States Advance Clean Transportation Policies

In the face of federal inaction, states across the country are stepping up to establish programs and policy incentives to move the transportation sector away from high carbon and polluting petroleum-based fuels. Transportation is the largest source of greenhouse gases in the US. It contributes 29% (1.8 billion tons) of the country’s total of 6.5 billion tons emitted annually.

The most successful approach, a low carbon fuel standard (LCFS), has seen significant results in California and is being explored by other states committed to climate action. In California, it has created substantial demand for biofuels and electric vehicles as intended, without the need for taxpayer funded subsidies, and it has reduced the climate impacts of the transportation sector by 10% so far.

What is a Low Carbon Fuel Standard?
A low carbon fuel standard is a relatively simple system. It creates incentives for the rapid production and use of cleaner fuels by providing economic rewards for companies producing or delivering clean transportation fuels, and penalties for petroleum fuel providers that do not decarbonize their fuel supply. The state sets a carbon intensity (CI) benchmark for each of the fuels produced and consumed within the state. Companies producing fuels with a CI at or below the benchmark receive “credits” for the fuels they make or distribute; companies producing fuels with CIs above the benchmark generate “deficits.” (See chart below.) The companies with deficits – if they want to sell their fuels in the state – have to buy credits from companies with cleaner fuels, buy fuel from them or produce cleaner fuels themselves.

The LCFS Movement Expands
In 2016, Oregon became the second state to introduce its own clean fuels program, modeled after the California LCFS. In Colorado, an LCFS is under discussion following the release of an Energy Vision-led report (August 2019) on the state’s potential resources for renewable natural gas, which concluded that the state could displace 24% of current diesel use. Washington, New York and Minnesota are also exploring similar programs.

Municipal Wastewater Plants Become Clean Energy Leaders

In 2015, the Persigo Wastewater Treatment Plant (WWTP) in Grand Junction, CO became one of the first wastewater plants in the country to turn its biogas into fuel. For years, that biogas was simply burned off; now it is being upgraded to renewable natural gas (RNG) for use in over 80 natural gas vehicles, including local rapid transit buses and municipal vehicles.

More and more municipalities are recognizing the value of the biogas from their wastewater plants as a source of ultra-low-carbon transportation fuel that can displace diesel in trucks and buses. Starting in late 2017, in response to a rush of queries, Energy Vision, in partnership with leading engineering firms, has advised several municipal wastewater operations on policy, economics and market opportunities associated with producing RNG.

So far two WWTPs, in Harrisburg, PA and Mesa, AZ are building facilities to produce RNG, with others considering them in Ohio, Indiana, Florida and New York. Many more opportunities are on the horizon.

As managers of solid waste and operators of critical wastewater plants, municipalities are uniquely positioned to put organic waste to use. But no two
LETTER FROM THE FOUNDER

At some times life seems more fragile than at others, and we are facing such times right now. The world is actually facing fragile times on two very different fronts. But ACTING NOW, we can forge ahead to conquer both.

With the expanding immediate threat of the coronavirus, we have to hunker down in our homes, wash our hands, avoid touching surfaces on which the virus might be alive, and maintain a six foot distance from others. But only after months of denial by the federal government, the rising death toll, the suffering of those with Covid-19 and those caring for them, the calls of governors, a tumbling economy, and, finally, the evidence of scientists has driven the Administration in Washington to summon the powers of the Defense Production Act to address this crisis.

Life on this planet is also increasingly fragile with advancing climate change. Many who have already suffered from climate-related floods, hurricanes, ocean rise, wildfires and more, including those in New York and New Jersey who endured Superstorm Sandy in 2012, continue to struggle to recover and rebuild their lives. But the Administration ignores their plights and the evidence of scientists worldwide about the need to act now.

The current Administration the US has sought to withdraw from the Paris Climate Accord subscribed to by nations worldwide. It has rolled back dozens of environmental laws geared to cut pollution and the emissions of greenhouse gases from fossil fuel-burning that are a key cause of climate change. Most recently, and dangerously, this EPA has proposed a rollback of the vehicle fuel efficiency standards passed by the Obama Administration. The transportation sector is now the largest source of greenhouse gases in the country, and this rollback would allow cars to emit more than a billion tons more of CO₂ over vehicle lifetimes than the Obama rule did.

Energy Vision’s mission is to identify and promote the low- and no-carbon fuels needed to address our climate crisis. And the new technologies have been emerging. Fifteen percent of all our electricity now comes from solar, wind and other renewable sources. Electric cars have entered the passenger vehicle market big time. And for the millions of heavy-duty buses and trucks – essential urban fleets – another solution is available: shifting these vehicles from use of high-carbon and health-threatening diesel fuel to clean-burning, carbon-negative “renewable natural gas” made from organic waste.

The two lead articles in this EV News show municipalities and states – despite the lack of federal leadership – getting on the bandwagon. Many jurisdictions are now beginning to convert the organic wastes from their communities, businesses and agriculture operations into renewable natural gas, providing both a waste and a key climate change solution.

Human ingenuity, scientific brainpower, and technological know-how can address both crises that humans are facing today. But it will take citizens who do their part and who call for leaders with the political will to make our health and the health of our planet top priorities.

EV: On The Road

January 16 Kyle Jeremiah participated in a “Trash Talk” event by Manhattan Borough President Gale Brewer that explored the options NYC has to reach its ambitious 2030 zero waste goal.

January 29 Matt Tomich and other environmental leaders of the newly-formed Clean Fuels NY Coalition hosted a low carbon fuel standard (LCFS) policy forum in Albany.

February 5 Matt Tomich spoke to municipal leaders from across NY State about converting the biogases from wastewater treatment plants to RNG at the 2020 NY Water Environment Conference.

February 26 EV, represented by Phil Vos, and other members of the Clean Fuels NY Coalition spent a day in Albany educating legislators about the benefits of an LCFS for New York.

February 27 Matt Tomich met in Ohio with a group of 20 leading dairy farmers about the economic/environmental benefits of transforming their manure into RNG.

March 4 Phil Vos testified at the NY City Council’s budget hearing on the Department of Environmental Protection about the economic/environmental benefits of investing in upgrading anaerobic digesters at the City’s aging wastewater treatment facilities.

March 5 EV hosted its 20th US Power of Waste Workshop in Downey, CA, which was attended by 200 civic and business leaders. EV and other experts demonstrated how production and use of RNG can help meet the State’s climate, waste management and transportation goals.

March 21 Kyle Jeremiah and Phil Vos gave an online presentation to 5th grade teachers in NYC about how schools can turn food scraps into renewable energy and compost.
An LCFS for New York State
To move an LCFS forward in New York State, the New York League of Conservation Voters, Energy Vision, the American Lung Association, Natural Resources Defense Council, the Alliance for Clean Energy and the NY Farm Bureau launched the Clean Fuels NY Coalition in January 2020. The Coalition has been advocating for inclusion of an LCFS in the 2020 New York State budget.

Energy Vision and other Coalition members have made numerous trips to Albany to educate state policymakers and agency staff.

Although there has been significant interest in both the Senate and the Assembly, the debate has been overtaken by the current public health crisis. Nonetheless, an LCFS will remain a top priority in 2021.

Energy Vision Hosts 20th US Power of Waste Workshop
EV’s March 5th workshop in Downey, California – the 20th overall and fourth in the State – drew its largest attendance ever, including more than 200 leaders from government, industry, academia and NGOs. The message was clear: the technologies to transform organic waste streams into renewable fuel and nutrient-rich soil products are commercial, and funders are increasingly looking for environmental, social and governance (ESG) investment opportunities.

In introducing the session, Energy Vision’s founder, Joanna Underwood, said: “Since we co-hosted our first California workshop in 2016, it has been exciting to see such progress here in producing and using RNG fuel and also the success of the State’s low carbon fuel standard. The policy has proven effective in advancing use of all low-carbon biofuels and electric vehicles and is now a model for other states.”

Attendees heard from state and municipal agencies, elected officials, labor leaders, technology providers and investors. Southern California Gas presented its initiative to provide RNG to its customers. Clean Energy Fuels, the largest supplier of natural gas to fleets in the US, announced its commitment to deliver only RNG to its fleet customers with an aim of achieving 80% or more greenhouse gas reductions by 2025—25 years before the international target.

Mayor Deborah Robertson of Rialto, CA described the digester now under construction there that will be the largest food waste processing plant in North America. Eric Hofmann, President of the Utility Workers Union of America Local 132, discussed the importance of worker health and safety and the role of labor in creating a sustainable energy future. Mark Byron, Executive Director of Renewable Energy programs at the University of California, laid out the UC system’s goal of carbon neutrality by 2025 and the role that RNG can play.

Energy Vision’s president, Matt Tomich, moderator of the last session of the day, said, “Our research has shown that the biogas from California’s landfills, communities, farms and industries could produce enough RNG to displace 75% of all the fuel used in the state’s millions of buses and trucks. Still, while RNG fuel use in California’s fleets is by far the greatest of any state, only nine of the more than 100 RNG production plants in the US are here. So the state – an environmental leader in so many ways – still has great potential to do more.”
projects are the same; each has its own unique goals and program constraints.

Wastewater from a mid-size city of 150,000 residents typically contains enough energy to displace close to 500,000 gallons of diesel per year—enough to fuel nearly 100 garbage trucks. For many jurisdictions, their wastewater biogas-to-vehicle fuel projects are the single largest municipal greenhouse gas emissions reduction effort.

Every year in the United States, over 12.4 trillion gallons of wastewater are processed for reuse and discharged into waterways. Roughly 14,500 municipal wastewater plants are part of this massive clean-up effort, and about 1,300 have systems in place to produce and capture biogas. While only a portion of these facilities are using this renewable energy resource, a growing number are exploring the production and use of RNG fuel.

In spring 2019 there were 14 operational RNG production projects at US wastewater plants—up from only seven in 2017. Six more were under construction, and 10 were in planning.

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**Energy Vision is a national environmental organization working to advance commercial and cost-effective options for a carbon-neutral economy.**


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