



# City of Chula Vista Vehicle Replacement & Electrification Update

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# COLLECTION VEHICLES

## Vehicle Types



**Commercial-FL**



**Residential**



**Industrial-Roll Off**

# COLLECTION VEHICLES: VEHICLE MAINTENANCE

## Air Conditioning Upgrades

### 2023 – 2024

- Upgraded 12 vehicles with new A/C systems
- Red Dot roof mount air conditioning systems
- Cost \$7,000 per unit

**~\$80,000 investment**



■ Roll Off ■ Commercial ■ Residential

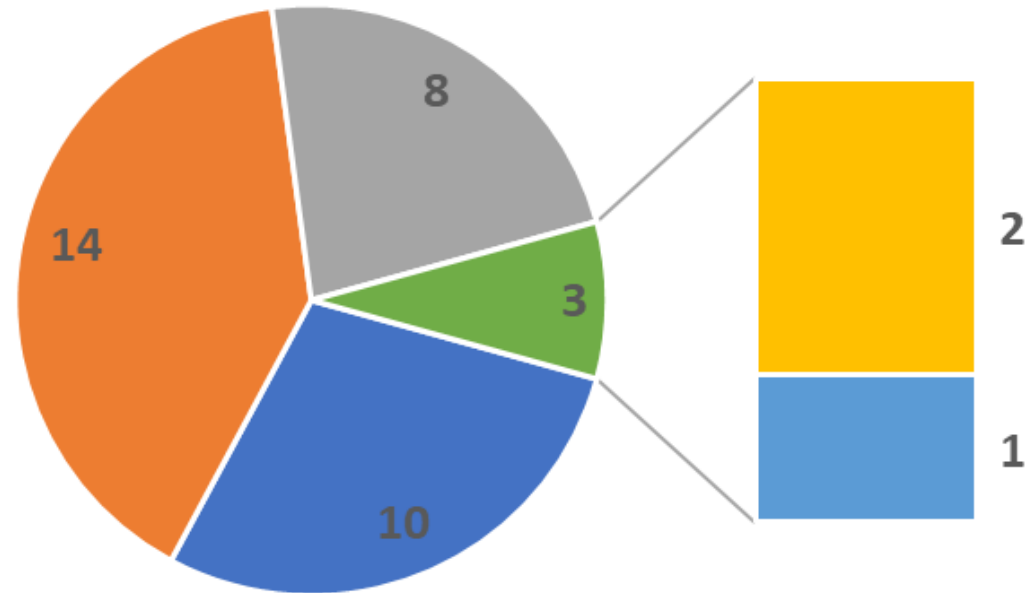
Cost: ~\$7,000 per unit: 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 1219, 1312, 3111, 3017

# COLLECTION VEHICLES

## 32 New Vehicles in City of Chula Vista in 2024

**New Vehicles for City Of Chula Vista**  
**Estimated \$14M Investment**

32 Vehicle Delivery Schedule for 2024

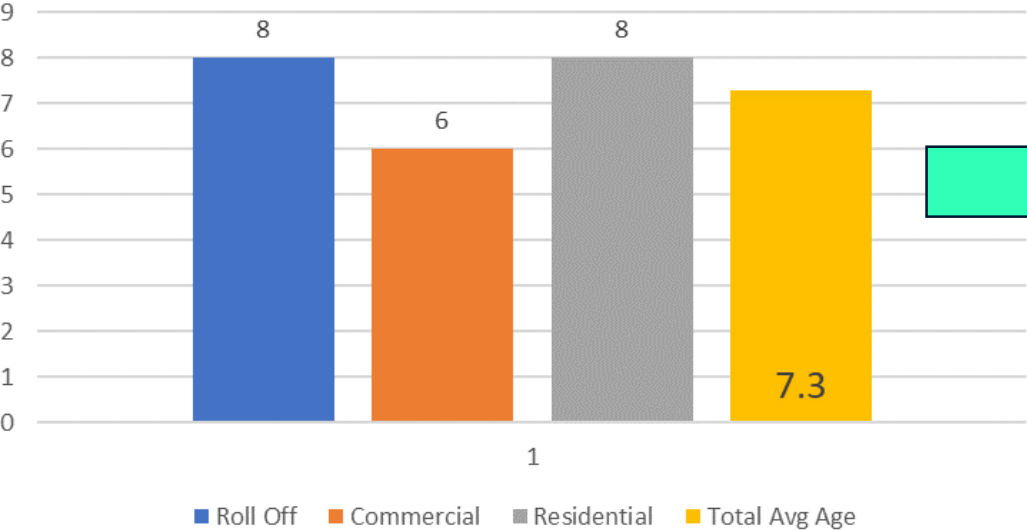


■ Roll Off ■ Commercial - FL ■ Residential - ASL ■ Residential - ASL (EV) ■ Container Delivery (EV)

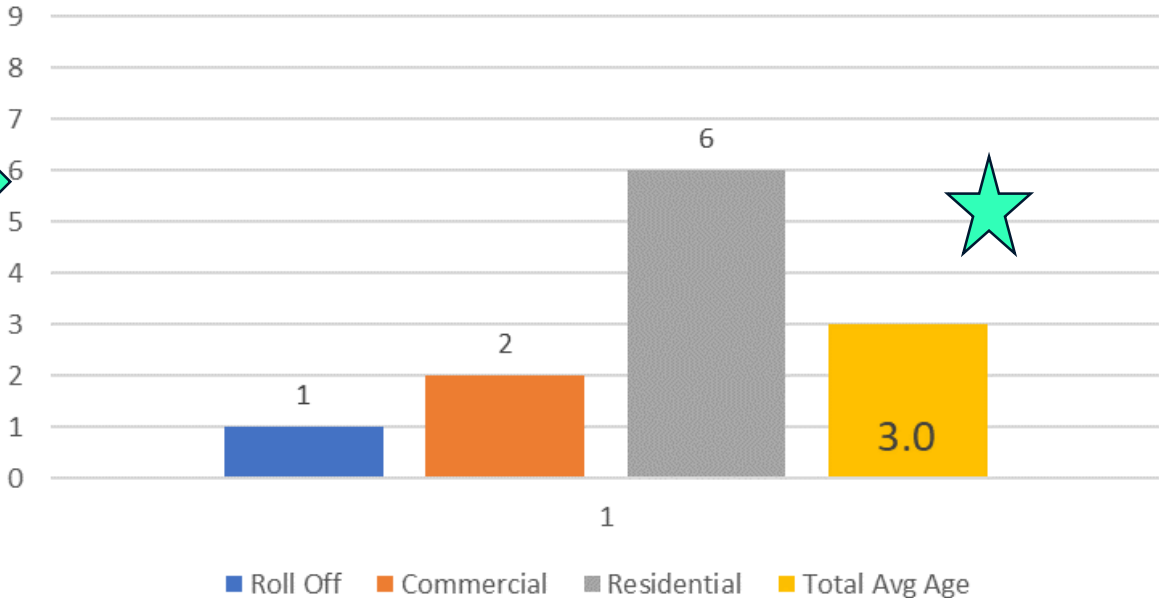
# EQUIPMENT SPECIFICATIONS AND MAINTENANCE

## Collection Vehicles 6.2.13

Average Age of Fleet (in years)  
City of Chula Vista - Current State



Average Age of Fleet (in years)  
City of Chula Vista - EOY 2024



# NEW VEHICLE SAFETY ENHANCEMENTS

## UPGRADES TO NEW AND EXISTING VEHICLES

### Safety upgrades

- 10 New Industrial/Roll Off trucks equipped with Backing Cameras and Front/Side and Rear Collision avoidance devices
- Samsara In-Cab video/camera devices to all collection vehicles

### 1 New Lighter Collection Vehicle in 2024

New *LCV-Lighter Collection Vehicle* replaced as "single axle" Automated Side Load

- Safer for driver: not requiring the driver to exit the truck to service carts

### Cooling Upgrades: All New Trucks

Equipped with cooling package

- Dual A/C units: Dash and Roof mounted
- Sprayed Coating under cab
- engines wraps on heat sources

# EV RESEARCH PROGRAM

## Technology Research Program

- Internal program to place and evaluate trucks in various market and terrain conditions
- Entering 4<sup>th</sup> year with trucks on routes
- Expanding research trucks to 24 markets in 2024

## 2024 Research Markets \*

- Anaheim, CA
- Baltimore, MD
- Bend, OR
- Boise, ID
- Carlsbad, CA
- Chicago, IL
- **Chula Vista, CA**
- Daly City, CA
- Fairfield, CA
- Fort Collins, CO
- Fremont, CA
- Gardena, CA
- Huntington Beach, CA
- Long Beach, CA
- Pacheco, CA
- Phoenix, AZ
- Rancho Cordova, CA
- Richmond, CA
- Salem, OR
- Salinas, CA
- Stockton, CA
- Wilsonville, OR

\* Low qty (1-2) trucks for evaluation purposes; Should not be marketed by municipality as these are subject to movement to other markets as needed.



## McNeilus Volterra ZSL

# BENEFITS TO MUNICIPALITIES



## Climate Action Plan Contribution

Reduced greenhouse gas emissions, through an 85% carbon reduction over diesel trucks (27% over RNG), and **zero tailpipe emissions**



## Reduced Noise Pollution

50%+ quieter on collection days (some Municipalities even ask for noise generators)



## Safer Communities

Enhanced safety features consistent with the most state-of-the-art vehicles today



## Employing Local Talent

Better attraction and retention of driver talent, leveraging the TalentLink program



## Differentiates the Municipality

Signals to constituents that the Municipality is progressive and committed to sustainability; Sets them apart from other peers



## Access to Subject Matter Experts

Municipality can leverage our subject experts for planning other Municipal fleet conversions



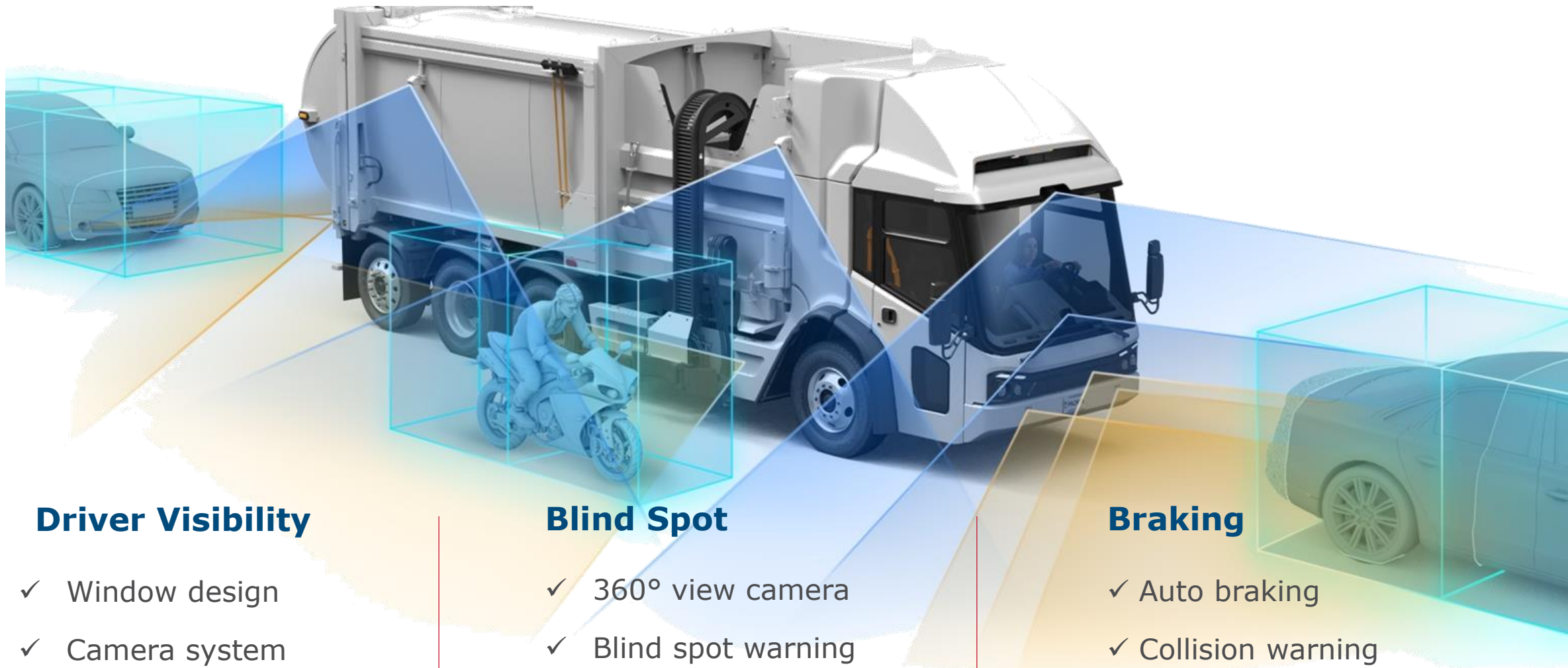
# PERFORMANCE

## Performance on our research fleet gives us the confidence to launch our Conversion Program.

- Able to complete full routes for both MSW and Recycling
  - 80-110 miles; 1000-1200 lifts (Total mileage and quantity of serviced homes varies by route)
  - Average daily operations of ~10 hours
  - Average returning "State of Charge" (SOC) of >20%
- 85% emission reduction over diesel (using CA power grid)
- Zero tailpipe emissions in community
- Over 50% less noise pollution (on compaction cycle)
- State-of-the-Art Safety features



# SAFER COMMUNITIES



## Driver Visibility

- ✓ Window design
- ✓ Camera system

## Blind Spot

- ✓ 360° view camera
- ✓ Blind spot warning
- ✓ Cross traffic

## Braking

- ✓ Auto braking
- ✓ Collision warning

# EMPLOYING LOCAL TALENT

**The “office” for a driver is the cab of their truck**

**Offering a superior “office” will differentiate**

- 30% more spacious cab
- Greater visibility
- Safety features give peace of mind
- Cooler (no hot engine under seat)
- Quieter
- Community Attention – Residents and kids love the truck

## Republic Driver Study



Drivers in Oshkosh, WI testing new Oshkosh EV

In an ever-increasing CDL driver shortage, EV trucks help attract and retain top talent

# CONTRACT CONVERSION SEQUENCE



## Infrastructure

### Feasibility

3 months



### Utility Upgrade

12+ months



### Permitting

6 months



### Construction

3 months



## Trucks

(Build slots are 12-18+ months out)

- ✓ Initial delivery for routes that fit current performance
- ✓ Contracted annual Price Increase adjusted to include incremental EV costs for any EV trucks delivered
- ✓ Process repeated annually as additional routes are enabled



## Sustainability in Action



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**Dow Jones  
Sustainability Indices**

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**Sustainability Yearbook**  
Member 2023

**S&P Global**