



Tucson Regional Coalition
A PROGRAM OF
Pima Association of Governments



Tucson Regional Clean Cities Coalition | A program of Pima Association of Governments | CLEAN TIMES NEWSLETTER | Oct - Dec 2010

Clean Cities **U-HAUL** Member Highlight

This quarter's member highlight comes to us from U-Haul International. U-Haul is based in Tempe and is a strong contributing member of the Tucson Clean Cities Coalition. We thank U-Haul for the efforts they are making to advance clean fuels in Arizona.

U-Haul International is a corporation known for services in goods movement mobility. More recently, U-Haul has advanced in the alternative fuels market, specifically by using propane autogas. After Roush Inc. successfully developed Liquid Petroleum Injection Technology for the chassis fuel system, U-Haul has considered propane conversions in both service and rental fleet vehicles.

Furthermore, propane conversions make sense for the company as U-Haul centers traditionally distribute propane nationwide. Current propane distributors have the ability to distinguish between autogas and non-highway use pricing, such as barbeque tanks. In order to provide for a more familiar refill experience U-Haul has worked to upgrade motor pumps. As a distributor of alternative fuel, U-Haul expects to be part of the development of propane corridors. These corridors would provide motorists with a consistent distributed network of refilling stations along major U.S. highways. The use of alternative fuels will not only support U-Haul's business and goal to manage and mitigate its greenhouse gas emissions, but will support the goal of the nation's clean cities coalitions: petroleum displacement.

Visit U-Haul's Web site to find propane refill stations: www.uhaul.com/propane/



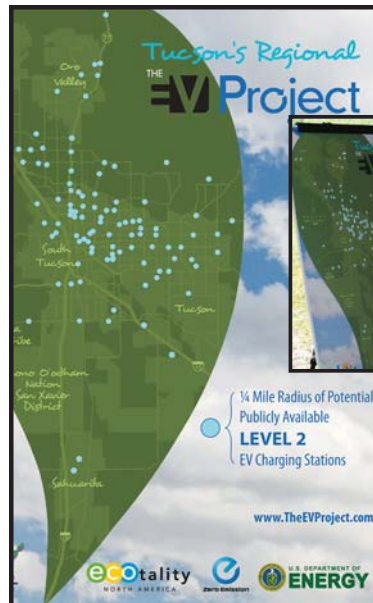
EV Project Maps the Future of Tucson

Tucson will soon be a great place to own an electric vehicle (EV). The Tucson Clean Cities Program has worked diligently with the U.S. Department of Energy and ECotality North America in planning EV infrastructure in Tucson. On Oct. 22, a map of charging stations proposed for Tucson was revealed. At a special media event at Tucson Botanical Gardens, Clean Cities Director Colleen Crowninshield unveiled two maps, one showing level 2 EV charging stations and one showing DC Fast Charge EV stations.

Level 2 stations will constitute the majority of available stations and have the capability to recharge EVs in 4-6 hours using 220 volt power.



Don Karner, President of ECotality, speaking to attendees at the EV infrastructure media event at Tucson Botanical Gardens.



Colleen Crowninshield, Clean Cities Manager, answering questions at the EV infrastructure media event.

Level 2 stations are intended for commercial and business use and will be the type installed in homes. DC Fast Charge stations have the ability to charge compatible EVs up to 80 percent in 30 minutes and are intended for high density areas or travel corridors. Over 200 EV charging stations will soon occupy all corners of the region, from Oro Valley in the north to Sahuarita in the south and east to Tanque Verde.

The charging station locations were carefully planned to correspond to areas of high travel demand, and to locations frequented by high percentages of the population such as entertainment and shopping venues and places of business. Because of the nature of EV charging, destination charging is more convenient than conventional in-route refueling.

An Evening with Doug Fine



Does living sustainably mean moving into a cave and living off berries and rainwater? Or, can we protect the planet while surfing the Internet and rocking out on our iPods? Organic Cowboy Doug Fine seeks to answer these

questions. On Oct. 6, he brought his quest for sustainable modern living to Tohono Chul Park in Tucson for "An Evening with Doug Fine," presented by Tucson Clean Cities.

Fine, an adventure journalist, NPR contributor and author of *Farewell My Subaru*, posed the question, "Can a regular American kick his addiction to oil and live more locally?" Tucsonans were treated to a recounting of Fine's sundry adventures from living "off the grid" in New Mexico. During the course of his ongoing experiment, Fine has raised goats and chickens for milk and eggs, bartered locally for as many staples as possible, grown veggies from local seeds, converted his remote desert ranch to solar power, and driven on straight vegetable oil.

The realization and motivation behind Fine's mission are that people want to live a green lifestyle, but are often unable or unwilling to forgo their modern amenities. Not everyone can move to a ranch and raise chickens, but not everyone has to. Fine hopes to lead by example, and encourages those who want to make a difference to start with small steps, not drastic lifestyle changes. As Fine said, manual labor in your own vegetable garden isn't so bad, as long as you can come inside to your Netflix.

To learn more about Doug Fine's pursuit of sustainability, visit his Web site at: www.dougfine.com.



Author, Doug Fine and Clean Cities Manager, Colleen Crowninshield, at the event.

Zero Race Electrifies Tucson

A race around the world in 80 days seems challenging enough, but add to the mix a few people attempting the feat with zero vehicle emissions, and you have the truly amazing Zero Race. Louis Palmer, the first man to circumnavigate the globe in a solar-powered vehicle, conceived of the race to raise awareness that zero-emission technology is reliable, affordable and ecologically responsible.

As part of its North American leg, the Zero Race team partnered with Tucson Clean Cities to highlight its zero-emission journey with a stop at Bookmans on Nov. 23. Special guests at the event included U.S. Rep. Gabrielle Giffords and Pima County Supervisor Ray Carroll.

Congresswoman Giffords and Supervisor Carroll spoke of their support of electric vehicle infrastructure and alternative fuels against the backdrop of charging Zero Race vehicles.

The event also gave local EV owners a chance to come together, exhibit their own

electric vehicles, and talk with the racers about their experiences. Across the country, the racers have been supported by networks of EV owners groups including the Tucson Electric Vehicle Association.

One of the goals of Zero Race is for each car to remain "carbon neutral" throughout the race. While it may not be possible to charge the vehicles using emission-free power at every stop, each of the race teams is sponsored by a company or organization in their home country that will produce the equivalent amount of energy needed to power the vehicles from alternative sources. That energy will be fed into the grid to offset any unavoidable carbon output.

After leaving Tucson, the Zero Race continued across the Southwest into Mexico. The racers ended their North American race leg at the World Climate Change Conference in Cancun, raising awareness of sustainable alternative transportation options.



Zero Race racing team and Clean Cities Manager Colleen Crowninshield.



Tracer race car.



U.S. Rep. Gabrielle Giffords and Pima County Supervisor Ray Carroll spoke of their support of electric vehicle infrastructure and alternative fuels.

First Marana Car Care Day a Success

As everyone knows, prevention is the best medicine. And just like people, cars need regular checkups even if they seem to be running fine. This was the idea behind the first Marana Car Care Day, a collaborative event between the Town of Marana, the Marana Chamber of Commerce, and Tucson Clean Cities.

Vehicle owners were invited to come to the Marana Operations Center on Dec. 11 to receive a free car checkup. While owners waited, Marana's Fleet Department gave their cars a thorough inspection to determine if any maintenance issues could be hindering the safety or efficiency of the vehicle. Vehicle owners also were given the opportunity to discuss vehicle maintenance with local car care professionals at a number of booths set up especially for the event.

Sustainable Flare at the Green Living Fair

Interested in finding ways to live more sustainably but have trouble knowing where to start? Recycling and reducing water use are great first steps. However, if you're interested in taking your green mission a step further it can be beneficial to talk to the pros. The Green Living Fair, sponsored every year by Habitat for Humanity's Habistore, is an excellent outlet to get acquainted with great green advice first hand.

Homes and transportation account for 50 percent of the energy consumed in the United States. We spend a great deal of time at home or in our vehicles, so it makes sense to start saving energy in these places first. The exhibitors at the Green Living Fair offer solutions and suggestions for everyone from the casual energy conserver to those who push the boundaries of energy independence.

Held in partnership with Alternative Fuel Day Odyssey in October, the fair featured multiple booths where attendees talked to exhibitors like PAG Clean Cities, BICAS, Mrs. Green, Pima County Green Building, Tucson Electric Power Co., Watershed Management Group, and many more green-minded organizations.

Topics covered at the 2010 fair included green building and remodeling, solar power, home energy efficiency, resource conservation, waste reduction, gardening and landscaping, alternative fuels and vehicles, bicycle commuting and alternative transportation, and rain water harvesting. Missed this year's fair? Be sure to make visiting the Green Living Fair a green priority in 2011.



Nissan LEAF Heats Up 4th Ave Winter Fair

The 4th Ave Winter Street Fair is always a good place to find something exciting and new, and this year was no different. The Nissan Drive Electric Tour, featuring the LEAF on its maiden voyage around the country, stopped in Tucson and gave fair goers their first opportunity to see and drive the new all-electric vehicle.

University of Arizona President Robert Shelton stopped by the event to discuss UA plans to install EV charging infrastructure on campus and became the first Tucsonan to drive the LEAF.

By 7 a.m., a line had already formed with people eager to drive the LEAF. Many who drove the vehicle commented on how quiet it was and how smoothly it handled. Drivers were invited to make a video and were entered in a contest to win a new LEAF.



UA President Robert Shelton, Clean Cities Manager Colleen Crowninshield and Dr. Joseph Simmons Director of the Arizona Research Institute for Solar Energy (AzRISE) and Head of the Materials Science and Engineering Department at the University of Arizona.

Some drivers raised concerns about vehicle range and plant-to-powertrain emissions, assuming that EVs do not have sufficient battery life to satisfy the needs of drivers. Nissan states that the LEAF has a range of 100 miles and given that the average commuter in the United States drives between 30 to 40 miles a day, the range of the LEAF is more than sufficient.

Plant-to-powertrain emissions are the total emissions output by power plants generating electricity for EVs. While EVs do increase load on power plants, their powertrains transfer energy to the wheels with 80 percent efficiency vs. 20 percent efficiency for petroleum-fueled engines. The percentage of electricity produced by alternative sources is continually rising and the plant-to-powertrain emissions for EVs will steadily decrease, eventually reaching nearly zero in some markets.

Nissan will expand availability of the LEAF to nine more states. A full nationwide launch is expected by late 2011 or early 2012.

Gobbling our way to biodiesel

Thanksgiving has always been a time to celebrate a bountiful harvest. This year, that harvest grew bigger. Instead of harvesting food, though, Pima County harvested fuel. The sixth annual Day-After-Thanksgiving Grease Recycling Event was once again a huge success with approximately 4,400 pounds of used cooking oil and grease collected, a new record over previous years.

Pima County Regional Wastewater Reclamation Department, Town of Sahuarita, Pima Association of Governments' Clean Cities Program, Greycle and EDG Fuels hosted the event on Friday, Nov. 26. Used cooking oil was collected at five sites around the community.

Over 13,000 pounds of oil and grease have been collected since the Grease Recycling event first was held in 2005. The converted grease will be used to power diesel vehicles in Pima County.

New Clean Cities Members

We welcome our new members to the coalition:

Saguaro

- Rancho Sahuarita Management Co.

Cholla

- Rooter 2000, The Green Plumber

Clean Cities Coalition Meeting Dates for 2011

All meetings are from 2:00 p.m. to 4:00 p.m. and are held in the 5th Floor Main conference Room at 177 N. Church Ave., on the corner of Church and Alameda.

Wednesday, January 19

Wednesday, March 16

Wednesday, May 18

Wednesday, July 20

Wednesday, September 21

Wednesday, November 16

Clean Cities National Spotlight

Clean Times is proud to introduce our national spotlight. Articles in this feature highlight the accomplishments of our sister coalitions. Our coalitions this month are Clean Cities Coalition New York, which is testing new Prius Plug-in Hybrids, and Kentucky Clean Fuels Coalition, whose hard work has placed over 200 hybrid schools buses on Kentucky roads.

New York

Toyota teams with CCCNY for Demonstration Program

Clean Communities Central of New York (CCCNY), the local chapter of the U.S. Department of Energy's Clean Cities Program, recently received eight Prius Plug-in Hybrid vehicles (PHV) as part of Toyota Motor Sales, USA, Inc.'s U.S. plug-in demonstration program. Clean Communities is managing a long-term evaluation of the vehicles, which are being used by coalition members and project partners Syracuse University, Syracuse Center of Excellence (Syracuse CoE), and CuseCar, a local not-for-profit community car share provider using alternatively fueled vehicles. Barry Carr, Coordinator of CCCNY, is also managing a separate long-term demonstration program at Georgetown University in Washington, D.C.

A total of 150 Model Year 2010 PHVs are being delivered to demonstration program partners across the United States—600 throughout the world—as part of a global program to demonstrate plug-in hybrid technology, educate and inform the public about the cars, and capture real-world driving data. The Prius PHV is capable of running on electricity for approximately 13 miles at speeds up to 62 mph, at which point it operates as a conventional Prius hybrid.

Kentucky

Hybrid Electric School Buses Hit the Road Across Kentucky

School buses in Kentucky have become rolling classrooms with the introduction of the hybrid electric school bus project. Heavy-duty hybrid systems, used in large trucks for some time, are providing first-hand lessons for students and adults alike.

With funding from the U.S. Department of Energy, both the Kentucky Clean Fuels Coalition and the Kentucky Department of Education have teamed to place 213 hybrid buses on roads across Kentucky. School districts using the new buses are providing valuable real-world data that include miles per gallon, driver compatibility, comparisons with existing diesel engines, terrain, weather conditions, photos and media coverage. Initial performance reviews are indicating an almost double mpg fuel economy for the ThomasBuilt buses with the Eaton hybrid system.

More than 100 buses have been ordered with 33 of those already in use. Second round delivery will begin in March 2011. Thanks to the efforts of the coalition, Kentucky will soon have the largest hybrid-electric school bus fleet in the nation. This accomplishment is a proud one for the KCFC and reinforces its role as a leader in the clean fuels arena. Over the years, the KCFC has consistently brought clean fuel options to local municipalities, Mommouth Cave National Park as well as UPS hub fleet based in Louisville.

Alternative Fuels help fuel Alzheimer's Memory Walk

During the month of October, Arizona Petroleum donated \$0.05 to the Alzheimer's Foundation for every gallon of E85 ethanol and biodiesel sold. By the end of the fundraising period, Arizona Petroleum collected \$2,000, representing over 40,000 gallons of alternative fuel. A check from October's proceeds was presented by Clean Cities Manager Colleen Crowninshield at the Alzheimer's Memory Walk on Nov. 6.