

Biodiesel Partnership

Dear Reader:

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We hope this information will be useful to you; reference to it will assist you with many of the questions that will arise in your tenure with municipal government. However, the *Tennessee Code Annotated* and other relevant laws or regulations should always be consulted before any action is taken based upon the contents of this document.

Please feel free to contact us if you have questions or comments regarding this information or any other MTAS website material.

Sincerely,

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Reference Number: MTAS-818

Tennessee Renewable Energy and Economic Development Council and East Tennessee Clean Fuels Coalition

Cities may want to consider pooling their resources to create a shared biodiesel recycling program. The Tennessee Renewable Energy and Economic Development Council (TREEDC) and East Tennessee Clean Fuels Coalition (ETCFC) began seeking funding assistance for small cities and counties to share in the development of several statewide biodiesel recycling programs. In order to develop a viable and sustainable biodiesel recycling program among communities, an assessment of annual diesel should be conducted. This inventory serves a dual role as 1) a foundation to benchmark fossil fuel reductions; and 2) as information to help determine how much fuel will be needed based on the biodiesel blends that the community wishes to use. TREEDC and ETCFC plan to collaborate with communities on a regional basis to understand their fuel needs, and develop a program to enhance local capacity to coordinate and build the necessary and appropriate infrastructure, logistics, and distribution systems to enable the delivery of sustainable alternative fuels to new markets in Tennessee.

TREEDC and ETCFC will work with participating local governments, transportation systems and utility companies to profile their current and past fuel usage and procurement practices for gasoline, diesel and natural gas. TREEDC will collect information from communities on fuel use by government, police, fire departments, emergency and regular service, utilities, schools and transportation systems. The council will compile regional renewable fuel market information and coordinate shared biofuel purchases and distribution.

ETCFC is the East Tennessee arm of the U.S. Department of Energy's (DOE) Clean Cities program and serves the majority of the eastern half of Tennessee.

Since 2009, three communities in Tennessee started their biodiesel production activities. These communities are Clarksville, East Ridge and Crossville. Clarksville's processor, which was funded by an EPA Congestion Mitigation and Air Quality Improvement grant, was damaged during heavy rains in May 2010 and East Ridge suspended its operations due to a change in city management. Since Spring 2010, Crossville has produced 1,600 gallons of biodiesel. It uses a 10 percent blend of biodiesel in backhoes and mowers. The city also uses its biodiesel facility as an educational tool at an annual sustainability fair. Crossville uses a 100 percent blend in a 1997 one-ton service truck. According to Public Works Maintenance Manager Steve Powell, the biggest challenge in the operation is to secure enough usable and clean used oil from local grocery franchise stores and donors.

Conclusion

Small-scale production of biodiesel by municipalities has been conducted successfully by several cities in Alabama, and appears to be a concept that can be successfully duplicated in other municipalities across the state and nation. These programs use recycled WVO as their primary feedstock for biodiesel. The WVO can be obtained from the food service industry or from local citizens. Organizations such as the Tennessee Renewable Energy and Economic Development Council and the East Tennessee Clean Fuels Coalition can assist local governments with the implementation of sustainable small-scale biodiesel production systems.

By using commercially available biodiesel processors and relatively simple oil collection and storage equipment, the municipal fleet management team can produce high-quality biodiesel for use in vehicles and equipment. While there are technical challenges to overcome in any such program, challenges such as WVO quality assurance, fuel quality assurance, and glycerin offtake have all been successfully overcome by fleet operators.

The most important aspect of these programs is the successful involvement of local businesses and citizens in creating a community-based recycling and biofuel production program. Such programs alone will not solve the nation's energy security problem; however, they can be a small step toward energy independence by producing renewable fuels from local resources while building community awareness for environmental protection. In short, these programs allow the local citizens to have a part in producing renewable fuels in their own community.

Acknowledgements: Hoover and Gadsden Ala., Jonathan Overly, ETCFC

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