

US EPA ARCHIVE DOCUMENT



Midwest Clean Diesel Initiative Conference

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City of Chicago Department of Transportation

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Overview

Background

- Diesel emissions in Chicago
- City of Chicago's sustainability goals

Funding Sources

- USEPA
- USDOE
- CMAQ

CMAQ Examples

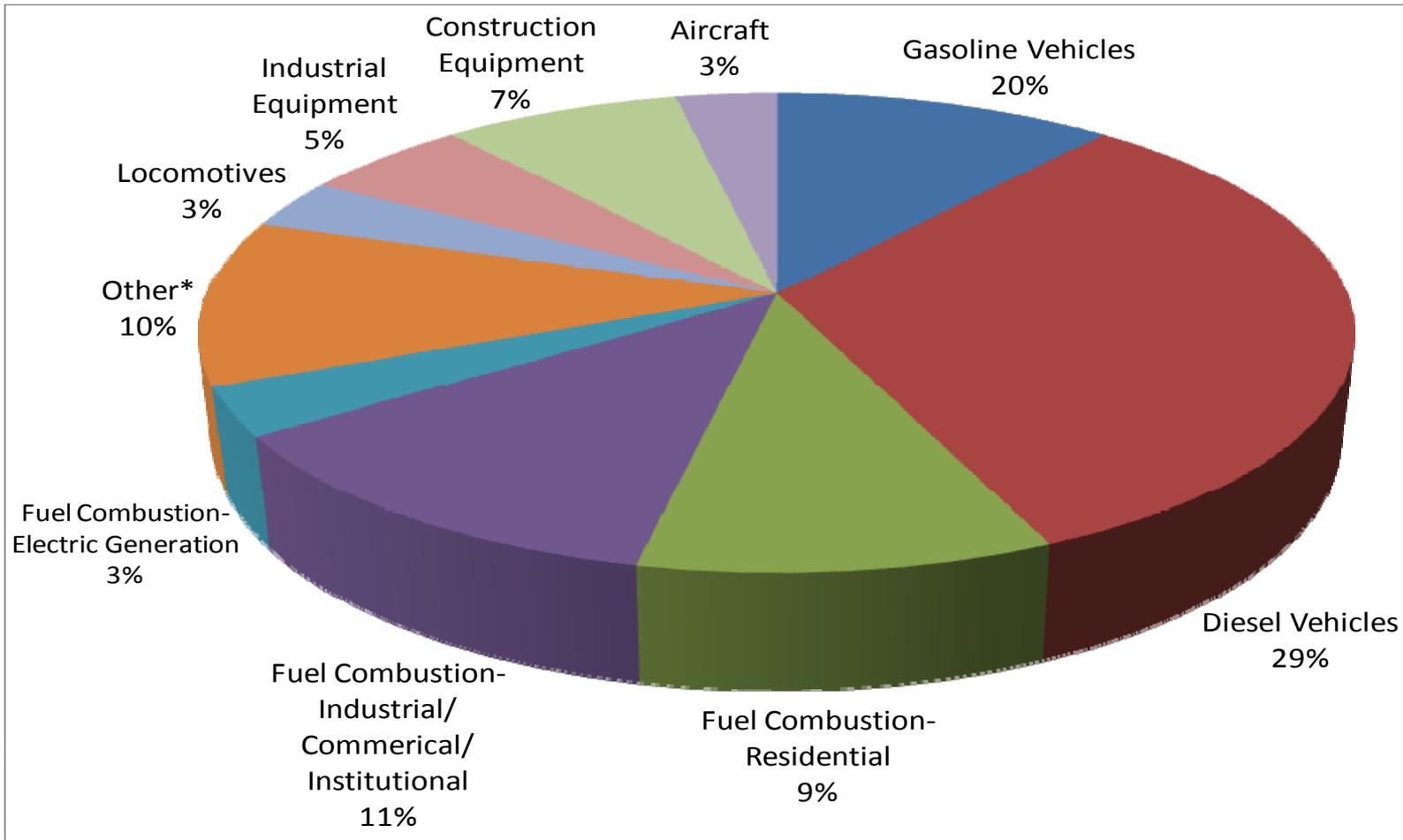
- Diesel emissions reduction projects
- Alternative fuel deployment projects

Lessons Learned

- Marketing and outreach
- Grant management assistance
- Snowball effect

Emission Inventory For Non-Attainment Criteria Pollutants

Nitrogen Oxide (NOx) Cook County Emissions 2008



Chicago Climate Action Plan



25% Reduction by 2020

Calls for a 10% increase
in alternative fuel use
in Chicago by 2020

Chicago Climate Action Plan

34.6 MMTCO₂e



City of Chicago Clean Diesel Policy Support

- Diesel Idling Reduction Ordinance
 - www.NoldlingChicago.org
- Excessive Smoking Vehicle Ordinance
- Clean Diesel Contracting Ordinance

US EPA Funded Projects

- Clean School Bus Program (over 500 buses)
- Pre-DEIRA Diesel-Fired Heaters (13)
- ARRA-DEIRA Diesel-Fired Heaters and Hybrid-Electric Trucks



191 diesel-fired heaters installed on refuse and snow plows



3 hybrid-electric aerial bucket trucks replaced 3 older vehicles

Lesson Learned

This vehicle is equipped with an auxiliary idle-reduction heater.

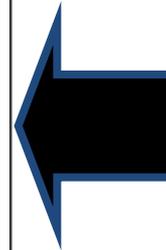
DO NOT IDLE TO WARM ENGINE.

*Idling a City of Chicago vehicle is limited to **three minutes per hour** in most cases by policy and ordinance.*

Do not idle this vehicle's engine. Do not start this vehicle during a cold-weather event. Instead, start the auxiliary heater to warm the engine and hydraulic system.

For more information, contact the Department of Fleet Management.

**CHICAGO
CLIMATE
ACTION
PLAN**



Outside the truck

AUXILIARY HEATER SYSTEM

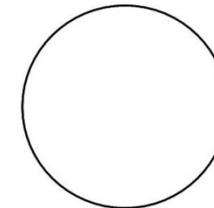
Heats cab, engine and hydraulic tank without running engine.

Inside the truck



Directions:

1. Turn engine off. Leave key in Accessory position to use radio(s).



2. Press button once to start the cab heater and the engine heater.

4. Press button again to stop heaters.

3. Adjust dial to control cab temperature.

US DOE Funded Projects

- **Chicago Climate Action Plan Advanced Transportation Technologies Initiative Grant**
- **Clean Cities - Chicago Area Alternative Fuels Deployment Project**
- **Groot Industries Clean Cities Grant**

CAAFD Project Budget

**\$15
million**

**in USDOE ARRA
funding received by
City and partners**

+

**\$24.6
million**

**leveraged in
additional project
investments**

Project Objectives

Increase alternative fuel vehicles & hybrids

310 CNG Vehicles (129 Medium & Heavy Duty), **83** Gasoline Hybrids, **10** Heavy Duty Diesel Hybrids and PHEVs

Develop fueling & charging infrastructure

316 Electric Charging stations (73 DC Fast Charging), **17** CNG stations, **1** LPG station, **11** E-85 stations

400 metric tons/yr in reduced criteria pollutants

7,500 metric tons/yr in reduced CO2 (eq. to removing almost 1,400 cars/yr)

3 million gallons of petroleum/yr displaced

77 full time equivalent jobs

16 Project Partners

US DOE
Sponsor—Project Oversight

City Of Chicago DOT
Samantha Bingham
Prime
•Coordination of Project Partners
•Project Reports

GTI
Ted Barnes – PM
• Coordination with Subawardees
• Project reporting and invoicing support
• Technical support

City of Chicago
Dept of Fleet and Facilities Mngt
Matt Stewart
• Subawardee

350 Green
Hali Sittig-PM
• Subawardee
• Electric Charging station infrastructure developer

Green Taxi Program
Hybrid and Alt Fuel Taxis

Commonwealth Edison
Vehicles and Infrastructure

Doreen's Pizza
Infrastructure

DuPage County DOT
Vehicles and Infrastructure

Foodliner
Vehicles

Forest Preserve DuPage
Vehicles and Infrastructure

Groot
Vehicles and Infrastructure

I-GO
Infrastructure

Patson-Exel-Diageo
Vehicles

Peoples Gas
Vehicles and Infrastructure

Clean Energy / Yellow Cab
Vehicles and Infrastructure

Village of Downers Grove
Infrastructure

Waste Management
Vehicles and Infrastructure

Clean Cities Diesel-Replacement/Reduction Projects



Waste Management
15 Waste Haulers, 1 CNG station



Groot Industries
20 Waste Haulers, 2 CNG stations



Foodliner
6 Long-haul Heavy-Duty CNG Trucks



Ozinga Brothers
14 CNG Cement Mixers

Clean Cities Diesel-Replacement/Reduction Projects



Patson-Exel Diageo
2 Heavy-Duty CNG Delivery Trucks



ComEd
35 Hybrids, 8 Hybrid Bucket Trucks, 1 PHEV Digger, 36 Level 2 EVSE



Clean Energy
2 Public Fueling Stations



GTI
1 CNG Station

Accomplishments to Date

352 Vehicles Deployed

259 CNG Vehicles (87 Heavy Duty),
83 Gasoline Hybrids, 10 Heavy Duty
Diesel Hybrids and PHEVs

223 Stations Operational

198 Electric Charging stations (26 DC
Fast Charging), 15 CNG stations, 1
LPG station, 9 E-85 stations,

\$11.6 million in USDOE costs incurred

\$20.6 million in Recipient share incurred

750,000 gallons of petroleum displaced

CMAQ Projects

- **1999 & 2000 FFY Regional Alt Fuel Program**
- **2007 FFY DOCs & DPFs, SEP Match**
- **2008 FFY DPFs, Cash Match**
- **2009 FFY DPFs, Hybrid-Electric and All-Electric Trucks, City's Vehicle Budget Match**
- **2012 – 2016 FFY Phase 2 Chicago Area Alternative Fuels Deployment Project**

First Step in Grant Application Development

- **Talk to an expert**
 - **Fleet Staff**
 - **Vendors**
 - **Other MWCDI members**

Lessons Learned

- **Budget for marketing and outreach**
- **Seek project/grant management temporary assistance**
- **Track collateral effects (snowball effect)**

Snowball Effect —US DOE Funds Lead to Outside Investments/Improvements

Green Taxi Program

55 CNG taxis

>\$750,000 in private funds

City Policy Changes

2 major changes to incent green taxis

Released RFP for “Green” O’Hare fueling station

WM and Groot Projects

3 More Waste Haulers

> 75 CNG Trucks, 3 Stations

>\$5,000,000 in private funds

Additional WM Public station

Near Midway Airport

Early Nissan Leaf Release

City Flex Fuel Vehicles

“Locked out” of gasoline

AT&T CNG Vehicles

>50 NGVs; >\$500,000 private funds

New Alternative Fuel Infrastructure

Summary

- **Understand the goals of your funding agency**
- **Highlight policy support and institutional goals**
- **Seek assistance from experts**
- **Learn from experience – or from other's experience**
- **Be creative – but not too creative**



Questions?

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