CLEANER GASOLINE

PHASE I: A SUCCESS STORY

Phase I of the reformulated gasoline program was conducted from 1995 through 1999. During that time, drivers in 17 states and the District of Columbia used fuel blended to burn cleaner and reduce emissions. Today, this cleaner-burning fuel represents about 30 percent of the gasoline sold in the U.S.

The results of the Phase I program are impressive.

- By using reformulated gasoline, drivers have cut emissions of pollutants that cause smog 17 percent, compared to conventional gasoline.
- That 17 percent cut means that 64,000 tons of pollution are kept out of the air each year.
- Keeping 64,000 tons out of the air is like taking 10 million cars that burn conventional gasoline off the road.
- Drivers using reformulated gasoline have also cut emissions of toxic pollutants 17 percent.
- Benzene, a known cancer-causing compound, has been reduced 43 percent.

The graph below shows how drivers who use cleaner-burning reformulated gasoline are helping to reduce air pollution and protect the health of millions of Americans.

CLEANER GASOLINE

PHASE II: GREATER AIR BENEFITS

Phase II of the reformulated gasoline program begins January 1, 2000. The formula for gasoline sold in cities and states that participate in the reformulated gasoline program will again be adjusted to help them move toward cleaner air.

The Phase II program will further improve air quality in cities with the worst smog.

- It will remove an additional 41,000 tons of smog-forming pollutants from the air, which is like taking 6 million cars that burn conventional gasoline off the road. Two of the key smog-forming pollutants are volatile organic compounds (VOCs) and nitrogen oxide (NOx). Compared to conventional gasoline, Phase II RFG will:
  - Cut the release of VOCs 27 percent.
  - Cut NOx emissions 7 percent.
- It will cut emissions of toxic pollutants 22 percent.

The combined impact of Phase I and Phase II of the reformulated gasoline program will be substantial. Reducing emissions of smog-forming chemicals by 105,000 tons is the equivalent of taking about 16 million vehicles that burn conventional gasoline off the road, as shown in the graph below.

**Phase I Impact of Reformulated Gasoline**

Amount of Annual Vehicle Emissions Reduced Since 1995

<table>
<thead>
<tr>
<th>Smog-forming Pollutants</th>
<th>Toxic Pollutants</th>
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Smog-forming Pollutant Reduction Equivalent in Automobile Reductions

- Phase I (1995-1999)
  - 2 million automobiles

**Phase II Impact of Reformulated Gasoline**

Amount of Annual Vehicle Emissions Reduced Since 1995

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Smog-forming Pollutant Reduction Equivalent in Automobile Reductions

- Phase II (2000)
  - 2 million automobiles
Reformulated Gas: Providing Cleaner Air For All Americans

In 1995, America took an important step to help clean the air we breathe. We started using gasoline blended to burn more cleanly, that reduces emissions and cuts smog in cities with the worst air quality.

The switch to "reformulated" gasoline (RFG) was part of a national strategy outlined by Congress in the Clean Air Act. The U.S. Environmental Protection Agency (EPA) has been working with states to implement a two-phase reformulated gasoline program to improve air quality.

Phase I of the reformulated gasoline program made great progress. Between 1995 and 1999, it cut smog-forming pollutant levels by about 17 percent compared to 1995 and 1999. Phase I of the program helped make significant progress in cutting emissions that cause smog and toxic air pollutants. Phase II will help make even more progress.

Why do we need reformulated gasoline?

Since Congress passed the first Clean Air Act in 1970, the U.S. has made tremendous progress in reducing air pollution from gasoline-powered cars and trucks. Today’s vehicles are 98 percent cleaner than those on the road 30 years ago.

Despite these improvements, cars and trucks still cause much of the pollution in our cities. There are twice as many cars on the road traveling twice as many miles each year.

The reformulated gasoline program is helping to reduce pollution in areas with the worst air quality problems. Phase I of the program helped make significant progress in cutting emissions that cause smog and toxic air pollutants. Phase II will help make even more progress.

How does reformulated gasoline differ from conventional gasoline? Why do we need reformulated gasoline? How does reformulated gasoline differ from conventional gasoline?

Reformulated gasoline has the same components as conventional gasoline. However, the components that contribute most to air pollution are further processed and refined. RFG is made in a way that prevents it from evaporating as quickly as conventional gasoline, and it contains chemical oxygen, known as oxygenate, to improve combustion. Reformulated gasoline performs at the same level as conventional gasoline and meets the power requirements of all gasoline vehicles.

How does Phase II reformulated gasoline differ from Phase I reformulated gasoline? Will Phase II gasoline cost more?

Manufacturers will process and refine the components of Phase II reformulated gasoline to further reduce those that contribute most to air pollution.

Phase II reformulated gasoline is helping to reduce pollution in areas with the worst air quality problems. Phase II RFG requirements of all gasoline vehicles.

Where will Phase II RFG be used? Does MTBE in RFG pose a health threat?

The Clean Air Act requires those metropolitan areas with the worst smog problems to participate in the reformulated gasoline program. Many communities and states also have opted to participate in Phase II voluntarily. The State of California implements its own reformulated gasoline program; in effect since 1996, it already meets the EPA Phase II RFG requirements. Shaded areas are federal reformulated gasoline areas.

Phase II, which begins January 1, 2000, takes another step toward cleaner air. It will reduce smog-forming pollutants 27 percent more than conventional gasoline.

Will Phase II gasoline affect engine performance? Will MTBE in RFG pose a health threat?

Engine performance as those using Phase I fuel. Does MTBE in RFG pose a health threat?

Will Phase II gasoline affect my gas mileage? What should I know about health effects of reformulated gasoline components?

A 1998 study for a coalition of northeastern state air officials, NESCAUM, demonstrated that RFG substantially reduced the relative cancer risk associated with gasoline vapors by 12 percent in Phase I. The study estimates that in Phase II, cancer risks will drop 19 percent.

What should I know about health effects of reformulated gasoline components? Does MTBE in RFG pose a health threat?

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