

Clearing the Air

New Web Site Calls Attention to Pollutants in Gasoline

The Urban Air Initiative (UAI) launched in September a new web site—www.fixourfuel.com—calling attention to toxic compounds found in gasoline that produce invisible, odorless ultra-fine particulates (UFPs).

“These UFPs have been linked to ailments from lung cancer and stroke, to birth defects and developmental disorders in children,” said UAI Chairman David VanderGriend of ICM, Inc., Colwich, KS (316-796-0900).



David VanderGriend

The new web site has been launched as part of the UAI's efforts to convince the U.S. Environmental Protection Agency (EPA) that it should remove regulatory barriers to the increased use of higher octane and cleaner burning fuel blends, including higher-blend ethanol concentrations in gasoline.

According to VanderGriend, the UAI (316-927-4230) is as a non-profit organization dedicated to clearing the air of pollution derived from the toxic aromatics in gasoline. The UAI's goal, he stated, is to create greater demand for cleaner, high-octane fuels that will give the ethanol industry more access to consumers by removing regulatory barriers. To achieve the UAI's goals and objectives, it will need to change the regulations of the U.S. Environmental Protection Agency (EPA), VanderGriend noted.

The Clean Air Act, VanderGriend explained, requires the EPA to remove harmful aromatics from gasoline, but not enough is being done by the EPA. There are cleaner and cheaper options available, he said, such as using mid-level

blends of ethanol. Increased use of these mid-level blends will reduce toxic aromatics and UFPs.

“UFPs are too small to see, but too big to ignore,” said VanderGriend when he announced the new web site sponsored by UAI.

At www.fixourfuel.com, visitors can learn about the toxins in gasoline and fill out a form urging the EPA to regulate the problem so that the U.S. gasoline supply can be cleaned up to protect the public health through lowered emissions from vehicles.

To further its goals, VanderGriend said, the UAI is working with a diverse coalition of interest groups dedicated to improving air quality, particularly in urban areas, by improving the quality of motor fuels.

UAI, which was formed in 2012, is working with several law firms, including the Michael Best and Friedrich firm, to find legal pathways and legal solutions. UAI hopes to submit the technical and scientific evidence to the EPA to prod the agency into exercising its authority to address the public health issues surrounding the use of aromatics in gasoline.

Pathway to Clean Air

The pathway to cleaning up the nation's gasoline runs directly through the EPA, according to Todd Palmer, a lawyer with the Michael Best & Friedrich LLP law firm in Milwaukee, WI (414-271-6560).

Palmer told *BioFuels Journal* that UAI hopes to collaborate with the EPA to remove the regulatory hurdles hindering the use of higher ethanol blends in the U.S. gasoline market. UAI may ultimately file a formal petition requesting increased EPA regulation of aromatic additives in gasoline, he stated. If filed, the petition will be supported by a di-



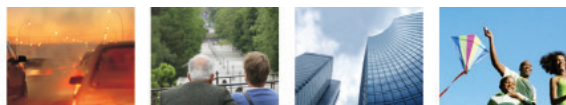
Urban Air Initiative has launched a new web site, www.fixourfuel.com, to call attention to toxic compounds in gasoline.

verse cast of like-minded groups and organizations and focus on the adverse health and environmental impacts of the aromatics that are added to gasoline.

If it is submitted to the EPA, Palmer stated, the petition would be filed pursuant to a provision in the Clean Air Act (CAA) which allows citizens to request that the EPA regulate components of gasoline that cause or contribute to an endangerment of public health or welfare.

According to Palmer, an important piece of the regulatory puzzle will be solving the Reid Vapor Pressure (RVP) issue that is used by EPA to measure

For more information, go to www.UrbanAirInitiative.com. Email for Urban Air Initiative is info@UrbanAirInitiative.com. On Facebook and LinkedIn: Urban Air Initiative. On Twitter: @UrbanAir1.



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the volatility of a fuel and its emissions. The RVP regulatory barrier limits the amount of ethanol that can be distributed in the marketplace, he noted.

Out-dated and Inaccurate

The EPA's interpretation of RVP regulations is based on out-dated and inaccurate data, according to Palmer.

The EPA's current RVP interpretation harkens back to the late 1980s when regulations were being created for gasohol, as ethanol-blended fuels were called at the time, Palmer explained. EPA needs to consider more recent scientific evidence that emissions from gasoline actually drop when ethanol is added at concentrations above 10%.

"Our review of the relevant statutes and latest science indicates that EPA's interpretation of the RVP Ethanol Waiver statute is unnecessarily narrow," Palmer said. "There is a more appropriate interpretation that gives meaning and harmony to the Clean Air Act's RVP provisions, while allowing the RVP Ethanol Waiver to be used for ethanol blends greater than E10."

If the EPA adopts this revised interpretation, Palmer said, that would allow the introduction of more ethanol into the marketplace with lower RVPs than E10 and lower the overall emissions from more conventional fuels.



Ultrafine particles in gasoline have been linked to birth defects and developmental disorders in children, according to David VanderGriend, chairman of UAI.

The UAI, he said, intends to urge EPA to change its interpretation of the RVP Ethanol Waiver based upon the following:

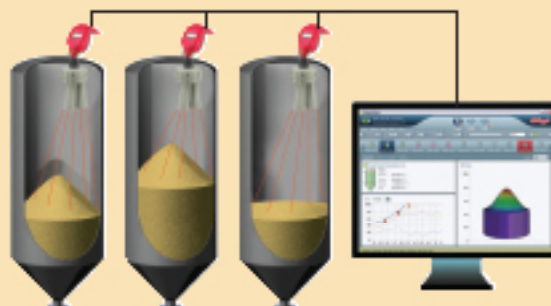
- It is widely known that the RVP of fuel blends will decline as more ethanol is added by splash blending it with E10.
- Ethanol is readily available in the market and is available for higher-blend fuels.
- Motor vehicle manufacturers want higher-octane, clean-burning ethanol fuel blends.
- EPA has ample legal authority and discretion to ►

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UAI has identified pathways to boost the use of higher blends of ethanol because of health benefits from cutting toxins in gasoline.

revise its interpretation to line up with current science and market demands.

Regulating the aromatic content in fuel while facilitating an increase in octane will support numerous other EPA initiatives, Palmer noted, including the reduction of carbon intensity, air toxics, particulate matter, and ultrafine particulates; a reduction in fuel RVP; and improved gas mileage. It also will address environmental justice because the harmful impacts on the public's health from aromatics are largely focused on vulnerable urban population centers.

Working with Partners

UAI will continue to work with its partners to develop science that will support the advocacy effort, Palmer said.

For example, he said, UAI supported

workshops held in Washington, DC, in April and June sponsored by the Energy Future Coalition (EFC) documenting the linkage between aromatics and fine and ultrafine particle-borne toxic emissions.

UAI and EFC have teamed up to deliver comments to EPA on the Tier III rules.

EFC and Higher Blends

Although EFC is not an ethanol group, Palmer said, it believes higher ethanol blends should be more widely used to replace aromatics. EFC's leadership includes former U.S. Senators Tim Wirth and Tom Daschle, former White House Chief of Staff John Podesta in the Clinton Administration, and C. Boyden Gray, who was White House counsel to President George H. W. Bush.

Palmer said that the combination of technical, scientific/health, and legal arguments, backed by broad public support, can change the way ethanol is valued as a fuel component.

UAI needs the support of ethanol organizations, commodity groups, and other advocates for the ethanol industry, Palmer noted. The pathways identified by the UAI to promote higher blends of ethanol based on their health benefits are critical to backstop the RFS and create market demand. "This is complementary and supportive of current ethanol industry efforts," he said, "yet it is unique."

Jerry Perkins, editor

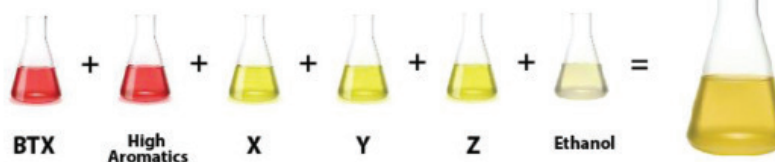
Splash Blending: Simply Adding Ethanol To E10

- Starts the reduction of vapor pressure
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- Reduces costs with limited to no mpg loss



Match Blending: Varying Multiple Components

- Whoever Controls the Blending; Controls the Outcome



Splash blending is the way nearly all ethanol is mixed with gasoline and tests that use ethanol blended this way have shown that ethanol reduces pollution.

Federal Match Blending Ethanol Tests Are Flawed, Groups Tell EPA

A computer model used by state regulators to assess mobile source emissions is seriously flawed, according to an analysis by the Urban Air Initiative (UAI).

The computer model, which is called the Motor Vehicle Emissions Simulator (MOVES), could effectively block market access for higher ethanol blends, the UAI said in a letter dated Oct. 20 to Gina McCarthy, administrator of the U.S. Environmental Protection Agency (EPA), calling her attention to the flaws in the MOVES model.

MOVES and other modeling tools are used by states to demonstrate to the EPA how they plan to maintain air quality standards or, in some cases, come into compliance for various pollutants.

Flawed Methodology

Because of the flawed methodology used by the EPA, the UAI said, using more ethanol is incorrectly shown to increase particulate emissions rather than correctly identifying aromatics and other high-boiling hydrocarbon compounds added to test fuels as the cause.

With the publishing of the model in the Federal Register, a letter from the Energy Future Coalition (EFC) and the UAI was sent to McCarthy citing specific reasons why the models are flawed and requesting an immediate suspension of their use.

"Ethanol blends can be created in one of two ways – by adding more ethanol to a product approved for commercial use, such as E10 (splash blending), or by adjusting the gasoline blendstock first to match certain selected parameters (match blending)," wrote the UAI and EFC. "Many tests of splash-blended ethanol have shown that it reduces pollution, but this study used match blending instead – despite the fact that nearly all U.S. gasoline is produced by splash-blending

10% ethanol."

The groups contend that models used by the Office of Transportation and Air Quality (OTAQ) have been contradicted

by numerous studies which show splash-blended ethanol with a fixed consumer-grade gasoline blendstock substantially reduces vehicle exhaust emissions, including the most dangerous particulate matter, air toxics, and brown and black carbon. The letter also noted that these problems in EPA methodology are recognized by fuel experts in the auto industry, the Department of Energy's National

Renewable Energy Laboratory, and numerous other entities independent of the ethanol industry."

Scientific Papers

On Nov. 3, a new study from the Society of Automotive Engineers (SAE) echoed UAI's and the EFC's analysis that the EPA's MOVES model is seriously flawed.

SAE Papers are technical in nature, require exhaustive peer review, and are highly regarded, said Steve VanderGriend, technical manager of fuel and engine technology for ICM, Inc. of Colwich, KS (316-796-0900). That is critical, he noted, to the argument UAI has made that splash blending higher volumes of ethanol on to finished E10 not only fails to raise any emissions, but serves to improve emissions by diluting sulfur and aromatics, along with reducing the current non-regulated ultrafine particulates emissions. Also, by using ethanol's octane potential, the greatest carbon dioxide and mileage benefits can be achieved by the auto industry. "Match blending is negative for ethanol," VanderGriend told *BioFuels Journal*. "Dirtier gasoline has been allowed in the marketplace because of the use of match blending."

The ethanol industry needs to call for a standard way to blend ethanol for vehicle testing, VanderGriend stated.

Jerry Perkins, editor



Steve VanderGriend

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