

**2011 U.S. DOE HYDROGEN PROGRAM and VEHICLE TECHNOLOGIES PROGRAM
ANNUAL MERIT REVIEW AND PEER EVALUATION MEETING**

Midwest Region Alternative Fuels Project



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ARRAVT056

Midwest Region Alternative Fuels Project Overview

Timeline

- **Start:** Dec 28, 2009
- **Finish:** Dec 27, 2013
- **% Complete:** 15% thru 1FQ2011

Budget

- Total project: \$31,744,788
 - \$14,999,905 DOE
 - \$16,744,883 contractor
- Budget expended thru 3/2011
 - \$5.6M DOE
 - \$7.9M contractor

Targets: Alt Fuel Deployment

- 333 alternative fuel vehicles
- 36 alternative fuel stations

Barriers & Risks

- Budget constraints of partners until FY2011
- Backlog in electric and CNG supply chain
- Added partners when projects under budget

Partners

17 varied public and private entities (see slide 4). Each procures or builds alternative fuel vehicles and/or refueling stations. Fuel and technology types: CNG, electric, biofuels, propane.

Midwest Region Alternative Fuels Project Relevance

FY2010 - FY2013 Project Objectives

- In the national alternative fuel and advanced technology vehicle sector, create new jobs while preserving existing ones.
 - **Benefit to related barrier:** encourages increased production in established and new U.S.– based electric and CNG supply chains
 - **Benefit to related barrier:** provided basis for new sales and service jobs for alternative fuel vehicles within local private businesses
- In the three-state project region (MO, KS, NE):
 - Spur economic activity and invest in long-term economic growth by creating a sustainable alternative fuel market
 - **Benefit to related barrier:** outreach engendered interest in and knowledge of project and eased transition to new partners
 - Demonstrate diversified approach to petroleum reduction through a targeted deployment of alternative fuel and advanced technology vehicles and infrastructure

Midwest Region Alternative Fuels Project Approach

Project Partners

➤ Each partner has named a team lead, who manages progress of its part in the project, monitors and collects required data and reports to Metropolitan Energy Center.

➤ Metropolitan Energy Center provides management of total project objectives, holds partners to DOE requirements, hosts monthly best practice and project status calls, administers invoices and expenditures, and aggregates project partner data for reporting to DOE.

- City of Kansas City, Missouri
- City of Lawrence, Kansas
- City of Lee's Summit, Missouri
- City of Wichita, Kansas
- Happy Cab Company
- Kansas City Power & Light®
- Kansas City Kansas School District USD500
- Kansas Gas Service
- Lee's Summit School District R-7
- Lincoln Airport Authority
- Margo Leasing (Wil Fischer)
- Metropolitan Community College - Omaha
- Metropolitan Utilities District
- New Bern Transport Corporation
- O' Daniel Honda
- University of Missouri at Kansas City
- Zarco 66, Inc.

Midwest Region Alternative Fuels Project Approach

Technical Barriers and NEPA Status

- Partner procurement processes and fiscal year planning times differ
 - In some cases, this delayed initiating orders and resulted in later deployment dates than originally anticipated.
 - Some partners shifted funding to other project emphases than originally intended.
- Backlog in electric and CNG supply chain
 - Partners chose different vendors and vendors chose different parts when the intended supply chain was too slow.
 - No insurmountable supply chain barriers have arisen.
- Added partners when projects came in under budget
 - Outreach during first year of project very effectively reached other agencies interested in alt fuels. Resulted in easy transition to additional partners.
 - Chose new partners with accelerated project plans to meet overall project timelines.
- NEPA Status
 - NEPA Environmental Questionnaires are submitted according to requirements.
 - NEPA submittals by our staff and review by DOE staff are timely.
 - NEPA process is on track, with none overdue.

Midwest Region Alternative Fuels Project Approach

Milestones

Milestone No.	Description	Original Planned Completion Date	Revised Planned Completion Date	Actual Completion	Milestone Status		
					On-Track	Behind	Ahead
1	Statement of Project Objectives outlined below						
2	Task 1: Project Management and Planning						
3	task 1a: Kick-off meeting with all partners and DOE	2/28/2010		2/10/2010			x
4	task 1b: finalize agreements with partners *	8/30/2010	2/28/2011			x	
5	Task 2: Vehicle Deployment						
6	task 2a: order vehicles	12/31/2011			x		
7	task 2b: deploy vehicles	1/31/2012			x		
8	Task3: Infrastructure Deployment						
9	task 3a: Design and begin site work	5/31/2011			x		
10	task 3b: Complete construction	12/31/2011			x		
11	Task 4: Training Development and Delivery						
12	task 4a: begin training plans	5/15/2010		5/15/2010	x		
13	task 4b: develop training	7/15/2010	12/31/2013		x		
14	task 4c: deliver training	12/31/2013			x		
15	Task 5: Outreach/ Marketing						
16	task 5a: Begin marketing plans at kick-off meeting	2/10/2013			x		
17	task 5b: develop marketing tools	6/20/2010		5/15/2010			x
18	task 5c: conduct marketing events	12/31/2013			x		
19	Task 6: Documentation and Reporting						
20	task 6a: develop templates for invoice, progress, media	3/15/2010		3/15/2010			x
21	task 6b: monthly reporting	12/31/2013			x		
22	task 6c: quarterly reporting	1/31/2014			x		

* We are behind on finalizing agreements due to the addition of new partners and recent agreement to terms.

Midwest Region Alternative Fuels Project Technical Accomplishments

Target: 333 Alternative Fuel and Advanced Technology Vehicles

- Orders placed for 158; or 46% of project objective
 - This is low due to supply chain barriers, which are now overcome
 - Compare to last year, reported at 23%
- Deployed 44; or 13% of project objective
 - This seems low but is due to long-lead equipment orders and is on track
 - Compare to last year, reported at 0%
 - Gallons of alternative fuel used or petroleum fuel displaced: 3427 (2184 in 1FQ11)

Target: 36 Alternative Fuel Stations

- Design and Site Work is begun at 27 locations (80%)
 - Compare to last year, reported at 30%
- Completed 6 locations; or 16% of project objective
 - Compare to last year, reported at 0%
 - Gallons of alternative fuel dispensed: 1066 (825 in 1FQ11)
- One project component with 7 biofuels stations is on hold, pending a budget revision

All statistics are through 1FQ11, as reported in Jan 2011

Midwest Region Alternative Fuels Project Technical Accomplishments

Target: Outreach Events

- 4 events held last year, including
 - first-ever electric truck fleet in a school district (a \$1M project component)
 - biodiesel station for regional beverage delivery fleet (<\$1M)
 - CNG van and refueling for college (<\$50,000)
- 4 events scheduled, including
 - March 16, 2011 CNG buses and refueling for Kansas City Kansas School District (a \$7M component)
 - June 10, 2011 CNG vehicles and refueling for Metropolitan Utilities District (first completion in a \$3.5M component)
 - Includes first public CNG refueling station in Nebraska.

Target: American Jobs

- Jobs created and saved is consistently between 3 and 4 per quarter
- Expected to increase substantially in 2011, as station design and site work are completed and construction begins in 20 stations
- This statistic does not include manufacturing jobs, which are positively impacted by this project but not directly employed by the partners or vendors and are not reimbursed under this project nor recorded as cost share

All statistics are through 1FQ11, as reported in Jan 2011

Midwest Region Alternative Fuels Project Partnerships: Subrecipients

- **City of Kansas City, Missouri**
vehicle deployment and public refueling station
- **City of Lawrence, Kansas**
vehicle deployment
- **City of Lee's Summit, Missouri**
vehicle deployment
- **City of Wichita, Kansas**
vehicle deployment
- **Happy Cab Company (fleet)**
vehicle deployment
- **Kansas City Power & Light**
charging station installations
- **Kansas City Kansas School District USD500**
bus deployment and private refueling
- **Kansas Gas Service (utility)**
public refueling upgrade
- **Lee's Summit School District R-7**
vehicle deployment
- **Lincoln Airport Authority**
vehicle deployment and public refueling
- **Margo Leasing (fleet)**
private refueling
- **Metropolitan Community College – Omaha**
vehicle deployment and private refueling
- **Metropolitan Utilities District (utility)**
vehicle deployment and public refueling
- **New Bern Transport Corporation**
vehicle deployment
- **O' Daniel Honda (industry)**
semi-public refueling
- **University of Missouri at Kansas City**
vehicle deployment and public charging
- **Zarco 66, Inc. (industry)**
public refueling upgrade

Midwest Region Alternative Fuels Project Future Work

Technical Work

Vehicle progress

- 47% ordered and 13% deployed as of 1FQ11
- 100% deployment by Dec 2011

Infrastructure progress

- 80% site work started and 15% deployed as of 1FQ11
- 95% planned completion by Sept 2011
- 100% completion Dec 2011

Project Administration

Continue Project Management

Continue Data Collection, Reporting and Monitoring

Midwest Region Alternative Fuels Project

Future Work

Outreach and Training

Completed Marketing Toolbox and Begin Outreach Campaign

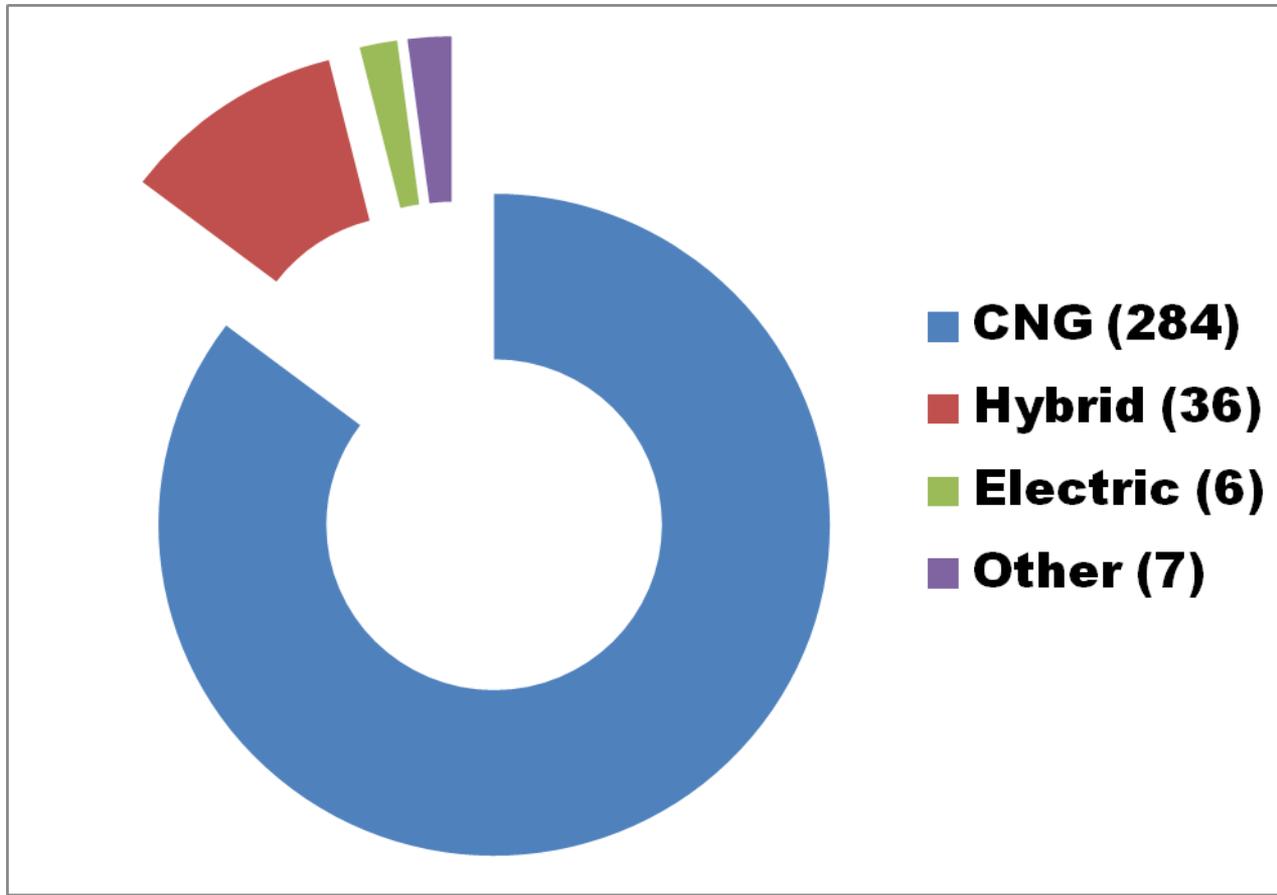
Media and Grand Opening Events

- Media Event and Ribbon Cutting: March 16, 2011– First CNG school bus fleet in Kansas and private CNG stations by Kansas City Kansas Unified School District
- Launch electric charging at UMKC in May 2011 and throughout Greater KC by KCPL
- Launch July 2011 for CNG fueling sites with CNG vehicles in Omaha & Lincoln NE

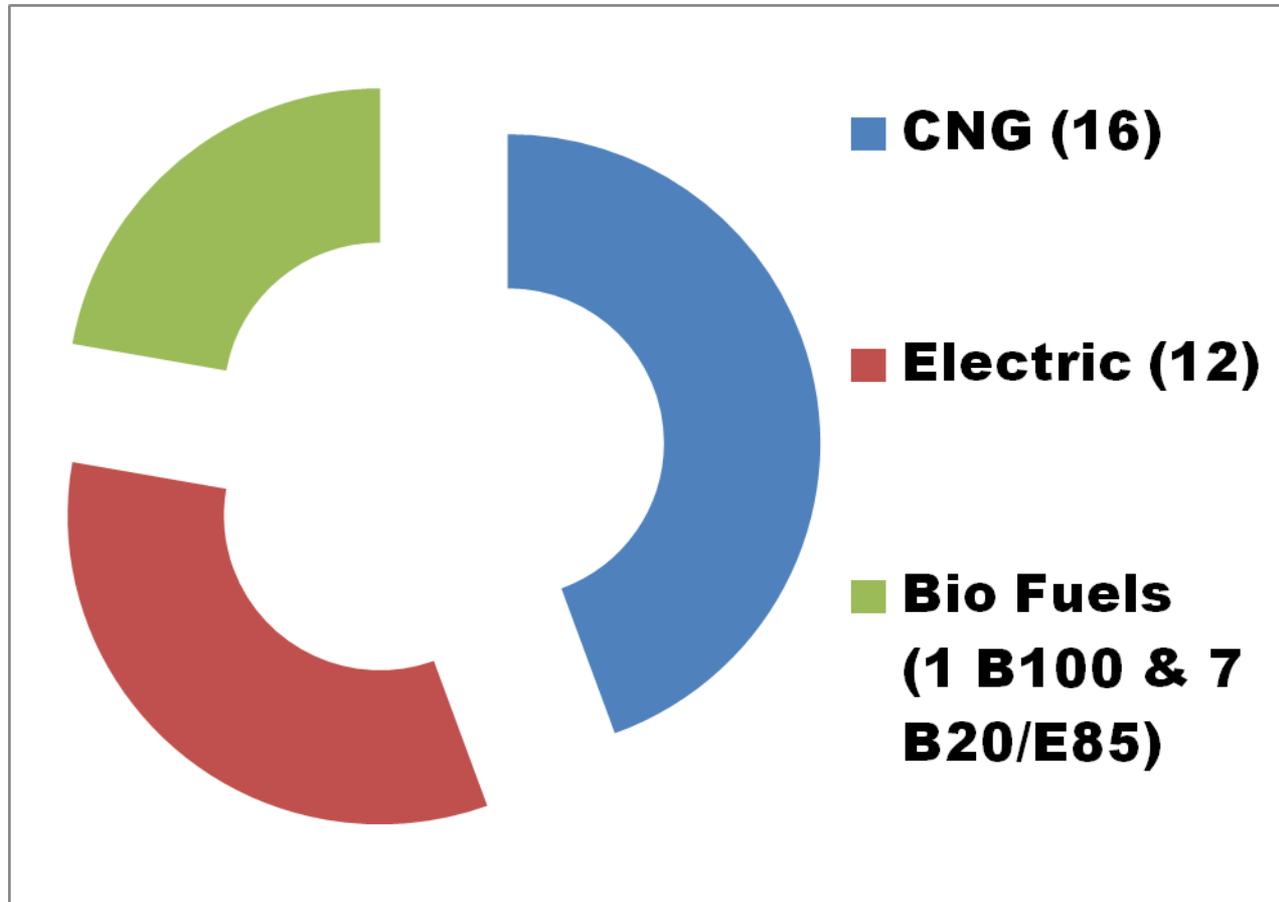
Develop and Deliver Training Curriculum

- Operator and Technician Training
- First Responder Training

Midwest Region Alternative Fuels Project Summary: 333 Vehicles



Midwest Region Alternative Fuels Project Summary: 36 Infrastructure Locations



Midwest Region Alternative Fuels Project Summary

sub-recipient	vehicle	infrast	stage
City of Kansas City, Missouri	152	3	deployed & ordering variety of vehicles/plan for public CNG fueling
City of Lawrence, KS, Public Works	1	0	deployed electric truck
City of Lee's Summit, MO	4	0	deployed hybrid police vehicles
City of Wichita	18	0	deployed 2, ordered 16
Happy Cab	50	0	plan until station complete July 2011
Kansas City KS School Dist. USD 500	47	1	deployed CNG school buses and private fueling
Kansas City Power & Light	0	10	RFP electric charging
Kansas Gas Service	0	2	design complete for CNG public fueling
Lee's Summit School District R-7	4	2	deployed electric trucks and charging
Lincoln Airport Authority	7	2	design public CNG for August 2011 deployment
Margo Leasing	2	1	deployed 2 propane trucks and bio fueling
Metropolitan Community College - Omaha	1	1	deployed CNG van and refueling
Metropolitan Energy Center	1	1	plan CNG truck and public refueling
Metropolitan Utilities District	39	2	deploy and order vehicles/construct stations deploy in July 2011
New Bern/ Pepsico Beverage Corp	3	0	order HD hybrid trucks
O'Daniel Honda	0	1	deployed CNG refueling
UMKC	1	1	deployed vehicle/construct public charging deploy in May 2011
Zarco 66, Inc.	0	7	deployed 1, construct 6
	330	34	