

The City of Columbus, OH Fleet Management Division: Maintaining the Best Fleet Operation in North America

Working hand in hand with the Refuse Division, the Fleet Management Division continues to help Columbus push its get green effort by transitioning its fleets to CNG, building the best fueling stations, and ensuring safety and efficiency throughout the organization.

The City of Columbus, OH Fleet Management Division works hand in hand with the City of Columbus Refuse Division under Mayor Michael B. Coleman's leadership to serve the citizens of Columbus in waste removal. The Division of Refuse for the City of Columbus began in 1906, a time when all waste was collected with teams of horses to haul the waste. The means of collection and amount to collect has certainly changed over the years. Today, the divisions work together to collect waste at more than 334,000 households each week. An automated side loader is used for about 214,939 households for customers using 90-gallon and 300-gallon containers. A Manual Side Loader is also used to collect more than 11,000 homes weekly. More than 106,000 households are serviced with roll-off and front loader trucks. The mission of the Refuse Division is to collect in a timely manner comprehensive, cost-effective, environmentally sound, and technically reliable residential solid waste collection and disposal for the residents of the City of Columbus.

Along the same lines, the City of Columbus Fleet Management Division strives daily to help the Refuse Division meet its objectives. The Fleet Management Division is tasked with the procurement, maintenance and sale of all of the City of Columbus Fleet. Today, the Fleet consists of more than 6,000 pieces of equipment—2,993 on highway vehicles and 3,289 off-highway pieces of equipment. The equipment is maintained with a \$32 million dollar budget, 121 employees, and four facilities located in Columbus.

Plowing Forward

The state of the economy in Columbus has helped push the “get green” effort.

When many municipalities have been strapped for funds to make new vehicle purchases Columbus has found the means to plow forward with the green effort. “In 2009 Mayor Coleman worked with city business leaders and won their support for an income tax increase, the first in 27 years. The leaders agreed as the Mayor had already made decisions that trimmed the City spending. The Mayor also vowed to put a third of the tax hike into development.”¹

In addition, with the leadership of both Mayor Coleman and Auditor Hugh Dorrian, Columbus has kept Columbus fiscally sound with a triple A bond rating from Moody's Investors Service, Standard & Poors, and Fitch Ratings—which helps the effort in purchasing equipment. Bond ratings are a method of evaluating relative credit risk and are issued before a city, state or other public body can issue bonds to finance major capital projects and neighborhood improvements. High ratings let the city borrow at lower interest rates, potentially saving the city millions of dollars in borrowing costs.

The City of Columbus issues bonds to finance its capital projects such as; park improvements, roadwork, sidewalks, streetlights, fire stations, safety equipment and other public improvements. They are repaid with income tax money that's set aside for major public works. The City of Columbus capital budget is separate from the general fund “operating” budget, and can only be invested in major purchases, construction or renovations, or land purchases. In fact, the Columbus efforts have even been featured in Time Magazine in an article titled “The Columbus Comeback”.

A plethora of units currently being made OEM as CNG — all in the Columbus fleet. Figures courtesy of the City of Columbus.





First CNG Station packs them in for fueling with almost 35 percent “private sector” use to date.

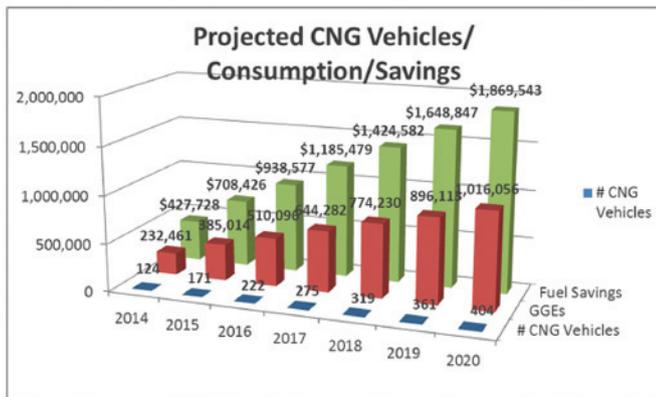
Transitioning to CNG

Columbus’ biggest challenge in the last several years has been the implementation of their CNG initiative. In order to help the Refuse Division be environmentally sound and cost effective, the City of Columbus is transitioning their large fleet from primarily diesel fueled to CNG compressed natural gas. In 2009 the divisions worked together with the first of many CNG vehicles going into service. According to John King, Fleet Operations Manager for the Fleet Management Division, there were many challenges on the road

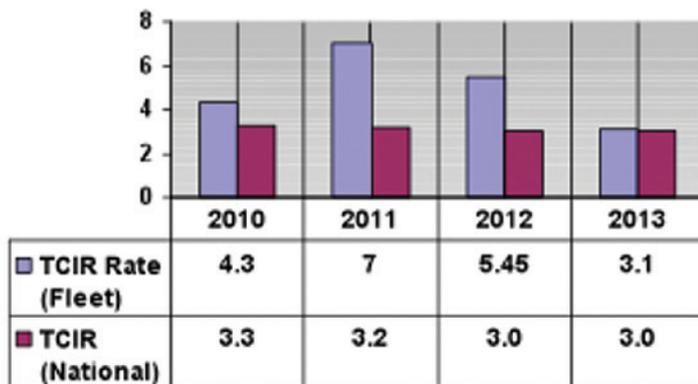
to the CNG transition. Making this shift was anything but easy - “We had to revise vehicle specifications, gain customer buy-in, change our operating procedures, design and build our own fueling stations and select future fuel sites to ensure an adequate infrastructure across the city,” says King. “However, the resolution to these issues can be summed up in one word—education! We trained our customers, our vendors, first responders, worked with fire marshals and BUSTR (Bureau of Underground Storage Tank Regulations) as well as employed a CNG expert consultant to guide us along the way. Education has been the key to overcoming fears, learning new vehicle requirements, building the best fueling stations and ensuring safety and efficiency.”

And the results surely speak for themselves. In 2013, the city’s first CNG station pumped 240,920 gges (gasoline gallon equivalents)—75 percent to city-owned vehicles and 25 percent to private customers. They ended up saving more than \$ 417,602 in fuel costs in 2013. “The 2014 first quarter results look very promising,” says King. “We have pumped 89,000 gge’s year to date; this includes 32,000 gge in retail sales and 57,000 gge to city owned vehicles. The saying ‘if you build it they will come’ is being proven as the retail side is up to 50 percent in total volume. We are on pace to exceed 350,000 combined gge’s this year.” Currently, the equipment is cleaner than ever with 70 pieces of equipment dedicated to run on CNG; 39 of the 70 are refuse vehicles running on CNG and all new heavy equipment purchases will be CNG powered. Columbus is dedicated in the CNG endeavor and is opening a second CNG station by June 2014, two additional stations will follow.

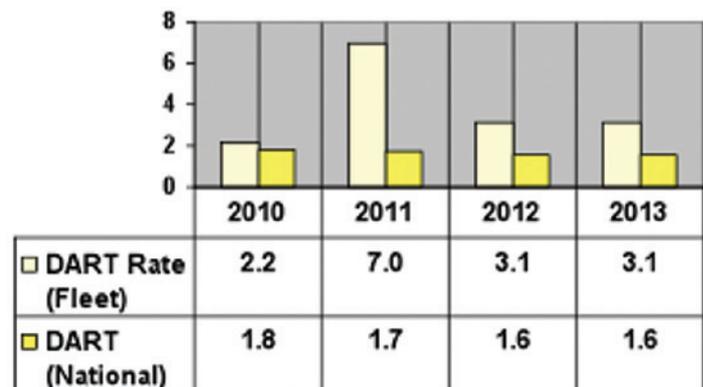
“Upon receiving new CNG powered vehicles, we discovered it mission critical to do an inspection of each vehicles’ CNG system,” says King. “Fleet mechanics (certified CNG inspectors) inspect the units as part of commissioning



Total Case Incident Rate



Days Away Restricted or Transitional



for service. On many occasions we found vehicles fueling discrepancies that have led to OEM corrections prior to going into service.” He also points out that they have modified their preventative maintenance schedule to incorporate a 90-day inspection of all CNG tank hardware and components. The Fleet Management Division is also currently looking at engine on hours to identify opportunities to extend oil change intervals.

Training and Safety

According to King, what appears to have been the best training for the technicians to date when it comes to CNG has been the CNG tank inspector training and testing. “Having experts in house has helped catch items during the entry of the equipment into the system that have the potential to be big problems in the future, such as tanks touching items leading to premature tank failure, cracked brackets within fueling infrastructure that compromised cabinetry integrity to the truck frame.” The Fleet Management Division has also developed an educational session with with owning agencies like Refuse when the equipment is put in service. Proper filling techniques, safety items and dispelling myths of the CNG product are some of the training topics that employees are required to attend.

The Fleet Management Division’s leadership also takes active measures ensuring the safety, health and well-being of its employees. Safety Manager, Terrell Spencer, reinforces the Division to be as safe as possible through hazard recognition, injury prevention, training, accident investigation, hazard remediation and periodic review and evaluation of programs and policies. Employees also are encouraged to participate in organizationally sponsored wellness programs.

Job hazard analyses are performed for staff members in order to evaluate risks and the probability of injury based on regularly performed tasks. The use of personal protective equipment is mandated base on these job hazard analyses. The work environment is also evaluated periodically for regulatory conformance. Safe work procedures, policies and programs are set in place to control and or eliminate recognized risks.

All property damage and personal injury occurrences are immediately investigated and a root cause analysis performed. Once causal factors are determined, steps are taken to prevent incidents from reoccurring. These steps may take the form of instituting engineering controls, upgrading equipment, the introduction of new or revised work procedures along with training. Fleet Management’s Safety Committee also participates in the incident review and remediation process. Policies and procedures are updated as dictated by changes in the workplace such as, new employees and equipment. Training programs are also updated to reflect changes and updates. Through risk analysis, hazard remediation, training, and continuous improvement of policy and procedures, Fleet Management has continually reduced personal injury and hazards in the work place. The results are reflected in a continued reduction in D.A.R.T (days away, restricted, transferred) and severity ratings. A strong Safety Program in the last seven years has saved the City of Columbus hundreds of thousands of dollars in annualized medical expenses. It has also reduced incidents on the floor from 19 to 23 per year to currently only having four this year to date.

The #1 Fleet in America

On April 9, 2014, the Columbus Fleet Management Team was awarded the #1 Fleet in North America by “100 Best Fleets” program. Chosen from more than 38,000 fleets, King says, “This award is a true testament to the ability and work ethic of the men and women on our team. Day in and day out this team of highly qualified and dedicated



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ASE BLUE SEAL

people give their absolute best striving to provide the safest, cleanest, best performing fleet to all user agencies and, ultimately, the citizens of Columbus.” The Fleet Management Division has also been proactive in CNG station building and meets with neighborhood/community groups and educates the audience on the proposed CNG stations. “This year we have been given a marketing budget and are in process of meeting with potential CNG users.”

The Division has also started the Ohio Chapter of MEMA (Municipal Equipment Maintenance Association), whose goal it is to help improve the quality of service in the public sector by providing opportunity to have a free exchange of experience, technical knowledge, ideas and opinions in the Fleet industry. Columbus has made their purchasing contracts available for smaller municipalities, which in turn gives the smaller agency Columbus buying power.

The Next Five Years

Columbus is not done yet. In the next five years, Columbus will take on two main challenges—the “one million gallon challenge” and the certification of ISO 14001. “By 2020, we plan to reduce our petroleum consumption by 1 million gallons per year. To get to this goal, we will employ a variety of strategies from right sizing our fleet, right cycling our equipment, purchasing “green” vehicles and increasing our use of alternative fuel,” says King. In order to become ISO 14001 certified, the Fleet Management Division is developing an Environmental Management System (EMS), which involves the creation of an environmental policy and puts procedures and requirements in place to ensure policy compliance. At the end of the EMS process, the Fleet Management Division will seek ISO 14001 certification that will demonstrate that they are meeting or exceeding all applicable environmental regulatory standards. King points out, “ISO 14001 means that the Columbus fleet goes beyond mere compliance. It will confirm that Columbus is a leader in the environmental field and is truly a good steward of our environment.” **IWA**

For more information, contact John King at juking@columbus.gov.

Note

1. From the Columbus Auditors site: <http://columbus.gov/Templates/Detail.aspx?id=990>.

The Columbus Fleet Management Division is the largest Municipality in the nation to have earned ASE Blue Seal for seven consecutive years. The staff has studied and tested to obtain ASE certifications.

S.H.O.P

At the beginning of every shift, supervisors and mechanics begin with a SHOP talk:

Safety— Discuss a safety topic or concern

Help—What help does the supervisor need from the staff and what help does the staff need from the supervisor?

Opportunity—What is the challenge or priority? What is a problem that can be discussed into an opportunity of the day?

Plan—The plan to accomplish the priority or provide the best possible customer service is communicated.



Daily SHOP talks occur every day to educate technicians on the floor.

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