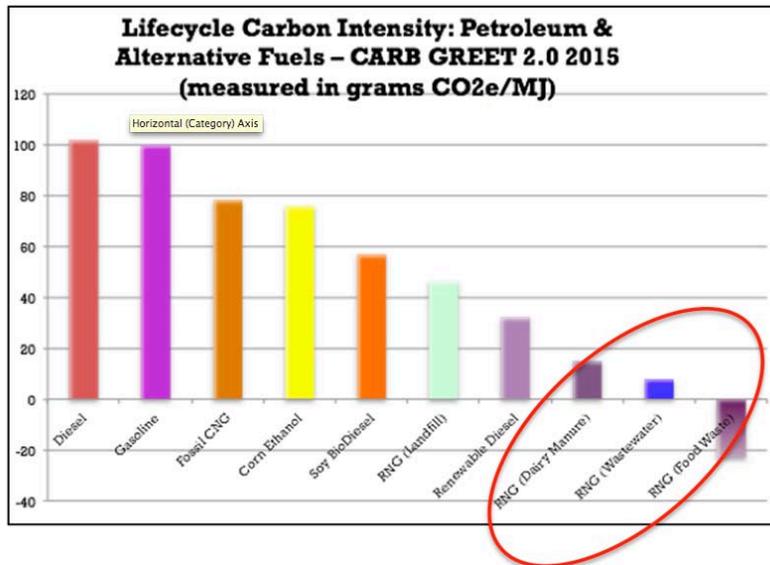




## The Power of Waste in New York: *Renewable Natural Gas as a Vehicle Fuel*

### Background:

Over the last few years, at multiple locations across the U.S. and Canada, an exciting new green industry is emerging: converting the biogases emitted from decomposing organic wastes into fully sustainable, renewable natural gas (RNG) vehicle fuel. This fuel is chemically similar to fossil natural gas but better. It requires no drilling and is close to carbon neutral, and it can replace diesel in trucks and buses. On a lifecycle basis, according to the CA Air Resources Board, vehicular R-CNG (renewable compressed natural gas) use represents an 80-115% or more reduction in greenhouse gas emissions as compared to diesel, making it the lowest carbon commercially viable diesel replacement fuel available today (see below).<sup>1</sup>



Derived from CA Air Resources Board LCFS, 20#

### Renewable Natural Gas: A Winning Environmental & Climate Strategy for New York State

- Top priorities for the region include reducing its excessive reliance on foreign oil and natural gas and tackling climate change: Building a renewable natural gas industry to make fuel for its bus and truck fleets is one of the best strategies for accomplishing both of these goals. A variety of technologies exist to generate renewable power, but RNG (and CNG) are among the only commercially viable options that can substantially displace on-road diesel fuel use.
- New York State's more than 2.5 million buses and trucks consume close to 1.1 billion gallons of on-highway diesel fuel annually:<sup>2</sup> This fuel constitutes a transfer of wealth of more than \$3 billion to out-of-state and foreign entities. Moreover, annual on-highway diesel emissions exceed 12.2 million tons of greenhouse gases in addition to various health-threatening pollutants.<sup>3</sup>
- New York State is rich in sources of organics for RNG production: It is the 4th largest waste producer after California, Florida and Texas, and the second largest exporter of waste. To handle this waste burden (the amount not recycled or composted) takes 10 incinerators, 27 large landfills and the export of more than 6 million tons to out-of-state facilities. New York is also home to the fourth largest dairy herd in the US, and a \$3 billion food processing industry.<sup>4</sup> All of these organic materials can be captured and processed to generate RNG.

- State-level incentives focused on vehicle conversions to natural gas would drive significant private sector investment in the creation of an RNG industry in New York State: The creation of incentives to cover the incremental cost of natural gas vehicles and a portion of the necessary refueling infrastructure would encourage private sector investment in RNG production by ensuring fleet markets for the fuel (much like an RPS guarantees a market for renewable electricity).
- New York State has an acknowledged need to help improve the economics of its farms and dairies as well as of its mid-sized cities: Turning expensive organic wastes into fuel for truck and bus fleets can reduce solid waste management costs and assure these fleets of a reliable supply of inexpensive RNG fuel.
- A growing number of private companies and consultants exist to help communities plan in this new green fuels arena: The place to begin is with projects that can be both economic and energy winners, especially capturing landfill gas for vehicle fuel.
- An early priority on communities and cities makes sense: Public agencies are owners and contractors of truck and bus fleets. They also own or make disposal decisions about vast streams of organic waste that could be converted to fuel for these fleets – primarily municipal solid waste that every locality must collect and dispose of and wastewater that is processed by local and regional treatment plants. By both owning or managing the “markets” for the fuel as well as the raw feedstocks from which to make RNG, public agencies can be ideal drivers, community by community, of a revolution in truck and bus fueling. Relevant projects are already afoot in California, Michigan, Wisconsin, Georgia, Indiana, Louisiana, Texas and Ohio.<sup>5</sup>
- A waste-based renewable natural gas industry deserves to be a major component of the “green” energy economy in New York State, contributing to economic development and job growth in urban and rural areas alike.\*

\* A recent study by Energy Vision and the Renewable Natural Gas Coalition concluded that a national RNG industry could create upwards of 75,000 non-exportable jobs over the next decade.<sup>6</sup>

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For Access to EV’s Publications, visit: <http://energy-vision.org/resources-ev-publications/>

## Sources

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2. EIA: New York Distillate Fuel Sales by End Use, 2011. [http://www.eia.gov/dnav/pet/pet\\_cons\\_821dst\\_dcu\\_SNY\\_a.htm](http://www.eia.gov/dnav/pet/pet_cons_821dst_dcu_SNY_a.htm)
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4. Energy Vision: A Greener Transportation Future for the Empire State, 2012. <http://energy-vision.org/wordpress/wp-content/uploads/2012/05/A-Greener-Transportation-Future-for-the-Empire-State2.pdf>
5. A selection of organics-to-fuel projects can be found on Energy Vision’s “Case Studies” page: <http://energy-vision.org/resources/project-profiles/>
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