

CITY COUNCIL REPORT

TO: Rick Naimark
Deputy City Manager

FROM: John A. Trujillo
Public Works Director

SUBJECT: TRANSFORMING TRASH INTO RESOURCES REQUEST FOR PROPOSALS (RFP) AND REIMAGINE PHOENIX CALL FOR INNOVATORS (CFI) UPDATE

This report provides the Transportation and Infrastructure Subcommittee with an update on the Transforming Trash into Resources Request for Proposals (RFP) and the Reimagine Phoenix Call for Innovators (CFI).

THE ISSUE

Transforming Trash into Resources RFP

On March 9, 2015, the Public Works Department issued the Transforming Trash into Resources RFP to identify new partners to help the City reach its goal of diverting 40 percent of its trash by the year 2020. Public Works received eight responsive proposals outlined below.

RFP Categories	Responsive Proposals
Category 1 – Non-Rechargeable Dry Cell (Alkaline) Batteries	1
Category 2 – Carpeting and Carpet Foam	1
Category 3 - Furniture	0
Category 4 – Latex Paint	0
Category 5 – Mattresses	2
Category 6 – Palm Fronds	0
Category 7 – Residential Food Waste	3
Category 8 – Other (Construction Debris)	1

A panel appointed by the Public Works Director evaluated all eight responsive proposals based on the following criteria, as established in the RFP: business plan (450 points); community impact (350 points); and qualifications and experience (200 points). The panel included representatives from Arizona State University (ASU), Republic Services, and City staff from Public Works, Community and Economic Development (CEDD), and the Water Services Departments. The panel is recommending staff negotiate with the top-ranking proposer in each of the following three categories:

- Category 2 (Carpeting and Carpet Foam) – Planet Recycling
- Category 5 (Mattresses) – Goodwill of Central Arizona (Goodwill)

- Category 7 (Residential Food Waste) – Recycled City, LLC

Staff will bring forward contract awards for the Subcommittee's recommendation in the fall.

Reimagine Phoenix CFI

On March 9, 2015, the Public Works Department also partnered with the CEDD to issue the Reimagine Phoenix CFI. The CFI requested information that would allow the City to identify the highest and best uses of the materials deposited by Phoenix residents in their garbage and recycle bins and to understand the business opportunities that could be created locally from those materials. The City received 118 responses from 75 organizations as outlined below.

CFI Categories	Innovators Profiles
Category 1 – Manufacturers with Market-Ready Processes	21
Category 2 – Market-Ready Waste to Liquid Fuel Technologies	25
Category 3 – Market-Ready Waste to Gaseous Fuel Technologies	15
Category 4 – Market-Ready Waste to Electricity Technologies	22
Category 5 – Start-Up/Emerging Technologies and Processes	8
Category 6 – Everything Else	27

Category 1 - Manufacturers with Market-Ready Processes

Innovator Profiles submitted for Category 1 included suggestions for the following: repurposing construction debris, green organics, food waste, and glass into new construction and road materials; manufacturing new plastic products from recycled plastics; and generating animal feed, humus, and compost from food waste.

Category 2-4 - Market-Ready Waste to Liquid Fuel Technologies, Market-Ready Waste to Gaseous Fuel Technologies, and Market-Ready Waste to Electricity Technologies

Innovator Profiles submitted for Categories 2-4 described conversion technologies that transform construction debris, green organics, food waste, glass, plastics, paper, cardboard, carpeting, furniture, and tires into ethanol, biodiesel, synthetic gas, and electrical power. The City has engaged a conversion technology expert, through an existing on-call engineering consulting contract, to analyze the waste-to-energy technologies described in the submittals.

Category 5 - Start-Up/Emerging Technologies and Processes - Incubator Tenants

As stated in the CFI, the responses in Category 5 will be used to program the Technology Solutions Incubator to be located at the Resource Innovation Campus. Examples of innovations submitted for this category include: creating building materials from recycled materials; designing new municipal waste sorting systems; producing crude oil from plastics; manufacturing mulch and asphalt repair products from construction debris; and transforming algae into crude oil. The City has asked ASU and the Resource Innovation and Solutions Network (RISN), through an existing agreement, to review these innovator profiles and to incorporate them into the technology solutions incubator planning process.

Category 6 - Everything Else

Innovator Profiles submitted for Category 6 included suggestions for education and awareness programs, materials exchange programs, garbage disposal rebates, trash can technology sensors, water bottle filling stations, and new recycling programs for textiles, boxes and packing materials, furniture, plastics, aluminum and glass.

Based on staff's review of the innovator profiles, there is significant market interest in the City's trash stream. Multiple uses for various trash resources have been presented, across the CFI categories, with varying levels of economic benefit, resource requirements, and City assistance. Due to the volume and complexity of the innovator responses, staff will return in the fall to request Subcommittee approval to issue future RFPs resulting from the CFI.

RECOMMENDATION

This report is for information and discussion.