



ENVIRONMENTAL BENEFITS OF USING ETHANOL FACT SHEET

"Choosing ethanol-enriched fuels is a choice you can make in your everyday life to make a huge difference." It's like recycling an aluminum can instead of throwing it in the garbage. People should think of using ethanol as the fourth 'R' – Reduce, Reuse, Recycle, Renew."
Joanna Schroeder, Director of Communications, EPIC

- Ethanol is a renewable resource produced from American-grown crops. Conversely, gasoline is a nonrenewable resource refined from crude oil, a fossil fuel that some experts predict may be totally exhausted by the year 2050.
- Pure ethanol contains 35% oxygen and burns cleaner than gasoline. Ethanol is known as an "oxygenate" when added to fuel. Oxygenates are added to motor vehicle fuels to make them burn more cleanly, thereby reducing toxic tailpipe pollution, particularly carbon monoxide. Oxygenates also extend the fuel supply.
- MTBE (methyl tertiary-butyl ether), another oxygenate that is made from natural gas, has been classified as a carcinogen by the EPA, and has been eliminated from the U.S. fuel supply. In its place, ethanol is being added to the fuel supply to meet air quality requirements.
- Ethanol is biodegradable and does not pollute groundwater.
- In 1988, Denver, Colo., was the first city in the United States to begin using ethanol in its fuel supply solely to meet EPA clean air standards. Ethanol has been used in other states since the mid-70s.



we're helping everyone
breathe easier.



"Ethanol burns cleaner and there are a lot less pollutants that go into the air, so the air we breathe is cleaner."

Joel Jarman, General Manager, POET Biorefining –Hudson

- According to Dr. Michael Wang of Argonne National Laboratory, one gallon of ethanol reduces CO₂ emissions by 6.41 pounds. Recent research has found that CO₂ is the largest contributor of global climate change, the term used to categorize significant climate changes that are detrimental to human and plant life.
- In 2006, ethanol use in the United States reduced CO₂-equivalent greenhouse gas emissions by approximately 7.8 million tons, equal to removing the annual emissions of more than 1.18 million cars from the road (*Argonne's GREET 1.6 Model*).
- Ethanol has a positive energy balance. A 2004 USDA study found that ethanol contains 67% more energy than it takes to produce.
- The American Lung Association of Metropolitan Chicago credits ethanol-enriched fuel with reducing smog-forming emissions in Chicago by 25% since 1990.
- Ethanol-enriched fuel reduces harmful tailpipe emissions by as much as 30% — even in new cars. *Source: Smog Reyes, February 2004.*
- Ethanol reduces tailpipe fine particulate matter (PM) emissions by 50 percent. These emissions pose a health threat to children, senior citizens and those with respiratory ailments, such as asthma. *Source: Smog Reyes, February 2004.*
- Some ethanol plants are joining in the growing trend of running on methane from cow manure. By not using fossil fuels in the production process, plants are continuing to lower greenhouse gas emissions. *Source: Grist Magazine, May 2006.*

“With its ability to reduce greenhouse gas emissions and its renewable properties, ethanol is an environmentally friendly fuel choice that continues to guide America towards energy independence.”

Tom Branhan, CEO, Glacial Lakes Energy, LLC

