



Green Fleet Action Plan

2011-2014

2013 Mid-year Update

Department of Finance and Management
Division of Fleet Management

**City of Columbus
Green Fleet Action Plan
2011-2014
2013 Mid-year update**

Mayor Michael B. Coleman

Section 1: Introduction

Columbus continues to be a front-runner in the nation in “greening” our environment. The past several years have yielded significant accomplishments toward this end goal, including:

- City of Columbus awarded the #1 Greenest Fleet in North America by Government Fleet in 2011- now considered an “elite” fleet and sit on the judging panel for Government Fleet
- Received the 2012 Sustainability award from Government Green Fleets
- Awarded the “Clean Fuels Champion” statewide award by Clean Fuels Ohio in 2011
- Three Columbus divisions (Public Service’s Planning and Operations Division and the Refuse Division, as well as Public Utilities’ Sewerages and Drainages Division) are all certified as Ohio Green Fleets
- Environmental Stewardship Award (2009) presented to Mayor Coleman by Government Fleet Magazine, Bobbitt Publishing for public sector fleets in the USA
- “Environmental Leadership” award received from the Ohio Environmental Council for our 2009 green fleet initiatives

In 2008, Mayor Coleman issued the City’s first Green Fleet Action Plan (available at www.getgreencolumbus.com). This plan addresses the management, operation and procurement of Columbus fleet vehicles in order to improve vehicle energy efficiency and reduce emissions. This was a plan for greening our city’s fleet and addressed the most pressing issues of the time, with most targets and goals going through 2010. The majority of targets of the original plan were met, necessitating a plan to take us beyond 2010.

This 2011-14 updated plan is intended to guide the City through the next phase of greening our fleet and strengthen our efforts to reduce our carbon footprint. It is largely based on the City’s 2008 original plan and Mayor Coleman’s 2005 Green Memo. The Mayor also updated the Fleet Management Executive Order 2013-01 to include authorization of a Green Fleet Policy. The goals of this plan remain the same – to reduce fleet petroleum use and reduce vehicle emissions, while realizing cost efficiencies when possible.

Section 2: City of Columbus Facts

- The City of Columbus Fleet Management Division maintains over 6300 pieces of equipment
 - Approximately 3000 are on-road vehicles, i.e., cars, trucks, SUVs, etc.
 - Approximately 3300 are off-road, e.g. construction equipment
- 1,692,086 gallons of fuel consumed as of mid-year 2013. Alternative fuel includes:
 - 492,479 gallons biodiesel (79% of all bulk diesel purchased has been biodiesel)
 - E-85 – 15,556 gallons
 - CNG – 78,026 gges (over \$150,500 in 2013 so far in fuel savings over average year to date cost of diesel)

Section 3: Metrics

Immediate/On-going Initiatives:

- **Measure:** Total annual City fuel use (includes all fuel used- bio, ethanol, petroleum, CNG, etc.)
 - **Target: Reduce overall City fuel use by 2% compared to 2010 usage by 2014 –**
 - **Trending to surpass goal – fuel use reduced by 3.2% over 2010 at end of 2012.**

Accomplish through: Working with city agencies to right-size and downsize the fleet, refine and enhance “green” procurement policies, greater promotion of the anti-idling policy, GPS and AVL telematic technologies, and long-range planning and use of vehicle replacement plan

2013 Mid-year update: Mid-year overall fuel consumption is 1,692,086 gallons (including all alternative fuel), **2% lower than mid-year fuel consumption in 2012.** We continue on trend to surpass our goal of 2% overall fuel reduction by 2014.

- **Measure:** Total annual City petroleum use (includes only petroleum fuel- does not include “green” fuels - bio fuels, ethanol, CNG, etc.)
 - **Target: Reduce annual petroleum use by 5% compared to 2010 levels by the end of 2014**
 - **Trending to surpass goal- annual petroleum use was reduced by 5.25% at the end of 2012**

Accomplish through: Increased use of alternative-fueled vehicles- hybrids, CNG and flex fuel, and greater use of biodiesel

2013 Mid-year update: As of 2013 mid-year, City petroleum fuel consumed was 1,553,146 gallons, **5% less than mid-year petroleum consumption in 2012.** We continue on trend to exceed our reduction goal of 5% over 2010 levels.

- **Measure:** Percentage of City bulk diesel purchases that are a biodiesel blend (at least B2 and up to B20 depending on season)
 - **Target: 100% by end of 2013- trending to meet**
 - **75% by end of 2011 – 72%, slightly below target**
 - **85% by end of 2012 – 74.5%, below target**
 - **100% by end of 2013 – 79% at mid-year**

Accomplish through: Cleaning of diesel tanks so that all tanks can be switched to biodiesel

2013 Mid-year update: As of mid-year, **79%** of City bulk diesel purchases have been biodiesel, with B5 purchased January - March and B20 purchased April to date. Fleet Management has begun an aggressive plan to clean the remaining fuel sites so that all tanks can be switched to biodiesel. As of mid-year, 15 out of 49 fuel tanks have been cleaned. We are currently trending to meet our 2013 goal of 100% biodiesel.

- **Measure:** Light duty vehicle purchases that are considered green
 - **Target: 50% each budget year**
 - **2011: target exceeded- 55% green light duty purchases**
 - **2012: 42% green light duty purchases**
 - **2013 mid-year: target exceeded – 71% green light duty purchases to date**

Accomplish through: Continue to enforce “environmentally preferable purchasing” policy, continue to review all vehicle specifications in conjunction with the end user agency and the Purchasing Office to ensure the most “green” vehicles possible are being specified, continue to meet with City divisions to review purchase requests in order to right-size vehicles for their intended purpose

2013 Mid-year update: As of mid-year, the City has purchased 126 light duty vehicles. Of these, 90 or **71%**, are considered green. The majority of green light duty vehicle purchases have been flex fuel.

- **Measure:** Heavy-duty truck purchases that are considered green (excluding Safety vehicles)
 - **2012 Target:** Purchase at least 22 heavy duty CNG trucks and 5 heavy duty hybrid trucks through federal grant programs – **met- all vehicles in service**
 - **2013 Target:** 80% of all new heavy duty vehicle purchases will be green (excluding Safety) – **89% at mid-year**

Accomplish through: Since CNG vehicles will comprise the majority of “green” heavy duty purchases, Fleet Management will work closely with divisions to purchase CNG vehicles that will keep pace with fueling infrastructure while continuing to meet operational need. All heavy duty purchases will be targeted for CNG when possible as heavy duty vehicles are the largest consumers of fuel and therefore yield the greatest return on fuel savings and reduced emissions.

2013 Mid-year update: To date, Columbus has purchased 57 heavy duty vehicles (excluding Safety). Of these, 51, or **89%, have been green**. Of the 51 heavy duty purchases, 26, or **46%, have been CNG**. By the end of 2013, Fleet projects that Columbus will have 91 CNG vehicles on order or in operation, which are expected to displace over 170,000 gallons of diesel and save over \$314,000 in fuel costs in 2013.

Total “green” vehicles in Columbus fleet as of mid-year 2013:

Vehicle Type	# of vehicles
CNG	46
Hybrid	16
Electric	5
Flex fuel	657
Propane	16
Total	740

- **Measure:** Create and expand CNG fueling infrastructure
 - **Target:** Construct and open the first City-owned CNG fueling station at Groves Road by November 1, 2011 – **open for business**
 - **Target:** 2nd CNG station open and pumping fuel by end of 1st Q 2014 – **trending to meet**

Accomplish through: Implementation of Clean Cities grant for construction and operation of a CNG fueling station

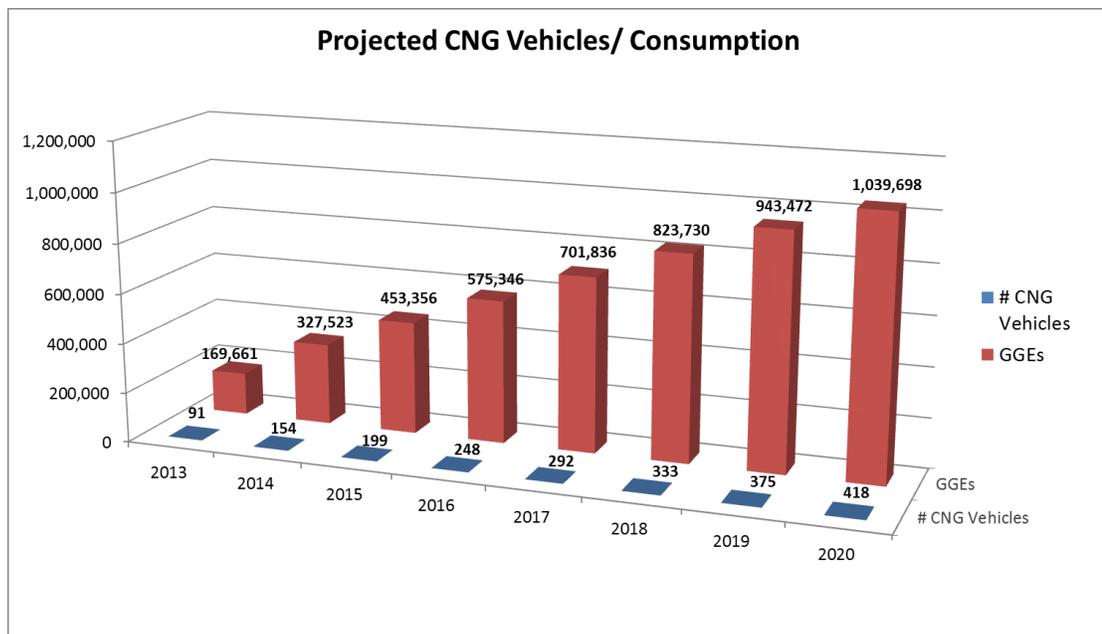
2013 Mid-year update: The City’s first CNG station has been open and operating on Groves Road since April 2012. In addition to City agencies, this station is accessible to the public via Visa/MasterCard payment (no cash as the station is not attended). The station has pumped nearly 99,000 gge’s (gasoline gallon equivalents) in 2013 as of mid-year. Of this total, approximately 80% has been for city-owned vehicles and 20% has been pumped by non-city (private) vehicles. CNG fuel savings for city vehicles as of mid-year total over \$150,500 for 2013 compared to the average price of diesel.

Property for the second CNG station has been purchased on Morse Road near Cleveland Avenue. The station is currently in the construction phase and is expected to be open and pumping fuel by end of first quarter 2014.

Negotiations are well underway between the City of Columbus and COTA to memorialize an agreement and/or license whereby the City can utilize COTA's CNG fueling station on McKinley Avenue. Hopefully fueling can begin sometime during the first half of 2014. A third City-owned CNG station targeted for the West side of Columbus is currently in the discussion and budgeting phase.

Long-term Initiatives:

- Expand numbers of CNG vehicle fleet
 - **Target:** As fueling infrastructure grows, create strategy for increasing the number of CNG vehicles to keep pace with infrastructure growth
 - **2013 Mid-year update:** Fleet Management has been working with City Departments to project CNG vehicle purchases through 2020 that will keep pace with fueling infrastructure. Based on replacement criteria and the availability of future CNG fuel, prospective projections for CNG vehicles and fuel consumption is as follows:



- Reduction of Greenhouse Gas Emissions from City vehicles
 - **Target:** Establish baseline and reliable measurement tool to calculate GHG emissions from City-owned vehicles; establish target for GHG reduction
 - **2013 Mid-year update:** The new GPS units being installed on city vehicles have the ability to calculate greenhouse gas (GHG) emissions and will allow the city to calculate its carbon footprint. Most on-road city vehicles (approximately 1,970) will receive GPS units. Installation of the units began in September 2012. 1350 units have been installed as of mid-year. The remaining units

(approximately 620) will be installed by the end of the year. Once all units are installed, a baseline GHG emission report can be created and reduction targets can be set.

- Electric vehicle use
 - **Target:** Explore electric vehicle options and infrastructure available and viable to the City of Columbus operations; explore cost and funding opportunities
 - **2013 Mid-year update:** The City of Columbus developed an electric vehicle readiness plan with help from the *Project Get Ready* community network. The plan outlines the ideal locations for vehicle charging stations. A Department of Energy grant obtained through project partner Clean Fuels Ohio allowed the city to install two of these stations for use by the public that are currently operational. Columbus has purchased five all electric vehicles - three GEMs and two all-electric Ford Focuses. All units replaced gasoline driven vehicles. Columbus continues to explore further options for electric vehicle applications.
- Green Off Road Vehicles
 - **Target:** Explore available “green’ off road options such as propane mowers and electric golf carts at city-owned golf courses, etc.
 - **2013 Mid-year update:** Fleet Management has begun exploring off road green options and worked with Recreation and Parks and Planning and Operations to purchase propane mowers. As a result, the City purchased 14 propane powered mowers (12 Rec and Parks, 2 Planning and Ops) that were put in service during spring mowing season this year. Through a purchase incentive program offered by the Petroleum Education and Research Council (PERC), the City received a \$1000 incentive for each mower purchased (total \$14,000) in exchange for providing one season worth of data to PERC for research purposes. All mower specifications are now being evaluated for a propane option.
- Help create a green infrastructure
 - **Target:** Cooperate with other Central Ohio private and public fleets in alternative fuel procurement, in refueling station placement and in demonstrating new technologies
 - **2013 Mid-year update:** Fleet Management is a member of the Mayor’s Green Team, as well as the Green Transportation Committee, thereby affording us the opportunity to confer with other Central Ohio private and public fleets. Columbus has had conversations with COTA, Columbus Public Schools, ODOT and several other local municipalities to explore collaboration opportunities regarding CNG including fuel procurement and future station location. Fleet Management is currently working with the State Fire Marshall on a program to provide statewide first responder CNG safety training.

Section 4: Next Steps

Achievement of these goals and targets will require the cooperation and participation of all City department and divisions. The Fleet Management Division, with support from the Mayor's Environmental Steward's Office, will take the lead in implementing these initiatives and will track the progress of the targets. However, each city division should be responsible for calculating and tracking its own carbon footprint. Updates will be provided at mid-year and mid-year that outline the activity that has taken place. The Mayor's Green Team will be kept informed about the progress of the plan and will have the opportunity to provide input and assist in monitoring progress. We expect this document to be fluid- new technology, new grant opportunities, funding challenges, etc. are constantly happening. Every effort will be made to take advantage of the best options available to green our fleet, while minimally impacting City operations.