

Clean Air Excellence Award Recipients: Year 2014

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Clean Air Technology

Montgomery County Resource Recovery Facility

*Montgomery County Department of Environmental Protection,
Northeast Maryland Waste Disposal Authority, and
Covanta Montgomery, Incorporated*

The Montgomery County Resource Recovery Facility (MCRRF) is a municipal solid waste processing facility owned by the Northeast Maryland Waste Disposal Authority on behalf of Montgomery County, Maryland, and operated by Covanta Montgomery, Inc. In 2009, funded by Montgomery County and approved by the Maryland Department of the Environment, the MCRRF voluntarily implemented an upgrade to the Selective Non-Catalytic Reduction (SNCR) for Nitrogen Oxide (NOx) emission control called "Low NOx" or LN'. The system involves the redirection of a portion of the secondary or overfire air to a higher elevation in the furnace. This control completes the combustion process while minimizing NOx formation through temperature control.

The LN technology was developed by Covanta for the retrofit of existing waste-to-energy facilities. This new technology redistributes combustion air leading to better fuel-air mixing. This project represents the first use of LN design at any publicly owned waste-to-energy facility and has demonstrated a reduction of NOx emissions by approximately 50 percent from pre-installation levels. This reduction is equivalent to approximately 400-500 tons per year or the annual emissions of about 50,000 passenger cars.

The County could have pursued NOx Emission Reduction Credits but chose not to pursue economic gain for these emissions reductions. This project will have long-term benefits for the local environment, ensuring ongoing NOx reductions at the plant.

Community Action

Regional 8-Hour Ozone Flex Planning

Central Texas Clean Air Coalition

The Central Texas Clean Air Coalition (CAC) of the Capital Area Council of Governments (CAPCOG) is a regional collaboration of local governments in Central Texas, consisting of elected officials appointed by city and county governments from the Austin– Round Rock Metropolitan Statistical Area. The CAC has successfully implemented a voluntary, regional 8–Hour Ozone Flex Plan (8–O3 Flex) and continues its positive impact on the community through ongoing air quality planning efforts. Through the 8–O3 Flex, the region has successfully stayed in attainment of the National Ambient Air Quality Standards for ozone despite a population growth rate that far exceeds the state and national averages. The plan was developed through an innovative partnership of a diverse group of 69 stakeholders in the Austin–Round Rock area, including governmental, business and non–profit entities. The participants, led by the CAC, implemented more than 95 measures, with a focus on keeping the area in attainment of federal ozone standards. Many of these measures, such as energy efficiency and resource conservation, have also resulted in reductions in other criteria pollutants, air toxics and greenhouse gases. The CAC adopted the 8–O3 Flex in 2008 to replace the CAC's Early Action Compact (2004), which in turn replaced the 1–Hour Ozone Flex Plan (2002). The group has now adopted a new air quality plan under the Ozone Advance Program that will continue the region's voluntary ozone planning efforts through 2018. The new plan includes 491 emission reduction commitments from five county governments, 13 city governments and 11 other governmental, nonprofit and business entities from the region.

Ducktown 28–Kilowatt Solar Array

City of Ducktown, TN

Located in southeast Tennessee, the City of Ducktown is a small rural community of 475 citizens. After years of environmental devastation caused by ore mining and its processing through open pit roasting, the community has undergone a complete transformation. Over the past five decades, the area has been rejuvenated through reclamation and reforestation provided by public and private partnerships. More than 500,000 visitors from nearby metropolitan areas now come to enjoy the natural amenities annually. Building on these environmental improvements and continuing to invest in economic development, city leaders chose to pursue renewable energy projects. In partnership with the Tennessee Renewable Energy & Economic Development Council (TREEDC), city leaders have attended multiple classes and conferences, learning about renewable energy sources and alternative fuels. In 2010, Ducktown constructed its first solar project: a 28–kilowatt solar photovoltaic system, through a federal grant received from the Tennessee Department of Economic and Community Development and local funds. With a total project cost of \$108,000, the city should only have been able to build a 14–kilowatt system, but by thinking out of the box, providing training for staff and completing construction themselves, the city was able to double the size of the system. In the first year of operation, the 28–kilowatt system created \$9,000 in revenues, offsetting approximately 45 percent of the energy cost. To date, this project has avoided more than 35 tons of greenhouse gases and other pollutants. Ducktown has also partnered with other private businesses and installed an additional 60 kilowatts of solar capacity, offsetting the total energy cost by 65 percent to date.

Education/Outreach

Idle Free Louisville

Kentuckiana Air Education

Idle Free Louisville was developed in 2010 to combat rising summertime ozone levels in Kentuckiana, an area encompassing Metropolitan Louisville and Southern Indiana that has long struggled with air pollution. Idle Free

Louisville is overseen by Kentuckiana Air Education (KAIRE), the education and outreach unit of the Louisville Metro Air Pollution Control District. KAIRE communicates the Idle Free Louisville message through partnerships with local schools, businesses and organizations; TV and radio commercials; online via social media; press releases to news outlets; and direct conversations with the public at neighborhood festivals, community meetings, business expos, health fairs and other events.

The campaign's cornerstone is Idle Free School/Idle Free Business, which enlists parents, teachers, students, employees and business operators to adopt Idle Free principles. Schools, for example, discourage parents from idling while waiting to pick up their children. Businesses post signage asking customers and delivery drivers to shut off their vehicles. The more than 40 participating schools, businesses and organizations are also encouraged to promote Idle Free Louisville in newsletters and other communications.

Each year, KAIRE conducts a random, scientific survey of adults in the five-county area it serves. According to the most recent survey in October 2013, 1 in 3 adults mentioned the Idle Free Louisville message without prompting. More than half of consumers understood that idling longer than 10 seconds uses more gas than restarting the engine. A similar survey by the Foundation for a Healthy Kentucky corroborates these findings, reporting that 62 percent of Louisvillians were changing their idling behavior in response to Air Quality Alerts, another indication that Idle Free Louisville is making an impact.

Improving Tribal Indoor Air Quality

Tribal Healthy Homes Northwest

Tribal Healthy Homes Northwest is a coalition of American Indian and Alaska Natives from Washington, Oregon, Idaho, and Alaska. The coalition was formed in 2009, after tribes called attention to indoor air hazards in tribal housing – a largely unfunded, unaddressed but profound health risk. With the support of EPA Region 10 and the Tulalip Tribes, the coalition has served more than 200 tribes and villages, providing peer-to-peer learning and connecting tribes across the region and country.

Through its core programs of outreach, training and field research, the coalition develops and disseminates best practices that are evidence based and culturally informed. Its goal is to help families live, play and work in environments that are free from disease-producing toxins and free from housing conditions that cause stress and financial strain. To this end, the coalition works by building partnerships with government, non-profits, academia and tribal consortia. In tribal communities, they help to craft solutions through cross-program partnerships, including tribal housing, air quality, and health care staff.

Highlights of this successful program include the Circuit-Rider training program in Weatherization + Health, bringing training directly to reservations and tribal homes. The Wood Heat and Community Health Research Initiative promotes affordable, practical methods to reduce woodsmoke exposure. Finally, the Outreach program consists of webinars, workshops and resource guides to connect tribes to innovative tribal programs, funding and technical assistance. A central priority of all these efforts is to reduce the burden of asthma in native communities – the prevalence of which speaks to disparities in both housing quality and air quality.

[Regulatory/Policy Innovations](#)

Seaport Air Quality Program

Port of Seattle, WA

The Port of Seattle is successfully reducing maritime-related emissions through collaboration with the maritime industry, regulatory agencies and the community. Using the 2005 Puget Sound Maritime Air Emissions Inventory as a baseline, the Port of Seattle partnered with the Port of Tacoma, Port Metro Vancouver and several regulatory agencies to develop the Northwest Ports Clean Air Strategy in 2007. The Strategy's objective is to reduce diesel and greenhouse gas emissions in advance of regulatory requirements. The Port of Seattle applied a science-based approach to develop programs focused on several maritime sectors, including the At-Berth Clean Fuels Program to incentivize the use of lower sulfur fuels by ocean-going vessels, a drayage truck scrapping program, and the Green Gateway Partner Awards program to recognize environmental accomplishments of container and cruise lines.

Using an updated 2011 emission inventory, the Port of Seattle estimates that overall diesel particulate matter emissions were reduced by 27 percent between 2005 and 2011, including reductions of 34 percent from ocean-going vessels at berth, 53 percent from trucks and 39 percent from cargo-handling equipment. In addition, greenhouse gases from Port activities have gone down by 5 percent over the same time period.

The Port is working with its partners to continue to make progress. With an updated Northwest Ports Clean Air Strategy in 2013, the Port has set new goals of reducing diesel particulate matter emissions per ton of cargo by 75 percent of 2005 levels by 2015 and 80 percent by 2020. In addition, the Port has set goals of reducing greenhouse gas emissions per ton of cargo by 10 percent from 2005 levels by 2015 and 15 percent by 2020. The Port is developing and implementing new programs to achieve these goals.

Transportation Efficiency Innovations

FPL's Clean Fleet and Consumer Education Program

Florida Power & Light Company

Florida Power & Light Company (FPL) is widely recognized for lowering emissions with its next-generation clean power plants. FPL has extended this commitment to reduce greenhouse gas emissions and other pollutants through its clean vehicles fleet and consumer education program. It operates one of the largest clean vehicle fleets in the nation with 1,750 biodiesel-powered vehicles and 550 hybrid or plug-in electric vehicles. Ninety-two percent of FPL's light-duty fleet is hybrid or plug-in electric, reducing petroleum use by 295,000 gallons and carbon dioxide (CO₂) emissions by 2,500 metric tons in 2012. FPL is also the largest user of biodiesel in Florida, reducing CO₂ emissions by 3,407 metric tons in 2012. With 18 percent of its bucket-trucks being hybrid or plug-in electric, the company has realized a savings of up to 60 percent in fuel and a reduction in emissions of up to 90 percent when also using biodiesel. In addition, FPL leverages "vehicle area network" technology to track and reduce vehicle idle time and miles traveled.

FPL engages with industry to help shape the future of clean transportation technologies. FPL serves on the boards of the Electric Drive Transportation Association and National Association of Fleet Administrators and supports CALSTART, an organization focused on promoting clean transportation. The company also works with manufacturers to establish vehicle specifications, including a partnership with Quantum to develop plug-

in electric pickup trucks. Finally, FPL raises awareness and educates customers and other stakeholders on the benefits of clean transportation options. For example, it has launched an innovative plug-in electric consumer Web site; features plug-in electric vehicles at nearly 100 community events annually; and publishes blogs, videos, articles, fact sheets and other communications about plug-in electric vehicles, reaching more than 4.5 million customers. FPL has demonstrated a commitment to providing energy and services while reducing air emissions and also keeping bills low for consumers.

Clean School Bus NC: Kids Breathe Here

North Carolina Department of Environment and Natural Resources North Carolina Department of Public Instruction

North Carolina's Division of Air Quality (DAQ) in the Department of Environment and Natural Resources and the Department of Public Instruction (DPI) have partnered in an 18-year effort to improve air quality at public schools through the "Clean School Bus NC: Kids Breathe Here" program. Consisting of various technological, policy, outreach and transportation efforts, this program has significantly reduced air pollution across the state, especially for the nearly 800,000 students who travel by bus in 115 school districts. The agencies and school systems secured nearly \$3.6 million in grants to replace, repower or retrofit 1,891 school buses with exhaust controls. These technologies have reduced annual bus emissions by 3.4 tons for nitrogen oxides and 9.1 tons for particle pollution. DPI also estimates that new school buses average 9 to 10 percent better fuel economy. In addition, DPI has educated bus drivers about idle reduction benefits while requiring local school systems to adopt a reduced idling policy to be eligible for state transportation funds linked to increasing fuel prices. DAQ has assisted outreach efforts through its "Turn Off Your Engine" campaign, including brochures, instruction, a Web site and signage. The division distributed more than 3,000 "Turn Off Your Engine: Kids Breathe Here" signs and installed more than 1,000 signs at schools in 30 counties. These efforts to reduce unnecessary idling have conserved fuel and reduced air pollution. In addition to helping to meet state air quality standards, this program has directly benefited children's health across the state.

Thomas W. Zosel Outstanding Individual Achievement

Dick Valentinetti – Vermont Agency of Natural Resources

As the longest-serving state air director in the country, Richard A. Valentinetti has demonstrated a lasting commitment to improving air quality. During his tenure over the past four decades as the Director of the Vermont Department of Environmental Conservation's Air Pollution Control Division, his list of accomplishments is extensive. He has consistently invested resources in air quality monitoring and research, establishing Vermont as a national leader in improving the scientific understanding of complex regional, national and international air quality issues. Mr. Valentinetti played a key role in providing the technical basis for EPA's acid rain program and in conducting long-term monitoring in Vermont that demonstrated the long-range transport of mercury emissions. He emerged as a leader in developing the New England Governor's/Eastern Canadian Premiers' mercury and climate action plans and the Regional Greenhouse Gas Initiative. His legacy of improving air quality also includes adopting a number of air quality regulations in Vermont that served as models for other states, such as groundbreaking air toxics regulations and the first emission limits for outdoor wood-fired boilers. He also coordinated the regional haze program for the Northeast and Mid-Atlantic states, and was critical in the region adopting and implementing California's low-emission vehicle standards, zero emission vehicle standards and greenhouse gas emission standards.

Mr. Valentinetti served as the President of the National Association of Clean Air Agencies (NACAA), on the board of directors for the Northeast States for Coordinated Air Use Management (NESCAUM) and on the executive committee of the board of the Northeast States Center for a Clean Air Future. He currently serves as a Special Assistant to the Secretary of the Vermont Agency of Natural Resources and remains a passionate advocate and a strong voice for environmental protection. Thanks to his successful efforts to reduce emissions of criteria pollutants, air toxics and greenhouse gases over the past forty years, we can all breathe a little easier.

Gregg Cooke Visionary Program

Keep It Clean

Washoe County Health District Air Quality Management Division

Keep It Clean is the brand developed in 2012 by the Air Quality Management Division of the Washoe County Health District to increase public awareness and to engage citizens of Reno, Sparks and Washoe County, Nevada, on air quality issues. There are three major community action components to Keep It Clean: Know the Code, a woodburning advisory program; Rack Em Up, an alternative transportation program; and nOzone, a smog prevention program. Each of these encourages emission reduction and empowers citizens to take positive actions to reduce ozone and particulate matter throughout the year. The Keep it Clean brand has greatly increased public awareness of air quality and improved access to information regarding air quality through programs with schools, social media, television, radio and other avenues. For the Know the Code program, a recent Residential Wood Use Survey found that approximately 74 percent of the public reduced their burning on Yellow (encourage no burning) or Red (stop burning) days. The Rack Em Up campaign held a contest in 2013 where 10 schools and over 500 students participated in biking events or riding to school. In 2014, the District plans to double the student and school participation as well as the award amounts. Additionally, the nOzone campaign has led to an idle reduction campaign at six local schools, and Idle Free Zone signs will be installed this spring. For other ozone reduction efforts, the County is updating its policy to prohibit 2-stroke gasoline-powered landscape maintenance equipment and has installed an electric vehicle charging station, available free to the public, at the Washoe County Health District.