BIOFUELS:
KEY TO CLEAN, HEALTHY AIR

growth energy
America's Ethanol Supporters

The transportation sector is the largest carbon emitter in the U.S. economy, and contributes disproportionately to smog in urban communities while releasing toxic additives linked to cancer and asthma into our air.

Biofuels, like ethanol, play a major role in cleaning up our transportation sector and displacing harmful fuel additives, like benzene, toluene, ethylbenzene, and xylene (BTEX) that can be found in petroleum-based fuels.

BIOFUELS ARE A LOW-CARBON, CLEAN FUEL

- Petroleum-based additives are impacting our urban populations and play a dominant role in the formation of toxic emissions linked to cancer, as well as neurological, cardiovascular, and reproductive damage. They also drive significant increases in particulate emissions, which cause asthma and contribute to heart and lung disease.
- Nationwide adoption of higher-octane, lower-carbon biofuel blends of 15 percent or more could deliver major benefits for American motorists, as well as for public health.
- And because ethanol is the lowest cost, highest octane fuel on the planet, future internal combustion engines can take advantage of this characteristic to allow greater fuel efficiency gains.

BIOFUELS CUT EMISSIONS

- USDA data shows that ethanol reduces greenhouse gas emissions by 39 percent or more compared to traditional gasoline, with corn ethanol's relative carbon benefits reaching as high as 70 percent.
- But ethanol doesn't just protect our climate. Increasing biofuels in the fuel supply is something we can do right now to both lower emissions and reduce exposure to toxic pollutants.

BIOFUELS IMPROVE AIR QUALITY AND REPLACE TOXIC FUEL ADDITIVES

- Clean, renewable ethanol remains the single most affordable and abundant alterative to toxic fuel additives, including benzene, toluene, ethylbenzene, and xylene. These toxic aromatics and carbon compounds make up 19.3 percent of the unleaded gasoline that comes out of the pump, according to the EPA.
- Petroleum-based aromatics play a dominant role in the formation of toxic emissions linked to cancer, as well as neurological, cardiovascular, and reproductive damage.
- They also drive significant increases in particulate emissions, which cause asthma and contribute to heart and lung disease.

WE MUST ACT

As new research reveals the rising cost of air pollution, it is vital that the EPA reject oil-backed efforts to undercut the science and move quickly to limit the impact of petroleum-based aromatics on air quality.

We must press ahead with increasing biofuel blends in our nation's fuel supply, which burn cleaner, pollute less, and can power engines with higher compression ratios, delivering more miles from every gallon.

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THANKS TO ETHANOL, THERE ARE FEWER TOXIC, DIRTY CHEMICALS IN OUR FUEL, WATER, AND AIR.

As an oxygenate, ethanol replaces harmful carcinogens and BTEX toxic additives that can be found in petroleum-based fuels, while providing a high-octane boost.

Ethanol also reduces carbon monoxide and smog in urban communities.

SCIENCE IN ACTION

A study by the University of California Riverside found that ethanol blends reduce toxic emissions by up to 50 percent, including smog and ultra-fine particulates.

A separate study by the University of California Riverside found that petroleum-based aromatics were linked to higher ozone-forming potential, carbon dioxide, and VOCs like benzene, a known carcinogen.

It also found that aromatics drive significant increases in particulate emissions, which cause asthma and contribute to heart and lung disease.

Research conducted in five global cities by the University of Illinois at Chicago found that E10 ethanol blends cut toxic emissions by 15.2 percent, while E20 blends reduce toxins by 31.7 percent.

A study done by researchers at the Ford Motor Company found that ethanol blends above 30 percent cut particle emissions by as much as a 45 percent.

A study by the Swiss Federal Laboratories found that E10 lowers emissions of polycyclic aromatic hydrocarbons by 67 to 96 percent compared to E0, and E85 lowers them 82 to 96 percent.

A study by Life Cycle Associates found that higher ethanol blends reduced cancer risk from vehicle exhaust and evaporative emissions, as well as ozone and photochemical smog.

A study in the Journal of Air & Waste Management found that replacing benzene-based additives with ethanol directly reduces particulate matter and NOx emissions.

A study conducted by Northwestern University and the University of Singapore found that ultrafine particles rose by a third in San Paolo, Brazil when the use of gasoline rose due to increases in the price of ethanol.