ENERGY VISION EV the time is now.

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EV's 2014 Awards Reception Celebrates Energy Pioneers

The 2014 *Energy Vision Leadership Awards* were presented at our year-end reception, which also featured a "green" silent auction, organic hors d'oeuvres , and our now famous "melting glacier" climate change cocktail.

The event, once again hosted at the beautiful West Village townhouse of EV friend and supporter Tom Fontana, raised funds and awareness for EV's ambitious cause — to move beyond the petroleum era by rethinking waste and transportation fuels in America.

Award winner Kathryn Garcia (left), Commissioner of New York City's Department of Sanitation (DSNY), with EV Board Member and former DSNY Commissioner Brendan Sexton (middle) and EV President Joanna Underwood

Receiving the first award was Cleveland-based **quasar energy group**, for its national leadership in developing and building closed-loop "anaerobic digestion" systems for turning organic waste into fuel. Mel Kurtz, quasar's President, said, "Innovation always precedes legislation and regulation. If no one is telling the story of what is possible, then legislators and regulators don't know what to promote or what to encourage people to participate in. That's a big issue in this industry. These innovative projects aren't hypothetical — they're real."

The second award of the evening went to Michigan-based **Aria Energy** and California-based **Clean Energy**

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Grand Junction Sets the Pace with Colorado's First Waste-to-Vehicle Fuel Project

Grand Junction, a small city of about 60,000 in Mesa County, Colorado will unveil the first renewable natural gas (RNG) vehicle fuel project in the State on April 22, 2015.

City engineers at the Persigo Wastewater Treatment Plant began exploring options to use the biogas being generated at the facility almost a decade ago. After years of planning, in 2014, the city contracted with BioCNG, LLC, a Wisconsin-based company, to design, build and operate a system that will collect and purify the biogas, creating clean, vehicle-grade renewable natural gas fuel.

Since the city already had a natural gas refueling station, city officials determined it would be most economical to create vehicle fuel on-site (as opposed to heat/power) and construct a pipeline connecting the BioCNG system to the existing refueling infrastructure six miles away.

By collecting and processing the biogas – rather than just flaring it – the city will produce enough fuel to power 38 municipal natural gas vehicles by year-end, including refuse trucks, street sweepers, dump trucks and sedans. Four regional transit buses (already equipped with natural gas engines) will also be fueled, with the option of adding an additional 5 in the future. This locally produced ultra-low-carbon fuel will achieve greenhouse gas emission reductions of 88% or more compared to gasoline or diesel.

The innovative project will displace more than 160,000 gallons of gasoline and diesel, and prevent the release of nearly 3 million pounds of CO_2 annually. The primary economic drivers for the project are fuel savings and the long-term fixed costs of RNG as compared to petroleum-based fuel. The total project cost, including pipeline, is approximately $2.8 million, with an anticipated payback of 9 years.

Grand Junction Mayor Phyllis Norris said, "The Persigo project can serve as

Grand Junction's beautiful Persigo Wastewater Treatment Facility at sunset

Public and private sector officials from Grand Junction and Mesa County Colorado break ground on the BioCNG gas refining system adjacent to the Persigo Wastewater Facility

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LETTER FROM THE PRESIDENT

Joanna D. Underwood

What do Grand Junction, Colorado, and Washington, D.C. have in common? Here is one thing: Both are showing cities across the country one path to a brighter environmental future. Both are turning their wastewater treatment plants into modern resource recovery facilities, using the sewage to produce *clean energy, clean fuels and more*.

EV President Joanna Underwood on a tour of DC Water's advanced wastewater treatment facility, the largest of-its-kind in the world

Grand Junction, Colorado, featured in this issue of EV News, shows that even a small city *with a vision* – its population is just 60,000 – can be a real innovator. Officials at Grand Junction's Persigo Wastewater Plant have recently installed a small-scale system that will refine methane biogases emitted from the sewage in its "anaerobic digester" tank. The facility generated and flared biogas for decades, but thanks to U.S. engineering innovation, this small-scale operation is now able to put this gas to good use.

By year-end, the new fuel, "renewable natural gas", will displace gasoline and diesel in more than three-dozen municipal buses, trucks and sedans. It requires no drilling, is as clean burning as fossil natural gas, and generates just a fraction of the greenhouse gases that were produced by the petroleum-based fuels it was using. A half-million-dollar State grant covered part of the $2.8 million cost of Grand Junction's new facility. And while the project payback is 9 years, the city right now is assured of a clean, homegrown, modestly priced fuel for decades to come.

Washington, D.C.'s wastewater plant, called "Blue Plains," operates on quite a different scale. Run by DC Water, it is the largest advanced wastewater treatment plant in the world. It treats the sewage of 640,000 residents, 700,000 District employees and 17.8 million visitors a year, plus 1.6 million residents in VA and MD. Blue Plains' guiding light has been General Manager George Hawkins, a lawyer and committed environmentalist, whose vision is driving change.

Among DC Water's innovations: Its sewage is processed in a digester from which the collected biogases are used to power the plant. This is the largest source of renewable energy in the region, a source that may be expanded by addition of solar arrays at the 150-acre site. DC Water has invested $950 million to achieve levels of nutrient reductions – exceeding federal requirements – so the water it discharges, which flows into Chesapeake Bay, is helping clean up the country's most important estuary. DC Water has invested another $400 million in technology that heats and disinfects the bio-solids remaining in its digester after gas extraction, so they are now being safely used as fertilizer and mulch on Virginia farmlands.

Following EV's waste-to-fuel workshop in Washington last summer, DC Water began exploring opportunities to boost biogas production by adding food waste. This would reduce the volume of DC-generated waste being landfilled while providing more fuel, some of which could power municipal buses and trucks.

While these projects vary greatly in size and cost, both are municipally owned and operated, and plant officials proposed them for their economic, environmental and climate change benefits. Running a sewage treatment plant may not seem a glamorous job, but it is evident from these models that managers of these plants – large and small – can be real leaders in implementing state-of-the-art 21st century technology that will have a powerful impact on our future.

ENERGY VISION: On The Road

Nov 18 Energy Vision hosted its year-end Holiday Awards Reception in NYC. (See story on page 1 for details) For more photos, visit: **http://energy-vision.org/ev-2014-awards-ceremony/**

EV Board Member Joan Pearlman; EV President Joanna Underwood; Advanced Energy Research & Technology Center Chairman Bob Catell; EV Board Member Brendan Sexton, and NY State Assemblywoman Didi Barrett

Dec 9 EV's Tomich participated in the annual Coalition for Renewable Natural Gas Conference in San Diego. The event was attended by more than 100 experts from the quickly growing industry turning US wastes into low-carbon vehicle fuel.

Feb 11 EV's Underwood and Tomich presented to the Manhattan Solid Waste Advisory Board – which advises NYC on solid waste policy – on the opportunities, obstacles and benefits of the organic waste-to-vehicle fuel strategy for NYC.

Feb 27 EV's Tomich attended the Strategic Planning Meeting of the US Dept. of Energy's Clean Cities Program. For the first time, RNG was included as a high-priority national strategy for displacing diesel in the transportation sector.

Mar 18 EV President Joanna Underwood toured DC Water's Blue Plains wastewater treatment plant in Washington, DC. Its bold logo and tagline, "Water is Life," adorn every agency vehicle, making it a well-known symbol throughout the community.

One of the tanks at DC Water's advanced wastewater treatment facility

Coming Up

Apr 15 EV's team has been invited by the US EPA to introduce the organics recycling and anaerobic digestion strategy to nine Middle East & North African nations at the annual Sweep-Net regional solid waste conference in Tunisia.

Colorado RNG article continued from Page 1

a model for other communities as part of a strategy to address air quality, climate change, energy efficiency, energy security and independence."

In addition to being the first RNG transportation project in Colorado, the Grand Junction facility is the *first in the country* to utilize wastewater biogas exclusively as a transportation fuel. However, it certainly is not the only facility with the capacity to do so.

According to the US EPA, there are more than 1,500 wastewater plants nationwide generating enough biogas to justify its use to generate heat, power or vehicle fuel. In fact, several other municipal wastewater facilities across the country have similar plans underway, including the Central Wastewater Treatment Plant in Tacoma, WA and the Newtown Creek Wastewater Treatment Plant in New York City. An emerging opportunity, as evidenced by the proposed Newtown Creek project, is to boost biogas production by mixing (or "co-digesting") food waste with traditional sewage.

These examples make clear that municipalities have the opportunity TODAY not only to generate renewable energy and fuels, but also to recycle and process organic waste locally, rather than exporting this resource to distant landfills or incineration facilities.

Once operational, the Persigo project will be about the 12th in the country to utilize locally produced RNG to power local or regional natural gas vehicles. For detailed profiles of these projects and more, visit Energy Vision's website:

www.energy-vision.org/organics-to-fuel-case-studies/

Energy Vision Welcomes Two New Board Members

Sorbonne–educated and New York University (NYU) research scholar, **Mustapha Tlili** is the founder and Director of the NYU Center for Dialogues and a senior fellow at NYU's Remarque Institute. Professor Tlili also currently serves as Special Adviser to the President of the 66th Session of the United Nations General Assembly.

Previously, Mustapha taught at Columbia University's School of International and Public Affairs and was a senior fellow at the World Policy Institute of New School University. He is a former senior UN secretariat official, having served as Director for communications policy in the United Nations Department of Public Information, Director of the UN information center for France, located in Paris, and chief of the Namibia, Anti-Apartheid, and decolonization programs in the same department. Mustapha co-edited, with Jacques Derrida, a book of essays in honor of Nelson Mandela.

An established novelist, Mustapha is a knight of the French Order of Arts and Letters. He is also a member of Human Rights Watch's Advisory Committee for the Middle East and North Africa. Mustapha said, "I am proud to join Energy Vision's Board. I recognize the contribution its research can make to solving environmental issues of global concern, and want to help open doors for international collaboration."

Simon Sylvester-Chaudhuri founded TechFlo in 2014, a commercialization startup aimed at helping innovative companies excel in making the world and its cities smarter, safer and healthier. Previously, Simon worked for NYC ACRE, the City's premier clean technology incubator, focusing on driving cleantech startup development and innovation. In 2014, Simon co-founded the NYC Energy Data Meetup and was also a key catalyst for Clean.Data., the winning team of the 2013 New York Energy Data Jam at Google, and presented at the White House Datapalooza in the spring of 2014.

Simon was the O'Mara Energy Fellow and completed an MS in Energy and Environmental Policy at NYU's Center for Global Affairs (CGA). While at the CGA, Simon did extensive fieldwork in China and the Middle East. In 2013, Simon was named a Shell New Energy Fellow and has been featured multiple times on The Energy Collective and in many other energy–related publications. Prior to New York, Simon received a BS Hons in Economics and Philosophy at the University of Sussex and an MSc in International Business Economics at the Westminster Business School, both in the UK. Simon also serves on the Board of Directors for the New York Chapter of Young Professionals in Energy (YPE).

Spotlight on Progress: Oregon Moves Ahead with a Low-Carbon Fuel Standard

On March 11, 2015, Oregon Governor Kate Brown signed Senate Bill 324 into law, effectively extending Oregon's Clean Fuels Program through 2025. Energy Vision was among the many private and non-profit groups supporting this Program, which is modeled closely after California's Low-Carbon Fuel Standard. Oregon's law requires oil companies to gradually reduce carbon emissions from their petroleum-based fuels by 10% over the next 10 years. They can either blend biofuels in with their gasoline or diesel or buy credits from producers of non-petroleum alternative fuels such as propane, biodiesel, natural gas and renewable natural gas (RNG).

The transportation sector in Oregon generates more than 30% of the state's greenhouse gas emissions. By ensuring a market for locally produced low-carbon fuels, it is estimated that the Program will stimulate economic growth — creating up to 29,000 jobs and saving as much as $1.6 billion a year on out-of-state fuel costs — and significantly reduce both greenhouse gas emissions and air pollution. RNG, the lowest-carbon commercial option, is sure to play an important role in meeting these ambitious goals.

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Renewable Fuels, for producing renewable natural gas at the Seneca Meadows Landfill – the first RNG project in New York State – and delivering it to the transportation market. The joint project will displace more than 3 million gallons of diesel with ultra-low-carbon RNG each year. The awards were accepted by Rick DiGia, President and CEO of Aria Energy, and Harrison Clay, President of Clean Energy Renewable Fuels (CERF).

"Energy Vision has held the vision for what renewable fuels can really be," DiGia said. "With increased access to renewable transportation fuel, we're producing and putting RNG in pipelines and shipping it off to stations like the ones operated by Clean Energy."

Clay added, "When I started at Clean Energy, it was a revelation to me that we could put RNG in vehicles and cut their carbon emissions 90%." "But change requires that you push and push and push. So we are lucky to have Energy Vision, which knows how to really push, speak truth, and move RNG forward."

EV's Joanna Underwood and Matt Tomich with Award winner Mel Kurtz, President of Cleveland-based quasar energy group

Leadership Award recipients Harrison Clay (L-CERF) and Rick DiGia (R–Aria Energy) with EV's Underwood and Tomich

The final award of the evening went to the **NYC Department of Sanitation**, the world's largest sanitation department, for its ambitious residential and commercial organic (food) waste recycling programs. The award was presented to current DSNY Commissioner, Kathryn Garcia, by Energy Vision Board Member and former DSNY Commissioner Brendan Sexton.

"Today, DSNY has 44 trucks and more than a dozen sweepers running on natural gas, picking up real trash, driving real trucks across real roads," said Sexton. "Commissioner Garcia is the reason there is administrative and political will now behind the serious effort to replace diesel with natural gas vehicles in the DSNY fleet."

Commissioner Garcia added, "The nicest closed-loop we can achieve is to collect our organic waste, put it in a digester facility, create gas, and use it as fuel… In this way we can really do good for the environment, but also do well financially for the City."

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EV is a national non-profit organization that analyzes and promotes ways to make a swift transition to pollution-free renewable energy sources and to the clean, petroleum-free transportation fuels of the future.

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