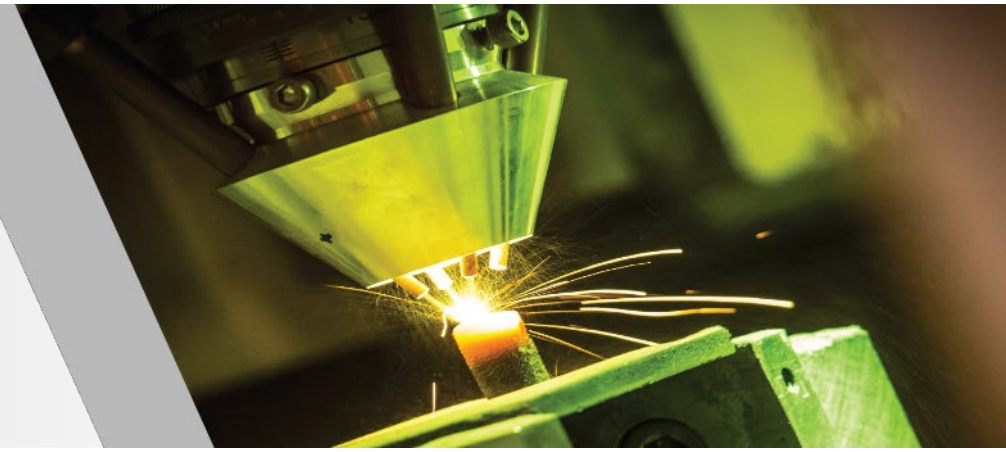

Systems Analysis & Integration RFP Topics

Barbara Reck

SA-1 Techno-economic Analysis to Identify Potential Pathways for Achieving Cost-competitive and Energy Equivalent Feedstocks

Knowledge/Technology Gap: Existing tools used for impact evaluation and research prioritization suffer from these limitations: (1) they are inefficient in considering dynamic market conditions, (2) LCAs and MFAs alone are unable to give a strategic picture on how to reduce energy, (3) they are inadequate at identifying opportunities for cross-industry secondary feedstock utilization.

Background

The global scrap market has experienced disruptions as the balance of trade between nations has dramatically shifted

- 10% decrease in scrap exports to China between 2016 to 2017, requiring the US to find alternate markets for 13.2M tons of scrap exports
- Decreases in scrap commodity prices and increases
- Significant pressure on the profitability of the domestic waste and recycling industry

Focus of RFP Topic – *C*ost competitive US recycling ecosystem

- Capture basic cost structure of the US recycling industry
- Evaluation of current recycling capacity and capital required
- Identification of new technologies, to improve the cost structure/profitability of Material Recovery Facilities (MRFs) and the broader recycling industry, and the potential energy and emissions impacts that would ensue.

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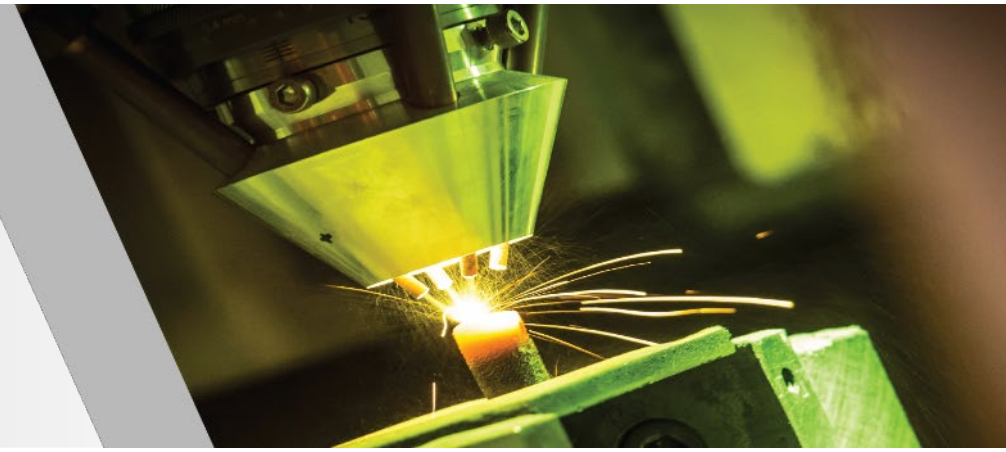

Design for Re-X RFP Topics

Deborah Thurston

DE-1 Development of Engineering Tools to Generate Design for Re-X Alternatives that Reduce Energy, Emissions, and Material Consumption and Promote Material Recovery/Reuse at End-of-life

Knowledge/Technology Gap: Existing design tools lack a methodology for making decisions about longer term techno-economic benefit/costs tradeoffs of Re-X options that could potentially accrue to the OEM. These tradeoff decisions should be made during, rather that after, the design process.

Background

Design for Re-X strategies/guidelines have been developed, but

- Do not provide design engineers with design alternatives that could reduce lifecycle impacts or improve Re-X at end-of-life.
- Are not integrated with tools industry typically uses

Focus of RFP Topic **-** Design for Re-X Tools

- Exchange information/data with LCA Tools and CAD/CAE Tools Industry Uses
- Generate design alternatives based on eco-Design frameworks or guidelines
- Applicable to new or existing designs
- Quantify relative benefits of design alternatives vs energy, emissions, material use.

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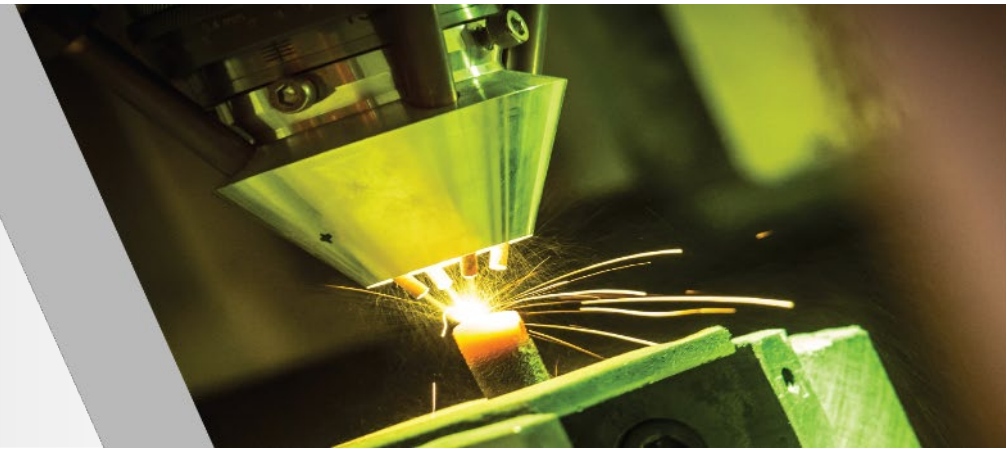

Manufacturing Materials Optimization RFP Topics

Alan Luo

MM-1 Development of Approaches for Accommodating Secondary Feedstock Chemistry Variations during Manufacturing

Knowledge/Technology Gap: The ability to increase secondary feedstock content without adversely impacting properties (e.g., plastic/polymer colors) or performance (properties) is limited.

Background

- Manufacturers attempts to increase secondary feedstock are sometimes limited by the degradation in the properties or performance that result.
- The underlying causes are not always well understood

Focus of RFP Topic - Identify processing changes to increase secondary feedstock use 10%

- Study how relationships between processing, structure, properties, and performance change as secondary feedstock content increases.
- Determine which interactions lead to performance and property degradation
- Identify processing approaches that mitigate degradation seen.
- ID experimental approaches, not solely modeling.

 Funding provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.

MM-2 Development of Processing Approaches to Increase Secondary Feedstock Content by 20%, Reuse 10% of Scrap Generated During Manufacturing, and Reduce In-Process Losses by 15% for REMADE-Relevant Materials *(Full only)*

Knowledge/Technology Gap: Manufacturing processes developed for primary feedstock are unable to tolerate chemistry or performance variations frequently seen in secondary feedstock. Manufacturers often treat complex materials lost during manufacturing as though they are scrapped end-of-life products to be separated for recycling before they can be reused. Low-cost methods to increase yields and reduce in-process losses and defects are not accessible to small and medium enterprise.

Background

- Secondary feedstock materials are often less attractive to manufacturers because they exhibit greater compositional and material property variance than virgin materials.
- Processes applicable for primary feedstocks don't work for secondary feedstocks.

Focus of RFP Topic - Reduce primary feedstock and energy/emissions in manufacturing

- Develop processing (manufacturing) approaches to increase secondary feedstock in mfg, reuse scrap, reduce in-process losses
- Examples exist across all material classes.

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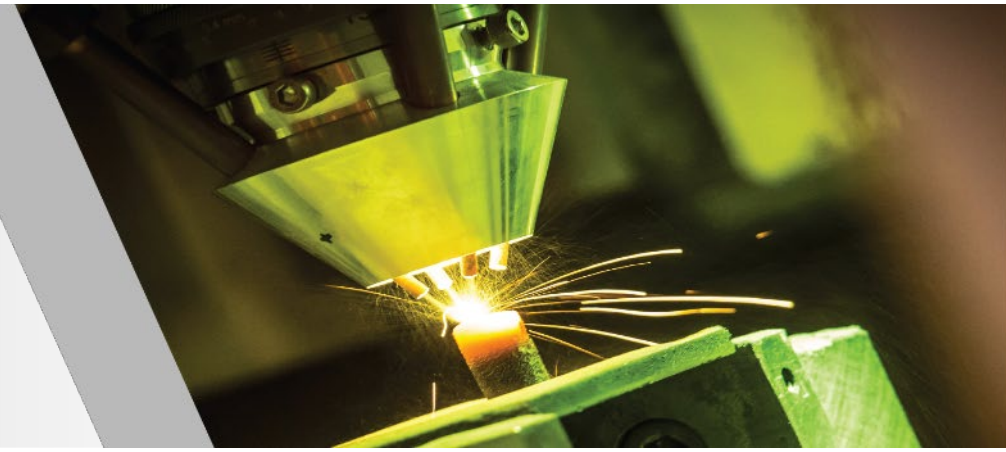

Remanufacturing and End-of-life Reuse RFP Topics

Mike Thurston

RM-1 Increasing Component Reuse by 10% and Extending the End-of-life (EOL) During Remanufacturing Through Development of Cost-effective Processes to Repair Damaged Components

Knowledge/Technology Gap: The costs of labor and key remanufacturing processes, such as component repair, limit reuse yield and remanufacturing intensity.

Background

- Cost and resulting technical performance associated with existing repair processes can be a barrier to repairing components during remanufacturing

Focus of RFP Topic *– Develop cost effective repair processes*

- For products or modules that are currently remanufactured, develop cost-effective repair processes that
  - enable additional components to be reused
  - enable previously reused components to undergo at least one more repair and reuse cycle
- For components where no repair processes exist, develop cost-effective repair processes

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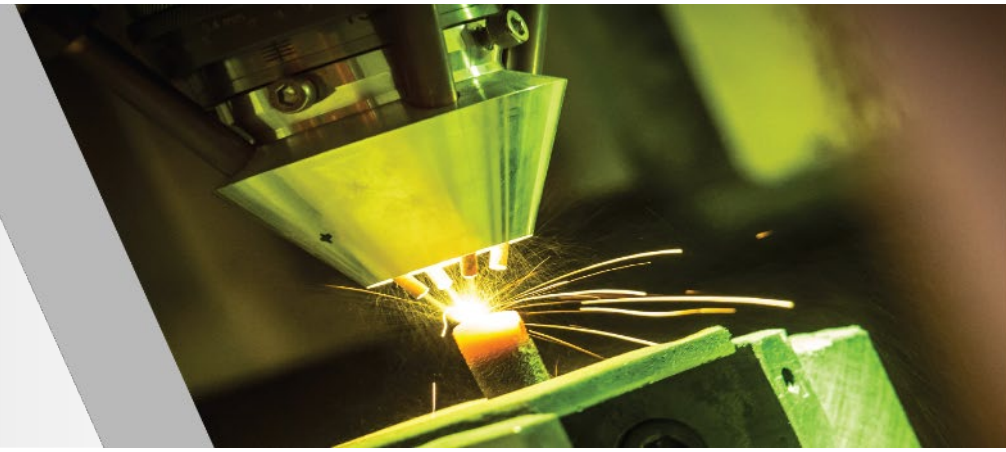

Recycling and Recovery RFP Topics

Eric Peterson

RR-1 Improving the Recovery Rate of Metals, Polymers, Fibers, and E-waste by up to 20% through Development of Cost-effective Material Sorting Technologies

Knowledge/Technology Gap: Technologies for sorting and separating materials are either ineffective, which limits the scrap to lower-quality and lower-value markets, or too expensive, which limits the amount of material that can be recycled or recovered economically.

Background

The ability to recover or recycle material is dramatically influenced by the quality of the incoming material stream. Although pre-sorting by composition or manual sorting are highly effective, they are often not cost-competitive.

Focus of the RFP - Low cost effective methods for automated material sorting

- Applicable to large-volume recycling markets
- Capable of adapting to changes in the content and volume of incoming waste streams
- Examples may include:
  - Sorting different paper grades using techniques such as recycled paper fractionation to separate different pulp grades in the process stream
  - Recovery and purification of metal from comingled streams such as e-waste

 Funding provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.

RR-2 Pathways to Increase Recovery and/or Reduce Energy Intensity by 25% through Development of Cost-Effective Methods to Clean and Purify Scrap Materials

Knowledge/Technology Gap: Technologies for cleaning and characterizing materials are either ineffective, which degrades the value of the scrap and can lead to secondary feedstock variations, or too expensive, which limits the amount of material that can be recycled or recovered economically

Background

Cleaning and contaminant removal requires significant energy and cost to prepare materials for downstream processing. Typical contaminants include surface contamination, food contamination, moisture, and product leave-behind (residual materials that remain at end-of-life or following cleaning) for both polymers and paper fiber.

Focus of RFP – New or improved technology for contaminant removal

- Technology to improve recovery rates and lower energy intensity
- Examples could include:
  - Techniques to reduce the contamination level for old corrugated cardboard (OCC)
  - Improved methods for recycling pulp, including deinking technologies, removal of adhesives and “stickies,” fiber cleaning, and fiber separation to enable reduction in energy and reduce fiber yield losses
  - Improved methods for removing food and other organic contamination from polymers.

 Funding provided by the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.

RR-3 Approaches for Increasing the Recycled Content in Polymer, Fiber, and E-waste Feedstocks by 15%

Knowledge/Technology Gap(s): Current technologies for processing and recovering recycled materials at appropriate quality levels are too expensive for large-scale commercial implementation. Potential integration of downstream users of secondary feedstock materials with secondary feedstock suppliers and mixed waste processing facilities (MWPF) is not well understood or utilized.

Background

Increasing the secondary feedstock content in REMADE-relevant materials requires an understanding of how secondary feedstocks interact with virgin materials and developing suitable approaches for mitigating adverse effects.

Focus of RFP – Develop methods to increase recycled content, promote cross-industry utilization of secondary feedstocks, or increase recovery

Examples could include:

- Develop recovery and processing approaches that allow post-consumer recycled plastics to replace virgin plastics, particularly in high-value applications.
- Identify alternative applications and processing approaches that enable large-scale or cross-industry utilization of secondary polymer feedstocks, particularly for sectors where the use of recycled plastics is limited.

RR-4 Doubling the Recycling Rate of Polymer Waste Streams Through Chemical Recycling (and Recycling using Solvents) *(Exploratory or Full)*

Knowledge/Technology Gap(s): Current technologies for processing and recovering recycled materials at appropriate quality levels are too expensive for large-scale commercial implementation.

Background

The recycling rate of polymers is strongly influenced by the format of the incoming waste stream. For some plastics, traditional mechanical recycling approaches is not effective due to the presence of colorants, co-monomers and other incompatible material types (e.g. plastic layers). Some streams of recycled plastics, particularly those from durable goods such e-waste, include plastics containing additives such as brominated flame retardants or heavy metal pigments that cannot be used in new products due to regulations or consumer concerns. Polymers can also only be mechanically recycled a small number of times without significant changes in properties relative to those of the original virgin polymer.

Focus of RFP Topic - Chemical recycling and/or solvent-based processing, extraction, and purification

Examples could include:

- Chemical recycling processes for recovery and conversion of polyester fibers (as found in composite materials such as clothing and carpet) into monomers suitable for the production of virgin-quality PET
- Process technology for the removal of hazardous additives or pigments from polymers (e.g. brominated flame retardants or heavy metal pigments)

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Questions and Answers

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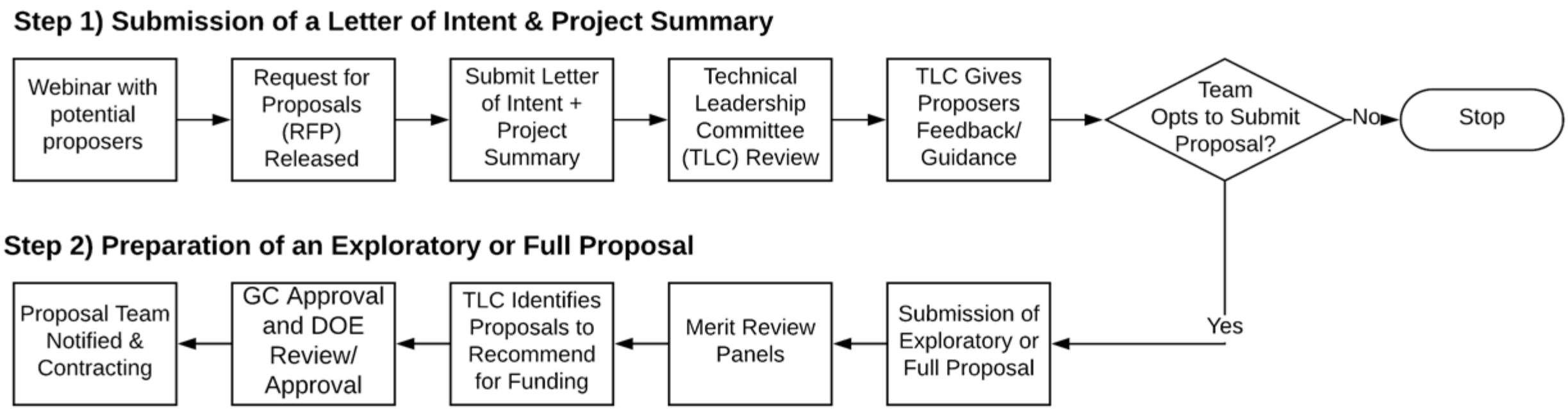
(Preliminary)

Anticipated Details for this Request for Proposal

- 9 Topics aligned to the five REMADE nodes
- Up to $5M in REMADE funding available for awards
- Accepting both Exploratory Proposals and Full Proposals
- Required Cost Share Ratio[1]
- Proposers must be REMADE Members by Proposal Due Date *(Anticipated Mid-December)*

[1] Cost Share Ratio is defined as REMADE Institute funding requested versus Cost Share provided by the proposers.

Overview of the REMADE RFP Process



All questions regarding this RFP must be submitted via email, with the subject line: “REMADE-18-02 Q&A”, to REMADE_RFP@remadeinstitute.org . Questions and Answers will be posted on the REMADE website.

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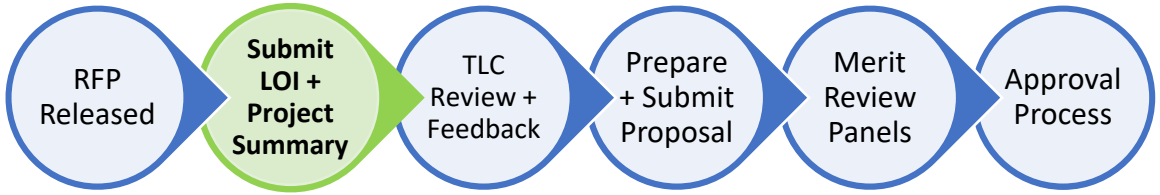
Letters of Intent and Project Summary

(Preliminary)



Required Information

- Identify Exploratory Proposal or a Full Proposal
- Identify Proposal Team Members

Format for Project Summary

- Follow the Project Summary Template

Purposes of this Step

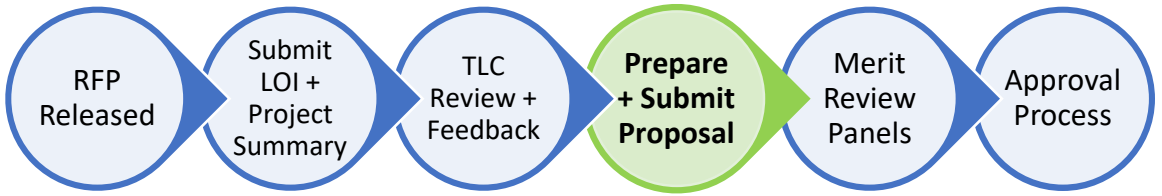
- Ensure alignment of proposal ideas with the goals of the project call
- Provides the REMADE Institute an idea of how many proposals will be submitted
- Enables REMADE to identify proposal reviewers and apply the conflict of interest (COI) policy

Submission Requirements

- The Lead Organization must be a member of REMADE at the time the Letter of Intent (LOI) and Project Summary are submitted.
- Submission of a LOI and Project Summary is required to be eligible to submit a proposal.
- LOI and Project Summary will be submitted electronically to: REMADE@remadeinstitute.org
- Must submit Letter of Intent and Project Summary *Anticipated Late October*

(Preliminary)

Differences between Exploratory and Full Proposals



Exploratory Proposals (16 pages)

- Provide funding aimed at demonstrating proof of concept and/or reducing uncertainty
- Appropriate for high-risk/high reward technical projects
- Guided by a significant industry-identified REMADE-relevant technical or economic barrier.
- 12 month or less
- Up to $200K total project costs* (REMADE funding + cost share)
- Up to $1M anticipated from REMADE for exploratory proposals

Full Proposals (20 pages)

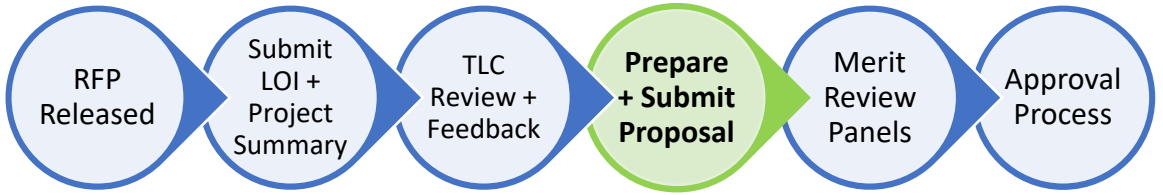
- Proof of concept already demonstrated or have addressed key uncertainties
- Should lead to validation in a “lab” or “relevant” environment by the end of the project.
- 12 – 24 months
- Up to $1M total project costs* (REMADE funding + cost share)
- Up to $4M anticipated from REMADE for full proposals

* Assuming 1:1 cost share

The Institute strongly encourages teaming between companies, national laboratories, and universities

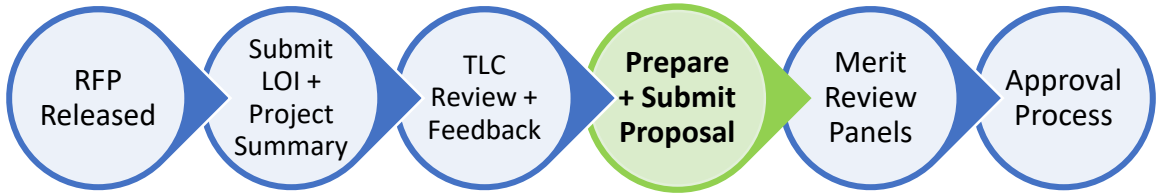
(Preliminary)

Preliminary Statement of Project Objectives (SOPO)



- The SOPO provides a clear and concise statement of goals of the project including expected outcomes, tasks, schedules and milestones. It is the workplan of the project.
- Project SOPOs including milestones are included into the REMADE Institute SOPO and used to monitor Institute progress.
- For this proposal, we are asking for a Preliminary SOPO
  - Tasks, Milestones, Go/No-Go Decision Points
  - Project Management and Reporting

Milestones & Go/No-Go Decision Points



Milestones

- Utilize S.M.A.R.T. Milestones, with metrics of success, **minimum of one milestone/quarter**
- Should ideally **reflect attainment of tangible, measurable results** required to demonstrate technical progress or move the project toward completion of Go-No/Go decision criteria or accomplishment of project objectives.
- Submittal of a report can be part of the milestone documenting the results or progress, but the **report in and of itself should not be the milestone.**

Go/No-Go Decision Points

- At least one annual Go/No-Go decision point for any proposed work that will span more than one year

Preparation of S.M.A.R.T. Milestones

Acronym	Further Clarification
S = Specific	Clear and focused to avoid misinterpretation. Should include measures, assumptions, and definitions and be easily interpreted.
M = Measurable	Can be quantified and compared to other data. It should allow for meaningful statistical analysis. Avoid "yes/no" measures except in limited cases, such as start-up or systems-in-place situations.
A = Achievable	Attainable, reasonable, and credible under conditions expected.
R = Relevant	Achievement of the milestone contributes to and is relevant to achieving the objectives of project; is important to moving the project forward/measuring progress against the Go/No-Go decision criteria and successful completion of the project.
T = Timely	Doable within the time frame given.

Risks and Risk Abatement Plans

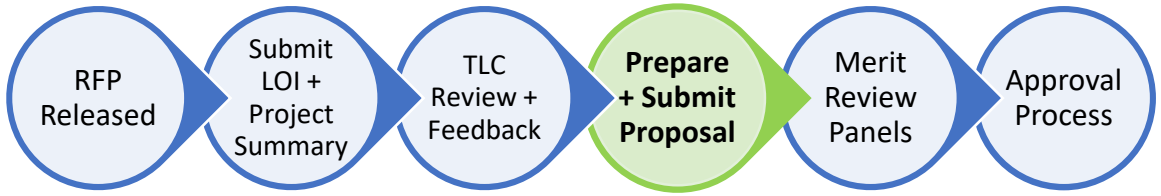


Table for Preparing a Risk Abatement Plan

Task	Risk	Risk Type (C/S/T)	Prob (P)	Imp (I)	Risk Score	Risk Abatement Plant
			H	H	9	
			H	M	6	
			H	L	3	
			M	M	4	
			L	L	1	

Risk Abatement Plan Best Practices

- Every project has risks, including yours
- Not identifying a risk does not mean it doesn't exist
- Credible projects properly identify risks
- Successful projects develop plans to manage risks
- Risk management is a dynamic process throughout the life of the project – review the plan regularly
- Need to have a plan to address the risk built into the schedule for any risk score of 6 or above

Guidelines for Estimating Probability/Impact

Probability Score

- H – Already know it is an issue
- M – May be an issue. Plan for how to address it
- L – Not likely to occur

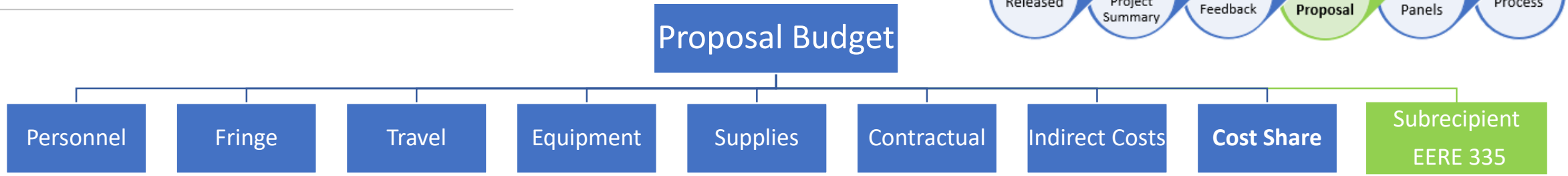
Impact Score

- H – Significant C/S/T risk to project success
- M – Could impact project success
- L – Not likely to impact project success

Examples for Estimating Impact Risk for a Project

Risk Type	Impact	Impact Examples (for a 2 year project with $1M budget)
Cost	H	Financial Impact to Project (Labor or Matl's) **> $75K**
	M	**$25K <** Financial Impact to Project (Labor or Matl's) **< $75K**
	L	Financial Impact to Project (Labor or Matl's) **< $25K**
Schedule	H	Project Delay **> 3 months**
	M	**1 month** < Project Delay **< 3 months**
	L	Project Delay **< 1 months**
Technical	H	Prevents current approach from reaching required level of performance. Alternate solution required.
	M	May impact ability to reach required performance or requires a modification to the approach to succeed.
	L	Current approach has been proven for this (or similar) applications.

Preparation of Budgets & Cost Share



Budget Preparation

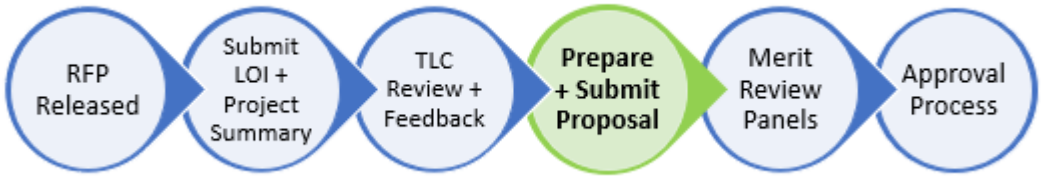
- Lead Organizations must complete the EERE 335 for the project as a whole (including Project Team and Contractors)
- All proposers, and their subrecipients are required to complete the Budget Justification Workbook, Form EERE 335.
- The Budget should break down cost into categories outlined in the EERE 335 Form
- Max base hourly rate should be no more than $120/hour
- All costs must be directly related to the project

Cost Share

- Minimum 1:1 cost share required (i.e. $1 REMADE funding must be matched by at least $1 of cost share)
- The team as a whole is required to meet the 1:1 cost share requirement (not every team member)
- Industry cost share viewed more favorably in the evaluation criteria
- Cost share may be in-kind or cash, but must be incurred within the project Period of Performance
- Participating organizations providing cost share must be Members of REMADE

All Project Members must be members of The REMADE Institute

Team Member vs Supplier



Team Members

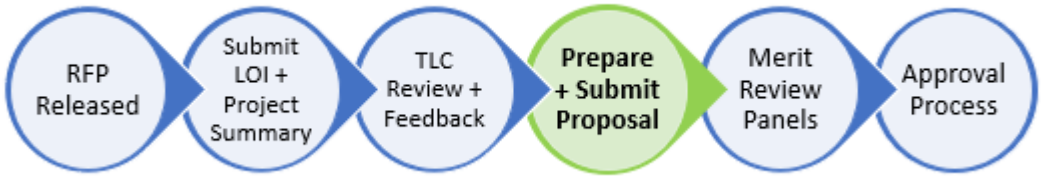
- Have a specific role or function on team
- Responsible for specific tasks/milestones
- Must be a member of REMADE
- Example: Produce 500lbs of material for pilot test

Suppliers

- Provide a service or material required to execute the task
- Do not have to be a member of REMADE
- Example: Provide 500lbs of material for $2K

(Preliminary)

Submission Requirements



Use the following naming conventions in the subject line of the e-mail

"**Full_Prop**-REMADE-18-02-<Lead Organization>-Proposal Title"

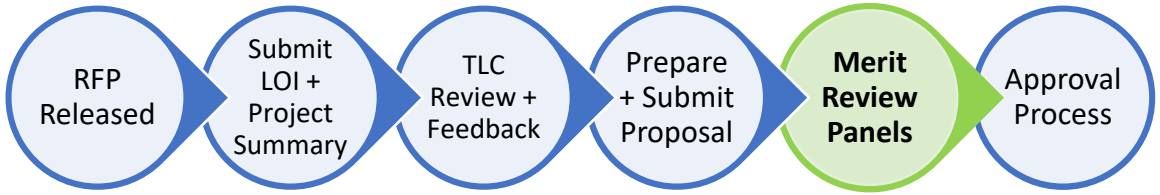
"**Exploratory**-REMADE-18-02-<Lead Organization>-Proposal Title"

- Proposals should be submitted electronically to: REMADE@remadeinstitute.org
- Each proposal team must submit its exploratory proposal and Cost Volume (using the EERE 335 Budget Justification Excel Template)
- All parties involved with the project must fill out an EERE 335
- Proposals due no later than ***Anticipated Mid-December***
  Late proposals will not be reviewed.
- Proposal submitters will receive an email confirmation that their proposal was received.

The Institute strongly encourages teaming between companies, national laboratories, and universities

(Preliminary)

Evaluation Criteria



Exploratory Proposals

Evaluation Criteria
Project Summary
Technical Approach
Technology Transition Plan
REMADE-Relevant Impacts
Team Qualification and Resources
Project Management Plan
Budget/Cost Summary

Full Proposals

Evaluation Criteria
Problem Statement and REMADE Relevance
Project Goals and Objectives
Technical Approach
Technology Transition Plan
Energy, Emissions, Material Efficiency, and Industry Impacts
Team Qualifications and Resources
Project Management Plan
Budget/Cost Summary

The Institute strongly encourages teaming between companies, national laboratories, and universities

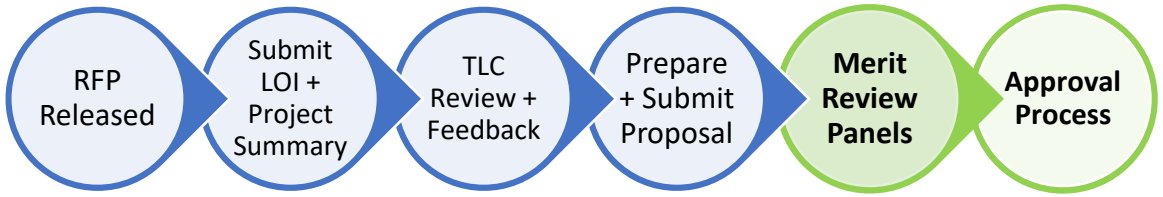
(Preliminary)

Example of Evaluation Criteria for Technical Approach (Exploratory)

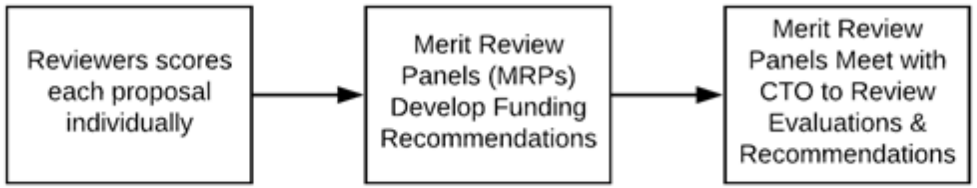
Criteria	Evaluation Criteria for Technical Approach (0-20 Points)	Score
Work Plan	The key technical elements and associated tasks that will be required are clearly defined. Task owners identified. Plan for achieving the project goals is credible.	0 – 4
Technical Development	Research and development techniques to solve problem are clearly described, well formulated. Scientific/technical aspects are original, innovative or novel.	0 – 4
Expected Results and Deliverables	Expected results that will be achieved are detailed. Description of how and where the proposed solution will be tested and validated is provided. Deliverables specify what will be delivered, including the format of the deliverable	0 – 4
Motivating Industry Investment/Adoption	Primary reasons why this proposed approach will enable successful industry adoption (especially relative to prior efforts) are well described.	0 – 4
Project Performance	Baseline and Project Goal KPIs quantified. Milestones, and Go/No-Go decisions provided to help project progress are fully described.	0 - 4

(Preliminary)

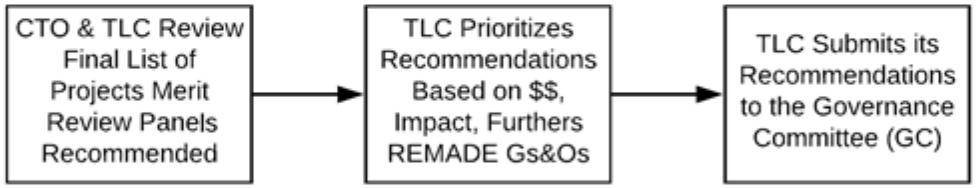
Proposal Review and Award Process



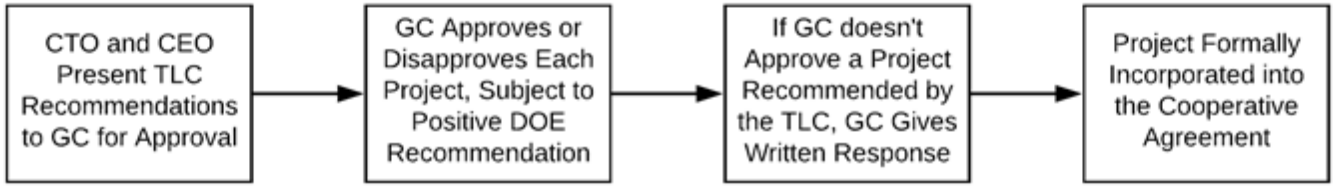
Proposal Evaluation Procedures (Merit Review Panels)



Proposal Selection Recommendations



Final Approval of REMADE Recommended Projects



Focus of this Activity

Technical Merit

Alignment

Impact

(Preliminary)

Anticipated Dates for this Request for Proposals

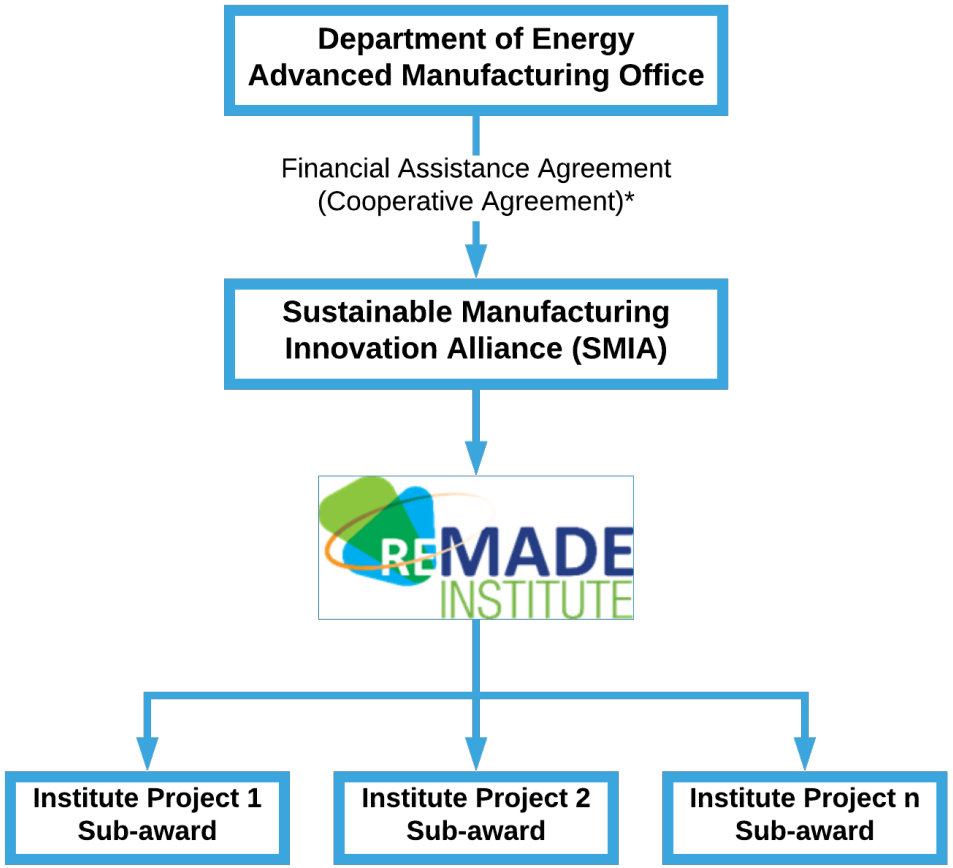
Proposal Review Stage	Key Dates (tentative)
Preliminary Project Call Webinar	October 1, 2018
Request for Proposals Released	Early October
Letters of Intent and 1- page Project Summaries Due	Late October
Feedback Provided to the Proposal Teams	Early November
Exploratory Proposals and Full Proposals Due	Mid-December
Projects recommended for funding submitted to DOE-AMO	Early February 2019
Proposal Teams Notified of Decision	February 2019
Anticipated Project Start Date	June 2019

 Funding provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.

REMADE Membership

- Organizations participating in Project Call proposals MUST be a member of REMADE by proposal due date
- Membership categories: Industry, Academic, Affiliate, and National Labs
- Membership Inquiry Form can be obtained via the REMADE website
- Provides overview of the different membership options and corresponding benefits/costs
- For membership questions or more information, please contact:
  - Kevin Kelley, Director of Sustainability & Business Development (kkelley@remadeinstitute.org or 585.213.1033)

Relationship between DOE, REMADE, and Sub-award Recipients



Subject to Cooperative Agreement Terms and Conditions

* Substantial involvement by DOE AMO in the management, control, direction or re-direction and performance of institute activities (provisions outlined in Term 7 of cooperative agreement)

Why are institute awards cooperative agreements?

- Due to their size, significant amount of funding, and public visibility

Which parties are involved in my award agreement?

- Technical projects selected will not result in any agreements directly between AMO and the project team members
- Technical Project Agreements will be executed between project team members and REMADE (SMIA)
- Funded Projects will be incorporated into the REMADE award with DOE as individual sub-awards

What Terms & Conditions apply for new project agreements?

- All Terms and Conditions that apply to REMADE in the SMIA award with DOE will flow down and also be incorporated into each new individual project agreement.
- REMADE Award Terms and Conditions include requirements for: Statement of Project Objectives, milestones and Go-No/Go decision points, project budget and cost share provisions, NEPA clearance, project review meetings, deliverables and written reports, among other things.

What else can you tell me about the award negotiation process and expectations/requirements?

- A conference call will be set up after selection of projects to go over in more detail the award negotiation process and expectation/requirements.

Questions and Answers

 Funding provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Advanced Manufacturing Office Award Number DE-EE0007897.