

Energy Action Plan 2020 Report

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City Council Agenda Session
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CITY OF
FAYETTEVILLE
ARKANSAS



Energy Action Plan Goals

COMMUNITY GOALS
CITY GOALS

The following goals were determined through a process of peer city research, community input, City staff alignment, expert stakeholder guidance, and administrative review.



CROSS-SECTOR:

- Reduce average housing and transportation costs to 45% of area median income
- Develop and expand Fayetteville's reputation as a hub for socially and economically responsible businesses, entrepreneurship, and green jobs
- Build local support for national carbon emissions reduction and carbon capture strategies



BUILDINGS:

- Complete periodic feasibility analyses of building energy code updates
- Achieve 3% annual reduction in overall energy use in buildings
- Improve the health, distribution, coverage, and effectiveness of Fayetteville's urban forest



ENERGY SUPPLY:

- Achieve 50% community-wide clean energy by 2030
- Achieve 100% community-wide clean energy by 2050



TRANSPORTATION:

- Reduce per capita vehicle miles traveled to 2010 levels by 2030
- Achieve 25% bike/walk/transit mode share by 2030



WASTE:

- Achieve 40% total waste diversion from the landfill by 2027



CITY OF FAYETTEVILLE ARKANSAS

GOALS FOR CITY GOVERNMENT OPERATIONS:

- Achieve 40% reduction in GHG emissions by 2030, from baseline year of 2010
- Achieve 80% reduction in GHG emissions by 2050, from baseline year of 2010
- Achieve 100% clean energy by 2030
- Achieve 3% annual energy use reduction in City facilities



MORE INFORMATION AVAILABLE AT WWW.FAYETTEVILLE-AR.GOV/ENERGYACTIONPLAN





Biden Administration Climate Goals: Building Back Better

- Reach 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030
- Create a carbon pollution-free power sector by 2035 and net zero emissions economy by no later than 2050
- The National Climate Task Force is developing this into a national climate strategy to be issued later this year
- The United States will also reduce non-CO2 greenhouse gases, including methane, hydrofluorocarbons and other potent short-lived climate pollutants. Reducing these pollutants delivers fast climate benefits



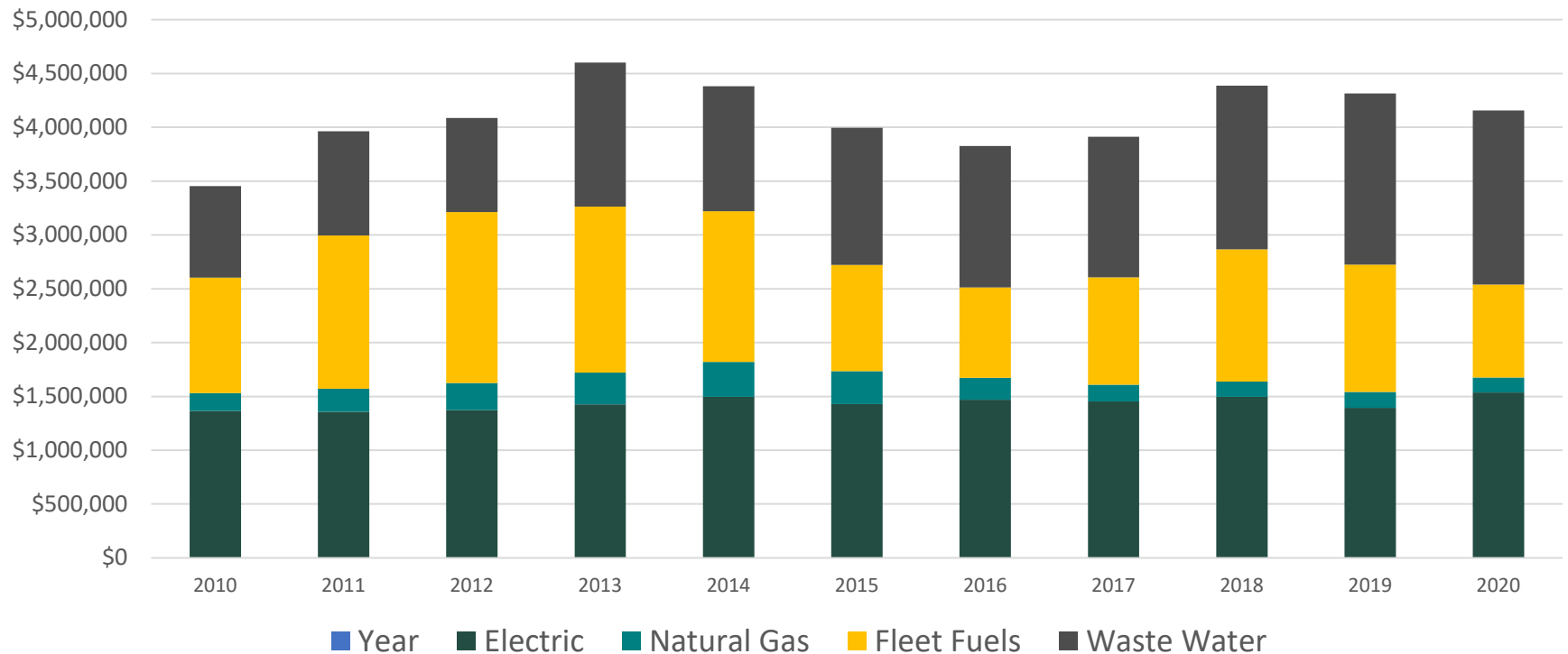
Create millions of good-paying, ensure economic competitiveness, advance environmental justice, and improve the health and security of communities across America



Utility Cost Summary

- In 2020, City of Fayetteville spent \$4.16 million on electricity, natural gas and vehicle fuels
- Decrease of \$157,964 or 4% under 2019

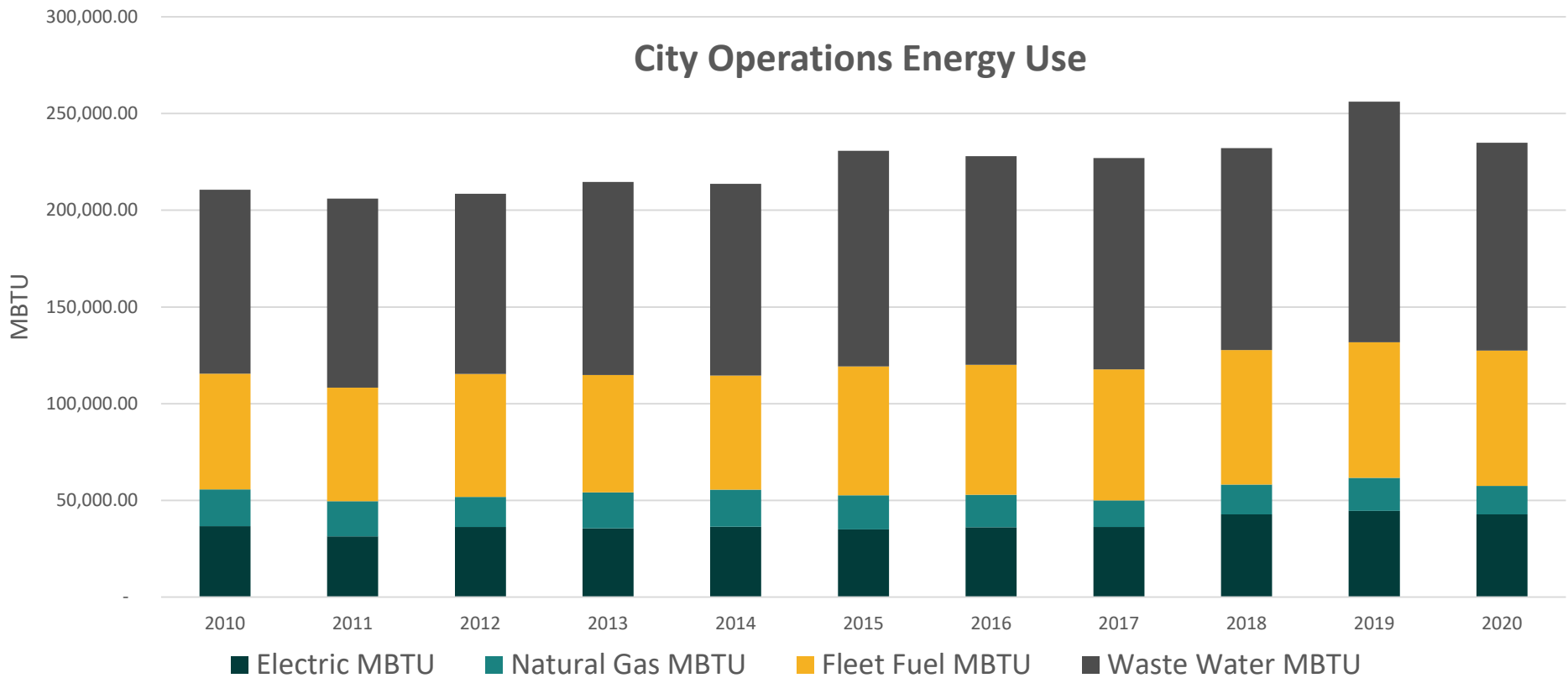
Energy Cost





Utility Usage Summary

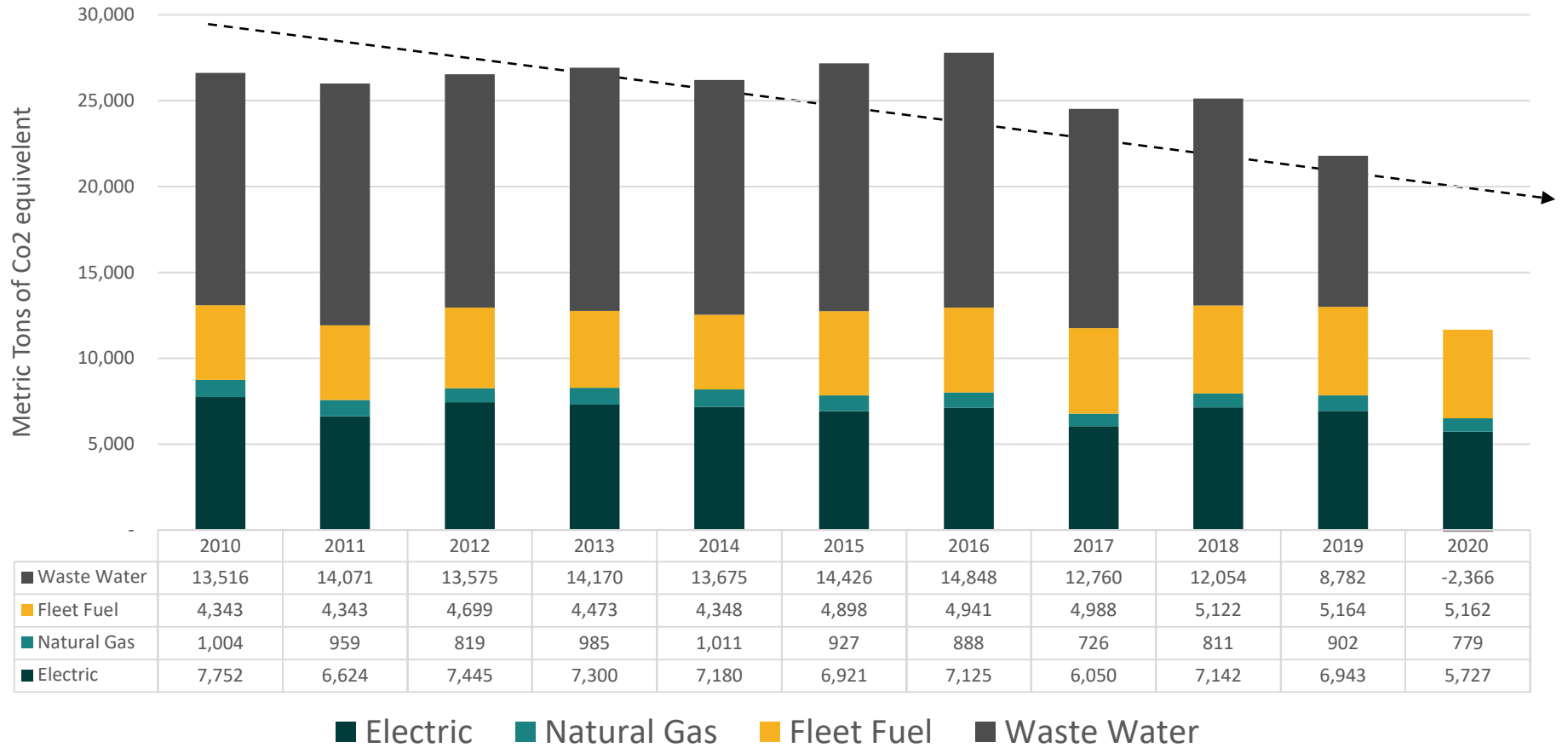
- In 2020, City of Fayetteville consumed **304,930** MBTU of energy
- The City saw **7% decrease** in overall energy use compared to 2019
- Since 2010 City energy use **increased 13%**





City Operation GHG Inventory

City Operations: Annual GHG Emissions (MTCO2E)





City Operation GHG Inventory

City Operations: Annual GHG Emissions (MTCO2E)

Metric Tons of Co2 equivalent

65% reduction from baseline

118% reduction in wastewater facilities GHG mainly due to solar arrays

Fleet fuel GHG emissions increased 19% since 2010

Natural gas emissions reduced by 22% since 2010.

26% reduction in electricity GHG emissions since 2010 due to improved Grid Emissions Factor (Fuel Source Mix)

	2010	2020
Waste Water	13,516	-2,366
Fleet Fuel	4,343	5,162
Natural Gas	1,004	779
Electric	7,752	5,727

Electric Natural Gas Fleet Fuel Waste Water



Energy Action Plan Goals – City Government

1. Achieved **40% reduction** in GHG emissions by 2030
 - In 10 years, the City has **reduced emissions by 65%**
2. Achieve **100% clean energy** by 2030
 - We are at 72% clean energy
 - Our grid (SPSO) is providing **30%** from clean energy sources
3. Achieve **3%** annual energy use reduction in City facilities
 - **7% decrease** in 2020. Averaging 1% decrease per year for City facilities.



Future Projects

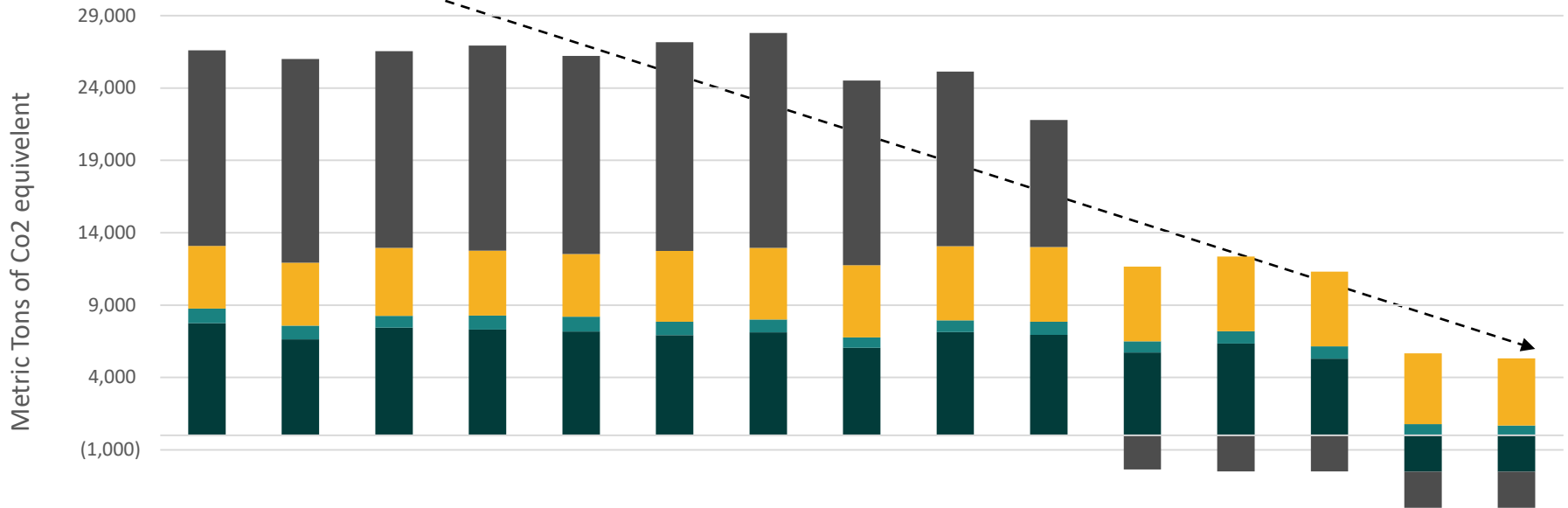
- Energy Savings Performance Contract (ESPC)– 100% Clean Electricity
 - 20% Energy Efficiency Improvement
 - 6-7MW of Solar
 - Legally guaranteed savings
 - In Audit Phase
 - Next Step is Implementation
- Electric Fuel Vehicles
 - Passenger Cars
 - Water & Sewer Meter Trucks
 - Recycling & Trash Trucks





City Operation GHG Inventory – **ESPC Projections**

City Operations: Annual GHG Emissions (MTCO2E)

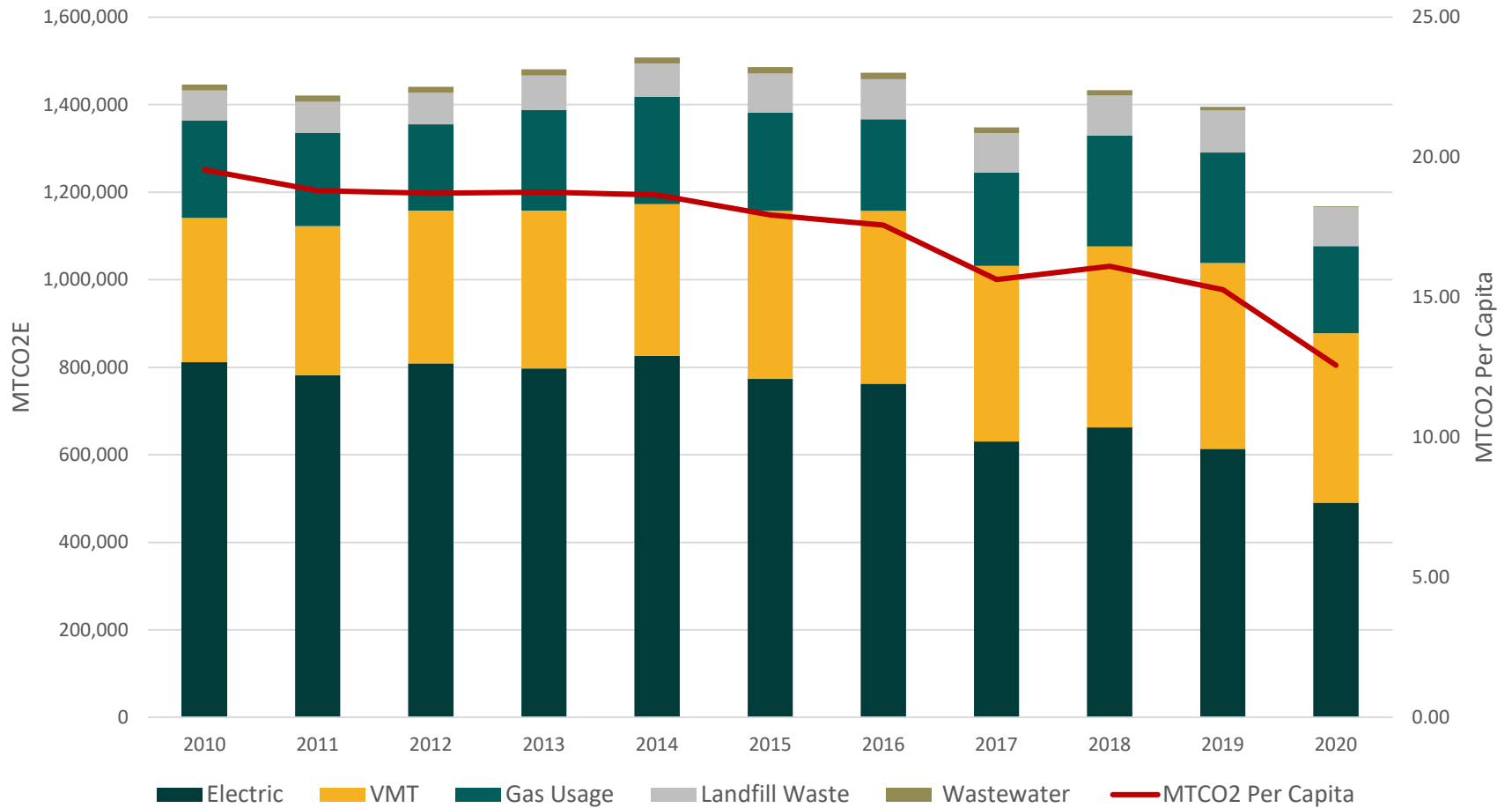


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
■ Waste Water	13,516	14,071	13,575	14,170	13,675	14,426	14,848	12,760	12,054	8,782	-2,366	-2,491	-2,491	-2,491	-2,491
■ Fleet Fuel	4,343	4,343	4,699	4,473	4,348	4,898	4,941	4,988	5,122	5,164	5,162	5,162	5,162	4,904	4,646
■ Natural Gas	1,004	959	819	985	1,011	927	888	726	811	902	779	850	850	765	680
■ Electric	7,752	6,624	7,445	7,300	7,180	6,921	7,125	6,050	7,142	6,943	5,727	6,335	5,299	-2,513	-2,508

■ Electric ■ Natural Gas ■ Fleet Fuel ■ Waste Water

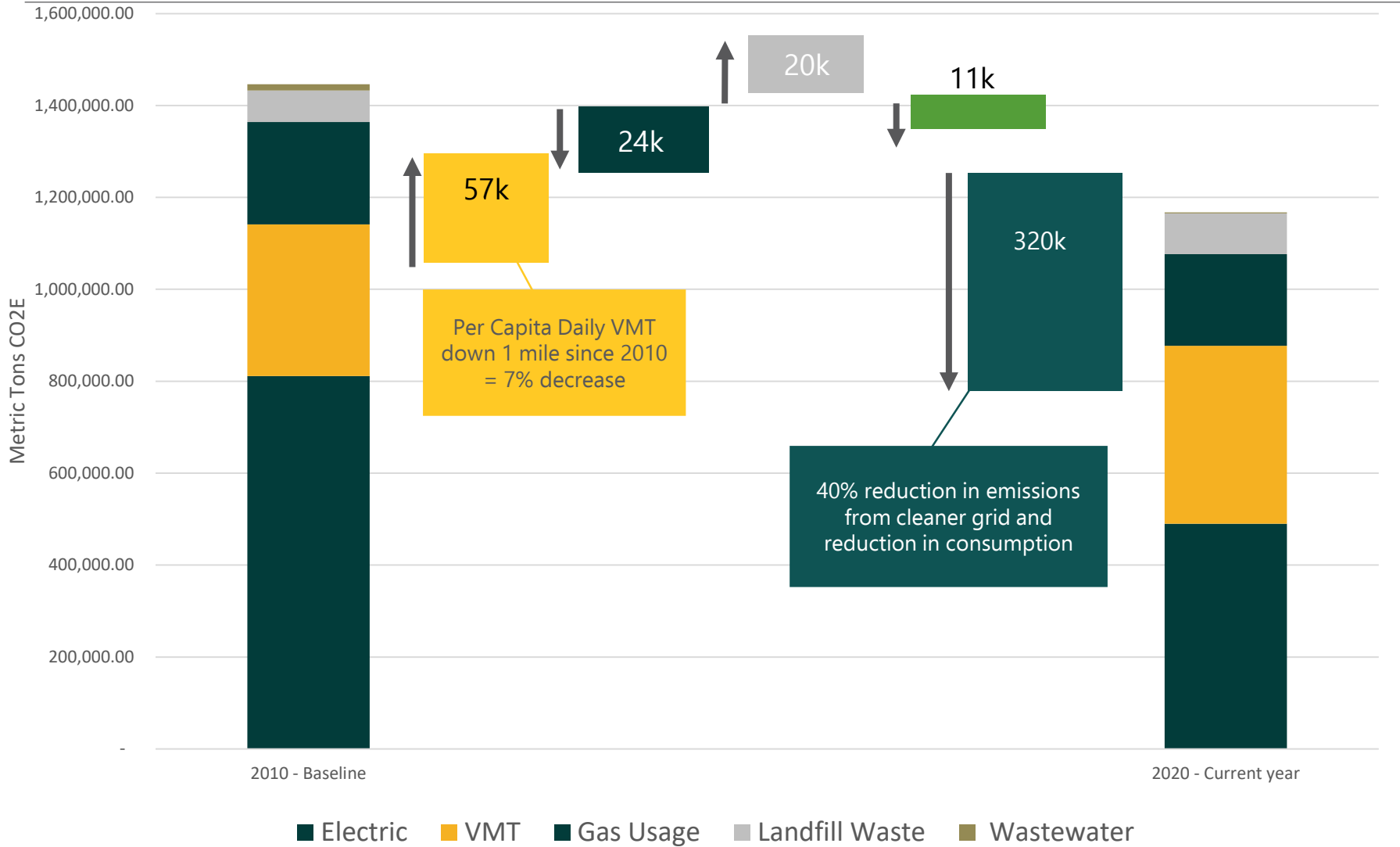
Community GHG Inventory

2010-2020 Community-wide Greenhouse Gas Inventory





Community GHG Inventory



Energy Action Plan Goals – Community Wide

1. Achieve **100% clean energy by 2050**

- Our electric grid is currently providing **30%** electricity from clean energy sources
- 70% to go in 29yrs

2. Achieve 80% reduction in GHG emissions by 2050

- Since 2010, Fayetteville has reduced emissions 19.25%
- 2020 may be an anomaly, we have challenges going forward

3. Achieve **3% reduction annually** in building energy use

- **15% decrease from 2019** energy use
- Averaging yearly decrease of 1% due to 2020 decrease

4. By 2030, reduce per capita daily vehicle miles traveled to 24.9 miles

- In 2020, VMT/per capita was 23.15 miles per day, a **10% reduction** from 2019
- VMT may rebound?

5. Achieve **40%** total waste diversion from landfill by 2027

- **19.25%** diversion rate in 2020
- 20.75% to go in 6yrs



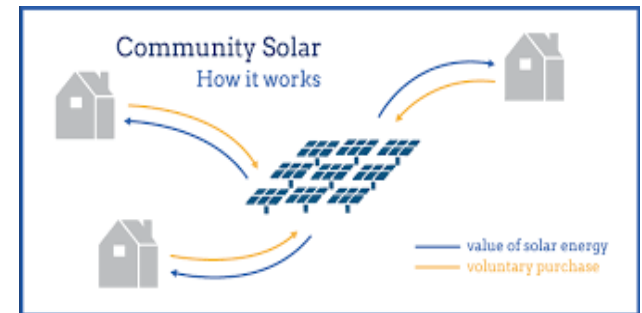
Advocacy on behalf of Community

1. Support **810MW SWEPCO Wind Energy Project**

- New regulatory approval approach
- Reduce community wide electricity emissions

2. Legislative Advocacy

- Community Choice Aggregation
 - Local governments purchase electricity on behalf of residents, businesses, and municipal accounts in their area
- Community Solar
 - Residents, small businesses, organizations, municipalities and others to receive credit on their electricity bills for the power produced from their portion of a solar array, offsetting their electricity costs.

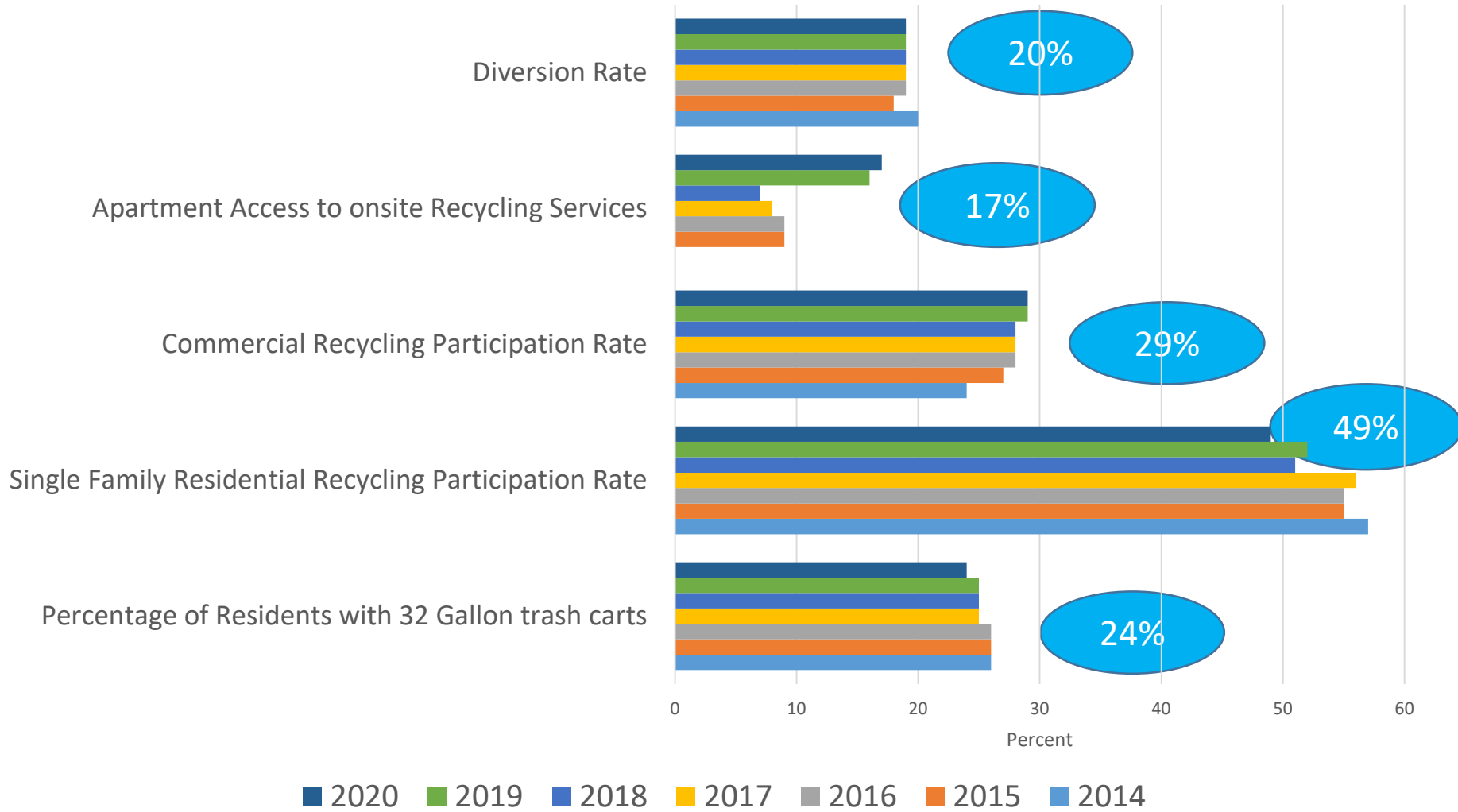


3. Action – Install EV Charging Stations

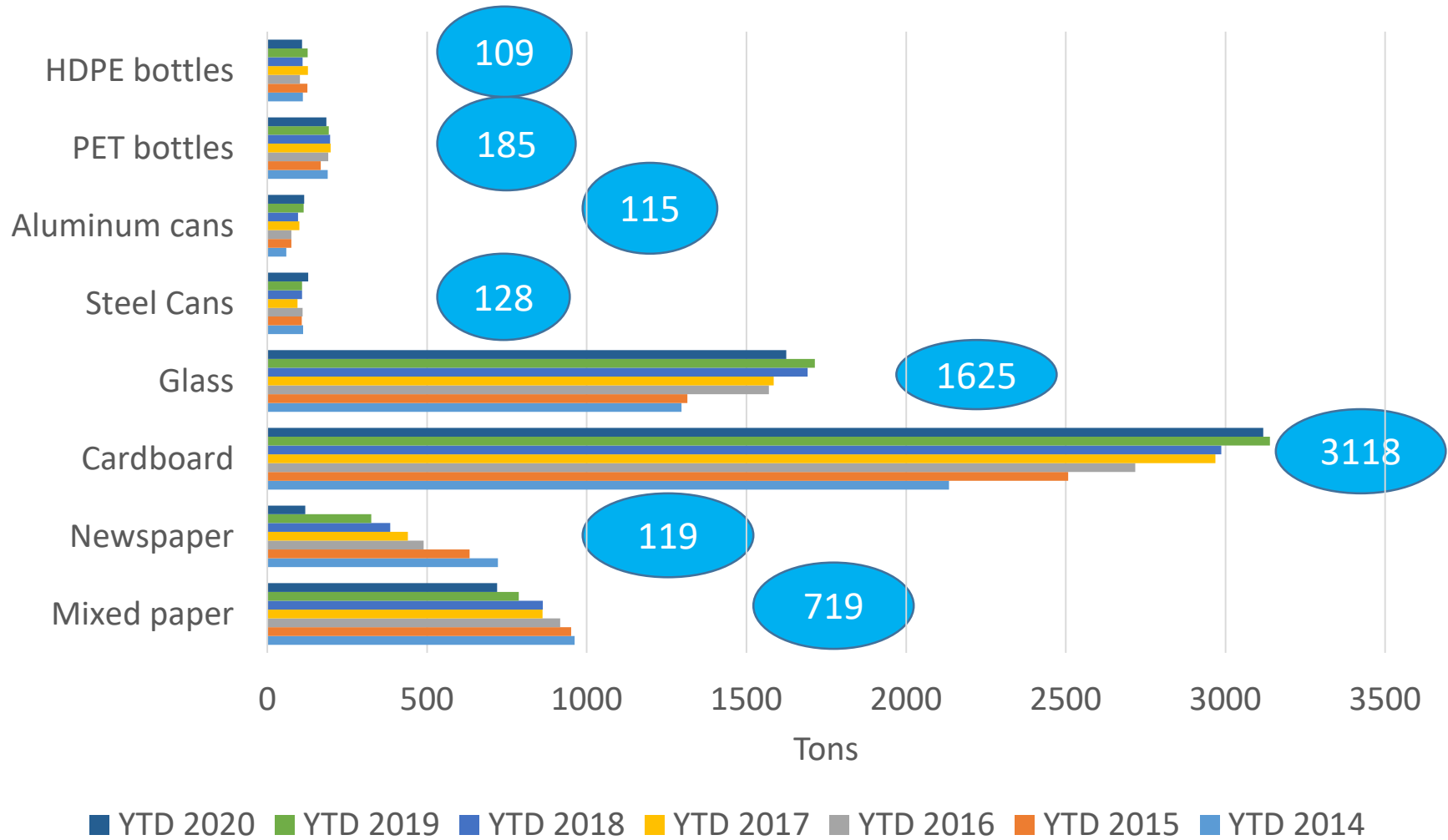
Waste Diversion Update: City of Fayetteville's 2020 Report



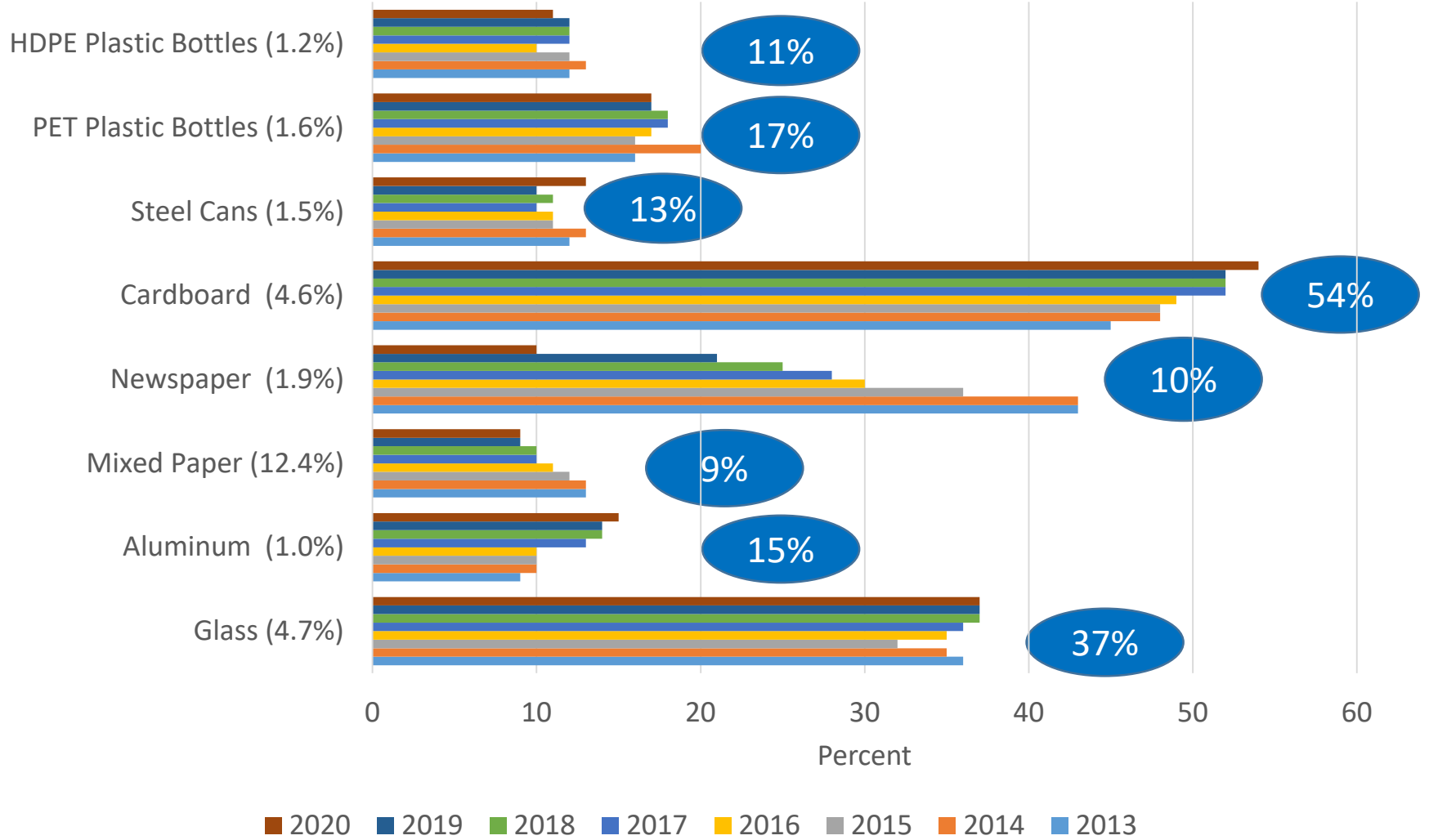
RTC Activities Metrics



Recycled Materials Trends



Capture Rates



Highlights

- Started Food Waste Compost Delivery
- USDA Food Waste Composting Grant & Trailer
- Residential Food Waste Compost Drop-offs
- Household Hazardous Waste Drop-off

Next Steps

- Continue to **implement plan and schedule for initiating a voluntary organics recovery program** focusing on large food waste generators and schools. Continue residential option of dropping off foodwaste at strategic locations.
- Continue to **implement the technical assistance program** to inform businesses, institutions, and multifamily complexes of the City's waste diversion commitment and help them prepare for new recycling initiatives.
- Continue **expansion of apartment recycling services** for both large complexes and smaller complexes 24 units or less in size.
- **Adopt a Green City initiative** directing all city owned or operated buildings to establish comprehensive recycling, organics recovery, and environmentally preferable purchasing programs.
- Continue dialogue with third parties for the **creation of a construction and demolition recovery program**.

Thank you!

Sustainability Department

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