

Solid Waste Master Plan

City of Joplin, MO

City Council Meeting

December 5, 2022

AGENDA



Introduction



Project Overview & Status Update



SWMP Recommendations



Lone Elm Concept Design



Next Steps



Energy Efficiency and Diversification Evaluation

Project Overview & Status Update

- Kickoff in Dec 2021
- Review of Current System
- Evaluation of Options
- Stakeholder Engagement
  - Solid Waste Advisory Commission
  - Community Survey
  - Public Open House
  - September “Third Thursday”
- Draft Solid Waste Master Plan
- Draft Energy Efficiency and Diversification Evaluation

Recommendations: Residential Curbside Services

- Include recycling in City contract for all
- Bulky item frequency reduced (monthly or quarterly) and limit quantities
- Modified PAYT: Charge for additional trash carts
- Require yard waste to be bagged in paper/Kraft bags
- Restrict yard waste from trash disposal
  - Provide subscription yard waste service option

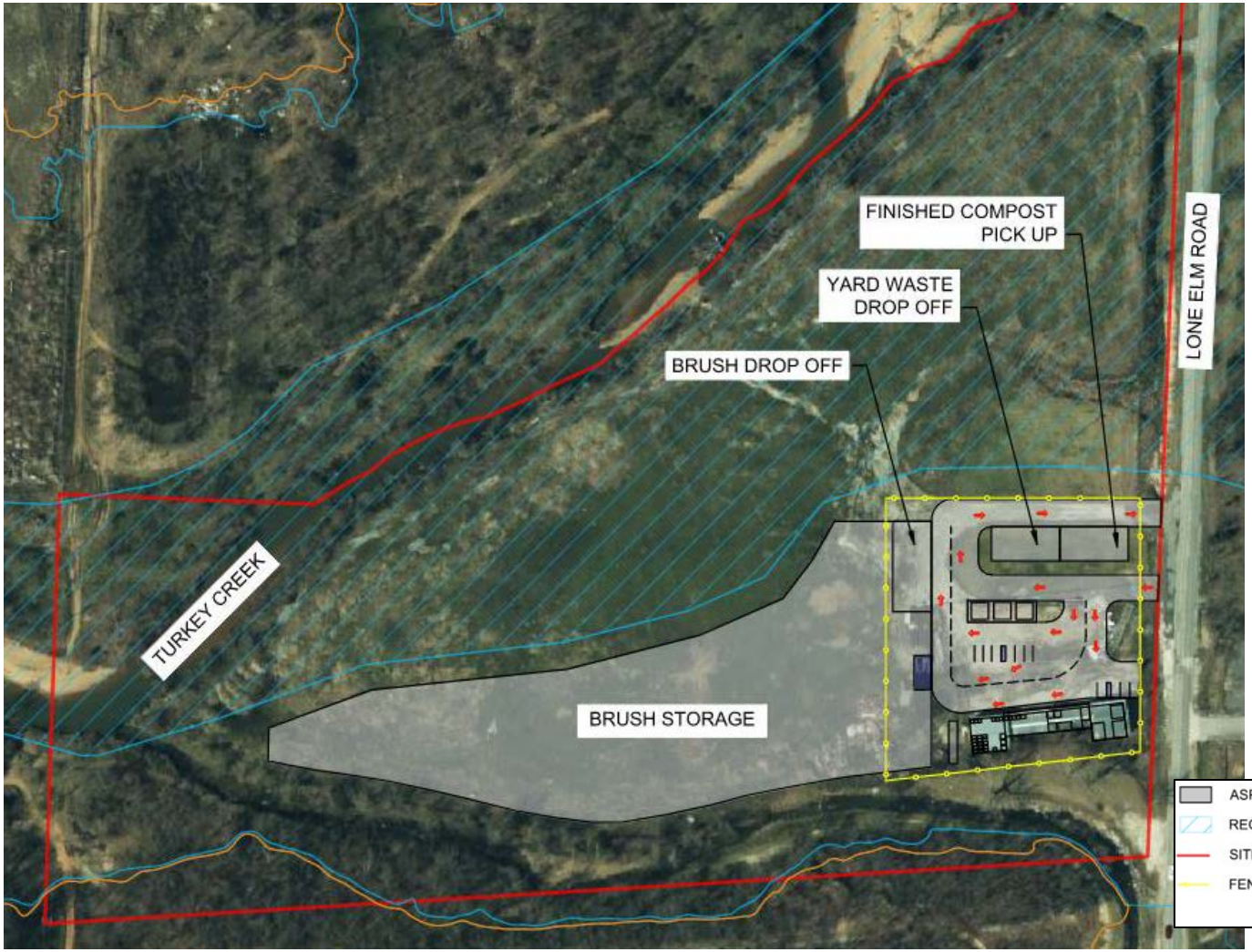




Recommendations: City Services

- Improve education and outreach about City services
- Continue to offer the discounted/subsidized drop off through a transfer station
- Co-locate all three services to one site (Lone Elm)
  - Recycling & HHW Center
  - Yard Waste Drop Off
  - Tree Limb Drop Off & material management

Lone Elm Concept Design



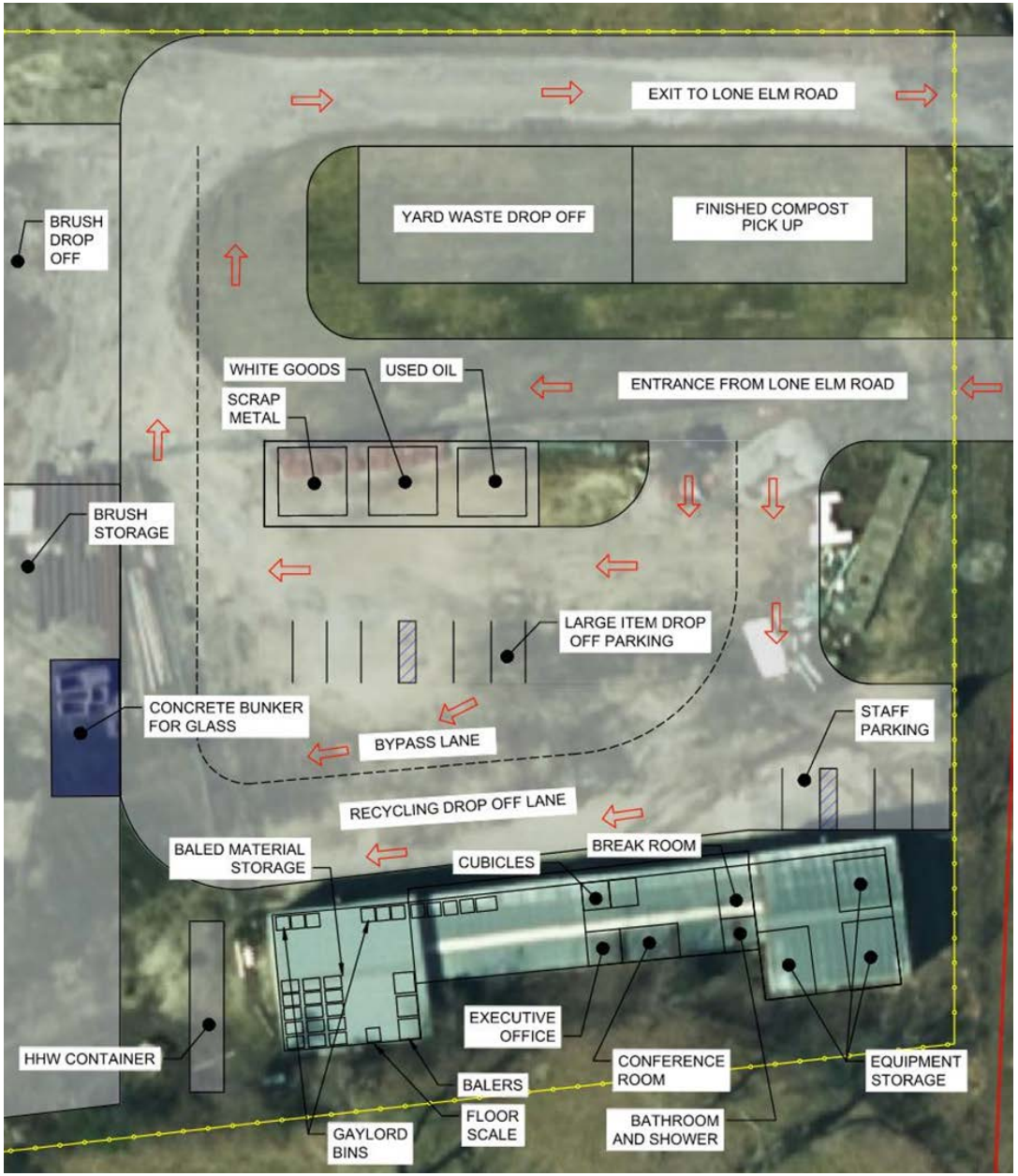
(approx. Zora & Lone Elm – northwest of downtown, near Turkey Creek WWTP)

Recycling & HHW Center - Lone Elm

- Drive-through lane for recyclable items
- Bale recyclables for revenue generation
- Glass bunker
- Professional Office features:
  - Executive office
  - Two workstations
  - Bathroom
  - Locker room/shower
  - Breakroom
  - Meeting room



Neosho Recycling Center Drive-through


EXIT TO LONE ELM ROAD
BRUSH DROP OFF
YARD WASTE DROP OFF
FINISHED COMPOST PICK UP
WHITE GOODS
USED OIL
SCRAP METAL
ENTRANCE FROM LONE ELM ROAD
BRUSH STORAGE
LARGE ITEM DROP OFF PARKING
CONCRETE BUNKER FOR GLASS
BYPASS LANE
STAFF PARKING
RECYCLING DROP OFF LANE
BALED MATERIAL STORAGE
CUBICLES
BREAK ROOM
EXECUTIVE OFFICE
HHW CONTAINER
BALERS
CONFERENCE ROOM
EQUIPMENT STORAGE
FLOOR SCALE
BATHROOM AND SHOWER
GAYLORD BINS

Energy Efficiency and Diversification Evaluation Overview

City Facilities

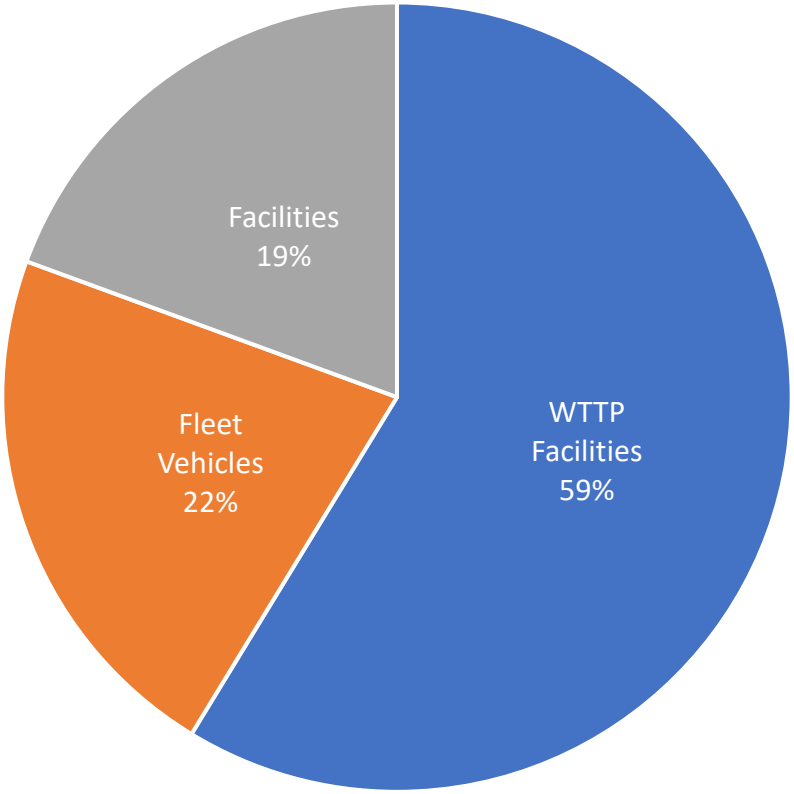
- 13 City-selected facilities which comprise just under 250,000 square feet (of 500,000)

City Fleet

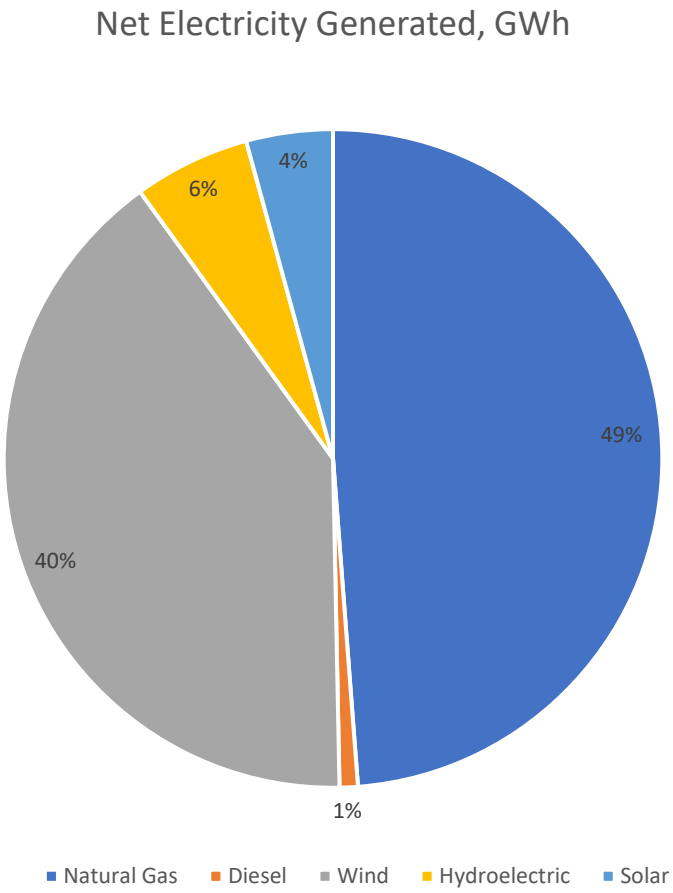
- 258 fleet vehicles across 23 departments

WWTP

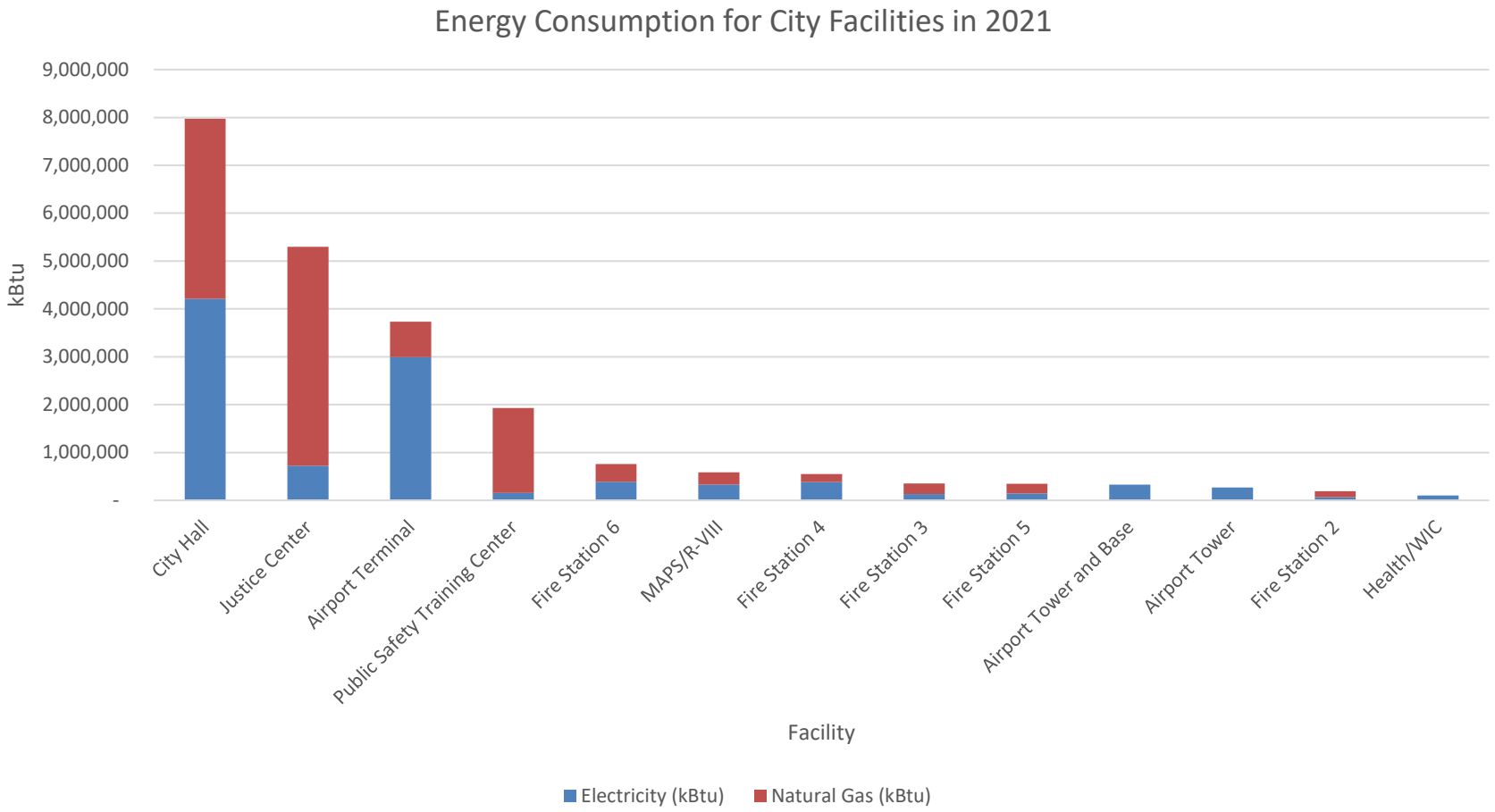
- Turkey Creek, Shoal Creek, Tin Cup



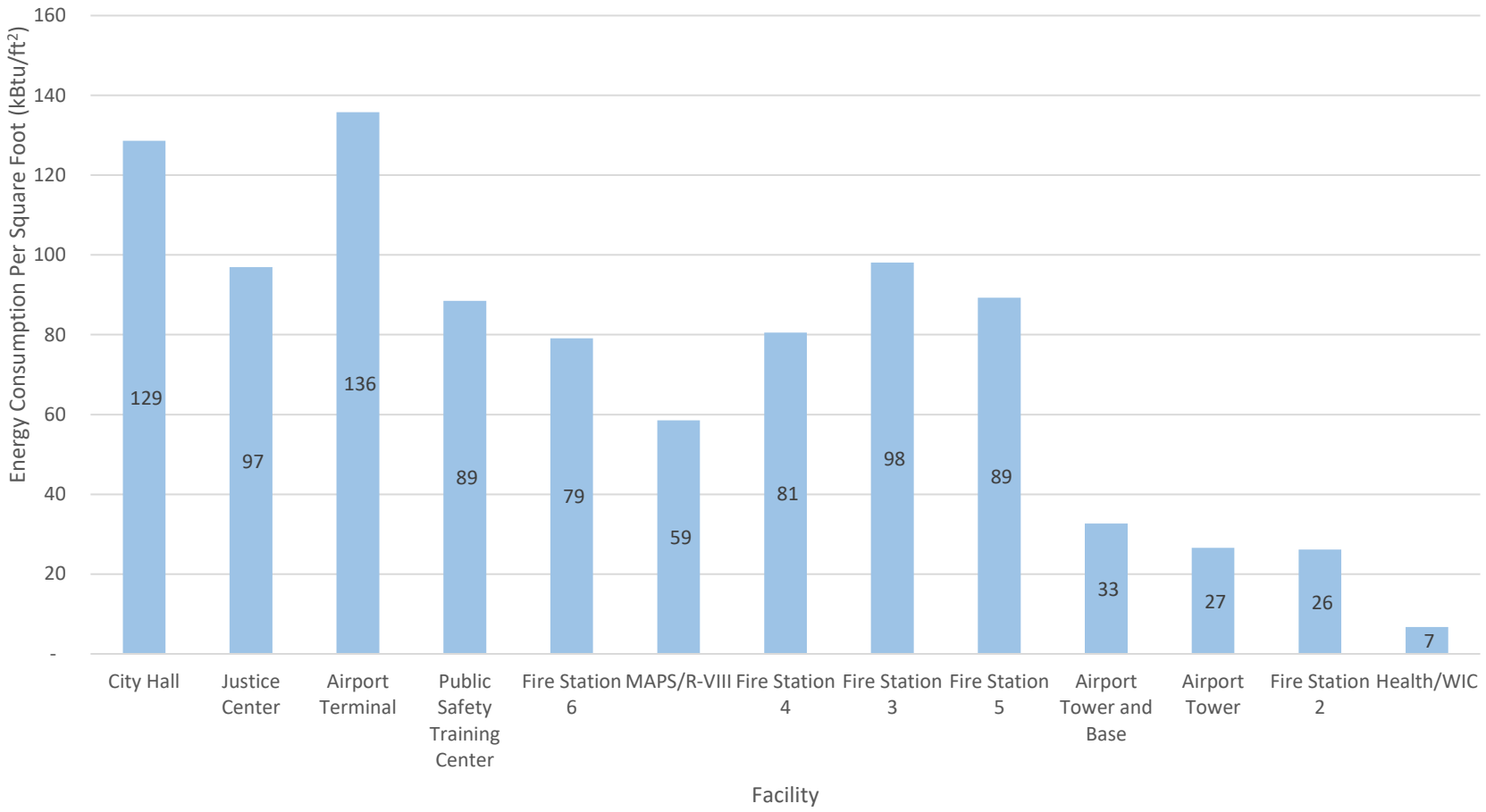
Algonquin-Liberty 2020 Resource Mix by Generation



Electricity and Natural Gas Energy Consumption by Municipal Facilities in 2021



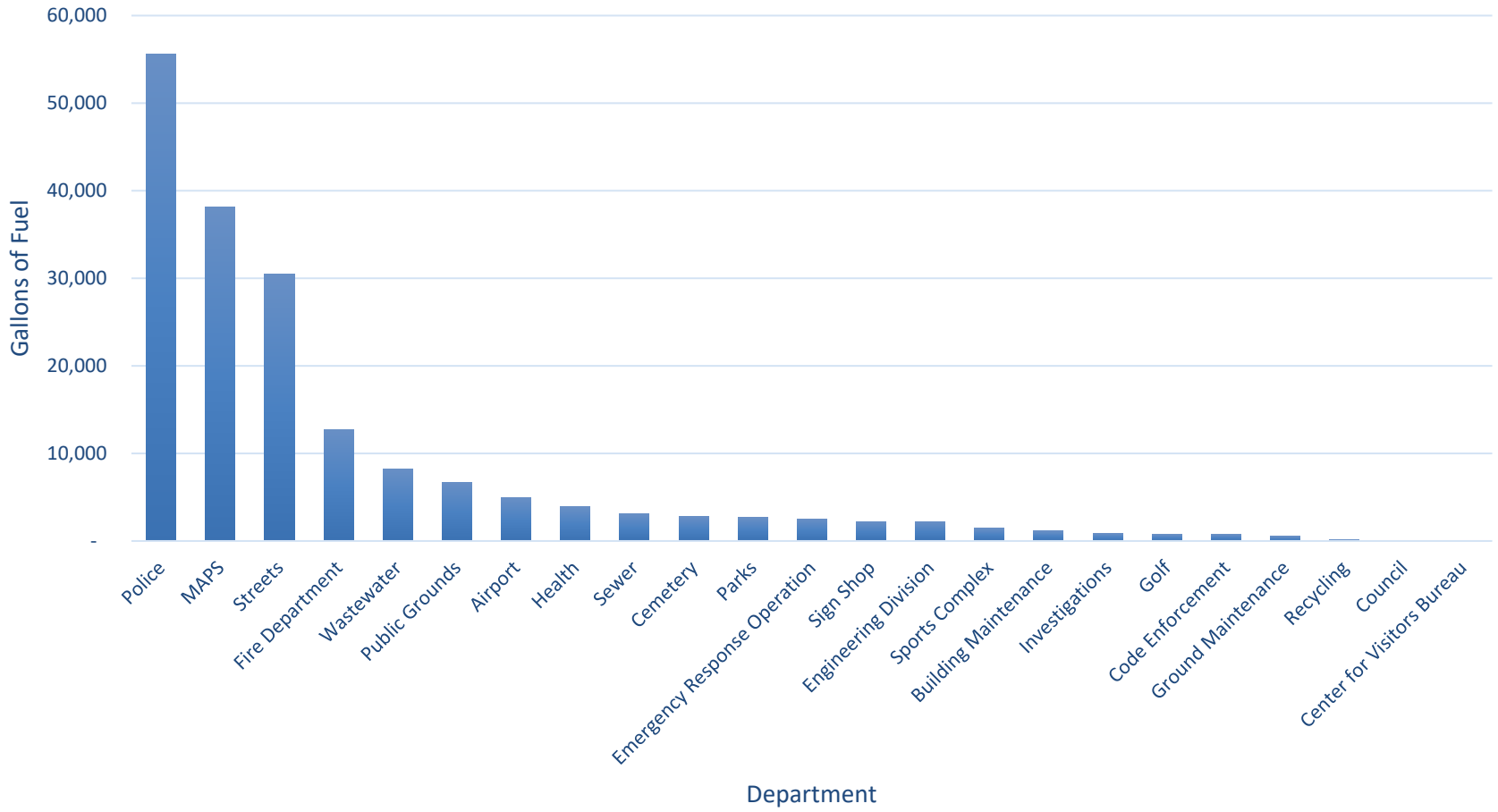
Energy Use Intensity for Municipal Facilities in 2021



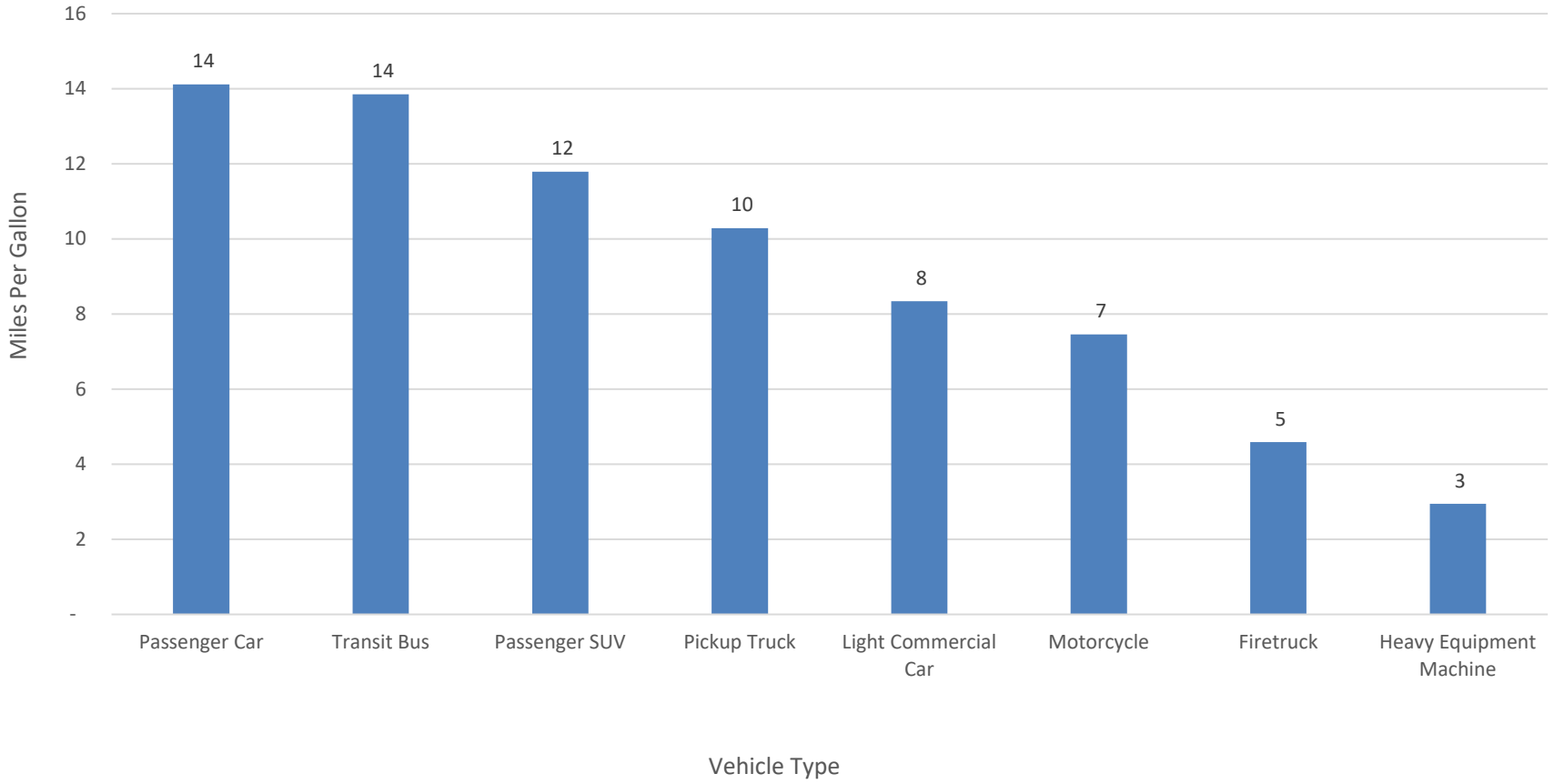
Key Findings and Recommendations

- Tracking and reporting
- Retrofits and upgrades
- Onsite solar generation
- Solar power farm
- Solar power purchase agreements
- Build efficiently

Total Fuel Consumed Per Department in FY 2021



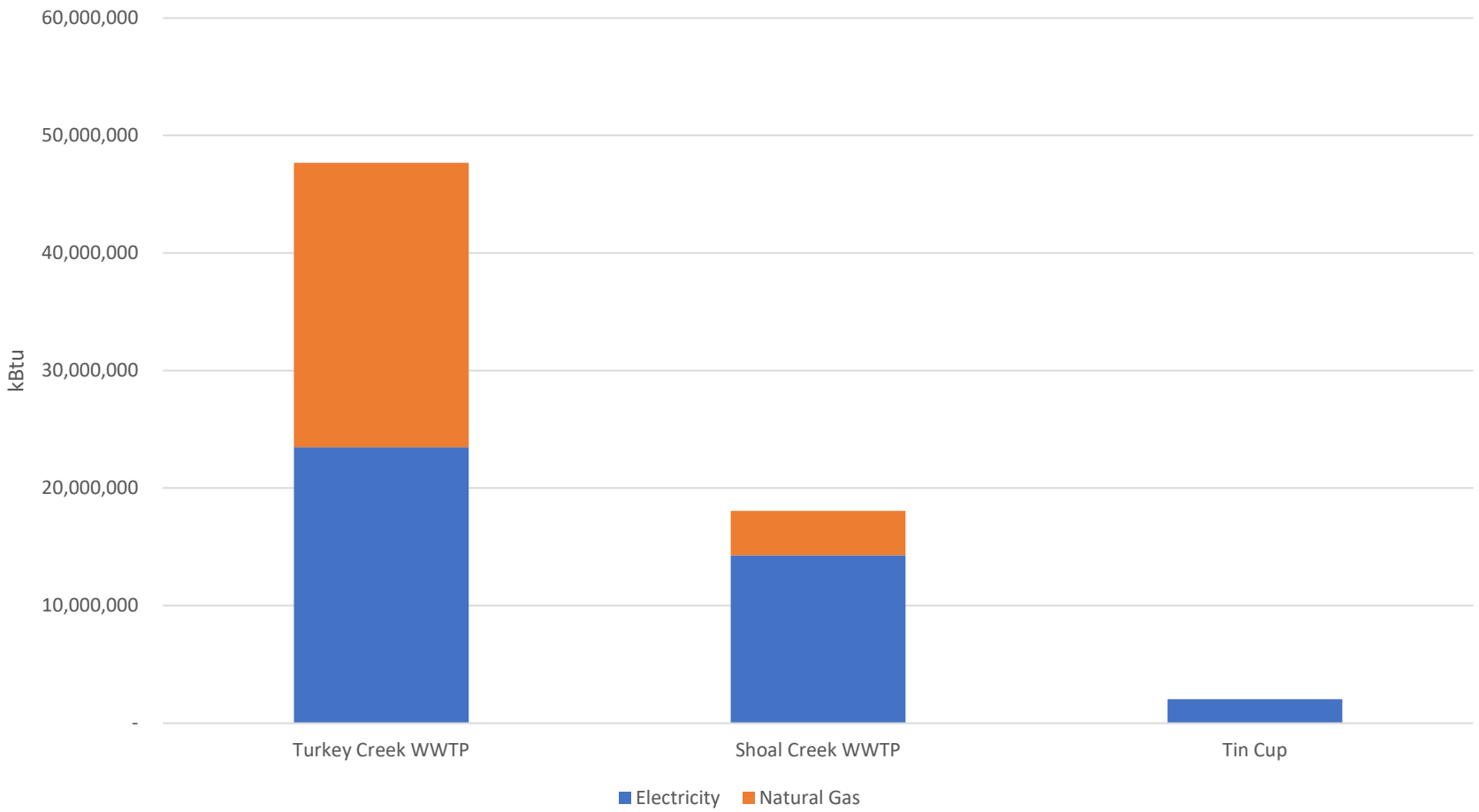
Average Miles Per Gallon By Vehicle Type



Key Findings and Recommendations

- Anti-idling policy
- Proactive maintenance
- Route optimization
- Vehicle rightsizing
- Fleet electrification

2021 WWTP Energy Consumption



Key Findings and Recommendations

- Variable-frequency and eddy-current drives
- Equipment efficiency upgrades
- Peak-use pricing
- Upgrade Biogas for Beneficial Use

QUESTIONS

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