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INFORM REPORT SHOWS GARBAGE TRUCKS CAN BE GOOD NEIGHBORS

Study Finds That the High-Polluting Refuse Truck Sector Is Slowly, But Successfully, Shifting from Diesel to Cleaner Natural Gas

New York, NY, February 13, 2006: Today, INFORM, the national environmental research organization, released its latest report, *Greening Garbage Trucks: Trends in Alternative Fuels Use, 2002–2005*. The study—a follow-up to the groundbreaking research presented in 2002's *Greening Garbage Trucks: New Technologies for Cleaner Air*—finds robust growth in the use of alternative fuel refuse trucks in the US and internationally.

INFORM's new report, authored by Sr. Fellow James S. Cannon, documents that since 2002:

- the use of alternative fuel refuse trucks—nearly all powered by natural gas—has doubled from 697 to as many as 1496. The number of cities in which these trucks operate has also doubled, from 26 to 57.
- Refuse trucks have become the most rapidly growing natural gas vehicle sector in the US. Their use has expanded more rapidly as a percentage than any other vehicle sector. Its 89 percent increase was four times the overall 20 percent increase (between 2002 and 2004) in natural gas vehicle use nationwide.
- New natural gas fleets have come into operation in Paris, Madrid and Mechun, Belgium.
- Other clean fuels and advanced technologies are emerging: use of biodiesel (San Jose CA.) hydraulic hybrid technology (in Los Angeles) and use of bio-methane fuel, a win-win strategy capturing a powerful green house gas that was escaping from landfills for use as a clean renewable refuse truck fuel (with projects in Burlington, NJ; Los Angeles Cy., San Diego, and Gothenburg, Sweden.)

California: leading the way

Because of California's ambitious programs including the South Coast Air Quality Management District (SCAQMD) mandates for use of natural gas in heavy duty bus and truck fleets, and its economic incentives for fleet purchase of alternative fuel vehicles, the vast majority of alternative fuel refuse trucks are operating in California.

- California is home to the five largest fleets in the US: in Los Angeles (252 Liquefied Natural Gas (LNG) trucks; El Cahon (San Diego) (136 LNG trucks); Sacramento (105 trucks -55 LNG/diesel and 50 LNG), San Diego (77 dual-fuel LNG trucks) and the City of Fresno (69 LNG trucks).
- California has 1,268 of the 1496 natural gas trucks that INFORM confirmed or identified, followed by New York (26 CNG trucks), Texas (7 CNG trucks), Washington DC (3 CNG trucks), and Boston (2 CNG trucks).

Natural Gas Refuse Trucks: Meeting the needs of communities and the US

"The best thing about natural gas fuel," according to report author Cannon, "is that there are so many good things about this fuel." Burning natural gas in refuse trucks means:

- **Healthier air for millions of Americans:** Today, more than 150 (CK) million Americans breathe air that does not meet public health standards set by the US Environmental Protection Agency -- largely because of vehicle emissions. The 136,000 refuse trucks operating in cities coast to coast are major contributors to this pollution. They travel down virtually every residential street, stopping and starting and compacting wastes. There are more than three times as many refuse trucks as there are transit buses.

- **Improved quality of life in cities:** Diesel trucks rumble through neighborhoods often at night disturbing the rest of residents while trucks with natural gas engines are up to 90 percent quieter than their diesel counterparts.
- **Increasing energy security for the US:** “Refuse trucks burn petroleum-derived fuels at an astonishing rate,” according to Cannon. “Because of their stop and start mode of operation they burn approximately a gallon of fuel every 2.8 miles, making them the most fuel inefficient vehicles on US roads. A refuse truck travels on average 25,000 miles a year, burning about 8,900 gallons of diesel fuel. Replacing 50 percent of the 136,000 diesel refuse trucks in the US with trucks burning domestically-produced natural gas, would displace about 15 million barrels of oil.” The US depended on foreign oil to meet just 35 percent of its oil consumption needs in 1970. Today the figure is over 60 percent, and most of the oil imported to the US (67 percent) is used in transportation.
- **Putting the Us on the path to hydrogen:** “Refuse truck fleets that burn natural gas are way ahead of their peers,” according to Joanna Underwood, INFORM President and Project Advisor, “in moving toward the hydrogen era for two reasons: First use of these vehicles involves refining systems for storing, transporting and fueling vehicles with a gas under pressure; second, investments in natural gas fueling infrastructure are investments in gaseous fuel facilities that, with added equipment, will be able to extract hydrogen from natural gas and provide fuel for the first generation of fuel cell vehicles.”

Getting beyond the first steps

Although natural gas truck use has risen dramatically, the 1496 on US roads are still barely one percent of the refuse truck population. Fleet operators identified concern about costs and rising fuel prices, the challenge of possible performance problems, and the need for sustained government support as obstacles standing in the way of the environmental, human health, and energy independence benefits that can be achieved using natural gas fuels.

Greening Garbage Trucks: Trends in Alternative Fuels Use, 2002–2005 outlines five recommendations for overcoming these obstacles:

1. States’ adoption of the ambitious fleet mandates and targeted economic incentives that have made California and Texas leaders in promoting use of alternative fuel refuse trucks, and educational workshops helping refuse fleet operators take advantage of the almost \$1 billion in new economic incentives included in the Energy Policy Act of 2005 and of the new federal excise tax credit of \$.50 per gasoline equivalent gallon provided in the 2005 Transportation Bill for purchase and use of alternative fuel refuse trucks.
2. Setting up, on the state if not the federal level, a system for tracking trends in technology and alternative fuel use in the refuse truck sector
3. Establishing within the natural gas refuse truck Industry a professional organization to evaluate trends, set strategies for promoting use of natural gas fuel and of bio-methane from landfills.
4. Encouraging more government/industry and non profit partnerships that can help refuse fleet operators plan affordable successful programs and taking advantage of the DOE Clean Cities program capabilities
5. Form an integrated energy and technology export program, supporting the export of heavy duty natural gas truck and transit bus technologies into the growing markets in industrializing Asia.

“Refuse collection is a vital public service in which municipal governments throughout the country are directly or indirectly involved,” adds INFORM president Underwood. And, as the new US EPA engine emission standards in 2007 and 2010 are implemented, diesel refuse trucks, which will be required to use expensive new pollution control equipment and more costly ultra low sulfur diesel fuel, will lose the cost advantage they have long held over natural gas trucks. Governments at all levels must support innovation in this crucial sector so that it can more rapidly be transformed from one of the most polluting to the leading 21st century transportation innovator it can be.”

For Further Information:

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