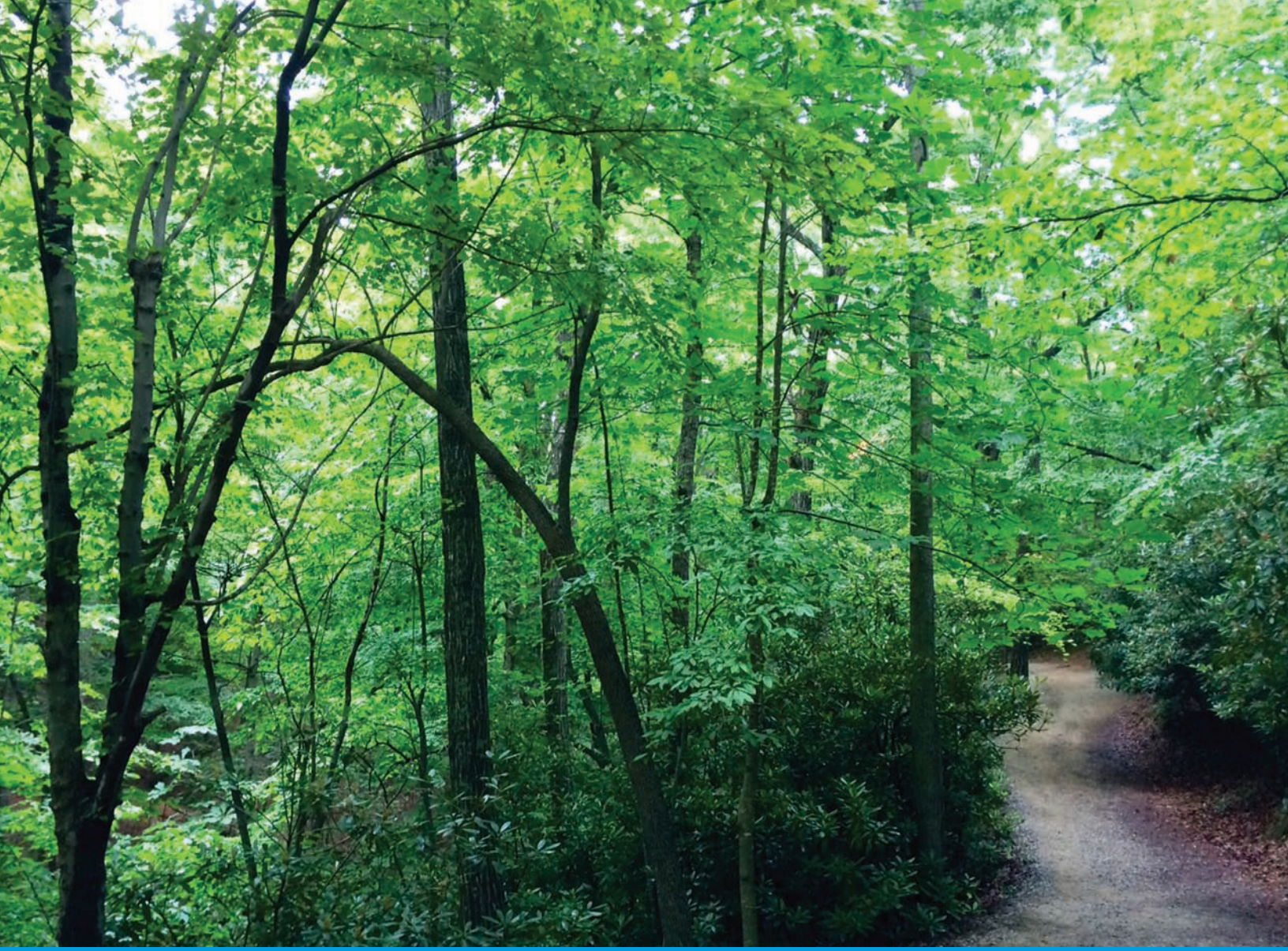
# CLEAN AIR Excellence Awards 2016

EPA United States Environmental Protection Agency

Office of Air and Radiation



CLEAN AIR Excellence Awards

## About the Clean Air Excellence Awards Program

The Clean Air Excellence Awards Program is sponsored by the U.S. Environmental Protection Agency's (EPA) Office of Air and Radiation. The program was suggested by the Clean Air Act Advisory Committee (CAAAC), a senior-level federal advisory committee that provides advice to the EPA on Clean Air Act issues and the Awards Program.

The Awards Program, now in its fifteenth year, recognizes and honors both individuals and organizations that have undertaken the risks of innovation, served as pioneers in their fields, advanced public understanding of air pollution, and improved air quality. Each award recipient has either directly or indirectly reduced emissions of criteria pollutants, hazardous air pollutants, and/or greenhouse gases.

The award recipients are chosen through a multi-step judging process. The EPA staff conduct an initial technical screening of all applications. Selected entries are then reviewed by a CAAAC task force, which provides advice to the EPA on the candidates' programs. The EPA's Office of Enforcement and Compliance Assurance then provides additional comments on entries. The EPA's Assistant Administrator for Air and Radiation makes the final award determinations.

The EPA posts information about current and past award recipients on the Clean Air Excellence Awards Program Web site, located at http://www.epa.gov/air/cleanairawards/.

# 2016 Clean Air Excellence Award Recipients

## Clean Air Technology

Electric Rubber Tire Gantry Cranes
*Georgia Ports Authority*

## Community Action

Protecting Blue Whales and Blue Skies
*Santa Barbara County Air Pollution Control District*

## Education/Outreach

Rhode Island Energy Challenge: “Find Your Four!”
*SmartPower*

## Regulatory Policy Innovations

Tribe Implementation of a Clean Air Act Title V Operating Permit Program
*Southern Ute Indian Tribe Air Quality Program*

Owens Lake $PM_{10}$ Project
*Great Basin Unified Air Pollution Control District*

## Transportation Efficiency Innovations

Sustainable Transportation Program
*UC Irvine Transportation Services*

## Thomas W. Zosel Outstanding Individual Achievement Award

Dr. John C. Wall

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Clean Air Technology Award

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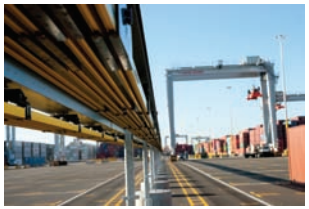
# Electric Rubber Tire Gantry Cranes

## Georgia Ports Authority



The Georgia Ports Authority (GPA), as a leading advocate of environmental stewardship, is implementing an electric rubber tire gantry (RTG) crane program that will transfer the entire RTG fleet to electric power. This will virtually eliminate the diesel fuel usage for these machines and reduce the terminal's diesel emissions. This cutting edge technology, built to a GPA design, is the first electric RTG (eRTG) installation at a port in North America.

GPA has invested over $17,500,000 constructing the first three phases that allows a total of 45 eRTGs to operate. Upon completion of the 12-phase program over the next 10 years, the entire fleet of 169 machines will have full electric capability.

This milestone project increases capacity and productivity in an environmentally responsible way. The eRTGs use 95% less diesel fuel than conventional RTGs with corresponding reduced diesel emissions for improved local air quality. Further, this project presents a robust business case – diesel is decreased by over 3 million gal/year for a net savings of over $9 million dollars while providing a strong, positive environmental message to the community and customers. The annual reduction in $CO_2$ is almost 70 tons at full build out in 2026. The business case is further reinforced when combined with maintenance reduction costs, bringing a total savings expected to eclipse $11 million per year.

The eRTG project is unique and innovative, and a model others can follow to work together for a common goal to reduce energy usage and diesel emissions. Project partners include Konecranes, Inc., Georgia Power, Electric Power Research Institute (EPRI) and Conductix-Wampfler.

# Protecting Blue Whales and Blue Skies

## Santa Barbara County Air Pollution Control District

This innovative project was implemented in the Santa Barbara Channel region to cut air pollution and protect whales.

Thousands of ships going to and from the Ports of Los Angeles and Long Beach travel through the Channel, emitting air pollution and raising the risk of ship strikes on endangered whales. Ships account for more than 50% of ozone-forming nitrogen oxides (NOx) emissions in Santa Barbara County, which does not attain the state ozone standard, and more than 25% in Ventura County, which is in nonattainment of both state and federal ozone standards.

Reducing ship speeds to 12 knots decreases emissions of NOx, and reduces the chance of a fatal ship strike. In 2014, Santa Barbara County Air Pollution Control District (APCD), Ventura County APCD, NOAA's Channel Islands National Marine Sanctuary, Environmental Defense Center, and National Marine Sanctuary Foundation implemented a voluntary vessel speed reduction (VSR) trial program in the Channel. Seven global shipping companies participated and slowed 27 transits from July through November to 12 knots or less, for an incentive of $2500 per transit. The Santa Barbara Foundation and Santa Barbara and Ventura air districts provided funding. The project reduced more than 12 tons of NOx emissions and more than 500 metric tons of regional greenhouse gas emissions, and no ship strikes on whales were documented during the trial.

This is believed to be the only voluntary VSR program globally not associated with a port. The trial demonstrated the willingness of shipping companies to participate in a voluntary program and laid a foundation for a comprehensive stakeholder effort in 2015, and for larger-scale efforts currently underway.

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Photo by John Calambokidis

Community Action Award

Education/
Outreach Award

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## Rhode Island Energy Challenge: "Find Your Four!"

### SmartPower

The Rhode Island Energy Challenge: "Find Your Four!" is an innovative community-based outreach campaign that works in partnership with the non-profit organization SmartPower and Rhode Island's utility, National Grid. The "Find Your Four" campaign engages businesses, municipalities, non-profit organizations, and faith-based groups to get 5-10% of residents, members and congregants to find four simple energy reductions in their homes or businesses. When a community reaches 5% participation, they are named "A Rhode Island Energy Champion" and a street sign is displayed in their city. Innovative outreach approaches include "Energy Sunday" sermons from pulpits, elected officials offering free coffee at town-sponsored events, and refrigerator recycling outreach at Sears. SmartPower also developed a Video Challenge encouraging students to create videos about household energy use, with over 10,000 on-line voters helping to select the winning schools. Other results include:

- Over 500,000 customer communications
- 10,000 face-to-face interactions
- 50 newspaper\online stories
- 90% of participating households indicated they took at least one energy saving action
- 75% of participating households indicated they became more aware of their energy use
- 66% of participating households who receive Home Energy Reports noted they now pay more attention to them
- National Grid's home energy assessment program achieved 215% of target MWh savings goal

National Grid reports "The Find Your Four! Challenge broadened awareness with targeted towns and organizations and created leads for energy efficiency programs. The grassroots energy campaign proved to be more effective at reaching customers and encouraging them to participate in meaningful ways."

# Tribe Implementation of a Clean Air Act Title V Operating Permit Program

## Southern Ute Indian Tribe Air Quality Program

The Southern Ute Indian Reservation, located in southwest Colorado within the San Juan Basin, is a center for natural gas production within the United States. There are numerous stationary air pollution sources within the Reservation, ranging from well pads to natural gas treating and processing plants. The Southern Ute Indian Tribe (Tribe) sought to manage and improve the air quality for Tribal members and residents within the Reservation and established a partnership between the Tribe and the State of Colorado through an Intergovernmental Agreement (IGA). This agreement established an Environmental Commission (Commission), with equal Tribe and State representation, to direct air quality policy and develop regulations applicable to all Reservation air pollution sources.

The Commission adopted a Reservation Air Code and, on March 2, 2012, the Tribe was delegated the administration of a Part 70 title V operating permit program by the U.S. Environmental Protection Agency (EPA). So far, this is the first and only approved Title V air quality permit program in Indian country, setting an example for other Tribes to implement more sustainable air quality programs.

The Tribe's Air Quality Program (AQP) successfully completed the task of transitioning 33 permits from the EPA to the Tribe, issuing 4 new permits within 3 years. In 2014, the AQP initiated a full compliance monitoring program, and had completed 27 inspections.

The Tribe's administration of the title V operating permit program has improved the permitting and compliance process for regulated sources. In addition, more frequent compliance inspections have increased assurance of conformity with Clean Air Act regulations, reducing criteria and hazardous air pollutant emissions. The Tribe hopes its program can be a model for other tribes.

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Regulatory Policy Innovations Award

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## Owens Lake $PM_{10}$ Project

### Great Basin Unified Air Pollution Control District

The Great Basin Unified Air Pollution Control District produced a historic achievement in American environmental protection to control air pollution from the dried Owens Lake bed in California. Made famous by the movie Chinatown, the lake bed was emptied by the diversion of the Owens River through the Los Angeles Aqueduct. For the next 100 years, the Owens Valley endured the highest $PM_{10}$ levels in the nation. In response to this public health threat, the District developed the world's leading methods to identify pollution source areas, analyze particulate emissions, and determine pollution control measures. In 2014, the District obtained a stipulated judgment requiring the Los Angeles Department of Water and Power to implement the largest air pollution control project in United States history. At 48.6 square miles, Owens Lake is the largest $PM_{10}$ control project in the world. The annual reduction of air pollution is unprecedented, comprising 75,000 tons of air pollution each year, transforming some of the nation's most polluted air into some of its cleanest. The District's technological innovations include test methods and water-saving technology that have wide-ranging applications to other communities, nationally and internationally, that are affected by air pollution from lake beds emptied by drought and the increasing demands on their water supplies.

The District's Owens Lake $PM_{10}$ Project marks a historic unprecedented achievement to address more than a century's worth of environmental damage. The improbable way a small, committed group of scientists changed environmental policy and the law will leave a legacy of their extraordinary dedication to protecting human health and the environment.

## Sustainable Transportation Program

### UC Irvine Transportation Services

UCI Transportation has turned campus driving culture on end through its innovative sustainable transportation programs and services that promote clean air for the campus and region and provide cost-savings and widely-available commuting options for the campus's 40,000 faculty, staff and students.

The second largest employer in Orange County, UCI has developed a wide range of sustainable commuter travel options which has enabled the campus to not only meet, but exceed by 30% the South Coast Air Quality Management District mandate to reduce emissions from employee commutes. Through its staff's broad adoption of sustainable transportation, UCI annually reduces 40,172,179 vehicle miles traveled, saves 21,000 metric tons of GHG emissions, removes thousands of vehicles from campus and regional roadways each day, and defers the need to build more parking infrastructure.

UCI Transportation works with regional agencies and campus entities to ensure that sustainable modes of transportation create seamless travel to and from the campus, especially during peak hours. Vanpools, carpools, train, bus, walking, and biking bring 65% of UCI's commuters to campus, and unlimited rides on California's first automated bike share and car-sharing options give commuters sustainable options for travel during the day without needing a personal vehicle. Additionally, convenient electric vehicle charging has accelerated the adoption of electric vehicles, and unique rideshare events encourage and educate campus commuters about sustainable transportation benefits.

UCI Transportation has been widely recognized as a leader in sustainable transportation programming and has previously received the California EPA Governor's Environmental and Economic Leadership Award, the Best Workplaces for Commuters "best of" Award, and recognized as a gold level Bicycle Friendly University. UCI Transportation continues to develop programs to reduce pollutants from commuter travel and improve consumer choice in travel options.

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Transportation Efficiency Innovations Award

# Thomas W. Zosel Outstanding Individual Achievement Award

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## Dr. John C. Wall

It's hard to overstate the impact Dr. John Wall has had on reducing commercial engine emissions and on advocating for tough, clear, enforceable regulations worldwide.

Electronic high pressure fuel systems, cooled exhaust gas recirculation, wall-flow diesel particulate filters, selective catalytic reduction – Dr. Wall has played a significant role in all of these breakthrough clean air technologies and more during his illustrious career. A true innovator, he was involved in the development and implementation of all of the major technology advancements ultimately leading to near-zero levels of emissions of particulate matter and oxides of nitrogen from both on- and off-highway engines. A champion of alternative fuel technology, he has promoted the development of renewable fuels, fuel cells and other advancements for future technologies to help the world meet its energy and environmental challenges.

In addition to shaping emissions science, Dr. Wall, who retired from Cummins Inc. in 2015, also helped shape emissions policy around the world. Perhaps most importantly, he consistently promoted a proactive, environmentally-conscious position for the industry. Working with the industry and the EPA, he played a key role in advancing the landmark 2010 heavy-duty vehicle emissions standards, and he worked firsthand with the EPA and multiple other stakeholders to establish the first commercial vehicle greenhouse gas and fuel consumption standards.

Dr. Wall has been a trusted advisor and advocate for clean air programs and has worked to teach the world about the EPA's standards. He was a recipient of the 2014 Haagen-Smit Clean Air Award from the California Air Resources Board and was elected into membership of the National Academy of Engineering in 2010 for leadership and management of research, design, development, and production of low-emission, fuel-efficient, heavy-duty diesel engines.

# Acknowledgements

## U.S. Environmental Protection Agency

Janet McCabe
*Acting Assistant Administrator*

Jim DeMocker
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Jim Ketcham-Colwill
*Interim CAAAC Designated Federal Officer*

## EPA Regional Review Panel

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Region 3—Dave Campbell
Region 4—Kelly Sheckler, Eva Land
Region 5—Jenny Liljegren
Region 7—Toni Gargas
Region 8—Kyle Olson, Scott Jackson
Region 9—John Mikulin, Trina Martynowicz
Region 10—Bob Kotchenruther, Madonna Narvaez

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# Acknowledgements


## Clean Air Act Advisory Committee Awards Review Panel

Adrian Shelley
*Air Alliance Houston*

Dan Greenbaum
*Health Effects Institute*

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*Southern California Edison*

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*Alstom Power Inc.*

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## Photos

Review Panel - Ellen Kurlansky and Wendy McQuilkin
*Office of Air Policy and Program Support*

Front Cover: *Mount Haynes*. Chris Sarsony

Opening Photos: *North Carolina Woods.* Amy Hambrick; *Claytor Lake Fog.* Alan Rush

Clean Air Technology: *Colorado.* Amy Hambrick

Community Action: *Washington Channel.* Travis Johnson

Education/Outreach: *Fields of Snow*. Chris Sarsony

Middle Spread: *Alaska Range*. April Melvin; *Dismal Swamp North Carolina.* Amy Hambrick

Regulatory Policy Innovations: *Ute Trail-Rocky Mountain National Park.* Amy Hambrick; *Sunset, November.* Verena Radulovic

Transportation Efficiency: *Northeastern Pennsylvania.* Amy Hambrick

Zosel Award: *Clarity of Vision*. Chris Sarsony

Back Cover: *Bend in the Yellowstone.* Chris Sarsony

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For more information on the Clean Air Excellence Awards Program or the Clean Air Act Advisory Committee, visit http://www.epa.gov/air/cleanairawards/.

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