

# Suffolk County

## Transportation Management System

### 2018 Clean Fleet Policy

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Clean Fleet Policy Statement: It is the policy of Suffolk County to purchase and manage the County's diverse fleet of 2,794 vehicles in a manner that minimizes greenhouse gas emissions and considers life-cycle economics.

#### Overview

Adopted in 2015, the Suffolk County Climate Action

Plan: <http://www.suffolkcountyny.gov/Departments/EconomicDevelopmentandPlanning/Energy.aspx> sets forth a clean fleet policy for the County. It states that, wherever possible, the County will minimize greenhouse gas emissions. This means that the fleet will be moving in the direction of alternative fuels, primarily electric, clean diesel, stop/start, and hybrid technologies. The County's fleet represents a significant portion of its greenhouse gas emissions; it is therefore important that the County take steps to reduce emissions and costs through increased efficiency, green vehicles, and reduced mileage and idling. This policy is to be reviewed annually for its progress and potential recommendations.

#### Policy Implementation

The following are considered 'green' vehicles:

1. Compressed natural gas (CNG). Suffolk County made dedicated CNG filling stations available in 2011. This technology achieves a 6% reduction in greenhouse gases. However, the operation and maintenance of the vehicles has not proven to be cost effective. Suffolk County will be disposing of these vehicles or converting them to clean diesel over the next several years.
2. Clean diesel. In 2010, Suffolk County began replacing all diesel vehicles at end of life with clean diesel (ultra-low sulfur diesel fuel, advanced engines, and effective emissions control combine to achieve near zero emissions that is smoke free). Recent studies noted by the U.S. Department of Energy indicate particulate matter can be reduced 90% and elemental carbon can be reduced 99% by retrofitting diesel vehicles with clean diesel.
3. Stop/start, also known as idle free. Stop/start shuts down the engine in certain driving conditions to reduce fuel consumption. These vehicles are suitable for use in law enforcement fleet.
4. Hybrid. Hybrid vehicles use both electric and fuel combustion. They may or may not require plug-in as delivered; however, Suffolk County GPS equipment will drain the battery if the vehicles are not charged overnight.
5. Electric. A fully electric vehicle is one that does not use fuel combustion at any time. As of July 2018, no fully electric vehicles are in use in fleet. This is mostly because of their limited range.

The County has three goals for its clean fleet:

1. 20% reduction in government operations emissions is attained between 2005 and 2020.
2. Non-law enforcement fleet is composed of at least 30% 'green' vehicles by year 2020.
3. At least twenty EV charging points for fleet are operating in Suffolk County by year 2020.

Figure 1 illustrates the numerical goals for change in fleet percentages based on type of vehicle used. So far, the County is on track to be successful by the 2020 deadline.

Fuel Type	2017	2018	2019	2020
Hybrid	4%	5%	6%	7%
Idle-Free	12%	12%	12%	12%
Clean Diesel	5%	6%	7%	8%
CNG	7%	6%	4%	3%
Unleaded & Diesel	72%	71%	71%	70%

Figure 1

The County has identified best practices to achieve this:

- For vehicles that operate on fixed routes, route optimization is being employed. All routes will be planned to optimize the route and the trips chained together to reduce the required travel time and distance.
- Encourage meetings at centralized locations or via conference call to reduce necessary travel.
- Drivers will not leave vehicles running, unless they have an exemption; the use of GPS in all county vehicles will help track idle time.
- Employees will be encouraged to use alternative modes of transportation, such as buses, rail, carpool, or bicycles when available.

In order to meet these goals, it is imperative that the Fleet Services Manager maintain an inventory of all vehicles in the fleet. The inventory will include the vehicles owned, type of fuel used, and the costs associated with it. This information is crucial for application to grants and funding requests.

Furthermore, before vehicle purchases, an evaluation of the overall lifetime efficiency of the vehicle shall be conducted. Total projected costs in fuel, maintenance, and other operational costs must be taken into account. Funding for green vehicles may potentially come from NYSERDA or NYSDEC. According to the 2015 Suffolk Climate Action Plan, capital leasing may be another potential funding mechanism.

### Progress Assessment

The first goal, a 20% reduction in government operations emissions between 2005 and 2020, is well on its way to success. The overall efficiency of the fleet has drastically increased. When vehicles are retired, they are replaced on average with more fuel efficient ones. Increased use of hybrids for replacement vehicles provides significant gains. Figure 2 shows the average fuel efficiency improvements, by year and by type of driving (highway/city). For example, vehicles retired in 2015 were replaced with vehicles which were on average 13% more fuel efficient for city driving.

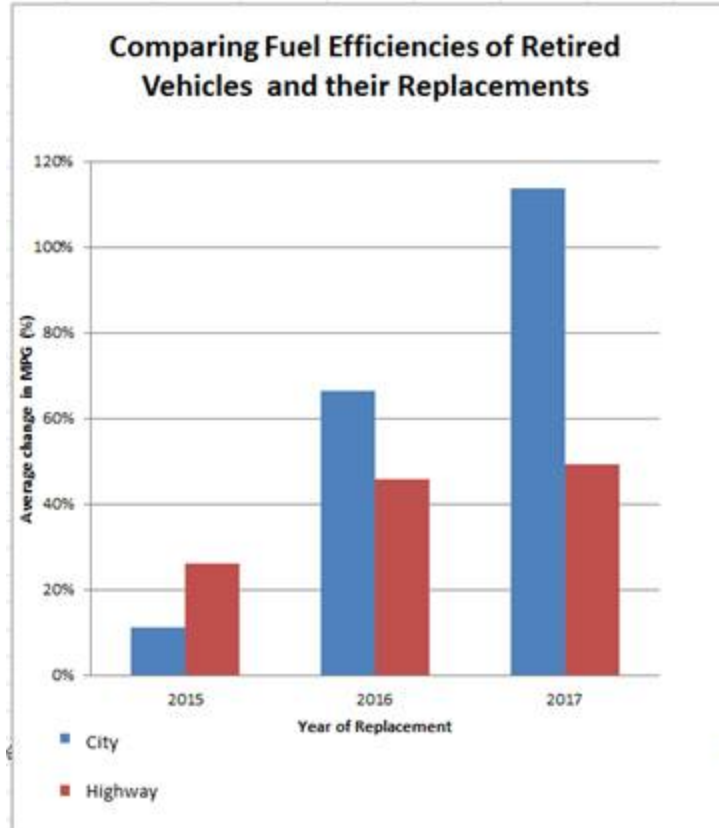


Figure 2

The more fuel efficiency increases, the lower the emissions will be. Further measures, like the implementation of a County policy to prevent idling and following of New York State law on inspections and repairs, have aided in increasing the efficiency of the fleet. Another project, the implementation of interim goals for the transportation fleet and regular monitoring, was put in place in the fall of 2017.

The second goal, that the non-law enforcement fleet be 30% green by 2020, is already near completion. As demonstrated in Figure 3, the County is at 28% green fleet.

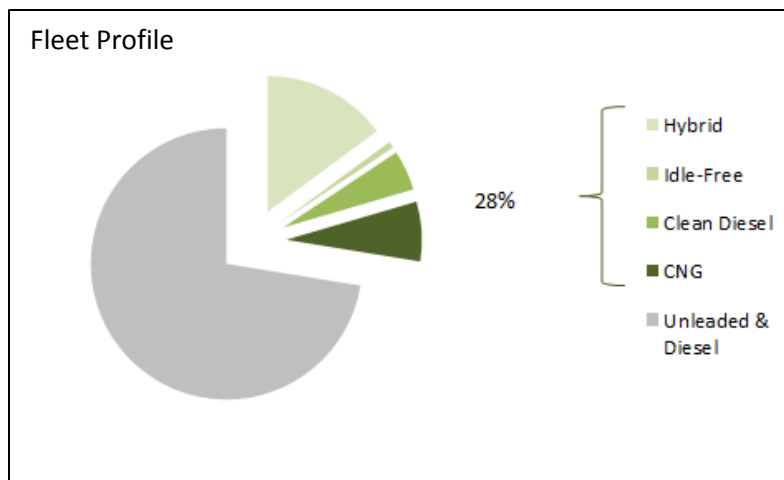


Figure 3

The fleet's diesel vehicles will be replaced with clean diesel as they reach end of life. This will help continue the trend towards a green fleet, while the compressed natural gas vehicles will be phased out over the next several years. Replacement of the CNG vehicles with green fleet vehicles, when possible, will help to ensure that the County stays on track meeting this goal. In addition to the environmental benefits of green fleet technology, there is the benefit of a decreased economic burden on the County to maintain these vehicles over their service life.

The third goal, that there be 20 EV charging points for fleet vehicles operating in Suffolk County by the year 2020, has already been completed. This puts the total number of EV charging points in the County, both public and private, at approximately 90. Strategies for increasing the number of charging points include capital program initiatives and working with local municipalities, NYSERDA, and NYSDEC to secure funding. In section 2.4.3 of the 2015 Suffolk Climate Action Plan, plans are discussed for the building of an east-west corridor of charging points for EV vehicles across the County. The County will locate potential locations for future stations, especially in the area between Medford and Manorville, where there is a large gap. NYSERDA's map of electric charging stations can be found [here](#).

### Conclusion

Overall, the County is doing a satisfactory job at completing its goals established for a clean fleet. The fleet is already 28% green, and as a result carbon emissions are down. The County has further encouraged a shift towards green energy by installing the allotted number of EV charging points in Yaphank. This, however, does not mean that the County's work is finished. There is always room to improve performance and move closer to sustainability. Continuing the effort to replace unleaded and diesel vehicles with hybrids, idle-free, electric, and clean diesel vehicles is absolutely essential. Especially important is the acquisition of electric vehicles where possible; there are currently no vehicles of this type in the fleet, despite the numerous charging points across the County, both owned by the County and by private companies. Furthermore, the fleet will continue practicing efficient driving techniques to reduce emissions and fuel consumption.