

Clean Fuels Ohio's Fast Track to AFV Adoption in Ohio



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Clean Fuels Ohio
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Project ID: TI036

This presentation does not contain any proprietary, confidential, or otherwise restricted information

Overview

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Timeline

- **Start: February 1, 2013**
- **Finish: December 31, 2014**
- **75% Complete**

Budget

- **Total Project – \$608,918**
- **DOE Share – \$499,918**
- **Partner Contribution - \$109,000**

Barriers

- Availability of alternative fuels and electric charging station infrastructure
- Consumer reluctance to purchase new technologies
- Lack of technical experience with new fuels and vehicle technologies

Partners

- Calstart
- Communica
- Earth Day Coalition
- Mid-Ohio Regional Planning Commission (MORPC)

Relevance

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Objectives:

- AFV Policy Education Initiative Development: Focus significant effort targeted at decision-makers within specific state government agencies along with local government officials.
- Ohio Green Fleets Program (OGF) Development: Expand the current level of OGF activities including fleet outreach, education, networking, project development, and recognition.
- Ohio NGV and Propane Autogas Partnerships Development: Educate and inform fleets, government regulators, and new industry players.
- Ohio PEV Market Development Initiative: educate consumers about PEVs by encouraging them to seek information, which will help lead to sampling (test-driving) and supporting the Ohio PEV initiative.

Project Supports Vehicle Technology Program Goals:

- By 2020, to achieve a petroleum reduction of over 2.5 billion gallons per year through voluntary adoption of alternative fuel vehicles and infrastructure
- To ease market introduction of alternative fuels and new electric drive vehicle technologies through voluntary efforts in partnership with local communities
- To provide technical and educational assistance to support local communities and partnerships that promote better understanding of the benefits of these new technologies

Milestones

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

AFV Policy Initiative:

- Develop model language/processes for inclusion of AFV, PEV and infrastructure projects in Ohio to influence 5 infrastructure projects
- Establish an alternative fuel task force
- Conduct workshop with Public Utilities Commission of Ohio (PUCO)
- Work with MPOs to host workshops for local governments

Safety and Training Initiative:

- Refine scope and requirements of AFV technical and safety training program by developing draft model training language
- Provide training materials to DOE for review and approval and develop gaseous fuels training program
- Provide training materials to DOE for review and approval and develop electric vehicle training program

Barrier Reduction Initiative:

- Education and outreach through alternative fuel events: 2 NGV Events (total) 2 Autogas Events (total) 2 OGF Events (total) 4 Biodiesel Events (total)"
- Identify and work with fleets to develop 5 "Green Fleet Action Plans."

Market Development/Outreach Initiative:

- Create 5 videos for Fleet Success Story profiles
- Develop outreach materials to be used for program outreach
- Develop media materials through 15 press releases
- Plan, develop and facilitate:
 - 1 Statewide NGV Event
 - 1 Statewide Autogas Event
 - 1 Statewide EV Event
 - 1 Statewide OGF Awards

"Go/No-Go" decision point :

- Applied for and received approval for the continuation of funding for Fast Track (1/31/14)

Project Approach

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Project Objectives:

- Policy Initiative
 - Develop a Green Fleet Model
 - Study and assess Ohio AFV procurement specifications
 - Develop model language in in Ohio Transportation Improvement Plans (TIPs) for AFVs
 - Educate members of Ohio's MPOs through seminars
 - Work with stakeholders to develop procurement specifications for AFVs
 - Work with partners and stakeholders to study best practices for tax incentives for AFVs
 - Study and present models around U.S. for AFV and infrastructure financial incentives.
 - Develop an alternative fuel task force to identify barriers and analyze policies
 - Work with state government to institute a database tracking system CNG cylinders
 - Work with stakeholders to review AFV safety ordinances and develop best practices
 - Host workshops for local governments and public utilities
- Barrier Reduction Initiatives
 - Develop outreach initiatives through Ohio Green Fleets (OGF).
 - Develop regular meeting alliance of key natural gas vehicle industry
 - Further develop regional fleet gaseous fuel partnerships groups
 - Education and outreach through alternative fuel events
 - Increase hands on project development assistance to fleets through the Ohio Green Fleets program

Project Approach

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- Barrier Reduction Initiatives (cont.)
 - Identify individuals willing to serve as fleet mentors and partner mentors with fleets
 - Develop maintain online resource center for fleet mentor contacts
 - Complete 5 Green Fleet Action Plans
 - Identify fleets located in close proximity of alt. fuel stations and inform the fleets
 - Identify barriers existing for workplace charging in Ohio and organize a workshops
- Safety and Training Initiatives
 - Refine scope and requirements of AFV technical and safety training program
 - Develop training schedule and secure training locations
 - Gaseous Fuels Training
 - Electric Vehicles Training
- Market Development/Outreach Initiatives
 - Implementation of PEV Marketing Strategy
 - Cultivate existing CFO EV website as the central resource center
 - Develop and implement an earned media advertising and media outreach plan
 - Develop a statewide media strategy for identifying top media outlets and reporters
 - Develop social media content focusing on electric vehicles and Ohio Green Fleet Successes
 - Develop ongoing observation, measurement and re-engagement program
 - Identify fleets to be featured in the Ohio Green Fleets Success Storytelling Outreach

Project Approach

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Market Development/Outreach Initiatives (cont.)

- Develop and continually maintain fleet and technical mentor profiles on CFO website
- Develop Video Content through 5 video Fleet Success Story profiles
- Create posters of Success Story fleets for business and OGF events
- Develop outreach materials, both print and electronic, to be used for outreach
- Identify fleets and distribute outreach materials focusing on the Ohio Green Fleets Program
- Identify enrolled Ohio Green Fleets that have qualified for Ohio Green Fleets Certification
- Develop Media Materials through 15 press releases
- Host fuel specific events:
 - Natural Gas Vehicle Event
 - Autogas Advantage Event
 - Ohio Green Fleets Awards
 - EV Event

Drive Electric Ohio

WORKPLACE CHARGING WORKSHOP

APRIL 29th 2014
10:00AM - 3:00PM

Confirmed Speakers:
John Deere, GM, Honda, Nissan, Shell, Tesla, U.S. Bank, U.S. Postal Service, U.S. Coast Guard, U.S. Navy, U.S. Marine Corps, U.S. Air Force, U.S. Army, U.S. Marine Corps, U.S. Coast Guard, U.S. Navy, U.S. Marine Corps, U.S. Air Force, U.S. Army

Nationwide & Ohio Farm Bureau 4-H Center 2201 F Taylor Dr. Columbus, OH
@ **The Ohio State University Campus**

Why Workplace Charging?
Learn how to discuss with your business how you can benefit from workplace charging. Be a part of the future workplace.

Enhance Your Bottom Line
Save money on fuel for your fleet vehicles by converting company cars to plug-in electric vehicles (PEVs).

Attract and Retain Employees
Draw in high-quality employees by showing leadership and helping them with their transportation needs.

GREAT LAKES TRUCK EXPO
WHERE ALL VOCATIONS COME TOGETHER

September 18th & 19th

Join Clean Fuels Ohio at the 2013 Ohio Green Fleets Awards to celebrate schools, businesses, and public fleets that have improved environmental performance and fuel efficiency.

Clean Fuels Ohio has partnered with the Great Lakes Truck Expo to present a unique two-day experience. Come learn about new alternative fuel and efficiency technologies, network with industry professionals and fleet experts, participate in an on-going alternative fuel vehicle Ride & Drive, and gain important information and expertise through the many educational breakout sessions.

Highlights will include:

- Ohio Green Fleets Awards Luncheon
- Eight Educational Breakout Sessions
- Advanced Fuels & Technologies 101
- Implementing Natural Gas in Your Fleet
- Advanced Vehicle Ride & Drive
- Advanced alternative fuel vehicles to be featured on West Mall Drive

Exhibit Space is still available, but going fast! See Below.

Register Here For The 2013 Great Lakes Truck Expo & Green Fleets Awards

Ohio's Autogas Advantage

Join Clean Fuels Ohio at the 2013 Ohio's Autogas Advantage Workshop and Expo. Learn about the advantages that many Ohio fleets are realizing by utilizing propane autogas in their fleet operations. Hear from experts, network with propane fleet operators and view the latest propane technology and equipment at the Expo.

Wednesday, July 24th
10 a.m. - 3 p.m.

Dublin Rec Center
5600 Post Rd.
Dublin, Ohio

Register For this Free Event Today!
www.ohioautogasadvantage.eventbrite.com

NGV Day
NATURAL GAS VEHICLE DAY

Educational Seminar

Event Agenda

8:30 - 9:30 a.m.	Registration and Vendor Expo Open
9:30 - 9:45 a.m.	Opening Remarks
9:45 - 10:45 a.m.	Natural Gas Overview Presented by Clean Fuels Ohio
10:45 - 11:45 a.m.	Vendor Expo and Ride and Drive
11:45 a.m. - 1:00 p.m.	Lunch and Sponsor Remarks Vectren
1:00 - 2:00 p.m.	Natural Gas Vehicle Panel See Panel Descriptions
2:15 - 3:30 p.m.	Natural Gas Stations Panel See Panel Descriptions
3:30 - 4:00 p.m.	Funding, Incentives and Policy Clean Fuels Ohio

March 28, 2013
8:30 A.M. - 4:00 P.M.

Clean Fuels Ohio

Project Accomplishments

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- **Policy Initiative: Educate Decision Makers on Best Practices and Opportunities for AFV Deployment**
 - Developed Green Fleet Model: <http://www.cleanfuelsohio.org/media/75523/Model-Green-Fleet-Policy.pdf>
 - Hosted workshops for local governments and public utilities
 - Cleveland Municipal EV Workshop and Ride and Drive: (May 9)
 - Public Utilities Commission of Ohio EV workshop at OSUCAR: (June 17)
 - Cincinnati Municipal EV Workshop and Ride and Drive: (August 28)

Electric Vehicle Readiness Workshop
Thursday, May 9
11:30 a.m. to 3 p.m.

Sustainable Cleveland Center - Tower City
230 West Huron Rd., Suite 100 31
Cleveland, Ohio 44113

10:30 a.m. - Lunch
• Local Lunch with Green Remains Introduction to EV Readiness Plan

11:30 a.m. - Workshop Presentation
• EV Planning
• Model Building Codes
• Fleet Procurement
• Incentives
• Charging Station Installation Best Practices

1:30 p.m. - Showcase
• Electric Vehicle Ride and Drive
• Charging Station Vendor Expo

Clean Fuels Ohio has published the Electric Vehicle Readiness Plan for Ohio. This plan will help local governments, employers, and businesses prepare for electric vehicle adoption by Ohioans. The plan can be downloaded at: <http://www.driveelectricohio.org/evr>

Register for the Workshop
Space is limited! Register today at www.evreadiness-workshop.eventbrite.com

Contact Information
Cynthia Maves
Clean Fuels Ohio
(414) 889-7136
Cynthia@CleanFuelsohio.org

Electric Vehicle Readiness Workshop
Monday, June 17th
12:00 p.m. to 3 p.m.

Center for Automotive Research
650 Kinnear Road
Columbus, Ohio 43212

11:30 a.m. - Lunch
• Workshop Presentation
• Garage Based, OHS CASE
• Steve Green - General Motors
• James Ellis - Nissan North America
• Steve Briggs - Ford Energy
• Mike Strickus - Duke Energy
• Chris Schuler - AEP
• Jeff Truesdler - DP & L
• Cynthia Maves - Clean Fuels Ohio

Clean Fuels Ohio has published the Electric Vehicle Readiness Plan for Ohio. This plan will help local governments, employers, and businesses prepare for electric vehicle adoption by Ohioans. The plan can be downloaded at: <http://www.driveelectricohio.org/evr>

2:00 p.m. - Electric Vehicle Ride & Drive

EV Ohio Site Visit by Automotive Research (OSU CAR) is the preeminent research center in the world for all work relating to the United States and an interdisciplinary research center in the College of Engineering.

For information, please contact:
Jason Phillips
Clean Fuels Ohio
(614) 889-7134
Jason@CleanFuelsohio.org

Cynthia Maves
Clean Fuels Ohio
(414) 889-7136
Cynthia@CleanFuelsohio.org

Electric Vehicle Readiness Workshop
Wednesday, August 28th
10:00 a.m. to 3 p.m.

OKI - Regional Council of Governments
700 E. Ross Street West, Suite 400
Cincinnati, Ohio 45202

10:00 a.m. - Introduction
• City of Cincinnati Remains Introduction to EV Readiness Plan

10:30 a.m. - EV Workshop Presentation
• EV Basics
• EV Fleet Applications
• Charging Station Installation Best Practices
• City Planning/Process Presentation

1:00 p.m. - EV & EVSE Showcase
• Electric Vehicle Ride and Drive

Clean Fuels Ohio has published the Electric Vehicle Readiness Plan for Ohio. This plan will help local governments, employers, and businesses prepare for electric vehicle adoption by Ohioans. The plan can be downloaded at: <http://www.driveelectricohio.org/evr>

Have you ever driven an electric vehicle? Come take a test drive!
2:00 p.m. - 3:00 p.m.
• Electric Vehicle Ride and Drive
• Charging Station Vendor Expo

Register for the Workshop
Lunch sponsored by Duke Energy
Space is limited! Register today at: <http://cincyevworkshop.eventbrite.com>

Contact Information
Cynthia Maves
Clean Fuels Ohio
(414) 889-7136
Cynthia@CleanFuelsohio.org

Model Green Fleet Policy
Clean Fuels Ohio

Overview and Rationale for Green Fleet Policies and Action Plans

A green fleet policy is a tool for any organization, company or government to set and achieve environmental performance goals related to composition and/or operations of their vehicle fleet. A handful of local governments adopted green fleet policies following an initiative from ICLEI USA in the early 2000's. Since that time, these policies have become more popular among local governments. Private fleets have used other tools, such as the U.S. EPA SmartWay program. Yet, the green fleet policy model is just as appropriate for private organizations.

Local or state-based green fleet programs can be a strong motivator and accompaniment to a government or private fleet policy. In 2008, Clean Fuels Ohio launched a program called Ohio Green Fleets that has become a model for many of these programs. Through this program, Clean Fuels Ohio can certify qualified fleets as a one, three or five star Green Fleet. For Ohio Green Fleets, certification is based on specific, quantifiable reductions in certain emissions, petroleum use and overall fuel use. For other green fleets programs, certification is based more on management practices and stated commitments. Clean Fuels Ohio recommends and prefers the former approach since it is outcomes based. Programs based on quantification also help a fleet anchor its own green fleet policy to meaningful, measurable environmental impact.

A green fleet action plan is a more detailed document that prescribes a step-by-step approach over a specific period of time that will enable the fleet to attain goals spelled out in the policy. The plan may be incorporated into the policy, or exist as a stand-alone document. It is formulated routinely and often as a guide for implementation in terms of vehicle procurement, management practice, and operations policies. It lays out measurable benchmarks.

Best Practices for Green Fleet Policies

Green fleet policies should include the following components:

Vision Statement:
This is a very high level, succinct statement about what the fleet will become - environmental improvement, cost savings and/or other high level outcomes.

Rationale:
This is a more detailed account about all of the specific reasons that the fleet is adopting the policy. If it is a government policy, adopted by ordinance or executive order, this can take the form of enumerated "whereas" statements. Private policies may be this formal, or less so, but the reasoning should be explained so everyone in and even outside the company understands why the policy is being adopted.

- **Barrier Reduction Initiatives**
 - Completed 3/5 Green Fleet Action Plans
 - City of Cincinnati, OH
 - City of Green, OH
 - City of Tipp City, OH

Project Accomplishments

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- Barrier Reduction Initiatives (cont.)
 - Identified fleets located in close proximity of alt. fuel stations and inform the fleets

Ohio CNG Stations Map - Ohio NGV Partnership

All open and planned stations.

Green=open

Yellow=under construction

Purple= active planning

Red=speculative

Blue=LNG

Teal Pin=private station

Unlisted - Open Collaboration - 13,494 views

Created on Mar 21, 2013 - By - Updated Mar 31

★★★★★ ratings - Write a comment - KML

-  **Quasar - Columbus, Ohio**
Quasar 2506 Jackson Pk Columbus, OH 43223 216-986-9999
Access: Public - see hours Hours: 7am-5pm M-F, 7am-12pm Sat; a
also accept Quasar card key - contact station to apply Payments
accepted: Discover...
-  **City of Dublin - IGS Card, Public**
- 6351 Shier Rings Rd, Dublin, OH 43016 614-410-4757 614-659-
5196 Access: Public - card key at all times Hours: 24 hours daily, c
614-659-5196 to purchase card key Payments accepted: Gas Carc
from ...
-  **CNG Auto Sales - Ward Card, Public**
- 1751 Alum Creek Dr, Columbus, OH 43207 740-327-7255 740-404
2123 Access: Public - card key at all times Hours: 24 hours daily,
contact station to arrange for card key Notes: Off I-70, south on AI
...
-  **City of Columbus Fleet Management**
- 4211 Groves Rd, Columbus, OH 43232 614-645-8281 614-288-79
Access: Public - credit card at all times Hours: 24 hours daily
Payments accepted: MasterCard, VISA Fill type: Fast-fill
Compression: 360...
-  **CNG Trans - Columbus, Ohio**
- 5800 Chantry Dr, Columbus, OH 43232 2727 Brice Rd Columbus,
OH 43232 614-398-3401 Access: Public - credit card at all times
Hours: 24 hours daily Payments accepted: MasterCard, VISA, Wrig
Expre...
-  **CNG Auto Sales - Ward Card, Public**
- 600 W Church St, Newark, OH 43055 740-327-7255 740-404-212
Access: Public - card key at all times, Ward Card Hours: 24 hours
daily, contact station to arrange for card key Fill type: Fast-fill Comp
-  **Quasar - Zanesville, Ohio**
- 6400 Maysville Pike Zanesville, OH 43701 Access: Public - see
hours Hours: 7am-5pm M-F, 7am-12pm Sat; also accept Quasar ca
key - contact station to apply Payments accepted: Discover



Project Accomplishments

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- Safety and Training Initiatives
 - Trainers include
 - Marathon Technical Services
 - AFV International
 - National Fire Protection Association
 - Refine scope and requirements of AFV technical and safety training program
 - Developed training schedule and secured training locations
 - Gaseous Fuels Training
 - Hosted Alt. Fuel Station Training: June 25 & 26 (2013)
 - Scheduled:
 - Nat. Gas Integration: May 13 & 14 (2014)
 - Operator Orientation to AFVs: May 14 (2014)
 - CNG Fuel System Inspection: June 10 & 11 (2014)
 - Alt. Fuels 101: Summer 2014
 - Electric Vehicles Training
 - Scheduled:
 - NFPA EV Safety Program: June 23 (2014)

Project Accomplishments

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- Market Development/Outreach Initiatives
 - Cultivated existing CFO EV website as the central resource center

Drive Electric Ohio
An initiative of **Clean Fuels Ohio**

Vehicles Charging Why Drive Electric Drive EV Ohio Resources Clean Fuels Ohio

Charging

OnElectricOhio.com: How to Charge Your EV

EVSE - Electric Vehicle Supply Equipment. Note to be confused with chargers, this term refers to any physical equipment used to supply charging energy to the vehicle. EVSE can take the form of a cord, a hardwired wall outlet or pole, and even the different outlets and plugs that make up the circuit.

There are a few levels of charging for EVs: Level 1, Level 2, and DC Fast Charging. Here is more info on each:

- Level 1**
120-Volt AC (15-amps)
Commonly found in homes, hotels, and public parking lots.
- Level 2**
240-Volt AC (up to 80 amps)
Used in homes, hotels, and public parking lots.
- DC Fast Charging**
480-Volt DC (up to 80 amps)
Used in homes, hotels, and public parking lots.

Types of Charging

- Home Charging
- Multifamily home charging
- Fast Charging
- Public and Commercial Charging
- Workplace Charging
- Fast Charging
- Public and Commercial Charging
- Ohio EV Charger Vendor Information

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Vehicles Charging Why Drive Electric Drive EV Ohio Resources Clean Fuels Ohio

Vehicles

Electric Vehicle Basics - Types of EVs

Hybrid electric vehicles (HEVs) plug-in hybrid electric vehicles (PHEVs), and all-electric vehicles (EVs) also called electric cars, use electricity either as their primary fuel, or to improve the efficiency of conventional vehicle engines.

Hybrid Electric Vehicles

HEVs are powered by an internal combustion engine or other propulsion source that runs on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The battery is charged through regenerative braking and by the internal combustion engine and is not plugged to a grid.

Get more info on plug-in hybrid vehicles

Plug-in Hybrid Electric Vehicles

HEVs are powered by an internal combustion engine that can run on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The battery is recharged by an electric power source to charge the battery. Regenerative braking can also charge the battery when decelerating. Some HEVs are also used to power plug-in electric vehicles (PHEVs). Learn more about plug-in hybrids.

Get more info on plug-in hybrid vehicles

Drive Electric Ohio
An initiative of **Clean Fuels Ohio**

Vehicles Charging Why Drive Electric Drive EV Ohio Resources

Standards & Codes

Electric vehicle supply equipment (EVSE) installations must comply with local, state, and national codes and regulations. Appropriate permits may be required from the local building, the environmental, and electrical inspecting and permitting authorities. The codes and standards resources listed below help project developers and code officials prepare and review code-compliant projects.

- Electric Vehicle and Infrastructure Codes and Standards Chart
- Electric Vehicle and Infrastructure Codes and Standards Chart
- NECA/NIBCA
- Use this template to develop a standard permit for residential charging stations that allows for quick, safe installation of EVSE.

Video: EVSE Installation

Codes and Standards Basics

Codes and standards ensure processes and products must uniform safety and performance requirements. CDFE HERE to find basic information about definitions, publishing codes and standards, legal enforcement, and industry norms.

Electric vehicle charging equipment is considered a continuous load by the National Electrical Code (NEC). Your electrical contractor should understand and apply the current NEC for a safe and code-compliant installation. NEC Article 625 contains most of the information applicable to charging equipment. If possible, contact vehicle manufacturer for information about the required charging equipment and learn the specifications before purchasing equipment or electrical services.

In many areas, a site installation plan must be submitted to the permitting authority for approval before installation. See the permitting template available for jurisdictions to use as a model for developing their own residential EVSE permit.

Other Links and Resources:

Drive Electric Ohio
An initiative of **Clean Fuels Ohio**

Vehicles Charging Why Drive Electric Drive EV Ohio Resources Clean Fuels Ohio

Charging Vehicles Standards EV Station Locator Workplace Charging

News

Round around the wall: Tesla's EVV credit allocation charging under new CAES rules

Workplace Charging Survey

Drive Electric Ohio is currently seeking to gauge Ohio employer perspective on Workplace Charging.

Workplace Charging Provides Benefits for Employers

With many more electric cars on the road today and prices coming down, your employees may be looking to purchase their own now and in the near future.

Electric vehicles offer zero tailpipe emissions and a savings on a strict mode, and offer the highest energy efficiency and lowest carbon emissions per mile of any current consumer vehicle offerings on the market.

Electric vehicles offer consumers significant savings on gas-powered vehicles, including savings on fuel costs, added convenience, and reduced maintenance costs.

Electricity is cheaper than gasoline to power a vehicle - generally about 1/3 the cost - and consumers are able to conveniently charge up at home.

Employees who are able to charge up at work have more miles in an

- Developed social media content focusing on electric vehicles and Ohio Green Fleet Successes

Clean Fuels Ohio
Statewide Non-Profit Organization
Columbus, Ohio Area | Environmental Services

Travel & Transportation - Environmental Consultant - Env
530 W. Spring Street, Columbus, Ohio 43215
614.464.7234

847 likes · 9 talking about this · 2 were here

Clean Fuels Ohio
@CleanFuelsOhio

TWEETS 4,578
FOLLOWING 1,534
FOLLOWERS 2,995

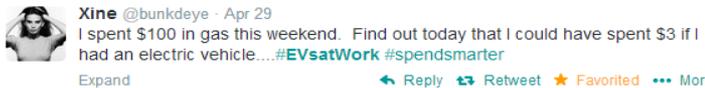
LinkedIn

Clean Fuels Ohio
Statewide Non-Profit Organization
Columbus, Ohio Area | Environmental Services

Project Accomplishments

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

- Workplace Charging Workshop Hosted by Clean Fuels Ohio: April 29, 2014
 - Features:
 - Key national partners: Google, Disney & GM
 - Educational workshops
 - Panel sessions that included employers utilizing workplace charging
 - Ride-and-drive
 - Social media: live texting and tweeting during the event



- The workshop supported DOE's Workplace Charging Challenge Effort
 - Increase the number of U.S. employers offering workplace charging by tenfold in the next five years.
 - Supports the Department's EV Everywhere Grand Challenge: President Obama in March 2012
 - Goal: Make PEVs as affordable and convenient for the American family as gasoline-powered vehicles within the next 10 years.

Project Collaborations

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Sub-Recipients:

- Earth Day Coalition
 - Work with CFO to advance all strategic AFV initiatives in NE Ohio
- Calstart
 - Collect and share concrete and relevant information about PEVs and workplace charging infrastructure through outreach
- Communicate
 - Develop a brand for the Ohio PEV initiative by creating a marketing plan
- Mid-Ohio Regional Planning Commission (MORPC)
 - Incorporate alt. fuel infrastructure and technologies, into regional transportation improvement programs (TIPs)

Trainers:

- AFV International
- Marathon Technical Services
- National Fire Protection Association (NFPA)

City Government:

- City of Columbus
 - Provide meeting space for events
- City of Tipp City
 - Development of Green Fleet Action Plan
- City of Cincinnati
 - Development of Green Fleet Action Plan
- City of Green
 - Development of Green Fleet Action Plan

State & Local Agencies:

- Ohio Air Quality and Development Authority
 - Provide funding for initiatives
- Ohio Department of Development
 - Provide outreach for educational workshops and activities
- Ohio Soybean Council
 - Provide funding for initiatives
- Stark Area Regional Transit Authority
 - Provide meeting space for events
- Solid Waste Authority of Central Ohio
 - Help host workshops and trainings
- Ohio Department of Education
 - Provide outreach support for deliverables

Alternative Fuel Market Expansion Potential

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Remaining Project Activities:

- Policy Initiative
 - Study and assess Ohio Dept. of Administrative Services (ODAS) vehicle procurement specifications.
 - Develop model language for inclusion of AFV in Ohio Transportation Improvement Plans (TIPs).
 - Conduct an educational seminar for Metropolitan Planning Organization (MPO) leaders.
 - Work with stakeholders to develop procurement specifications that include a wide range of AFVs.
 - Develop an alt. fuel task force to identify barriers and analyze policy solutions.
- Barrier Reduction Initiatives
 - Education and outreach through alternative fuel events
 - CNG events, autogas events, electric vehicle events & biofuels events scheduled for 2014
- Safety and Training Initiatives
 - Scheduled:
 - Nat. Gas Integration: **May 13** (all day) & **May 14** (1st half of day) (2014)
 - Operator Orientation to AFVs: **May 14** (2nd half of day) (2014)
 - CNG Fuel System Inspection: **June 10** (all day) & **June 11** (all day) (2014)
 - Electric Vehicle Safety Training: **June 23** (all day) (2014)
 - Alt. Fuels 101: Summer 2014
- Market Development/Outreach Initiatives
 - Continue implementation of PEV Marketing Strategy
 - Identify additional fleets to be featured in the OGF success storytelling outreach campaign
 - Continually maintain fleet and technical mentor profiles to be featured on CFO website

Alternative Fuel Market Expansion Potential

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Remaining Project Activities:

- Market Development/Outreach Initiatives (cont.)
 - Develop video content through 5 video fleet success story profiles
 - Create additional posters of Success Story fleets for business and Ohio Green Fleets events

Remaining Challenges/Barriers

- Lack of fleet technical and educational experience with new fuels and vehicle technologies
 - Specifically, lack of long-term vehicle demonstration projects and data driven case studies for fleets
- Lack of industry coordination clear and outlets for consumer education
 - Specifically relating to electric vehicles for consumers
- Lack of relevant alternative fuel training for operators, technicians and first responders
- Lack of state government focus on AFV inclusion
 - Specifically related to incorporating AFVs on the state bid list and including AFVs in the state Transportation Improvement Plan (TIPs) process

Contributions to Sustainable AFV Market

- Increased fleet educational outlets/opportunities thru expansion of Ohio Green Fleets programming
- Increased consumer education thru statewide PEV marketing plan implementation (Cincinnati 25th EV market)
- Developed partnership and training programs with the Ohio Fire Marshals for safety training program
- Established program to educated state and local decision makers on AFV benefits, opportunities and best practices

Alternative Fuel Market Expansion Potential

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Project Replication Potential:

- Catalogued AFV policy barriers, opportunities and best practices for use in educational efforts
- Created templates for AFV trainings covering operators, mechanics and first responders including outreach materials, curriculum, and other course content
- Developed successful educational event model which incorporates expert informational content, peer success testimonials, vendor networking and technology exhibits
- Refined model for recognition of AFV fleet deployment leaders (OGF multimedia marketing)
- Developed workplace charging survey, partnership model and event structure with state and national partners

Related Efforts (not project funded):

- DOE CC Recovery Act Grant
 - Extensive marketing campaign for the OATP AFV and infrastructure projects around Ohio
 - 14 video success stories designed to target key public and private fleet segments and the portfolio of available fuels and technologies
 - Videos are designed to educate fleets on existing successes and opportunities for further AFV deployment, including fleet ability to leverage existing ARRA fuel infrastructure

Alternative Fuel Market Expansion Potential

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Related Efforts (not project funded) (cont.):

- Driving Force Fleet Advisors: *providing in-depth contract services for entities outside of the grant*
 - Options assessments and planning services
 - Technical and project development assistance
 - Funding strategies and implementation planning
 - Monitoring, follow-up, & training services
- Policymaker Education
 - Educate policy makers on the impact of incentives for AFV deployment
 - Educate policy makers on the impacts of restricting direct access to consumers to electric vehicles
 - Educate policy makers of recovery costs for natural gas pipelines
- Local Government Innovation Fund (LGIF) Development
 - Work with City Governments all around Ohio provide financial assistance to create more efficient and effective service delivery and facilitate improved business environments and promote community attraction with their plan for efficiency, collaboration, or shared services.

Alternative Fuel Market Expansion Potential

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Related Efforts (not project funded) (cont.):

- Developed key partnerships with state agencies to facilitate additional AFV deployment
- Partnered with 21 fleets to prepare applications which secured \$10.7 million in direct funding for AFV deployment projects
- Project spanned various fuels, technologies, geographic regions and fleet types represented below:

DERG 2012

- Smith Dairy Trucking: *Dual-fuel CNG conversion kits*
- Ohio Roll-Off: *Repower engine to 2012 standards*
- Cleveland Clinic: *Fuel-operated heaters for idle reduction*
- IdleAire: *Electrified truck stop spaces to reduce idling*
- JRAYL Trucking: *Dual-fuel CNG conversion kits*
- Stenger Trucking: *Dual-fuel CNG conversion kits*

DERG 2012 & 2013 Partnerships

- Ohio Department of Transportation
- Ohio Air Quality and Development Authority
- Federal Highway Administration
- Ohio Environmental Protection Agency

DERG 2013

- Austintown: *Propane school bus replacements*
- Canton City Schools: *Natural gas school bus replacements*
- City of Cincinnati: *Natural gas dump truck replacements*
- COTA: *CNG transit bus engine components*
- CRAA - *Propane shuttle repowers*
- Frito-Lay: *Natural gas delivery truck replacements*
- Home City Ice: *Natural gas delivery truck conversions*
- Jaro Transport: *Anti-Idling unit retrofits*
- JRAYL Transport: *Natural gas dual fuel repowers*
- McGinnis: *Marine vessel repowers*
- NAT Transportation: *Natural gas refuse truck replacements*
- Ringler Energy: *Natural gas dual fuel repowers*
- Stenger Trucking: *Natural gas dual fuel repowers*
- Sugar Creek Packing: *Hybrid-electric refrigerator truck replacements*
- Superior Beverage: *Natural gas dual fuel repowers*

Project Summary

Clean Fuels Ohio: Fast Track to AFV Adoption in Ohio

Relevance:

- By 2020, to achieve a petroleum reduction of over 2.5 billion gallons per year through voluntary adoption of alternative fuel vehicles and infrastructure
- To ease market introduction of alternative fuels and new electric drive vehicle technologies through voluntary efforts in partnership with local communities
- To provide technical and educational assistance to support local communities and partnerships that promote better understanding of the benefits of these new technologies

Approach:

- Policy
- Barrier Reduction
- Safety and Training
- Market Development/Outreach

Collaborations:

- Continue collaborations with local governments, stakeholders, industry partners, Clean Cities coalitions and the general public

Progress Accomplishments/Progress:

- Educated Decision Makers on Best Practices and Opportunities for AFV Deployment to move the market forward
- Provided technical and educational assistance to promote better understanding of AFVs
- Developed communication strategies to promote the availability of AFVs and AFV infrastructure around Ohio