

Late Backup

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## MEMORANDUM

**TO:** Mayor and City Council

**CC:** Elaine Hart, Interim City Manager  
Robert Goode, P.E., Assistant City Manager

**FROM:** Sam Angoori, P.E., Interim Director  
Austin Resource Recovery

**DATE:** Sept. 13, 2017

**SUBJECT:** Alternative to Proposed Rate Increase for Austin Resource Recovery

During the budget deliberations, Council had questions regarding the Austin Resource Recovery Vehicle Fleet Technology Upgrade (VFTU) and asked if this program (or some other program) could be cut in order to reduce or eliminate the proposed \$0.85 rate increase.

Austin Resource Recovery (ARR) believes the VFTU, specifically identified in the City's "Smart Cities Strategic Roadmap", is a crucial initiative required to replace an obsolete Solid Waste Tracking system. This outdated system cannot be updated or remain functional following the next Internet Explorer update. **This system is integral to ARR's work and must be replaced.** The upgrade will also improve efficiency, safety, and customer service. We explain the program in greater detail below.

### **Proposed Budget Option for Council Consideration**

In recognizing the desire to reduce rate increases to customers, ARR could adjust its Proposed FY18 Budget to avoid a rate impact on customers. The proposed \$0.85 increase to the base customer charge would generate approximately \$1.6 million in revenue, which is necessary to fund the next phase of the Organics roll out. In the FY18 Proposed Budget, ARR has a transfer of \$6.2 million to cash fund much needed collection trucks. To offset the need to increase the rates, **ARR suggests debt financing \$1.6 million of the \$6.2 million in order to spread the impact of this expense over a number of years.** We did not originally recommend this alternative since cash-financing equipment with shorter service life (about 7-years in this case) saves money in the long term. We have been shifting from debt financing to cash financing this type of equipment for the last few years. However, for this year if Council chose to eliminate the proposed rate increase, this debt financing alternative could be taken.

## **Background on the Vehicle Fleet Technology Upgrade (VFTU)**

**How long have we been working on this program?** This program has been in the works for several years. In fact, the debt funding to support the technology was embedded in the total vehicle cost and was included in the appropriation and debt sale from FY13. When the vehicles were purchased, the debt funding for the technology component was set aside for future purchase.

**How is this program funded?** The vehicle upgrades are debt funded. \$2 million of that debt has already been issued and therefore can't be used on anything other than this technology or to pay back the debt.

**How much has been spent so far?** To clarify the conversation regarding the statement that "no expenditures have occurred yet", the VFTU hardware and software contractor has been at work since Council approved the contract in March 2017. Even if the program is discontinued, based on the work performed thus far, the City is obligated to pay the contractor approximately \$700,000.

**How much could be reallocated if this program is cut?** The \$2million of debt financing can't be used for other purposes. The City is obligated to pay the contractor approximately \$700,000. Therefore, out of the \$3.5 million project funding, approximately \$800,000 could be reallocated.

### **Why is the Vehicle Fleet Technology Upgrade (VFTU) a crucial Initiative?**

The technology upgrade will add automation and efficiency to ARR's daily activities, as well as replace an outdated system that is no longer supported by CTM. Most of ARR's current activities in the field are manual and time consuming; the VFTU will automate these manual processes and connect the activities with associated billing actions. This project is specifically identified in the City's "Smart Cities Strategic Roadmap", which aims to improve the efficiency of city services via information and communication technologies. This initiative also certainly fits into the "Government that works for all" Strategic Plan Outcome. The VFTU will allow the Department to better serve its citizens with more accurate data. The upgrade will do this by incorporating the following:

#### **Fleet Optimization**

Each week, ARR currently provides trash, recycling, composting, brush, and bulk collection services via more than 400 individual routes. ARR is responsible for servicing more than 400,000 customer carts. ARR's Solid Waste Tracking System (SWTS) currently houses the Department's data, including tons collected and miles travelled. This system also used to facilitate at least 400 daily cart-related actions.

Staff anticipates that SWTS cannot be updated or remain functional following CTM's next Internet Explorer update. **This system is integral to ARR's work and must be replaced.** We cannot provide our core services without an improved system in place.

The VFTU provides staff with a solution to this issue.

### **Improved Customer Service**

The VFTU will equip 217 vehicles with on-board computer systems. These vehicles primarily provide trash, recycling and organic collection services. The installed on-board computer systems will allow real time logistics management of collection activities, helping to reduce missed or late collections as well as staff overtime. The on-board computer will also automate a number of manual processes, helping ARR save time and money.

For example, when a cart is set out late by a customer now, operators must fill out a paper form. This requires the operator to stop collection, exit their vehicle, and then the fill out the form informing the customer their cart was not put out on time. The operator then provides a copy of the form to their supervisor, who manually enters the data into the 311 customer service database, CSR. The VFTU will allow this manual, time consuming process can be accomplished in a matter of minutes by the operator inside the truck without stopping the collection process or any manual entry (by the supervisor).

The on-board computer will also provide visual signals to staff when a cart is picked up or is missing. The technology and enhanced information allows operators to know the most efficient routes for their collections. By showing operators this information in real-time, and providing specific turn-by-turn direction ARR anticipates reduced collection time. The impact of reduced collection time is less staff overtime, lower fuel cost, and a smaller carbon footprint. The success of this practice has been observed and documented by other cities, including Santa Cruz, CA.

### **Operator Effectiveness**

ARR does not have a cart inventory system, which currently results in lost inventory and revenue. Additionally, staff manually performs cart audits system-wide. Due to the large number of carts in ARR's services, staff is only able to spot-check carts rather than audit its entire inventory.

The VFTU vastly improves the effectiveness of ARR's processes by providing Radio-Frequency Identification (RFID) technology to help locate and manage ARR's more than 400,000 trash, recycling and curbside composting carts. Using this technology, ARR is able to create a Cart Inventory System, which shows cart data such as cart size and location. This data effectively automates the current auditing process and helps ensure customers are being billed accurately for services.

### **Operator / Community Safety**

As the City of Austin continues to grow, traffic and traffic hazards continue to increase. In liability claims alone, ARR leads all departments in pay out cost paying more than \$1.8 million dollars over the last six years.

While some ARR vehicles are currently equipped with cameras, the range of visibility is limited and technology is not consistent across the fleet.

This VFTU is necessary to ensure operators have a 360 degree view of the area around their vehicles. This will help operators identify hazards in their blind spots, such as parked and turning cars, low hanging powerlines, cyclists, pedestrians, mailboxes and low-hanging tree limbs. The VFTU will provide ARR with consistent tools needed to help reduce the risk of vehicle incidents and liability. By avoiding hazards (in and around the vehicle), the cameras help the operators keep COA staff and citizens safe.

From a staff development perspective, this updated technology will allow ARR to enhance its current safety training practices. Ensuring our workforce has the tools and knowledge necessary will help enhance safety for staff and the community alike. With enhanced safety training, we expect the vehicle incidents to decline.

### **Zero Waste**

ARR is striving to meet its waste diversion goals as outlined in the ARR Master Plan. A major driver of this effort is increasing the volume of recyclable materials. A recent waste characterization study indicated that approximately 40% of items going to the landfill could have been diverted.

The VFTU and its related technologies will help address these missed opportunities by allowing the driver to identify recyclables placed in the landfill trash cart. Identifying these materials will allow staff to identify materials commonly discarded rather than diverted. ARR can use this information to more effectively develop outreach and messaging for the community.