

# RECOVERY ACT-- CLEAN ENERGY COALITION MICHIGAN GREEN FLEETS

**P.I.** Sean Reed, executive director  
**Presenters:** Lisa Warshaw, project manager  
**Organization:** Clean Energy Coalition  
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# OVERVIEW

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## Timeline

Start date: December 21, 2009

End date: December 31, 2013

Percent complete: 30%

## Partners

- Implementation partners: Michigan Department of Labor & Economic Growth's Bureau of Energy Systems & Greater Lansing Area Clean Cities Coalition
- Sub-grantees: Corporations, universities municipalities, & public utilities

## Budget

Total project funding: \$36,425,437\*

Federal share: \$14,970,144

Cost share: \$23,01,805\*

\*As of March 8, 2011

## Barriers & Risks

- Lack of fuel production capacity and distribution infrastructure
- Due to limited production, AFV's tend to be more cost prohibitive
- Declining capital budgets amongst project partners

# RELEVANCE



## Objective

The purpose of this project is to: (1) increase the use of alternative fuel vehicles and advanced technology vehicles; (2) build infrastructure to support these vehicles; (3) train individuals associated with the projects; and (4) collect relevant data on the projects.

## Vehicle Technologies Program Goals

- A. Enhance energy efficiency and productivity
- B. Bring clean, reliable, and affordable technologies to the marketplace
- C. Make a difference in the everyday lives of Americans by enhancing their energy choices and quality of life

## Project Relevance

- A. Deploy more than 500 vehicles on Michigan's roads, all of which have significant environmental benefits over gasoline and diesel
- B. The alternative fuel vehicles will be supported by more than 60 fuel and/or charging stations to ensure continued investment into cleaner vehicles

# RECOVERY ACT - RELEVANCE

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## ARRA Goals

- A. Jump start our economy
- B. Create or save millions of jobs
- C. Address long-neglected challenges so our country can thrive in the 21<sup>st</sup> century

## Project Relevance

- A. This project represents a \$5.8M investment into Michigan's transportation fueling infrastructure in 2010 & 2011.
- B. Vehicles and conversions are supplied by Eaton, Roush, and other automotive companies based in Michigan or the Midwest, keeping automotive industry employees working in Michigan.
- C. These alternative fuel pumps and EV charging stations support a broad transition to CNG, propane, and electricity as transportation fuels, allowing the U.S. to remain mobile without foreign oil.

# VEHICLE TECHNOLOGY - RELEVANCE



## Vehicle Technologies Goals

- A. Enhance energy efficiency and productivity
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## Project Relevance

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# APPROACH

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## Technical Barriers

- Changing priorities/budgets among project partners
- Technical problems/set-backs among technology suppliers
- Failure to achieve EPA/CARB certifications for new model year vehicles

## Technical Approach and Addressing Barriers

- Deadlines provided to project partners
- Releasing application solicitations for new project partners when necessary
- Scoring matrix for new partners with go/no-go decisions
- Leveraging DOE Technical Response Service to find qualified technology providers
- Ensuring environmental safety standards are met via NEPA documentation

# APPROACH - MILESTONES



Planned Milestones	Status
Distribute & Secure Project Sub-Grantee Contracts	Successfully secured contracts with 11 project partners
Create Marketing & Identity Plan	Marketing/PR firm chosen; press coverage in several publications including TIME Magazine
Complete Signage for Vehicles & Infrastructure	Signage developed; more than 130 vehicles tagged
Provide Training for Fleet & Infrastructure Partners	Two training webinars held in 2010
Host Informational Events	Three events held in 2010; NAFA Alternative Fuels event held on March 24, 2011
Successfully Purchase all 2010 Project Vehicles & Infrastructure	As of December 2010, 161 vehicles received or deployed; one station operational

# APPROACH – GO/NO-GO

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## Addressing Project Change

- Approval for project changes/contracts terminated for some
- Learned and communicated barriers to DOE
- Reviewing supporting documentation, EPA and CARB certifications and NEPA EQs
- Selection process for new partners includes scoring for maximum petroleum reduction and project readiness
- Go/no-go decisions include:
  - Eligibility of technology
  - EPA/CARB certification
  - Funding eligibility (incremental and maximum allowable amount)
  - Vehicles and/or infrastructure to be purchased/deployed before December 2011
  - Meet or exceed environmental safety standards



# ACCOMPLISHMENTS/PROGRESS



**Pictured left to right:** Tom Gibbons, City of Ann Arbor Fleet Manager; Lisa Warshaw, Clean Energy Coalition Project, and John Kargul, U.S. Environmental Protection Agency Director of Technology Transfer

## City of Ann Arbor

Deployed four hydraulic hybrid refuse trucks and one plug-in electric hybrid bucket truck

## Media Coverage

Covered in TIME Magazine (September 20, 2010 Issue), USA Today, and Reuters among other publications

## Results

Five vehicles had logged approximately 4,000 collective miles at the end of 2010

# ACCOMPLISHMENTS/PROGRESS



## Hybrid Vehicles

- Five medium/heavy duty vehicles deployed in 2010
- 30 light-duty hybrids to be deployed in 2011
- Project partners include the City of Ann Arbor and the University of Michigan

## Electric Charging Stations

- Two solar energy supported, centralized EV charging centers (in planning phase)
- Project partners include Western Michigan University and the Ann Arbor Downtown Development Authority

Four heavy-duty, hydraulic hybrid trucks and one medium-duty plug-in electric vehicle logged approximately 4,000 collective miles by the end of 2010.

# ACCOMPLISHMENTS/PROGRESS



## CNG Projects

- 90 Ford E350 service vans converted and deployed in 2010
- One infrastructure site open in 2010; 11 stations broke ground; three stations in planning phase
- Project partners include DTE Energy/MichCon Fuels and UBCR, LLC.

## Propane Projects

- 72 propane vehicles ordered, received, or deployed in 2010
- One infrastructure site broke ground in 2010
- Project partners include Schwan's Home Service, Frito-Lay, Metro Cars, and Wright & Filippis

Deployed 90 CNG vehicles throughout Michigan displacing 3,400 GGEs of petroleum.



## Job Creation

- Consistently created ~two full time jobs each quarter
- First quarter 2011 will reflect a significant increase in jobs created
- As the project continues to progress, we will see job creation numbers increase due to a higher volume of vehicle conversions and infrastructure development

# ACCOMPLISHMENTS/PROGRESS

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## Previous Challenges

- Some difficulty securing sub-grantee agreements
- Unobligated funding due to dismissed project partners
- Difficulty communicating and/or accepting contract terms and conditions
- Completing NEPA EQs
- Trouble finding a way to collect mileage and fuel use for reporting purposes

## Overcoming Barriers

- Providing contract execution deadlines/dismissing problematic project partners
- Quickly releasing application solicitations to attract new projects or partners/identifying good projects that meet the defined scope of work
- Created FAQs document addressing contract terms and conditions
- Working with Key Logic for NEPA EQ assistance
- Use “shared” Google Docs to collect project partner reporting data

# COLLABORATION



## Current Sub-Grantees

- Ann Arbor Downtown Development Authority (government)
- City of Ann Arbor
- DTE Energy/MichCon Fuels (utility)
- FedEx Ground (corporation)
- Frito-Lay (corporation)
- Great Lakes Transportation, LLC (private company)
- Schwan's Home Service (corporation)
- UBCR, LLC (private company)
- University of Michigan
- Western Michigan University
- Wright & Filippis (private company)

## Implementation Partners

- Greater Lansing Clean Cities Coalition (education and training partner)
- Michigan Department of Energy, Labor & Economic Growth's Bureau of Energy Systems (encourage regional collaboration)

## Key Resources

Quarterly conference calls among the ~25 Clean Cities ARRA projects are crucial. DOE leads calls and encourages information and resource sharing.

# FUTURE WORK - 2011

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- Obligate remaining un-obligated funding (due to reduced budgets, cancelled plans, etc.)
- Continue to refine data collection reporting process
- Purchase and deploy all vehicles by December 2011
- Install all infrastructure by December 2011
- Hold Informational event for the Michigan chapter of the National Association of Fleet Administrators on March 24, 2011
- Host first responder or other technical training workshop in Summer 2011
- Host three community-based regional educational meetings in 2011

# SUMMARY



## Project Goals

- A. Deploy more than 500 vehicles on Michigan's roads, all of which have significant environmental benefits over gasoline and diesel
- B. The alternative fuel vehicles will be supported by more than 60 fuel and/or charging stations to ensure continued investment into cleaner vehicles

## Project Status

- A. Deployed 90 CNG vehicles throughout Michigan displacing 3,400 GGEs of petroleum in 2010
- B. Four heavy-duty, hydraulic hybrid trucks and one medium-duty plug-in electric vehicle logged approximately 4,000 collective miles by the end of 2010
- C. 169 vehicles were either ordered, received, or deployed; one infrastructure site was, 12 infrastructure sites were under construction by the end of 2010
- D. 2011 work is focused on continued vehicle deployment and infrastructure development