



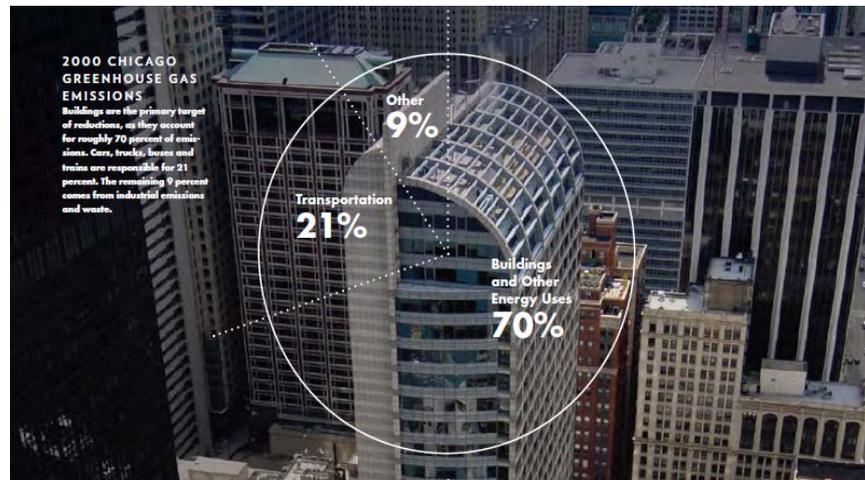
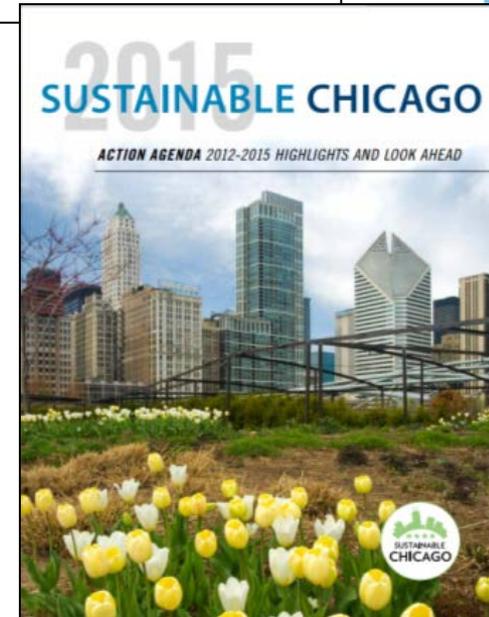
Talking Freight Seminar

July 20, 2016

Samantha Bingham, Chicago DOT &
CACC Coordinator

City of Chicago Sustainability Vision

- The **Chicago Climate Action Plan** established greenhouse gas emission targets
 - 25% GHG reduction by 2020, 80% by 2050
 - Focus on energy, transportation, waste, & adaptation
- The **Sustainable Chicago Action Agenda** prioritized specific activities to drive near-term progress
 - Mutually-reinforcing citywide and cross-sector goals



Supporting Sustainable Transportation

City of Chicago is a national leader in applying new technologies and policies to support the City's sustainability goals

- Sustainability Policies
- 20+ years partnering with U.S. Dept of Energy's Clean Cities Program
- Regional Alternative Fuel Deployment Projects



“The City of Chicago is committed to an environment in which energy efficient vehicles are the norm, not the exception...”
– Mayor Rahm Emanuel

Clean Cities Mission

Clean Cities

advances the energy,
economic, and
environmental security of
the United States by
supporting local actions
to cut petroleum use in
transportation.

Reduced petroleum
consumption

Reduced greenhouse gas
(GHG) emissions

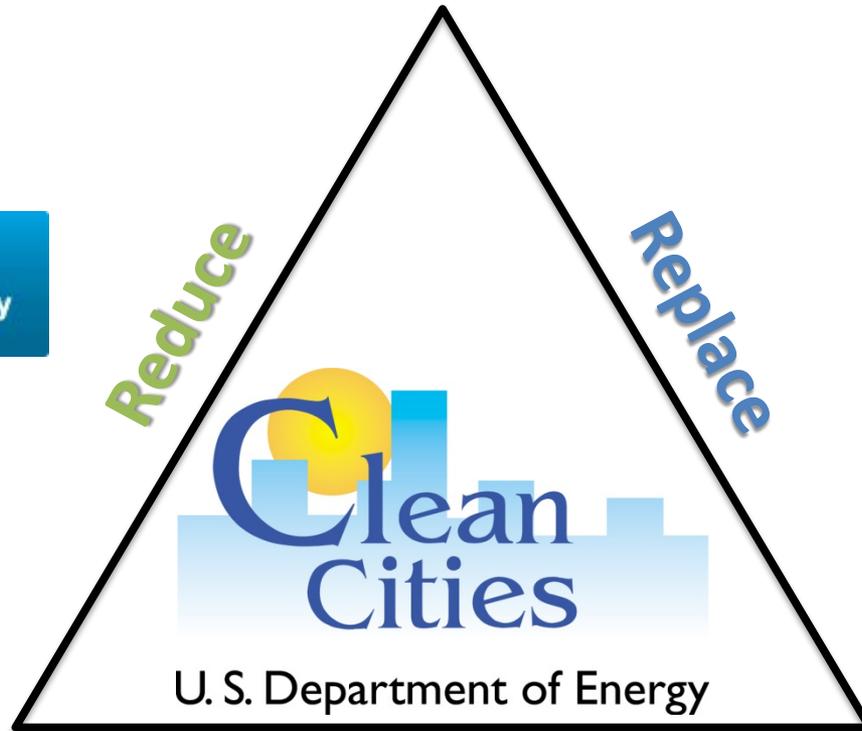
Reduced dependence on
imported petroleum

Clean Cities Coalitions

- National network of nearly 100 local coalitions
- 82% of the total U.S. population lives inside coalition boundaries
- Nearly 500,000 alternative fuel vehicles (AFVs)



Clean Cities Strategies



Reduce

Replace

Eliminate



How Does Clean Cities Strengthen Markets?

- Networking
- Training and information
- Technical assistance
- Education and outreach to decision makers, fleets, and the public
- Recognition
- Funding
 - Updates
 - Joint applications
 - Develop local programs



Supporting Sustainable Freight Through Incentives

Natural Gas



- Drive Clean Chicago
- Illinois Alternate Fuels Rebate Program
- Chicago Area Green Fleet Grant Program

E85



- Illinois Alternate Fuels Rebate Program

Biodiesel



- Illinois Alternate Fuels Rebate Program

Hydrogen



- Illinois Alternate Fuels Rebate Program

Propane



- Illinois Alternate Fuels Rebate Program
- Chicago Area Green Fleet Grant Program

Electric



- Drive Clean Chicago
- Illinois Electric Vehicle Infrastructure Rebate Program
- Illinois Alternate Fuels Rebate Program

Idling & Other



- Illinois Clean Diesel Grant Program
- Funding for school bus heaters and off-road engine repowers in Chicago area

Clean Fuels Across Chicago

Administered by: CDOT

<http://chicagocleancities.org/success-stories/>

- \$15M USDOE ARRA Funding, \$24M local investment

400 Vehicles Deployed

- 300 CNG Vehicles
- 100 Gasoline Hybrids, Heavy Duty Diesel Hybrids and PHEVs

225 Stations Operational

- 200 Electric Charging stations
- 15 CNG stations
- 10 E-85 Stations

Energy Security

- **7.5 Million** Gallons of Gasoline Displaced
- Distance from Chicago to Waco, TX if 7.5 M gas cans were lined end-to-end

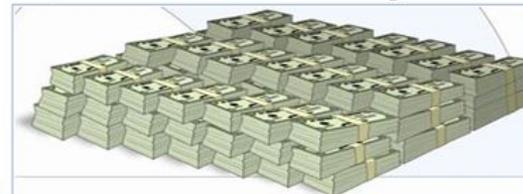


Environment

- **18,000** Tons of CO₂ emissions removed
- Equivalent to removing **3,750** cars from the road

Economic

- **\$8 Million** in Fuel Savings



Current CMAQ Leveraged Incentives in Illinois

Chicago Area Green Fleet Grant Program

Administered by: IL EPA

www.IllinoisGreenFleets.org

- 50% of incremental or conversion cost **CNG & Propane**
- Class 1-3 up to \$10,000
- Class 4< up to \$20,000

Drive Clean Chicago

Administered by: CDOT

www.DriveCleanChicago.org

Drive Clean Chicago

Three Targeted Programs

Drive Clean TRUCK VOUCHER FUND

Funds for Class 2 to 8 All-Electric and Hybrid Trucks and Buses

\$11,295,000 available in incentives

\$30,000 and up (80% of incremental cost)

Dealer applies on behalf of Vehicle Purchaser

Drive Clean Taxi VOUCHER FUND

Funds for Clean Fuel Taxis

\$1,275,000 available in incentives

\$10,000 per voucher or covers incremental cost

Dealer applies on behalf of Vehicle Purchaser

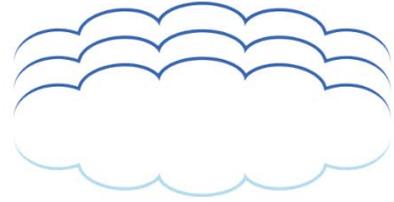
Drive Clean STATION REBATE FUND

Funds for "Public" CNG Fueling and DC Fast Charging Stations

\$1,425,000 available in incentives

Covers 30% of capital cost for station development

End-User will solicit competitive cost proposals



drive clean
CHICAGO

Drive Clean **Truck**



www.drivecleanchicago.com

Why Clean Trucks?

- Increased Efficiency
- Save \$\$\$ on Fuel Costs
- Save \$\$\$ on reduced maintenance
- Air Quality – Non Attainment Areas
- Produce less or no emissions



What is Drive Clean **Truck**?

- Point of sale incentives (vouchers)
- Help move fleets to zero and low-emission vehicles
- Class 2 to Class 8 trucks and buses
- All-electric and hybrid trucks and buses

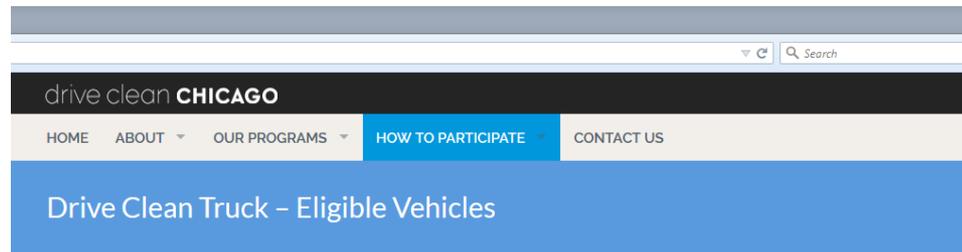
Drive Clean **Truck**

- **\$30 Million** program (\$8M requested)
- Voucher covers up to 80% of incremental cost
- Incentives for each vehicle on web site
- Leased vehicles are eligible
- Similar to other local voucher programs

Drive Clean **Truck**

- Eligible vehicles must operate 75% of the time in Chicago six-county Area
 - Cook, DuPage, Kane, Lake, McHenry and Will**
- Vehicle Purchasers must comply with 3-year program commitment

Eligible Vehicles – web site



Apply for Vehicle Eligibility

To list your All-Electric (including drivetrain retrofits) or Hybrid Vehicle on the Drive Clean Truck – Vehicle Eligibility List, manufacturers must follow the steps below. All-Electric and Hybrid Vehicles must be Class 2 to Class 8 and have a Gross Vehicle Weight Rating (GVWR) of 6,001 pounds and higher.

Vehicle Eligibility Application Process:

1. Download the [Electric Vehicle Eligibility Application](#) and the [Hybrid Vehicle Eligibility Application](#) from the Drive Clean Chicago Website.
2. Submit a completed Vehicle Eligibility Application to the Program Administrator at info@DriveCleanChicago.com.
3. [Contact us](#) for questions and application support.

Vehicle Eligibility List

Vehicle Purchasers (Fleet Owners) must select an approved "Eligible Vehicle" from the Vehicle Eligibility List. Below are eligible All-Electric and Hybrid Vehicles approved through the **Drive Clean Truck – Voucher Fund**.

Vehicle Purchasers must submit a Voucher Request through an Approved Vendor.

[Click here](#) to view the **Drive Clean Truck Approved Vendors List**.

Drive Clean Truck – Vehicle Eligibility List							
ALL-ELECTRIC VEHICLES							
OEM	Vehicle	Model Year	GVWR	Battery Capacity (kWh)	Incentive **	Website	Approved Vendor(s)
AMP Workhorse	E-100 All-Electric Walk-In Van	2015	19,500	100	\$60,000	http://ampelectricvehicles.com	AMP Workhorse
AMP Workhorse	E-GEN Electric Walk-In Van with Emergency Generator	2015	19,500	60	\$32,800	http://ampelectricvehicles.com	AMP Workhorse
BYD Motors	K9 40-Ft. Battery-Electric Transit Bus	2014	40,786	324	\$150,000	http://www.byd.com	BYD Motors
BYD Motors	K9M 40-Ft. Battery-Electric Transit Bus	2015	40,786	360	\$150,000	http://www.byd.com	BYD Motors
BYD Motors	C6 23-Ft. Battery-Electric Coach	2015	18,331	152	\$90,000	http://www.byd.com	BYD Motors
BYD Motors	K7M 30-Ft. Battery-Electric Transit Bus	2015	27,117	183	\$110,000	http://www.byd.com	BYD Motors
BYD Motors	K9S 33-Ft. Battery-Electric Transit Bus	2015	37,600	281	\$116,000	http://www.byd.com	BYD Motors
	K9S 35-Ft. Battery-						

Program Development & Oversight

Samantha Bingham, CDOT



Tom Brotherton, CALSTART



Priscilla Barragan, Tetra Tech



Carl Lisek, Legacy Environmental



Drive Clean Case Studies




CHICAGO MARRIOTT O'HARE FLEET CASE STUDY

Chicago Marriott O'Hare received \$105,098.60 in voucher incentives through Drive Clean Chicago for two (2) all-electric shuttle vans from Zenith Motors. These innovative shuttle vans provide convenient, zero-emission transportation to Marriott customers and help the business bottom line with fuel cost savings.



Company Profile

Marriott International is a global hotel company with properties in 87 countries. The Chicago Marriott O'Hare serves visitors flying in and out of the Chicago O'Hare Airport seeking to visit the convention center and other local attractions in the Chicago area. One of ways Marriott O'Hare provides value to its customers is through its daily shuttle bus service to these local attractions.

Business Case for Clean Vehicles

Marriott's Zenith all-electric shuttle vans have a range of 80 miles and include regenerative braking and plug-in charging capabilities. These vehicles also include a battery heater that maintains the battery's charge while plugged in during colder climates. After purchasing the two all-electric shuttle vans, Chicago Marriott O'Hare is charging the vehicles on-site, thereby maximizing operational efficiency by eliminating the time needed to refuel off-site. As a result, Chicago Marriott O'Hare is seeing \$3,000 per month in fuel cost savings and reduced monthly maintenance costs by \$4,000.

Serving the Community

The drivers in the Chicago Marriott O'Hare's fleet love the ease of use of the plug-in electric charging units and enjoy driving the new electric shuttle vans. Marriott's zero-emission vehicles promote clean air, reduce carbon emissions, and are quiet while providing enjoyable transportation for passengers in the Chicago area. In participating in its corporate "Spirit to Preserve" initiative, Marriott aims to reduce the carbon footprint of its properties and fleet by incorporating clean technologies and strategies.

For more information, visit drivecleanchicago.com

Questions? E-mail them to info@drivecleanchicago.com



FLEET PROFILE

Name	Chicago Marriott O'Hare
Services	Hotel, Hospitality
Employees	5,000+
Area Covered	O'Hare International Airport
Voucher Amount	\$105,098.60
Technology	All-Electric

About Drive Clean Chicago

The Drive Clean Chicago Program (DCC) is a unique and streamlined incentive program to help create a roadmap for a greater alternative fuel transportation network for Chicago. DCC accomplishes this by addressing the biggest barrier to the purchase of medium- and heavy-duty advanced trucks: the high incremental cost of these vehicles in the early market years when production volumes are still low. All fleets are eligible, whether they're public or private, large or small.




DHL SUPPLY CHAIN/EXEL FLEET CASE STUDY

DHL Supply Chain/Exel's Bolingbrook office received \$150,000 in voucher incentives through Drive Clean Chicago for one (1) all-electric tractor from Orange EV. The new zero-emission yard tractor offers attractive range, operates well in cold temperatures, and reduces fuel costs.



Company Profile

DHL Supply Chain is the world's largest logistics company, offering customized supply chain services for its customers. Its sister organization, Exel, is the leader in contract logistics for North America. DHL trucks carry around 80-90 loads per day, delivering outbound goods from its warehouses all year round. As a result of its global initiative to use more fuel-efficient vehicles, DHL has replaced around 75 percent of its U.S. fleet with alternative fuel vehicles since 2014.

Business Case for Clean Vehicles

Orange EV's all-electric system replaces the internal combustion engine with an electric motor and battery, eliminating the need for diesel fuel. After receiving the electric yard tractor, Exel has experienced an 85 to 90 percent reduction in fuel costs in the 2015 fiscal year. These savings are projected to be worth \$22,000 considering current fuel costs. The truck has operated at efficient speeds along with the other diesel trucks in the fleet and was reported to have run for 24 hours on a single charge.

Serving the Community

Exel liked the ability to refurbish an existing truck that the team had been using before with an all-electric system to streamline the integration of the truck back into the fleet. With the efficient performance of the vehicle reducing time at the pump, Exel can serve more of its customer base while reducing emissions for its surrounding communities.

For more information, visit drivecleanchicago.com

Questions? E-mail them to info@drivecleanchicago.com



FLEET PROFILE

Name	DHL Supply Chain/Exel
Services	Supply Chain Management
Employees	52
Area Covered	Chicago
Voucher Amount	\$150,000
Technology	All-Electric

About Drive Clean Chicago

The Drive Clean Chicago Program (DCC) is a unique and streamlined incentive program to help create a roadmap for a greater alternative fuel transportation network for Chicago. DCC accomplishes this by addressing the biggest barrier to the purchase of medium- and heavy-duty advanced trucks: the high incremental cost of these vehicles in the early market years when production volumes are still low. All fleets are eligible, whether they're public or private, large or small.

Coca-Cola Refreshments purchased 9 XL Hybrids systems with the Drive Clean Chicago Voucher Program



Hybrid Fleet Electrification Numbers

175

Chevrolet Express Van Hybrid Conversions

1.5+ million

Service Miles Driven

20% *(Equivalent to 25% MPG gain)*

Reduction in Gallons of Fuel Used per Van

\$15,000 -

\$20,000

per Van in Operational Savings*

Product	MSRP w/Installation	Chicago Incentive	Fleet Cost
1 GM Cargo Vans	\$10,990	(\$8,792)	\$2,198

Payback in as little as 20K miles!

\$15,000-\$20,000 net savings

Corridor Opportunity

FAST Act Section 1413 – Designation of Alternative Fuel Corridors



Contact Information

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Websites: www.cityofchicago.org/Transportation

www.DriveCleanChicago.com

www.DriveElectricChicago.org

www.ChicagoCleanCities.org

