UPDATE ON

AIR QUALITY

A NEW YORK METROPOLITAN TRANSPORTATION COUNCIL REGION REPORT

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WORKING TOGETHER FOR CLEAN AIR

Ever since the Federal government declared that the New York metropolitan region was not meeting acceptable air-quality standards under the Clean Air Act Amendments of 1990 and set a deadline for achieving them, many organizations have been engaged in the effort to make the air cleaner. This special report looks at one source of pollution - motor vehicle emissions — generated by the transportation system with its thousands of cars, trucks, buses and trains that keep the region moving every day, and several new, innovative measures The New York Metropolitan Transportation Council has undertaken to curb them.

NYMTC collaborated with its members and key stakeholders to implement initiatives aimed at reducing auto trips, spurring the use of alternative modes of travel and new, clean fuels as well as freeing the flow of traffic in the region.

EXPANSION PLANNED FOR OZONE ACTION DAYS PROGRAM

As part of an intensive effort to identify new programs to reduce vehicle emissions, NYMTC also has examined ways to build on current initiatives that target air-quality challenges. One of the areas that will be expanded is Ozone Action Days, a program promoting the use of travel alternatives during peak ozone seasons that has been in place in the New York metropolitan region since 1997.

Through outreach, incentives, education and a variety of other strategies, Ozone Action Days focuses on influencing commuting behavior and choices during periods when ozone levels spike. A significant expansion of the program by the New York State Department of Transportation (NYSDOT) is currently underway.

"We will shortly be announcing a new consultant whose task will be to both enhance the

current program and grow its visibility," said John Zamurs of NYSDOT. He added that, while still in the development and planning stages, significant results are anticipated.

The New York metropolitan region experiences 5-12 days each year, most during the hot summer months, that are designated Ozone Action Days due to unhealthy ozone levels. A number of strategies are employed to inform the public of an alert including public service announcements, e-mail alerts and advertising along with announcements on highway variable message signs.

500 Firms Support Ozone Action Days

"We currently have more than 500 business partners participating in the Ozone Action Days program," added Zamurs. "Their responses to an alert vary, from conveying the message to employees to measures that may include subsidizing vanpools or special incentives to encourage employees to use transit on alert days."

The public's understanding of the health risks associated with ground-level ozone is critical to the mission of Ozone Action Days and its ability to meet its goals. Among the program's expansion goals is increasing awareness about the measures that can be taken to minimize health risks and help decrease ozone levels on alert days, including the use of transit, carpools or vanpools as well as proactive choices, such as refueling vehicles during cooler evening hours and keeping cars tuned. The program also hopes to see more individuals signed up for e-mail ozone alerts via its website, www.ozoneny.org.

MTA hybrid-electric bus uses clean fuel and is helping reduce emissions in the region.

NEW COALITION SEEKS TO EXPAND FLEET USE OF CLEAN FUELS

A new coalition of transportation agency representatives, fleet owners and fuel and vehicle manufacturers will meet for the first time this spring to discuss ways to educate and persuade more vehicle fleet owners to adopt clean fuel technology. Sponsored by NYMTC, the Clean Technologies Group plans to meet quarterly to advance the effort. It is an important additional step to measures already taken.

"The whole purpose of this effort is to encourage fleet owners to consider cleaner technologies and potentially to even write that into municipal contracts," said Larry McAuliffe, manager of research and education with NYMTC. "We want to start a dialogue between fleet owners and fuel manufacturers that focuses on all potential incentives and technologies and to become a central clearinghouse for information about clean fuels and incentives."

To bring this idea to fruition, NYMTC is working closely with the Northeast States for Coordinated Air Use Management (NESCAUM), an organization representing the six New England states, New York and New Jersey that promotes air quality research, sponsors training programs and assists groups in the exchange of information and the procurement of funds.

Dave Park, an environmental engineer at NESCAUM, said, "What's critical here is incentive; perhaps monetary incentives to help these fleets in the region purchase control devices or upgrade their actual vehicles." Park also would like to see more labor unions doing their part to affect change. "Given the understanding of the health effects of diesel exhaust we would like labor unions to be more interested in protecting workers' health and in encouraging those who own or run the equipment to control those emissions better."

Transition to Cleaner Fuels Begins Across Region

Meanwhile, numerous agencies and organizations across the region have already made the switch to cleaner fuels and retrofits.

The New York City Department of Sanitation (DSNY), considered one of the region's trailblazers on the road to cleaner air, has been particularly busy reducing emissions in the last several months.

"We are always looking at different technologies and will continue to take a course of action to reduce emissions," said Rocco DiRico, assistant commissioner of support services at DSNY.

DSNY now operates about 800 alternative fuel vehicles, including some that use compressed natural gas (CNG) as well as a sizeable fleet of E85 flexible fuel vehicles. DSNY is also the first and only city agency to be using and dispensing the cleaner-burning E85 fuel and now has six filling stations located throughout the city.

DSNY to Cut Emissions Further

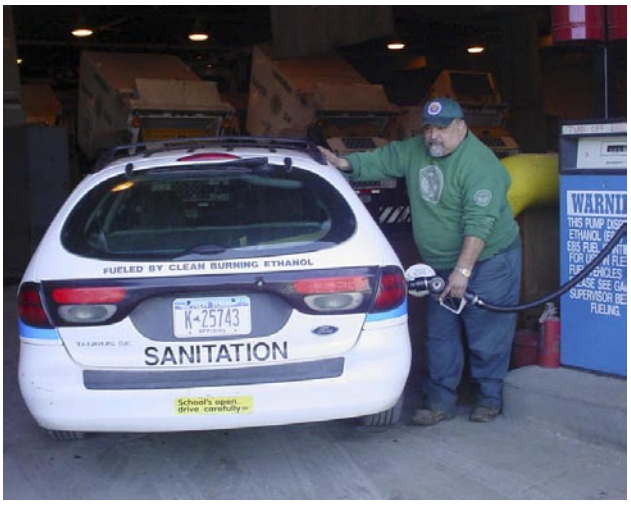
This past July, DSNY voluntarily adopted the use of ultra-low sulfur diesel for its remaining diesel fleet and this year the department will reduce emissions even further by retrofitting their vehicles with special filters and pollutant-cutting devices. "Now that our entire diesel fleet is using ultra-low sulfur diesel fuel, this enables us to move forward throughout the five boroughs with exhaust retrofits," said Spiro Kattan, supervisor of mechanics at DSNY. "It was very important to get the fuel in place before we could test some of these devices."

To help them do that, DSNY will use a U.S. Environmental Protection Agency grant to retrofit diesel vehicles and equip them with advanced technologies and cleaner fuels. The money would be used to outfit 68 refuse trucks in the South Bronx with diesel oxidation catalysts and crankcase filtration systems. Both EPA-approved, the catalyst is a muffler-like replacement that helps cut emissions and the crankcase filtration system is designed to prevent engine-generated pollutants from escaping into the atmosphere.

DSNY also received a grant at the end of 2004 to retrofit their vehicles in Queens. DiRico said this work is scheduled to begin later this year. "We are ecstatic," he said. "It helps us to keep moving."

The MTA has made substantial capital investments and implemented strategies to reduce emissions. On the list are: the entire bus fleet now uses clean fuels, including CNG; more than 300 City hybrid-electric buses are on the road, engines have been retrofitted, Metro-North Rail Road diesel trains have been replaced with high-efficiency locomotives and light-duty service vehicles use alternative fuel. Low sulfur diesel fuel powers buses, railroad engines, service and contractor construction vehicles. Idling times also have been reduced and maintenance cycles improved.

In Nassau and Suffolk Counties on Long Island, CNG and biodiesel fuel is the buzz and the demand for it is growing every year. More than 1,000 buses and other heavy-duty vehicles are operating on alternative fuels so far.



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"We had two big successes last year," said Andria S. Adler, program coordinator for Greater Long Island Clean Cities Coalition, an arm of the Long Island Forum for Technology (LIFT). "The Long Beach School District now has a fleet of 20 CNG buses and All Island Transportation, a taxi company, has purchased and is now running 40 CNG taxis in the region."

Continuing the effort, this year the coalition will begin partial distribution of a $5 million CMAQ award acquired recently by the Nassau-Suffolk Transportation Coordinating Committee. About 14 proposals are being evaluated, many of which include plans to convert additional municipal fleets and government vehicles to CNG.

Close to a dozen retrofits will be made to dump trucks and snowplows this year as well. "From the Queens border to the tip of Long Island, we've got things going on," said Adler.

The Coalition also is launching a seminar series targeted to fleet owners this spring, the first of which will explore biodiesel fuel. "We have people from all over the eastern seacoast coming to learn about biodiesel," Adler said.

In the lower Hudson Valley region, nearly all of the West-

The goal of Regional Commuter Choice is to lower emissions and traffic congestion by decreasing the number of people who commute by driving alone.

chester County Bee-Line buses have been operating on ultra-low sulfur diesel fuel since 2002. Patricia Chemka, director of planning at Westchester Department of Transportation, said there's also a new pilot program in the works to switch the Bee-Line Para Transit fleet of 54 vehicles to ultra-low sulfur diesel. "Westchester also has received funding to implement a retrofit of some of its diesel engines, which will be initiated shortly," she said.

"Based on EPA measures, before we can celebrate measurable differences in ambient air quality, Park from NESCAUM said, "we have a lot more work to do as a nation. But as far as our local neighborhoods are concerned, the NYMTC region has come a long way. We're definitely moving in the right direction with these projects."

REGIONAL COMMUTER CHOICE MOVES FORWARD

Development and implementation of the Regional Commuter Choice Program continues to be a significant initiative for NYMTC, not only for its potential to measurably improve air quality, but also for its role in helping the region comply with legislative requirements for air quality. A major regional initiative is about to launch, with outreach to increase the public's awareness of the transportation choices available to them. Creating a brand – a recognizable identity for the program and its components – is integral to the process and will be an important factor in achieving the program's goals.

The goal of Regional Commuter Choice is to lower emissions and traffic congestion by decreasing the number of people who commute by driving alone. In order to achieve this goal, the program targets two groups: commuters and employers. It promotes alternative means of transportation such as carpooling, vanpooling, transit, bicycling and walking, along with alternatives such as telecommuting, flextime and extended workday programs.

The two-phased development of the Regional Commuter Choice program is proceeding on schedule, with selection of a consultant to design the branding and marketing component planned for spring.

Financial incentives have a significant effect on advancing the goals of Commuter Choice and are essential in the arsenal of selling points to companies. The Transportation Equity Act for the 21st Century (TEA-21) created financial incentives by amending the Federal tax code allowing for programs such as TransitChek, one of the most recognizable forms of pre-tax transportation reimbursement.

Tax Incentives Abound

Commuter Choice tax incentives also include:

- employer-paid transportation benefits (in which the employer pays up to $100 per month for employees' transportation in exchange for a tax deduction and decreased payroll-related taxes);
- employee-paid, pre-tax transportation benefits (which allow employees to set aside pre-tax income for either vanpooling or transit);
- shared cost transportation benefits (employers and employees share both the cost and the tax breaks for vanpooling or transit),

"If you have long lines of cars just sitting at intersections waiting to make left turns for example, that's inefficient, dirty and it has local impacts," said Gerry Bogacz, Planning Group Director at NYMTC. "Add it up across the region and it has an even greater impact."

- parking cash-outs (in which employees can exchange employer-paid parking for tax-free transportation benefits for vanpooling or commuting by transit).

Local transportation demand management programs, implemented by CommuterLink in the New York City area, LITM in the Nassau/Suffolk area and MetroPool in the lower Hudson Valley are instrumental in delivering Commuter Choice in the New York metropolitan area. The new Regional Commuter Choice program will coordinate local efforts, increasing the program's visibility and accessibility to commuters and employers across the New York metropolitan region.

BETTER TRAFFIC FLOW BRINGS CLEANER AIR

Regional Signal Timing now under study at NYMTC

The Long Beach School District is the first on Long Island to adopt a natural gas school bus program. The district now operates a fleet of 20 Thomas Built compressed natural gas (CNG) buses. Created in partnership with NYSERDA, KeySpan and Greater LI Clean Cities, the CNG Bus Program was funded in part by the New York State Clean Water/Clean Air Bond Act.

The longer a vehicle sits idling in traffic, the more pollution it creates.

"If you have long lines of cars just sitting at intersections waiting to make left turns for example, that's inefficient, dirty and it has local impacts," said Gerry Bogacz, planning group director at NYMTC. "Add it up across the region and it has an even greater impact."

But when it comes to traffic signals, if the light is red, what else is a driver to do but sit and wait?

With Regional Signal Timing, there may be an option. Regional Signal Timing is aimed at putting an end to stop-and-go traffic in order to achieve optimal vehicle flow and curb noxious tailpipe emissions. It is currently under study in the New York region to determine where traffic signals across various corridors could be updated, re-timed or replaced all together.

According to the Environmental Protection Agency, it's considered one of the most cost-effective strategies for alleviating congestion and improving air quality.

"There are thousands of signals throughout suburban counties and in New York City that have never been re-timed," said Larry McAuliffe, manager of research and education at NYMTC.

The computerization of traffic signals in the five boroughs is one of the strategies that will allow for real-time adjustments to the system based on traffic conditions. "You basically take signals in a corridor and interconnect them," explained McAuliffe. "The computer can then sense the demand and alter the signals in progression to make traffic flow better."

New Long Island Traffic System Coming

Similar projects are also taking place in Nassau County, where 370 signals in 26 different corridors are being targeted. The county's centralized traffic control system, which has outgrown its ability to keep up with increasing traffic, also is being replaced with modern equipment. The new system has the capacity to control 1,600 signals.

Traffic signals throughout Westchester and Rockland Counties that are not connected to a centralized computer also are being evaluated for re-timing. Studies are now underway to determine how to optimize the phasing and timing of signals throughout those corridors – an effort that includes 765 existing signals in 37 municipalities.

In Westchester County alone, 680 locally maintained intersections are now being studied, according to Kevin Roseman, a traffic engineer at Westchester Public Works. Teams of consultants are now conducting a series of manual peak-hour movement counts at each intersection on weekdays from 7 to 9 a.m. and again from 4 to 6 p.m.

The information will be used along with existing signal timing data and roadway geometrics to evaluate the extent of intersection emissions so that the appropriate steps – either upgrades or the re-timing of existing signals – can be identified.

"The goal is to give local municipalities the opportunity to apply for Federal funding to coordinate and/or upgrade their signals in the future," said Roseman, adding that the data collection should be complete by mid-June and a final project analysis concluded by next March.

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IN THE PIPELINE: REGION EXPLORES EMISSIONS REDUCTION INITIATIVES

More programs are on the horizon to strengthen the region's continuing efforts to alleviate congestion and reduce emissions. Among those under study and consideration are: Regional Parking Pricing and Regional Idling Mitigation.

Regional Parking Pricing involves varying the price of curbside and municipal parking based on time of day and the duration of stay in order to influence driver behavior. The idea is that increasing the cost of parking at peak times might prompt individuals to shift their driving activity in certain areas to times when traffic is less congested or eliminate the need for parking entirely by opting for an alternate means of travel.

The plan would be to replace hundreds of individual meters on the streets with centralized parking devices – a model similar to that of congestion pricing on a bridge toll, said Gerry Bogacz, planning group director at NYMTC.

Fewer Meters; More Space

Removing the meters from various stalls also would free up parking space, which means fewer cars idling up and down the streets in search of a parking spot. "This would effectively increase the parking supply," he said. "People will begin to park in a more efficient way – smaller cars will take up less space, for example."

The plan could potentially improve turnover and reduce congestion in areas where there's a lot of commercial traffic as well. "In areas where there are commercial vehicles that have to offload, you want them to offload quickly so that other commercial vehicles can come in," Bogacz said. The hope is that delivery workers might get their trucks in and out in a more timely fashion if they had to pay higher fees to park.

"This can't be done everywhere in the region, it's just too complicated," Bogacz said. "But we're looking at whether it can be done strategically in key areas like Manhattan below 60th Street, White Plains, Mineola, and the Route 110 corridor. And if we did, what would the result be?"

Regional Idling Mitigation reduces emissions, particularly from large diesel vehicles, by cutting the amount of time drivers spend idling in traffic and parking lots.

"Research shows that nearly all idling is unnecessary when proper management is in place. Good management practices not only significantly reduce harmful emissions, but reduce costs through fuel savings as well," said Larry McAuliffe, manager of research and education at NYMTC.

"In New York City there's a law that you can't idle trucks or buses for more than three minutes so part of it is enforcing existing laws," said McAuliffe. "The other part is public education for fleet operators, owners and the general public about the problems caused by idling vehicles."

In addition to launching outreach campaigns designed to educate drivers about the health hazards of idling, NYMTC and its members would like to expand on the success of recent studies, such as the Truck Stop Electrification program at Hunt's Point Cooperative Market in the South Bronx – an area that receives hundreds of diesel-fueled delivery trucks every day.

The technology being used at Hunt's Pont, called Advanced Travel Center Electrification (ATE), eliminates extensive diesel engine idling by allowing truck drivers, for a minimal hourly fee, to turn off the engine and hook up to an electrical source for their power. "They get whatever they need to run their heaters, air conditioners, the Internet – whatever," said McAuliffe.

The project is co-funded by Clean Air Communities, IdleAire Technologies and the New York Power Authority. ATE also operates at rest stops in Syracuse, New York and Paulsboro, New Jersey.

And with new software conceived by Glenn Goldstein, program director at NESCAUM, and engineered by MetaComet Systems, users can obtain near real-time access to ATE data and system benefits. For example, a recent report generated by the software about the Paulsboro project shows ATE reduced total emissions by 33.92 tons this past February. It also resulted in nearly $5000 in total savings including operating expenses, fuel, engine costs and maintenance.

Now that Federal safety laws limit the duration of time long-haul truck operators can drive without pulling over to rest, expanding the program to other areas is a good idea. "We are going to look at non-traditional areas and assess what the regional benefits of this technology would be," Bogacz said.

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