



Briefing Notice

Protecting Public Health Through Cleaner Fuels and Lower Emissions

Monday, December 14, 2015

1:00 PM – 2:30 PM

385 Russell Senate Office Building

Please RSVP to expedite check-in: www.eesi.org/121415fuel

Live webcast (connection permitting) will be streamed at: www.eesi.org/livecast

The **Environmental and Energy Study Institute** (EESI) invites you to a briefing examining the health impacts of current octane sources and the need for cleaner, cost-effective octane providers. Octane is necessary for vehicle performance and increasing octane volumes would enable highly efficient engines. At the same time, octane-boosters in use today have historically been highly toxic compounds. But cleaner alternatives are available—namely biofuels. Speakers for this forum are:

- **Reuben Sarkar**, Deputy Assistant Secretary for Transportation, Department of Energy
- **Dr. Carol Kwiatkowski**, Executive Director, The Endocrine Disruption Exchange
- **Dean Drake**, President, The Defour Group, LLC; retired General Motors engineer (34 years)

Octane was provided by lead until EPA phased out its use because of serious health issues. Today, there are two primary sources of octane: gasoline aromatics (a petroleum refinery product) and ethanol (a biofuel). Gasoline aromatics make up approximately 25 percent of gasoline volume and are composed of benzene, ethyl-benzene, toluene and xylene – commonly referred to as the BTEX complex.

As well as being toxic itself, the BTEX complex contributes to the formation of secondary air pollutants, including ultrafine particulate matter (UFP) and polycyclic aromatic hydrocarbons (PAHs). Numerous health studies have linked both tailpipe exhaust and the BTEX complex to serious developmental and many chronic health conditions. As carmakers look for additional sources of octane, the impacts to both health and the environment need to be considered.

Research is finding that high octane fuel blends, such as a mid-level biofuel blend (30 percent ethanol and 70 percent gasoline), may enable greater engine efficiencies, lower GHG emissions and improve fuel economy. Substituting cleaner forms of octane into fuel will have the added benefit of improving air quality.

As automotive manufacturers look towards meeting stringent fuel economy standards, the role of fuels is receiving fresh attention. Automotive manufacturers, fuel producers and the Department of Energy (DOE) are collaborating on a project that assesses the potential co-optimization of fuels and engines in new cars through the DOE's Optima program.

Optima aims to reduce per vehicle petroleum consumption by 30 percent beyond currently mandated engine efficiency measures by 2030. DOE expects to achieve this reduction through a combination of engine technologies and by increasing the use of highly efficient, cleaner forms of octane. Reducing gasoline consumption is critical since the transportation sector is responsible for 27 percent of greenhouse gas (GHG) emissions, as well as half of all toxic emissions in the United States.

This event is free and open to the public.

For more information, contact Jessie Stolark at jstolark@eesi.org or (202) 662-1885

