

**Potential Economic Impacts  
Associated With Alternative  
Low-sulphur Gasoline Programs  
In Georgia**

**Prepared for**

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Environmental Protection Division**

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# Low-sulphur Gasoline Programs In Georgia

## A. INTRODUCTION

The purpose of this report is to provide the EPD's Air Protection Branch with estimates for the direct costs (in higher gasoline bills) associated with alternative configurations of a program requiring the use of "phase 1" low-sulphur gasoline in selected Georgia counties. The four alternatives considered are as follows.

**Alternative 1:** use of low-sulphur gasoline is mandated in 25 counties (see attached table for a list of counties) during the 5-month ozone season (May 1-September 30).

**Alternative 2:** use of low-sulphur gasoline is mandated in 25 counties (see attached table for a list of counties) during the entire year.

**Alternative 3:** use of low-sulphur gasoline is mandated in all Georgia counties during the 5-month ozone season (May 1-September 30).

**Alternative 4:** use of low-sulphur gasoline is mandated in all Georgia counties during the entire year.

## B. ANNUAL GASOLINE CONSUMPTION

We do not find measures for gasoline consumption by county. County gasoline consumption is then estimated in the following manner. Estimates for vmt (vehicle-miles-traveled) by county are provided by the Department of Transportation; see attached table for county vmts (per day) for the 25 Program counties. County vmt as a percent of total vmts in the state (254,990,515) are then calculated. The 25 Program counties account for 51.45% of total state vmts; the balance, 48.55%, derive in all other Georgia counties.

Total annual gasoline consumption in the State of Georgia for 1998 was 4,412,192,271 gallons.<sup>1</sup> Assuming no change in vmts between 1997 and 1998, the annual consumption of gasoline for the 25 Program counties is estimated as 51.45% of total, state gasoline consumption,  $(.5145)(4,412,192,271) = 2,270,151,948$  gallons. Annual consumption of gasoline for all other Georgia counties is 2,142,040,323 gallons.

### C. GASOLINE CONSUMPTION — SEASONAL

Monthly receipts of gasoline taxes for 1997 was provided by the Department of Revenue. 47% of gasoline tax revenue is received during the 5-month ozone season; 53% of revenues are received during the remaining 7 months of the year. For the 25 Program counties and all other Georgia counties estimates for annual gasoline consumption, described above in (a), are apportioned to the May-1-Sep 30 and Oct 1-April 30 time periods using these percentages (see attached worksheet).

### D. COSTS/ECONOMIC IMPACTS

We assume that low-sulphur gasoline will add \$0.01/gallon to gasoline prices. We the consider two classes of economic costs: direct costs; indirect costs.

Direct costs associated with the required use of low-sulphur gasoline consist simply of the higher cost of gasoline. With households spending more of their incomes on gasoline, this means that they are spending less on other goods and services (or saving less). Indirect costs derive from any reduced expenditures on other goods and services and the secondary and tertiary effects of such reductions. Indirect costs are estimated using a version of the IMPLAN input-output model for the State of Georgia.

### E. RESULTS: ANNUAL ECONOMIC COSTS ASSOCIATED WITH ALTERNATIVE LOW-SULPHUR GASOLINE PROGRAMS IN GEORGIA

Using the methods described above, we derive the following estimates for annual economic impacts that may be associated with the four program alternatives described above.

<u>Alternative</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Costs</u>
Alternative 1	\$10.7 million	\$ 3.7 million	\$14.4 million
Alternative 2	\$22.7 million	7.8 million	30.5 million
Alternative 3	\$20.7 million	7.5 million	28.2 million
Alternative 4	\$44.2 million	15.8 million	60.0 million

## **Endnotes**

1. Table 4, Motor Fuel and Motor Carrier Detailed Revenue Data for Fiscal Year 1998, Georgia Department of Revenue.