



2014 DOE Vehicle Technologies Office Review Presentation

Accelerating Alternatives for Minnesota Drivers

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Organization: American Lung Association of the Upper Midwest

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Project ID TI041

Overview



Timeline

- Start: February 2013
- End: January 2015
- 58% complete (as of March 2014)

Budget

- Total project funding \$275,466
 - DOE share: \$248,788
 - Contractor share: \$26,658
- Funding received in FY13
 - \$137,909
- Funding for FY14
 - \$86,992
- \$123,811.47 Spent (49%)

Barriers

- Availability of alternative fuels and electric charging station infrastructure
- Availability of AFVs and electric drive vehicles.
- Consumer reluctance to purchase new technologies.

Partners

- American Lung Association in Minnesota/Twin Cities Clean Cities Coalition
- PlugInConnect, LLC
- Xcel Energy
- GE Capital Fleet Services
- Minnesota Pollution Control Agency
- CenterPoint Energy
- City of Duluth
- University of Minnesota - Duluth

Relevance



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. The project shall target the geographic region of Minnesota.

- Accelerating Alternatives for Minnesota Drivers (AAMD) will develop and implement initiatives that will lead to expanded use of alternative fuel vehicles and domestically produced alternative transportation fuels.
- AAMD aims to overcome barriers to plug-in electric vehicles (PEVs) and natural gas vehicles (NGVs) to ensure a wide selection of cleaner fuels are in use on Minnesota roads.
- The AAMD project aims to provide safety and technical training opportunities for first responders, fleet personnel, multi-unit housing owners and staff, and potential and existing alternative fuel vehicle adopters.
- AAMD will bring alternative fuel vehicles to participants at the Minnesota State Fair Eco Experience and Living Green Expo, providing visitors with educational handouts and hands-on experiences.
- In addition, AAMD will identify and address policy barriers and incentives, develop a national multi-unit housing charging database; establish the Minnesota Natural Gas Vehicle Workgroup, develop and implement a Minnesota green fleet recognition program; and, establish DriveElectricMN.org as its own branded site.

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 technologies.

Milestones



FY13

- Multi Unit Housing PEV Charging Database. Gather MUH Charging information, policy, tools, best practices to address barriers to PEVs – **on track**
- Establish Minnesota Natural Gas Vehicle Work Group. Develop MN NGV Workgroup mission and strategic plan to address and mitigate barriers for NGVs – **completed**
- Workshops & Training: Host workshops, safety trainings, events & presentations – **on track**
- DriveElectricMinnesota.org updated and expanded on branded site - **completed**

FY14

- MN Fleet Recognition Program – Promote & market MN program, January 2015
- Workshops & Training: Continue to host workshops, safety training, events & presentations through December 2014
- Multi Unit Housing PEV Charging Database. Continue to update MUH Charging information, tools, and best practices to address barriers to PEVs, December 2015

Approach



Task 1.0 – Project Management and Administration

TC4 manages project planning and execution activities in order to achieve project objectives.

Task 2.0 – Policy Initiative

Collaborating with key stakeholders (state agencies, utilities, businesses, and nonprofits) to identify and assess state and local incentives for alternative fuel vehicles.

Task 3.0 – Barrier Reduction Initiatives

Multi-unit housing EVSE work-group members analyze the EV charging infrastructure implementation barriers in multi-unit housing buildings and work together to reduce or eliminate barriers. Deliver workshops and training to fleet managers and decision makers regarding electric and natural gas vehicles.

Task 4.0 – Safety and Training Initiatives

Coordinate first responder trainings on alternative fuels. Deliver EV workshops to multi-unit property developers, managers and owners with best practices in PEV charging infrastructure.

Task 5.0 – Market Development/Outreach Initiatives and Activities

Coordinate and implement workshops for PEVs and related charging infrastructure along with seeking speaking and sponsorship opportunities targeting key audiences including policy makers, business leaders, fleet managers and early adopters.

Accomplishments



TC4 staff talks to St Cloud reporter at conference



Above: one of many education exhibits



Nine alternative fueled vehicles were present for the 1st Responders "hands on" portion of training in Saint Paul



MN Plug-In Vehicle Owners Circle brings consumers interested in learning more about PEVs at March 14 event



Right: TC4 staff talks to the mayor of Saint Michael, MN about natural gas refuse haulers at the League of Minnesota Cities Annual Conference

Accomplishments cont.



- Hold alternative fuel & vehicle first responder safety trainings
- Develop a natural gas vehicle workgroup
- Establish a MN green fleet recognition program
- Further the deployment of electric & natural gas vehicles
- Develop Multi-Unit Housing tools and website



MultiHousingCharging.com

[Home](#) [EV Owners](#) [HOAs](#) [Building Owners/Mgrs](#) [Utilities](#) [Resources](#) [States](#)

Find the right PEV charging solutions for your multi-ho property.

Accomplishments cont.



Multi-Unit Housing tools and website

Visit the Case Study library:



Crane Station (Place, Minneapolis, MN
(VMHC.com case study report)



Pioneer Building, St Paul, MN
(VMHC.com case study report)



Clean Floor Apartments, Minneapolis, MN
(VMHC.com case study report)



Country Club Mansion, West St Paul, MN
(VMHC.com case study report)

MultiHousingCharging.com

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Find the right PEV charging solutions for your multi-unit property.

Electric vehicles and plug-in hybrids are coming to the market, and these vehicles will need to be charged at home rather than filled up at the gas station.

There are several considerations when planning for EV charging solutions.

MHC Decision Process tools

Visit the [Tools](#) page to download MHC Decision Process worksheets that help PEV owners and multi-unit housing property management calculate, decide and plan for PEV charging infrastructure.



- California
- Colorado
- Connecticut
- Delaware
- The District of Columbia
- Florida
- Hawaii
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- New Jersey
- New York
- Oregon
- Pennsylvania
- Rhode Island
- Texas
- Washington

Visit the Case Study library.

Accomplishments cont.



Drive Electric Minnesota

Mission: To encourage the deployment of EVs and the establishment of plug-in charging infrastructure through public-private partnerships, financial incentives, education, technical support, and public policy. To advance electric vehicle deployment to reduce transportation costs, improve air quality and create energy independence for Minnesotans.

- 49 public and private partners
- Installed more than 120 EVSE
- Zero Emissions Charging Challenge
- Charge While You Work – guide
- Meets quarterly at TC4 office

A screenshot of the Drive Electric Minnesota website. The page has a blue navigation bar with links for HOME, VEHICLES, CHARGING, RESOURCES, ABOUT US, and CONTACT US. Below the navigation bar is a header with the Drive Electric Minnesota logo and the text 'Drive Electric Minnesota'. The main content area is titled 'ABOUT US' and contains text about the organization's mission and goals. There is a photo of a group of people standing in front of a charging station. At the bottom of the page, there is a footer with the same navigation links and a copyright notice for 2014 Drive Electric Minnesota.

Accomplishments cont.



Minnesota Natural Gas Vehicle Coalition

Mission: To accelerate the deployment of natural gas vehicles (NGVs) in public/private fleets and expand the infrastructure in Minnesota in order to reduce transportation costs and improve air quality for Minnesotans.

- Formed through funding of USDOE AAMD grant
- Meets quarterly at TC4 office
- 80+ public and private stakeholders
- Creating case studies, resource pages, workshops, ride & drives



Collaborations



Local Government Agencies

- City of Duluth
- City of Minneapolis
- City of St. Paul
- Dakota County
- Hennepin County
- Minnesota Department of Administration Travel Management
- Minnesota Division of Energy Resources
- Minnesota Pollution Control Agency
- Ramsey County

Fleets

- Eureka Recycling
- Ford Motor Company
- GE Capital
- General Motors
- Metropolitan Airports Commission

Utilities

- CenterPoint Energy
- Xcel Energy

Other

- American Lung Association in Minnesota
- Boyer Ford
- Eaton Corporation
- Environmental Initiative
- PlugInConnect
- University of Minnesota - Duluth
- U.S. Department of Energy National Clean Cities
- U.S. General Services Administration



Future Work



- Remaining Project Activities:
 - Green Fleet Program
 - Continued workshops, sponsorships and speaking events
 - Further development of MN Natural Gas Vehicle Coalition
- Related Efforts (NOT Project Funded):
 - MN Plugin Electric Vehicle Owners Circle
 - 75+ events through Twin Cities Clean Cities Coalition and partners
 - Twin Cities Clean Cities Coalition & Mississippi National River and Recreation Area Clean Cities/National Parks Partnership
 - 12 EVSE at 11 sites
 - Completion estimated July 2014
 - Infrastructure Grant Programs
 - Biodiesel market development



Summary



Relevance:

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. Accelerating Alternatives for Minnesota Drivers (AAMD) will develop and implement initiatives that will lead to expanded use of alternative fuel vehicles and domestically produced alternative transportation fuels.

Approach:

The AAMD project will provide safety and technical training opportunities for first responders, fleet personnel, multi-unit housing owners and staff, and potential and existing alternative fuel vehicle adopters.

Collaborations:

Partnerships include state and local government, utilities, private businesses and non-profit entities working in collaboration to accelerate use of alternative fuels and infrastructure in Minnesota.

Project Accomplishments/Progress:

- 47 events including trainings, speaking opportunities and exhibits have taken place
- 5,485,167 total media impressions have been recorded
- 2 websites have been developed and expanded and continue to develop over time