

# Michigan Fuel Forward

2014 DOE Annual Merit Review

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TI043



# Overview



## Timeline

<b>Started</b>	2/1/2013
<b>Ends</b>	1/31/2015
<b>Progress*</b>	58.3%
	<b>*As of 3/31/2014</b>

## Budget

<b>Total Project</b>	\$ 500,000.00
DOE share	\$ 500,000.00
Contractor Share	\$ 0.00
<b>Funded w/FY13 &amp; FY14 funds</b>	
	\$238,632.79 spent (47.7%)
	<b>*As of 3/31/2014</b>

## Barriers

- Availability of AFVs and electric drive vehicles.
- Availability of AFVs and Electric Charging Infrastructure
- Consumer reluctance to purchase new technologies.
- Lack of technical experience with new fuels and vehicle technologies.

## Partners

- Michigan Environmental Council (MEC)
- Macomb Community College (MCC)
- Electric Vehicle Infrastructure Training Program (EVITP)

## Project Objectives

The objective of this project is to target and remedy obstacles to alternative fuel vehicle adoption and use in regional and/or statewide sectors and niche markets in Michigan.

The project will address each of the following four initiatives:

1. Policies
2. Barrier Reduction
3. Safety and Training
4. Market Development/Outreach

## Project Supports VTP Deployment 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.

# Approach

## Statement of Project Objectives Tasks



### Task 1 - Project Management and Administration

Manage project planning and execution activities in order to achieve project objectives.

### Task 2 - Policy Initiatives

Identify, develop, update, and modify policy initiatives in coordination with local agencies.

- Establish Michigan Alternative Fuel Task Force
- Conduct a study, develop technical reports, and sample guidelines for alternative fuel adoption policies and petroleum reduction goals for fleets.
- Update AFV Acceptance Criteria within the State Implementation Plan
- Revise Regional and State Transportation Plans
- Develop Scalable AFV Policies and Plans
- Recommend AFV Codes, Signage, and Permitting Process Standards

### Task 3 - Barrier Reduction Initiatives

Identify, address, and/or mitigate local/regional/or state barriers to the use of alternative fuel vehicles.

- Recruit and Engage Fleet Partners
- Complete fleet-specific petroleum reduction consultation projects
- Support Fleet Alternative Fuel Vehicle Deployment

# Approach (cont.)

## Statement of Project Objectives Tasks



### Task 4 - Safety and Training Initiatives

Identify training needs, develop training materials, and deploy training.

- Deliver First Responder Training
- Deliver Mechanic and Technician Training
- Deliver Safety and Training Workshops

### Task 5 - Market Development/Outreach Initiatives

Address outreach, education, and coordination with public and private entities regarding the use of alternative fuel vehicles.

- Publicize Partners, Projects, and Fleet Plans
- Expand Fleet Manager Database
- Develop a Commercial Vehicle Sales Manager Database
- Communicate with Project Stakeholders
- Create Short Workshop Plans and Training Materials

## Policy

- Q1: Meet with the commissioner of the MPSC to create the Alternative Fuels Taskforce
- Q2: First meeting of the Michigan Alternative Fuels Taskforce held
- Q2-Q5: Meet with MPOs to incorporate AFV language into TIPs and STIPs (results will be published in a whitepaper in year 2)
- Q3: Meet with the MDEQ to discuss State Implementation Plan (SIP)
- Q4: Event held in Lansing to educate policymakers on AFVs
- Q5: Completed *Road Signage for Alternative Fuel Vehicles in Michigan*

## Barrier Reduction

- Q1-Q3: Recruited 16 fleets and held meetings with all fleets
- Q4: Data gathering for fleet reports completed.
- Q5: Presented reports to fleet partners, received feedback for petroleum reductions plans
- Q5: Began work on petroleum reductions plans by meeting with each fleet individually

## Safety and Training

- Q1-Q2: Year 1 training events planned
- Q1-Q5: 13 Safety & Training events held in 2013 across the state. Events targeted first-responders, technicians, electrical contractors, and electrical inspectors.

## Marketing and Outreach

- Q1-Q5: Released bi-monthly newsletters to partners

# Accomplishments

## Policy Initiatives



### Michigan Alt Fuel Taskforce meetings

- Taskforce meetings held in Lansing with members of the AFV community.
- One event held at the Michigan Legislative Andersen House Office Building in Lansing, MI to educate policy makers on AFVs. 65+ attendees.



### Addressed AFVs and infrastructure in regional Transportation Improvement Plans (TIPs) and the State Transportation Improvement Plan (STIP).

- AFV language incorporated into the Washtenaw Area Transportation Study long range plan.
- Meeting held with several key MPO organizations around Michigan
  - Meeting will culminate in a whitepaper to be released soon

### Drafted a whitepaper addressing best practices for AFV signage

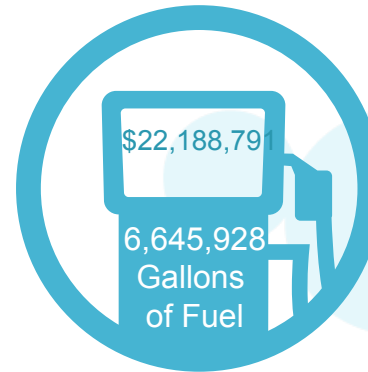
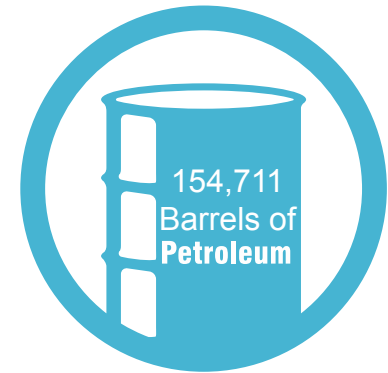
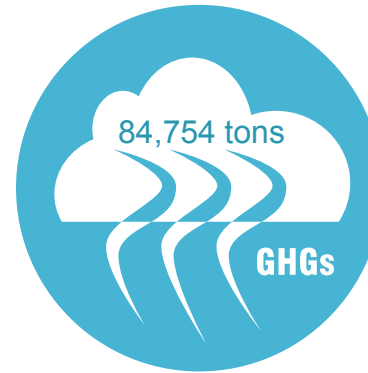


# Accomplishments (cont.)

## Barrier Reduction



### Baseline Statistics for Fleet Partners





# Accomplishments (cont.)

## Safety and Training



**Macomb  
Community College**

Education • Enrichment • Economic Development

<b>Date</b>	<b>Course</b>	<b>Attendees</b>
9/26/13	EV/HEV Vehicle Safety	44
9/27/13	HEV Safety & Fundamentals	12
11/1/13	HEV & the First Responders	22
11/1/13	HEV & the First Responders	12
11/19/13	HEV & the First Responders	20
11/19/13	HEV & the First Responders	15
11/22/13	HEV & the First Responders	27
11/22/13	HEV & the First Responders	17

# Accomplishments (cont.)

## Safety and Training



<b>Date</b>	<b>Class</b>	<b>Location</b>
6/1/13	Stakeholder Readiness Workshop	Detroit, MI
11/1/13	Electrical Inspector Workshop	Ferndale, MI
10/1/13	Stakeholder Readiness Workshop	Detroit, MI
11/1/13	Electrical Inspector Workshop	Grand Rapids, MI
12/1/13	Electrical Inspector Workshop	Ann Arbor, MI

# Accomplishments (cont.)

## Market Development/Outreach



## Project Newsletters (bi-monthly)

### Lead Article

- Recent Accomplishments

### Fleet Manager Spotlight

- Michigan AFV Deployment

### Upcoming Events and Opportunities

- Training/Workshops Events
- Taskforce Meetings
- Fleet Partner Meetings



The newsletter preview features the Clean Energy Coalition logo at the top right and a stylized map of Michigan at the top left. The title "michigan fuel forward" is prominently displayed in orange. Below the title is the URL "cec-mi.org". The main content includes a "Fleet Profile: Lynn McLean" section with a photo of Lynn McLean and a brief description of his role at the Flint Mass Transportation Authority. Below this is a "First Responder Safety Training" section with a photo of a fire truck and details about the training event, including the date (April 24-27, 2014) and location (DeVos Place, Grand Rapids, MI).

# Collaborations

## Michigan Fuel Forward



### Award Partners

- EVITP
- Macomb Community College
- Michigan Environmental Council

### Academic

- *Western Michigan University*

### Clean Cities Coalitions

- Ann Arbor Clean Cities (managed by CEC)
- Detroit Area Clean Cities (managed by CEC)

### Vehicle Manufacturer/Supplier

- Chrysler
- CleanFuel USA
- Clipper Creek
- Ferrellgas
- Ford Motor Company
- General Motors
- GM Fleet and Commercial
- GM Groups
- ICOM
- IMPCO
- Pro Leasing Services
- Roush Clean Tech
- Venchurs
- AmeriGas
- Bosch/SPX

### State of Michigan

- Michigan Department of Environmental Quality (MDEQ)
- Michigan Department of Transportation (MDOT)
- Michigan Energy Office (MEO)
- Michigan Public Service Commission (MPSC)

### Utilities

- *DTE*
- Consumers

### Municipalities

- City of Ann Arbor
- *City of Auburn Hills*
- *City of Dearborn*
- *City of Farmington Hills*
- *City of Flint*
- *City of Grand Rapids*
- *City of Holland*
- City of Livonia
- *City of Saline*
- *City of Warren*
- *City of Ypsilanti*
- Oakland Schools
- *Pittsfield Charter Township*

### Other

- America's Natural Gas Alliance
- Ecology Center
- Propane Education & Research Council

### Private Fleets

- Assured Carriers
- *Benzie Bus*
- *Edw. C. Levy*
- Flint Mass Transportation Authority
- Frito Lay
- Lake Michigan Mailers
- *McNaughton & McKay*
- *Metro Delivery*
- Wright & Filippis

*Michigan Fuel Forward Fleet Reports Completed*

## Planned for release in 2014:

### Whitepapers

- MPO Funding Allocation for AFVs
- State Policy Landscape
- Financing AFVs Revolving Loan Fund

### Guides

- A Fleet Guide to Petroleum Reduction
- Planning Reform – Incorporating Alternative Fuel Vehicles (TIPs/STIPs)
- Petroleum Reduction Plan for Fleet Partners (x16)

### Case Studies

- State Fleet Case Study
- Incorporating CNG into an Existing Facility

### Website

- AFV Resource Library
  - Sample RFPs, other procurement docs
  - Payback and Emissions Calculators
  - Michigan Case Studies

# Future Work (cont.)

## Michigan Fuel Forward



## 2014

### Educational Events and Meetings (CEC)

- Educational Forum on Incentives for AFVs – Event
- Educational Outreach to State Administration – Meeting
- Dealership Training Educational Forum on Incentives for AFVs – Webinar

### Safety & Training Activities

- First Responder Training x5 – (MCC)
- HEV Safety Fundamentals for Mechanics x2 – (MCC)
- CNG Facility Upgrades – (MCC)
- Stakeholder Readiness Workshops x6 – (EVITP)
- Inspector Workshops x3 – (EVITP)



## Related Efforts (NOT Project Funded)

### Continue to lead the Michigan Alternative Fuel Vehicle Task Force

Bi-annual meetings (minimum)

Publications developed during this project will be used as guides for future policy work

### Work with project fleet partners to help implement plan recommendations

Follow up on goals with partners

Offer support through our Clean Cities work

Project fleet partners can act as mentors for other fleets transitioning to alternative fuels.

### Awards ceremony

Potentially making this an annual event

# Summary

## Michigan Fuel Forward



### 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:

- Work with local/state agencies to research, recommend, and modify policy
- Engage fleet partners and provide fleet-specific studies to support AFV deployment
- Educate first responders, technicians, and mechanics through workshops/training
- Publicize the projects efforts

### Collaborations:

- Continue collaborations with municipalities, private fleets, state agencies, utilities, and industry partners

### Project Accomplishments/Progress:

- Fleet analysis reports for 14 fleet partners
- A collection of policy research, recommendations, and outreach aimed at preparing Michigan for AFVs
- 13 safety training and education events for mechanics/technicians and first responders

