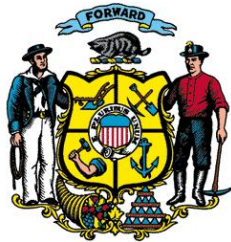


Wisconsin Clean Transportation Program

Funded by the American Reinvestment & Recovery Act –
Clean Cities Alternative Fuel & Advanced Technology Vehicle Pilot Program





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Wisconsin Clean Transportation Program

Grant Number: DE-EE0002559
Period Covered by the Report: December 1, 2009 – December 31, 2013
Recipient: Wisconsin Department of Administration, Division of Energy Services, State Energy Office
Project Director: Maria Redmond, Senior Analyst & Program Manager, Transportation Fuels
Total Award Amount: Federal Share - \$15,000,000
Match - \$17,047,478

PROJECT DESCRIPTION

The Wisconsin Clean Transportation Program (WCTP) was a four-year initiative aimed to significantly reduce petroleum consumption and emissions in Wisconsin, by increasing the use of alternative fuel or advanced technology vehicles and the installation of infrastructure necessary to support them. The WCTP also aimed to maximize the preservation and creation of jobs by investing in the technology and training necessary to continue to develop a strong alternative fuels industry.

WCTP QUICK FACTS

- Deployed 177 Light-Duty Vehicle
- Deployed 200 Medium/Heavy-Duty Vehicles
- Installed 3 publically accessible alternative fuel stations
- Installed 19 private alternative fuel stations
- Displaced over 2.26 million gallons of petroleum
- Featured at 163 events throughout WI

In August 2009, the United States Department of Energy's (U.S. DOE) Clean Cities Program competitively awarded nearly \$300 million in American Reinvestment and Recovery Act (ARRA) funding to 25 cost-share projects nationwide. The Wisconsin State Energy Office (SEO) was awarded \$15 million and subsequently partnered with Wisconsin Clean Cities (WCC) and a technical consultant for marketing, outreach, education and training.

The objectives of this project were to:

- Increase the use of alternative fueled vehicles and advanced technology vehicles, as a means to reduce the United States (U.S.) dependence on imported petroleum, increase fuel economy and improve emissions;
- Install infrastructure that supports alternative fuel and advanced technology vehicles;
- Ensure that vehicles capable of using alternative fuel do so to the greatest extent possible;
- Provide appropriate training for individuals associated with this project and in the larger community about the benefits of alternative fuel and advanced technology vehicles, and provide them with strategies that will help them to maximize these benefits; and,
- Collect data on the success of the project through collection of vehicle, infrastructure and training information.

The WCTP leveraged over \$17 million in cost-share from its 57 sub-recipients across the state. Since its inception, the WCTP has updated or installed 19 private and 3 public alternative fueling or electric charging stations and deployed 377 vehicles on the roads of Wisconsin. The program displaced over 2.26 million gallons of petroleum between January 2010 and December 2013.

The technologies used in the WCTP are solar, biodiesel, compressed natural gas, propane, electricity, ethanol, hybrid-electric, and plug-in hybrid electric. Sub-recipients were able to choose which alternative fuel(s) or advanced technology vehicles would work best in their fleets. Some sub-recipients chose just one fuel or

technology, while others chose various methods to decrease their petroleum consumption. A list of sub-recipients is found below:

WCTP Sub-Recipient List		
Bayfield County	Kenosha County	Waste Management of Wisconsin, Inc.
Barnes, Inc.	Lamers Bus Lines, Inc.	We Energies
Barnes Power Equipment	Madison Gas & Electric	We Energies – Hribar Transport, LLC
Bestway Limousine, LLC	Marquette University	We Energies – Paper Transport, Inc.
Brown County	Marshfield Utilities	We Energies – Transit Express
Chippewa County Highway Department	Milwaukee County	WI Department of Administration – Enterprise Services
City of Bayfield	Milwaukee County General Mitchell Airport	WI Department of Corrections – Columbia Correctional Institution
City of Durand	Milwaukee Metro Sewerage District	WI Department of Corrections – Jackson Correctional Institution
City of Madison	Oconomowoc Transport Company	WI Department of Corrections – Oakhill Correctional Institution
City of Milwaukee	Pope Transport	WI Department of Corrections – Racine Correctional Institution
City of Monona	Remy Battery Co., Inc.	WPPI Energy - City Utilities of Richland Center
Contract Transport Services, LLC	Roehl Transport, Inc.	WPPI Energy – Florence Utilities
Dane County	Sheehy Mail Contractors, Inc.	WPPI Energy – Kaukauna Utilities
Dart Transit Co.	Stoughton Utilities	WPPI Energy – Lake Mills Water & Light
Fox Valley Metro Police Department	SunPower Biodiesel, LLC	WPPI Energy – Lamers Bus Lines, Inc.
Fun Time Bounces	Time Transport	WPPI Energy – Menasha Utilities
GO Riteway	University of Wisconsin- Madison	WPPI Energy – New Richmond Utilities
Great Lakes Community Conservation Corps	University of Wisconsin- Oshkosh	WPPI Energy – Oconomowoc Utilities
Jefferson County Sheriff's Office	Veriha Trucking	WPPI Energy – GO Riteway

FUEL DISPLACEMENT

Three of the major objectives in this program directly contributed to the reduction of U.S. dependence on imported petroleum by:

- Increasing use of alternative fueled vehicles and advanced-technology vehicles;
- Installing infrastructure that supports alternative fuel and advanced technology vehicles; and
- Ensuring that vehicles capable of using alternative fuel do so to the greatest extent possible.

As a result of the support of the WCTP, the deployment of 377 vehicles and 22 new alternative fuel infrastructure sites the program was able to displace 2,265,255 Gasoline Gallon Equivalents (GGE) of petroleum. The tables below show the breakdown of fuel displaced by type of fuel, type of infrastructure and sub-recipients.

Summary of Petroleum Displacement by Station Fuel Type & Sub-Recipient		
Technology / Station	Sum of Cumulative GGE	Count of Stations
Propane, Liquefied Petroleum Gas (LPG)	413,354	2
GO Riteway	329,467	1
Jefferson County Sheriff's Department	83,886	1
Biodiesel (B100)	347,825	1
Sun Power Biodiesel	347,825	1
Compressed Natural Gas (CNG)	177,911	4
Bayfield County	6,623	1
City of Milwaukee – Lincoln Avenue	104,457	1
City of Milwaukee – Ruby Avenue	38,581	1
Dane County	28,250	1
Electric	32,010	14
City of Madison	3,323	1
Go Riteway	9,727	1
Kenosha County	258	3
Madison Gas & Electric	986	1
Marshfield Utilities	634	1
Milwaukee County	383	4
Oconomowoc Transport	15,553	1
Stoughton Utilities	1,146	2
Ethanol (E85)	7,270	1
WI Department of Administration	7,270	1
Grand Total	978,370	22

Summary of Petroleum Displacement by Vehicle Fuel Type & Sub-Recipient ¹		
Technology / Fleet	Sum of Cumulative GGE	Count of Vehicles
Compressed Natural Gas (CNG)	936,952	151
Barnes Inc.	377	3
Barnes Power Equipment	911	2
Bayfield County	0	7
Bestway Limousine, LLC	17,419	1
City of Milwaukee	0	21
City of Monona	32	1
Contract Transport Services	70,370	5
Dane County	3,327	26
Dart Transit Co.	26,963	5
Fun Time Bounces	0	1
Great Lakes Community Conservation Corps	217	1
Milwaukee County General Mitchell Airport	2,381	1
Milwaukee Metro Sewerage District	2,121	10
Pope Transport	4,925	5
Remy Battery	119	1
Roehl Transport	0	3
Sheehy Mail Contractors	38,398	3
Time Transport	25,865	5
UW-Oshkosh	33	1
Veriha Trucking	17,074	5
Waste Management of Wisconsin, Inc.	12,879	5
We Energies	2,378	3
We Energies - Hribar Logistics	58,017	2
We Energies - Paper Transport, Inc.	622,663	24
We Energies -Transit Express	30,483	10
Propane, Liquefied Petroleum Gas (LPG)	288,283	65
GO Riteway	285,374	42
Jefferson County Sheriff's Department	0	18
Lamers Bus Lines, Inc.	2,908	5
Hybrid-Electric Vehicle (HEV)	58,370	120
Bayfield County	552	2
Brown County	1,847	3
Chippewa County	1,479	3
City of Madison	982	1
City of Milwaukee	999	5
Fox Valley Metro Police Department	624	2
GO Riteway	11,208	16
Milwaukee County	8,370	35
Milwaukee Metro Sewerage District	5,091	6
Sun Power Biodiesel	0	1
University of Wisconsin - Madison	70	1
WI Department of Administration- Enterprise Services	13,262	28
WI Department of Corrections (Columbia)	450	1
WI Department of Corrections (Jackson)	2,407	1
WI Department of Corrections (Oakhill)	760	1
WI Department of Corrections (Racine)	381	1
WPPI (Florence Utilities)	531	1
WPPI (GO Riteway)	1,512	2
WPPI (Kaukauna Utilities)	697	1
WPPI (Lamers Bus Lines, Inc.)	5,549	6
WPPI (Menasha Utilities)	508	1
WPPI (New Richmond Utilities)	720	1
WPPI (Oconomowoc Utilities)	370	1
Neighborhood Electric Vehicle (NEV)	2,202	20
City of Bayfield	70	1
City of Durand	123	1
Milwaukee Metro Sewerage District	916	6
University of Wisconsin - Madison	1,094	12

¹ The vehicle GGE displacement calculations back out any percentage of fuel also recorded in the station inventory.

Summary of Petroleum Displacement by Vehicle Fuel Type & Sub-Recipient ¹		
Technology / Fleet	Sum of Cumulative GGE	Count of Vehicles
Plug-in Hybrid Electric Vehicle (PHEV)	1,040	20
City of Madison	0	2
Kenosha County	0	1
Madison Gas & Electric	0	1
Marshfield Utilities	0	1
Milwaukee County	0	4
Oconomowoc Transport Company	0	5
GO RiteWay	0	2
Stoughton Utilities	0	2
WPPI (City Utilities of Richland Center)	889	1
WPPI (Lake Mills Light and Water)	151	1
Electric Vehicle (EV)	38	1
Marquette University	38	1
Grand Total	1,286,885	377

PROJECT IMPLEMENTATION - ANTICIPATED GOALS VERSUS ACTUAL OUTCOMES

In the original application, submitted in 2009, the SEO aimed to fund the incremental cost of purchasing 502 alternative fuel vehicles (AFVs) and advanced-vehicle technologies by 119 public and private fleets throughout the state. This program also proposed supporting the installation of 10 alternative fuel refueling sites. After the launch of the program, a number of the sub-recipients that originally committed to the project backed out. The program management team, discussed in the next section, decided to move forward with sub-recipients fully committed to the program and offered them additional funding for more vehicles and infrastructure.

The participating sub-recipients were able to spend expeditiously and economically, leaving a reasonable amount of funding to support additional fleets in 2013. This second phase of funding focused on propane and natural gas vehicle deployment and brought in 17 additional sub-recipients. As a result the WCTP concluded with 57 sub-recipients; installed 19 private and 3 public alternative fueling or electric charging stations; and deployed 377 vehicles on the roads in Wisconsin.

WCTP – Goals Versus Outcomes			
	Planned	Final	Reason for Change
Sub-Recipient (Fleets)	119	57	Reduced number of sub-recipients and distributed more funding at each location
Number and Type of AFVs	502	377	Reduced number of sub-recipients and size of vehicles purchased
Deployment by Size	354 light-duty 88 medium-duty, and 64 heavy-duty vehicles	177 Light-Duty, and 200 Medium/Heavy-Duty Vehicles	Shift in type of sub-recipients, municipal versus private transport and utility fleets
Number and Type of Fueling Infrastructure	10	22	Shift in type of sub-recipients and fuel interests
Complete Infrastructure Deployment	December 31, 2012	December 31, 2013	Siting, bidding, permitting and construction took longer than expected
Complete AFV Deployment	December 31, 2012	December 31, 2014	Additional funding fleets made available early 2013
Outreach Events	31	163	Growing interest in alternative fuels and advanced vehicle technologies.
WCTP Led Training Events	10	5	Most training provided by technology vendors
Leveraged Funding	\$17,047,478 ²	\$26,764,229	Types of vehicles purchased and lower federal investment in vehicles

SUCCESSSES & BEST PRACTICES:

One of the major successes of the WCTP was the implementation and ongoing management of the program. As part of an ARRA grant, the SEO agreed to launch a program that was “shovel ready”, with sub-recipients and projects in place at the time of the application. Those sub-recipients were also prepared to move forward when

² This amount reported on Final Federal Financial Report

the program was approved. Within a few months of receiving the award, the SEO assembled a project management team to help coordinate the administrative efforts of the program. This team included WCC and a technical coordinator, Mark O'Connell. The team hosted a program launch meeting, for the sub-recipients, to walk them through the contract negotiation process and discuss Davis-Bacon, Buy American and other important flow down provisions they needed to be aware of before fully committing to the program. As a result, the SEO was able to provide transparency regarding the project and expectations to the sub-recipients. As a result, the sub-recipients were able to expeditiously execute contracts and equipment purchases. Through the life of the program, the SEO managed the contract, invoicing and reporting; WCC handled the marketing and outreach efforts; and the technical coordinator handled training and resolving technical issues with the vehicles. The consistency in the roles and responsibilities made it easier for the sub-recipients to know who to contact and how to get questions answered in an efficient manner.

A second success of the program was related to spending. A number of the sub-recipients in the program were able to get lower prices on vehicles and equipment, either because they were a local government or buying vehicles or other equipment in bulk. Because of this, initial spending was lower than expected, and the SEO was able to distribute additional funding to existing sub-recipients in 2012. The WCTP was also able to take on new sub-recipients in 2013. The funding reached a wider range of fleets and expanded the use of alternative fuel and advance vehicle technologies.

A third success was related to vehicle safety. Fleets that purchased a plug-in hybrid-electric vehicles (PHEV), hybrid-electric vehicles (HEV), electric vehicles (EV), compressed natural gas (CNG) vehicles, and propane or liquefied petroleum gas (LPG) expressed some surprise when they found that the vehicles operate quieter and with less emissions. Specifically, a number of the fleets operating PHEV utility trucks expressed satisfaction that their line workers and boom operators were able to have conversations without the noise of the diesel vehicle in the background. This provides a much safer and efficient work environment for these employees.

During the program, Hurricane Sandy slammed the east coast of the U.S. causing billions of dollars in damage to homes and businesses in that area. This damage caused limited to no access to vital energy needs, including electricity and conventional transportation fuels. Three of the WCTP sub-recipients sent their PHEV utility trucks to the east coast to assist with the recovery efforts. The PHEV would charge off-site and then utilize the battery system in the ravaged areas that had no access to conventional fuels. These vehicles gave line workers the ability to repair power lines and restore access to electricity. The Hurricane Sandy recovery efforts showed the value of AFVs and advanced technology vehicles, by providing critical services when conventional fuel supplies were interrupted. This technology was useful in emergency preparedness and response, and should continue to be explored as an option during these types of disasters.

Overall, the program was a success. Over the life of the program there were low maintenance costs, tremendous support from vehicle and equipment vendors; and an increased interest by fleets to adopt and use alternative transportation fuels and advanced vehicle technologies beyond the close of the program.

BARRIERS, CHALLENGES & LESSONS LEARNED:

Large programs can result in many successes and challenges. Overall, this program saw a number of successes and very limited number of challenges. The first challenge experienced by the sub-recipients was technology availability. With the increased demand for alternative fuels related equipment, vehicles and infrastructure, stress was put on the vendors and the manufacturing industry to provide the necessary equipment in a timely manner. This in-turn delayed the deployment of vehicles and infrastructure. In time, the vendors were able to catch up to the demand and provide vehicles and infrastructure equipment efficiently.

Another issue the program faced was related to vehicle technology reliability and performance. The U.S. DOE required the purchase of commercially available and proven technology. Commercially available vehicles and

vehicle conversion systems were defined by U.S. DOE as, “...those that are available for purchase and unrestricted operation by the general public and are fully compliant with all applicable emissions and safety regulations.” Although the WCTP complied with the provision, once the commercially available vehicles were deployed there were clear issues with performance with some of the technology. In 2011, a sub-recipient experienced significant performance problems with PHEV school buses funded under the program. Problems included inefficient charging; jerking spontaneously while in operation; very low fuel economy; and vehicle control module communication faults. The program management team met a number of times with the vehicle manufacturer and sub-recipient, developed a corrective action plan and came to a resolution in 2012. Eventually, a number of the buses were returned to the vendor and the manufacturer assigned an engineer to the sub-recipient, to monitor and support them with the PHEVs they continued to operate.

Additional challenges were met for heavy-duty PHEV and HEV utility trucks. The same issues arose related to fuel economy, jerking while in operation and charging issues. An additional issue arose related to miscommunications between three different systems on the vehicle; the chassis, operating the boom, and the hybrid system. When the systems were not communicating, the boom would often get stuck in the air, leaving a line worker stranded until they were able to remedy the situation. All vendors for these vehicles cooperated to find solutions to these issues. Some assigned engineers to problem solve and update software, while other vendors offered extended warranties to ensure the sub-recipient would have the repair costs covered. As the technology continued to become more main stream and the manufacturers produced more of these vehicles, there were fewer of these types of issues and swift responses when issues arose.

The last issue the WCTP saw was with the NEVs and consistent operation in cold weather. The sub-recipients who purchased these types of vehicles found that operation in winter was not efficient. Because of their size, the vehicles were difficult to maneuver in heavy snowfalls on any type of terrain. It was also difficult to keep the interior warm without compromising fuel economy. The program management team and sub-recipients decided, for the safety of the driver, to park the vehicles during the winter months.

SUB-RECIPIENT DETAILS:

BAYFIELD COUNTY

Bayfield County was awarded a total of \$230,316.67 of federal funding for the purchase of two light-duty HEVs, seven light-duty CNG vehicles, one CNG fueling station, and related maintenance costs. By implementing CNG, the county considerably decreased fueling costs and air pollution emissions. Bayfield County completed their purchases and installations on April 2012. They were also able to take advantage of additional funding made available through the program in 2013 and made their final vehicle purchases in May 2013. Through their vehicle and infrastructure deployment efforts Bayfield County was able to realize a petroleum displacement of 7,175 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$230,316.67
Technology:	CNG, HEV
Infrastructure:	CNG
Vehicle(s):	2 CNG Chevy Silverados 2 CNG Ford F150s 1 CNG Ford Escape 2 CNG Honda Civics 2 HEV Honda Insights
Fuel Displacement:	7,175 GGE
County:	Bayfield



County Administrator Mark Abeles-Allison stands in front of one of the county's hybrid Honda Insights

The two HEVs purchased were Honda Insights and put into service in April 2010. The vehicles were used by the Health and Services Departments at the County. The HEVs were well received by employees and the fuel savings were considerable since they replaced a Ford Focus and Ford Taurus. The only challenge they faced was the vehicle's tendency to get stuck during heavy snowfalls due to its low-to-the-ground profile.

The seven CNG vehicles purchased through the WCTP were dedicated (two) and bi-fuel (five). The bi-fuel vehicles, which were aftermarket conversions with separate fueling systems, allowed the vehicles to use

CNG or gasoline and expanded the vehicle's range. The bi-fuel vehicles were initially converted by a company in Mankato, MN and then later by World CNG in Chicago, IL. These vehicles averaged 17-18 miles per gallon (MPG). The dedicated vehicles had the same mileage as their gasoline equivalents.

Bayfield County had to get special permission to install the CNG station. The county installed a fast-fill dispenser in front of their county administration building and four time-fill dispensers on the other side of the refueling island. Although the station was private, the county was also interested in partnering with other fleets and reached out to area local government agencies and companies that wished to fuel with CNG.

A public grand opening event took place on May 31, 2012 at the Bayfield County CNG Fueling Station located at 117 E Sixth Street, Washburn, WI. County officials, neighboring municipalities, project sub-recipients, and members of the general public attended the opening. At the grand opening event Bayfield County Administrator, Mark Abeles-Allison stated, "CNG fueling is a new concept to Bayfield County and we are enjoying the benefits of fueling with compressed natural gas." According to Abeles-Allison, Bayfield County's goals for participating in the program were to develop a local capacity for natural gas, save on fuel costs, reduce emissions, work with the State of Wisconsin to create local infrastructure, and generate local experience fueling with CNG.



Bayfield County - CNG Station Grand Opening.

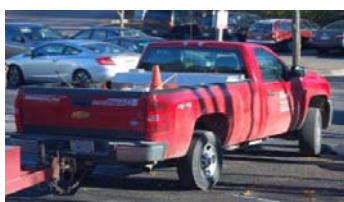
Bayfield County continues to look for opportunities to integrate CNG vehicles into their fleet and expand the use of their CNG refueling infrastructure by other local fleets.

Bayfield County - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light – Duty CNG	5	7
	Light -Duty HEV	3	2
Number and Type of Fueling Infrastructure	CNG	1	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 62,839.00	\$ 88,328.25
	Infrastructure	\$ 120,000.00	\$ 134,842.50
	Committed Match (reported on FFR)	\$ 62,839.00	\$ 140,744.57
	Additional Match (not reported on FFR)	\$ -	\$54,579.50
	Maintenance	\$ -	\$ 7,145.92
	Total	\$ 245,678.00	\$ 425,640.74

BARNES, INC

Barnes, Inc. was awarded \$20,250 of federal funding for the purchase of three light-duty CNG vehicles. Barnes, Inc. was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. Barnes, Inc. finalized their purchases of their CNG conversions systems and completed the installations in November 2013. Through their vehicle deployment efforts Barnes, Inc. was able to realize a petroleum displacement of 377 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$20,250.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	3 CNG Chevy Silverados
Fuel Displacement:	377 GGE
County:	Dane



Barnes, Inc. - CNG Chevy Silverado

The three Chevy Silverados are used by the company for their landscaping services. The vehicles purchased through the WCTP were bi-fuel CNG vehicles, outfitted with aftermarket conversion systems. The vehicles were converted by qualified equipment installers located on-site at Barnes, Inc. Barnes, Inc. saw the value of utilizing this low cost fuel in their landscaping business. In the future they plan to continue to convert vehicles to CNG for their fleet; expand their services to convert vehicles to CNG for other fleets;

and, look for opportunities to integrate public CNG infrastructure on-site to expand the availability of the fuel in the Madison area.

Barnes, Inc. - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	3	3
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 20,250.00	\$ 20,250.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 136,340.00
	Maintenance	\$ -	\$ -
Total		\$ 20,250.00	\$ 156,590.00

BESTWAY LIMOUSINE, LLC

Bestway Limousine, LLC was awarded \$24,976.33 of federal funding for the purchase of one heavy-duty CNG shuttle bus and related maintenance costs. The CNG shuttle bus was ordered in the winter of 2011 and was deployed in late summer 2012. Through their vehicle efforts Bestway Limousine, LLC was able to realize a petroleum displacement of 17,419 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$24,976.33
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG Ford E450 Shuttle Bus
Fuel Displacement:	17,419 GGE
County:	Milwaukee



Bestway Limousine, LLC. - CNG E450

The shuttle bus is a Ford E450 outfitted with BAF Technology, which was converted prior to delivery to the sub-recipient. The 20 to 24 passenger vehicle was contracted for use by 2040 Lofts, a private residence hall, located near Marquette University and was used to shuttle residents to local area universities. The vehicle averaged 9 MPG. At first, Bestway Limousine, LLC used the CNG station owned by the Clark Oil Company, located near the General Mitchell International Airport, to fuel the shuttle and has since used fellow WCTP Partner, Transit Express' CNG station.

In the fall of 2011, Bestway Limousine, LLC experienced problems with one of the fuel tanks, which caused an increase in fueling occurrences. They brought the vehicle to Ewald Automotive Group, who was able to re-calibrate the CNG fuel system. Not only was the problem fixed, but the driver reported that the CNG shuttle bus had improved performance. In October 2012, the engine broke down and was replaced by Ford, at no cost to the program. Bestway Limousine, LLC's owner, Jim Knoblauch, was thoroughly pleased with the fuel savings realized from using CNG and has no future plans to replace the vehicle. Drivers also enjoyed how quiet the bus was compared to their previous diesel vehicle. In the future, Bestway Limousine, LLC plans to explore CNG options for other vehicles in their fleet.

Bestway Limousine, LLC - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-Duty CNG	2	0
	Medium-Duty HEV	1	0
	Heavy-Duty CNG	0	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 130,000.00	\$ 24,976.33
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 130,000.00	\$ 61,260.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 456.33
Total		\$ 260,000.00	\$ 86,236.33

BARNES POWER EQUIPMENT

Barnes Power Equipment was awarded \$13,500 of federal funding for the purchase of two light-duty CNG vehicles. Barnes Power Equipment was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. They finalized the purchase of the CNG conversions systems and completed the installations in November 2013. Through their vehicle deployment efforts Barnes Power Equipment was able to realize a petroleum displacement of 911 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$13,500.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	2 CNG Chevy Silverados
Fuel Displacement:	911 GGE
County:	Dane

The two Chevy Silverados were used by the company for delivery of equipment. The vehicles purchased through the WCTP are bi-fuel CNG vehicles outfitted with aftermarket conversion systems. The vehicles were converted by qualified equipment installers located at Barnes, Inc. Barnes Power Equipment saw the value of utilizing this low cost fuel in their equipment delivery business. In the future, they plan to continue to convert vehicles to CNG for their fleet.

Barnes Power Equipment - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	2	2
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 13,500.00	\$ 13,500.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 91,470.00
	Maintenance	\$ -	\$ -
	Total	\$ 13,500.00	\$ 104,970.00

BROWN COUNTY

Brown County was awarded \$6,000 of federal funding for the purchase of three light-duty HEVs. During the program, the three Toyota Priuses averaged 50 MPG, a substantial increase from past vehicles with lower fuel efficiency. The increased mileage saved the county fuel costs and decreased its oil consumption and greenhouse gas emissions. Vehicles were deployed May 2010. Drivers were very happy with the vehicle's driving performance. Through their vehicle deployment efforts, Brown County was able to realize a petroleum displacement of 1,847 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$6,000.00
Technology:	HEV
Infrastructure:	None
Vehicle(s):	3 HEV Toyota Priuses
Fuel Displacement:	1,847 GGE
County:	Brown

Because of the smaller size of a Toyota Prius, the county's biggest challenge was finding the right application for the vehicles. The vehicles were used by multiple departments to perform job duties and to travel to trainings throughout Northeast Wisconsin. In order for the Sheriff's Department to use the HEVs additional equipment, such as a computer and radio, needed to be installed in the vehicle. However, the technical team was not able to install the equipment without hindering the efficiency of the hybrid technology. Thus, the vehicle used by the department was driven by its non-patrol detective unit and was later transferred to another county department in the winter of 2011.

Initially, Brown County board members were resistant to the HEV technology. A presentation was made to board members to show that the vehicles are safe and reliable before the vehicles were deployed so that they were comfortable with the technology. This eased the acceptance, transition of the fleet and approval of purchases to HEVs much easier. Based on their positive experience, Brown County may consider purchasing HEVs in the future.

Brown County - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light- Duty HEV	5	3
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 10,000.00	\$ 6,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 10,000.00	\$ 60,865.40
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
Total		\$ 20,000.00	\$ 66,865.40

CHIPPEWA COUNTY HIGHWAY DEPARTMENT

Chippewa County Highway Department (CCHD) was awarded \$6,000 of federal funding for the purchase of three light-duty Ford Fusion HEVs. The HEVs improved fuel efficiency compared to older vehicles that were previously used by the department. CCHD averaged 38-42 MPG with the three vehicles purchased under this program. Improved efficiency not only saved CCHD money on fuel, but decreased overall petroleum consumption and greenhouse gas emissions. Through their vehicle deployment efforts CCHD was able to realize a petroleum displacement of 1,479 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$6,000
Technology:	HEV
Infrastructure:	None
Vehicle(s):	3 HEV Ford Fusions
Fuel Displacement:	1,479 GGE
County:	Chippewa

Due to winter weather conditions, CCHD preferred a four-wheel-drive vehicle. However, HEV all-wheel-drives were more expensive, so they chose the smaller, less expensive Ford Fusion. The vehicles were operated in their shared fleet; there was initial apprehension about whether drivers would operate the vehicle according to technology specifications. With multiple drivers, Paul Mohr, CCHD Shop Superintendent, was worried that monitoring the vehicle's use and savings would be difficult. Through deployment and monitoring of the HEVs, both the technology and driver concerns were overcome and CCHD was content with their overall performance. Based on their positive experience, CCHD may consider purchasing HEVs in the future.

Chippewa County Highway Department - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty HEV	8	3
Number and Type of Fueling Infrastructure	E85	1	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 16,000.00	\$ 6,000.00
	Infrastructure	\$ 50,000 .00	\$ -
	Committed Match (reported on FFR)	\$ 16,000.00	\$ 69,027.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
Total		\$ 82,000.00	\$ 75,027.00

CITY OF BAYFIELD

The City of Bayfield was awarded \$3,158.24 of federal funding for the purchase of a NEV and related maintenance costs. The NEV was received in May 2010 and was used by city administrative staff and public works department. The NEV replaced a full-sized vehicle. According to Public Works Director, Tom Kovachevich, the NEV's battery charge was good for about 50 miles (or 4 to 5 hours of driving). Each night the city crew plugged in the vehicle to charge the batteries and when full, the charger would shut down automatically. The City of Bayfield saved a considerable amount of money by purchasing a used vehicle from fellow WCTP partner University of Wisconsin (UW)-Madison. Through their vehicle deployment efforts, the City of Bayfield was able to realize a petroleum displacement of 70 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$3,158.24
Technology:	NEV
Infrastructure:	None
Vehicle(s):	1 NEV E-Ride Industries EXV2
Fuel Displacement:	70 GGE
County:	Bayfield

The NEV conformed to the City of Bayfield's sustainability plan. The purchase of a NEV directly contributed to the city's "25 by 25" resolution to reduce Wisconsin's energy dependence for imported energy by 25% by 2025.



Mayor Larry McDonald stands in front of the City's NEV during the 2011 Apple Fest

Mayor Larry McDonald used the NEV each year in October during the annual Apple Festival, to travel around the festival grounds. During the three-day event, with more than 50,000 people in attendance, the Mayor noted he was pleasantly delayed getting to and from different places because, "...for every block that I traveled, I had three to four people stop me so they could ask questions about the NEV. People are intrigued."

The City of Bayfield met a challenge when, at the time of purchase, no local low speed vehicle (LSV) laws existed, making use of the NEV prohibited on the City's roads. Therefore, the City of Bayfield adopted a LSV ordinance in June 2010. The ordinance allows a vehicle, such as a NEV, with a gross vehicle weight of 3,000 lbs. or less to operate on city streets that have a speed range up to 35 mph. Mayor McDonald said the ordinance, "...shows our commitment to reducing energy usage."

Another challenge related to NEV's heater limitations and the lightness of the vehicle, preventing year-round usage. Although the previous owners, UW-Madison, drove the vehicle year round, the City of Bayfield is further north and has harsher winters. As a result, the NEV was parked inside and unused for about three months of the year. Another issue that arose was related to the NEV's driving range reduction due to terrain. Driving often on the City of Bayfield's hills decreased the range due to the extra exertion on the battery. Depending on the route, the NEV's range could be longer or shorter than predicted with up to an hour difference. Lastly, in 2011, the City of Bayfield had to replace the batteries on the NEV, due to inefficient charging and lower use time. The WCTP was able to cover the cost of the battery replacement to ensure continued operation of this vehicle.

Based on their overall positive experience, the City of Bayfield may consider purchasing another NEV in the future.

City of Bayfield - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light – Duty NEV	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 2,000.00	\$ 2,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 2,000.00	\$ 3,000.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 1,158.24
Total		\$ 4,000.00	\$ 6,158.24

CITY OF DURAND

The City of Durand was awarded \$3,119.36 of federal funding for the purchase of a NEV and related maintenance costs. The City of Durand chose a Columbia MEGA flatbed utility truck that can be plugged in any 110V outlet. The NEV replaced a 1992 GM gasoline pick-up truck that averaged 12 MPG. The City of Durand estimated the NEV had 40 miles per charge and took 11 kilowatt hours of energy to fully charge the vehicle. The vehicle averaged 4,000 miles a year, saving the city almost \$1,000 in fuel costs. Through their vehicle deployment efforts, the City of Durand was able to realize a petroleum displacement of 123 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$3,119.36
Technology:	NEV
Infrastructure:	None
Vehicle(s):	1 NEV Columbia MEGA
Fuel Displacement:	123 GGE
County:	Pepin

The NEV was officially unveiled during the 2010 Dazzle Day Parade, and continued to be used for the annual parade, to generate interest and a media presence for the vehicle, city, and the WCTP. The vehicle was well received by city employees and by citizens who saw it driven around the City.



City of Durand – Light-Duty NEV

The City of Durand did experience a few challenges. Initially the city anticipated getting a 50% charge during winter, but experienced a 25% charge. As a result, the City of Durand limited use of the NEV; stored in the winter months and operated it in spring. Additionally, the NEV had limited use within the city, due to ordinances that did not allow it to cross Highway 85/25, which runs through the heart of the city. However, the city amended the ordinance to allow the NEV to cross the highway and travel throughout the city limits. Lastly, in 2013, the City of Durand had to replace the batteries on the NEV due to inefficient charging and lower use time. The WCTP was able to cover the cost of the battery replacement to ensure continued operation of this vehicle.

The City of Durand had an overall positive experience, but will not likely purchase another NEV in the future, due to the limitations of the vehicle.

City of Durand - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty NEV	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$2000.00	\$ 2,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$2,000.00	\$ 12,055.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 1,119.36
Total		\$4,000.00	\$ 15,174.36

CITY OF MADISON

The City of Madison received an award of \$247,455.84 of federal funding for the purchase of one heavy-duty HEV utility truck, two heavy-duty PHEV utility trucks; electric vehicle recharging equipment, and associated maintenance costs. The vehicles were ordered in the summer of 2010 and were delivered in the summer of 2011. The vehicles were used by the drafting and engineering departments in the field for maintaining and erecting signs throughout the City. Through their vehicle and infrastructure deployment efforts, the City of Madison was able to realize a petroleum displacement of 4,305 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$247,455.84
Technology:	HEV, PHEV
Infrastructure:	Electric
Vehicle(s):	1 HEV Navistar w/ Eaton Utility Truck 2 PHEV Navistar w/ Odyne Utility Trucks
Fuel Displacement:	4,305 GGE
County:	Dane

The City of Madison faced challenges with the vehicles when problems arose with communications between the vehicle's chassis, hybrid system and boom system. Initially, there were problems with the Eaton hybrid system cooperating with the International chassis. They eventually saw similar problems with the Odyne PHEV technology. The communication issues resulted in vehicles jerking during shifting, inoperable booms, and unrealized fuel efficiency. Both manufacturers, Eaton and Odyne, were responsive to the issues and provided resources to address the problems. The WCTP provided maintenance funding to assist covering the costs of the repairs, once the vehicles were out of warranty.

The City of Madison was initially concerned about safety issues related to first responder's knowledge of advanced vehicle technology. The City of Madison was happy to learn that Madison Area Technical College provided training courses, for first responders, on how to safely deal with their vehicles in accident situations.

The City of Madison chose the HEV and PHEV technology as a tool to address their sustainability efforts and to reduce fuel costs, through efficiency. They were also interested in how these vehicles would work in an urban environment. They were pleasantly surprised with how quiet the vehicles were during operation, which was also noticed by citizens. Operation early morning or during busy times in the downtown area reduced noise congestion in the City, while allowing an expanded timeframe to increase productivity. The City of Madison did see some fuel savings, but because of the numerous technical issues associated with the vehicles they are not likely to purchase similar technology in the near future.

City of Madison - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty HEV	3	1
	Light-Duty HEV	8	0
	Light- Duty NEV	4	0
	Heavy-Duty PHEV	0	2
Number and Type of Fueling Infrastructure	Electric	0	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 249,000.00	\$ 213,780.00
	Infrastructure	\$ -	\$ 1,350.00
	Committed Match (reported on FFR)	\$ 249,000.00	\$ 374,484.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 32,325.84
	Total	\$ 498,000.00	\$ 621,939.84

CITY OF MILWAUKEE

The City of Milwaukee was awarded \$4,440,001 of federal funding for the purchase of five light-duty HEVs, 15 heavy-duty CNG refuse trucks, six CNG heavy-duty CNG recycling trucks, and two CNG stations. The station located on Ruby Avenue, was opened as a limited-access fast-fill public station. The other station, located on Lincoln Avenue, has a 24- hour public fast-fill station in the front of the garage, as well as a private fast-fill station and time-fill system consisting of 16 hoses on eight stands behind the facility. The City of Milwaukee received two of the CNG refuse trucks in the summer 2010 and the rest of the heavy-duty trucks were delivered between January and September 2012. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle and infrastructure deployment efforts, the City of Milwaukee was able to realize a petroleum displacement of 144,037 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$4,440,001.00
Technology:	HEV, CNG
Infrastructure:	CNG (2 stations)
Vehicle(s):	2 HEV Honda Insights 3 HEV Ford Escapes 2 CNG Crane Carrier Refuse Packers 6 CNG Crane Carrier Recyclers 13 CNG Mack Refuse Packers
Fuel Displacement:	144,037 GGE
County:	Milwaukee

On August 17, 2012, the City of Milwaukee unveiled the public CNG station on Lincoln Avenue. The station, the first for the City of Milwaukee, was selling fuel for \$1.98 per GGE at the event to attendees. According to Mayor Barrett, "By embracing natural gas vehicles, Milwaukee is taking a very significant and practical step to help clean the air in our community and advance United States energy security."



City of Milwaukee – CNG Refuse Truck

The City of Milwaukee was satisfied with all of their AFV purchases and infrastructure installations. The six recycling trucks averaged 600 stops that covered 12.8 miles per day and were equipped with 80 gallon tanks. The vehicles operated two days before having to fill up. The trucks took the same time to fuel as their diesel counterparts, which took only 8-10 minutes. The City of Milwaukee selected the CNG vehicles to help with fuel cost savings for their fleet. Additional savings were seen due to reduced idling time: 150 minutes for the recyclers, as compared to 240 minutes for their counterparts.

The three different trucks that made up the City of Milwaukee's CNG heavy-duty fleet have many improvements compared to the City of Milwaukee's old refuse trucks, especially related to direct reduction of fuel costs by use of CNG. Also, due to being a government entity, the City of Milwaukee did not pay certain taxes and thus, paid about \$1.00 per GGE to fuel their own vehicles with CNG. The City was also able to provide public access CNG refueling and remains competitive with the public price of a GGE of CNG sold, as compared to other stations in the area. In the near future, the City of Milwaukee plans to expand and promote their CNG station locations, as well as purchase additional CNG vehicles in light-duty and heavy-duty models.



The City of Milwaukee's CNG station located at 3921 W. Lincoln Ave., Milwaukee, WI .

City of Milwaukee - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	20	21
	Light-Duty NEV/ HEV	22	5
Number and Type of Fueling Infrastructure	CNG	2	2
		Estimated	Actual
Costs	Vehicle(s)	\$1,242,060.00	\$ 840,001.00
	Infrastructure	\$3,600,000.00	\$ 3,600,000.00
	Committed Match (reported on FFR)	\$1,242,060.00	\$ 2,476,350.62
	Additional Match (not reported on FFR)	\$ -	\$ 2,345,332.10
	Maintenance	\$ -	\$ -
	Total	\$ 6,084,120.00	\$ 9,261,683.72

CITY OF MONONA

The City of Monona was awarded \$6,490 for the purchase of one CNG vehicle. The City of Monona was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The sub-recipient finalized their purchases of their CNG conversions system and completed the installation in November 2013. Through their vehicle deployment efforts, the City of Monona was able to realize a petroleum displacement of 32 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$6,490.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG Ford F350
Fuel Displacement:	32 GGE
County:	Dane

The converted F350 was utilized in the City of Monona's Public Works Department. They pursued CNG technology due to the lower cost of the fuel and emissions benefits. The vehicle was converted to use an aftermarket conversions system by qualified equipment installer located at Madison Truck Equipment, Inc. There was initial concern regarding storing the vehicle indoors. The SEO provided the City of Monona information clarifying that the vehicle can be stored indoors, but any repairs had to be done in a facility that is compliant with federal and state building and fire codes. The City of Monona was pleased with their CNG vehicle purchase, and in the future plan to continue to explore other CNG options for their fleet.

City of Monona - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-duty CNG	1	0
	Light-duty CNG	0	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 6,490.00	\$ 6,490.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 27,025.00
	Maintenance	\$ -	\$ -
	Total	\$6,490.00	\$ 33,515.00

CONTRACT TRANSPORT SERVICES

Contract Transport Services was awarded \$125,000 of federal funding for the purchase of five heavy-duty CNG vehicles. Contract Transport Services was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in September and December 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts they were able to realize a petroleum displacement of 70,370 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$125,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	5 CNG Freightliner Cascadias
Fuel Displacement:	70,370 GGE
County:	Dane



Contract Transport Service - CNG vehicle

Contract Transport Services pursued CNG technology due to the lower cost of the fuel and emissions benefits. The vehicles purchased are on-road heavy-duty vehicles that transport shipments from a broad spectrum of clients, ranging from Fortune 1000 businesses to Fortune 50 companies. The CNG vehicles work well in their application because they are equipped with the larger 12 Liter Cummins engine, travel the region, and return to home base each day. Increased availability of CNG infrastructure and technology has given the company ability to expand their clientele and range. They had a very positive experience with CNG fuel. Contract Transport Services plans to convert a majority of their fleet over to CNG, as they continue to purchase new vehicles.

Contract Transport Services - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$125,000.00	\$ 125,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 804,047.50
	Maintenance	\$ -	\$ -
	Total	\$125,000.00	\$ 929,047.50

DANE COUNTY

Dane County received \$571,598.00, which included both federal and State Oil Overcharge funding, to purchase 26 CNG vehicles and to install one CNG fueling station. The vehicles purchased were all bi-fuel and equipped with an aftermarket conversion system. The vehicle's conversion systems were purchased and installed between April of 2010 and December of 2013. Because of their ability to deploy vehicles quickly, Dane County was able to take advantage of additional funding made available to fleets in 2013.

Dane County saved a considerable amount of money by fueling with CNG. In January 2013, Dane County was fueling for \$1.561 per GGE, whereas they would have been fueling with diesel for \$3.83 per gallon.

Converting the vehicles to CNG did not affect the vehicle's fuel economy. Dane County averaged 40 MPG while driving the CNG Ford Fusion, while the trucks got a range of 15-25 MPG. Through their vehicle and infrastructure deployment efforts Dane County was able to realize a petroleum displacement of 31,577 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$571,598
Technology:	CNG
Infrastructure:	CNG
Vehicle(s):	1 CNG Ford Fusion 1 CNG Ford Transit Connect 5 CNG Ford F350s 4 CNG Ford F250s 14 CNG Ford F150s 1 CNG Chevy Silverado
Fuel Displacement:	31,577 GGE
County:	Dane County

Dane County staff installed CNG refueling equipment at 4318 Robertson Rd. in Madison, WI. They selected a fast-fuel system manufactured by ANGI Energy Systems, a manufacturing company located in Janesville, Wisconsin. The county installed one dispenser with two fast-fill hoses, along with storage tanks to hold 100 GGEs, capable of producing 30 GGE every hour from the compressor. The gas line was installed by Madison Gas & Electric for less than 1% of the cost of the project.

Dane County implemented a Green Vehicle Purchase Policy that mandates new vehicles purchased must be the right size for the job and have 50% higher fuel economy, than the one it is replacing. The policy also states that the savings from an alternative fuel vehicle should pay for the incremental cost of the alternative version of the vehicle.



Dane County – CNG Vehicles

In the near future, Dane County plans to purchase 15-20 additional alternative fuel vehicles that will range from plow trucks to passenger cars and consist of some dedicated CNG vehicles. Because Dane County has had considerable success with fueling with CNG, they hired a consultant to explore the feasibility of converting their entire fleet to run on CNG. They also look to expand their infrastructure efforts by contracting with local fleets that need access to the fuel.

Dane County - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	7	14
	Light-Duty NEV	4	0
	Medium-Duty CNG	0	12
Number and Type of Fueling Infrastructure	CNG	1	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 120,000.00	\$ 290,699.12
	Infrastructure	\$ 250,000.00	\$ 280,899.00
	Committed Match (reported on FFR)	\$ 120,000.00	\$ 705,033.85
	Additional Match (not reported on FFR)	\$ -	\$ 215,010.59
	Maintenance	\$ -	\$ -
	Total	\$ 490,000.00	\$ 1,444,164.00

DART TRANSIT

Dart Transit was awarded \$125,000 of federal funding for the purchase of five heavy-duty CNG vehicles. Dart Transit was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in September 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts, Dart Transit was able to realize a petroleum displacement of 29,963 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$125,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	5 CNG Volvos
Fuel Displacement:	29,963 GGE
County:	Columbia

Dart Transit is a family owned and operated business, and ranks as the 14th largest truckload carrier in America. Like other sub-recipients, Dart Transit pursued CNG technology due to the lower cost of the fuel, their use of the vehicles in high mileage applications, and overall emissions benefits. The vehicles purchased were on-road heavy-duty vehicles that transport shipments for companies across the state and region. Increased availability of CNG infrastructure and technology has given the company ability to expand their clientele and range. Dart Transit plans to continue purchasing CNG vehicles for their fleet over to CNG.

Dart Transit - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 125,000.00	\$ 125,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 733,145.00
	Maintenance	\$ -	\$ -
	Total	\$ 125,000.00	\$ 858,145.00

FOX VALLEY METRO POLICE DEPARTMENT

Fox Valley Metro Police Department (FVMPD) received \$4,000 of federal funding for the purchase of two light-duty HEVs. The vehicles were delivered to the sub-recipient April 2010. Through their vehicle deployment efforts, FVMPD was able to realize a petroleum displacement of 624 GGE.

Project at a Glance	
Fleet Type:	Law Enforcement
Award Amount:	\$4,000.00
Technology:	HEV
Infrastructure:	None
Vehicle(s):	2 HEV Ford Fusions
Fuel Displacement:	624 GGE
County:	Outagamie



Fox Valley Metro Police Department – HEVs

These were the first HEVs purchased by FVMPD and were well received by drivers. The unmarked vehicles were not authorized for pursuit and were used for investigations, administration, and traffic enforcement. The HEVs replaced two older unmarked vehicles that averaged 14 MPG. The new HEVs averaged 35 MPG, significantly decreasing fuel costs for the department. Additionally, the department installed energy efficient light bars, complimenting the overall energy efficiency of the vehicle. According to Captain Scott Lund, “The mileage we get out of them is unreal.” The employees have enjoyed the use of the vehicles in their department, and they have also been buying them for personal vehicles. FVMPD will likely consider additional HEV purchases in the future.

Fox Valley Metro Police Department - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty HEV	2	2
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 4,000.00	\$ 4,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 4,000.00	\$ 45,710.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
	Total	\$ 8,000.00	\$ 49,710.00

FUN TIME BOUNCES

Fun Time Bounces was awarded \$6,925 of federal funding for the purchase of one light-duty CNG vehicle. Fun Time Bounces was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchase and installation of their conversion system for the bi-fuel CNG truck in December 2013. Because they completed their project in December 2013, they were not able to realize a petroleum displacement during the program.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$6,925.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG GMC Sierra
Fuel Displacement:	0 GGE
County:	Dane

Fun Time Bounces is a local family owned and operated business that rents inflatable bounce houses for events. For the last 17 years, they have operated out of Sun Prairie serving Madison, WI and the whole Dane County, WI area. Like other sub-recipients, Fun Time Bounces pursued CNG technology due to the lower cost of the fuel,

their use of the vehicles in high mileage applications, and overall emissions benefits. Fun Time Bounces experienced some technical difficulties related to the CNG system installations that were immediately addressed by the vendor. Fun Time Bounces' plans to continue purchasing CNG vehicles is unknown at this time.

Fun Time Bounces - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 6,925.00	\$ 6,925.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 38,775.00
	Maintenance	\$ -	\$ -
Total		\$6,925.00	\$ 45,700.00

GO RITEWAY

GO Riteway was awarded \$2,281,804.40 for the purchase of 16 heavy-duty HEV school buses, 31 medium-duty LPG shuttles, 11 heavy-duty LPG school buses, two light-duty PHEVs, one solar electric charging stations, one LPG refueling station, and related maintenance costs. The solar-powered charging station was completed early winter 2010, while the propane fueling station was installed in summer 2011. Vehicles were delivered between December 2010 and December 2013. Because of their ability to deploy vehicles quickly, GO Riteway was able to take advantage of additional funding made available to fleets in 2013. Through their vehicle and infrastructure deployment efforts GO Riteway was able to realize a petroleum displacement of 329,467 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$2,281,804.40
Technology:	HEV, PHEV, EV, LPG
Infrastructure:	1 propane fueling station 1 solar electric charging station
Vehicle(s):	14 HEV Thomas School Bus 2 HEV International CE300 buses 31 LPG Ford E350 Shuttles 11 LPG Ford E450 School Buses 2 PHEV Chevy Volts
Fuel Displacement:	329,467 GGE
County:	Milwaukee



Riteway Transportation Group - Propane Airport Shuttles

The 31 converted LPG vehicles made up 68% of GO Riteway's airport shuttle fleet. These vehicles were equipped with ROUSH CleanTech LPG systems. ROUSCH CleanTech trained the company's mechanics on how to install and maintain the vehicles. After the conversions systems were installed, the LPG vehicles averaged 11 MPG. In addition to the LPG airport shuttles, GO Riteway also fueled 11 school buses with LPG. The company saved considerably on its fuel costs. With all taxes included, the company on average pays less than \$2.50 for a GGE of propane. The company has estimated that its return on investment is less than five years, with or without grant assistance.

Renewable Energy Solutions designed and installed the solar charging station. Originally, GO Riteway intended on purchasing a number of PHEV school buses, but uncertainty related to the reliability of the vehicles cause them to cancel their order and explore other types of PHEV options. GO Riteway purchased two PHEV Chevy Volts that can run for 35 miles on electricity before switching over seamlessly to gasoline. Initially, GO Riteway was planning to use the PHEVs as a luxurious, eco-friendly transportation option for customers. However, due to a lack of backseat space, the vehicles are instead primarily used by the company's sales team.



GO Riteway mechanics were trained by ROUSH CleanTech on how to install and maintain the LPG airport shuttles

GO Riteway staff had to adjust to all of its AFVs. Not only were drivers apprehensive with the new LPG vehicles and their range, but mechanics had to adapt to the longer waiting time for conversion kits and parts. However, with the fuel savings and reduced emissions Ronald Bast, president and owner, doesn't seem to be looking back.

Bast said, “For a number of years, GO Riteway has been in tune with environmental concerns, especially those concerning the transportation industry. We have implemented policies and procedures designed to reduce nitrogen oxide, carbon monoxide and greenhouse gas emissions from our fleet. Converting our airport shuttle fleet to run on propane autogas is one of the most recent steps in our environmental sustainability efforts.” GO Riteway will continue to purchase LPG vehicles and explore other EV and PHEV options to maximize the use of their solar charging station.

GO Riteway - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty Diesel HEV	13	16
	Medium-Duty LPG	0	42
	Light-Duty PHEV	0	2
Number and Type of Fueling Infrastructure	Solar	1	2
		Estimated	Actual
Costs	Vehicle(s)	\$ 18,683,638	\$ 1,655,640.56
	Infrastructure	\$ 500,000.00	\$ 618,120.92
	Committed Match (reported on FFR)	\$ 955,760.00	\$ 2,490,148.88
	Additional Match (not reported on FFR)	\$ -	\$ 304,270.00
	Maintenance	\$ -	\$ 8,042.92
	Total	\$ 3,139,38.00	\$ 5,076,223.28

GREAT LAKES COMMUNITY CONSERVATION CORPS

Great Lakes Community Conservation Corps. (Great Lakes CCC) was awarded \$5,000 for the purchase of one light-duty CNG vehicle. Great Lakes CCC was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchase and installation of their conversion system for the CNG vehicle in October of 2013. Through their vehicle deployment efforts the Great Lakes CCC was able to realize a petroleum displacement of 217 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$5,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG Fort Transit Connect XLT
Fuel Displacement:	217 GGE
County:	Racine

Great Lakes CCC is an organization that addresses regional social and physical challenges in southeastern Wisconsin, with a mission to leverage resources among Great Lakes communities to train and educate disadvantaged populations for credentials that close the skills gap, improve water quality, build habitat, and make the region more competitive in the global economy. Great Lakes CCC serves the Greater Milwaukee region of Kenosha, Walworth, Racine, Milwaukee, Waukesha, Washington and Ozaukee counties. They purchased the vehicles to; 1) teach student participants in the Root River Watershed AmeriCorps program to drive, for free,

since high schools no longer offer that service; and 2) operate the vehicle in an emergency, when access to conventional gasoline may be limited or not available. They also pursued CNG technology due to the lower cost and increased abundance of CNG fuel and emissions benefits.



Great Lakes CCC – CNG Vehicle
Source – Racine Journal Times

The vehicle was converted by qualified conversion equipment installer located at Barnes, Inc. in Madison, WI. Great Lakes CCC has had an overall positive experience with CNG and plan to explore other CNG vehicle options for their fleet.

Great Lakes CCC - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 5,000.00	\$ 5,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 27,847.00
	Maintenance	\$ -	\$ -
Total		\$ 5,000.00	\$ 32,847.00

JEFFERSON COUNTY SHERIFF'S OFFICE

Jefferson County Sheriff's Office (JCSO) was awarded \$144,806.98 of federal funding for an upgrade its existing propane fueling pump, to purchase 18 LPG vehicle conversions, and to cover minor maintenance under this program. Through their vehicle and infrastructure deployment efforts, JCSO was able to realize a petroleum displacement of 83,886 GGE.

The conversion kits purchased were manufactured by IMPCO and were installed in 13 Ford Crown Victorias and five Chevrolet Tahoes by the county's maintenance manager, Randy Frohmader. Frohmader received training on the installation and maintenance of the vehicles at a training course in Michigan and was able to complete each conversion in two days.

Infrastructure improvements were made to an existing propane refueling station located at the Jefferson County Highway Department at 141 W. Woolcock in Jefferson, WI. The final improvements were made during the winter of 2011. The county also built a shelter over the unit to protect the pump and to make it more convenient for all county employees to fuel.

Project at a Glance	
Fleet Type:	Law Enforcement
Award Amount:	\$144,806.98
Technology:	LPG
Infrastructure:	None
Vehicle(s):	5 LPG Chevy Tahoes 13 LPG Ford Crown Victorias
Fuel Displacement:	83,886 GGE
County:	Jefferson



Jefferson County Sheriff Office - Chevy Tahoe LPG police cruisers

The JCSO adopted this technology as a cost savings to the county. In the summer of 2011, LPG was being sold at \$0.97-0.99 per GGE. According to the sub-recipient, if six squad cars used 10 gallons of fuel per shift, with three shifts a day for 365 days a year, the county would save over \$100,000 each year in fuel costs alone. With 18 LPG cruisers, the JCSO expected to save taxpayers \$120,000 a year by using propane. After a two year of use at the JCSO, the County moved the vehicles to other Jefferson County Departments to also enjoy the fuel savings. For example the JCSO moved two LPG Ford Crown Victoria's to the County's Human Services Department, who has since saved \$60,000-80,000 by using the vehicles.

The JCSO was impressed with the safety of the LPG system, as compared to the gasoline counterpart; due to the LPG system tanks being 20 times more puncture-resistant than gasoline tanks and propane having a very narrow flammability range. According to Sheriff Paul Milbrath, following a crash of one of the cruisers that resulted in a down power line pole, "It was much safer than if that would have been gasoline pouring all over with those sparks."

One challenge faced by the JCSO was the reduction of trunk space available in a vehicle, due to the LPG tank storage. However, they prevented this in the LPG Chevy Tahoes by constructing a customized storage box that was



Jefferson County's propane station, located at the Highway Department

installed over the tank. The compartment hid the LPG tanks, and allowed the vehicle to hold all the necessary emergency equipment.

The JCSO has been a proponent of LPG since it started using the fuel in the 1970s. According to Sheriff Milbrath, “The bottom line is our mechanic’s maintenance time is way down, it’s a safe fuel, and it’s cost effective.” Sheriff Milbrath attended and spoke at a number of WCTP events to support and describe their LPG efforts. JCSO will continue to promote and purchase LPG vehicles in the future.

JCSO - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty LPG	14	18
Number and Type of Fueling Infrastructure	Propane	1	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 93,758.00	\$ 107,589.26
	Infrastructure	\$ 40,244.00	\$ 37,126.15
	Committed Match (reported on FFR)	\$ 93,758.00	\$ 420,418.26
	Additional Match (not reported on FFR)	\$ -	\$ 5,876.31
	Maintenance	\$ -	\$ 91.57
	Total	\$ 227,760.00	\$ 571,101.55

KENOSHA COUNTY

Kenosha County was awarded \$108,582.92 of federal funding for one PHEV utility truck, three electric charging stations, and associated vehicle maintenance costs. The vehicle was purchased from the manufacturer in June 2010. The PHEV truck was shared among departments and put to use in a variety of ways, such as changing street lights by the highway department or repairing roofs by the facilities department. Through their vehicle and infrastructure deployment efforts, Kenosha County was able to realize a petroleum displacement of 258 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$108,582.92
Technology:	PHEV
Infrastructure:	3 electric charging stations
Vehicle(s):	1 PHEV International w/Odyne Utility Truck
Fuel Displacement:	258 GGE
County:	Kenosha

One benefit of the PHEV utility truck was related to noise reduction. When in the field, the ‘spotter’ employee could be heard when alerting the truck operator. According to Jon Rudie, from the Kenosha County Public Works Department, “Operation in the hybrid mode is so quiet it does not disrupt folks working inside the buildings or those enjoying a picnic in the park. The operator can speak with the ground crew without having to try and yell over the noise of a diesel engine.”

Kenosha County dealt with a number of challenges related to vehicle technology and the charging stations. The county had an issue at one of the charging station locations and the amount of electricity needed to charge the truck. Charging the vehicle turned out to be much greater than anticipated. To fix this issue, the county added another transformer and panel to the station. The PHEV vehicle purchased under this program was also a first generation of the PHEV vehicle manufactured by Odyne in Waukesha, WI. Unfortunately, Kenosha County dealt with a number of technology issues related to communications between the chassis, boom and hybrid system. The manufacturer was responsive to the technical issues, and the program covered the costs of the maintenance related to the vehicles once the warranty had expired.

At the beginning of the program the Kenosha County was very receptive to the PHEV truck, which had participated in countless car shows and parades. The sub-recipient was also initially very happy with the hybrid portion of the vehicle, until the vehicle no longer operated and there were ongoing technical issues which occurred almost daily. The hybrid system was eventually turned off to address these issues and prevent further accrual of high costs associated with repairing the vehicle. In the future, Kenosha County has no plans to purchase this technology again, due to the high costs of repairing the vehicle and their view of the uncertainty of the technology in this application.

Kenosha County - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-Duty HEV	1	0
	Heavy-Duty PHEV	0	1
Number and Type of Fueling Infrastructure	Electric	0	3
		Estimated	Actual
Costs	Vehicle(s)	\$ 100,000.00	\$ 94,750.00
	Infrastructure	\$ -	\$ 5,250.00
	Committed Match (reported on FFR)	\$ 100,000.00	\$ 131,305.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 8,582.92
	Total	\$ 200,000.00	\$ 239,887.92

LAMERS BUS LINES, INC

Lamers Bus Lines, Inc. was awarded \$15,000 of federal funding for the purchase of five heavy-duty LPG school buses. Lamers Bus Lines, Inc. was initially a sub-recipient under the WPPI Energy award, and then was able to separately take advantage of additional funding made available through the program in 2013. The company finalized their vehicle purchases in November of 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts, Lamers Bus Lines, Inc. was able to realize a petroleum displacement of 2,908 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$15,000.00
Technology:	LPG
Infrastructure:	None
Vehicle(s):	5 LPG Blue Bird Vision School Buses
Fuel Displacement:	2,908 GGE
County:	Brown

Lamers Bus Lines, Inc. is a transportation company, with 27 locations throughout Wisconsin that specializes in school route contract services, charter services, escorted tours and custom tour planning. The LPG vehicles purchased under this program operate out of the company's Menasha terminal. The bus company chose LPG due to the lower cost of the fuel, the vehicle's quieter operations, and lower tailpipe emissions. Lamers Bus Lines, Inc. was pleased with their purchases and plans to incorporate additional LPG vehicles into their fleet in the near future.

Lamers Bus Lines - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-Duty LPG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 15,000.00	\$ 15,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 434,320.00
	Maintenance	\$ -	\$ -
	Total	\$15,000.00	\$ 449,320.00

MADISON GAS AND ELECTRIC

Madison Gas and Electric (MGE) was awarded \$88,180.50 of federal funding for the purchase of one heavy-duty PHEV utility truck and installation of one electric charging station. The company finalized their purchase in October 2010 and the vehicle was delivered in July 2011. The electric charging station was installed July 2011, as well. Through their vehicle and infrastructure deployment efforts, MGE was able to realize a petroleum displacement of 986 GGE.

Project at a Glance	
Fleet Type:	Utility
Award Amount:	\$88,180.50
Technology:	PHEV
Infrastructure:	1 electric charging station
Vehicle(s):	1 PHEV IHC 4300 w/Odyne Utility Truck
Fuel Displacement:	986 GGE
County:	Dane

MGE selected this technology to save on fuel costs and take advantage of the quieter idling. The vehicle was used by one crew that enjoyed the PHEV feature that allowed the worker in the bucket to talk to the rest of the

crew on the ground, instead of shout. In November 2012, as an emergency preparedness resource, MGE sent the PHEV truck to the East Coast for Hurricane Sandy relief. The team was able to operate the PHEV in the relief efforts, when access conventional fuel was limited.



Madison Gas & Electric – PHEV Utility Truck

Initially, MGE experience challenges in tracking data from the charging system, which was not metered separately. They made necessary upgrades to the system, adding a separate meter to track consumption from the vehicle and this made reporting fuel and electric use easier. The truck also had problems in the winter of 2011. Slush in the road, after a snowfall, would splash on the undercarriage and affect the battery card, which resulted in the battery shutting down. Odyne was very responsive with fixing the problem and since had no further issues. MGE purchased a Generation I Odyne PHEV, they plan to upgrade the vehicle to a Generation II when the WCTP finished. Due to staff turnover, it is unknown if MGE will purchase more PHEVs in the future.

MGE - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty PHEV	1	1
Number and Type of Fueling Infrastructure	Electric	0	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 100,000.00	\$ 86,454.09
	Infrastructure	\$ -	\$ 1,726.41
	Match	\$ 100,000.00	\$ 122,260.01
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ -
	Total	\$ 200,000.00	\$ 210,440.51

MARQUETTE UNIVERSITY

Marquette University was awarded \$65,000 of federal funding conversion of a passenger van to an EV. The vehicle was converted and put into service August 2011. The EV is used in for the Marquette University Local Inter-campus Mobile Operation (LIMO) program and is referred to as the eLIMO. Through their vehicle deployment efforts, Marquette University was able to realize a petroleum displacement of 38 GGE.

Project at a Glance	
Fleet Type:	University
Award Amount:	\$65,000.00
Technology:	Electric
Infrastructure:	None
Vehicle(s):	1 EV Ford E350
Fuel Displacement:	38 GGE
County:	Milwaukee

Marquette University's College of Engineering had students convert the van to run on electricity. Thus, the vehicle conversion and maintenance of the vehicle was and will continue to be used as a research and education tool by the university. The batteries purchased for the EV were manufactured by Valence Technology. The battery carriages, charging system, and high voltage control system were purchased with additional funding from Marquette Student Government, National Wildlife Foundation, and other private companies.

Concern over the legal issues of driving a converted EV on streets was brought to the attention of the students. After contacting university officials, the WI Department of Transportation, and the university's insurance provider the students were able to ensure that the EV could legally drive on any street. There was also concern with the conversion process being completed by students. Specifically, there was concern of whether they were following the Federal Motor Vehicle Safety Standards. By working with Marquette University's Risk Management Department, the students were able to ensure that the vehicle complied with all safety standards.



Marquette University – EV

There were problems with the vehicle in the winter of 2012 when Marquette University was told, by the battery manufacturer, that the van should not be driven when the temperature was below 14° Fahrenheit (F). They were also told the EV should not be driven when salt is on the road, because the batteries are not sealed in the undercarriage of the vehicle. Students repaired the problems by fully sealing the batteries, allowing it to be driven in winter conditions. However, taking the battery maker's precautions, the eLIMO is not driven when it is below 14° F.

Despite some minor complications and according to team advisor and Associate Professor Emeritus of Electrical and Computer Engineering, Susan Riedel, the vehicle was never viewed as a “one-of-a-kind,” and the electric van is just the first step to having a full fleet of eLIMOs at Marquette University in the future.

Marquette University - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-duty EV	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 65,000.00	\$ 65,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 37,668.00	\$ 44,578.11
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
Total		\$ 102,000.00	\$ 109,578.11

MARSHFIELD UTILITIES

Marshfield Utilities was awarded \$95,849.82 of federal funding for the purchase of one heavy-duty PHEV utility truck and installation of equipment for electric vehicle charging. Marshfield Utilities purchased a Generation II Odyne utility truck that was delivered December 2011. Through their vehicle and infrastructure deployment efforts, Marshfield Utilities was able to realize a petroleum displacement of 634 GGE.

Project at a Glance	
Fleet Type:	Utilities
Award Amount:	\$95,849.82
Technology:	PHEV
Infrastructure:	1 electric charging station 1 PHEV IHC 7300 w/Odyne Utility
Vehicle(s):	Truck
Fuel Displacement:	634 GGE
County:	Marathon



Marshfield Utilities - PHEV Utility Truck

Like other sub-recipients, Marshfield Utilities selected this technology to save on fuel costs and take advantage of the quieter idling during line work. Marshfield Utilities PHEV has been highlighted in a variety of ways including, the 2012 Midwest Renewable Energy Association Fair and local parades. Unlike other fleets that had technical issues with the PHEV system, Marshfield Utilities was pleased with their vehicle and will continue to promote and look at PHEV options for their fleet.

Marshfield Utilities - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty PHEV	1	0
Number and Type of Fueling Infrastructure	Heavy-Duty EV	0	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 100,000.00	\$ 95,500.00
	Infrastructure	\$ -	\$ 349.82
	Committed Match (reported on FFR)	\$ 100,000.00	\$ 195,619.50
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
Total		\$ 200,000.00	\$ 291,469.32

MILWAUKEE COUNTY

Milwaukee County was awarded \$485,046.47 of federal funding for the purchase of four PHEV utility trucks, 35 light-duty HEVs, and one electric charging station. The 35 HEVs were put into use in February 2011. Two of the PHEV utility trucks were delivered in late December 2011, and the last two were delivered in January 2012. The electric charging station was installed spring of 2012. Through their vehicle and infrastructure deployment efforts, Milwaukee County was able to realize a petroleum displacement of 8,753 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$485,046.47
Technology:	HEV, PHEV
Infrastructure:	1 electric charging station
Vehicle(s):	35 HEV Ford Fusions 4 PHEV Kenworth w/Odyne Utility Trucks
Fuel Displacement:	8,753 GGE
County:	Milwaukee

The majority of the HEV Ford Fusions were used by the Milwaukee County Sheriff's Department. The HEVs replaced 35 Chevy Impalas that cost the county \$40,000 annually to fuel. The new HEVs were estimated to provide a 35% fuel savings for the county. According to Milwaukee County Chairwoman Marina Dimitrijevic, "The new Fusion hybrids are rated at 40 MPG but the recent data indicates some of our vehicles are getting much higher mileage, some are even reaching 70 MPG. This may be due to improved driving habits and driver's interest in maximizing the use of electricity created and stored in the hybrid. I do want to thank our employees for embracing this."

Similar to the Fusions, the PHEV utility trucks proved to be a huge cost saver for Milwaukee County. Milwaukee County primarily used the trucks to maintain traffic signals and street lighting. The trucks were charged overnight when needed and cost \$2.25 to charge to 95% of the battery capacity. Milwaukee County realized a savings of \$34,000 in 2012, due to the PHEV's improved fuel efficiency of nearly 50% as compared to the conventional diesel counterpart. Milwaukee County was also pleased with the truck's reduction of idling time and noise, and considered them as a tool for positive press for the county. The drawbacks of the four PHEV trucks were few. Technicians and crews using the truck needed special training. Odyne trained the crews in January 2012 on how to work and maintain the trucks. Also, the drivers needed to adjust to the slower acceleration of the vehicles, because of the added battery weight.



Milwaukee County – PHEV Utility Truck

The county had a large event on January 31, 2011 to unveil the vehicles. At the event former County Executive Lee Holloway stated, "Milwaukee County now has the largest fleet of hybrid Ford Fusions in the State of Wisconsin." The County also unveiled the PHEV trucks on April 20, 2012. According to Milwaukee County Executive Chris Abele, "The trucks are not only cleaner, but will save money in fuel and maintenance costs." Milwaukee County was pleased with both their HEV and PHEV purchases and will continue to promote and look at these options for their fleet in the future.

Milwaukee County - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty PHEV	1	4
	Light-duty HEV	32	35
Number and Type of Fueling Infrastructure	Electric	0	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 170,000.00	\$ 468,000.00
	Infrastructure	\$ -	\$ 2,000.00
	Committed Match (reported on FFR)	\$ 170,000.00	\$ 1,282,821.50
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 15,046.47*
Total		\$ 340,000.00	\$ 1,767,867.97

*Used towards electric infrastructure project

MILWAUKEE COUNTY GENERAL MITCHELL INTERNATIONAL AIRPORT

Milwaukee County General Mitchell International Airport (General Mitchell Airport) was awarded \$12,075 of federal funding for the purchase of one medium-duty CNG vehicle. General Mitchell Airport was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The vehicle purchased through the WCTP was converted by the manufacturer off-site, using BAF Technology, prior to delivery to the sub-recipient. They finalized the purchase of their CNG vehicle September 2013. Through their vehicle deployment efforts, General Mitchell Airport was able to realize a petroleum displacement of 2,121 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$12,075.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	2,121 GGE
Fuel Displacement:	1 CNG Ford Aerotech Shuttle
County:	Milwaukee

Like other sub-recipients, General Mitchell Airport saw the value of utilizing this low cost fuel for their transportation needs. In the future they plan to continue to convert vehicles to CNG for their fleet.

General Mitchell Airport - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-duty CNG	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 12,075.00	\$ 12,075.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 70,234.00
	Maintenance	\$ -	\$ -
Total		\$12,075.00	\$ 82,309.00

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

The Milwaukee Metropolitan Sewerage District (MMSD) was awarded \$95,371.80 for the purchase of nine light-duty CNG vehicles, one medium-duty CNG vehicle, six light-duty HEVs, and six NEVs. Vehicles were delivered between August 2010 and December 2013. Because of their ability to deploy vehicles quickly, MMSD was able to take advantage of additional funding made available to fleets in 2013. Through their vehicle deployment efforts MMSD was able to realize a petroleum displacement of 10,491 GGE.

Three of the vehicles were used by MMSD staff while the other vehicles were outsourced to contractor, Advanced Disposal. MMSD fueled its CNG vehicles at fellow WCTP sub-recipients' stations, Transit Express and City of Milwaukee. Due to limited CNG refueling locations, MMSD had to research and find CNG stations before traveling beyond Milwaukee. By contacting other WCTP sub-recipients, such as Dane County, MMSD was able to travel to and from Madison. With increased public retail CNG fueling availability around the state, this is becoming less of an issue.

Project at a Glance	
Fleet Type:	Regional Government Agency
Award Amount:	\$95,371.80
Technology:	CNG, HEV
Infrastructure:	None
Vehicle(s):	6 NEV Columbia Summits 2 HEV Chevy Silverados 4 HEV Ford Escapes 5 CNG Honda Civic GXs 1 CNG Freightliner 144sd, 2 CNG Chevy Cargo Vans 2 CNG Ford Econoline Van
Fuel Displacement:	10,491 GGE
County:	Milwaukee



MMSD Staff stand in front of one of their CNG vehicles

Participation in the WCTP was a unique and beneficial way for MMSD to green its fleet, as well as save on fueling costs. In August 2011, MMSD finished a comparative analysis between the vehicles that were replaced and their new CNG vehicles. The CNG vehicles were saving \$0.05 to \$0.17 per mile. MMSD estimated they will be driven more than 25,000 miles per year, saving the company a considerable amount on its fuel costs. MMSD saw the value of utilizing this low cost fuel for their transportation needs.

In the future they plan to continue to explore additional options to add CNG vehicles to their fleet.

MMSD - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty CNG	1	9
	Medium-Duty CNG	2	1
	Light-duty HEV	7	6
	Light duty NEV	0	6
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 47,500.00	\$ 95,371.80
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 47,500.00	\$ 369,785.33
	Additional Match (not reported on FFR)	\$ -	\$ 363,321.20
	Maintenance	\$ -	\$ -
	Total	\$ 95,000.00	\$ 828,478.33

OCONOMOWOC TRANSPORT COMPANY

Oconomowoc Transport Company (OTC) was awarded \$1,064,487 in federal funding for the purchase of 5 PHEV school buses, 1 solar-powered electric charging station, and related project maintenance costs. Vehicles were delivered summer of 2010. Through their vehicle and infrastructure deployment efforts, OTC was able to realize a petroleum displacement of 10,491 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$1,064,487.00
Technology:	PHEV
Infrastructure:	1 solar electric charging station
Vehicle(s):	5 PHEV Navistar School Buses
Fuel Displacement:	15,553 GGE
County:	Waukesha

The bus chassis' were manufactured by Navistar International, while the hybrid system was manufactured by Enova Systems, and the batteries by Valence Technology. Renewable Energy Solutions designed and installed the solar charging station. OTC originally purchased 11 PHEV school buses as part of the WCTP. All of the buses were deployed at the beginning of the 2010-2011 school year. During September, October, and November 2010, the buses' average fuel economy was steadily improving to 9.2, 9.3 and 9.9 MPG, respectively. Of the eleven, five were getting over 10 MPG, while one was getting over 11 MOG, a huge improvement compared to traditional buses that get 8 MPG. However, due to significant maintenance and performance issues, six of the buses were returned in winter 2013 and are no longer part of the WCTP.



OTC's PHEV school buses under its solar charging station

Although, the solar-powered electric charging station was equipped with eleven stalls, not enough energy was generated by the solar panels on the station to fully charge a bus; the power generated over the summer was banked for credit during the winter. In the future, OTC plans to explore additional electric vehicle options to maximize the use of their solar electric vehicle charging station.

OTC - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty PHEV	11	5
Number and Type of Fueling Infrastructure	Solar	1	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 1,449,000.00	\$ 658,635.00
	Infrastructure	\$ 400,000.00	\$ 394,052.00
	Committed Match (reported on FFR)	\$ 836,000.00	\$ 842,600.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 11,800.00
	Total	\$ 2,685,000.00	\$ 1,907,087.00

POPE TRANSPORT

Pope Transport was awarded \$75,000 of federal funding for the purchase of five heavy-duty CNG vehicles. Pope Transport was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. They finalized their purchases of their heavy-duty CNG conversion systems and completed the installations in August 2013. Through their vehicle deployment efforts, Pope Transport was able to realize a petroleum displacement of 4,925 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$75,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	5 CNG Freightliners
Fuel Displacement:	4,925 GGE
County:	Walworth

Pope Transport is shipping and trucking company, running freight hauling based out of Whitewater, Wisconsin. The sub-recipient selected existing heavy-duty vehicles in their fleet to convert to CNG, using Inland Power Group technology. The vehicles were converted by qualified equipment installers located at Inland Power Group in Butler, WI. Having a high mileage, heavy fuel use fleet, Pope Transport saw the value of utilizing this low cost fuel in their freight shipping business due to the low cost of the CNG. In the future, they plan to continue to convert vehicles to CNG for their fleet.

Pope Transport - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy -Duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 75,000.00	\$ 75,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 330,840.62
	Maintenance	\$ -	\$ -
	Total	\$ 75,000.00	\$ 405,840.62

REMY BATTERY CO.

Remy Battery Co. was awarded \$6,194 of federal funding for the purchase of one CNG vehicle. Remy Battery Co. was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. They finalized the purchase of their CNG vehicle December 2013. The vehicle purchased through the WCTP was converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts the Remy Battery Co. was able to realize a petroleum displacement of 119 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$6,194.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG Chevy Express
Fuel Displacement:	119 GGE
County:	Milwaukee

Remy Battery Co. is family-owned and operated company serving the metropolitan Milwaukee area since 1931. The company carries a full line of batteries and accessories to meet power needs. Remy Battery Co. utilizes their vehicle in their delivery, sales and maintenance services. The company is pleased with their vehicle purchase, due to the lower cost of the fuel, and in the future they plan to continue to explore other CNG vehicle options for their fleet.

Remy Battery Co. - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light duty CNG	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 6,194.00	\$ 6,194.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 38,313.00
	Maintenance	\$ -	\$ -
	Total	\$ 6,194.00	\$ 44,507.00

ROEHL TRANSPORT, INC.

Roehl Transport, Inc. was awarded \$75,000 of federal funding for the purchase of five heavy-duty CNG vehicles. Roehl Transport, Inc. was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in September and December 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Because they completed their project late in December 2013, they were not able to realize a petroleum displacement during the program.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$75,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	3 CNG Cascadia Daycabs
Fuel Displacement:	0 GGE
County:	Wood

Roehl Transport, Inc. pursued CNG technology due to the lower cost of the fuel and emissions benefits. The company provided these vehicles in their truckload transportation and logistical service for customers. Increased availability of CNG infrastructure and technology has given the company ability to expand their clientele and range. Having a high mileage, heavy fuel use fleet, Roehl Transport, Inc. saw the value of utilizing this low cost fuel in their freight shipping business, due to the low cost of the CNG. In the future, they plan to continue to convert vehicles to CNG for their fleet.

Roehl Transport, Inc. - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-duty CNG	3	3
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 75,000.00	\$ 75,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 516,726.00
	Maintenance	\$ -	\$ -
	Total	\$ 75,000.00	\$ 591,726.00

SHEEHY MAIL CONTRACTORS

Sheehy Mail Contractors was awarded \$75,000 of federal funding for the purchase of three heavy-duty CNG vehicles. Sheehy Mail Contractors was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The sub-recipient finalized CNG vehicles July 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts, Sheehy Mail Contractors was able to realize a petroleum displacement of 38,398 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$75,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	3 CNG Freightliner Cascadias
Fuel Displacement:	38,398 GGE
County:	Jefferson

Sheehy Mail Contractors is a Midwest regional carrier that specializes in freight transportation for their customers. One of their main customers is the U.S. Postal Service. Like other sub-recipients having a high mileage, heavy fuel use fleet, Sheehy Mail Contractors saw the value of utilizing this low cost fuel in their freight shipping business, due to the low cost of the CNG. They plan to have a significant portion of their fleet operate on CNG in 2015.

Sheehy Mail Contractors - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	3	3
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 75,000.00	\$ 75,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 452,578.98
	Maintenance	\$ -	\$ -
	Total	\$ 75,000.00	\$ 527,578.98

STOUGHTON UTILITIES

Stoughton Utilities was awarded \$232,017.29 of federal funding for the purchase of two PHEV utility trucks, 2 electric charging stations, and related maintenance costs. Vehicles were delivered summer of 2010. The infrastructure was installed summer of 2011. Through their vehicle and infrastructure deployment efforts Stoughton Utilities was able to realize a petroleum displacement of 1, 146 GGE.

Project at a Glance	
Fleet Type:	Utility
Award Amount:	\$232,017.29
Technology:	PHEV
Infrastructure:	2 electric charging stations
Vehicle(s):	2 PHEV IHC 4300 w/Odyne Utility Trucks
Fuel Displacement:	1,146 GGE
County:	Dane



Stoughton Utilities - PHEV Utility Truck

Stoughton Utilities has over 200 miles of electric line and a team of eight people to work three bucket trucks, two of which were funded by the WTCP. When Stoughton Utilities used the trucks for tree trimming, the crew got three hours of work done before the battery was drained. Like other sub-recipients, they were impressed with the emissions and safety benefits of these vehicles. According to Operations Superintendent Sean Grady, "The standard vehicle uses twice as much fuel, if not more, than the hybrids. The biggest bonus for us is that, when they're operating the truck, the guys don't have to yell at each other. Our guys would not want any other type of truck right now. Just the fumes that come off the trucks when they're working off it all day that in itself is bothersome to some people."

Stoughton Utilities appreciated the support from the WCTP. According to Robert Kardasz, Utilities Director, "This is a great program that not only advances clean energy vehicle technologies in the state, but also gives us the opportunity to own and operate our own green vehicles and maximize our fuel economy by reducing emissions." Stoughton Utilities is a member of the nationwide Plug-In sub-recipients campaign, which works to help auto makers appreciate the market for PHEVs.

Stoughton Utilities dealt with a number of challenges related to technology and the charging of these vehicles. One of the vehicles purchased under this program was a Generation I PHEV manufactured by Odyne in Waukesha, WI. Unfortunately, the utility dealt with a number of technology issues related to communications between the chassis, boom and hybrid system. The manufacturer was responsive to the technical issues, and the program covered the costs of the maintenance and full battery replacement for the vehicles, once the warranty expired.

Despite the challenges, the utility plans to continue using these vehicles. They have not decided if they will pursue this technology again. This is due to the high costs of repairing the vehicle and their view of the uncertainty of the technology in this application.

Stoughton Utilities - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty HEV	2	0
	Heavy-Duty PHEV	0	2
Number and Type of Fueling Infrastructure	Electric	0	2
		Estimated	Actual
Costs	Vehicle(s)	\$ 200,000.00	\$ 194,500.00
	Infrastructure	\$ -	\$ 1,962.29
	Committed Match (reported on FFR)	\$ 200,000.00	\$ 284,491.21
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 35,555.00
Total		\$400,000.00	\$ 516,508.50

SUNPOWER BIODIESEL, LLC

SunPower Biodiesel was awarded \$156,730.00 of federal funding for the purchase of one heavy-duty HEV and installation of one public biodiesel fuel station near their production facility in Cumberland, WI. The HEV was delivered in winter 2011 and is fueled with biodiesel. The installation of a 10,000 gallon tank and construction for the biodiesel pump was finished in March 2011. The station is public, open 7 days a week, 24 hours a day, and offers B11 and B20 year round and B99 in summer. Through their vehicle and infrastructure deployment efforts, SunPower Biodiesel was able to realize a petroleum displacement of 347,825 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$156,730.00
Technology:	HEV, biodiesel
Infrastructure:	1 biodiesel fueling station
Vehicle(s):	1 HEV Kenworth T370
Fuel Displacement:	347,825 GGE
County:	Barron

SunPower Biodiesel, LLC hosted a grand-opening ceremony on May 26, 2011 that was attended by 250 people. The event featured tours, a workshop, and a ribbon cutting ceremony. In its first week the station sold over 5,000 gallons of biodiesel, with sales doubling for each blend every month for the next three months. "The owners of SunPower Biodiesel are ecstatic that the dream of locally grown fuel - available to the public - is now a reality for the people of Northwest Wisconsin," said SunPower Chief Executive Officer Ron Ruppel. "We welcome all consumers to try our fuel, and are confident that all will agree that locally grown diesel fuel is

superior to all the other available diesel fuels in our marketing area." There has been a lot of positive feedback from consumers about the biodiesel, which is produced by locally grown canola.



SunPower Biodiesel – HEV and Retail Biodiesel pump.

SunPower was also pleased with the HEV because of increased fuel economy of 20-30%, and emission, anti-idling, and noise reductions. SunPower has plans to continue to market and install biodiesel retail stations throughout the state. It is unknown at this time if they will pursue another HEV.

Sun Power Biodiesel, LLC - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-Duty HEV	1	1
Number and Type of Fueling Infrastructure	Biodiesel	1	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 56,730.00	\$ 56,730.00
	Infrastructure	\$ 100,000.00	\$ 100,000.00
	Committed Match (reported on FFR)	\$ 56,730.00	\$ 70,011.77
	Additional Match (not reported on FFR)	\$ -	\$ 12,889.64
	Maintenance	\$ -	\$ -
	Total	\$ 213,460.00	\$ 239,631.41

TIME TRANSPORT

Time Transport was awarded \$125,000 of federal funding for the purchase of five heavy-duty CNG vehicles. Time Transport was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in September 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts they were able to realize a petroleum displacement of 25,865 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$125,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	3 CNG Kenworth T440s 2 CNG Peterbilt 384
Fuel Displacement:	25,865 GGE
County:	Racine

Time Transport provides same day freight services to its customers in the Milwaukee and Chicago area. They pursued CNG technology due to the lower cost of the fuel and emissions benefits. The company has had a positive experience with CNG fuel, and plan to purchase additional CNG vehicles in the future.

Time Transport - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 125,000.00	\$ 125,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 696,912.50
	Maintenance	\$ -	\$ -
Total		\$ 125,000.00	\$ 821,921.50

UNIVERSITY OF WISCONSIN – MADISON

UW-Madison received \$63,698 of federal funding for the purchase of 12 NEVs and one medium-duty HEV utility truck. The university finalized their purchases of their vehicles between June 2010 and June 2011. Through their vehicle deployment efforts, UW-Madison was able to realize a petroleum displacement of 1,164 GGE.

UW-Madison's NEVs had 100% battery-electric drive systems and were manufactured by E-Ride Industries and Vantage. The chassis for the hybrid utility truck was manufactured by International and had an Eaton hybrid drive system installed prior to delivery. The HEV utility truck also had a 75-ft VersaLift aerial that was used for building exterior maintenance, such as window, roof, and gutter repair.

Project at a Glance	
Fleet Type:	University
Award Amount:	\$63,698.00
Technology:	NEV, HEV
Infrastructure:	None
Vehicle(s):	1 HEV International w/Eaton Utility Truck 1 NEV Vantage EXV1000 4 NEV E-ride Industries EXV2s 7 NEV E-ride Industries EXV4s
Fuel Displacement:	1,164 GGE
County:	Dane

UW-Madison used NEVs for many years prior to this program. The 12 NEVs purchased through the WCTP were primarily driven to move people from one end of campus to the other. The university favored the alternating current drive system of E-Ride Industries NEVs versus the direct current power systems of other manufacturers. Thus, the university sold their older NEVs, to other universities and municipalities. According to UW-Madison Fleet Program Manager Jim Bogan, "The NEVs are working great."

The UW-Madison's NEVs were used all year round and although the heater was not ideal in the heart of winter, drivers were not in the vehicle very long and did not mind the cold for a short amount of time. Because of their extensive use, the university saved considerably on fuel costs. The NEVs appealed to UW-Madison and its conservation ideals. The funded vehicles aided the university in reaching its goal of reducing greenhouse gas emissions by 20% in 2010. The vehicles were also used in promoting the university as an eco-friendly campus. In 2010, the NEVs were used heavily on campus during their "We Conserve" campaign and for 2012's "Be the WE" campaign.



Jim Bogan and Matt Winchell stand in front of two of the University's 12 NEVs

UW-Madison was also happy with their medium-duty HEV utility truck purchase. The truck was the only two-man bucket truck the university owned, so it was used extensively by a variety of departments. Although the battery time depended on how much the bucket went up and down, workers enjoyed how quiet the truck is compared to one that ran continually. UW-Madison plans to continue purchasing AFVs as part of their greenhouse gas reduction and campus "greening" efforts.

UW-Madison - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty NEV	11	12
	Medium-Duty HEV	0	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 72,000.00	\$ 63,698.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 72,000.00	\$ 475,614.90
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
	Total	\$ 144,000.00	\$ 539,312.90

UNIVERSITY OF WISCONSIN – OSHKOSH

University of Wisconsin-Oshkosh (UW-Oshkosh) was awarded \$6,261.50 for the purchase of a light-duty CNG vehicle. UW-Oshkosh was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The university finalized their purchases of their CNG conversion system and completed the installation in November 2013. Through their vehicle deployment efforts, UW-Oshkosh was able to realize a petroleum displacement of 32 GGE.

Project at a Glance	
Fleet Type:	University
Award Amount:	\$6,231.50
Technology:	CNG
Infrastructure:	None
Vehicle(s):	1 CNG Ford F250
Fuel Displacement:	33 GGE
County:	Winnebago

The converted F250 was utilized by the facilities management staff on campus. They pursued CNG technology due to the lower cost of the fuel and emissions benefits. The vehicle was converted to use an aftermarket conversions system by a qualified equipment installer located at Barnes, Inc. in Madison, WI.

The only challenge they faced was related to refueling. They had to travel several miles off campus to refuel the vehicle, which in major snow storms proved to be a challenge. UW-Oshkosh was happy with the vehicle and in the future plans to explore other CNG vehicle options for their fleet.

UW-Oshkosh - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-duty CNG	1	1
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 6,261.50	\$ 6,261.50
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 41,496.50
	Maintenance	\$ -	\$ -
	Total	\$ 6,261.50	\$ 47,758.00

VERIHA TRUCKING

Veriha Trucking was awarded \$125,000 in federal funding for the purchase of five heavy-duty CNG vehicles. Veriha Trucking was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in September 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts they were able to realize a petroleum displacement of 17,074 GGE.

Project at a Glance	
Fleet Type:	Municipal
Award Amount:	\$125,000.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	5 CNG Kenworth T660s
Fuel Displacement:	17,074 GGE
County:	Marinette

Veriha Trucking has served as a freight transportation company in Wisconsin for 35 years. They pursued CNG technology due to the lower cost of the fuel and emissions benefits. With high mileage vehicles that often return

to base on the same day, CNG was the best option for this company. Veriha Trucking has had a positive experience with CNG fuel, and plans to purchase additional CNG vehicles in the future.

Veriha Trucking - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 125,000.00	\$ 125,000.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 776,977.50
	Maintenance	\$ -	\$ -
	Total	\$ 125,000.00	\$ 907,977.50

WASTE MANAGEMENT OF WISCONSIN, INC.

Waste Management of Wisconsin, Inc. (Waste Management) was awarded \$99,840 for the purchase of five heavy-duty CNG vehicles. Waste Management was a new sub-recipient that was able to take advantage of additional funding made available through the program in 2013. The company finalized their purchases of their CNG trucks in December 2013. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their vehicle deployment efforts, Waste Management was able to realize a petroleum displacement of 12,879 GGE.

Project at a Glance	
Fleet Type:	Private
Award Amount:	\$99,840.00
Technology:	CNG
Infrastructure:	None
Vehicle(s):	5 CNG Peterbilts
Fuel Displacement:	12,879 GGE
County:	Washington

While their CNG trucks were delivering the promised environmental benefits and savings in fuel and maintenance costs, the unusually cold temperatures during the 2012-13 winter did pose unique challenges. These trucks produced more moisture and condensation than typical diesel trucks. As a result, when the temperature dipped below zero degrees, sensors froze and caused engine failure on the trucks. They worked with the engine manufacturer to address the problem. The manufacturer recalibrated the engines to prevent moisture accumulation, and Waste Management also installed cold-weather fronts - masks, essentially - over the truck grills to reduce cold-air infiltration.

As a result of the program and their growing interest in CNG refuse haulers, in June of 2013, they opened a temporary CNG fueling station in Franklin to accommodate their growing CNG refueling needs. They were also moving forward with plans to construct a permanent station opening in late 2014. Additionally, they completed a \$1.5 million shop upgrade incorporating ventilation systems, alarm systems and other components required to service CNG vehicles indoors. Overall, Waste Management's experience with CNG was very positive. They plan to add seven to eight more CNG effuse haulers to their existing fleet of 29 CNG vehicles in 2014. They anticipate, by the end of 2014, 100% of their front-end-loaders and several of their roll-off units in Franklin, WI could be CNG.

Waste Management - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty CNG	5	5
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 99,840.00	\$ 99,840.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ -	\$ -
	Additional Match (not reported on FFR)	\$ -	\$ 1,187,229.20
	Maintenance	\$ -	\$ -
	Total	\$ 99,840.00	\$ 1,287,069.20

WE ENERGIES

We Energies was awarded \$1,262,291.35 in federal funding to purchase three light-duty CNG vehicles; to award three transportation companies in their territory to also purchase CNG vehicles; and, cover maintenance costs associated with the vehicles purchased. We Energies customers and vehicles include: Hribar Logistics with two heavy-duty CNG trucks, Paper Transport, Inc. with 24 heavy-duty CNG trucks, and Transit Express with 10 medium-duty CNG para-transit vans. All vehicles were converted by the manufacturer off-site prior to delivery to the sub-recipient. Through their and the customer's vehicle deployment efforts, We Energies was able to realize a cumulative petroleum displacement of 713,522 GGE.

We Energies, which has been fueling on CNG since 1985, deployed its three CNG vans in February 2012. The vans were used by service workers to perform their daily work on electric and gas distribution systems

We Energies - Projects at a Glance		
Paper Transport, Inc.	Fleet Type:	Private Transportation
	Award Amount:	\$947,234.99
	Technology:	CNG
	Infrastructure:	None
	Vehicle(s):	24 CNG Freightliner M2112
	Fuel Displacement:	622,644 GGE
	County:	Milwaukee
Hribar	Fleet Type:	Private Transportation
	Award Amount:	\$87,170.56
	Technology:	CNG
	Infrastructure:	None
	Vehicle(s):	2 CNG Kenworth T440
	Fuel Displacement:	58,017 GGE
	County:	Milwaukee
Transit Express	Fleet Type:	Private Transportation
	Award Amount:	\$180,230.80
	Technology:	CNG
	Infrastructure:	None
	Vehicle(s):	10 CNG Ford E350
	Fuel Displacement:	30,483 GGE
	County:	Milwaukee
We Energies	Fleet Type:	Private Transportation
	Award Amount:	\$47,655.00
	Technology:	CNG
	Infrastructure:	None
	Vehicle(s):	3 CNG Chevy Express Cargo Van
	Fuel Displacement:	2,378 GGE
	County:	Milwaukee
Project Total	Award Amount:	\$1,262,291.35
	Fuel Displacement:	713,522 GGE



Paper Transport - CNG Freightliner M2112s

Paper Transport, Inc. trucks were used to haul 80,000 lb. truckloads between Green Bay, WI and Chicago, IL, which is relatively flat, and thus perfect for the vehicle's Cummins 9L CNG engine. The first trucks went into service in late March 2010 and are run around the clock. Paper Transport, Inc. was the first freight transport company in the United States that used CNG trucks for line-haul service.

Although the cost of a CNG truck was \$50,000 more than a diesel truck, according to Jeff Shefchik, President of Paper Transport, Inc., "The total operating cost of a CNG truck is still lower over the life of the vehicle."

During the first two years of operation, Paper Transport, Inc. fueled their trucks in Milwaukee. Today there are several fueling stations along the route. With the tank package Paper Transport, Inc. chose, the CNG trucks averaged a 500 mile range. Although a traditional diesel truck had a 1200 mile fuel range, given the regional nature of the company's routes a 500 mile range worked well.

Hribar Logistics' trucks are powered with the Cummins Westport ISL G Engine, which allowed the truck to be rated at 320 horsepower and 1,000 lb-ft of torque. This closely matched a diesel engine, which allowed for an easy transition for drivers. According to Mark Hribar, Hribar Logistics Director of Fleet Operations, "We embraced the idea of using CNG because it costs less than diesel and helps to increase our country's energy independence."



Hribar Logistics CNG Kenworth T440



Mary Smarelli, President of Transit Express, demonstrates the wheelchair-lift on a CNG para-transit van

Transit Express has used CNG para-transit vans since 2002 and have had only positive experiences. Furthermore, the CNG vans are the most profitable vehicles in its 140 vehicle fleet. According to Mary Smarelli, President and Owner of Transit Express, “We were all a little reticent about it but ultimately once we kind of worked out some of the initial kinks in terms of mileage range, I think it’s really been almost no different than maintaining the rest of our fleet.” The company benefits largely from having its own CNG fueling station on site, which is also open to the public.

We Energies and its customers plan to continue purchasing CNG vehicles in the future.

We Energies - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Medium-duty or light -duty CNG	50	13
	Heavy-duty CNG	50	26
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 825,000.00	\$ 1,235,407.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 825,000.00	\$ 3,400,050.84
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ 26,884.35
	Total	\$ 1,650,000.00	\$ 4,662,342.19

WI DEPARTMENT OF ADMINISTRATION – ENTERPRISE SERVICES

The Wisconsin Department of Administration (WI-DOA) was awarded \$111,500 for the purchase of 28 light-duty HEVs and the installation of E85 (a blend of 85% ethanol and 15% gasoline) refueling equipment. The vehicles were deployed between December 2010 and spring of 2011. The E85 infrastructure was installed in January 2011. Through their vehicle and infrastructure deployment efforts, WI-DOA was able to realize a cumulative petroleum displacement of 20,532 GGE.

Project at a Glance	
Fleet Type:	State Government Agency
Award Amount:	\$111,500.00
Technology:	HEV, E85
Infrastructure:	1 E85 fueling station
Vehicle(s):	2 HEV Chevrolet Silverados, 26 HEV Ford Fusions
Fuel Displacement:	20,532 GGE
County:	Milwaukee

The E85 refueling facility was for private use by the University of Wisconsin-Milwaukee, and was installed at the university’s fleet offices in Glendale, WI. Most of the HEV vehicles were personally assigned to employees in the Wisconsin Department of Corrections and other state facilities, which made training and WCTP reporting easy for the department. The HEV Chevrolet Silverados averaged 13 MPG, while the Fusions averaged 28 MPG. WI-DOA was pleased with their purchases and will continue to look at AFVs for their fleet in the future.

WI-DOA - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Light-Duty HEV	28	28
Number and Type of Fueling Infrastructure	E85	1	1
		Estimated	Actual
Costs	Vehicle(s)	\$ 56,000.00	\$ 56,000.00
	Infrastructure	\$ 55,500.00	\$ 55,500.00
	Committed Match (reported on FFR)	\$ 56,000.00	\$ 668,618.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
	Total	\$ 167,500.00	\$ 780,118.00

WI DEPARTMENT OF CORRECTIONS

The Wisconsin Department of Corrections (WI-DOC) was awarded \$101,650 for the purchase of two light-duty and two heavy-duty HEVs, which are located at four different correctional facilities across the state. The light-duty vehicles were deployed June 2011 and the heavy-duty in August 2011. Through their vehicle deployment efforts, the WI-DOC was able to realize a cumulative petroleum displacement of 3,998 GGE.

The heavy-duty HEV International Durastar trucks drove two to six miles a day around the perimeter of the correctional facilities picking up garbage, recycling, and laundry. According to Douglas Nelson, Buildings and Grounds Supervisor for the Racine Correctional Institution, "Because of the versatility and efficiency of this truck, we have expanded its role to include recycling trips out of our institution. We are pleased with the performance of this truck, and consider it a valuable addition to our fleet."

The two light-duty HEV Ford Escapes were used for perimeter control. Because the HEVs used for



WI-DOC – Racine Correctional Facility Heavy-Duty HEV

perimeter

patrol drove short, self-contained loops, the vehicles went faster than 30 miles per hour, and realized a fuel savings of 33%.

Feedback from staff was overwhelmingly positive about the purchases of all of the HEVs. The WI-DOC intends to look for other opportunities to incorporate HEVs in their fleet in the future.

WI-DOC - Projects at a Glance		
Columbia Correctional Institution	Fleet Type:	State Government Agency
	Award Amount:	\$2,000
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV Ford Escape
	Fuel Displacement:	450 GGE
	County:	Columbia
Jackson Correctional Institution	Fleet Type:	State Government Agency
	Award Amount:	\$2,000
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV Ford Escape
	Fuel Displacement:	2,407 GGE
	County:	Jackson
Oakhill Correctional Institution	Fleet Type:	State Government Agency
	Award Amount:	\$48,825.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV International Durastar Truck
	Fuel Displacement:	760 GGE
	County:	Dane
Racine Correctional Institution	Fleet Type:	State Government Agency
	Award Amount:	\$48,825.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV International Durastar Truck
	Fuel Displacement:	381 GGE
	County:	Racine
Project Total	Award Amount:	\$101,650.00
	Fuel Displacement:	3,998 GGE

WI – DOC - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy- Duty HEV	2	2
	Light-Duty HEV	2	2
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 101,650.00	\$ 101,650.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 101,650.00	\$ 222,236.00
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
	Total	\$ 203,300.00	\$ 323,886.00

WPPI ENERGY

WPPI Energy received \$1,057,826 for the purchase of 13 heavy-duty HEVs and two heavy-duty PHEVs. The vehicles were deployed between August 2011 and January 2012. Through their vehicle deployment efforts WPPI Energy was able to realize a cumulative petroleum displacement of 10,927 GGE.

WPPI Energy, a coalition of 51 locally-owned electric utility companies in Wisconsin, Iowa, and Michigan, worked with coalition members to fund projects through its WCTP award. WPPI members that purchased either a PHEV or HEV utility truck were the following: City Utilities of Richmond Center, Florence Utilities, Kaukauna Utilities, Lake Mills Water and Light, Menasha Utilities, New Richmond Utilities, and Oconomowoc Utilities.



New Richmond Utilities – Heavy-Duty HEV Utility Truck

When WPPI Energy had additional program funding, that wasn't spent right away; they reached out to municipal parks, public works departments, schools, and bus companies in its members' service areas. As a result, Lamers Bus Lines, Inc. in Menasha, WI and GO Riteway in Germantown, WI received funding for HEV school buses, 6 and 2 respectively.



Oconomowoc Utilities – Heavy-Duty HEV Utility Truck

As an emergency preparedness resource, New Richmond Utilities and Oconomowoc Utilities sent their vehicles to the East Coast for Hurricane Sandy relief in November 2012. The teams were able to operate the hybrid-electric system on the vehicle in the relief efforts, when access conventional fuel was limited. The New Richmond Utilities HEV truck and crew spent a week and a half in Long Island, NY, an area with the largest number of outages. According to Journey Line Worker, Dean Anderson, "It was a great truck to take out there, the perfect truck to use in this way."

The HEV utility trucks were well received by the utility sub-recipients.

Menasha Utilities realized a fuel savings 30% on its fueling costs by using its HEV utility truck. According to Joel Heider, Menasha Utilities Line Foreman, the utility usually plans a 10 year turn around with vehicles; however they are planning on keeping the HEV truck for 15 years.

Other utility companies are enjoying the benefits of their PHEV utility trucks. City Utilities of Richland Center received their PHEV in January 2012 and used the truck for utility grid construction and maintenance. According to Dale Bender, Electrical Superintendent, "The utility is excited to promote and educate the public about hybrids and help Richland Center to create a 'greener' environment." Lake Mills Water and Light also enjoyed their Odyne PHEV truck. According to Mike Brien, Journeyman Line Worker, "It is nice that it doesn't run the whole time, you can talk to people." Lake mills Water & Light may also consider buying another PHEV.

The WPPI Energy sub-recipients did face some challenges with the vehicles, when problems arose with communications between the vehicle's chassis, hybrid system and boom system. Initially, there were problems with the Eaton hybrid system cooperating with the chassis'. They saw similar problems with the Odyne hybrid systems on the trucks. The communication issues resulted in vehicles jerking during shifting, inoperable booms, and unrealized fuel efficiency. Both Eaton and Odyne were responsive with the issues and provided resources to address the problems.

The hybrid school buses also worked well for the two transportation services sub-recipients. According to Paul Mennen, Lamers Bus Lines, Inc. Manager, the buses were "just as reliable as the non-hybrid." Lamers Bus Lines, Inc. tested out switching different drivers and routes for the buses to see what scenario worked best for the hybrid buses. Some of the buses operated at 9-12 MPG, a great improvement compared to a regular bus at 8 MPG.



Lamers Bus Lines - HEV school buses

WPPI Energy - Projects at a Glance		
City Utilities of Richland Center	Fleet Type:	Utility
	Award Amount:	\$99,500.00
	Technology:	PHEV
	Infrastructure:	None
	Vehicle(s):	1 PHEV International w/Odyne Utility Truck
	Fuel Displacement	889 GGE
	County:	Richland
Florence Utilities	Fleet Type:	Utility
	Award Amount:	\$54,591.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV International w/Eaton Utility Truck
	Fuel Displacement	531 GGE
	County:	Florence
GO Riteway	Fleet Type:	Private Transportation
	Award Amount:	\$151,578.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	2 HEV Thomas C2s School Buses
	Fuel Displacement	1,512 GGE
	County:	Milwaukee
Kaukauna Utilities	Fleet Type:	Utility
	Award Amount:	\$67,485.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV Altec w/ Eaton Utility Truck
	Fuel Displacement	697 GGE
	County:	Outagamie
Lake Mills Water & Light	Fleet Type	Utility
	Award Amount:	\$92,000.00
	Technology:	PHEV
	Infrastructure:	None
	Vehicle(s):	1 PHEV International w/Odyne Utility Truck
	Fuel Displacement	151 GGE
	County:	Jefferson
Lamers Bus Lines	Fleet Type:	Private Transportation
	Award Amount:	\$442,734.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	6 HEV Thomas C2School Buses
	Fuel Displacement	5,549 GGE
	County:	Brown
Menasha Utilities	Fleet Type:	Utility
	Award Amount:	\$52,785.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV Altec w/ Eaton Utility Truck
	Fuel Displacement:	508 GGE
	County:	Winnebago
New Richmond Utilities	Fleet Type:	Utility
	Award Amount:	\$49,156.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 HEV Altec w/ Eaton Utility Truck
	Fuel Displacement	720 GGE
	County:	St. Croix
Oconomowoc Utilities	Fleet Type:	Utility
	Award Amount:	\$47,997.00
	Technology:	HEV
	Infrastructure:	None
	Vehicle(s):	1 2011 Freightliner w/ Eaton
	Fuel Displacement	370 GGE
	County:	Waukesha
Project Total	Award Amount:	\$1,057,826.00
	Fuel Displacement:	10,927 GGE

WPPI Energy - Project Specific Goals versus Outcomes			
		Planned	Final
Number and Type of AFVs	Heavy-Duty HEV	11	13
	Heavy-Duty PHEV	0	2
	Light-Duty NEV	10	0
Number and Type of Fueling Infrastructure	None	0	0
		Estimated	Actual
Costs	Vehicle(s)	\$ 1,120,000.00	\$ 1,057,826.00
	Infrastructure	\$ -	\$ -
	Committed Match (reported on FFR)	\$ 1,120,000.00	\$ 1,855,198.25
	Additional Match (not reported on FFR)	\$ -	\$ -
	Maintenance	\$ -	\$ -
	Total	\$ 2,240,000.00	\$ 2,913,024.25

CONTRIBUTION TO A SUSTAINABLE ALTERNATIVE FUELS MARKET

With the implementation and deployment of alternative fuels and advanced vehicle technologies through the WCTP, businesses including dealers and manufacturers, have realized increased revenues and opportunities for growth in Wisconsin. Two manufacturing companies have seen increased production and expansion opportunities directly related to this program, Odyne and ANGI Energy Systems.



Odyne, headquartered in Waukesha, WI, has manufactured many of the plug-in hybrid electric vehicles in the WCTP, including Kenosha County's PHEV truck.

Under the WCTP eight sub-recipients purchased 12 utility trucks with Odyne PHEV technology. Odyne manufactures hybrid drive systems for medium- and heavy-duty vehicles. According to the company's web site, the name "Odyne" represents the combination of "O" for optimal and "dyne" for force. Odyne's advanced PHEV technology enables trucks over 14,000 pounds to have substantially lower fuel consumption, lower emissions, improved performance, quieter work site operation and reduced operating and maintenance costs. The WCTP provided \$1.06 million to partners to cover the cost of purchasing Odyne technology. The company has also seen increased interest and created additional jobs within their company to meet the growing demands of the market.

Another company based in Wisconsin and benefited from the WCTP was ANGI Energy Systems. ANGI Energy Systems is a privately held company that designs and manufactures equipment for CNG vehicle fueling and tube trailer transport. WCTP sub-recipients, Dane County and City of Milwaukee, installed ANGI Energy Systems equipment at their CNG locations in Madison and Milwaukee, respectively. The WCTP provided just over \$1.8 million for the ANGI energy equipment at these locations. This program, along with an increased adoption of CNG vehicle and refueling in Wisconsin and the United States helped contribute to the expansion of ANGI Energy Systems' production facilities from Milton to Janesville, WI. The new facility was completed in 2012 and equipped with 141,000 square feet of manufacturing and material handling floor space with dedicated shop areas for: gas and control panel assembly, compressor assembly, welding and fabrication, machining and hydrostatic testing.

In addition to the increase in manufacturing of equipment related to alternative fuels, Wisconsin has seen an increased interest from fleets across the state related to ways to reduce fuel costs and consumption and increase adoption of advanced vehicle technology. Many of the fleets in the WCTP have served as mentors to other fleets in the state and across the nation for the deployment of alternative fuels and advanced vehicles technologies. Overall, the interest from fleets that are exploring the use of alternative fuels and advanced

vehicle technologies has increased due to the visibility of the WCTP vehicles on Wisconsin's roads and the outreach conducted by the program.

MARKETING, OUTREACH AND TRAINING

The SEO, WCC, and the technical coordinator for the program collaboratively worked together to conduct marketing, outreach and training for the WCTP. WCC focused on events and coordinating outreach with all of the sub-recipients, while the Technical Coordinator, worked to schedule trainings as requested by each partner.

The WCTP program management team held an initial launch meeting held February 4, 2010 at the Wisconsin Department of Agriculture, Trade and Consumer Protection in Madison as the first outreach event for the WCTP sub-recipients. This was a way to inform all potential sub-recipients of the necessary compliance and parameters that needed to be followed under this program. After the launch event, the WCTP hosted a Resource Fair on April 6, 2010 at Fox Valley Technical College - Appleton Campus. The Resource Fair brought together sub-recipients and other fleets with vehicle and equipment suppliers to allow face-to-face communication in a dynamic environment. Vehicle and engine manufacturers, fuel providers, automotive component suppliers and infrastructure providers offered table-top displays and a vehicle expo spanning the options that the WCTP sub-recipients were exploring: CNG, EV, PHEV, HEV, biodiesel, LPG and E85.

For this event, the program management team also developed and distributed a resource guide as a tool for fleets to understand the technology and vendors available for alternative fuels and advanced vehicle technologies. The Fleet Partner Resource Guide (Attachment I), included contact information for relevant governmental organizations, trade organizations, industry allies and vendors. Regularly updated hard copies of the Fleet Partner Resource Guide were available at WCTP-related events and training classes. In addition, an electronic copy was featured on an ongoing basis on the WCTP web page. Please note that the document attached to this report is provided for reference; the contacts are now outdated due to the date of publication.



On August 31, 2010, WCC finalized a Marketing and Outreach Plan (Attachment II) for the program as a guide for the program management team to educate the general public, businesses and fleets on the myriad benefits of achieving petroleum reduction and lowered emissions through deploying alternative fuel and advanced vehicle technologies and associated infrastructure. The Marketing and Outreach Plan also aimed to apprise those same target groups about the WCTP's implementation status, upcoming events and related news, and promote the greater use of public-access fueling stations. Major components of the Marketing and Outreach Plan included WCTP presence on:

- A dedicated web site;
- Print media in state and local newspapers, magazine articles, event brochures, newsletters, posters/fliers and mail inserts; and
- Social media including Facebook, Twitter and Flickr.

On April 26, 2011 the program management team conducted a marketing conference call for WCTP sub-recipients to review marketing steps for vehicle deployment and outreach. WCC also developed and distributed a Marketing Materials and Resource Guide (Attachment III) as a tool for each fleet partner to conduct their own self-directed outreach. The Marketing Materials and Resource Guide included:

- Tips for writing press releases and media alerts;
- Tips for marketing projects;
- What is WCTP flier and WCTP fact sheet for partner use;
- WCTP program statistics; and,
- A flash drive including all of the information for ease of use.

Additionally, at the request of the sub-recipients, WCC researched, drafted and distributed a Best Practices Guide for Neighborhood Electric Vehicles (Attachment IV) to provide prospective purchasers and current owners of NEVs with helpful information on operations, regulations and tips and suggestions for add-ons and driving in winter weather.

Lastly, per the requirements of the program, WCC distributed Clean Advanced Technology Vehicle decals to participating fleets. Below are some placements of the decals on a variety of vehicles in the program. These decals gave the program visibility while the vehicles were operated on Wisconsin roadways or were on display at special events.



Milwaukee County – Light-Duty HEV



City of Milwaukee – Heavy-Duty CNG Refuse Hauler



City of Bayfield – Light-Duty NEV



Kenosha County – Heavy-Duty PHEV Utility Truck

Below is a list of specific marketing and outreach activities conducted for the WCTP:

Events	Date	Title	Location	Role/Purpose
1	08/26/09	Governor Doyle Announces WCTP	Madison, WI	Official public launch of WCTP
2	10/14/09	Wisconsin Clean Cities Board of Directors	Milwaukee, WI	WCTP program overview
3	12/15/09	Wisconsin Clean Cities Board of Directors	Milwaukee, WI	WCTP program overview
4	11/02/09	Clean Cities Coordinator Leadership Retreat	Gatlinburg, TN	WCTP program overview
5	11/19/09	Fight Asthma Milwaukee Allies General Membership	Milwaukee, WI	WCTP program overview
6	03/25/10	Green Energy Summit	Milwaukee, WI	Introduce participants to WCTP
7	04/23/10	Driving Toward 2020: the Seventh Annual Green Vehicles Workshop	Milwaukee, WI	WCTP program overview
8	05/12/10	Alternative Fuels & Vehicles National Conference	Las Vegas, NV	Introduce participants to WCTP
9	06/18/10	Midwest Renewable Energy Association (MREA) Energy Fair	Custer, WI	Introduce participants to WCTP
10	06/30/10	Clean Cities Eastern States Coordinator Peer Exchange	Pittsburgh, PA	WCTP update
11	07/16/10	Eco-Fair 360	Elkhorn, WI	Introduce participants to WCTP
12	07/17-18/2010	Green Drive Expo	Madison, WI	Highlight WCTP
13	07/30/10	Propane Road Show	Zion, IL	Highlight propane related activities in WCTP
14	09/14/10	Biodiesel: A Great Fuel for a Great Lakes Region	Milwaukee, WI	Highlight biodiesel related activities in WCTP
15	08/25/10	Oconomowoc Transport Project Ribbon-Cutting	Oconomowoc, WI	Highlight WCTP sub-recipients plug-in hybrid-electric school buses and solar charging station, vehicles displayed
16	08/25/10	Groundbreaking Go Riteway Solar Charging Stations	Oak Creek, WI	Highlight WCTP sub-recipients project to deploy plug-in hybrid-electric school buses and solar charging station,
17	10/10/10	Madison Area Technical College's Odyssey Day Event	Madison, WI	WCTP update
18	10/14/10	Forward Wisconsin: Reducing Diesel Emissions for the Long Haul: Forward Wisconsin 3.0	Oak Creek, WI	WCTP update
19	10/14/10	National Alternative Fuel Vehicle (AFV) Day Odyssey:	Oak Creek, WI	WCTP update
20	11/05/10	Energy Hub Conference	Madison, WI	WCTP presentation
21	12/14/10	Fifth Annual Wisconsin Clean Cities Stakeholder Meeting	Milwaukee, WI	Highlighted WCTP accomplishments
22	03/09-11/11	Green Energy Summit	Milwaukee, WI	WCTP update
23	04/04/11	Kenosha County Board of Supervisors Meeting	Kenosha, WI	WCTP update, vehicle displayed
24	04/8/11	Dane County Press Event	Madison, WI	WCTP project announcement , vehicles displayed
25	04/08/11	Propane Event hosted by WCC	Milwaukee, WI	Highlight propane related activities in WCTP
26	04/16/11	Gateway Technical College Earth Day Event	Kenosha, WI	WCTP information booth, vehicle displayed
27	04/19/11	Rockwell Automation Event	Milwaukee, WI	WCTP information booth
28	04/19/11	Miller Coors Event	Milwaukee, WI	WCTP information booth
29	04/19/11	What is Clean Cities? Event	Milwaukee, WI	WCTP information booth
30	04/20/11	Chase Bank Earth Day	Milwaukee, WI	WCTP information booth
31	04/29/11	Green Vehicle Event	Milwaukee, WI	WCTP update, WCTP Information booth
32	05/04/11	City of Madison Public Works Day	Madison, WI	Vehicle displayed
33	05/17/11	MG&E Annual Meeting	Madison, WI	WCTP update, vehicle displayed
34	05/21/11	Paddock Lake Event	Salem, WI	Vehicle displayed
35	05/26/11	SunPower Grand Opening Event	Cumberland, WI	WCTP project announcement , vehicles displayed
36	05/30/11	Kenosha County Memorial Day Parade	Kenosha, WI	Vehicles displayed
37	06/01/11	Pulaski Outreach Event	Pulaski, WI	WCTP information booth
38	06/08/11	Johnson Controls Outreach Event	Milwaukee, WI	WCTP information booth
39	06/17/11	MREA Energy Fair	Custer, WI	WCTP update
40	06/23/11	Stoughton Utilities Public Power Walk	Stoughton, WI	Vehicles displayed
41	06/27-30/11	Clean Cities Stakeholder Summit	Indianapolis, IN	WCTP update
42	07/04/11	Kenosha County Parade	Kenosha, WI	Vehicle displayed
43	07/07/11	Lights & Sirens Event	Watertown, WI	Vehicle displayed
44	07/08/11	Eco-Fair in Lake Geneva on July 8	Lake Geneva, WI	WCTP information booth
45	07/19/11	Johnson Controls Event	Glendale, WI	WCTP information booth
46	07/20/11	Waukesha County Fair	Waukesha, WI	WCTP information booth
47	08/04/11	Compelling Case for CNG	Milwaukee, WI	Highlight CNG related activities in WCTP
48	08/24/11	EV Implementation Meeting	Milwaukee, WI	Highlight EV related activities in WCTP
49	09/07/11	Soy Biobased Products Events	Kenosha, WI	Highlight biodiesel related activities in WCTP
50	09/09/11	City of Milwaukee Groundbreaking Event	Milwaukee, WI	Highlight WCTP partner's CNG vehicles

Events	Date	Title	Location	Role/Purpose
				and infrastructure, vehicles displayed
51	09/14/11	Green Fuels Workshop	La Crosse, WI	WCTP update
52	09/22/11	Kenworth Truck CNG Event	Oak Creek, WI	Highlight CNG related activities in WCTP
53	09/26/11	CNG Event	Wausau, WI	Highlight CNG related activities in WCTP
54	09/29/11	Ford – Power of Choice Event	Madison, WI	WCTP update
55	10/07/11	Marquette University Engineering Hall Open House	Milwaukee, WI	Highlight WCTP partner's EV
56	11/08/11	Go Riteway Open House	Oak Creek, WI	Highlight WCTP partner's LPG, HEV vehicles and infrastructure, vehicles displayed
57	11/16/11	DOE Clean Cities Peer Review	Dallas, TX	WCTP update
58	12/07/11	Green Energy Summit Academic Meeting	Milwaukee, WI	WCTP update
59	12/14/11	Wisconsin Kenworth Natural Gas Summit	Wisconsin Dells, WI	WCTP information booth
60	12/15/11	WCC-SEA Annual Stakeholders Meeting and Holiday Reception	Milwaukee, WI	WCTP update & accomplishments
61	01/17-18/12	WI School Bus Association Trade Show and Convention	Milwaukee, WI	WCTP information booth
62	01/18/12	US Venture Event	Menomonie, WI	Highlight CNG related activities in WCTP
63	02/01-02/12	Knapheide Event	Fond du Lac, WI	WCTP information booth
64	02/22/12	Propel with Propane	Milwaukee, WI	Highlight WCTP partner's LPG projects
65	02/29/12	Chippewa Falls Brown Bay Discussion Event	Chippewa Falls, WI	WCTP update
66	03/07-09/12	9th Annual Sustainability Summit	Milwaukee, WI	WCTP update, vehicles displayed
67	03/20/12	Fueling Wisconsin Fleets with CMG	Eau Claire, WI	Highlight WCTP partner's CNG projects
68	03/20/12	Fueling Wisconsin Fleets with CNG	La Crosse, WI	Highlight WCTP partner's CNG projects
69	03/27/12	Energy Independence Days	Washington, DC	WCTP accomplishments
70	04/20/12	Milwaukee County PHEV Utility Truck Unveiling	Milwaukee, WI	Highlight WCTP partner's PHEV project
71	04/21/12	Marquette University - eLIMO at the Hunger Cleanup:	Milwaukee, WI	eLIMO transported 13 members of the MU women's club basketball team to St. Hyacinth Food Panty on Beecher for a day of helping pack food and other duties.
72	04/25/12	ATT CNG/City of Milwaukee EV Station Event	Milwaukee, WI	Highlight WCTP partner's EV project
73	04/26/12	6th Annual Advanced Technology Vehicle Show	Whitewater, WI	Highlight Marquette eLimo
74	05/01/12	Northeast WI CSCMP Presents: Alternative Fuels: Issues & Opportunities	Green Bay, WI	WCTP update
75	05/04/12	Green Vehicles Workshop	Milwaukee, WI	WCTP update
76	05/09-10/12	Kwik Trip CNG Event	La Crosse, WI	WCTP information booth
77	05/24/12	Sub-recipients for Clean Air Extravaganza	Milwaukee, WI	WCTP information booth
78	05/25/12	SunPower One Year Anniversary Event	Cumberland, WI	Highlight WCTP partner's HEV vehicle and biodiesel infrastructure, vehicles displayed
79	05/29/12	Marquette University - eLIMO hosts MU Mathematics, Statistics, and Computer Science students.	Milwaukee, WI	Orientation includes a discussion of personal safety around the Marquette campus, including use of the eLIMO service.
80	05/31/12	Bayfield County Ribbon Cutting Event	Washburn, WI	Highlight WCTP partner's CNG vehicles and infrastructure, vehicles displayed
81	05/31/12	Pulaski High School Career Fair	Pulaski, WI	WCTP information booth
82	06/12/12	eLIMO Alumni Dinner	Milwaukee, WI	eLimo project accomplishments
83	06/15-17/12	MREA Energy Fair	Custer, WI	WCTP information booth
84	06/20-21/12	WI School Bus Association Trade Show and Convention	Stevens Point, WI	WCTP information booth
85	06/22/12	Evolution Marketing Event	Oconomowoc, WI	WCTP information booth
86	07/11/12	Veolia Open House	Easy Troy, WI	WCTP update
87	07/25/12	Propane in the Park	Grafton, WI	WCTP Information booth
88	07/28/12	Marquette University: Engineering Alumni Reunion	Milwaukee, WI	Vehicle displayed
89	08/10/12	Stoughton Coffee Break Festival	Stoughton, WI	Vehicle displayed
90	08/10/12	Waupun Truck Show on	Waupun, WI	Vehicle displayed
91	08/17/12	City of Milwaukee - Ribbon Cutting Ceremony	Milwaukee, WI	Highlight WCTP partner's CNG vehicles and infrastructure, vehicles displayed
92	08/23/12	Plugging into the Future PHEV/HEV Event	Waukesha, WI	Highlight WCTP partner's PHEV vehicles, WCTP information booth
93	09/08/12	Heritage Hill History of the Vehicle	Green Bay, WI	WCTP Information booth
94	09/15/12	Rock the Green	Milwaukee, WI	WCTP information booth
95	09/27/12	Wisconsin Science Festival	Madison, WI	WCTP information booth
96	09/29/12	Jefferson Car Show	Jefferson, WI	WCTP information booth
97	10/05-07/12	Apple Festival	Bayfield, WI	WCTP information booth, Vehicle displayed
98	10/04/12	Madison AFV Odyssey Day Event	Madison, WI	WCTP update
99	10/06/12	Fall Harvest Fest	Oconomowoc, WI	WCTP information booth
100	10/11/12	Kwik Trip CNG Event	Sturtevant, WI	Highlight WCTP partner's CNG vehicles
101	10/11/12	La Crosse Odyssey Day Event	La Crosse, WI	WCTP update

Events	Date	Title	Location	Role/Purpose
102	10/11/12	Appleton NGV Odyssey Day Event	Appleton, WI	Highlight WCTP partner's CNG vehicles
103	10/23/12	3 rd WI Natural Gas for Transportation Roundtable	Milwaukee, WI	Highlight WCTP partner's CNG vehicles
104	10/25/12	Milwaukee AFV Odyssey Day Even	Milwaukee, WI	WCTP update
105	10/25/12	Oconomowoc Odyssey Day Event	Oconomowoc, WI	WCTP update
106	12/01/12	Kwik Trip CNG Event	Pewaukee, WI	Vehicle displayed
107	12/01/12	Kwik Trip CNG Event	Oshkosh, WI	Vehicle displayed
108	12/13/12	Kwik Trip CNG Event	Sheboygan, WI	Vehicle displayed
109	12/06/12	WCC's 7th Annual Stakeholder Holiday Reception	Milwaukee, WI	WCTP update and accomplishments
110	01/23/13	Kwik Trip CNG Event	Sturtevant, WI	Vehicle displayed
111	01/24/13	Kwik Trip CNG Event	Pewaukee, WI	Vehicle displayed
112	01/23-24/13	WI School Board Conference	Madison, WI	Introduce participants to WCTP
113	01/29/13	4 th Natural Gas for Transportation Roundtable	Wisconsin Dells, WI	WCTP update
114	02/10/13	First Unitarian Church	Milwaukee, WI	Introduce participants to WCTP
115	02/23-03/02/13	Milwaukee Auto Show	Milwaukee, WI	Vehicle displayed
116	03/01/13	Madison Gas & Electric CNG Station Opening	Madison, WI	Vehicle displayed
117	03/06-7/13	10th Annual Sustainability Summit	Milwaukee, WI	Vehicle displayed
118	03/20/13	GE Ecomagination Event	Milwaukee, WI	WCTP information booth
119	03/23/13	Ripon College Panel	Fond du Lac, WI	WCTP update
120	03/28/13	Kwik Trip CNG Seminar	Grand Chute	Vehicle displayed
121	04/07-10/13	Energy Independence Summit	Washington, DC	WCTP update
122	04/11/13	Kwik Trip CNG Seminar	Lake Mills, WI	Vehicle displayed
123	04/24/13	Green Vehicles Workshop & Showcase	Milwaukee, WI	WCTP update
124	04/29/13	Vincent High School Drivers Ed Presentation	Milwaukee, WI	Introduce participants to WCTP
125	05/02/13	Kwik Trip CNG Seminar	Verona, WI	Vehicle displayed
126	05/07/13	WCTP Partner Showcase	Madison, WI	WCTP update and accomplishments
127	05/18/13	Things that Go	Appleton, WI	WCTP information booth
128	05/22/13	Pulaski High School Career Fair	Pulaski, WI	WCTP information booth
129	05/23/13	WI Sub-recipients for Clean Air Extravaganza	Milwaukee, WI	WCTP sub-recipients highlighted
130	06/01/13	Motors and Music	Sun Prairie, WI	WCTP information booth
131	06/07/13	100 Best Fleets Event	Milwaukee, WI	WCTP update
132	06/08/13	Vegan Fest	Madison, WI	WCTP information booth
133	06/13/13	Kwik Trip CNG Seminar	Janesville, WI	Vehicle displayed
134	06/19/13	GM Fleet Event	Milwaukee, WI	Vehicle displayed
135	06/20/13	Kwik Trip CNG Seminar	Baldwin, WI	Vehicle displayed
136	06/22/13	MREA Energy Fair	Custer, WI	WCTP update
137	07/06/13	Bay Area Car Club	Ashland, WI	WCTP information booth
138	07/09-11/13	WI Farm Technology Days	Dallas, WI	WCTP information booth
139	07/16/13	Alternative Fuel School Bus Workshop	Milwaukee, WI	WCTP information booth
140	07/20/13	Paperfest	Kimberley, WI	WCTP information booth
141	07/27/13	Milwaukee Car Show	Milwaukee, WI	Vehicle displayed
142	08/03/13	Elkhorn Classic Car Show	Elkhorn, WI	Vehicle displayed
143	08/08/13	Propane in the Park	Monona, WI	WCTP information booth
144	08/10/13	Waupun Truck Show	Waupun, WI	Vehicle displayed
145	08/10/13	Neenah's Farmers Market	Neenah, WI	WCTP information booth
146	08/17/13	Bike Federation Sustainability Fair	Milwaukee, WI	WCTP information booth
147	08/17/13	Stoughton Coffee Break Festival	Stoughton, WI	Vehicle displayed
148	08/24/13	Green Life Expo	Black River Falls, WI	WCTP information booth
149	09/18/13	UW Green Bay Campus Alt. Fuels Tour	Green Bay, WI	Vehicles displayed
150	09/27/13	Madison Science Fair	Madison, WI	WCTP information booth
151	10/04-06/13	Apple Festival	Bayfield, WI	WCTP information booth, Vehicle displayed
152	10/04/13	UW Milwaukee Alt Fuels Tour	Milwaukee, WI	Vehicles displayed
153	10/07-08/13	High Efficiency Truck Users Forum Conference	Chicago, IL	WCTP update
154	10/12/13	UW Oshkosh Alt Fuels Tour	Oshkosh, WI	Vehicles displayed
155	10/16/13	Marquette eLimo Event	Milwaukee, WI	Vehicles displayed
156	10/19/13	Sister Bay Classic Car Show	Sister Bay, WI	Vehicles displayed
157	10/23/13	GO Riteway Event	Oak Creek, WI	Vehicles displayed
158	10/23/13	UW Whitewater Alt Fuels Tour	Whitewater, WI	Vehicles displayed
159	11/01/13	Green Highway Workshop	Pewaukee, WI	Vehicles displayed
160	11/12/13	Kwik Trip CNG Event	New Berlin, WI	Vehicles displayed
161	11/13/13	Sustainability Event	Fond du Lac, WI	WCTP update
162	12/10/13	WCC Annual Meeting	Green Bay, WI	WCTP update& accomplishments
163	12/10/13	WCTP Partner Banquet	Green Bay, WI	WCTP update& accomplishments



*Milwaukee County's Hybrid Vehicle News Conference
January 31, 2011 in Milwaukee, WI*



*Bayfield's Annual Apple Fest is a great opportunity to teach
the public about the city's green initiatives*



*The City of Madison displayed one of their
hybrid bucket trucks at Public Works Day on
May 4, 2011 in Madison, WI*



*Marquette University's eLIMO at the 9th
Annual Sustainability Summit March 7-8,
2012 in Milwaukee, WI*



*The PHEV utility trucks at the Milwaukee County
unveiling event on April 20, 2012*



*Ron Ruppel, SunPower Biodiesel, talks
about the benefits of biodiesel at their
One Year Anniversary Event on May 25,
2012 in Cumberland, WI*



*Tom Brice, Madison Gas and Electric,
speaks about their experiences with
MG&E's PHEV utility truck at "Plugging into
the Future" hybrid event on August 23,
2012*



*Heritage Hill's History of the
Automobile September 8, 2012 in
Green Bay, WI*



*Captain Duane Scott, Jefferson County
Sheriff's Office, speaks to attendees on
September 29, 2012 in Jefferson, WI*



*Oconomowoc's National Alternative Fuel Vehicle
Day October 5, 2012 in Oconomowoc, WI*



*John Welch, Dane County, presents about
the County's return on investment by
fueling their fleet with CNG at Wisconsin's
4th Natural Gas for Transportation
Roundtable on January 29, 2013*



*Marquette University students educate attendees
about their senior engineering project on the eLIMO
October 16, 2013 in Milwaukee, WI*

In addition to the marketing and outreach efforts, the program management team coordinated efforts for alternative fuels and advanced vehicle technology training. In August 2010, WCC created a training and education plan by surveying all the sub-recipients. WCC then designed an overall matrix that served as an action plan and a working document to identify and address partner's needs, and foster viable strategies that remedy any remaining gaps in training. Eventually, due the technical nature of this portion of the project, the technical coordinator took over all of the training efforts for the programs.

Below is a list of specific training activities hosted by the WCTP or that were sub-recipient led:

	Date	Training	Location	Role/Purpose
1	02/04/10	WCTP Project Launch Meeting	Madison, WI	Introduction of program compliance requirements for sub-recipients
2	07/20/10	City of Milwaukee CNG Installation Compliance Training	Milwaukee, WI	Sub-recipient hosted training to inform equipment installers of compliance for building the CNG Stations prior to selection of the vendor
3	09/01/10	City of Madison – Eaton Hybrid System On-Site Training	Madison, WI	City of Madison Fleet Maintenance Supervisor met with Road-Ranger product specialist, Lucas Davis and reviewed power point demonstration on the safety issues of technicians working on hybrid equipment; sub-recipient was provided a copy of the power point for future use, vendor also provided additional training for fleet staff at time of vehicle delivery.
4	Ongoing	Bayfield County Employee Orientation	Washburn, WI	All employees reviewed a safety DVD from County's insurance company regarding emergency response considerations with hybrid vehicles. They are also asked to view the safety/information video on the Honda Insight web page before they are allowed to operate the hybrid vehicles for the first time. Designated persons were provided an initial hands-on familiarization with the vehicles when they were received.
5	10/26/10	Odyne Engine System Training	Kenosha, WI	Operator training included a review of the DUECO/Odyne engine system and a hands-on demonstration for participating sub-recipients, including Kenosha County and Milwaukee County.
6	03/14/11	Eco-Driving Training	Green Bay, WI	WCC conducted an eco-driving training for this sub-recipient to assist them in optimizing the use of their light-duty hybrid-electric vehicles.
7	04/01/11	Eaton Hybrid Engine System Training	Madison, WI	Technical training hosted by Eaton vendor for UW-Madison
8	07/01/11	Odyne Engine System Training	Madison, WI	Technical Training provided by vendor; attended by 12 maintenance technicians representing: Madison Gas & Electric, Stoughton Utilities, City of Madison, and Kenosha County
9	12/07-08/11	GREET Training Workshop	Lemont, IL	Technical Coordinator attended GREET training; brought back information as a tool for sub-recipients to analyze emissions from vehicles purchased
10	03/19/13	Dane County Management Training	Madison, WI	Technical Coordinator provided a presentation for management staff of to talk about the importance of using CNG vehicles. At this presentation the internal CNG refueling instruction guide that had been developed by Dane County was given to staff for the current and new vehicles that will be added to their fleet.
11	04/11/13	Dane County CNG Training	Madison, WI	Hosted 20 fleet managers and technicians from partner fleets at CNG training class at Dane County to provided information on Altec/Eco conversion systems.

	Date	Training	Location	Role/Purpose
12	10/03/13	Time Transport – CNG System Training	Franksville, WI	Held informational meeting at facility, coordinated by JX Peterbilt and presented by Ray Contreras, the Training and Technical Services Rep. for Agility Fuel Systems.
13	12/04-05/13	Time Transport – CNG System Training		Mechanics attended a 2-day training: “Natural Gas Vehicle Safety Training - Kenosha, WI” Both passed the test(s) and brought back information for Time Transport to use to maintain current CNG trucks and develop plan to build our own in-house maintenance facility.
14	Ongoing	Bestway Limousine Driver Training	Milwaukee, WI	Provided Bestway Limousine with driver training related to CNG fueling practices
15	Ongoing	GO Riteway Rousch CleanTech Training	Oak Creek, WI	Vendor provided GO Riteway with ongoing training for installation of LPG systems as they were delivered.
16	Ongoing	Madison Area Technical College - CNG Technician Training	Madison<W I	Continued to work with auto tech instructors at Madison Area Technical College to develop CNG technician training in the state

Marketing/Outreach/Training Campaign Summary		
		Total
Outreach Events	Number of Events	162
	Number of Attendees	22597
Training Events*	Number of Events	5
	Number of Attendees	97
Marketing/Advertising Activities	Number of Activities	47
	Number of Page Views, Website hits, etc.	5465
Other Activities	Number of Events or Activities	93
	Number of Attendees, Page Views, etc.	7695

*WCTP Hosted Training

TECHNOLOGY TRANSFER ACTIVITIES

PUBLICATIONS:

Publications	Date	Title	Link	Purpose
1	Jan 2010	WCTP Monthly Newsletter	Email Distribution	WCTP Updates, Partner Highlight - MMSD
2	Feb 2010	WCTP Monthly Newsletter	Email Distribution	WCTP Updates, Partner Highlight – Milwaukee County
3	Mar 2010	WCTP Monthly Newsletter	Email Distribution	WCTP Updates, Partner Highlight – Sun Power Biodiesel
4	Apr-May 2010	WCTP Monthly Newsletter	Email Distribution	WCTP Updates, Partner Highlight –
5	April 6, 2010	Fleet Partner Resource Guide	Attachment I	A tool for fleets to understand the technology and vendors available for alternative fuels and advanced vehicle technologies.
6	Aug 31, 2010	Marketing and Outreach Plan	Attachment II	Provide a detailed plan to sub-recipients guide marketing and outreach efforts
7	Dec 2010	WCTP Monthly Newsletter	http://www.wicleancities.org/pdfs/WCTPFleetNewsDec10.pdf	WCTP Updates, Partner Highlight –Paper Transport
8	Jan 2011	WCTP Monthly Newsletter	http://www.wicleancities.org/pdfs/WCTPFleetPartnerNewsJan11.pdf	WCTP Updates, Partner Highlight – MMSD
9	Feb 2011	WCTP Monthly Newsletter	http://www.wicleancities.org/pdfs/WCTPFleetNewsFeb11.pdf	WCTP Updates, Partner Highlight – Milwaukee County
10	Mar 2011	WCTP Monthly Newsletter	http://www.wicleancities.org/pdfs/WCTPFleetNewsMarch11.pdf	WCTP Updates, Partner Highlight – Sun Power Biodiesel
11	April 26,2011	Marketing Materials and Resource Guide	Attachment III	A tool for each sub-recipient to conduct their own outreach.

Publications	Date	Title	Link	Purpose
12	Apr/May 2011	WCTP Monthly Newsletter	http://www.wicleancities.org/pdfs/WCTPFleetNewsApril11.pdf	WCTP Updates, Partner Highlight – Stoughton Utilities
13	Dec 3, 10	Best Practices Guide for Neighborhood Electric Vehicles	Attachment IV	Provide prospective purchasers and current owners of NEVs with helpful information on operations, regulations and tips and suggestions for add-ons and driving in winter weather.
14	Jun 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Cities.html?soid=1103817697706&aid=WTfUPVq4zbo	WCTP Updates, Partner Highlight – Dane County
15	Jul 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Cities.html?soid=1103817697706&aid=B0Q3c27uwS8	WCTP Updates, Partner Highlight – Fox Valley Metro Police Department
16	Aug 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=sXfI0MR4P6Y#constantcontact	WCTP Updates, Partner Highlight – Kenosha County
17	Sep 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=qh9SI96vUq4	WCTP Updates, Partner Highlight – City of Durand
18	Oct 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=oF4PN367BUs	WCTP Updates, Partner Highlight – City of Milwaukee
19	Nov 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=48FT1XHA6mo	WCTP Updates, Partner Highlight – City of Bayfield
20	Dec 2011	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=y9U8DUONj9M	WCTP Updates, Partner Highlight – GO Riteway
21	Jan 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=AcuZPCsJRMl	WCTP Updates, Partner Highlight – UW Madison
22	Feb 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=JqVbYxbOAA	WCTP Updates, Partner Highlight – WPPI Energy
23	Mar 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=YTml5-aSwoE	WCTP Updates, Partner Highlight – Paper Transport
24	Apr 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=erpv8t_9sll	WCTP Updates, Partner Highlight – MMSD
25	May 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=rLa7dtrTXH8	WCTP Updates, Partner Highlight – Marshfield Utilities

Publications	Date	Title	Link	Purpose
26	Jun 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=Dd0fjVej9fM	WCTP Updates, Partner Highlight – Bayfield County
27	Jul 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=CbdFXAF5Kiw	WCTP Updates, Partner Highlight – Madison Gas & Electric
28	Aug 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=3LY0vPxfAjo	WCTP Updates, Partner Highlight – Marquette University
29	Sep 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=S9B0dy4ahZY	WCTP Updates, Partner Highlight – City of Milwaukee
30	Oct 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=-JSXAoEs9al	WCTP Updates, Partner Highlight – Jefferson County Sheriff's Office
31	Nov 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=j8s3KrTyjKk	WCTP Updates, Partner Highlight – Bestway Limousine, LLC
32	Dec 2012	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=hhogmLclbl4	WCTP Updates, Partner Highlight – WI Department of Corrections
33	Jan 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=I6GIFTpa4A	WCTP Updates, Partner Highlight –2012 Forward Fleet Awards
34	Feb 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=K1820BQuwxw	WCTP Updates, Partner Highlight –City of Madison
35	Mar 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=9kdt1x_MTp0#.UTdjlzCVfpo.email	WCTP Updates, Partner Highlight –Transit Express
36	Apr 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=T-7OqcD1kVw#.UVrys2fa-Tg.email	WCTP Updates, Partner Highlight –Dane County
37	May 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=P9lrdCa_8gA	WCTP Updates, Partner Highlight – Milwaukee County
38	Jun 2013	WCTP Monthly Newsletter	http://myemail.constantcontact.com/News-from-Wisconsin-Clean-Transportation-Program.html?soid=1103817697706&aid=Icz_MGILijo	WCTP Updates, Partner Highlight – Sun Power Biodiesel
39	Aug 2013	WCTP Monthly Newsletter	http://archive.constantcontact.com/fs164/1103817697706/archive/1114247754696.html	WCTP Updates, Partner Highlight –Transit Express

Publications	Date	Title	Link	Purpose
40	Sep 2013	WCTP Monthly Newsletter	http://archive.constantcontact.com/fs164/1103817697706/archive/1114639320632.html	WCTP Updates, Partner Highlight – Go Riteway
41	Oct 2013	WCTP Monthly Newsletter	http://archive.constantcontact.com/fs164/1103817697706/archive/1115050842686.html	WCTP Updates, Partner Highlight –MMSD
42	Nov 2013	WCTP Monthly Newsletter	http://archive.constantcontact.com/fs164/1103817697706/archive/1115454915377.html	WCTP Updates, Partner Highlight – UW Oshkosh
43	Dec 2013	WCTP Monthly Newsletter	http://archive.constantcontact.com/fs164/1103817697706/archive/1115862366237.html	WCTP Updates, Project wrap up

WEB, INTERNET, TELEVISION & RADIO:

Social Media	Date	Title	Link	Purpose
1	Jan 2010	Facebook Page Launched	https://www.facebook.com/WisconsinCleanTransportationProgram	to generate awareness of WCTP, keep fleet members aware of what other project partner accomplishments
2	January 2010	Twitter account launched	https://twitter.com/WiCTP	keep sub-recipients and the public informed of the Program's progress and successes
3	August 2010	Web site launched	http://www.wicleancities.org/wct-program.php	public informed of the Program's progress and successes
4	September 2010	Flickr account launched	https://www.flickr.com/groups/wctp/	Available to sub-recipients store, sort, search and share WCTP photos online

Radio	Date	Title	Link	Purpose
1	06/19/10	Interview - WHAD 90.7 FM	Custer, WI	Interviewed about the WCTP by Chuck Quirnbach, Environmental Reporter for Wisconsin Public Radio
2	04/22/10	"Public Access" program on WCTP for Trinity Broadcasting	Mayville, WI	WCTP Background
3	04/22/12	CBS58 Eye to Eye	Milwaukee, WI	WCTP Background
4	04/30/12	Milwaukee Public Radio	Milwaukee, WI	WCTP Background

TV/Video	Date	Title	Location	Purpose
1	08/06/10	Motorweek Clean Cities Success Stories	http://www.afdc.energy.gov/case/163	Highlight WCTP partner - City of Milwaukee
2	09/07/10	Announcement of Stoughton Utilities' deployment of a PHEV bucket truck	http://www.wsto-online.com/2010/09/stoughton-utilities-hybrid-bucket-truck-2010/	WCTP partner project announcement
3	11/27/10	WQOW TV 18 News	http://www.wgow.com/story/13549610/durand-to-introduce-neighborhood-electric-vehicle	The Eau Claire-based station reported the City of Durand's introduction of a neighborhood electric vehicle (NEV) flatbed utility truck at its annual Dazzle Day Parade.
4	Ongoing	Clean Cities TV episodes	https://www.youtube.com/user/CleanCitiesTV	Transit Express, Milwaukee County, Bayfield County,
6	Ongoing	YouTube Videos of WCTP partner/events	https://www.youtube.com/watch?v=UUXmZVVe19s	Jefferson County Sheriff's Office, City of Milwaukee, Transit Express, Dane County; Paper Transport, GO Riteway, Milwaukee County, SunPower Biodiesel, UW Madison, Marquette University, and Success of the WI Clean Transportation Program



RJ Bast, Director of Operations for GO Riteway speaks on camera to Motorweek



*The City of Milwaukee on their Experience Using Compressed Natural Gas
YouTube - Jeff Tews, Fleet Operations Manager for the City of Milwaukee, discusses their experiences fueling on CNG*



*Transit Express on their Success with CNG
YouTube - Mary Smarelli, President of Transit Express, gets interviewed by Lorrie Lisek, Executive Director of WCC*

MARKETING MATERIALS:

WCC developed and distributed a Marketing Materials and Resource Guide (Attachment III) as a tool for each fleet partner to conduct their own outreach. The Marketing Materials and Resource Guide included:

- Tips for writing press releases and media alerts;
- Tips for marketing projects;
- What is WCTP flier and WCTP fact sheet for partner use;
- WCTP program statistics; and,
- Flash drive including all of the information for ease of use.

NETWORKS AND COLLABORATIONS:

Several WCTP sub-recipients have been honored for their alternative fuels projects, below are some highlights:



Ron Bast (Front Row, Third from the Left), President and Owner of GO Riteway, was honored with Green Fleet's 2012 Sustainability Award



All Star Award Dane County Received the U.S Environmental Protection Agency's Landfill Methane Outreach Program's 2011 Project of the year



The City of Milwaukee, GO Riteway, Milwaukee County, Paper Transport, Sun Power Biodiesel, Transit Express, MMSD, Dane County, Madison Gas & Electric, and Chippewa County were recognized as Forward Fleets by Wisconsin Clean Cities in 2012



Jeff Shefchik (First from the Left), President of Paper Transport of the Year Award Received NGV America's Outstanding NGV 3PL Industry Leadership Award in 2012

PROJECT MANAGEMENT SUCCESSES AND LESSONS LEARNED

A major success of the program was the cohesiveness and work flow of the project management team. The technical assistant and WCC collaborated closely to aid the SEO in coordinating ongoing management of the WCTP. The work for the project was divided among the program management team according to expertise. Through the life of the program, the SEO managed the contract, invoicing and reporting; WCC handled the marketing and outreach efforts; and the technical coordinator handled training and technical issue resolution for the vehicles and infrastructure equipment. The consistency in the responsibility made it easier for the sub-recipients to know who to contact and how to get questions answered in an efficient manner.

The SEO and technical coordinator also worked with fleet sub-recipients to expedite vehicle purchasing and invoicing; provided assistance to fleet sub-recipients on infrastructure site selection and approval, vehicle selection and purchases and on federal compliances (NEPA, Davis Bacon, and Buy American). The program management team met on a weekly basis to make sure everyone was up-to-date on the progress of the program and assist where there were gaps and challenges.

The program management team also conducted site visits of all fleet sub-recipients. A total of 47 on location site-visits were made throughout the life of the program. Many conference calls were conducted as well for smaller or long-distance projects. These visits gave the team a first-hand look at the sub-recipient projects and the ability to verify equipment purchases and continued operation of vehicles and equipment.

Although there were limited issues in the program, the program management team was able to walk away from the program with more knowledge regarding technology reliability and performance. The team was able to better address technology issues with knowledge of the process of how to work with vendors and sub-recipients to expedite solutions.

Overall, the management of the program was success and the support provided by the WCTP resulted in significant adoption of alternative fuels and advanced technology vehicles and infrastructure throughout the state. The SEO continues to see this deployment efforts move forward beyond the program. The SEO will continue to work with WCC and fleets across the state to keep up the momentum to increase the use of alternative fueled vehicles and advanced-technology vehicles as a means to reduce U.S. dependence on imported petroleum, increase fuel economy and improve emissions.

ATTACHMENTS

- I. FLEET RESOURCE GUIDE**
- II. MARKETING AND OUTREACH PLAN**
- III. MARKETING MATERIALS AND RESOURCE GUIDE**
- IV. BEST PRACTICES GUIDE: NEIGHBORHOOD ELECTRIC VEHICLES**

Wisconsin Clean Transportation Program



Fleet Partner Resource Guide

Clean Cities

Clean Cities is a government-industry sub-recipient moderated by the U.S. Department of Energy, designed to reduce petroleum consumption in the transportation sector.

Clean Cities Wisconsin-Southeast Area, Inc. is coordinating the Wisconsin Clean Transportation Program in sub-recipient with the **Wisconsin Office of Energy Independence.**

<http://www1.eere.energy.gov/cleancities/>



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Biodiesel

American Lung Association of Wisconsin

- *Advocate for Clean Transportation Choices*

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Brookfield, WI 53005-2508

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Jolene.mcnutt@lungwi.org

www.lungwi.org

www.CleanAirChoice.org

Green Diesel Wisconsin Foundation

- *Promotion of renewable diesel alternatives, fuel quality assurance, education and outreach*

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National Biodiesel Board

- *National Trade Association for the Biodiesel Industry*

605 Clark Ave

Jefferson City, MO 65110-4898

(800) 841-5849

www.biodiesel.org

Wisconsin Biodiesel Association

- *Promoting an Accessible, High-Quality Biodiesel Supply for Wisconsin*

Hardy Sawall, President

1626 South Harbor Drive

Milwaukee, WI 53207

(414) 469-8534

rhsawall@innovationfuels.com

www.wibiodiesel.org

Infrastructure

Acterra Group

- *Turnkey Biofuels Service*

Jerry Schueller, General Manager-Wisconsin Offices

3781 Prism Lane

Kieler, WI 53812

(800) 289-7371 x311

jes@acterragroup.com

www.acterragroup.com/wisconsinaltenergy.pdf

Horizon Fuels LLC

- *Direct Renewable Fuels Marketing*

Andrew Koplin

405 East Forest Street

Oconomowoc, WI 53066

(262) 727-7062

akoplin@GOhorizonfuels.com

www.GOhorizonfuels.com

Electric

Electric Drive Transportation Association

- *National Industry Association for Electric Drive Vehicle & Infrastructure Manufacturers*

1101 Vermont Avenue, NW. Suite 401

Washington, DC 20005

(202) 408-0774

www.electricdrive.org/

Vehicles

Columbia Parcar Corporation

- *Manufacturers of Neighborhood Electric Vehicles (NEVs)*

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1115 Commercial Ave.

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www.parcar.com

Doering Leasing Co.

- *Fleet Vehicle Leasing Agency*

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The Electric Vehicle Store

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jay@pluginmn.com

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Ford Motor Company

- *Ford Transit Connect BEV (Battery Electric Vehicle)*

http://media.ford.com/mini_sites/10031/2011TransitConnect/

Donald C. Dewar, N.C. Region Govt. Acct. Mgr., Ford North American Fleet, Lease and Remarketing Opns.

(317) 575-4121

ddewar2@ford.com

International Motorwerks

- *Neighborhood Electric Vehicle (NEV) Sales*

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www.nevcarstore.com

Mitsubishi Motors

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<http://www.mitsubishi-motors.com/special/ev/>

Nissan

- *Nissan LEAF Electric Car*

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<http://www.nissanusa.com/leaf-electric-car/index.jsp>

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ZENN Motor Company

- *Manufacturer of Neighborhood Electric Vehicles (NEVs)*

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(310) 601-6751

www.zenncars.com

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Carbon Day Automotive

- *Electric Vehicle Charging Stations*

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www.carbodayautomotive.com

ElectriCharge Mobility

- *Electric Vehicle Charging Stations*

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Brookfield, WI 53005
(414) 916-9876
Danhealy57@aol.com
www.ecomobility.com

Plug-In Vehicle Solutions

- *Electric Vehicle Charging Stations*

Ray Scripture, VP of Sales
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Highland Park, IL 60035
(847) 641-1428
rsripture@getplugging.com
www.GetPlugging.com

Renewable Energy Solutions

- *Solar Panel Design & Installation for Vehicle Charging Stations*

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Waukesha, WI 53188
(262) 542-9200
matt@renewableenergywi.com
www.renewableenergywi.com

Ethanol (E85)

American Lung Association of Wisconsin

- *Advocate for Clean Transportation Choices*

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Brookfield, WI 53005-2508
(262) 703-4833
Jolene.mcnutt@lungwi.org
www.lungwi.org
www.CleanAirChoice.org

Choose Ethanol

- *Ethanol news*
- *E85 Station Locator-download for Tom-Tom or Garmin GPS units*

<http://www.chooseethanol.com/>

Renewable Fuels Association

- *National Trade Association for the Ethanol Industry*

One Massachusetts Avenue, NW, Suite 820

Washington, DC 20001

(202) 289-3835

<http://www.ethanolrfa.org/>

Vehicles

Doering Leasing Co.

- *Fleet Vehicle Leasing Agency*

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Milwaukee, WI 53225

(414) 461-4100

adam@doeringleasing.com

www.doeringleasing.com

Ford Motor Co.

- *Manufacturer of Flex-Fuel Cars and Trucks*

Donald C. Dewar, N.C. Region Govt. Acct. Mgr., Ford North American Fleet, Lease and Remarketing Opns.

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General Motors

- *Manufacturer of Flex-Fuel Cars and Trucks*

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Infrastructure

Acterra Group

- *Turnkey Biofuels Service*

Jerry Schueller, General Manager-Wisconsin Offices

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(800) 289-7371 x311

(608) 568-3900

jes@acterragroup.com

www.acterragroup.com/wisconsinaltenergy.pdf

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- *Direct Renewable Fuels Marketing*

Andrew Koplin

405 East Forest Street

Oconomowoc, WI 53066

(262) 727-7062

akoplin@GOhorizonfuels.com

www.GOhorizonfuels.com

Hybrid & Plug-In Hybrid Trucks

CalStart Hybrid Truck Users Forum (HTUF)

- *Expanding the Commercial Market for Medium- and Heavy-Duty Hybrid Vehicles*

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(626) 744-5600

rparish@calstart.org

<http://www.calstart.org/Projects/Hybrid-Truck-Users-Forum/Overview.aspx>

Vehicles

Eaton Corp.

- *Manufacturers of Medium- and Heavy-Duty Hybrid Drive Systems*

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Pardeeville, WI 53954

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www.eaton.com

Mid-State Truck Service, Inc.

- *Hybrid & Plug-In Hybrid School Bus Sales*

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(715) 406-4266 x1702

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www.midstatetruck.com

Odyne/Dueco

- *Manufacturers of Plug-In Hybrid Utility Trucks*

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Waukesha, WI 53186

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Idle-Reduction

Espar Heater Systems

- *Manufacturer of Direct-Fired Cab Heating Systems*

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www.espar.com

Idle-Free Systems, Inc.

- *Manufacturer of Idle-Reduction Systems*

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Madison, WI 53719

(608) 237-6361

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www.idlefreesystems.com

Transport Refrigeration

- *Sales & Installation of TriPac Auxiliary Power Units*

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www.thermokinggreenbay.com

Natural Gas (CNG & LNG)

NGV America

- *Natural Gas Vehicles for America*

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Washington, DC 20001

(202) 824-7366

www.ngvc.org

Vehicles

CNG Chicago, LLC

- *Natural Gas Vehicle Conversions*

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(847) 357-9666

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www.cngchicago.com (under construction)

Ford Motor Company

- *Ford Transit Connect Taxi w/CNG Prep Package*

http://media.ford.com/mini_sites/10031/2011TransitConnect/

- *Ford E-Series 5.4L and 6.8L vans w/CNG Prep Package*

Donald C. Dewar, N.C. Region Govt. Acct. Mgr., Ford North American Fleet, Lease and Remarketing Opns.

(317) 575-4121

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International Motorwerks

- *Honda Civic GX Sales*

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La Crosse, WI 54601

(608) 784-6440

Tom.schee@centurytel.net

www.hondamotorwerks.com

O'Brian Technology, LLC

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www.FuelTek.biz

www.AltechEco.com

Truck Country Freightliner

- *CNG Freightliner M2 Truck Sales*

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(920) 766-5222

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www.truckcountry.com

Infrastructure

Advance Fuel Systems

- *Natural Gas Vehicle Fueling Systems*

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Huntley, IL 60142

(262) 385-2303

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www.advancefuelsystems.com

ANGI Energy Systems, Inc.

- *Manufacturer of Natural Gas Compression Equipment and Integrator of CNG System Design*

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Clean Energy Fuels

- *CNG Fueling Facility Design, Construction & Management*

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GreenField Compression, Inc.

- *Production, Compression, and Storage Systems for Natural Gas*

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Propane (LPG)

Propane Education & Research Council

- *National Association Promoting Propane Vehicle Projects*

1140 Connecticut Ave. NW, Suite 1075
Washington, DC 20036
(202) 452-8975
www.propanecouncil.org

Vehicles & Engines

Baytech Corporation

- *Dedicated Propane GM 8.1L and 6.0L Heavy-Duty Engines for GM, Isuzu, and Workhorse Custom Chassis vehicles*

P.O. Box 1148
Los Altos, CA 94023
(650) 949-1976
www.baytechcorp.com

Blue Bird Corporation

- *Vision® Propane-Powered School Bus*
- 402 Blue Bird Blvd P.O. Box 937
Fort Valley, GA 31030
(478) 822-2047
www.blue-bird.com

Campbell-Parnell

- *EPA-certified LPG Conversion Systems*
- 1720 E Deer Valley Road, Ste. 101
Phoenix, AZ 85024
(623) 581-8335
www.parnellusa.com

Clean Fuel, USA

- *LPitm (Liquid Propane Injection) System for the GM 8.1L Vortec, Family 2 and Family 3 Heavy-Duty Engine*
- 1104 South Church Street
Georgetown, TX 78628
512-864-0300
www.cleanfuelusa.com

Cummins Westport, Inc.

- *Manufacturer of B-LPG Plus 5.9L Heavy-Duty Engine*
- 101 – 1750 West 75th Avenue
Vancouver, British Columbia
Canada V6P 6G2
(604) 718-8100
www.cumminswestport.com/products/blpgplus.php

IMPCO Technologies

- *Propane Fuel Conversions for: GM 6.0L MY 07, Ford F150 MY03 and 05 (ex-GFI), GM 8.1L, GM 6.0L MY 08*
- 3030 South Susan Street
Santa Ana, CA 92704
(714) 656-1273
www.impcoweb.com/about_impcoweb.htm

The LP Gas Shop, LLC

- *Eco-Power LP001 Propane Conversions*
- Josh Kreyer, Owner
N2652 Goose Pond Rd.
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Roush Performance Products

- *Ford F150/F250/F350 Pickup Propane Conversions*
- *Ford E150/ E250/E350 Van Propane Conversions*

36630 Commerce Road

Livonia, MI 48150

(800) 59-ROUSH

www.roushperformance.com

www.propanetruck.us

Technocarb Equipment LTD.

- *Propane Conversion Kits for Trucks & Automobiles*

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www.ferrellgas.com

General Information

U.S. Department of Energy Alternative Fuels & Advanced Vehicles Data Center

- *Clearinghouse of Data, Publications, Tools, Incentives and Information Related to Advanced Transportation Technologies*

www.afdc.energy.gov/afdc

HOPE3: Hybrid Owners Preserving an Energy Efficient Economy

- *Hybrid Vehicles Owners' & Operators Group*

www.hope3.org

Western Sustainability and Pollution Prevention Network

- *Online Green Fleet Resources*

<http://wsppn.org/fleet/>

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Marketing & Outreach Plan

Marketing & Outreach Plan

Wisconsin Clean Cities

Wisconsin Clean Transportation
Program

August 31, 2010



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Introduction

Wisconsin Clean Cities-SEA

Since 1994, Wisconsin Clean Cities – Southeast Area (WCC-SEA) has worked to improve Wisconsin’s air quality and advance its energy security by promoting the use of alternative fuels, alternative fuel vehicles, advanced technology vehicles and related infrastructure across the state.

Recognizing that achievement of the aforementioned goals requires a broad-based, collaborative effort to reduce petroleum consumption, WCC-SEA has been fortunate to build working sub-recipientships across the state with both public and private sectors.

Wisconsin Clean Cities-SEA’s Role in the Wisconsin Clean Transportation Program

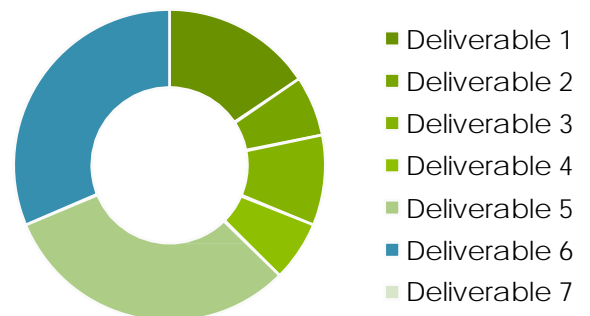
Paramount to its history of collaborative associations, however, is WCC-SEA’s recent opportunity to partner with the Wisconsin Office of Energy Independence on the Wisconsin Clean Transportation Program. As such, WCC-SEA is committed to helping the Wisconsin Office of Energy Independence manage the complexities of the Program, funded in part with \$15 million in American Reinvestment and Recovery Act monies via the U.S. Department of Energy’s Clean Cities Program and over \$17 million in leveraged funds.

Specifically, WCC-SEA will assist the Wisconsin Office of Energy Independence with management and planning duties, outreach and marketing efforts, and reporting requirements related to the Program. In addition, WCC-SEA will help to coordinate advanced technology vehicle purchasing, signage, post-deployment of vehicles and infrastructure, and training for all 31 program sub-recipients across the state.

WCC- SEA

Contract | Scope of Work

Deliverable 1	Project Management & Planning
Deliverable 2	ATV/AVT Purchases
Deliverable 3	Signage Coordination
Deliverable 4	Post-Deployment of Vehicles & Infrastr.
Deliverable 5	Training
Deliverable 6	Outreach/Marketing
Deliverable 7	Other Deliverables



Of the seven specific contract deliverables listed above, WCC-SEA will focus the majority of its efforts on training/educating program sub-recipients about their selected clean fuel technologies and conducting outreach/marketing efforts to promote the Wisconsin Clean Transportation Program objectives.

The following report articulates a plan for the latter, formulating marketing and outreach goals in light of the Wisconsin Clean Transportation Plan’s overall objectives, identifying target audiences, specifying methods and tactics for achieving marketing/outreach goals, establishing a budget and timeline for marketing/outreach activities and identifying methods for outcome measurement.

Marketing & Outreach Goals/Objectives

Wisconsin Clean Transportation Program – Overall Program Objectives

The Wisconsin Clean Transportation Program (WCTP) has a long-term goal of significantly reducing fuel consumption and emissions throughout the state of Wisconsin. To achieve this overall objective, *the four-year Program strives to support 1) increased use of alternative-fuel vehicles and advanced-technology vehicles, 2) installation of necessary and supportive infrastructure related to those vehicles, and 3) investments in necessary alternative-fuels training and technology.*

In order to effectuate these Program objectives, however, it is critical to educate potential consumers (both personal and commercial) about ATV/AFV technologies, their successful implementation, and their associated fiscal and environmental benefits. To that end, WCC-SEA has identified the following WCTP outreach and marketing goals:

GOAL 1: Educate the general public about the Wisconsin Clean Transportation Program, alternative fuels, alternative fuel vehicles, advanced technology vehicles, related infrastructure, laws, fiscal incentives and environmental benefits

GOAL 2: Educate businesses and fleet managers about the Wisconsin Clean Transportation Program, alternative fuels, alternative fuel vehicles, advanced technology vehicles, related infrastructure, laws, fiscal incentives and environmental benefits

GOAL 3: Keep the public, businesses, and fleet managers timely informed of Wisconsin Clean Transportation Program's implementation status, upcoming events, and related news concerning alternative fuels/advanced technology vehicles

GOAL 4: Promote the use of public access fueling stations

Target Audiences

As previously mentioned, capturing the interest of potential consumers (both commercial and personal) is key to effectuating the WCTP program's mission. As such, WCC-SEA will concentrate its outreach and marketing efforts on the following target audiences:



General Public

Specifically, WCC-SEA's will seek to promote the Wisconsin Clean Transportation Program and related technologies at the following levels:

- Local community residents near WCTP partner locations
- Wisconsin state residents
- Midwest Region residents

Businesses and Fleet Managers

WCC-SEA will also further concentrate its outreach and marketing efforts on the following businesses and fleet managers:

- Local businesses near WCTP partner locations
- Wisconsin businesses and fleet managers operating primarily in the state
- Mid to Large -scale regional businesses and fleet managers

Methods/Strategies for Achieving Outreach Goals

STRATEGIES FOR ACHIEVING GOAL 1:

GOAL 1: Educate the general public about the WCTP, alternative fuels, AFV, ATV, related infrastructure, etc.

- Website
- Social Media
- Events
- Print Media
- Radio

WEBSITE

One of the primary mechanisms WCC-SEA will utilize to educate the general public about the Wisconsin Clean Transportation Program, alternative fuels, AFVs, ATVs, related infrastructure, laws, incentives and environmental benefits will be the WCC-SEA's website and the WCTP webpage.

WCC-SEA will work to further develop this educational platform by creating "*Resources for the Public*" link on the Wisconsin Clean Transportation page. This resource list will direct public visitors to information about the following:

- General information about Alternative Fuels Types
- General information about Alternative Fuel Vehicles and Advanced Technology Vehicles
- General information on where to find Commercially Available AFVs and ATVs
 - WCC-SEA will provide a list and/or links to pertinent OEMs
 - Links to Find/Compare Search Tools on the Department of Energy's Website
- General information on Where to find Publicly Accessible Alternative/Advanced Technology Refueling Infrastructure
 - WCC-SEA will provide links to DOE's Alternative Fueling Station Locator/Map and will work to create a map of publicly accessible, WCTP infrastructure sites
- Federal & State Laws related to Alternative Fuels, Vehicles and Advanced Technology Vehicles
- Financial Incentives Related to Alternative Fuels, Vehicles and Advanced Technology Vehicles
- General Information about the Wisconsin Clean Transportation Program
 - Goals, Structure, Funding Sources, Contacts
 - Program Partner Directory and links to their applicable websites
 - News Sections/Events
 - Photo/Video Gallery

EVENTS

In addition to educating the public about the WCTP and related technologies via the WCC-SEA website and WCTP webpage, WCC-SEA will focus much of its outreach effort on public events and workshops. While the

travel costs and the number/frequency of events may preclude WCC-SEA staff from attending each event on an annual basis, the organization will work with OEI to attend those that are deemed most important and will strive to have a presence at all events either via speeches/presentations, staffing an informational booth about WCTP, or by arranging for distribution of print materials related to the WCTP.

National Energy Awareness Month

WCC-SEA will seek to participate in existing National Energy Awareness Month events throughout the State of Wisconsin or surrounding region. WCC-SEA will work to set up an informational booth at potential NEA Day events, displaying information about the WCTP and distributing educational print materials related to the WCTP, ATVs, AFVs, etc. Informational booths may include exhibiting/demonstrating specific vehicle types implemented by local Program sub-recipients.

Midwest Renewable Energy Association Energy Fair

Regarded by its organizer to be the "nation's premier education event," the Energy Fair is the largest and longest running event of its kind. The 2010 edition, held at the MREA's ReNew the Earth Institute in central Wisconsin, drew over 20,000 attendees to learn about renewable energy and sustainable living. WCC-SEA spoke on the WCTP and eco-driving in 2010. The 22nd Annual Fair, scheduled for June 17-19, 2011, will again feature a Clean Energy Car Show that will include vehicle demonstrations and exhibitors.

Earth Day

WCC-SEA will seek to participate in existing Earth Day events throughout the state, including possible events at the University of Wisconsin-Milwaukee, University Wisconsin-Madison, etc. WCC-SEA will seek to set up an informational booth at potential events, displaying educational information about the WCTP and distributing print materials related to the WCTP, ATVs, AFVs, etc. Informational booths may include exhibiting/demonstrating specific vehicle types implemented by local Program sub-recipients.

Wisconsin State Fair

WCC-SEA will seek to set up an informational booth at the Wisconsin State Fair and/or collaborate with applicable Program sub-recipients to display information about the WCTP in their booths. WCC-SEA will distribute informational print materials related to the WCTP, ATVs, AFVs, etc. Informational booths may include exhibiting/demonstrating specific vehicle types implemented by local Program sub-recipients.

Program Sub-recipients' Local County Fairs:

WCC-SEA will seek to set up informational booths at WCTP Program sub-recipients' local county fairs and/or distribute informational print materials related to the WCTP, ATVs, AFVs, etc. Informational booths may include exhibiting/demonstrating specific vehicle types implemented by local Program sub-recipients.

Wisconsin Clean Transportation Program Workshops

WCC-SEA will hold one or more annual Wisconsin Clean Transportation Workshops across Wisconsin once Program sub-recipients have begun deploying their selected technology or approach. Workshops will rotate across the state in locations that can best showcase Program successes, attract wide participation and generate additional publicity.

PRINT MEDIA

WCC-SEA will coordinate with the Wisconsin Office of Energy Independence to obtain and/or develop a list of local/state/regional press contacts and will work to publicly promote the WCTP and related technologies via the following print media outlets:

State & Local Newspapers:

- *WCC-SEA will coordinate with OEI to draft press releases concerning the WCTP, related events, program updates, etc. and will work to coordinate their submission to prominent state newspapers as well as Program sub-recipients' local newspapers*

Magazines articles:

- *WCC-SEA will coordinate with OEI to draft query letters, pitch letters and/or feature articles concerning the WCTP and will work to coordinate their submission to popular state/regional magazines such as Milwaukee Magazine, Madison Magazine, etc.*

Event Brochures/Handouts/Newsletters:

- *WCC-SEA will work to develop educational materials (including: handouts, brochures, newsletters, etc.) about the WCTP and related technologies for distribution at the aforementioned public events*
- *WCC-SEA will work to develop a consistent "brand/image" for WCTP to increase public recognition of the Program across all media types*

Posters/Fliers:

- *WCC will work to develop educational posters/fliers about the WCTP and will work with Program sub-recipients to encourage their display at Program partner businesses/organizations*

Mail Inserts:

- *WCC will seek out in-kind collaborations with Program Sub-recipients who widely distribute bills/ mailings to the public (potential projects could include requesting Sub-recipients donate inserts about the WCTP and place them in their standard public mailings; less costly in-kind donations could include requesting that Sub-recipients print information about the WCTP at the bottom of pre-existing/standard mailings)*

RADIO

WCC-SEA will coordinate with the Wisconsin Office of Energy Independence to obtain and/or develop a media contact list of prominent radio shows in the state and in local Program partner areas. WCC-SEA will contact these outlets and work toward setting up interviews, segments, short sound bites, public service announcements, etc. related to the Wisconsin Clean Transportation Program and related technologies. Potential radio outlets include:

1. *State/Local Morning Drive Shows*
2. *Wisconsin Public Radio*
3. *Other Auto Trade-related Radio shows/programs*

STRATEGIES FOR ACHIEVING GOAL 2:



WEBSITE

To better educate local/state/regional businesses and fleet managers about the Wisconsin Clean Transportation Program and related technologies, WCC-SEA will work to update the organization's website and WTCP webpage to include a "Resources for Businesses & Fleet Managers" page. The information provided will closely track that provided on the resources page for public visitors, but will also include the following, additional tools:

- The 2010 Fleet Resources Guide; and
- A Fleet Best Practices Manual (to be developed in conjunction with fleet partner training plans created by WCC-SEA)

EVENTS

WCC-SEA will utilize the following events and workshops to educate the local/state/regional businesses and fleet managers about the Wisconsin Clean Transportation Program and related technologies. Similar to its planned public events, the travel costs and the number/frequency of business/trade-related events may preclude WCC-SEA staff from attending each event on an annual basis. However, the organization will work with OEI to attend those that are deemed most important and will strive to have a presence at all events either via speeches/presentations, staffing an informational booth about WCTP, or by arranging for distribution of print materials related to the WCTP.

The Green Energy Summit

Initiated by the Wisconsin Technical College System, the Annual Green Energy convenes over 3,000 attendees from business, industry and academia for tours, exhibits and four days of plenary and parallel breakout sessions. Multiple program tracks address renewable energy, energy efficiency, sustainability, green business, social responsibility, green career pathways and water. The Wisconsin Office of Energy Independence (OEI) is a Summit Partner and WCC-SEA has participated in various ways in recent years, and provided a talk on the WCTP as part of its topical session on Biofuels and Green Transportation on Green Energy Day.

The next edition of the Summit, The Green Frontier: Historic Changes, Unprecedented Opportunities, is set for March 9 – 12, 2011, at the Frontier (formerly Midwest) Airlines Center in downtown Milwaukee.

Driving Toward 2020: The Green Vehicles Workshop & Fair

As host since the event's inception in 2004, Milwaukee Area Technical College (MATC) – Downtown Campus showcases the present and near future of energy-efficient and reduced-emission vehicles for all to see and learn. *Driving Toward 2020: The Eighth Annual Green Vehicles Workshop* will spotlight vehicles both in the marketplace and on the drawing board when held on Friday, April 22, 2011. This special edition of the Green Vehicles Workshop coincides with Earth Day, and will again demonstrate how alternative- fuel and advanced-technology vehicles are central to attaining cleaner air and energy independence. The event features remarks from public officials, panel presentations, a Vehicle Expo and related exhibits. Students, the academic community and fleet managers typically attend.

The Workshop extended its reach in 2010 when the Green Vehicles Fair debuted at MATC – Oak Creek's Campus. Aimed at the general public, the Fair included educational sessions, a Vehicle Expo and a tire pressure check called Pump Your Ride to Savings. Other event sub-recipients include WCC-SEA, the Milwaukee Hybrid Group, the American Lung Association of Wisconsin, We Energies, the Automobile Dealers Association of Mega Milwaukee (ADAMM) and the Green Diesel Wisconsin Foundation.

Forward Wisconsin: Reducing Diesel Emissions in the Long Haul

Forward Wisconsin 2.0 took place on February 26, 2009 at the City of Milwaukee Department of Public Works Field Headquarters. The Wisconsin Clean Diesel Coalition, WCC-SEA, the US EPA- Region 5, Midwest Diesel Initiative and the Wisconsin Department of Natural Resources presented the workshop, which examined the public health implications of diesel emissions and demonstrated various diesel emission reduction technologies and strategies. The workshop's broad-based audience included 100 participants, including fleet managers, trucking, school bus, construction, and locomotive industry, governmental and nonprofit organization representatives.

National Alternative Fuel Vehicle Day Odyssey

National AFV Day Odyssey, held biannually since 2002, is coordinated by the National Alternative Fuels Training Consortium. NAFTC works with member technical schools, Clean Cities coalitions and other groups to coordinate the event. WCC-SEA, the Wisconsin Clean Diesel Coalition and the Wisconsin DNR will hold Forward Wisconsin 3.0: Reducing Diesel Emissions for the Long Haul as an Odyssey event on 10/14/2010 at MATC – Oak Creek Campus. Madison Area Technical College will hold its event on Odyssey Day at its Truax Campus in Madison on 10/15/2010. OEI representative, Maria Redmond plans to present about the WCTP at both the Milwaukee and Madison events.

Clean Transportation Education Project Biofuels Workshop

The Clean Transportation Education Project (CTEP) is a two-year initiative funded by the DOE Clean Cities Program to provide 48 alternative fuel and advanced transportation technology workshops across the U.S. The North Carolina Solar Center, Wake Technical Community College and multiple industry sub-recipients provide content and deliver the one half-day event per year in six DOE Regions, in each of the following subject areas: biodiesel, ethanol, CNG/ propane; and idle reduction /fuel economy.

The Project engages selected Clean Cities coalitions to host and encourage attendance at the workshops. Attendees will learn about the technical, policy and future trends of alternative fuels and advanced transportation technologies and practices. Wisconsin Clean Cities will host a full-day workshop in September 2011 at a location to be determined around the subject of biodiesel and ethanol.

Other Events

- Resource Fair
- Alternative Fuel Conference and Expo.
- Hybridfest Green Drive Expo.
- Propane Road Show
- Biodiesel Workshop
- Wisconsin Clean Cities Stakeholder Meetings
- DOE Clean Cities – Clean Transportation Education Program Biofuels Workshop
- Wisconsin Clean Transportation Program Workshop
- Local Chamber of Commerce Meetings
- Local Rotary Club Meetings

PRINT MEDIA

WCC-SEA will coordinate with the Wisconsin Office of Energy Independence to obtain and/or develop a list of local/state/regional press contacts and will work to promote the WCTP and related technologies to businesses and fleet managers via the following print media outlets:

State & Local Newspapers:

- WCC-SEA will coordinate with OEI to draft press releases concerning the WCTP, related events, program updates, etc. and will work to coordinate their submission to prominent state newspapers as well as Program sub-recipients' local newspapers

Trade Publications:

- WCC-SEA will work with the Program's Technical Coordinator to develop a list of relevant trade publications and/or work independently to develop a list of trade publications/media contacts.
- WCC-SEA will work to draft feature articles concerning the WCTP, program events/updates, etc. and coordinate submission to relevant trade publications pending approval of OEI

Event Brochures/Handouts:

- WCC-SEA will work to develop educational materials (including: handouts, brochures, etc.) about the WCTP and related technologies for distribution at the aforementioned business/trade events
- WCC-SEA will work to develop a consistent "brand/image" for WCTP to increase businesses/trade recognition of the Program across all media types

RADIO

WCC-SEA will coordinate with the Wisconsin Office of Energy Independence to obtain and/or develop a media contact list of prominent radio shows in the state and in local Program partner areas. WCC-SEA will contact these outlets and work toward setting up interviews, segments, short sound bites, public service announcements, etc. related to the Wisconsin Clean Transportation Program and related technologies. Potential radio outlets include:

1. *Wisconsin Public Radio*
2. *Other Auto Trade-related Radio shows/programs*

STRATEGIES FOR ACHIEVING GOAL 3:

GOAL 3: Keep the public, businesses and fleet managers informed about the status and progress of the Wisconsin Clean Transportation Program

- Social Media
- Website
- Print Media
- Email

Social Media

As part of WCC-SEA's marketing and outreach efforts, the following social media accounts will be established:

1. Facebook (Although a WCTP currently is established, WCC-SEA will work with the WCTP's Technical Coordinator to make timely updates to the site)
2. Youtube
3. Flickr
4. Twitter

These social media outlets will be primarily used by WCC-SEA to provide the public/businesses/fleet managers with frequent status updates on the Wisconsin Clean Transportation Program's progress, events, and up to date changes associated with relevant technologies/laws/incentives/etc.

WEBSITE

While WCC-SEA envisions that its website and associated WCTP webpage will serve as the primary electronic mechanism for the public to gain general knowledge about the WCTP and its social media outlets will provide audiences with more frequent/immediate updates, WCC-SEA will also establish links on its website and WCTP page to WCTP social media accounts, including:

1. Twitter
2. Facebook
3. Youtube
4. Flickr

Additionally, WCC-SEA will create an RSS feed that will allow WCTP Facebook and Twitter followers to be automatically notified when WCC-SEA makes updates to the WCTP page. WCC-SEA will also seek to create a counter on the WCTP's webpage that will timely depict the number of gallons of petroleum that have been displaced via the program's efforts.

PRINT MEDIA

As aforementioned, WCC-SEA will coordinate closely with the WCTP Technical Coordinator and OEI to develop timely press releases concerning key Program events and status updates.

EMAIL

WCC-SEA will develop a contact to draft and electronically distribute a quarterly newsletter to its stakeholders on behalf of the WCTP. The Clean Cities Program's own Clean Cities Now newsletter will serve as a model. This newsletter will educate and inform general readers about the WCTP and its associated vehicle and fuel technologies. The newsletter will include the following standard section:

1. *WCTP News Update*
2. *Program Events in Review and Upcoming Events*
3. *Partner Spotlight*
4. *Tools You Can Use (e.g., the Mobile Alternative Fueling Station Locator)*
5. *Green Into Gold: a concise listing of timely tax credits or other incentives*

STRATEGIES FOR ACHIEVING GOAL 4:

GOAL 4: Promote the use of public access, alternative/advanced technology refueling stations

- Website
- Social Media
- Print Media
- Email

PRINT MEDIA

WCC-SEA will coordinate with OEI to write press releases on the status of WCTP infrastructure projects and where appropriate, will provide information to readers about the locations/broader network of ATV/AFV refueling stations.

WEBSITE

On the WCTP webpage, WCC-SEA will highlight progress of WCTP infrastructure projects and will provide visitors with links to the Alternative Fueling Station locator. Finally, WCC-SEA will work to provide visitors with a timely comparison of petroleum vs. alternative fuel prices.

SOCIAL MEDIA

WCC-SEA will timely update its social media accounts with information on fuel comparison prices and will provide followers with links to locations of publicly accessible, ATV/AFV refueling infrastructures. WCC-SEA will also timely track the progress of WCTP infrastructure projects and will provide followers with associated links/information.

EMAIL

Via its quarterly newsletters, WCC-SEA will provide readers with cost-benefit information related to alternative fuels, environmental benefits of their use, links/maps to publicly accessible, ATV/AFV refueling infrastructures and information related to the progress of WCTP infrastructure projects.

Budget

WCTP Marketing & Outreach Costs

WCC-SEA will focus the majority of its outreach and marketing efforts on website, social media, and earned media outlets, such as newspaper, magazine, radio, etc). As such, the majority of expenses for marketing and outreach efforts will be derived from the travel cost of attending events, developing annual WCTP workshops, and printing associated WCTP educational materials for distribution (brochures, postcards, information packets, etc.)

WCTP Workshop Costs

For costs associated with hosting WCTP workshops, please see the WCC-SEA Training Plan.

Event Travel Costs

WCC-SEA currently has \$10,000 under contract with OEI for travel expenses associated with the WCTP and will coordinate its projected annual event attendance accordingly after consulting with OEI.

Educational/Promotional Materials

The following are estimated printing costs for materials to be distributed at events:

Brochures

Color: \$100 /100 or \$310/500

B&W: \$30/100 or \$120/500

Flyers/Handouts

Color: \$60/100 or \$175/500

B&W: \$15/100 or \$50/500

Estimated Total Cost for stock photos to be used in print material: \$300

Timeline

The following is an anticipated timeline for WCC-SEA's marketing and outreach events. Although this is a comprehensive list of events, WCC-SEA will coordinate attendance at outreach events with OEI:

Quarter	Outreach Event	Marketing
1 (jan – March 10)	Green Energy Summit - Presentation	
2 (april - jun 10)	Resource Fair, Midwest Renewable Energy Fair, Green Vehicles Workshop & Fair, Alternative Fuel Vehicle Conference & Expo - Presentation	Governor's Press Tour; Facebook Launch
3 (jul-sep 10)	Hybridfest Green Drive Expo, Propane Road Show, Biodiesel Workshop	Coordinate Fleet Rollout Announcements, media events with OEI; continue to update website with resources/events; work on gathering press contacts; set up social media accounts
4 (oct-dec 10)	Science curriculum events for School Districts with Hybrid Buses, WI Clean Cities Stakeholder Meeting	Coordinate Fleet Rollout Announcements, media events with OEI; work on developing print media materials, update social media accounts
5 (jan-mar 11)	Green Energy Summit	Coordinate Announcements, media events with OEI; update social media accounts/website
6 (apr – jun 11)	Green Vehicles Workshop & Fair, Fleet Sub-recipients' County Fairs	Coordinate Announcements, media events with OEI; update social media accounts/website
7 (jul – sep 11)	DOE Clean Cities Clean Transportation Education Program Biofuels Workshop, Hybridfest Green Drive Expo, Wisconsin State Fair	Coordinate Announcements, media events with OEI; update social media accounts/website
8 (oct – dec 11)	WI Clean Cities Stakeholder Meeting	Coordinate Announcements, media events with OEI; update social media accounts/website
9 (jan-mar 12)	Green Energy Summit	Coordinate Announcements, media events with OEI; update social media accounts/website
10 (apr-jun 12)	Green Vehicles Workshop & Fair, Fleet Sub-recipients' County Fairs	Coordinate Announcements, media events with OEI; update social media accounts/website
11 (jul-sep 12)	Hybridfest Green Drive Expo, Wisconsin State Fair	Coordinate Announcements, media events with OEI; update social media accounts/website
12 (oct-dec 12)	WI Clean Cities Stakeholder Meeting	Coordinate Announcements, media events with OEI; update social media accounts/website
13 (jan-mar 13)	Green Energy Summit	Coordinate Announcements, media events with OEI; update social media accounts/website

14 (jul-sep 13)	Green Vehicles Workshop & Fair, Fleet Sub-recipients' County Fairs	Coordinate Announcements, media events with OEI; update social media accounts/website
15 (jul-sep 13)	Hybridfest Green Drive Expo, Wisconsin State Fair	Coordinate Announcements, media events with OEI; update social media accounts/website
16 (oct-dec 13)	WI Clean Cities Stakeholder Meeting	Coordinate Announcements, media events with OEI; update social media accounts/website

Outcome Measurement

Website

To monitor the efficacy and outcome of WCTP outreach and marketing efforts, WCC-SEA will utilize the following web tracking tools:

Google Analytics - WCC-SEA will utilize Google Analytics to:

- Establish and track goals for website hits
- Track the number of web hits, new page visitors, repeat visitors
- Track number of clicks/links to sub-recipients websites

Based on derived information, WCC-SEA will make adjustments to its website layout, content, weblinks, etc.

WCC will also seek to utilize PollDaddy.com to develop an online survey for web visitors. This will allow WCC-SEA to gain specific information on what visitors would like to see improved/added on the WCTP page.

Social Media

WCC-SEA will closely track followers on the WCTP's social media accounts:

- Facebook
 1. Track number of FB friends
 2. Track number of FB fans
- Twitter
 1. Track number of followers
 2. Track number of "re-tweets"

Email

WCC-SEA will utilize Constant Contact to distribute newsletters, allowing the organization to:

1. Track how many people look at the newsletter
2. Track bounce rate
3. Formulate reports



WCC-SEA

231 W. Michigan St., P318
Milwaukee, WI 53203
414-221-4958 (*phone*)
414-221-3961 (*fax*)

Dear WCTP Sub-recipients,

In support of the marketing and outreach efforts for the Wisconsin Clean Transportation Program, we have compiled a Marketing Materials and Resource Guide. This guide contains important information to assist in the marketing and outreach of your WCTP project, however, it is not the only available resource.

On behalf of WCTP, Wisconsin Clean Cities is here to support your marketing and outreach efforts. Wisconsin Clean Cities can assist you with coordinating an outreach event, writing a press release and/or developing media contacts. WCC is prepared to assist in all aspects of your marketing and outreach needs.

The binder is comprised of four sections:

1. Sample Press Releases – examples and formats to follow
2. Tips – on writing press releases, contacting media and more
3. AFV Information – specific information on project alternative fuel and/or advanced technology
4. Helpful Resources – general WCTP project information and miscellaneous resources

In addition to the print materials, we have provided the materials on the enclosed data drive. This provides a convenient resource for preparing personalized documents and accessing important project information.

We look forward to working together to promote your projects on behalf of the WCTP and the Wisconsin Office of Energy Independence. Please feel free to contact our office for any assistance you may require regarding the marketing and outreach of your project.

Best,

Laura Richard
Program Associate

Lorrie Lisek
Executive Director

Visit our website for more information regarding the
Wisconsin Clean Transportation Program at www.wicleancities.org.

WISCONSIN CLEAN TRANSPORTATION PROGRAM

Contacts

Driving Wisconsin Forward

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Marketing/Outreach:

Wisconsin Clean Cities

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WISCONSIN CLEAN TRANSPORTATION PROGRAM

Tips for Publicizing Your Project

Driving Wisconsin Forward

Publicizing your project to local media and the community is an important element of WCTP. Enhanced awareness and understanding can build momentum among stakeholders, increasing the development and use of alternative fuel vehicles. Some of you are already doing outstanding outreach in your communities; others are just getting started; and some of you are still waiting on delivery of your vehicles. The tips below were created to assist you by providing ideas, background information and tools to help you no matter where you are in the communication process. These ideas should be used as a springboard and personalized with your specific information.

Media Outreach

Media outreach is a key element involved in building public awareness of WCTP and alternative fuel vehicles. Both editorial coverage and public service advertising can be effective ways to reach a broad audience. Articles can tell a story and provide details about your achievements and AFVs (Alternative Fuel Vehicles) in general, but their publication relies on the interest of a reporter. There is no guarantee that a publication will run a story, and there is always the chance that they will not run the story that you want. You can control the message of public service announcements if you qualify.

Editorial Outreach

Step 1: Compile a Media List

The first step in implementing a sound media plan is to create a targeted list of media contacts. Wisconsin Clean Cities can help you compile a list of local print and radio reporters who cover the environment, energy, transportation and lifestyle beats. Targeted news outlets should include the local newspapers and periodicals, popular “morning drive” radio shows, and energy, environment or local news radio programs. *Tip: More and more reporters want information delivered to them via email so compile email addresses in addition to phone and fax numbers for media contacts.*

Step 2: Create Story Angle/News “Hook”

The second step is to create an interesting angle for the story. Your role will be to “sell” the story idea to the media. In order for reporters to cover the story, it must be relevant and newsworthy, conveying timely information that is of interest to the publications/station’s audience. *Tip: Reporters often complain that communications professionals try to sell the program or product they are pitching instead of selling the idea for the story. Make sure that you are pitching why this is a good story, not why it is a good program.*

- Pitch a story to a “morning drive” radio station with a local representative speaking about what it means to drive an AFV. The “morning drive” radio show is a great opportunity to reach a large segment of city residents with the story, and how alternative fuel vehicles benefit your city in particular.
- Pitch a human interest story on current AFV use in the community with “the future is here”. AFVs are inherently interesting because most people know a little bit about them, but they are unfamiliar with such basic information as how AFVs operate, what models are available, where AFV owners can refuel, the financial benefits of AFVs and how many different types already exist. Focus on the number and diversity of AFV vehicles that are in operation in your

community, and invite reporters to view these local fleets and interview the drivers. This story not only provides publicity for some of the participating fleets but dispels the common belief that AFVs are not yet available or in mainstream use.

- Pitch a story on the link between local pollution and AFV use. Use statistics to show the amount of local pollution caused by traditional gasoline vehicles and the amount of pollution that has been displaced or could be displaced by the use of AFVs. In order to put a “face on the issue”, provide equivalencies that people will understand and rally behind. For example, you could say that “the x (number) of AFVs currently on the road due to XYZ Business reduces the amount of air pollution equivalent to planting x (number) acres of trees”.
- Create an event to draw attention to your achievements. Events often provide timely and visual elements to your story.

Step 3: Create and Distribute Press Kit

After developing your pitch, the third step is to create a press kit that contains data to support this pitch as well as some background information for context. In your kit, you should include a pitch letter, a press release announcing your project, and background information on your technology or alternative fuel, which is included in your binder. Package these materials in an eye-catching way. *Tips: Reporters, depending on their beat and the city, get a large number of press kits each week. Make yours stand out.*

Step 4: Phone Follow Up

Approximately one week after sending the kits, you should follow up by phone with the reporters and verbally pitch your story. *Tip: The best time to call reporters is in the morning, since they are usually working under deadline in the afternoons.* Your verbal pitch should be supported by the data and statistics in your kit. Reporters rarely write a story based solely on a press kit, so your call is imperative. When you reach the reporter, he may be interested in your general story but not your angle. To maximize your chances of coverage, have a few back-up story angles ready to pitch as well. Also be prepared to collect additional data.

Community Outreach

Media attention is just one way to reach city residents and organizations to inform and educate them on your project. Through direct community outreach, you can tailor your message and choose the best vehicle for reaching specific segments of the populations.

Ideas:

Parades

County Fairs

Earth Day events

Green Fairs

Energy Awareness Events

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227 or laura.richard@we-energies.com

Driving Wisconsin Forward

When putting together press releases for your project, there are a number of basics of releases to keep in mind. Additionally, there are specific questions you should answer regarding your project.

- I. Develop an attention grabbing headline and elevator pitch—The media responds to news items that are the first, the biggest or involve large statistics like money, so frame your news accordingly.
- II. Lead with the most important information.
- III. Keep it brief, simple, and on point.
- IV. Answer the traditional who, what, where, when, why, and how questions.
- V. Use active voice and strong verbs.
- VI. Provide your contact information.
- VII. Suggested Questions to Answer
 - a. What year/make/model vehicle did you purchase?
 - b. What year/make/model vehicle did you replace?
 - c. What was average gas mileage on the replaced vehicle?
 - d. What inspired you to participate in the program? Environmental, cost savings, etc?
 - e. What was the average annual mileage on the replaced vehicle?
 - f. What is the anticipated average annual mileage on the new vehicle?
 - g. What type of application will the new vehicle be used in?
 - h. How much petroleum do you anticipate displacing?
 - i. How much do you anticipate saving in fuel and maintenance costs?
- VIII. *WCTP Disclaimer must be included in all press releases:* WCTP is administered jointly by the Wisconsin Department of Administration--Office of Energy Independence and Wisconsin Clean Cities—Southeast Area. Wisconsin Clean Cities is part of the U.S. Department of Energy's National Clean Cities initiative. Clean Cities supports local decisions to reduce petroleum consumption in the transportation sector through the use of alternative fuels, advanced technology vehicles, and fuel economy measures.
- IX. Check your grammar, spelling, and facts.
- X. Recheck your grammar, spelling, and facts.

Driving Wisconsin Forward

Increase your coalition's exposure to the public and garner more support from stakeholders by contacting local media to publicize your events, accomplishments, and activities. Follow these tips to engage local media effectively.

- Reach out to the media at least one week before events/announcements.
- Contact news beat staff before pitching ideas to editors.
- Schedule an in-person meeting or phone call for anything requiring more than five minutes.
- Take print materials to in-person meetings. E-mail materials after remote meetings.
- Provide your contact information.
- Thank your contacts for their time in a follow-up e-mail or note.

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227

WISCONSIN CLEAN TRANSPORTATION PROGRAM
Tips for Marketing with Social Networking Sites

Driving Wisconsin Forward

Online social networking websites bring people with similar interests together. Typically known to attract teenagers, these free networking sites are growing in popularity among professionals. That's because these sites help organizations quickly increase awareness about certain issues and encourage supporters to take action. By building an online network of contacts, you can leverage the ability of social networking sites to swiftly spread the word to an audience that reaches beyond your traditional stakeholder base.

Social networking sites give you an opportunity to communicate on a more direct and meaningful level with stakeholders and potential supporters, which adds certain value over traditional forms of communication such as direct mail, television, radio spots, and e-mail.

The first step when considering social networking is to identify your purpose and audience. Are you trying to reach young adults concerned about sustainability? At this point, social networking sites are best used to expand your audience and build local interest—especially among a tech-savvy audience who may not read traditional media. This also rings true as more organizations allow their employees to communicate through social networking, which has greatly increased the number of experienced professionals who utilize these websites.

Online social networking sites are best used to communicate brief and general information about your project, as well as to announce news, achievements, and events. People are not going to consult social networking sites for detailed information and are unlikely to even consider them trustworthy sources of technical subjects. Therefore, they shouldn't be used to share complex technical information. You can refer them to your website for that. Similarly, social networking should not be used for formal communications.

Many social networking sites offer the ability to create a group or page which might be good for your project.

A "group" is a community of people who share a common interest. By forming a group, you can increase interest in your project. Groups allow users to invite others to join, discuss topics, and post links and photos. When you join a group, you become a "member."

Similarly, organizations post "pages" where people are known as "fans." Pages are slightly less interactive than groups because fans can't post their own photos or links. However, pages show up more prominently than groups on individual profiles and rank higher on search engines. Pages are a good opportunity to keep your fans up-to-date about your coalition activities and events because this information is distributed through a news feed. When creating your group or page, be sure to briefly describe your mission, goals, and successes of the project.

Some questions to consider:

- What is your mission?
- Why do you think alternative fuels and advanced technology vehicles are important?
- What are your projects major accomplishments?

To increase traffic to your group or page, you can also place a link to your social networking site on your website.

Once your group or page is populated, expand your reach. Invite your friends to become members or fans, and ask them to recommend your group or page to their connection. Once people join, introduce yourself by individually e-mailing or messaging them.

Facebook and MySpace allow you to post photographs and video, which can make your site more exciting. Posting different types of media allow people to choose how they want to experience information. Also, the photos or video can remind members or fans of an event or allow them to “experience” the event second-hand. On Facebook, people can also “comment” on your photos, increasing your site’s interactivity. Similarly, if the photographs have a Facebook member in them, you can “tag” the photo with his/her name to call attention to it.

If you are interested in learning more about social networking or would like help setting up a site for your project, please feel free to contact the Wisconsin Clean Cities office. We are here to help.

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227 or laura.richard@we-energies.com

WISCONSIN CLEAN TRANSPORTATION PROGRAM

General WCTP Information

Driving Wisconsin Forward

- WCTP total W.S. Department of Energy award \$15,000,000; partner matching funds \$17,000,000

- Project started in January 2010; completed in December 2013
- Project Sub-recipients:
 - Wisconsin Office of Energy Independence – project lead and reporting
 - Wisconsin Clean Cities Southeast Area, Inc. – outreach and marketing
 - Technical Coordinator – training and technical coordination
 - 36 Public and Private Fleet Sub-recipients
- Objectives of project:
 - Increasing use of alternative-fuel vehicles (AFVs) and advanced technology vehicles at public and private fleets settings;
 - Installing infrastructure necessary to directly support AFVs or advanced-technology vehicles;
 - Maximizing the preservation and creation of jobs by investing in the technology and training necessary to continue to develop a strong alternative fuels industry; and
 - Providing ongoing program support for the operation, performance and maintenance of vehicles, infrastructure and other associated equipment acquired through the program.
- Scope of project:
 - 374 vehicles deployed by the end of 2011
 - 16 infrastructure sites open by the end of 2011
- Project portfolio:
 - Compressed Natural Gas
 - Hybrid Electric
 - Plug-in Hybrid Electric
 - Propane
 - E85
 - Biodiesel
 - Neighborhood Electric Vehicles
- WCTP estimates 1.6 million gallons of petroleum will be displaced by December 2013

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227

What is WCTP?

The Wisconsin Clean Transportation Program (WCTP), a far-reaching, four-year initiative, aims to achieve significant reductions in fuel and emissions in Wisconsin by supporting the increased use of alternative-fuel vehicles and advanced-technology vehicles, and the installation of infrastructure necessary to support these new vehicles. The U.S. Department of Energy's Clean Cities Program competitively awarded nearly \$300 million in American Reinvestment and Recovery Act (ARRA) funding to 25 cost-share projects nationwide in August 2009.

The Wisconsin Office of Energy Independence (OEI) was awarded the highest among the projects, \$15 million, and was the only one to receive the maximum amount allowable. Partnering with Wisconsin Clean Cities for Marketing, Outreach and Education of the program has enabled OEI to tap in to additional resources for the program sub-recipients.

The Wisconsin OEI project, deemed the Wisconsin Clean Transportation Program (WCTP), leverages \$17 million in cost-share from its 36 sub-recipients across the state.

WCTP Sub-recipients

<u>Partner</u>	<u>Technology</u>	<u>Infrastructure</u>	<u>Award</u>
Bayfield County	Compressed Natural Gas (CNG), Hybrid Electric	CNG	\$194,639
Bestway, LLC	CNG	-	\$40,000
Brown County	Hybrid Electric	-	\$10,000
Chippewa County Highway Department	Hybrid Electric		\$6,000
City of Bayfield	Neighborhood Electric	-	\$2,000
City of Durand	Neighborhood Electric	-	\$2,000
City of Madison	Hybrid Electric, CNG	-	\$249,000
City of Milwaukee	CNG	CNG	\$4,842,060
Dane County	CNG, Hybrid Electric	CNG	\$400,899
Fox Valley Metro PD	Hybrid Electric	-	\$4,000
Jefferson County Sheriff's Office	Propane	Propane	\$134,002
Kenosha County	Hybrid Electric	-	\$100,000
Madison Gas & Electric	Plug-in Hybrid Electric	Plug-In	\$100,000
Marquette University	Electric Vehicle	-	\$65,000
Marshfield Utilities	Plug-in Hybrid Electric	Plug-In	\$100,000
Milwaukee County	Hybrid Electric	-	\$470,000
Milwaukee Metropolitan Sewerage District	CNG, Hybrid Electric, Neighborhood Electric	-	\$52,000
Oconomowoc Transport Co., Inc.	Gasoline Electric Hybrid	Solar	\$1,843,049
Riteway Bus	Hybrid Electric, Propane	Solar, Propane	\$2,492,638
Stoughton Utilities	Plug-in Hybrid Electric	Plug-In	\$200,000
Sun Power Biodiesel, LLC	Hybrid Electric	Biodiesel	\$156,730
University of Wisconsin-Madison	Neighborhood Electric	-	\$72,000
We Energies	CNG	-	\$825,000
WI Department of Administration-Enterprise Operations	Electric Vehicle	E85	\$111,500
Wisconsin Department of Corrections	Neighborhood Electric	-	\$101,650
WPPI Energy	Plug-in Hybrid Electric, Hybrid Electric	Plug-In	\$1,120,000

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227

WISCONSIN CLEAN TRANSPORTATION PROGRAM

Sample Disclaimer

Driving Wisconsin Forward

WCTP is administered jointly by the Wisconsin State Energy Office and Wisconsin Clean Cities—Southeast Area. Wisconsin Clean Cities is part of the U.S. Department of Energy's National Clean Cities initiative. Clean Cities supports local decisions to reduce petroleum consumption in the transportation sector through the use of alternative fuels, advanced technology vehicles, and fuel economy measures.

Questions about WCTP – Please contact Wisconsin Clean Cities at 414.221.4227

Best Practices Guide: Neighborhood Electric Vehicles



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Purpose & Disclaimer

The purpose of this Best Practices Guide is to provide prospective purchasers and current owners of NEVs with helpful information on operations, regulations and tips and suggestions for add-ons and driving in winter weather. We tried to keep the guide simple and cover key information; however in keeping it concise, we could not cover every imaginable consideration. Therefore we encourage you to speak with the NEV dealer/supplier of your choice to assist you with vehicle purchase, service or maintenance questions.

Please also note that information provided within this Fleet Resource Guide is provided for informational purposes only, and does not constitute an endorsement of any company, organization or individual. Moreover, as a working document, the Guide is reviewed on an ongoing basis for accuracy. If you are aware of any necessary changes to the information offered herein, or wish to offer an additional listing that may or may not be included, contact Laura Richard at laura.richard@we-energies.com.

This guide is funded in whole by the Wisconsin Department of Administration, Office of Energy Independence, through the Wisconsin Energy Bureau under the terms and conditions of the contract agreement between the above entities and Wisconsin Clean Cities – Southeast Area.

Introduction to Neighborhood Electric Vehicles

Neighborhood electric vehicles (NEV) are in a class of vehicles known as LSV (low-speed vehicle). LSVs are vehicles with four wheels, a top attainable speed of no more than 25 miles per hour on a paved level surface, a gross vehicle weight rating of less than 3,000 pounds, self-propelled by gas or electric power, and exempt from state emissions testing.

A NEV is a type of low-speed vehicle (LSV) which runs solely on electricity via battery power. It is a four-wheeled vehicle whose top speed is greater than 20 miles per hour but not greater than 35 miles per hour. NEVs are useful for a variety of applications from police departments to public utilities.

NEVs benefit fleets, drivers, the environment, public health, and energy security. They displace imported petroleum with locally generated electricity. Neighborhood electric vehicles are energy efficient, and have been shown to aid in reducing greenhouse gas emissions, such as hydrocarbons, nitrogen oxides and carbon dioxides. They can be used to meet air quality requirements due to their lack of emissions, and can be entirely free of emissions if charged from an emission-free source, such as solar panels.

It is mandatory for manufacturers of NEVs to meet the minimum requirements of FMVSS (Federal Motor Vehicle Safety Standards) Standard No. 500 (refer to page 7) and to certify they have met these requirements. However, manufacturers are not required to meet safety regulations for performance of the items listed in the standard, except seatbelts. This is a major issue when purchasing NEVs because federal and state regulation requires they meet the safety standards when in use.

NEV Tips for Cold Weather Operation

Dress for the weather.

Heating and defroster units are available on all series of NEVS as an option. However, do not rely on the NEV's heater as it does not produce significant amount of heat and detracts from the range by using the battery power.

Store vehicle in a garage.

Warm starts to NEVs help retain the heat in the vehicle a little better. Heated garages are best, when possible.

Plan to use the car to go somewhere.

A duty cycle that involves the user being in the car all day is not very practical, but a trip to a destination is fine. Sitting in the car all day can be draining to the user, especially in winter.

Plan consistent battery maintenance.

The major culprit for NEV failure is the batteries. With either extreme cold or heat conditions, the batteries should be checked more often, adding distilled water to the cells where needed. Performing battery maintenance prior to and after winter will prevent the plumbing system from freezing. It is important to keep the cable connections clean and tight. Lead batteries use lots of water during normal use. If not maintained properly, the normal life of the batteries will be reduced significantly. Batteries should be inspected and topped off every other week and any corrosion on the battery posts or connections should be sired brushed off.

One option to consider for wet cell (also known as flooded-cell) batteries is a single-point battery watering system. This centralized filling system uses a squeeze ball, like the one used to start a boat's outboard motor, to fill all of the battery cells at once. With all of the batteries connected to common tubing, each valve independently shuts off water flow to the cell when the proper electrolyte level is reached, allowing the batteries to be filled precisely every time. This system significantly reduces time needed to water batteries. Contact your NEV vendor for suggestions on finding systems compatible with your vehicle.

Check suspension.

The front suspension has three grease fittings on each side. Make sure these are checked and maintained at least once every three months.

Towing tips.

If the vehicle loses power in the field and needs to be towed, make sure the key is in the off position and the vehicle is in neutral. Not following these steps will damage the electric motor beyond repair and could start a fire.

Emergency brake.

Make sure the emergency brake is off before driving. Leaving the emergency brake on when driving will glaze the brake pads and reduce stopping power.

Watch for snow.

Vehicle use is discouraged if there are 3 or more inches of snow on the ground.

Practice safe driving.

Drivers should drive with extreme caution in the winter. These vehicles are light and tend to slide on ice and snow more than the average vehicle. Use plenty of caution, take your time, and allow for greater stopping distances when bringing the vehicle to a complete stop.

Keep them plugged in when not in use.

In very cold weather batteries take longer to charge, have less capacity, and can freeze if the charge level is not kept above 50%. Also, having a vehicle ready to ride at all times of the day is more convenient for the user.

Use them every day.

NEVs respond well to regular use and their range improves. The battery does not respond well to sitting for long periods and sporadic use. However, if the vehicle needs to be stored for an extended period of time, turn on the main switch and charge the batteries weekly.

Keep the vehicle clean.

Push the snow off right after a snow so the sun can melt the rest – do not let them get buried in snow and ice. If driven through snow or mud, keep the undercarriage of the vehicle clean by simply hosing it off. Allowing mud, snow or debris to remain will adversely affect the cooling of the charger and controller. Also, salt from the roads can cause extreme corrosion to the electrical connections and body.

What is the story with propane heaters?

Propane heaters have mixed reviews. Some resellers do not get involved in installing propane heaters and don't recommend it for safety reasons. Venting is critical to its safe use on NEV technology.

Winter add-ons that can be purchased:

Always check with the manufacturer first. These items may be accessories you can purchase with the vehicle, or there may be specifications or tips the manufacturer can provide about these items. Please consider winter driving needs and accessories if at all possible when specing the vehicle for purchase. However these items can be purchased and installed after purchase if needed.

- Snow tires or off-road tires –
 - Most NEVs are using 13" tires. An aggressive tread tire does help, but make sure there is ample wheel well and tire turning clearance.
 - One operator found that there are several sources where you can purchase “knobby” AVT tires that will provide improved winter driving capabilities. As noted above, make sure they fit your vehicle and there is ample wheel well and tire turning clearance.
- Heated battery cover
 - Whether or not using heated battery covers are beneficial is debatable. Some feel it does not increase winter MPG significantly and should not be used. Rather the owner/driver should keep the battery cleaned and charged with good connections and water level. Conversely, others would strongly recommend using a heated battery cover, affirming its value to battery performance in winter.
 - If you would like to purchase or research heated battery covers, start with your manufacturer. The manufacturer may have a winter package for the NEV, or you can find aftermarket heating pads and install them yourself.
- Heated seats or seat covers are available from a number of sources.

Wisconsin Clean Cities cannot endorse any specific vendors for merchandise. Add-ons can be purchase through local vendors or through the internet.

NEV Safety

In Wisconsin, NEV operation is deemed permissible by the governing bodies of individual municipalities, while the WI DOT controls licensing and registration. Federal law mandates NEVs can only operate on roadways that have a speed limit of 35 miles per hour or less. NEVs are categorized under the FMVSS (Federal Motor Vehicle Safety Standards) Standard No. 500 for LSVs. The standard outlines safety conditions and testing criteria for LSVs to ensure that those “operated on public streets, roads and highways are equipped with the minimum motor vehicle equipment appropriate for motor vehicle safety.”

FMVSS Standard No. 500

Standard No. 500 requires that the vehicles are equipped with:

- headlamps,
- front- and rear-turn signal lamps,
- tail lamps,
- stop lamps,
- red reflex reflectors (one on each side and one of the rear),
- exterior mirror on the driver’s side and either an exterior mirror on the passenger side or an interior mirror,
- parking brake,
- AS-1 or AS-5 windshield,
- vehicle identification number (VIN), and
- Type 1 or Type 2 seat belt installed at each seating position.

Testing

While vehicles capable of reaching highway speed are safety-tested through NHTSA (National Highway Traffic Safety Administration), NEVs are tested through the NEV America Program. NEV America is sponsored by the U.S. Department of Energy (DOE) Office of Transportation Technology to provide for independent assessment of NEVs. Moreover, the DOE recognizes the NEV America Test Program as a requisite for funding of programs involving NEVs.

The testing requires that the vehicles meet several conditions, including ambient conditions, road test surface, vehicle conditions, tire inflations pressure, break-in conditions, vehicle openings, and battery charge. Each vehicle must have a maximum speed of 25 miles per hour and meet the safety requirements listed above. To obtain the maximum speed performance, the maximum attainable speed of the vehicle is measured over a distance of one mile from the starting point and then repeated in the opposite direction.

Beyond Safety Testing

There are some additional safety considerations to think about. Because of the design of some NEVs, there are blind spots when driving. Since the vehicles are so quiet, some users have designed simple driving courses to provide drivers with an opportunity to practice driving the vehicles. It is imperative that drivers undergo appropriate training and use common sense when operating.

NEV Laws & Incentives

Wisconsin State Statute 349.26

“A self-propelled motor vehicle that has successfully completed the NEV America test program conducted by the U.S. Department of Energy (DOE) and conforms to the definition and requirements in the Federal Motor Vehicle Safety standard for low-speed vehicles under Title 49 of the Code of Federal Regulations, section 571. A golf car is not considered an NEV. The governing body of any city, town, or village may be ordinance allow the operation of an NEV on a roadway that has a speed limit of 35 miles per hour or less.”

2009 Senate Bill 321

Current law allows a municipality, by ordinance, to authorize the use of a Neighborhood Electric Vehicle (NEV) on roadways under its jurisdiction that have a speed limit of 35 miles per hour or less. However, if the roadway is a connecting highway or the roadway crosses a state trunk highway, the following must apply in order for the ordinance to be valid: (1) the municipality must provide written notice to the Department of Transportation (DOT) of the ordinance, including identification of any connecting highway or state trunk highway intersection to which the ordinance applies; and (2) within 21 days of receiving the notice, DOT consents or fails to object to the use of NEVs on the connecting highway or through the intersection crossing the state trunk highway.

2009 Senate Bill 321 allows a municipality, by ordinance, to authorize the use of NEVs on any roadway within a municipality that has a speed limit of 35 miles per hour or less.

Assembly Substitute Amendment 1 allows the operation of a Low Speed Vehicle (LSV) on certain highways at 25 miles per hour or less and includes NEVs in the definition of LSV. In general, the substitute amendment allows the operation of LSVs on any highway that has a speed limit of 35 miles per hour or less that is under the jurisdiction, for maintenance purposes, of a municipality or county. Any municipality or county may prohibit the use of LSVs on highways under their jurisdiction by ordinance. The substitute amendment gives preference to a municipality's determination regarding LSV operation.

Assembly Substitute Amendment 1 contains exceptions to the general rule for intersections crossing state trunk highways, connecting highways, expressways, freeways, or controlled-access

highways. LSVs may be operated on a connecting highway only if the connecting highway has a speed limit of 25 miles per hour or less **or** the municipality or county with jurisdiction has adopted a valid ordinance. LSVs may be operated through intersections where the highway under the jurisdiction of the municipality or county crosses a state trunk highway **or** the connecting highway has a speed limit of 35 miles per hour or less and traffic at the intersection is controlled by traffic control signals.

The substitute amendment exempts intersections where the highway crosses a freeway, expressway, or controlled-access highway from the general authorization. However, a municipality may adopt an ordinance authorizing the use of LSVs on any roadway that has a speed limit of 35 miles per hour or less located within the territorial boundaries of the municipality regardless of whether the municipality has jurisdiction over the roadway, which may include intersections where the highway crosses an expressway, freeway or controlled-access highway.

Operating an LSV in excess of 25 miles per hour or on those roads not authorized under the substitute amendment may result in a fine of not more than \$200 and assessment of two demerit points against the person's driving record.

<http://legis.wisconsin.gov/lc/publications/amendment/2009/PDFs/sb321.pdf>

Code of Federal Regulations, Title 49, Section 571

Section 571 is the Federal Motor Vehicle Safety Standards, which affects all motor vehicles or the manufacture of items of motor vehicle equipment on or after September 1, 1971.

To view all standards of the section, visit:

http://www.access.gpo.gov/nara/cfr/waisidx_00/49cfr571_00.html

Standard No. 500; Low-speed vehicles

The purpose of this regulation is “to ensure the low-speed vehicles operated on the public streets, roads, and highways are equipped with the minimum motor vehicle equipment appropriate for motor vehicle safety.”

To read more about this regulation, visit:

http://www.access.gpo.gov/nara/cfr/waisidx_00/49cfr571_00.html

Qualified Plug-In Electric Drive Motor Vehicle Tax Credits Through December 31, 2011

Credits are available for:

- qualified plug-in electric vehicle conversions are eligible for a tax credit for 10% of the conversion cost, not to exceed \$4,000
- the cost of qualified low-speed electric vehicles up to 10%, not to exceed \$2,500

(Reference [Public Law](#) 111-5, Sections 1141-1144, and 26 [U.S. Code](#) 30, 30B, and 30D)

More information at <http://www.irs.gov/>

NEV Resources

NEV America Specifications & Test Procedures

http://www1.eere.energy.gov/vehiclesandfuels/avta/light_duty/nev/nev_tests.html

Testing Reports

http://www1.eere.energy.gov/vehiclesandfuels/avta/light_duty/nev/nev_reports.html

Special Reports

http://www1.eere.energy.gov/vehiclesandfuels/avta/light_duty/nev/nev_projects.html

Wisconsin Department of Transportation Low-Speed Vehicles

<http://www.dot.state.wi.us/drivers/vehicles/title/nev.htm>

Petroleum Reduction Planning Tool

<http://www.afdc.energy.gov/afdc/prep/index.php>

Light-Duty Vehicle Search (Find & Compare)

http://www.afdc.energy.gov/afdc/vehicles/search/light/#pane=low_speeds

Sources

Low-speed vehicles, WI DOT, 27 Oct 2010

<http://www.dot.state.wi.us/drivers/vehicles/title/nev.htm>

US DOE EERE AFDC Federal & State Incentives & Laws, 16 Nov 2010

<http://www.afdc.energy.gov/afdc/laws/>

Code of Federal Regulations (CFR), 1 Apr 2010

http://www.access.gpo.gov/nara/cfr/waisidx_00/49cfr571_00.html

Wisconsin Laws

<http://legis.wisconsin.gov/lc/publications/amendment/2009/PDFs/sb321.pdf>