

would be vast quantities of "left over" biomethane that the City could offer to other urban fleets to shift to "renewable natural gas": street sweepers and other DSNY vehicles; taxis, limos, amulettes; buses

related to the high incidence of cardiovascular disease, asthma, and cancer in urban areas. Biomethane, which is chemically equivalent to natural gas in containing only one carbon atom for every four

buses switch from diesel to biomethane later this year, they will slash their fuel costs by 60%, after correcting for the cost of the electric power that drives the biomethane-production process at both of the city's sewage treatment plants.

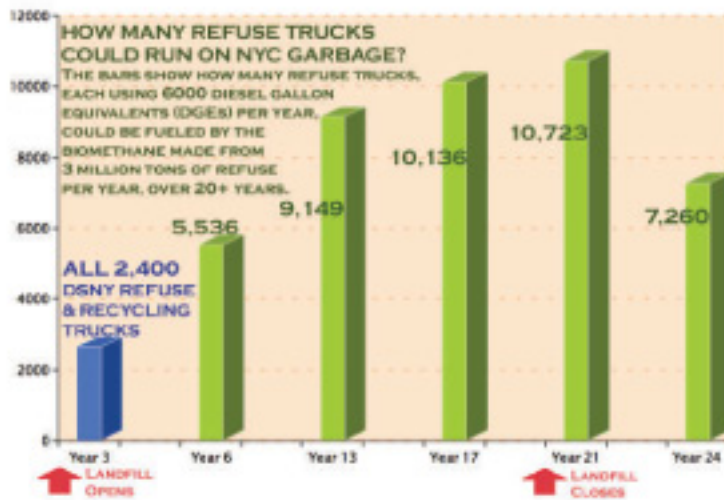
technology already exists in the US and Europe.

Once produced from biogas, biomethane can be pumped through the same pipelines, dispensed at the same fueling stations, and burned in the same truck engines that are already on the market to support the growing use of natural gas in heavy duty refuse and bus fleets in New York City and elsewhere in the US and Europe. No scientific breakthroughs are required. Nothing new need be invented to take advantage of this very green fuel, which is already on the market in a number of European cities. Because biomethane can move right into the "shoes" of natural gas infrastructure and vehicles, the more numerous the vehicles that use natural gas the faster the biomethane markets can grow.

Hauling NYC garbage hundreds of miles away to produce vehicle fuel for city fleets may not sound especially efficient — and in an ideal world it would not be. However, given the sprawling waste-management system in place right now, it would be far better for the City to realize benefits from its residential garbage than to turn it over for free to be "mined" by others as the scramble for energy resources intensifies in the US and abroad.

City agencies could also look into other sources of biomethane closer to home. For example, the site of the former Fresh Kills Landfill, which closed a decade ago with about 150 million tons of municipal waste in place,

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and delivery vans. In fact, the quantities of biomethane owned by the City would be large enough to employ as an incentive for private carters who operate more than 3,600 mostly old and dirty diesel trucks, to go green with the only commercial fuel that is pollution-free, greenhouse gas neutral or negative, and made from renewable organic resources.

hydrogen atoms, achieves all the benefits of natural gas, and then smartly outshines its fossil "twin." Its production

In New York City, a business plan spelling out how the City could reap benefits from its "renewable gas fields" would necessarily take into account current high costs of waste management, expenditures that are offset at present by no income streams except taxpayer dollars. Such a plan would include consideration of opportunities for selling excess biomethane, beyond that used in the transportation sector, in nearby natural gas markets, for example, to towns on Long Island.

By taking steps to develop its own renewable gas resource, the City could

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The Win-Win-Win-Win Fuel: Health, Climate Protection, Economy, Oil Independence

In 2008, Energy Vision documented the air quality gains for NYC metro area residents of converting diesel trucks to natural gas: the 25-30% reductions in carbon dioxide emissions and the minimizing of particulate and nitrogen oxide pollution that, as numerous studies of diesel emissions have shown, are

and use recycles carbon that was recently removed from the atmosphere (instead of unearthing fossilized carbon) and also prevents the powerful greenhouse gas methane from escaping the rotting organics. Thus, the entire cycle of making and burning waste-based biomethane fuel is actually GHG-negative: It removes more GHG from the atmosphere than it contributes. Biomethane can also be a very low-cost fuel when made from an essentially free source — wastes. In Norway, for example, when Oslo transit

ensure a significant measure of independence from foreign oil and security for vital urban services. The zig-zags of the petroleum markets in 2008 underscore the dangerous dependence of New Yorkers on oil imports and the need to break the oil habit.

Tapping into an Urban Natural Resource

New York City need not invent a new wheel to tap into its biomethane potential. Commercial biogas cleanup

is still rich with biogas. Some of these emissions are being cleaned up by National Grid, injected into a pipeline, and delivered to thousands of Staten Island residents for home heating. What about the rest of the biogas? How much potential fuel might the City be wasting by flaring it away? A study is needed to find out.

Restaurant food wastes and fresh market wastes, which are currently shipped to landfills by private waste management companies,

are another potentially rich source of biomethane fuel. These wastes could be separated from the rest of the commercial waste stream and processed closer to home, using small-scale digestion and biogas cleanup plants like those whose numbers are rapidly growing in European towns and cities.

In short, New York City, as the owner of the largest residential waste stream in the country, is in a position to take the lead in working with private sector partners to ensure that its

garbage resource is recycled into valuable biomethane vehicle fuel for urban fleets — to help cleanse the air of health-damaging pollutants, to make headway in reducing greenhouse gases, to save taxpayer dollars, and to take a significant step to reduce the dependency of indispensable service fleets on imported petroleum.

Energy Vision plans to continue its research and to collaborate with the DSNY, other public agencies, and private companies to design

biomethane initiatives that could help shape the leadership role in urban sustainability that New York City is committed to playing.

Second anniversary event..continued from Page 1



A mezzanine view of the EV's December 4th reception



Evening Co-Chair Joan C. Pearlman with Neil Zeller of "Limo Green"



EV award winner Robert B. Catell, exec chairman of National Grid US, Joanna Underwood, and Rocco DiRico of the NYC Dept. of Sanitation

Guests were welcomed by evening Co-Chair Blythe Danner and EV President, Joanna Underwood before going to place their bids on more than thirty tempting items in our "green products auction" collected by EV Board member, Joan Pearlman, and her committee.

These popular offerings included items donated by "At West End"; dinner for two at the Savoy; a bracelet and earrings made from reused cufflinks by New England jewelry designer Laura Bergeron; a spring weekend in a solar heated country home in Rhinebeck,

NY; a trip to one of the NY area airports in a "Green Limo" black car powered by natural gas; a case of fine wine from the Guido Gaulandi winery in Tuscany, where all practices and the wines are organic; a blouse worn by Blythe Danner in the movie *Meet the Fockers*; and a signed print by artist Saul Lambert from his leaf series.

Joanna Underwood described the highlights of Energy Vision's first two years, especially the real impact this work has had in bringing the use of "green garbage trucks" to the East Coast. Dozens are now operating in NYC and on Long Island,

and they will soon be arriving in Philadelphia. "Every one rolling onto our streets," she said, "means healthier air, quieter communities and reduced dependence on foreign oil for one the most important service fleets in urban America."

Phil Shabecoff, EV board member, former lead environmental writer for The New York Times, and author of several books on the environmental movement was the evening's keynote speaker. He discussed the catastrophic effects that toxic pollutants in the atmosphere from many sources including cars and trucks are having on

our children, reported in his most recently released book, *Poison Profits*, co-authored by Phil and his wife Alice Shabecoff. (For the text of his remarks see highlight on the following page.)

Next Blythe Danner presented the first two "Energy Vision" awards. The first went to Robert B. Catell, formerly CEO of Keyspan Energy and its predecessor Brooklyn Gas Company, and now Executive Chairman of National Grid focused on Massachusetts, New Hampshire, Rhode Island and New York, and Deputy Chairman of National Grid based in the United Kingdom. Catell was an

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