

---

# Pre-Proposal Conference

## End-Use Markets for Byproducts from the Recycling & Energy Center

September 17, 2020

Phase I Proposal Due Date: December 4, 2020

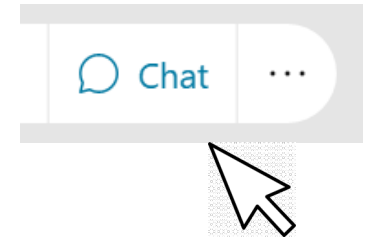


**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE

# Welcome

- **Please keep your mic muted at all times**
- Questions?
  - **Ask today:** Use the “Chat” feature in WebEx (lower right corner of your screen) to type in your question
    - *Note: Oral statements (including during this pre-proposal conference) shall not be relied upon to be terms of the RFP documents. All modifications to RFP documents shall be in writing.*
  - **Ask after the meeting:** email [sholl@recyclingandenergy.org](mailto:sholl@recyclingandenergy.org)
- Agenda
  - Presentation
  - Q&A



---

# Presentation

- Overview of Ramsey/Washington Recycling & Energy
- Overview of End-Markets RFP
- Materials for End-Markets
- RFP Process and Information
- Q&A after presentation

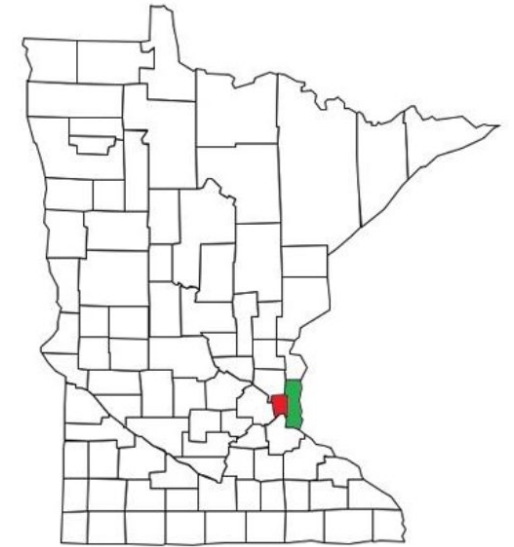


**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE

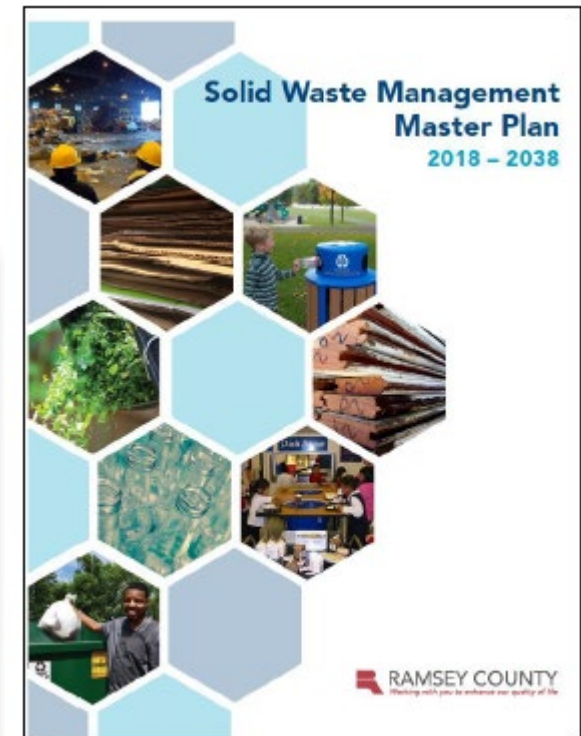
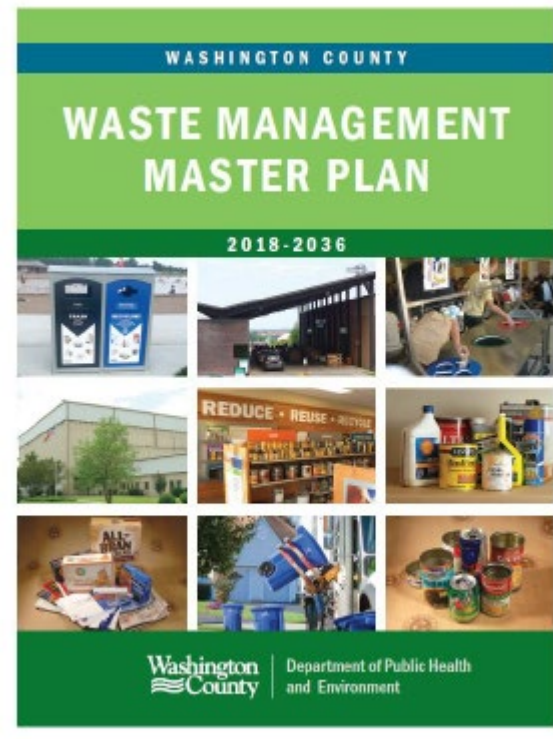
# Ramsey & Washington Counties, MN

- Two counties in the eastern part of the seven-county Minneapolis-St. Paul metropolitan area
- Population of around 813,000
  - 14% of the population of Minnesota
- Nearly 600 square miles
- Consists of urban, suburban and rural areas
- In Minnesota, counties are the unit of government responsible for the management of solid waste



# An Integrated Waste System

- **Prioritizing waste reduction & reuse**
- **Emphasis on source-separation**
  - Traditional recyclables
  - Organics (food waste)
  - Yard waste
- **Robust problem materials management**
  - Household hazardous waste
  - Commercial haz. waste regulation
- **Resource recovery at the R&E Center**
  - Produce RDF for waste-to-energy
  - Recover recyclables
  - Plans to recover more materials



**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE

# Ramsey/Washington Recycling & Energy Board

- Joint Powers Board
  - 9 County Commissioners
    - 5 Ramsey County
    - 4 Washington County
  - 2 Ex-Officio members
    - Minnesota Pollution Control Agency (MPCA)
    - City of Newport



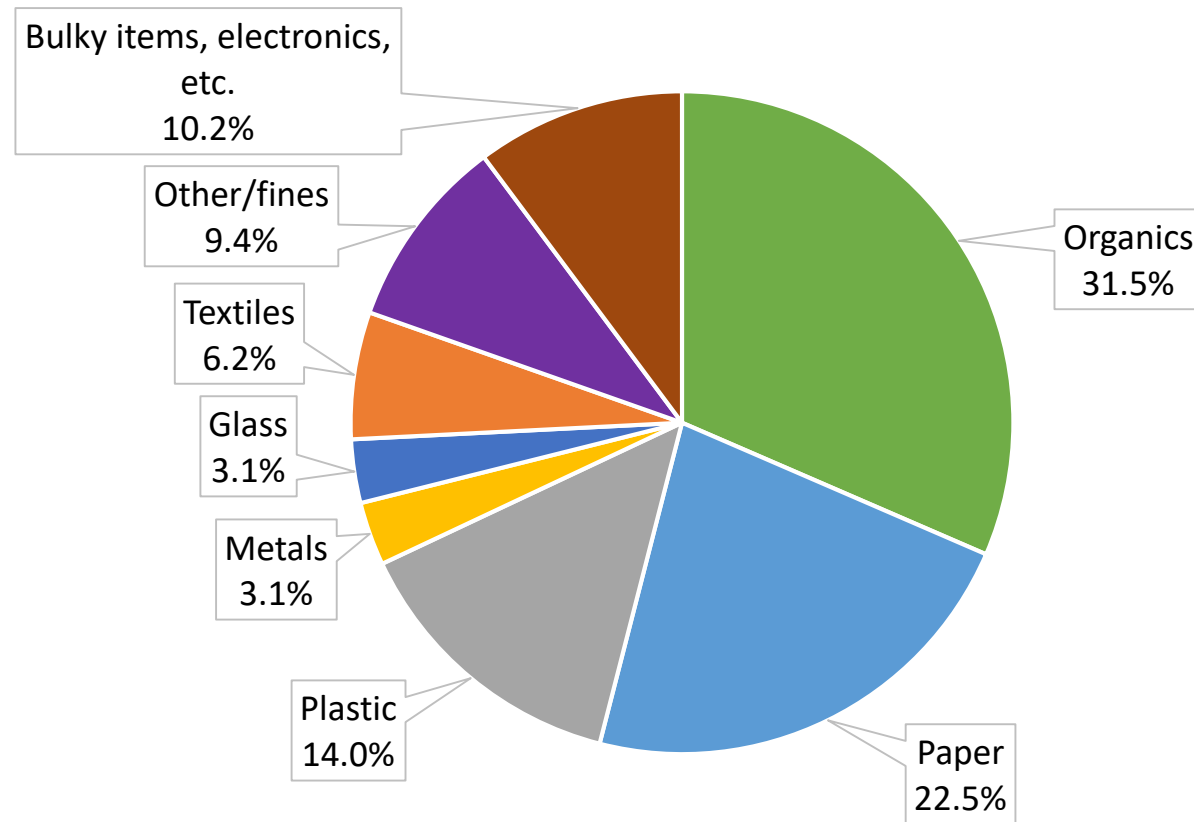
# About the R&E Center

- Began operations in 1989
  - Originally privately-owned
  - In 30 years, over 10.5 **million** tons of MSW have been delivered here
- Purchased by Ramsey/Washington in 2015
  - Designation (flow control) ordinances implemented in 2018
- Annually, the R&E Center:
  - Manages about 450,000 tons of MSW
  - Recovers about 14,000 tons of metals from the trash for recycling
  - Landfills less than 15% of MSW generated in the two counties



# Opportunity to Capture Resources

**MSW Composition by weight (2018)**





---

# Mission, Vision, and Guiding Principles

**Mission:** Enhancing public health & the environment by creating value from waste through partnerships

## Guiding Principles

1. Plan for a 20- to 30-year horizon
2. Build on the current system and allow changes in processing to emerge over time
3. Assure flexibility
4. Manage risks
5. Pivot the view from “waste” to “resources” to add value to the local economy and the environment



---

# Paradigm Shift: Waste as a Resource

## *Turning a liability into an asset*

- Follows 5+ years of comprehensive analysis
- Looking ahead to the next generation
- Critical shift in thinking and policy
- Why?
  - To manage resources locally
  - Ensure flexibility
  - Embrace new technology



# End-Markets Solicitation: Project Goals

1. The project(s) will support the integrated solid waste management system and solid waste management master plans of [Ramsey County](#) and [Washington County](#).
2. The project will minimize the negative environmental health impacts of MSW management, including minimizing anthropogenic and biogenic greenhouse gas and criteria pollutant emissions.
3. The R&E Board will ensure adequate local organics capacity for organic wastes managed from the two counties.
4. The R&E Board preference is for private financing, ownership, development and operation of a proposed facility. However, R&E Board would consider a project that is R&E Board financed and/or owned.
5. The project will be located on a site secured by the proposer, acceptable to the R&E Board. The R&E Board and its member counties may consider providing a site as an alternative option.
6. The project will commence full operations within five (5) years of contract execution, contingent upon timely federal, state and local approvals.



# Two-Phase Solicitation

## Phase I

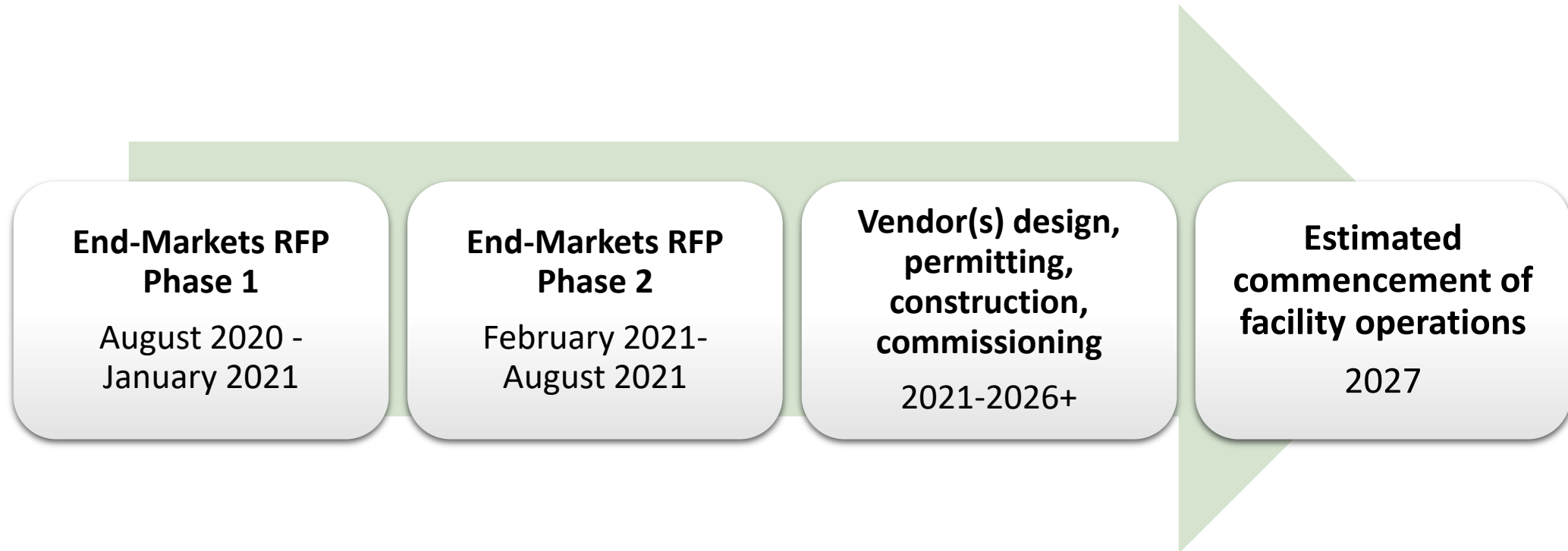
- Vendors may propose to manage one, two **or** all three materials
- R&E will be largely “technology agnostic”
- Review proposals and select proposer(s) to respond to Phase II RFP

## Phase II

- Open to select proposers from Phase I RFP
- Vendors respond to supplemental RFP, conduct further analyses and submit final proposal
- Final proposal: technology approach; pricing; business, marketing, financing aspects, etc.
- R&E select finalist(s) for contract negotiation to develop project(s)

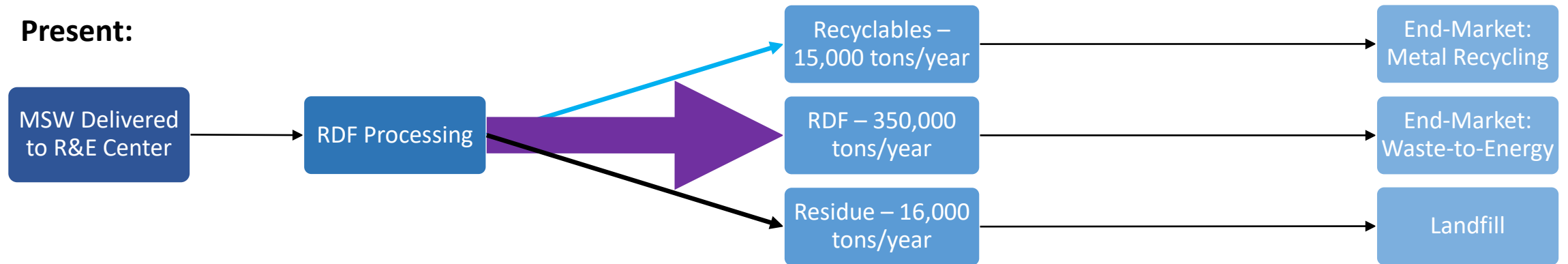


# Overall Timeline

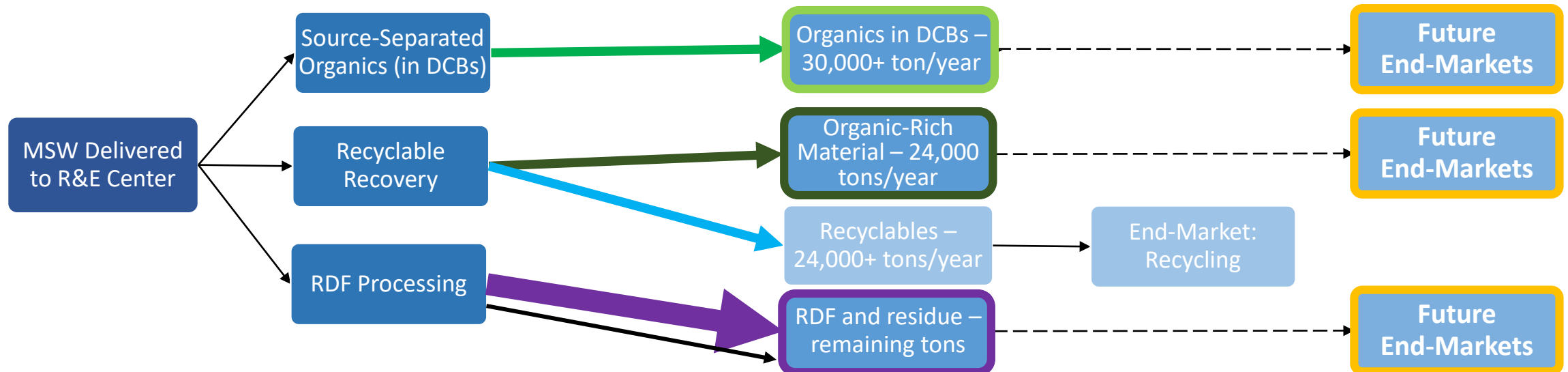


# R&E Center Byproducts → Feedstocks for End-Markets

## Present:



## Future:



---

# Feedstock Materials from the R&E Center

- Source-Separated Organics in Durable Compostable Bags (DCBs)
- Organic-Rich Material from the Recyclable Recovery System (RRS)
- Refuse-Derived Fuel (RDF)

***This RFP is intended to find qualified vendors to accept and use one, two, or all three of the feedstock materials.***

Technologies for the management of the materials may include, but is not limited to, composting, anaerobic digestion, pyrolysis, gasification, or chemical recycling.



# Source-Separated Organics in DCBs

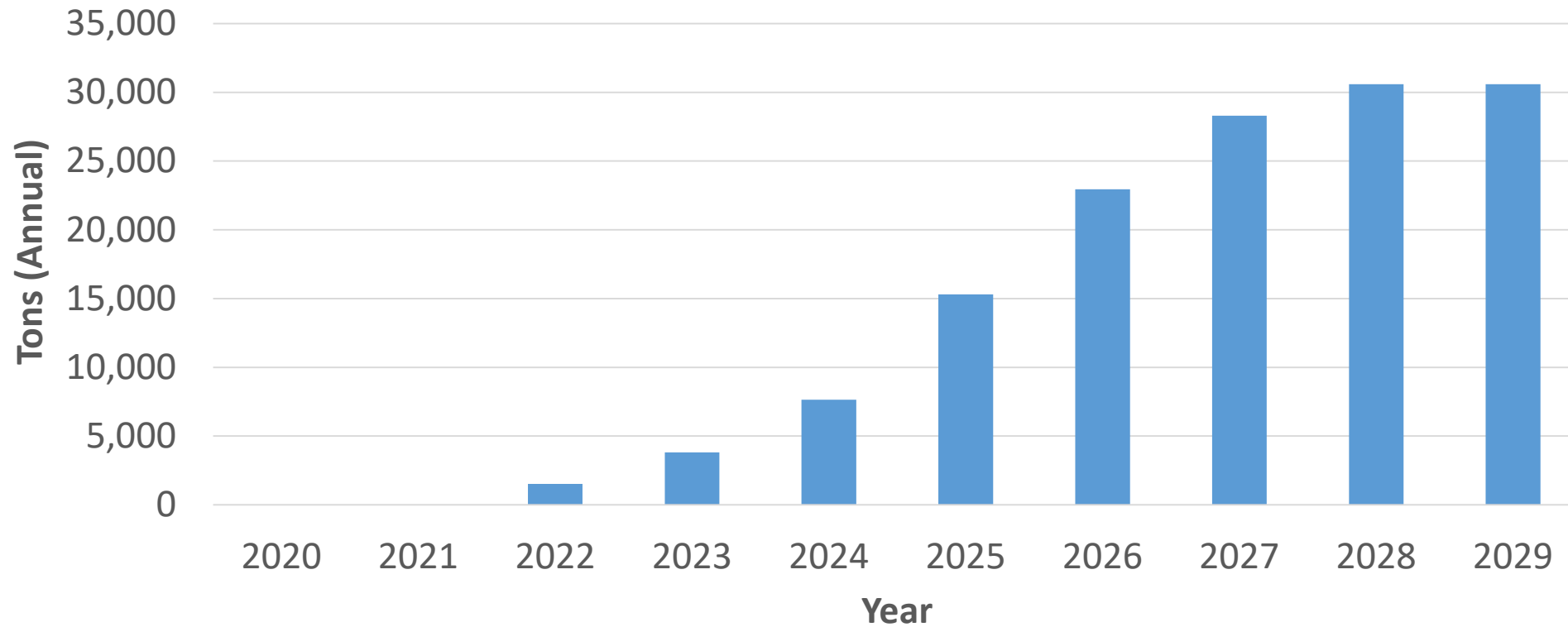
- Starting in 2022, R&E will launch a new opt-in source-separated organics collection program
- Participating households will receive durable compostable bags (DCBs) to collect organics (food scraps) and place in garbage container
- DCBs recovered at R&E Center/transfer stations
- High-quality organics (low contamination)
- R&E preference for anaerobic digestion with renewable natural gas production





# SSO Est. Material Volumes & Timing

Estimated Annual Tons of SSO in DCBs



# Organic-Rich Material (ORM)

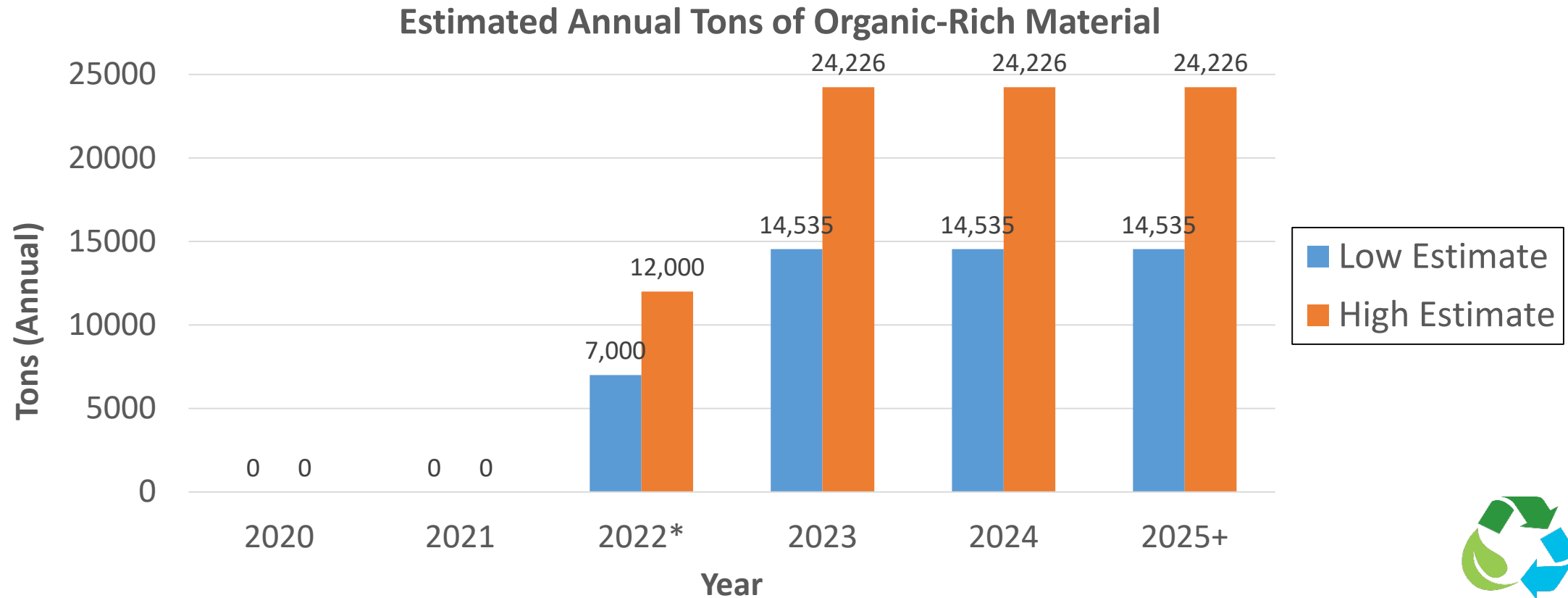
- Starting in 2022, the R&E Center plans to commence operation of a Recyclables Recovery System (RRS) to recover high-value recyclables from MSW
- RRS will also separate the organic-rich fraction of MSW
- ORM: organics recovered from loose MSW (i.e., not in DCBs) via 2-inch minus fraction (also from 6-inch fraction)
- Highly organic but also expected to contain inorganic materials (grit, glass, sand, dirt, etc.)

**ORM Seasonal Test Results**  
(Excerpted from Table 2-4)

Characteristic	Low	High
Moisture	32.7%	60.0%
Fines (<6 mm)	11.4%	30.2%
Inorganics	14.6%	47.7%
BMP (mL CH <sub>4</sub> /g)	149.6	339.0



# ORM Est. Material Volumes & Timing



\*Assumes commencing of RRS operation in Q3 2022



# Refuse-Derived Fuel

- R&E Center currently produces ~350,000 tons of RDF annually
- Currently used by Xcel Energy in two waste-to-energy (combustion) facilities in Southern MN

RDF Analysis/Xcel Requirements  
(Excerpted from Table 2-5)

Characteristic	Average	Max.
BTU/lb.	5000-5500	-
Moisture	25%	40%
Particle Size	8" x 8"	12" x 12"
Ash (Dry)	15%	20%

- Recently completed seasonal analysis on biogenic and non-biogenic content of RDF (Q3 2019 through Q2 2020)

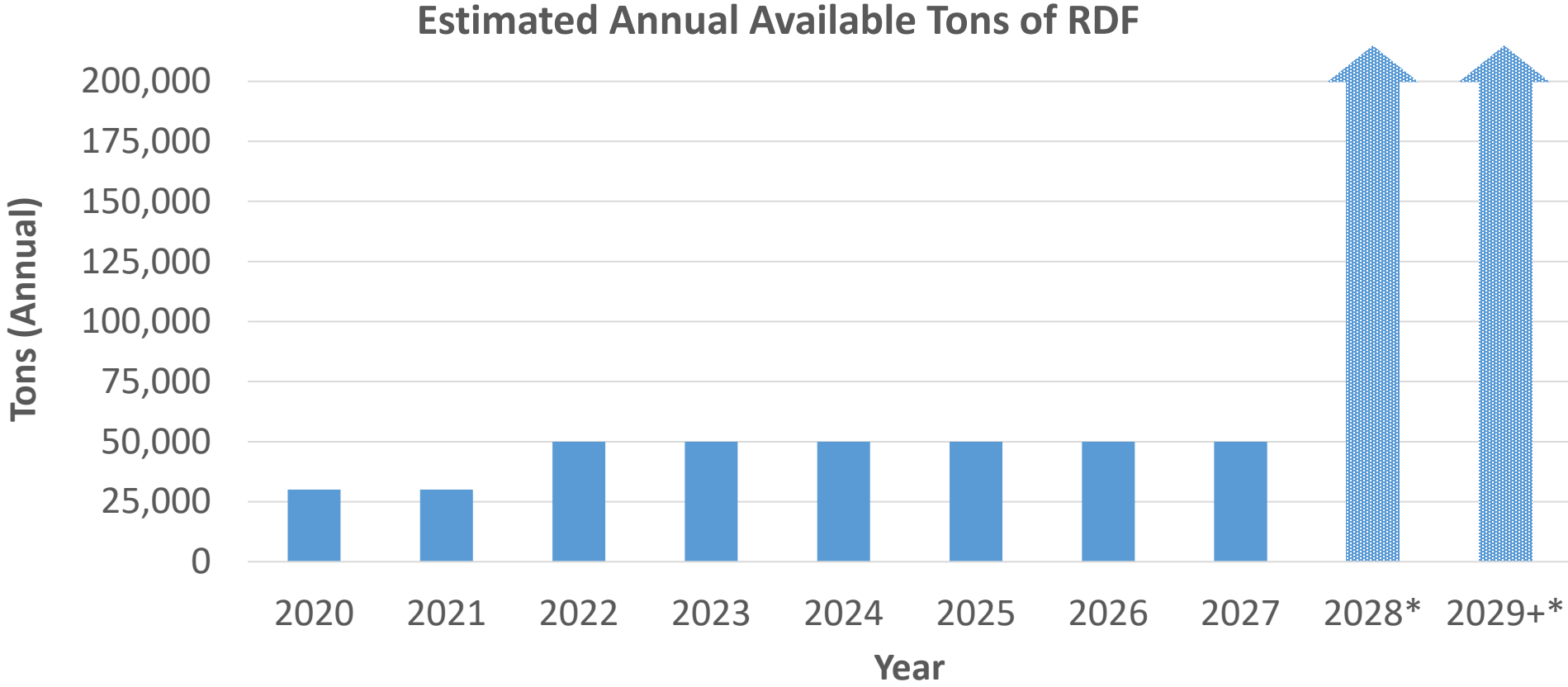
- Updated averages (*see Addendum 1, published 9/3*):

**Biogenic carbon: 54%      Non-biogenic carbon: 46%**

- RFP is seeking vendors that can accept and use 20,000 tons or more annually of RDF



# RDF Est. Material Volumes & Timing



*\*Available quantities post-2027 expected to be greater than previous years – exact quantities not yet estimated*



---

# RFP Process Point of Contact & Addenda

Section 1.7 of RFP – Table 1-2 – Point of Contact

All inquiries shall be submitted to Sam Holl at  
[sholl@recyclingandenergy.org](mailto:sholl@recyclingandenergy.org)

All addenda will be published on the R&E website at  
[www.morevaluelesstrash.org/vendor-opportunities](http://www.morevaluelesstrash.org/vendor-opportunities)



**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE

# End-Markets RFP Schedule

## Key Dates

- Deadline for questions October 1, 2020 4pm CT
- Final addendum for Q&A published October 22, 2020
- Deadline – Phase I proposals December 4, 2020 4pm CT
- Vendor interviews (as necessary) Week of January 4, 2021
- Proposers informed of Phase II selection March 1, 2021



# Phase I RFP Process

## Section 4.1 of RFP – Table 4.2 – Proposal Checklist

- Transmittal Letter (page 19)
- Executive Summary (page 20)
- General Company Information (page 20)
- Description of Technology (page 20-21)
- Description of Operations (page 21)
- Description of Materials Management (page 21-22)
- Marketing Information and Experience (page 22)
- Environmental Permits and Controls (page 22-23)
- Reference Facility (page 23)
- Facility Economics and Financing (page 24)
- Completed Solicitation Response Form (Attachment 1)
- Application for Designation of Trade Secret Information (Attachment 2)



**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE



# Phase I RFP Evaluation Criteria

## Section 3.2 of RFP – Evaluation Criteria

### Technical/Operational:

- Proposer's demonstrated experience in project development, permitting, design and construction, and operation of proposed facilities
- Proposer's demonstrated experience in marketing and selling the products (or similar products) to be produced
- The proven commercial viability of the technology and the responsiveness of the proposer's technical proposal
- The scalability and adaptability of the technologies and facilities proposed and overall approach and fit to the DCBs, ORM, or RDF produced by the R&E Center
- Proposer's proposed project schedule
- Proposer's comprehensive identification of and approach to siting and permitting requirements and issues.

### Financial:

- Proposer's demonstrated financial strength and ability to finance the capital costs, including construction and operation of the facilities proposed
- The contractual terms and price to be offered to or requested from the R&E Board
- Project economics and funding
- Innovative ideas to reduce the expected initial or ongoing costs and environmental impacts of the project



---

# Next Steps

- Notify Sam Holl via email ([sholl@recyclingandenergy.org](mailto:sholl@recyclingandenergy.org)) if you wish to be added to the e-distribution list
- Next Steps
  - Addendum with pre-proposal conference questions
  - Additional questions due by October 1, 2020, 4:00 pm CT



# Question & Answer



*Oral statements (including during this pre-proposal conference) shall not be relied upon to be terms of the RFP documents. All modifications to RFP documents shall be in writing.*



**RAMSEY/WASHINGTON  
RECYCLING & ENERGY**  
CONNECTING VALUE TO WASTE