

TENNESSEE

Clean Fuels Advisor



A quarterly publication from the partnership between the Clean Cities coalitions in Tennessee and the state of Tennessee.

Bringing alternative fuels and hybrids to the forefront. Alt fuels = biodiesel, electricity, ethanol, hydrogen, natural gas and propane.

Governor's Conference on Biofuels Promotes Alternative Fuels in Tennessee

Contributed by David Owenby of TDEC.

The first-ever Governor's Conference on Biofuels was held May 30-June 1 at Montgomery Bell State Park. The conference drew more than 250 participants from nine states and featured a variety of expert presenters and panels addressing feedstock sources, biofuels production and retail availability in Tennessee. Attendees also heard current perspectives on biofuels activities at the federal level from Joe Jobe, National Biodiesel Board CEO, and Doug Faulkner, USDA Deputy Undersecretary for Rural Development.

The conference was highlighted by an opening address from Governor Phil Bredesen where he shared his vision for biofuels impact on Tennessee in terms of economic growth, agricultural opportunity, consumer choice and environmental quality. The Governor took this opportunity to endorse the 25 x '25 Vision, a new national renewable energy goal of meeting 25 percent of the United States' energy demand by 2025 from renewable sources such as solar, wind, hydro, geothermal and biomass. He also announced the recipients of one million dollars in Feedstock Processing Demonstration loans awarded by the Department of Economic and Community Development. These loans were designed to improve the production and accessibility of alternative fuel feedstocks, and the three organizations receiving these loans will use these funds to extract soybean oil that can be readily delivered into the production process for biodiesel fuel (see below article). "These loans will help Tennessee companies create new markets and new opportunities for producing alternative fuel feedstocks," said Bredesen. "Investing in these com-



(l-r) Matt Kisber, Economic and Community Dev. Commissioner; Brent Bailey, 25x'25 state alliance facilitator; Governor Phil Bredesen; Ken Givens, Agriculture Commissioner; and Env. and Conservation Commissioner Jim Fyke with Governor Bredesen's endorsement letter for the 25x'25 Vision.

panies is a smart energy strategy that will help increase biofuel production and Tennessee farm income."

The Governor and representatives of the University of Tennessee and Oak Ridge National Laboratory provided conference attendees with an update on the Tennessee Biofuels Initiative, a partnership between the State of Tennessee, ORNL and UT. The Tennessee General Assembly recently approved Governor Bredesen's \$72 million proposal to support a range of alternative fuels activities for Tennessee, including \$40 million to help fund the Tennessee Biofuels Initiative.

The conference was sponsored by the Governor's Alternative Fuels Working Group. Created by Executive Order 33, this group represents six state departments and is currently working with numerous stakeholders to develop a comprehensive alternative fuels strategy for Tennessee. "Conference attendees and the Working Group benefited from hearing so many high-quality presenters and panelists," said Working Group co-chairman Paul Sloan. "However, I think the most significant result from this conference were the networking opportunities afforded for farmers, researchers, entrepreneurs, biofuel producers and local officials. It was exciting to see the contacts and connections that will help Tennessee move forward from the farm to the fuel tank."

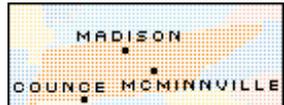
The conference also featured the unveiling of an alternative fuels public education and outreach campaign called **BioTenn: A Partnership for Homegrown Energy**. Conference presentations and materials are available at www.biotenn.org.

Tennessee Feedstock Loan Recipients

These feedstock loan program recipients were announced at the Governor's Conference (above). One million in state funds were set aside to fund this effort.

Nu-Oil, LLC - Counce

Receiving \$250,000 to purchase additional equipment to process 1.5 million bushels of soybeans annually to produce 1.5 million gallons of biodiesel and over 38,000 tons of meal.



Freedom BioFuels, Inc. - Madison

Receiving \$250,000 to open facility adjacent to current

grain elevators in Robertson County. Company will daily produce 5,000 gallons of oil and 128 tons of meal from processing 1.8 million bushels of soybeans/year.

Tennessee Soy Products - McMinnville

Receiving \$500,000 to purchase an existing facility to house the company and its partner, Alliance Biofuels. It will process 2 million bushels of soybeans annually to meet demands of their partner, Alliance, which will construct a five million gallon/year biodiesel refinery.

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American Fuels Checklist:

1. Visit the www.biotenn.org Web site to see all of the public E85 and B20 stations that are open statewide!
2. All three of Tennessee's Clean Cities coalitions need your help to continue their effort.

Please consider becoming a supporter! See the backpage for info.



U. S. Department of Energy



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WTCCC Awards its Founding Partners

At a recent West Tennessee Clean Cities stakeholder meeting, certificates of appreciation were given to our three founding partners: Memphis Light Gas and Water (MLGW), Memphis Biofuels (MBF) and the Energy Division of the Tennessee Department of Economic and Community Development. Included with these certificates were also gift certificates to Tsunami Restaurant in Memphis, Tennessee.

Our coalition is very dependent on its partners; not only for their financial support, but for the guidance, leadership and credibility that these partners bring to the table. Again, we extend our deepest gratitude to Chris Bieber of MLGW, Brandon Sheley and Ken Arnold of MBF and to Brian Hensley of the Energy Division for their continued support of our organization.



ENERGY DIVISION



We're Moving

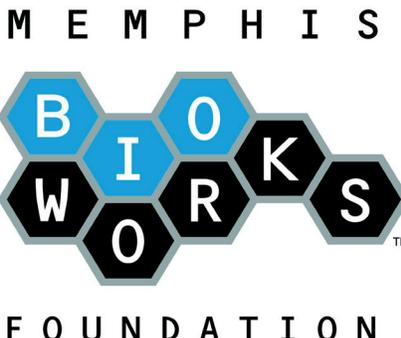
The WTCCC has been in operation for almost two years now. During this time frame, I have used my home as the head office. I am very pleased to announce that we are moving this operation from my home into the Memphis Bioworks facility on 20 South Dudley Street.

If you have been to one of our recent coalition meetings, you will recognize this address as the same location for our meetings. The Memphis Bioworks Foundation is a nonprofit organization that is executing a methodical business plan that leverages

the area's impressive competitive strengths while expanding the infrastructure, educational opportunities, and entrepreneurial support needed to grow the

burgeoning bioscience industry. The Bioworks Foundation is also the home to a number of other concerns, like coalition stakeholder, AgroThech Communications and the Leadership School.

The WTCCC is fortunate to have this opportunity and is looking forward to a lasting and productive relationship with the Memphis Bioworks Foundation. To learn more, please visit www.memphisbioworks.org.



Cary Oil Now Offering Biodiesel

Long time petroleum distributor Cary Oil has recently committed to providing biodiesel blends to its customers in Tennessee, Mississippi and Arkansas. Cary Oil has been in the Memphis area for the past two years and has provided service to municipal and private fleets, service stations, and farming operations. Making the decision to include biodiesel in its inventory has taken a great deal of investigation and careful study for the management of Cary Oil.

"We wanted to be sure that we could get



the highest quality product from a source that we could count on for the demand volumes we anticipate to see," says Oakley Bohannon, manager of Cary Oil in Memphis. "I believe we have found at least one such supplier in Memphis Biofuels."

Cary Oil and Memphis Biofuels began discussing biodiesel in late February. "We're looking forward to doing business with Cary Oil," said Brandon Sheley of Memphis Biofuels. "They have a great reputation in this region and an impressive customer base. We're proud to be supplying the biodiesel portion of their fuel."

Cary Oil's decision to begin selling this fuel was motivated by a number of factors, but mostly it was "just plain old common sense" according to Bohannon. "We see the obvious benefits of using domestically produced fuels that can help us with the air quality issues in this region. We also see the value in getting in on this transition to renewable fuels on the front end rather than playing catch-up later. I think this fuel is going to be a big part of the overall fuel inventory of this country... we're looking forward to doing our part to help it along."



Middle Tennessee - David Pelton

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Daily's Does Biodiesel

Tri-Star Energy, which owns the Daily's brand Shell stations, is adding biodiesel to eight locations across middle Tennessee. Smyrna, Gallatin, Lebanon, Franklin and Nashville all either now have or will soon have easier access to B20, the most common blend of biodiesel.

In 2006, Tri-Star installed a 20,000 gallon storage tank at their main facility in Nashville. The tanks allow Tri-Star to purchase larger quantities of B100 and blend it as needed for the new pumps. This model cuts down on transportation time and cost.

Clean Cities of Middle Tennessee helped Tri-Star gain some state grant funding to help off-set installation costs. "We anticipate increased demand for

clean, domestic fuels" said Tri-Star spokesman Rob Jewel.

Find a complete list of locations for alternative fuels in middle Tennessee at www.TennesseeCleanFuels.org.

A Tri-Star tanker truck with their 20,000 gallon pure biodiesel storage tank in the background.



Credible Information

At least three times a week someone tells me with great sounding authority that "ethanol is worse for the environment than gasoline" or "biodiesel takes food away from starving people in Africa" or, my personal favorite, "hybrid cars don't get better fuel economy than regular cars." Really?

All too often information gets twisted as it moves further away from the original source. For example, food shortages around the world have very little to do with production and a great deal to do with distribution. But solving the distribution problem is complicated and doesn't make an interesting sound bite. In that same spirit, 25 years ago the ethanol statement had some truth to it. Today's production, however, is quite different, and tomorrow's production will be better still. That's the point. Progress is about small, steady steps forward. Moving in great leaps and bounds sounds attractive when there is a crisis but can also cause a crisis if we leap in the wrong direction.

The other day I was giving a talk on energy

policy to a group of college students. During Q&A time a student made a statement that he read somewhere "hybrid cars were no better than non-hybrid cars." When I pressed him to say where exactly he read that, he couldn't remember. I pressed some more until he finally admitted he hadn't read it but heard it from a friend who had read it. I held back my sarcasm.

Most of what we see today is a stepping stone to better solutions tomorrow. Instead of finding the flaws we should be celebrating the creativity and the diversity. For example, our main stream internal combustion engines have basically stayed the same for 100 years. Now we have a hybrid concept that literally puts the engine on its ear. Is it perfect? Of course not. But it is a step in the right direction. We should embrace the desire to push technology out of its comfort zone and into the realm of possibility.

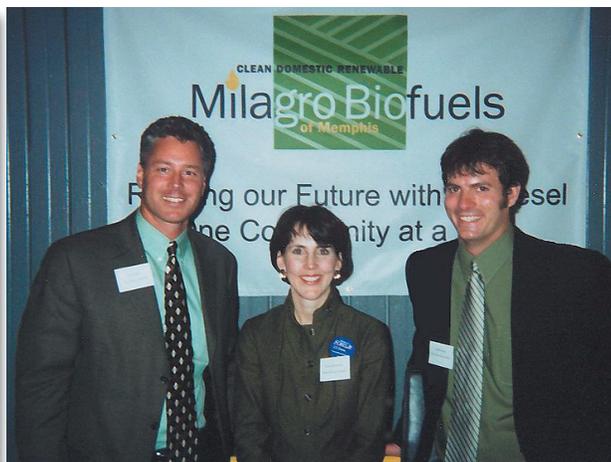
Make sure you check with credible sources before making a decision on a technology. Clean Cities has a number of links and websites to help.

Recent Middle Tennessee Photos

Mayor Rogers Anderson of Williamson County stands with a new Franklin Transit bus. The agency uses biodiesel blends fleetwide.



Andrew and I flank Milagro Biofuels owner Diane Mulloy. Milagro is selling biodiesel into west and middle Tennessee.





What You Can Do for Your Country

Contributed by Congressman Zach Wamp.

As our country continues to consume large amounts of energy, it is essential that we rapidly move toward energy independence. The federal government is playing a crucial role, but the government can't get us there quickly enough. The marketplace and individuals can help accelerate it by reducing our gasoline consumption and dependence on foreign oil. Many of the solutions may come from the private sector also doing its part to move our nation to greater energy diversity and efficiency.

Just recently, the Oak Ridge National Laboratory (ORNL) led a team with the University of Tennessee that was selected to receive \$125 million to establish and operate a new BioEnergy Sciences Center (BESC). The center will accelerate research in the

development of cellulosic ethanol, and make biofuel production cost competitive on a national scale by 2012.

The selection of ORNL for the new BESC solidifies Tennessee's place on the cutting edge in alternative energy, especially in the development of biofuels from switchgrass and poplar trees. It's more important now than ever that the United States lessen its dependence on foreign sources of energy, and Tennessee is leading the way with solutions to meet this preeminent challenge.

It is absolutely vital that the government and private sector work together in ways that bring about practical, useful solutions. I urge you to learn more about biofuels and get involved to benefit our future and make our country more energy independent.



Tennessee Congressman Zach Wamp pumps the first gallon of E85 into one of the flex-fuel vehicles operated by the Department of Energy at the Oak Ridge Operations Office during the station's grand opening in 2003.

TDOT Using Biodiesel Statewide

Contributed by Alan Jones of TDOT.

In December 2005, the Tennessee Department of Transportation (TDOT) initiated a pilot project using biodiesel in a B20 blend (20 percent biodiesel and 80 percent petroleum diesel) in most TDOT diesel vehicles located at maintenance facilities in Knoxville and Johnson City. Using cleaner biofuels is part of TDOT's ongoing commitment to cleaner transportation. Approximately 130 onroad vehicles participated in the pilot, including dump trucks, snowplows and HELP trucks.

Because Northeast Tennessee tends to have colder winter temperatures, TDOT decided that this region would be the best place to test the fuel's cold weather performance. TDOT and our fuel suppliers used an anti-gelling additive, just as we routinely do with petroleum diesel, and have not experienced gelling problems despite year-round use of B20. As a preventive measure, TDOT also cleaned fuel storage tanks before the first B20 deliveries. In the early days of the pilot, TDOT frequently changed engine fuel filters because of published concerns that the solvent properties of biodiesel could break loose fuel system deposits and clog fuel filters. However, fuel filter clogging was not a significant problem. Overall, the performance of the fuel has been excellent.

Some vehicle dealer garages told TDOT that their companies did not classify B20 as a conforming fuel and that its use could lead to a refusal to cover necessary engine repairs under the vehicle warranty. As a result, TDOT made a cautious decision to stop using B20 in the relatively small number of diesel

vehicles still covered by warranty.

After several months of successful experience, Commissioner Gerald Nicely authorized expanding the use of B20 to the other three regions and selected districts. TDOT fleet vehicles in Chattanooga and Cookeville began using B20 in the fall of 2006, and in early 2007, TDOT operations in Nashville and Williamson County converted to B20. Finally, TDOT's Region 4 facility in Jackson began using B20 in June 2007.

TDOT's goal is to phase in the use of B20 in other districts with adequate storage capacity and enough diesel fuel use to ensure proper turnover of stored fuel. In other areas, the agency will encourage drivers to obtain B20 from private sector stations that accept state fuel cards (currently Fuelman).

In conjunction with the Governor's Interagency Alternative Fuels Working Group, TDOT is working with retail fuel stations to convert or install biofuels storage and fuel dispensing equipment near interstates and major state highways. These green island corridors will make biofuels more accessible to citizens, businesses and government agencies.



The biodiesel logo that TDOT created in 2005. Looks sharp, eh?

(l-r) The decal on the TDOT pump at the Knoxville refueling site and one of the bumper stickers that TDOT uses to raise awareness of their biodiesel usage.





East Tennessee Gets First Public E85 Station

Wednesday, June 6 was a beautiful day for the grand opening of Knoxville's and East Tennessee's first public E85 station. The station is located at the Pilot Food Mart on Walker Springs Road in west Knoxville along the busiest stretch of road in all of East Tennessee: the 17-mile joining of interstates I-40 and I-75.

With federal funding assistance through TDOT, the station now has two pay-at-the-pump dispensers. The station also has the E85 price shown on the reader board on top of all the other gasoline prices.

Alan Wright from Pilot and myself



each spoke briefly before opening up the pumps for refueling the 10 flex-fuel vehicles that were onsite for the event. A Pilot truck was first up, followed by FFVs from local GM and Ford dealers, ORNL, Big South Fork, TDEC, TDOT and several individuals.

During the opening remarks, Wright spoke of the partnership between the ETCFC and Pilot that helped make this particular station happen, and noted that Pilot will continue looking at other opportunities for placing E85 pumps.

Thanks Pilot!

East Tennessee - Jonathan Overly



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Nu-Energie Becomes Partner, Sets Challenge

The ETCFC is blessed to now have Nu-Energie, LLC as a Founding Partner! They joined in May and donated \$10,000 to the coalition, but didn't stop there: they challenged other regional organizations to get involved with alternative fuels and the ETCFC.

"It just seems like such an important time in our history right now," says CEO Brian Hullette. "Clearly we want to sell fuel once we are up and running this fall, but looking at the bigger picture right now for our

country, I can't see why any American would not be upset with our current situation and wanting to be a part of something greater that will help both our community and our country. It just seems so simple to me that action is needed by all Americans."

Nu-Energie is located in the Phipps Bend Industrial Park in eastern Hawkins County and plans to be producing 5 million gallons per year of ASTM spec multi-feedstock-based biodiesel by October.



Food City Opens 35 E10 Stations in East TN

K-VA-T Stores -- better known as Food City -- has changed the gas they offer at many of their "Gas 'N Go" stations to E10. They operate 43 Gas 'N Go's in the tri-state area of Kentucky, Virginia and Tennessee that recently moved their blends over to E10.

Their decision helps East Tennesseans all over the region now have access to the fuel where it was not

available before. Here's a list of the ET cities where they have refueling centers: Alcoa, Blountville, Bristol, Church Hill, Crossville, Dandridge, Elizabethton, Gatlinburg, Gray, Greeneville, Jefferson City, Johnson City, Jonesborough, Kingsport, Kingston, Knoxville, Loudon, Newport, Rogersville, Sevierville, Seymour and White Pine.



New East Tennessee Biodiesel Fleets

Several fleets have gotten started on biodiesel since our last newsletter. Here's some short stories.

> The Y-12 National Security Complex, which is managed by BWXT Y-12, completed moving their ~100 vehicles to B20 in November 2006. Along the way, they learned that Tennessee Mechanical--the company that operates out of the backside of their facility--was already using B20!

> Also in Anderson County, the City of Oak Ridge has moved all of their equipment to B5, and has applied for funding to complete that move to B20.

> Cascade Outdoors in Polk County has begun using B20 in their rafting service buses.

> Cleveland Utilities has moved to using B20 in their 40 vehicles, mainly as a precautionary step before moving to ULSD. However, the ETCFC is working with them to get them to make a stronger commitment to longer term use of biodiesel.

> EPB of Chattanooga started B20 last fall in all 115 of their diesel vehicles. Most are Caterpillar,

Detroit Diesel, Sterling and Fords.

> Kingsport has moved their landfill to using B5 and is having discussions about moving the entire city's fleet over to B5 then to B20.

> Nuclear Fuel Services of Unicoi County (Erwin) has ordered a 500-gallon tank to begin a transition phase for moving most of their diesel equipment (~30 vehicles) over to B5, then later to B20.

> In Washington County, Jonesborough has now joined Johnson City in using fleet-wide B20 in its diesel vehicles. Jonesborough worked through the move over the last year.

Below are three vehicles from the town of Jonesborough fleet that are running on B20 (l-r): 2006 CAT trackhoe, 2006 fire truck, and a 2002 Peterbilt refuse truck.



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Just visit www.biotenn.org to get the latest on alt fuels' action in Tennessee.**

Support alternative fuels... and your state's Clean Cities coalitions!

The state of Tennessee's Clean Cities coalitions serve an important role: local champions for change. All three coalitions serve their respective areas with assistance in helping fleets move to using alternative fuels. See any of our Web sites to find out how you can become a member and get involved at the local level to help bring about change in your community!



Major Partners in Tennessee's Clean Cities Coalitions

**Tennessee Department of Economic and Community Development, Energy Division
The Governor's Interagency Alternative Fuels Working Group**

Memphis Biofuels
Memphis Light, Gas, & Water
Valero Energy Corporation
MATA Transit
Milagro Biofuels
Tennessee Soybean Promotion Board
AgroTech Communications
FedEx Express
FBA Consulting

Hollingsworth Oil
Tri-Star Energy
PowerService

University of Tennessee
Nu-Energie, LLC
Pilot Travel Centers
Oak Ridge National Laboratory
Eastman
Sevier Transportation Board
Knoxville Utilities Board
Benton Oil Service
BAE Systems