

SENATE FISCAL AGENCY  
MEMORANDUM



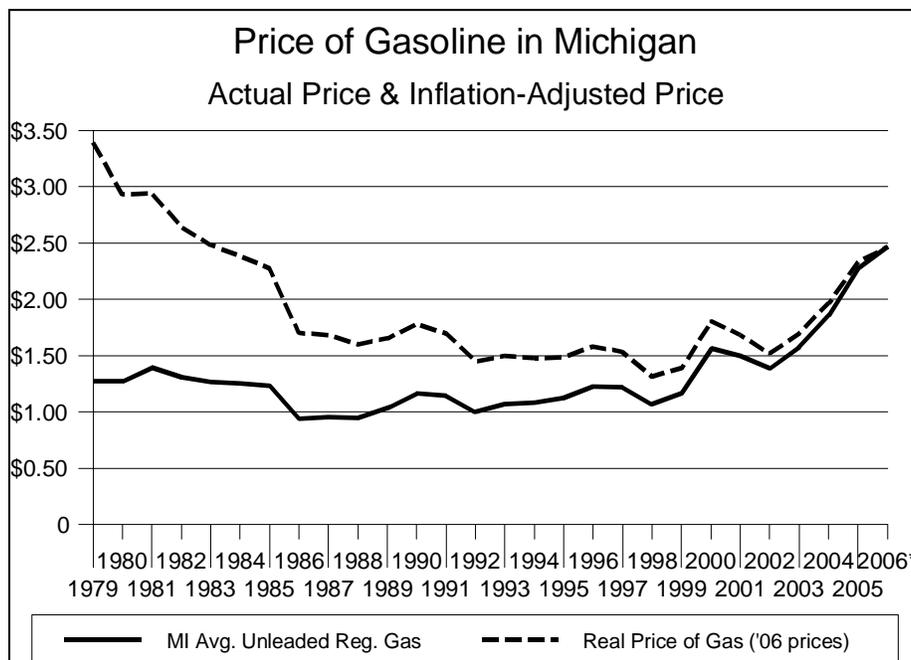
**DATE:** May 1, 2006  
**TO:** Members of the Michigan Senate  
**FROM:** Jay Wortley, Senior Economist  
David Zin, Economist  
**RE:** Sales Tax and Gasoline

The Senate Fiscal Agency has received a number of inquiries concerning the price of gasoline and the amount of sales tax that is being collected from gasoline sales. As a result, this memo is intended to provide some general information on gasoline prices, sales tax collections, and the impact of a proposal to cap the sales tax on gasoline.

**Price of Gasoline**

Current and Historical Prices. The average price of unleaded regular gasoline in Michigan topped \$2.90 on April 24, 2006, according to AAA of Michigan. This represented a \$0.73 per gallon or 33.5% increase from the \$2.18 average price in mid-February and an increase of \$0.66 or 29.0% from the year-ago price level. Despite the recent sharp increase in the price of gasoline, adjusting gasoline prices for inflation reveals that while current prices are very high, they remain below the real gasoline prices paid in 1979 and the early 1980s, as shown in Figure 1. In fact, comparing the average price of unleaded regular gasoline during the first four months of 2006 with the average price in 1979 reveals that gasoline prices are up 94.0%, while during the same period overall consumer prices are up 166.7%.

**Figure 1**



Gasoline Price Components. The retail pump price for gasoline has four major components, as shown in Table 1. First, about 55.0% of the price is due to the price of crude oil. Most of the recent increase in gasoline prices is due to increases in the price of crude oil. Currently, crude oil prices are in excess of \$70 per barrel, which is up dramatically from year-ago prices, which were in the range of \$50 to \$55 per barrel. In 2004, crude oil prices accounted for about 47.0% of the price of gasoline. Second, about 22.0% of the price of gasoline is due to refining costs and profits. This component of the price of gasoline has been creeping up. In 2004, it accounted for 18.0% of the price. Third, distribution and marketing costs currently account for about 4.0% of the price of gasoline. These first three components of the price of gasoline equal the oil industry's portion of the retail price. As discussed below, taxes comprise the fourth component.

**Table 1**

| <b>Components of Price of Gasoline &amp; Michigan Sales Tax Calculation<br/>(Based on \$3.00/Gallon Retail Price)</b> |                              |                   |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------|
|                                                                                                                       | <b>Amount<br/>per Gallon</b> | <b>% of Price</b> |
| <b>Price Components:</b>                                                                                              |                              |                   |
| Crude Oil.....                                                                                                        | \$1.687                      | 56.0%             |
| Refining Costs & Profits.....                                                                                         | 0.660                        | 22.0%             |
| Distribution & Marketing .....                                                                                        | 0.120                        | 4.0%              |
| Subtotal: Oil Industry Components.....                                                                                | \$2.467                      | 82.0%             |
| Federal Excise Tax.....                                                                                               | 0.184                        | 6.0%              |
| MI Sales Tax.....                                                                                                     | 0.159                        | 5.0%              |
| MI Excise Tax .....                                                                                                   | 0.190                        | 6.0%              |
| Subtotal Federal & State Taxes.....                                                                                   | \$0.533                      | 18.0%             |
| <b>Total Price .....</b>                                                                                              | <b>\$3.000</b>               | <b>100.0%</b>     |
| <b>Addendum: MI Sales Tax Calculation</b>                                                                             |                              |                   |
| Oil Industry Price Components.....                                                                                    | \$2.467                      | 82.0%             |
| Federal Excise Tax.....                                                                                               | \$0.184                      | 6.0%              |
| Subtotal: Wholesale Price + Retail Markup .....                                                                       | \$2.651                      | 88.0%             |
| Sales Tax Rate .....                                                                                                  | 6%                           | ---               |
| Sales Tax Amount .....                                                                                                | \$0.159                      | 5.0%              |

**Source:** Senate Fiscal Agency estimates based on information from the Energy Information Administration (EIA).

Taxes on Gasoline. The final component of the price of gasoline is the taxes assessed by Federal and state government. In addition to the Federal excise tax of 18.4 cents per gallon, Michigan assesses a 19-cent per gallon excise tax and the 6.0% sales tax. At the present time, these taxes total about 53 cents per gallon or 18.0% of the retail price. Michigan's 6.0% sales tax is assessed on the sum of the oil industry portion of the price and the Federal excise tax, which together make up the wholesale price plus retail markup. Michigan's sales tax is not assessed on the State's 19-cent excise tax. The sales tax calculation is shown in Table 1.

**Michigan's Sales Tax Collections on Gasoline**

Approximately 4.9 billion gallons of gasoline are sold in Michigan each year, or a little more than 400 million gallons per month. Based on the average price of gasoline each month, it appears that the State received approximately \$546.1 million in sales tax revenue during FY 2004-05 from sales of gasoline, up from \$433.0 million during FY 2003-04 and \$248.8 million in FY 1998-99. Table 2

provides data regarding gasoline tax revenue, average price, number of gallons sold, and sales tax revenue from gasoline sales for selected time periods.

**Table 2**

| <b>Date</b>               | <b>Gasoline Tax Revenue</b> | <b>Average Price Per Gallon</b> | <b>Estimated Number of Gallons Sold</b> | <b>Estimated Sales Tax Revenue from Gasoline</b> |
|---------------------------|-----------------------------|---------------------------------|-----------------------------------------|--------------------------------------------------|
| Jan-99                    | \$78,276,262                | \$0.940                         | 411,980,325                             | \$17,489,731                                     |
| Jan-00                    | \$82,641,527                | \$1.315                         | 434,955,408                             | \$27,697,632                                     |
| Jul-00                    | \$73,343,696                | \$1.952                         | 386,019,455                             | \$38,499,978                                     |
| Jan-01                    | \$67,663,850                | \$1.498                         | 356,125,525                             | \$26,366,728                                     |
| Jun-01                    | \$81,624,329                | \$1.900                         | 429,601,734                             | \$41,582,206                                     |
| Jan-02                    | \$77,459,161                | \$1.140                         | 407,679,793                             | \$21,922,404                                     |
| Jul-02                    | \$79,859,736                | \$1.447                         | 420,314,400                             | \$29,905,766                                     |
| Jan-03                    | \$76,928,181                | \$1.345                         | 404,885,161                             | \$26,470,322                                     |
| Jul-03                    | \$86,490,614                | \$1.575                         | 455,213,759                             | \$35,687,041                                     |
| Jan-04                    | \$78,839,344                | \$1.472                         | 414,943,915                             | \$30,110,836                                     |
| Feb-04                    | \$74,790,457                | \$1.609                         | 393,633,984                             | \$31,616,979                                     |
| Mar-04                    | \$72,287,639                | \$1.693                         | 380,461,259                             | \$32,367,921                                     |
| Apr-04                    | \$72,621,966                | \$1.726                         | 382,220,871                             | \$33,231,581                                     |
| May-04                    | \$78,948,518                | \$1.801                         | 415,518,515                             | \$37,890,585                                     |
| Jun-04                    | \$78,622,093                | \$1.985                         | 413,800,490                             | \$42,043,691                                     |
| Jul-04                    | \$77,798,789                | \$1.988                         | 409,467,309                             | \$41,672,956                                     |
| Aug-04                    | \$83,171,476                | \$1.912                         | 437,744,613                             | \$42,667,711                                     |
| Sep-04                    | \$80,362,374                | \$1.925                         | 422,959,864                             | \$41,537,851                                     |
| Oct-04                    | \$76,273,306                | \$1.886                         | 401,438,454                             | \$38,538,092                                     |
| Nov-04                    | \$81,071,174                | \$2.014                         | 426,690,389                             | \$44,053,770                                     |
| Dec-04                    | \$78,162,542                | \$1.979                         | 411,381,798                             | \$41,658,228                                     |
| Jan-05                    | \$80,785,849                | \$1.818                         | 425,188,681                             | \$39,181,538                                     |
| Feb-05                    | \$71,015,860                | \$1.854                         | 373,767,683                             | \$35,204,684                                     |
| Mar-05                    | \$67,458,106                | \$1.965                         | 355,042,663                             | \$35,671,739                                     |
| Apr-05                    | \$76,043,668                | \$2.108                         | 400,229,832                             | \$43,451,367                                     |
| May-05                    | \$68,811,097                | \$2.255                         | 362,163,669                             | \$42,332,150                                     |
| Jun-05                    | \$79,516,048                | \$2.150                         | 418,505,516                             | \$46,430,423                                     |
| Jul-05                    | \$82,097,122                | \$2.182                         | 432,090,114                             | \$48,720,198                                     |
| Aug-05                    | \$83,371,659                | \$2.318                         | 438,798,203                             | \$52,854,485                                     |
| Sep-05                    | \$84,824,776                | \$2.521                         | 446,446,189                             | \$58,905,626                                     |
| Oct-05                    | \$73,090,575                | \$2.839                         | 384,687,235                             | \$57,681,311                                     |
| Nov-05                    | \$76,929,620                | \$2.673                         | 404,892,737                             | \$56,906,528                                     |
| Dec-05                    | \$76,137,773                | \$2.180                         | 400,725,122                             | \$45,138,283                                     |
| Jan-06                    | \$77,226,598                | \$2.210                         | 406,455,778                             | \$46,474,000                                     |
| Feb-06                    | \$70,437,211                | \$2.348                         | 370,722,166                             | \$45,284,062                                     |
| Mar-06                    | \$69,573,310                | \$2.265                         | 366,175,318                             | \$43,008,327                                     |
| <b>Fiscal Year Totals</b> |                             |                                 |                                         |                                                  |
| FY 1998-99                | \$921,742,507               | \$1.092                         | 4,851,276,355                           | \$248,755,250                                    |
| FY 1999-2000              | \$933,888,120               | \$1.499                         | 4,915,200,632                           | \$363,213,486                                    |
| FY 2000-01                | \$929,154,802               | \$1.588                         | 4,890,288,433                           | \$388,224,037                                    |
| FY 2001-02                | \$941,563,616               | \$1.328                         | 4,955,597,977                           | \$321,350,970                                    |
| FY 2002-03                | \$938,681,567               | \$1.569                         | 4,940,429,302                           | \$385,215,322                                    |
| FY 2003-04                | \$926,079,207               | \$1.756                         | 4,874,101,088                           | \$433,012,945                                    |
| FY 2004-05                | \$926,248,474               | \$2.167                         | 4,874,991,971                           | \$546,145,521                                    |
| FY 2005-06 (YTD)          | \$370,304,513               | \$2.421                         | 1,948,971,120                           | \$236,811,201                                    |

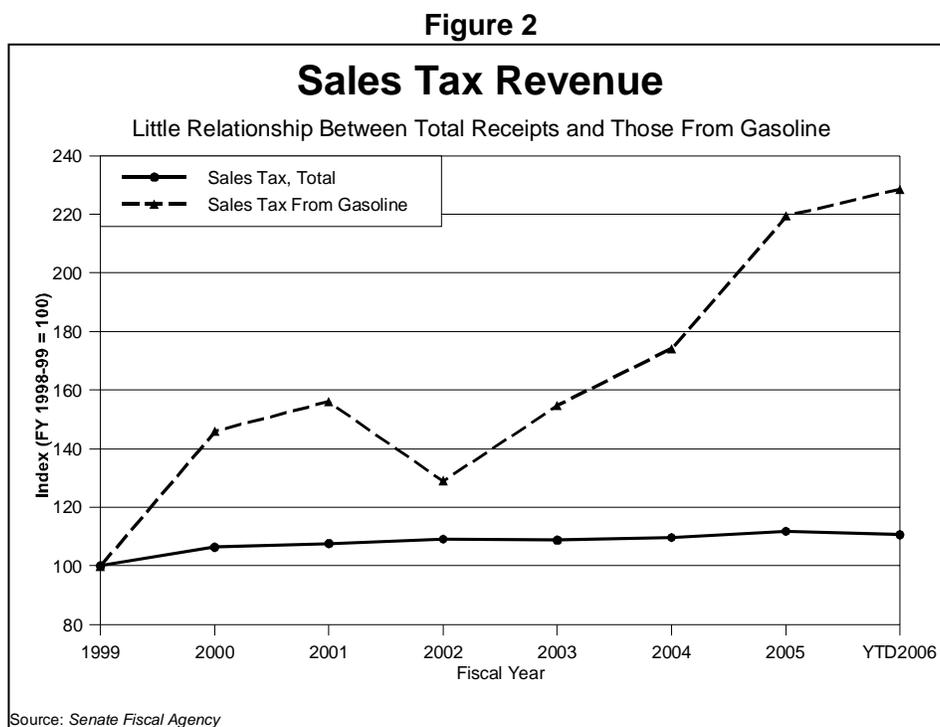
Note: The timing of gas prices is adjusted to reflect the collections that would have been made at that price.

**Source:** Senate Fiscal Agency, Michigan Dept. of Management & Budget, AAA of Michigan.

While sales tax collections from gasoline sales have risen significantly as the price of gas has risen, this has not translated into a windfall for State revenue, either in general or under just the total tax. Three principal factors account for why total sales tax collections have not exhibited any meaningful increase despite the rise in sales tax revenue from gasoline sales:

- 1) Most consumers face a budget constraint, meaning that greater spending on gasoline results in less spending on other items.
- 2) While each gallon is more expensive, consumers have reduced their gasoline consumption.
- 3) Gasoline sales are a relatively minor portion of total consumer spending.

Figure 2 depicts the growth in total sales tax revenue and sales tax revenue from gasoline sales, with both sales indexed to the level in FY 1998-99. As illustrated, sales tax revenue from gasoline rose to 220.0% of the FY 1998-99 level in FY 2004-05, while total sales tax collections have remained flat since FY 1999-2000.



As indicated in Table 2, sales tax revenue from gasoline sales peaked in the months surrounding Hurricane Katrina, when both prices and consumption were high. However, the available data suggest that consumers face genuine budget constraints in addressing higher gasoline prices. The State will realize extra revenue from the sales tax revenue on gasoline only when higher gasoline prices are financed by an additional increase in total consumer spending, essentially meaning that the consumer does not face a budget constraint. As shown in Figure 3, in FY 1998-99, when the average price of gasoline was \$1.09 per gallon, the sales tax on gasoline sales accounted for approximately 4.3% of total sales tax collections. By FY 2001-02, when gasoline prices averaged \$1.33 per gallon, that share had risen to 5.0%. As shown in Figure 4, in FY 2003-04, when the average price of gasoline was \$1.76 per gallon and total sales tax revenue was essentially unchanged from FY 2001-02, sales tax collections from gasoline sales accounted for approximately 6.7% of total sales tax revenue—suggesting that as consumers have spent more on gasoline they have spent less on other taxable items, by purchasing fewer items and/or by purchasing less expensive items.

Figure 3

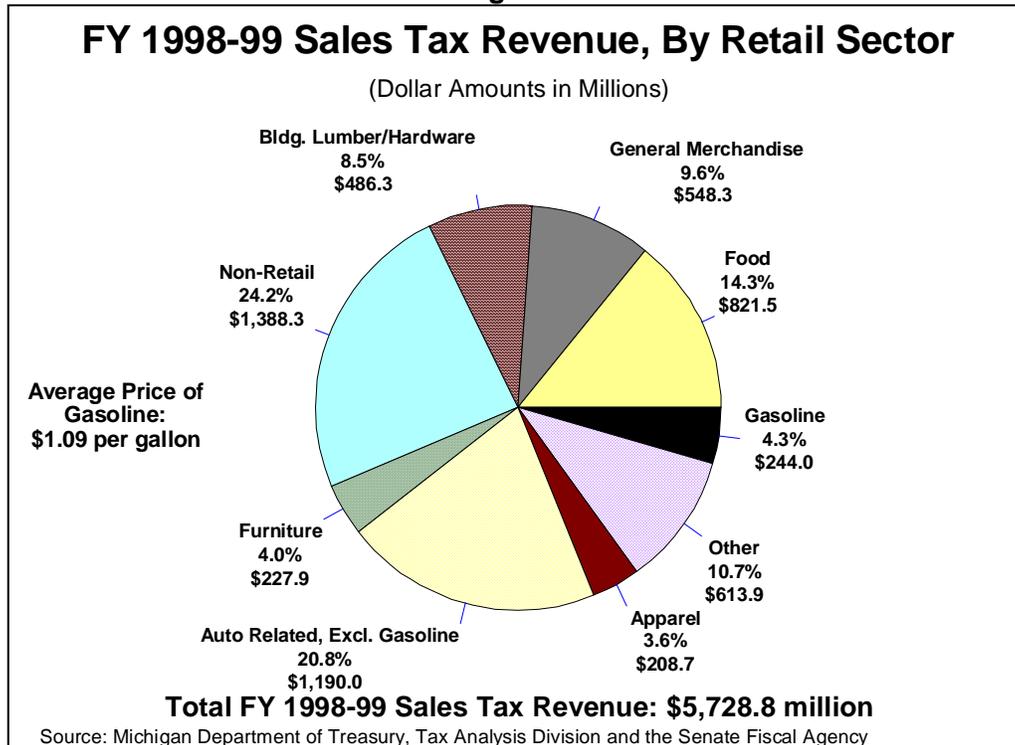
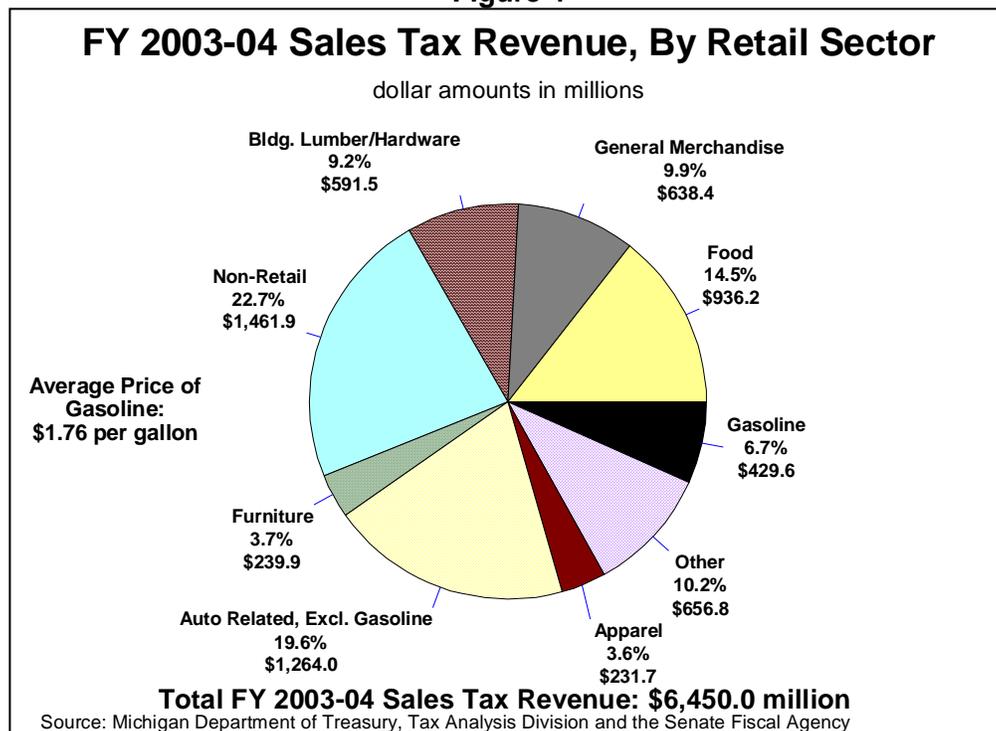


Figure 4



Consumers also appear to have reduced their consumption of gasoline substantially, particularly over the long term. The number of gallons of gasoline consumed in Michigan has fallen 5.6% since FY 2001-02, and the average number consumed each month so far in FY 2005-06 is 2.2% below last year. This reduction in consumption has occurred even though expenditures on gasoline still comprise a relatively small portion of total consumer spending. In FY 2004-05, gasoline sales comprised 8.3% of taxable retail sales, which generally make up less than half of total consumer spending. According to the Consumer Expenditure Survey, in 2004, approximately 3.7% of expenditures by consumers in the Midwest were on gasoline and oil, compared with 5.1% on entertainment, 3.9% on apparel, and 2.2% on telephone services.

The share of sales tax revenue consisting of sales taxes on gasoline sales reached a high in October 2005, at 10.6%, but had declined to 8.2% in March 2006. However, these increases have not translated into greater total sales tax revenue: At the end of March 2006, sales tax revenue was running 0.3% above the same level last year and was only \$10.9 million above the level expected by the Senate Fiscal Agency, given the January 2006 consensus revenue estimates. While the economic forecast does not explicitly forecast gasoline prices, it does forecast oil prices and inflation in the energy sector. The price of oil in the first quarter of 2006 was approximately 5.5% above the Senate Fiscal Agency's estimates and the SFA's personal consumption implicit price deflator for gasoline and oil was only 2.7% below the advance figures released for the first quarter.

### **Proposal to Cap the Sales Tax on Gasoline**

House Bill (H.B.) 5211 proposes one possible policy action the State can take in response to high gasoline prices. The bill would exempt from sales tax that portion of the sales price of a gallon of gasoline that exceeded \$1.99. As discussed earlier, the sales price of gasoline for purposes of computing the sales tax is not the price the consumer faces at the pump. The relevant price is the price of the gas plus Federal taxes, but excluding the Michigan gasoline tax. Consequently, the \$1.99 per gallon price under the bill would translate roughly to a "pump price" the consumer sees of \$2.299 per gallon (\$1.99 plus 11.9 cents of sales tax and 19 cents of State gasoline tax).

### **Impact of a Sales Tax Cap on a Typical Family**

Table 3 provides an example of how capping the sales tax on gasoline would affect a typical family. This example is based on the cap proposed in H.B. 5211 and on the following assumptions: 1) the price of gasoline will rise to \$3.00 per gallon; and 2) the family travels 15,000 miles per year and the average fuel consumption of its vehicles is 20 miles per gallon. Based on these assumptions, the sales tax would be capped at 12 cents per gallon, which represents a sales tax decline of 4 cents per gallon compared with the 16-cent sales tax that would be assessed at a retail price of \$3.00 per gallon under current law. This 4-cent per gallon reduction in the sales tax would reduce the family's sales tax payments on gasoline purchases by about \$2.50 per month or just under \$30 per year. Assuming that this reduction in the sales tax would result in a comparable decrease in the price of gasoline from \$3.00 to \$2.96 per gallon (which is probably a big assumption), this represents a 1.3% reduction in the family's annual gasoline costs.

**Table 3**

| <b>Gasoline Consumption &amp; Sales Tax Payments<br/>Family Example</b>                  |                  |                 |
|------------------------------------------------------------------------------------------|------------------|-----------------|
|                                                                                          | <b>Per Month</b> | <b>Per Year</b> |
| <b>Assumptions:</b>                                                                      |                  |                 |
| Price of Gasoline/Gallon (includes sales tax) .....                                      | \$3.00           | \$3.00          |
| Miles Traveled .....                                                                     | 1,250            | 15,000          |
| Miles per Gallon .....                                                                   | 20               | 20              |
| Gasoline Consumed (gallons).....                                                         | 62.5             | 750.0           |
| <b>Sales Tax/Gallon: (see calculations in Table 1) .....</b>                             | <b>\$0.16</b>    | <b>\$0.16</b>   |
| <b>Family Spending on Gasoline:</b>                                                      |                  |                 |
| Spending on Gasoline (includes sales tax).....                                           | \$187.50         | \$2,250.00      |
| Spending on Sales Tax on Gasoline.....                                                   | \$9.94           | \$119.29        |
| <b>Proposed Change:</b>                                                                  |                  |                 |
| No additional sales tax when retail price of gasoline exceeds<br>\$2.30/gallon (HB 5211) |                  |                 |
| <b>Impact of Proposed Change:</b>                                                        |                  |                 |
| Sales Tax Maximum per Gallon .....                                                       | \$0.12           | \$0.12          |
| Reduction in Sales Tax per Gallon .....                                                  | (\$0.04)         | (\$0.04)        |
| Reduction in Family Spending on Sales Tax on Gasoline.....                               | (\$2.48)         | (\$29.72)       |

**Impact of a Sales Tax Cap on State Revenue**

The impact of a bill such as H.B. 5211 would depend upon the price of gasoline. With a “pump price” of less than \$2.299, the bill would have no fiscal impact, although the bill would apply to all grades of gasoline, not just the least expensive grade—so if the “pump price” of “regular” were \$2.199 per gallon but the cost of “premium” were \$2.499, there would be a fiscal impact from the sales tax on the premium gasoline but not on the regular grade gasoline. Assuming all grades of gasoline sold at \$2.999 (essentially \$3.00) per gallon, the bill would reduce State revenue by approximately \$193.0 million per year. Under this assumption, School Aid Fund revenue would fall by approximately \$141.5 million; constitutional revenue sharing payments to cities, villages, and townships would decline by approximately \$19.3 million; revenue to the Comprehensive Transportation Fund would decline by \$8.1 million; and the remaining \$24.2 million reduction in revenue would be split across statutory revenue sharing payments and the General Fund. While the State would experience a substantial revenue loss under the bill, the net effect on the “pump price” of gasoline would be fairly negligible. Under the assumption of a \$2.999 per gallon “pump price” the bill would lower the price by only 4 cents per gallon—assuming that retailers passed the tax exemption on to consumers. Table 4 illustrates the impact of H.B. 5211, as well as providing illustrations for capping the price to which the sales tax is applied at other levels. The effect on the “pump price” of gasoline would be negligible even at substantially lower caps, with a cap based on a price of \$1.50 per gallon (and consumer prices of \$2.999 absent the bill) lowering the “pump price” only by 7 cents per gallon. If the “pump price” absent the bill were 50 cents a gallon higher, at 3.499 per gallon, the bill would reduce State revenue by \$331.0 million but lower the “pump price” of the gasoline only by less than 7 cents per gallon.

**Table 4**  
**Effect of Capping Sales Tax Collections on Gasoline**  
**Assuming an Average Price of Gasoline per Gallon of \$2.999**  
**(revenue figures in millions)**

| Cap Sales<br>Tax Base<br>at:<br>(per gallon) | Price Per<br>Gallon After<br>Exemption | Revenue Reduction |                    |                                |                                         |          | General<br>Fund and<br>Statutory<br>Revenue<br>Sharing | Maximum<br>Potential<br>"Feedback" |
|----------------------------------------------|----------------------------------------|-------------------|--------------------|--------------------------------|-----------------------------------------|----------|--------------------------------------------------------|------------------------------------|
|                                              |                                        | Total             | School Aid<br>Fund | Constitutional<br>Rev. Sharing | Comprehensive<br>Transportation<br>Fund |          |                                                        |                                    |
| \$2.50                                       | \$2.990                                | (\$43.9)          | (\$32.2)           | (\$4.4)                        | (\$1.8)                                 | (\$5.5)  | \$2.6                                                  |                                    |
| \$2.25                                       | \$2.975                                | (\$117.0)         | (\$85.8)           | (\$11.7)                       | (\$4.9)                                 | (\$14.6) | \$7.0                                                  |                                    |
| \$1.99                                       | \$2.959                                | (\$193.0)         | (\$141.5)          | (\$19.3)                       | (\$8.1)                                 | (\$24.2) | \$11.6                                                 |                                    |
| \$1.75                                       | \$2.945                                | (\$263.2)         | (\$193.0)          | (\$26.3)                       | (\$11.0)                                | (\$32.9) | \$15.8                                                 |                                    |
| \$1.50                                       | \$2.930                                | (\$336.4)         | (\$246.6)          | (\$33.6)                       | (\$14.1)                                | (\$42.1) | \$20.2                                                 |                                    |

**Notes and Assumptions:**

1. Retailers pass the tax exemption on to consumers.
2. Based on the number of gallons of gasoline consumed during FY 2004-05.
3. Maximum potential "feedback" if offsetting sales tax revenue assuming all of the tax savings is spent on other taxable items.
4. 10% of sales tax on gasoline is not captured for transfer to the CTF because of the nature of the retailer.

**Source:** Senate Fiscal Agency

We hope you find this information helpful. If you have any questions, please let us know.

/kjh

c: Gary S. Olson, Director  
 Ellen Jeffries, Deputy Director