CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

June 4, 2007

S. 357
Ten-in-Ten Fuel Economy Act

As ordered reported by the Senate Committee on Commerce, Science, and Transportation on May 8, 2007

SUMMARY

S. 357 would increase fuel economy standards for passenger automobiles and light, medium, and heavy trucks starting in 2011, and would require the Department of Transportation (DOT) and the Environmental Protection Agency (EPA) to promulgate rules and regulations to implement the increased standards. The bill also would require those agencies to submit several reports to the Congress concerning fuel economy. Further, the legislation would authorize appropriations for the Department of Energy (DOE) to provide grants for the installation of equipment to deliver alternative fuels to consumers and would authorize programs to research technologies to conserve motor fuel and to increase consumer awareness of fuel economy. Based on information from the affected agencies and assuming appropriation of the necessary amounts, CBO estimates that implementing S. 357 would cost $11 million in 2008 and $149 million over the 2008-2012 period.

CBO estimates that enacting S. 357 would lead to reduced use of motor fuels starting in 2011, thereby reducing revenues from the federal excise taxes on motor fuels. CBO estimates that revenues would decline under the bill by $72 million over the 2011-2012 period and by about $3.1 billion over the 2011-2017 period. Enacting S. 357 would not have a significant impact on direct spending.

Pursuant to section 203 of S. Con. Res. 21, the Concurrent Resolution on the Budget for Fiscal Year 2008, CBO estimates, that under S. 357, revenues would be reduced by at least $5 billion—and as a result, deficits would be increased by at least $5 billion—in at least one of the four 10-year periods beginning in 2018 through 2057.

S. 357 would preempt state and local authority to implement their own consumer information laws or regulations on the fuel efficiency impact of vehicle tires; that preemption constitutes an intergovernmental mandate as defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates, however, that the preemption would impose insignificant additional costs on

state, local, or tribal governments that would be well below the threshold established in UMRA ($66 million in 2007, adjusted annually for inflation).

S. 357 would impose several private-sector mandates as defined in UMRA, on vehicle and tire manufacturers, as well as suppliers of crude oil, gas, or petroleum distillates. The bill would set new corporate average fuel economy standards for automobiles and certain trucks and impose new safety standards and labeling requirements on manufacturers of those vehicles. The bill also would impose new requirements related to consumer information on manufacturers and retailers of motor vehicle tires. In addition, the bill would prohibit certain pricing practices during a declared energy emergency. The aggregate costs of the mandates in the bill is uncertain because such costs would depend on regulations to be developed under the bill. However, because the cost of the fuel economy standards could be large, CBO expects that the aggregate cost of mandates would likely exceed the annual threshold established by UMRA for private-sector mandates ($131 million in 2007, adjusted annually for inflation) in at least one of the first five years the mandates are in effect.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 357 is summarized in Table 1. The costs of this legislation fall within budget functions 270 (energy), 300 (natural resources and environment), 400 (transportation), and 800 (general government).

BASIS OF ESTIMATE

For this estimate, CBO assumes that S. 357 will be enacted by the end of fiscal year 2007 and that the necessary amounts will be appropriated each year. Estimates of spending are based on historical spending patterns of similar and ongoing programs.

S. 357 would increase fuel economy standards for passenger automobiles and light, medium, and heavy trucks starting in 2011, and would require DOT, DOE, and EPA to promulgate rules, regulations, and standards and to submit several reports to the Congress concerning fuel economy standards and implementation of the fuel-efficiency requirements of the bill. The bill also would authorize additional programs to increase the availability and consumer awareness of vehicles that operate on alternative fuels and of such fuels.

TABLE 1. CHANGES IN REVENUES AND SPENDING SUBJECT TO APPROPRIATION UNDER S. 357

	By Fiscal Year, in Millions of Dollars				
	2008	2009	2010	2011	2012
CHANGES IN REVENUES [a]					
Estimated Revenues	0	0	0	-17	-55
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Implement CAFE Standards					
Authorization Level	0	25	25	25	25
Estimated Outlays	0	15	21	24	25
Energy Security Fund					
Estimated Authorization Level	8	6	7	7	2
Estimated Outlays	6	6	7	7	3
Public Awareness Programs					
Estimated Authorization Level	5	5	5	5	5
Estimated Outlays	3	5	5	5	5
Grants for Advanced Battery Research					
Estimated Authorization Level	1	1	1	1	1
Estimated Outlays	1	1	1	1	1
Other Programs					
Authorization Level	2	1	1	1	1
Estimated Outlays	1	2	1	1	1
Total Changes					
Estimated Authorization Level	16	38	39	39	34
Estimated Outlays	11	29	35	39	35

NOTE: CAFE = corporate average fuel economy.

a. Changes in revenues through 2017 are shown in Table 2.

Revenues

The Secretary of Transportation is currently authorized to set corporate average fuel economy (CAFE) standards for passenger automobiles and light trucks sold in the United States. S. 357 would amend those standards in a number of ways designed to increase fuel economy. The Secretary of Transportation would set standards for passenger automobiles and light trucks beginning in 2011 to achieve a combined fuel economy by 2020 of at least 35 miles per gallon, unless it was determined that a higher standard was not cost-effective. Separate treatment of passenger automobiles and light trucks would end, although a system of different standards for vehicles with different attributes could be established, such as is currently being implemented for light trucks. S. 357 would include under the new standards those types of light trucks currently exempt from CAFE standards. In addition, a fuel economy standard would apply to medium- and heavy-duty trucks for the first time and would be separate from that covering passenger automobiles and light trucks. Among other provisions, S. 357 would authorize the Secretary of Transportation to establish a program for trading credits between firms.

The estimated changes in revenues under S. 357 are shown in Table 2. Combining the effects of the reduced motor fuel excises and penalties, CBO expects that total revenues would be reduced by $72 million over the period from 2011 to 2012 and by about $3.1 billion from 2011 through 2017, net of income and payroll tax effects.

TABLE 2. CHANGES IN REVENUES OVER THE 2008–2017 PERIOD UNDER S. 357

	By Fiscal Year, in Millions of Dollars											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008-2012	2008-2017
CHANGES IN REVENUES												
Estimated Revenues	0	0	0	-17	-55	-150	-309	-536	-835	-1,214	-72	-3,116

Fuel Economy Standards. Based on information provided by the National Highway Traffic Safety Administration (NHTSA) within the Department of Transportation, CBO assumes that new, higher standards would be put in place starting in 2011 without a determination that they fail a cost-effectiveness test. S. 357 specifies that the composite standard for passenger automobiles and light trucks be adjusted starting in 2011 to the maximum feasible level to achieve a fuel economy for the U.S. fleet of at least 35 miles per gallon in 2020. To reach 35 miles per gallon by 2020, CBO expects that, beginning in 2011, the standards would be increased gradually from their levels under current law for 2010, which are 27.5 miles per gallon for passenger automobiles and about 23.5 miles per gallon for light trucks, or a composite of more than 25 miles per gallon. As a result, CBO estimates that the composite fuel economy standard for passenger automobiles and light trucks would rise by more than 3 percent per year and, by 2017, would reach about 32 miles per gallon—between 6 and 7 miles per gallon higher than the composite standard in 2017 expected under current law. (By 2020, the composite fuel economy standard would be almost 10 miles per gallon higher.)

CBO also assumes that new standards for medium- and heavy-duty trucks would begin in 2013, following a required study and an implementation period set by the bill. Those standards would increase by 4 percent per year under S. 357. In addition, CBO expects that a system of trading of credits would be established, allowing firms whose fleets are above the standard to sell credits they earn to firms whose fleets are below the standard and would otherwise be subject to monetary penalties. (Under current law, such credits can only be used by a manufacturer to offset its own potential penalties in other years.) Considerable uncertainty exists, however, about how such a system would be structured and how the market would function.

In estimating the effects of S. 357, CBO assumes that the baseline against which the policy is measured does not incorporate any future changes to the program by the Secretary of Transportation. Potential changes to the system that can be accomplished without legislative action—such as are currently being studied as a part of an Executive Order to study ways to reduce greenhouse gas emissions from motor vehicles—are too indefinite to incorporate into the baseline.

CBO expects that the new CAFE standards brought about by S. 357 would reduce use of motor fuels, which in turn would reduce revenues from excise taxes on motor fuels. Under current law, gasoline is taxed by the federal government at a rate of 18.4 cents per gallon and diesel fuel is taxed at a rate of 24.4 cents per gallon. Blends of gasoline and ethanol effectively are taxed at lower rates through 2010. CBO estimates that enacting S. 357 would cause excise tax revenues to decline by $17 million in 2011, about $46 million in 2012, and by amounts increasing to about $1.2 billion by 2017, net of income and payroll tax effects. In 2017, CBO expects savings in motor fuel use of roughly 8 billion gallons—or between 3.5 percent and 4 percent of total motor fuel use expected under the current-law baseline.

The estimated revenue losses would rise rapidly between 2011 and 2017 for several reasons. First, the new standards would be continually increased over a period of time, starting in 2011 for passenger automobiles and light trucks and later for medium- and heavy-duty trucks. Second, the vehicle fleet is replaced over a period of years as individuals gradually retire old vehicles and purchase new ones. Over time, an increasing share of the vehicle stock would be produced under the new standards, and motor fuel savings would accumulate. Third, some firms would not find the higher standards to be binding immediately because their fleets would already exceed those standards under current law. Some firms already produce fleets with fuel economy several miles per gallon above the current standards. Because of recent price increases for motor fuels, other firms that until recently produced vehicles with fuel economy at or just above the standards are expected under current law to produce vehicles with higher fuel economy. As the standards steadily rise under S. 357, an increasing share of manufacturers would find the standards to be binding. Finally, firms with fleet fuel economy above the new standard would initially earn credits that they could sell to firms with higher costs of complying with the new standard, which would hold down increases in fuel economy by those who purchase the credits. However, fewer firms would generate credits over time as the standard increases.

Credit Trading Program and CAFE Penalties. CBO also expects that the establishment of a credit trading program would reduce penalties currently collected for violations of the CAFE standards. CBO expects that penalties under current law would be between $10 million and $20 million per year through 2017. With a credit trading program projected to start around 2011, CBO expects that enough credits would be generated and sold to noncompliant firms such that penalties would be reduced substantially in 2012 and become negligible from 2013 through 2017. As a result, revenues from penalties would decline by $9 million in 2012 and $73 million over the 2012-2017 period, net of income and payroll tax effects, CBO estimates.

Civil and Criminal Penalties. S. 357 would expand the scope of the FTC's enforcement authorities by treating price gouging for petroleum products as a violation of rules regarding unfair or deceptive acts or practices. The FTC would be authorized to enforce new standards that would be subject to both criminal and civil penalties for any violations. Collections of criminal penalties are recorded in the budget as revenues, deposited in the Crime Victims Fund, and later spent. CBO estimates that any additional revenues and direct spending that would result from enacting the bill would not be significant because of the relatively small number of cases likely to be involved.

Further, the bill would establish new civil penalties for tire manufacturers that do not comply with certain regulations established by DOT. Thus, the federal government might collect additional fines if the bill is enacted. Collections of civil fines are recorded as revenues and deposited in the Treasury; however, CBO expects that any increase in revenues related to those penalties would not be significant.

Spending Subject to Appropriation

CBO estimates that implementing S. 357 would cost $149 million over the 2008-2012 period, subject to appropriation of the necessary amounts.

Implementation of CAFE Standards. S. 357 would expand the authority of DOT to set CAFE standards starting in 2011. The bill would authorize the appropriation of $25 million annually, starting in 2009, to implement fuel economy standards. The authorization of appropriations includes funds to expand the CAFE program to medium- and heavy-duty trucks, to issue rules and regulations regarding the expanded program, to institute a program that would allow companies to obtain credits for exceeding CAFE standards, and to trade such credits with other companies that do not meet the annual standards. The authorization also would allow DOT to complete studies required by the bill relating to fuel economy standards.

Based on information from DOT and assuming appropriation of the specified amounts, CBO estimates that implementing those provisions would cost $15 million in 2009 and $85 million over the 2009-2012 period.

Energy Security Fund. Under S. 357, one-half of the penalties collected each year for automakers' violations of CAFE standards would be authorized to be appropriated to DOE for a grant program to support the installation of equipment at gas stations to deliver alternative motor fuels. Based on historical spending patterns for similar grant programs administered by DOE, CBO estimates that this provision would cost $6 million in 2008 and $29 million over the 2008-2012 period. Those estimates are based on CBO's projections of CAFE penalties that would result under S. 357. After 2012, CBO estimates such penalties would not be significant because of the opportunity that firms would have under the bill to purchase CAFE credits and avoid paying federal penalties.

Public Awareness Programs. Based on rules promulgated by DOT, the bill would require manufacturers of automobiles and tires to provide consumers with information about the fuel efficiency of their products and, in the case of automobile manufacturers, to provide information about the use of alternative fuels in their vehicles. The bill also would require NHTSA to create a fuel-efficiency rating system for tires and set uniform testing procedures for tire manufacturers to rate the fuel efficiency of their products. Further, through a labeling and consumer education program, the bill would require DOT and EPA to increase the public's awareness of the fuel efficiency and the greenhouse gas emissions of individual vehicles. Based on information from those agencies and assuming appropriation of the necessary amounts, CBO estimates that these activities would cost $3 million in 2008 and $23 million over the 2008-2012 period.

Grants for Advanced Battery Research. The bill would require DOT to administer a grant program to support research, development, demonstration, and commercial application of electric battery technologies and to establish a council of industry advisors. Under current law, DOE administers a similar program that costs about $10 million annually. CBO expects that the grants authorized in the bill would likely augment the program as administered by DOE. Assuming appropriation of the necessary amounts, CBO estimates that the grant program would cost $1 million annually.

Other Provisions. The bill would require DOT to establish rules mandating that at least 50 percent of vehicles sold in 2012 and 80 percent sold in 2015 be able to operate on both gasoline and another fuel, such as diesel. The bill also would require the General Services Administration (GSA) to submit a report to the Congress about the fuel efficiency of automobiles purchased by federal agencies and would require the executive branch to establish and enforce standards for biodiesel fuel sold in the United States. Title II would require the FTC to develop and enforce rules that would prohibit suppliers from selling oil, gas, or other petroleum distillates at excessively high prices during certain emergencies declared by the President. Based on information from the agencies involved, CBO estimates that those provisions would cost $1 million in 2008 and $6 million over the 2008-2012 period.

Mileage Improvement for the Federal Vehicle Fleet. The General Services Administration purchases around 60,000 new vehicles annually for most government agencies for the federal government's use. By increasing CAFE standards starting in 2011, the federal government could realize some cost savings under the bill from reducing gasoline purchases if the vehicles it purchases achieve greater gasoline mileage. Vehicles with improved fuel efficiency are likely to be more expensive to purchase. Consequently, CBO expects that any net savings or costs in vehicle acquisition and operating costs would not be significant over the next five years.

ESTIMATED IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

S. 357 would preempt state and local authority to implement their own consumer information laws or regulations on the fuel efficiency of tires; that preemption constitutes an intergovernmental mandate as defined in UMRA. CBO estimates, however, that the preemption would impose insignificant additional costs on state, local, or tribal governments that would be well below the threshold established in UMRA ($66 million in 2007, adjusted annually for inflation). The bill could also benefit public institutions of higher education through a grant program for research on the commercial application of batteries. States also would be authorized to take civil action based on a provision of the bill that prohibits price gouging during an energy emergency. Any costs public entities might incur as a result of those provisions would be incurred voluntarily.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

S. 357 contains several private-sector mandates as defined in UMRA on vehicle and tire manufacturers, as well as suppliers of crude oil, gas, or petroleum distillates. The bill would set new corporate average fuel economy standards for automobiles and certain trucks and impose new safety standards and labeling requirements on manufacturers of those vehicles; impose new requirements related to consumer information on manufacturers and retailers of motor vehicle tires; and prohibit certain pricing practices during a declared energy emergency. The aggregate cost of the mandates in the bill is uncertain because that cost would depend on regulations to be developed under the bill. However, because the cost of new fuel economy standards could be large, CBO expects that the aggregate cost would likely exceed the annual threshold established by UMRA for private-sector mandates ($131 million in 2007, adjusted annually for inflation) in at least one of the first five years the mandates are in effect.

Fuel Economy Standards

Section 102 would require the Secretary of Transportation to prescribe average fuel economy standards for automobiles, medium-duty and heavy-duty trucks beginning with model year 2011. CBO cannot estimate the cost of the mandates in this section of the bill because the scope and timing of the requirements would depend on regulations to be developed by DOT. However, the cost of the mandate on car manufacturers would only have to average around $12 per vehicle for it to exceed UMRA's annual threshold. According to studies by the National Research Council and the Department of Energy on various policies that would increase the CAFE standards, the average cost per vehicle would likely be greater than that amount. Consequently, the cost of these mandates would likely exceed the threshold in at least one of the first five years that the mandates are in effect.

Additional Requirements on Manufacturers of Motor Vehicles

The bill would impose numerous mandates on automobile manufacturers addressing motor vehicle safety, fuel-use capabilities, and labeling. The costs of most of those mandates cannot be determined because they would depend on future rulemaking. The bill would:

- Direct the Secretary of Transportation to issue a motor vehicle safety standard to reduce vehicle incompatibility and aggressivity between passenger vehicles and nonpassenger vehicles;
- Require each automobile manufacturer to produce a certain number of flexible fuel vehicles each year;

- Require that the fuel economy label attached to passenger automobiles to also include information about the environmental consequences of greenhouse gas and other emissions; and

- Direct the Secretary of Transportation to prescribe regulations that would require automobile manufacturers to provide certain information about their vehicles' capability of operating on alternative fuel and to display a permanent badge or emblem on the tailgate of each vehicle that indicates that the vehicle is capable of operating on alternative fuel.

Consumer Information on Tire Fuel Efficiency

The bill would require the Secretary of Transportation to develop rules establishing a national program for consumer information on the effect of tires on the fuel efficiency of motor vehicles. Some of the rules would include requirements for providing information to customers at the point of sale and on the internet and specifications for test methods for manufactures to use in assessing and rating tires. Based on information from industry sources the cost of this mandate would not be substantial relative the UMRA's annual threshold for private-sector mandates.

Additional Requirements on Certain Oil and Gas Suppliers

The bill would prohibit certain oil and gas suppliers from selling or offering to sell crude oil, gasoline, or other fuel derived from petroleum for an excessive price (as defined in the bill) in a geographic location where the President has declared an energy emergency. CBO cannot estimate the cost of this mandate for several reasons. First, there is uncertainty about the conditions under which the President would declare an energy emergency. Second, there are uncertainties about how the FTC and a state attorney general would interpret the bill's definition of an excessive price. Finally, it is not clear to what extent suppliers would forgo business opportunities under the bill or what the value of those lost opportunities would be.

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