



DATE: October 9, 2009  
TO: Economic and Technology Advancement Advisory Committee  
FROM: Jamie Hall, Policy Director  
RE: ETAAC Advanced Technology Development Report

Clean Transportation  
Technologies and Solutions

[www.calstart.org](http://www.calstart.org)

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CALSTART applauds the work that ETAAC has done to date in providing recommendations and advanced technology updates for the state, and we appreciate the opportunity to comment on the draft report on advanced technology development. We have not had the time to do a thorough review of the document but do want to provide input on one subject that appeared to be missing from the report – the use of biomethane, or renewable natural gas, as a transportation fuel.

***Biomethane is the Lowest Carbon Fuel Currently Available and has Additional Environmental Benefits***

Biomethane from landfills, dairies, and wastewater treatment plants stands out as one of the most promising next-generation alternative fuels. It has the lowest greenhouse gas impact of any fuel currently available, according to the most recent analysis by the California Air Resources Board (CARB) for the state's Low Carbon Fuel Standard. According to CARB, **vehicles running on biomethane generate 1/3 to 1/2 the greenhouse gas emissions as vehicles running on electricity or hydrogen, even under optimistic assumptions about the electricity mix.** The use of this clean and renewable fuel, initially in trucks and buses, will also improve air quality.

The benefits of biomethane go beyond emissions reductions. Biomethane offers an opportunity to capture waste products and put them to constructive use, without the fuel-for-food tradeoffs or land use impacts associated with fuels such as ethanol. Furthermore, the biomethane production process itself can reduce a number of issues associated with the management of waste in agricultural operations. For example, biomethane production from animal manure at dairy farms decreases the potential for surface water contamination, reduces offensive odors, and can contribute to better soil nutrient management.

***Biomethane is a Proven Technology and Can Make a Difference Today***

In addition to being clean, low-carbon, and renewable, biomethane is a "shovel-ready" technology that can be used today. No technological breakthroughs are needed for production, distribution, or use of the fuel. The feedstock is cheap and abundant. The distribution system already exists, and vehicles are readily available. While the U.S. biomethane industry is currently rather limited, Sweden has demonstrated the enormous potential of this fuel in a commercial scale, real-world setting. Sweden estimates that biomethane could meet 10-15% of their transportation needs with existing technology, and that it could potentially meet 30% of their needs by 2030 with some technological advances. Within the U.S., there are natural gas vehicles on the road today that can run on biomethane, and original equipment manufacturers are now starting to produce natural gas trucks.

The State of California already has several planned and permitted biomethane plants that are being held back by their inability to secure financing in this tough financial market. With targeted support, the biomethane industry could begin to scale up today, contributing to both near- and long-term economic and environmental goals. The benefits will be most apparent in hard-hit agricultural areas.

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### ***The Public Sector has a Role to Play in Supporting Biomethane***

As a fuel- and technology-neutral organization, we believe there are many paths to the future, and no single “silver bullet.” It is therefore important that government policies and programs support a broad variety of fuels and vehicle technologies, with a focus on those that solve multiple environmental problems. For all of the reasons mentioned above, biomethane should be a part of our transportation energy future. However, as with most alternative fuels, biomethane needs targeted support for research, development, demonstration, and deployment during the transition period. With the right policies and incentives in place, biomethane can deliver low-carbon fuel from waste products while creating jobs and economic benefits.

The California Energy Commission recognized this need and potential, setting aside \$10 million for biomethane transportation projects in the initial investment plan for the Alternative and Renewable Fuel and Vehicle Technology Program (AB 118). This is a step in the right direction. Support for biomethane is a smart and logical complement to the federal government’s recent investment in natural gas vehicles and infrastructure.