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# Questions and Answers About Cleaner-Burning Gasoline

## **What is California cleaner-burning gasoline?**

- It is an improved gasoline formula that pollutes our air less. It is not a new fuel.
- It has been extensively tested under real-world conditions.
- By spring of 1996, Californians who purchase gasoline for use in vehicles or gasoline-powered equipment will be using cleaner-burning gasoline.

## **Why does California need cleaner-burning gasoline?**

- Over 90 percent of Californians breathe unhealthy air.
- Gasoline-powered vehicles and equipment contribute about half the pollution that makes California's air among the most polluted in the country.

## **Do Californians support cleaner-burning gasoline?**

- Yes. Californians want cleaner air: 80 percent of Californians polled statewide support the use of cleaner-burning gasoline to help clean California's air.

## **What are the emission benefits of cleaner-burning gasoline?**

- Cleaner-burning gasoline provides one of the largest emission reductions in California's long fight against smog by reducing smog-forming emissions from motor vehicles by 15 percent. This is equivalent to removing 3.5 million cars from California's roads and freeways.
- Using cleaner-burning gasoline immediately reduces over three million pounds a day of unhealthful air pollutants from vehicles.

## **What are the health benefits from using cleaner-burning gasoline?**

- You will have healthier air to breathe. Using cleaner-burning gasoline lowers emissions of pollutants that cause or contribute to health problems such as heart and lung disease and asthma.
- Cleaner-burning gasoline reduces the cancer risk from vehicle emissions by more than one-third. Emissions of benzene, a known carcinogen, are reduced by one-half.

## **Will cleaner-burning gasoline work in all gasoline-powered engines?**

- Yes. You can use cleaner-burning gasoline in exactly the same way as the gasoline you are currently using. Cleaner-burning gasoline works just as well as today's gasoline in boats, jet skis, garden equipment, chain saws, and other gasoline-powered engines.
- Cleaner-burning gasoline will be available in the same octane levels as current gasoline.

## **Has cleaner-burning gasoline been tested?**

- Yes. Under the guidance of an Advisory Committee which includes experts representing automobile manufacturers, gasoline manufacturers, and government, the Air Resources Board (ARB) tested the fuel in hundreds of vehicles and other gasoline-powered equipment.
- Over five million miles were driven on cleaner-burning gasoline. This comprehensive program did not identify any increase in problems with the use of cleaner-burning gasoline.
- Many car parts, especially fuel system components, fail and require replacement during the normal life of the vehicle. Cleaner-burning gasoline will not change this. The test program indicated that cleaner-burning gasoline did not increase problems in fuel systems.



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### **Has cleaner-burning gasoline been tested (cont'd)**

- Testing did show that, on average, vehicles about ten years old and older, particularly those with over 90,000 miles, can experience a fairly high level of fuel system problems due to normal wear and tear. Owners of such vehicles are encouraged to have their fuel system inspected and to follow their vehicle manufacturer's recommendations for maintenance of fuel system parts.

### **Will I notice any change in gas mileage with cleaner-burning gasoline?**

- Possibly. On average, cleaner-burning gasoline may result in a very small (less than one-half mile per gallon) reduction in car mileage from the fuel that you are currently using.
- Many factors affect the actual vehicle fuel economy one may experience. These include driving habits, vehicle condition, and tire pressure. Because of these and other factors, even with the same gasoline, your mileage can vary by several miles per gallon from one fill-up to the next.

### **Will I have to pay more for cleaner-burning gasoline?**

- Possibly. Cleaner-burning gasoline costs more to produce. Depending on the refinery, this increase in production cost varies from 5 to 15 cents per gallon. However, the price you will see at the pump cannot be accurately predicted.
- The price of cleaner-burning gasoline is subject to and will be determined by competitive forces in the market place. Many factors including production costs, weather, crude oil prices, taxes, and supply and demand affect gasoline prices.
- It is expected that at least some of the increased cost to make cleaner-burning gasoline will be reflected in prices at the pump.

### **What's in cleaner-burning gasoline?**

- All gasoline is made from a recipe of basic ingredients. Cleaner-burning gasoline is composed of these same basic ingredients, but is less polluting because the recipe requires more cleaner-burning components and fewer toxic compounds.
- The general cleaner-burning gasoline recipe:
  - Reduces benzene (a known human carcinogen) in gasoline by one-half;
  - Lowers the amount of fuel that evaporates from your vehicle;
  - Reduces the amount of sulfur in gasoline by 80 percent which allows your vehicle catalyst to perform more effectively;
  - Reduces aromatic hydrocarbons, a part of gasoline that contributes to smog-forming emissions;
  - Adds oxygen-containing compounds, which allow gasoline to burn more completely in your engine. Oxygenates have been added to gasoline since the mid -1970's to enhance octane.

### **Will using cleaner-burning gasoline really make a difference?**

- Yes. It is equivalent to leaving your car at home one day a week.

### **Is cleaner-burning gasoline toxic?**

- Yes. Cleaner-burning gasoline reduces emissions and exposure to toxic substances which result from the evaporation and combustion of gasoline. Although using cleaner-burning gasoline reduces emissions of smog-forming and toxic pollutants, like conventional gasoline, cleaner-burning gasoline is a hazardous substance. You should continue to take precautions to avoid exposure to gasoline vapors when pumping and handling any gasoline. You should never swallow or siphon any gasoline.

### **Does the State regulate the price of gasoline?**

No.

### **Why did the State require cleaner-burning gasoline if it may cost more at the pump?**

- Healthier air is worth it. Cleaner-burning gasoline is one of the least costly remaining ways to reduce emissions of pollutants into our air. Its use will immediately reduce over three million pounds of pollution from being released to the air each day.
- Cleaner-burning gasoline is one of the most significant measures needed to help California meet state and federal health standards for air quality.

### **Do automobile manufacturers recommend using cleaner-burning gasoline?**

- Yes. Automobile manufacturers participated in the development of the specifications for cleaner-burning gasoline and recommend its use in their vehicles.

### **Will using cleaner-burning gasoline affect my vehicle's warranty?**

No.

### **Will I have to make any changes in order to use cleaner-burning gasoline?**

- No. You can use cleaner-burning gasoline in exactly the same way as the gasoline you are currently using. The same applies to boats, jet skis, garden equipment, chainsaws, and other gasoline-burning engines. It will be available in the same octane ratings as current gasoline.

### **How extensive was the testing program?**

- The ARB and industry experts conducted a comprehensive six-month testing program. Hundreds of vehicles, as well as other gasoline powered-equipment, used cleaner-burning gasoline during this program. Over five million miles were driven on cleaner-burning gasoline.
- As part of this testing program, over 800 vehicles from several fleets including Bank of America, GTE California, Pacific Bell, CalTrans, the City and County of Sacramento, and California State University, Fresno, were tested on cleaner-burning gasoline. Cleaner-burning gasoline was also tested on a broad range of other gasoline-burning equipment including lawnmowers, tractors, leaf blowers, edgers, forklifts, snowmobiles, motorcycles, jet skis, and marine pleasure craft.

### **Is there just one way to make cleaner-burning gasoline?**

- No. Gasoline manufacturers will be making their own decisions on their recipe for cleaner-burning gasoline. Though individual gasolines may vary, all gasoline produced for sale in California after spring of 1996 will be cleaner-burning gasoline.

### **Is there a program to ensure that all gasoline produced in California after the spring of 1996 is cleaner-burning gasoline?**

- Yes. The State has a comprehensive compliance program to ensure all of the gasoline produced for sale in California after spring of 1996 is cleaner-burning gasoline.

### **What is methyl tertiary butyl ether (MTBE) and why is it used?**

- MTBE is an oxygenate that helps gasoline burn more completely. Federal law requires that most gasoline in California contain oxygenates. MTBE is the oxygenate that most gasoline manufacturers choose to use.

### **Is MTBE something new?**

- No. MTBE has been used in gasoline since the mid-70's. In 1995, about nine billion gallons of oxygenated gasoline were used in California, the majority of which contained MTBE.

### **Is MTBE the only oxygenate that can be used in cleaner-burning gasoline?**

- No. MTBE is one of several possible oxygenates expected to be used by gasoline manufacturers to produce cleaner-burning gasoline. MTBE is expected to continue to be the most widely used oxygenate in California. Other oxygenates expected to be used are ethanol and ethyl tertiary butyl ether (ETBE).

### **What is known about MTBE and health?**

- In some states there were complaints of nausea and headaches possibly being associated with MTBE. However, recent health studies have found no association between MTBE and these complaints. California health experts are continuing to monitor other MTBE health studies that are currently being conducted.

### **Does cleaner-burning gasoline smell different from conventional gasoline?**

- No. Cleaner-burning gasoline is not expected to smell different than the gasoline that most people are currently using. If an odor is noticed, it is probably from oxygenates, usually MTBE.
- Most gasoline service stations in California use vapor recovery systems to minimize the exposure of motorists and service station personnel to gasoline odors and fumes while refueling.

### **Who developed cleaner-burning gasoline?**

- The specifications for cleaner-burning gasoline were developed by ARB engineers and scientists in consultation with gasoline and automobile manufacturers and others. Data from thousands of vehicle tests were used to develop the specifications.

### **Will there be adequate supplies of cleaner-burning gasoline?**

- Yes. Cleaner-burning gasoline will be available in California to meet the demand. However, as we have experienced in the past, it is possible that unusual conditions could lead to a temporary disruption in the fuel supply.
- The State has worked extensively with gasoline manufacturers and distributors to ensure that adequate supplies of cleaner-burning gasoline are produced and distributed. A mechanism to help ensure adequate supplies in unusual conditions is in place and ready if needed.

### **What if we need to use more gasoline in the future?**

- As in the past, we expect the market will adjust to meet demand.

### **Is cleaner-burning gasoline the only thing that California is doing to make the air cleaner?**

- Cleaner-burning gasoline is only one part of a wide range of programs to improve air quality in California. Other programs include efforts to clean up cars, trucks, buses, factories, consumer products, and other sources. These programs benefit all Californians by helping to clean the air. In addition to the above efforts, there are a number of steps that people can take to reduce air pollution. These include properly maintaining their vehicle, car pooling, and planning trips to avoid bumper-to-bumper traffic.

### **Will I see cleaner air with cleaner-burning gasoline?**

- While cleaner-burning gasoline is an important component of our program to provide healthy air for Californians, it will not single-handedly eliminate California's air pollution problem. However, cleaner-burning gasoline in combination with other programs will lead to reduced levels of air pollution and therefore better air quality.

