KERRY-LIEBERMAN:

A MULTI-TRILLION DOLLAR GAS TAX

A Report by the U.S. Senate
Committee on Commerce, Science & Transportation
Ranking Member U.S. Senator Kay Bailey Hutchison
and
Appropriations Subcommittee on Transportation,
Housing & Urban Development, and Related Agencies
Ranking Member U.S. Senator Kit Bond

Summer 2010

U.S. Senator Kay Bailey Hutchison

In 1993, Texans elected Kay Bailey Hutchison to the United States Senate in a special election, making her the first -- and, to date, the only -- woman elected to represent the state in the Senate. One year later, she was re-elected to a full six-year term. In 2000, she received more votes for her re-election to a second full term than any other statewide candidate had ever received. And in 2006, she was again re-elected by an overwhelming margin. Sen. Hutchison is the Senior Republican on the Senate Committee on Commerce, Science, and Transportation. Additionally, she serves on the Appropriations Committee, the Committee on Banking, Housing, and Urban Affairs, and the Committee on Rules and Administration. In the 110th Congress, Sen. Hutchison served as the Chairman of the Republican Policy Committee. Sen. Hutchison is a member of the Republican National Hispanic Assembly National Advisory Committee, and she is Chairman of the West Point Board of Visitors.

U.S. Senator Christopher S. "Kit" Bond

Kit Bond is serving his fourth term in the U.S. Senate representing the State of Missouri. He is Ranking Member of the Transportation, Housing and Urban Development Appropriations Subcommittee with responsibility for federal transportation spending. He is also a member of the Senate Environment and Public Works Committee and a past Chairman of its Transportation and Infrastructure Subcommittee with responsibility for authorizing federal transportation policy. He is currently Ranking Member of the Green Jobs and the New Economy Subcommittee. He also serves as Vice-Chairman of the Senate Select Committee on Intelligence, and as a member of the Committee on Small Business. He previously served two terms as Governor of the State of Missouri.

Executive Summary

The American Power Act proposed by Senators Kerry of Massachusetts and Lieberman of Connecticut is the latest attempt to cap American carbon emissions through new federal legislation. However, Kerry-Lieberman is unique from previous efforts by also proposing a new gas tax on the transportation sector. American families and workers will pay this new climate-related tax on the gasoline, diesel and jet fuel they use to drive and ride in their cars, trucks, tractors and planes. This report documents the cost of this proposed Kerry-Lieberman gas tax.

Past attempts at federal climate legislation have struggled with how to cut carbon emissions from the transportation sector. A cap-and-trade approach used on industrial facilities is not ideal for transportation emissions, essentially becoming a complicated indirect tax on fuels. Kerry-Lieberman takes the direct approach of assessing a fee on transportation fuels linked to their carbon content.

Kerry-Lieberman's climate-related gas tax will drive up the prices of gasoline, diesel and jet fuel. The Kerry-Lieberman gas tax hits families at every income level, farmers in every field, truckers on every road and workers in every position. Determining the size and cost of the Kerry-Lieberman gas tax is essential to knowing how heavily this proposal will hurt Americans.

The information and methodology needed to calculate the Kerry-Lieberman gas tax is all publicly available. The U.S. Energy Information Administration annually predicts future U.S. fuel consumption. The U.S. Environmental Protection Agency (EPA) has already adopted methods for calculating the amount of CO2 emitted from each gallon of transportation fuel. Finally, Kerry-Lieberman includes both a floor and ceiling for carbon prices that will form the cost range for the program. Additionally, EPA has just released its estimates of future carbon prices that would form the basis of the gas tax under Kerry-Lieberman. Utilizing this information reveals a truly massive gas tax that Kerry-Lieberman would impose on the American people.

Kerry-Lieberman will impose a new gas tax of at least $2.3 trillion and up to $7.6 trillion. Under EPA estimates, the Kerry-Lieberman gas tax would total $3.4 trillion:

- $1.29 trillion to $4.18 trillion gasoline tax on American drivers, workers and businesses ($1.87 trillion under EPA estimates)
- $744 billion to $2.46 trillion diesel fuel tax on American truckers, farmers, workers and businesses ($1.08 trillion under EPA estimates)
- $294 billion to $963 billion jet fuel tax on American air passengers ($425 billion under EPA estimates)

These figures include provisions in the legislation intended to reduce the impact of this massive new gas tax. While present, the allowances provided to refiners mitigates only 2% of the gas tax, leaving consumers with a new $2.3 trillion to $7.6 trillion gas tax bill.

Another component of Kerry-Lieberman is its refund program. Building on legislation from Senators Cantwell and Collins, Kerry-Lieberman refunds a portion of its tax and fee revenues back to consumers. Kerry-Lieberman, like the House-passed Waxman-Markey cap-and-trade bill, also attempts to shield energy consumers from its massive cost increases with price relief subsidies. Over the life of the bill, these refund and relief programs amount to approximately 69 percent of the revenues it collects. However, Kerry-Lieberman proposes the government keep the remaining 31 percent of its new tax and fee revenues and spend it on new government programs and deficit reduction. Applying this 69/31 refund/spending ratio to the new gas tax means that U.S. consumers would still face a net tax burden of between $734 billion and $2.4 trillion under Kerry-Lieberman (31 percent of $2.3 trillion and $7.6 trillion).

Kerry-Lieberman:
A Multi-Trillion Dollar Gas Tax

INTRODUCTION

Climate change legislation will raise energy prices. Higher prices will result from the cost of new government mandates to install emissions control technology, shortages created by government imposed emissions caps, and new government imposed emission-related fees. Like previous climate bills, legislation proposed by Senators Kerry and Lieberman contains new mandates, restrictions and fees. However, their American Power Act goes beyond previous measures by proposing a new fee on transportation fuels. Critics have labeled this a gas tax. Determining the size and impact of this climate-related gas tax is the subject of this report.

Senators Kerry and Lieberman argue that their climate-related transportation fuel fee is not a tax. However, in every regard it is a tax. Their fee is imposed by the government, on persons, for a public purpose. Whether Senators Kerry and Lieberman refuse to call it a tax will not lessen the pain at the pump American consumers and workers will feel. Thus, this report will refer to their transportation fuels fee as the Kerry-Lieberman gas tax.

Senators Kerry and Lieberman propose a new tax on the gasoline, diesel and jet fuel consumed by Americans. The government would periodically estimate the amount of fuel the nation consumes, multiply that by the amount of carbon in the fuel, and require payment of a fee reflecting the amount of carbon emissions from consumption of that fuel.

Ironically, the big oil companies that are the rhetorical foes of many climate legislation advocates will pay very little of this new fuel fee. Oil producers will pass most all of this new gas tax on to consumers in the form of higher prices at the pump.

Consumers will pay the Kerry-Lieberman gas tax because they must. Transportation is an essential part of modern American life. The Kerry-Lieberman gas tax will hit American families in almost every way they lead their daily lives. American parents will pay more to drive to their families to church and the supermarket. American workers will pay more to drive to work and home again.

American truckers will pay more to deliver the goods that supply every American business. American railroads will pay more to haul the bounty of America's farms and factories. American farmers will pay more to run their tractors and harvesters. American food producers will pay more to transport their crops and foods to market. American businesses will pay more to perform their services and deliver their goods to market. American flyers will pay more to visit family, vacation and travel across the country. The second half of this report will examine Kerry-Lieberman gas tax's impact on American families and workers in more detail.

A further irony is that the Kerry-Lieberman gas tax would do little to reduce demand for transportation fuels or carbon emissions. Studies show that gasoline must cost $7 or more per gallon before the public cuts its use enough to produce a 17 percent reduction in transportation emissions, the bill's target for 2020.[1] The summer 2008 runup in gasoline prices to $4 per gallon confirmed this dynamic when Americans reduced their fuel consumption by only 4 percent. The analysis below shows thankfully that the Kerry-Lieberman gas tax will be short of $7 per gallon. Thus, the Kerry-Lieberman gas tax will not reduce emissions substantially, but it will impose a massive new tax on the American public.

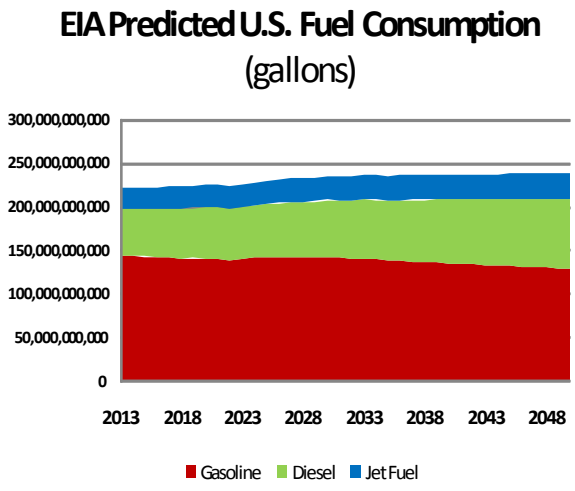
CALCULATING THE KERRY-LIEBERMAN GAS TAX

The Kerry-Lieberman American Power Act will impose a new gas tax of at least $2.3 trillion dollars and as much as $7.6 trillion over the life of the bill. This figure is relatively simple and straightforward to calculate from publicly available information provided by the U.S. government and the bill itself.

The American Power Act would require payment of a fee based on the greenhouse gas emissions attributable to gasoline, diesel and jet fuel consumed. The carbon content of these fuels is already established by the U.S. Environmental Protection Agency (EPA). Furthermore, EPA has also already established methods for converting amounts of fuel consumed into levels of carbon emitted.

U.S. FUEL CONSUMPTION

The amount of transportation fuels consumed by Americans each year is predicted annually by the U.S. Energy Information Administration (EIA). EIA provides estimates of future U.S. fuels consumption in its Annual Energy Outlook.[2] As the chart below shows, the United States consumes quite a large amount of fuel. In 2015, U.S. drivers, farmers, truckers and fliers will consume 222 billion gallons of fuel comprised of 144 billion gallons of gasoline, 54 billion gallons of diesel, and 24 billion gallons of jet fuel.



U.S. fuel consumption levels are expected to remain substantial over coming decades. EIA does predict that more fuel efficient vehicles, more hybrid and electric vehicles, and fuels that are lower in carbon content will lower gasoline consumption levels. However, such technologies are not as readily available for

shipping and air transportation that uses diesel and jet fuels. Furthermore, the U.S. economy and population will continue to grow and mitigate lower gasoline usage rates. In 2035, EIA predicts that U.S. drivers will still consume 139 billion gallons of gasoline, 69 billion gallons of diesel and 28 billion gallons of jet fuel.

Carbon Content of Fuels

Gasoline: 2,421 grams CO2/gallon

Diesel: 2,778 grams CO2/gallon

U.S. TRANSPORTATION EMISSIONS

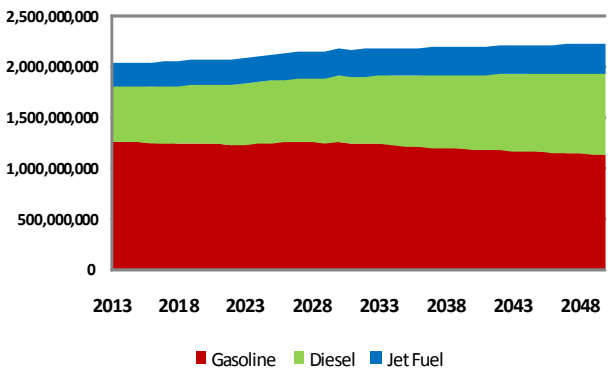
EPA data and methodology allow for the calculation of expected carbon emissions from U.S. transportation sources. For example, there are 2,421 grams of CO2 in a gallon of gasoline.[3] A tax rate based on tons of carbon requires calculation of how many tons of carbon are in a gallon of gasoline and EPA provides a method for calculating that as well.[4]

Calculating CO2 Emissions

mtCO2/gal of gasoline = 2,421 gCO2/gal x 0.99 oxidation conversion factor x 44 gCO2/12gC / 1,000,000 g/mt

Multiplying the amount of carbon released per gallon of fuel times the number of gallons used provides figures on total carbon emissions. U.S. drivers are expected to emit 2.0 billion metric tons of carbon dioxide from their cars, trucks, tractors and planes in 2015, rising modestly to 2.2 billion metric tons in 2035.

Estimated CO2 Emissions from Transportation Fuels
(mtCO2/yr)



KERRY-LIEBERMAN GAS TAX RATE

The amount of the thing to be taxed provides the first half of establishing the size of the tax. The second part is the tax rate. The tax rate Kerry-Lieberman tax applies to gasoline, diesel and jet fuel will mirror the market price for carbon at auction at the time the tax is applied.[5] Furthermore, Kerry-Lieberman mandates a minimum carbon auction price/tax rate as well as a maximum carbon auction price/tax rate .[6] Using this floor and ceiling allows for a calculation of the minimum amount the new tax will cost Americans, as well as its maximum amount. Additionally, just-released EPA analysis of Kerry-Lieberman provides that agency's opinion of carbon prices, and thus the gas tax rate, under the bill.[7]

For example, Senators Kerry and Lieberman propose to require American

drivers in 2013 to pay at least $12 per ton of carbon they emit through their cars and trucks. Their bill would cap the new tax in 2013 at $25 per ton of carbon emissions.

However, the bill also requires the tax rate to grow each year. The floor price is set to grow 3 percent plus inflation per year. The ceiling price is set to grow at 5 percent plus inflation per year. Using the Consumer Price Index at a level of 1.9 percent per year as the Congressional Budget Office predicts for 2014 to 2019 means that the floor price would grow at 4.9 percent per year and the ceiling price would grow at 6. 9 percent per year.

A 5 to 7 percent increase per year in the tax rate often goes unmentioned by commentators, and when mentioned goes unanalyzed. However, doing the math of this rising tax rate shows how rapidly it will increase over time. The minimum Kerry-Lieberman gas tax rate will double by 2030, triple by 2040, and grow to more than five times its initial rate by 2050. The maximum Kerry-Lieberman tax rate will double by 2025, triple by 2030, and grow to more than ten times its original rate by 2050.

In 2020, the Kerry-Lieberman gas tax rate will range between $16.77 and $39.88 per ton, with EPA estimating it at $23.85 per ton. In 2030, the Kerry-Lieberman gas tax rate will grow to between $27.06 and $77.73 per ton with EPA estimating it at $38.85 per ton. In 2040, the Kerry-Lieberman gas tax will increase to between $43.66 and $151.47 per ton, with EPA estimating it at $63.22 per ton. And in 2050, the Kerry-Lieberman tax rate will be at least $70.45 per ton and up to $295.20 per ton, with EPA estimating it at $102.38 per ton. These figures make the Kerry-Lieberman one of, if not the, most rapidly increasing U.S. tax rates ever proposed.

Kerry- Lieberman Gas Tax Rate
$/tCO2

Yr	Min.	Max.	EPA Est.
2013	$12.00	$25.00	
2020	$16.77	$39.88	$23.85
2030	$27.06	$77.73	$38.85
2040	$43.66	$151.47	$63.22
2050	$70.45	$295.20	$102.38

KERRY-LIEBERMAN GAS TAX

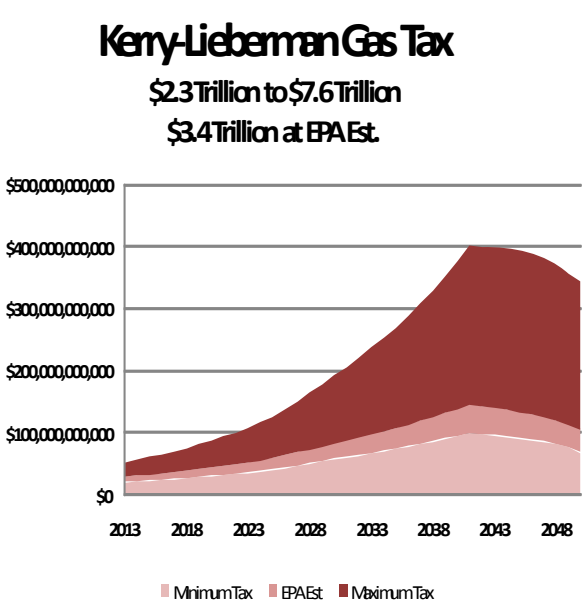
Multiplying these proposed and expected tax rates by the expected U.S. transportation emissions yields the gas tax that Senators Kerry and Lieberman propose, and it is a staggering amount.

The Kerry-Lieberman climate bill would impose a total gas tax on U.S. drivers, truckers, farmers and fliers between $2.3 trillion and $7.6 trillion dollars. Complete numbers are included at the end of this report, but an overview here highlights these numbers. In 2013, American fuel consumption will emit 2.039 billion metric tons of carbon. This amount multiplied by the $12 per ton Kerry-Lieberman minimum tax rate yields a tax (after refiner subsidies discussed below) of $22.0 billion in 2013. In 2030, Americans fuel consumption will emit 2.178 billion metric tons of carbon and the

KERRY-LIEBERMAN: A MULTI-TRILLION DOLLAR GAS TAX

Kerry-Lieberman minimum tax rate would be $27.06 per ton, yielding a gas tax of $58.9 billion in 2030. In 2040, the Kerry-Lieberman gas tax would range between $96 billion and $334 billion. Summing the tax over all the years Kerry-Lieberman applies produces a total gas tax of between $2.3 trillion and $7.6 trillion.

Even using EPA carbon price projections still yields an enormous new gas tax from Kerry-Lieberman. In total, Kerry-Lieberman would impose a $3.4 trillion gas tax using EPA carbon projections. In 2013, the Kerry-Lieberman gas tax would start at approximately $30 billion per year. By 2020, the Kerry-Lieberman gas tax would rise to $45 billion per year, increasing to $85 billion per year in 2030 and $139 billion per year in 2040. In 2050, using EPA carbon price projects the Kerry-Lieberman gas tax would be $107 billion, the lower amount reflecting the way the overall carbon cap will constrain U.S. consumption of energy-intensive products.



The carbon cap will limit U.S. consumption because after about 2040, the bill's economy-wide carbon cap is smaller than the amount of emissions the transportation sector alone would otherwise generate. For purposes of this analysis, that serves to artificially restrict the amount of fuel consumed. Thus, the tax revenues collected on those smaller amounts of fuel also decline.

However, this also suggests other severe hardships for families and workers. Severe shortages in the right to emit carbon will produce price spikes in all energy-related goods. While the cost of the carbon tax itself will be capped, the shortage in the good itself the cap forces will raise prices for the underlying goods. Similarly, it cannot be the case that the transportation sector is the only sector emitting carbon after 2040. Families and workers will need other energy related services and products such as electricity, heating and cooling, and food and manufactured goods that require energy.

KERRY-LIEBERMAN: A MULTI-TRILLION DOLLAR GAS TAX

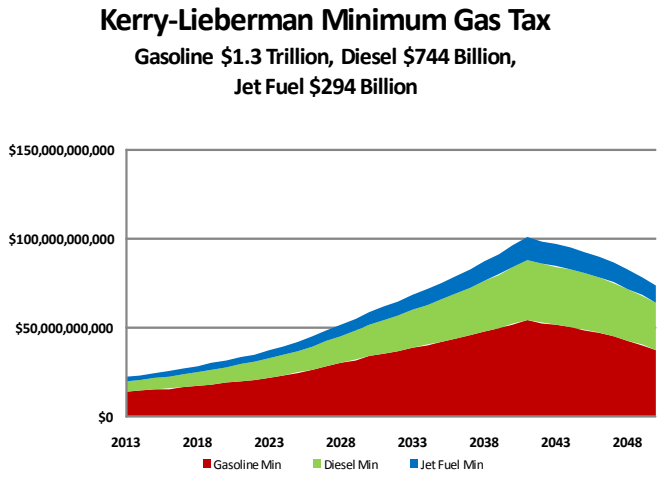
While low-carbon technology is expected to take hold in coming decades, the nation will not be carbon free in 40 years. Thus, carbon cap mandated shortages will force the prices of all energy related goods higher. Further analysis of those looming issues is left for other occasions.

RELIEF PROGRAMS

Kerry-Lieberman does include a series of relief programs for users of energy-intensive products. Kerry-Lieberman reduces the compliance obligation for users of electricity,[8] natural gas,[9] home heating oil[10] and refined transportation products like gasoline.[11] From 2013 to 2020, Kerry-Lieberman reduces the carbon liability of users of transportation fuel by approximately 200 million metric tons per year. However, between 2020 and 2030 the bill phases out this support completely. Between 2030 and 2050, there is no relief. Assuming this relief is passed on for the benefit of consumers, the gas tax paid for example in 2013 decreases from $24.5 billion to $22.0 billion.

Over the life of the bill, refiner provision relieves 2.2 percent of the carbon emissions liability, with a value of between $47 billion and $122 billion. However, this cost reduction is only a sliver of the multi-trillion tax burden Kerry-Lieberman seeks to impose and still leaves U.S. drivers, truckers, farmers and fliers liable for between $2.3 trillion and $7.6 trillion in new gas taxes.

A $1.3 TO $4.2 TRILLION GASOLINE TAX



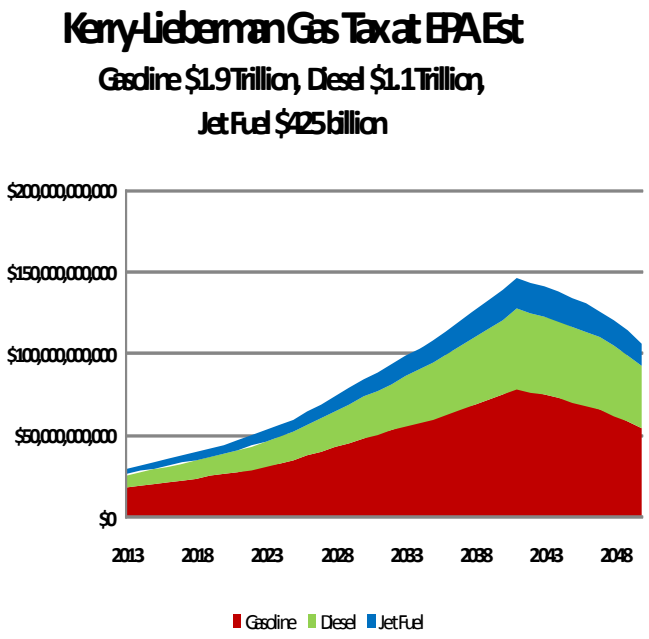
Kerry-Lieberman will impose a gas tax on American families and workers of between $1.3 trillion dollars and $4.2 trillion dollars. EPA estimates of the Kerry-Lieberman tax rate would put the gasoline tax at $1.9 trillion.

Starting in 2013, American drivers will consume 145 billion gallons of gasoline resulting in the emission of 1.3 billion metric tons of CO2 in that year alone. With the Kerry-Lieberman

minimum tax set at $12 per ton in 2013, Americans will face at least $14 billion in new gasoline taxes in 2013. At EPA's projected carbon price levels, Americans would face a $19 billion gasoline tax in 2013. If carbon prices approach the bill's price ceiling of $25 per ton, Americans would face $29 billion in new gas taxes from Kerry-Lieberman.

In following years, the Kerry-Lieberman gas tax would increase to between $19 billion and $45 billion in 2020 and between $34 billion and $98 billion in 2030. While fuel consumption decreases after 2030, the refiner refund expires that year and the bill's minimum and maximum tax rate continue to grow as discussed above. American drivers would face a gas tax between $52 billion and $181 billion in 2040.

At EPA's projected carbon price levels, U.S. drivers would face a gasoline tax of $27 billion in 2020, $49 billion in 2030, $75 billion in 2040 and $55 billion in 2050. Adding up all of these years yields a total Kerry-Lieberman gasoline tax imposed on American families and workers of between $1.3 trillion and $4.2 trillion, with a gasoline tax of $1.9 trillion at EPA estimated levels.



A $744 BILLION TO $2.5 TRILLION DIESEL TAX

Kerry-Lieberman would impose a diesel tax on American truckers and farmers of between $744 billion and $2.5 trillion. At EPA estimated carbon price levels, Kerry-Lieberman would impose a $1.1 trillion diesel tax.

Starting in 2013, American truckers and farmers will consume 54 billion gallons of diesel fuel resulting in the emission of 540 million metric tons of CO2 in that year alone. Kerry-Lieberman would impose a diesel tax of between $6 billion and $12 billion in 2013. At EPA estimated levels, the Kerry-Lieberman diesel tax would be $7.9 billion in 2013. American truckers and farmers would face a diesel tax of between $9 billion and $21 billion in 2020, between $18 billion and $50 billion in 2030, between $32 billion and $110

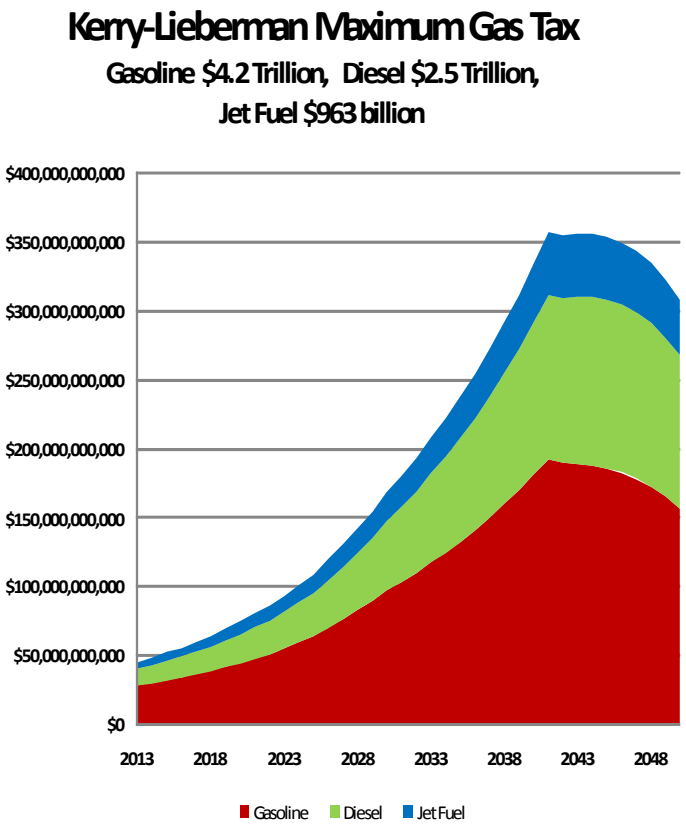
billion in 2040, and between $26 billion and $110 billion in 2050.

At EPA's projected carbon price levels, American truckers and farmers would face of Kerry-Lieberman diesel tax of $13 billion in 2020, $25 billion in 2030, $46 billion in 2040 and $38 billion in 2050. Adding up all of the years during the life of the legislation yields a total Kerry-Lieberman diesel tax of between $744 billion and $2.5 trillion with the total tax at $1.1 trillion at EPA projected levels.

A $294 TO $963 BILLION JET FUEL TAX

Kerry-Lieberman would impose a jet fuel tax on American fliers of between $294 billion and $963 billion. At EPA estimated carbon price levels, Kerry-Lieberman would impose a $425 billion jet fuel tax.

Starting in 2013, American fliers will consume 23.4 billion gallons of jet fuel in their flights in that year alone. American fliers will face at least $2.5 billion in new jet fuel taxes at the minimum Kerry-Lieberman tax level, and up to $5.1 billion at the maximum level in 2013. Kerry-Lieberman would impose a jet fuel tax of between $3.8 billion and $9.1 billion in 2020, between $7.3 billion and $20.9 billion in 2030, between $12.3 billion and $42.6 billion in 2040, and between $9.6 billion and $40.4 billion in 2050.



At EPA's projected carbon price levels, American fliers would face a Kerry-Lieberman jet fuel tax of $5.4 billion in 2020, $10.5 billion in 2030, $17.8 billion in 2040 and $14.0 billion in 2050. Adding up all of the years during the life of the legislation yields a total Kerry-Lieberman jet fuel tax of between $294 billion and $963 billion with the total tax at $425 billion at EPA projected levels.

REFUND AND RELIEF PROGRAMS

Kerry-Lieberman includes a series of refund and relief programs, which send back to consumers a portion of the carbon fees and taxes taken from them. Refiner relief cited above is an example of such a relief program intended for fuel refiners. Kerry-Lieberman also proposes a measure of relief for electricity consumers, natural gas, home heating oil and propane consumers, and low-income consumers.[12] Kerry-Lieberman extends relief funds to trade-exposed industries facing higher energy costs and foreign competition.[13] Additionally, Kerry-Lieberman proposes a refund program to distribute a portion of the fee and tax proceeds to the public at large.[14]

Funding for these refund and relief programs takes approximately 69 percent of the total carbon fees and taxes Kerry-Lieberman collects. However, the remaining 31 percent of the bill's new tax revenue that the government keeps for new spending and deficit reduction still represents a massive tax increase.

Calculating the size of the total tax bill is likewise as straight forward as its gas tax. The minimum and maximum prices it sets for carbon plus its requirements to purchase credits for emitted carbon somewhere between that price floor and ceiling puts the total Kerry-Lieberman program cost at between $3.4 trillion and $10.4 trillion. The government retaining "only" 30 percent of this sum still leaves American taxpayers facing between $1.1 trillion and $3.2 trillion in new carbon taxes, one of the largest tax increase ever proposed.

Additionally, many of the Kerry-Lieberman relief programs intended to mitigate this massive new tax increase are lowered and then discontinued less than half way into the bill's life. Electricity consumers, natural gas users, and home heating oil and propane consumers all see their relief programs halved by 2028 and discontinued completely by 2030. Kerry-Lieberman leaves two more decades of unmitigated higher power, heating, and cooling costs. Similarly, Kerry-Lieberman leaves workers in trade-exposed industries unprotected by their relief program after 2030.

Of those receiving Kerry-Lieberman relief revenues or refunds, many receive far less than others. Entire regions of the country, such as the Midwest and South, would receive less than their fair share under the universal relief program. That program spreads a portion of the bill's tax revenues evenly across American families. However, families in the coal-dependent Midwest and South would pay higher carbon related costs for their power because of coal's relatively high carbon content. Families in the Northeast and West Coast reliant on natural gas would pay less given natural gas's lower carbon content.

However, each would get back the same amount from the program.

Likewise in the transportation sector, drivers who must commute long distances to their work or schooling would face higher gas taxes then those with shorter commutes or in urban areas. Many working poor or families of modest income would be trapped by higher transportation costs, as their incomes limit them to lower priced housing and regions that oftentimes are a greater relative distance to employment centers.

Rural families and workers would face higher relative fuel taxes then their suburban and urban counterparts, as would those living in rural areas compared to those in town. Similarly, farmers and livestock producers would face higher costs then other workers given their necessarily rural locations.

Where is the $1.1 trillion to $3.2 trillion in new climate related government tax revenues going? Kerry-Lieberman proposes to spend between $330 billion and $927 billion on new government programs and spending. Tens of billions of dollars in new tax revenues are designated for international adaptation, energy efficiency, community protection, clean energy technology, and renewable energy programs. Many, if not all, of these programs are laudable. However, the vast majority of Americans do not want hundreds of billions of dollars in new taxes imposed on them to fund these programs.

Kerry-Lieberman also proposes to devote between $707 billion and $2.3 trillion to paying down the U.S. national debt. Again, this is a laudable goal for many, but few at this time would support a new federal tax of hundreds of billions to trillions of dollars to accomplish this goal.

A major source of the revenues necessary for these new government spending programs, consumer relief and deficit reduction is the Kerry-Lieberman gas tax. As discussed above, approximately 69 percent of the entire bill's revenues would fund consumer and user relief and refund programs, with 31 percent of revenues from the bill funding new government programs, spending and deficit reduction. Applying this same 69/31 ratio to the Kerry-Lieberman gas tax revenue produces between $1.6 trillion and $5.2 trillion of the gas tax revenue devoted to relief and refund programs, and between $734 billion and $2.4 trillion of the gas tax remaining in government coffers to fund new programs and deficit reduction.

Thus, under Kerry-Lieberman American drivers, truckers, farmers and fliers would face a new gas applied at the pump of between $2.3 trillion and $7.6 trillion, with a net new gas tax burden after refund and relief programs of between $734 billion and $2.4 trillion.

BUSINESSES, FARMERS, TRUCKERS, & AIR TRAVELERS WOULD PAY NEW CLIMATE GAS TAXES

FAMILIES, COMMUTERS AND SMALL BUSINESSES

The $2.3 trillion to $7.6 trillion tax on gasoline caused by Kerry-Lieberman would hurt drivers of all ages and income levels, families running their errands, and commuters traveling to their workplaces.

Americans travel over 200 million vehicle miles each month.[15] Americans make trips using gasoline as short as to the local supermarket and school and as long as extended commutes, sales calls or vacation travel. Americans use their cars every day to go to work, visit the doctor, take their children to activities, and fulfill their business commitments. All told, Americans spend nearly $300 billion per quarter on gasoline and oil.[16] Spending on gasoline and motor oil makes up approximately 5 percent of the American household budget, with households earning under $40,000 per year devoting the largest share of their budget to motor fuels.[17]

For those who must buy gasoline to drive to their workplace, gasoline costs are a mandatory expense. Lower income households especially have longer workplace commutes from areas of affordable housing to areas of employment. Thus, while all increases in gas prices hit household budgets hard, they hit hardest low-income families with the least amount of income to spare for higher taxes.

Small businesses would suffer particularly under higher energy costs caused by Kerry-Lieberman. Small business owners rank energy costs as their second most-pressing problem,[18] with thirty-five percent of small businesses reporting it as one of their top three business expenses.[19]

While small businesses face a variety of energy costs, from heating and cooling their space to operating equipment and lighting, operating vehicles is the top energy cost for small businesses.[20] Unfortunately, small businesses are least able to withstand higher fuel costs. Small businesses are unable to use higher prices to address higher energy costs without hurting their customer base. Additionally, small businesses often lack the resources to make new, more energy efficient equipment required to avoid higher energy costs.[21]

SMALL BUSINESS ENERGY COSTS

	Employee Size of Firm			
	1-9	10-19	20-249	All
Vehicle Operation	38%	38%	38%	38%
Heating/Cooling	33%	35%	35%	33%
Equipment Operation	21%	24%	20%	21%
Lighting	5%	2%	5%	5%

FARMERS AND RANCHERS

Farmers and ranchers would share the pain of both a Kerry-Lieberman gasoline tax and diesel tax. Farmers and ranchers use fuel for everything from tractors to combines. Even setting aside the run-up in fuel prices in 2008, farmers and ranchers in 2007 spent $8.2 billion on diesel fuel to run heavy machinery, and $2.8 billion on gasoline on their trucks and equipment.[22] Crop farmers spent $5.4 billion and $1.6 billion on diesel and gasoline respectively, and livestock producers spent $2.8 billion and $1.2 billion on diesel fuel and gasoline.[23]

The higher fuel costs calculated through the analysis presented in the previous section represents an increase between 3.0% and 7.4% on the price of a gallon of gasoline in 2020 and between 3.9% and 11.2% on gasoline per gallon in 2030. Diesel costs per gallon would rise between 3.3% and 8.2% in 2020 and between 4.2% and 12.4% in 2030. Based on 2007 dollars and usage rates, U.S. farmers and ranchers would face between $331 million and $815 million in higher fuel costs in 2020 and between $323 million and $915 million in 2030.

Kerry-Lieberman fuel cost increases would also hit farmers in the Midwest, South and Great Plains harder than the Northeast. Farmers in the region, including Massachusetts, Rhode Island and New York, paid on average $3,939 for fuel in 2007.[24] Farmers in this region facing a 12% increase in

fuel costs from Kerry-Lieberman would pay $473 in additional fuel costs. However, farmers in the South would pay an additional $725 for fuel or 53% more than the Northeast. Farmers in the Midwest would pay $910 more or 93% more than those in the Northeast, and farmers in the Great Plains would pay $795 or 68% more than those in the Northeast for their fuel.

Individual States in the Midwest, South and Great Plains would suffer an even worse fuel price increase than Northeastern States under Kerry-Lieberman. Farmers in Arkansas facing a 12% increase in their fuel prices would pay $974 more per year for fuel, or an increase 106% higher than a farmer in a Northeastern State would face. A farmer in Georgia would pay $877 more per year for fuel, or an increase 86% higher than a Northeastern farmer. A farmer in Nebraska would pay $1,533 more per year for fuel, an increase 224% higher than that faced by a farmer in the Northeast.

Applying these rates at the farm level, the average crop farmer who paid $9,207 for fuel in 2007[25] would face $1,104 in higher 2030 fuel costs. The average livestock farmer paying $3,980 in fuel costs in 2007[26] would face $477 in added 2030 fuel costs under Kerry-Lieberman.

COMPARATIVE FARM FUEL COSTS

State / Region	2007 Avg Fuel Cost per Farm	16 % Increase	Increase Compared to Northeast
Northeast	$3,939	$630	-
South	$6,040	$966	53.3%
Arkansas	$8,114	$1,298	106.0%
Georgia	$7,307	$1,169	85.5%
Midwest	$7,582	$1,213	92.5%
Indiana	$6,066	$971	54.0%
Minnesota	$8,642	$1,383	119.4%
Plains	$6,621	$1,059	68.1%
Nebraska	$12,778	$2,044	224.4%
Kansas	$9,313	$1,490	136.4%

2007 Avg Farm Fuel Data from USDA National Agricultural Statistics Service

TRUCKERS

Millions of truckers would suffer under the $1.3 trillion Kerry-Lieberman diesel tax. In 2007, 1.7 million drivers of combination trucks, commonly known as tractor-trailer or semi-trailer trucks, logged 145 billion vehicle miles in 2.2 million vehicles, consuming 28.5 billion gallons of fuel.[27] The average tractor-trailer consumed 12,800 gallons of fuel in 2007. At $2.70 per gallon, that equates to $34,560 in annual fuel costs. The 4% to 12% increase in fuel costs predicted from Kerry-Lieberman climate legislation in 2030 would cost a trucker between $1,382 and $4,147 a year.

The 900,000 drivers of the 6.8 million 2-axle 6-tire light or delivery trucks would also face higher fuel costs under climate legislation.[28] They traveled 82 billion miles in 2007, consuming 10 billion gallons of fuel. The average delivery truck consumed 1,474 gallons of fuel for a $2.70

per gallon total cost of $3,980. Increased Kerry-Lieberman fuel costs of 4% to 12% would cost delivery truck drivers $159 per year, rising to $478 per year.

Higher diesel taxes for truckers represent a new tax on the middle-class. In 2007, the average wage for a truck driver was $43,545. Middle-income truck drivers who drive for themselves would face this new climate tax directly, while drivers in trucking companies would face lower employment as firms are forced to cut costs.

Truckers would not suffer higher diesel taxes alone. Their costs are shared by every consumer in the price of every good sold in America. At some point, almost everything bought or sold must be shipped from where it is made or imported to where it is retailed. That also helps explain how for-hire transportation services amounted to $127.6 billion of the nation's gross domestic product in 2007.[29]

Thus, diesel taxes from climate legislation would hurt truckers, consumers and the entire economy.

AIR TRAVELERS

Everyone who travels by airplane would pay for higher jet fuel costs totaling between $294 billion and $963 billion over the life of Kerry-Lieberman. In 2007, air passengers traveled 6.7 billion miles across the United States, consuming 13.6 billion gallons of jet fuel.[30] Kerry-Lieberman would cause jet fuel to increase between 5.0% and 14.4% per gallon by 2030. An increase of 14% in jet fuel prices would hit American fliers with between $41 billion and $135 billion in higher flying costs.

A sizable portion of each airline ticket goes to pay these fuel costs, with fuel making up 30 percent of the average ticket price in 2007 and 60 percent or more during the oil price runup in 2008.[31] Thus, when fuel costs go up, air passengers would pay more for air travel.

Conclusion

Kerry-Lieberman would increase gas taxes on the American people by trillions of dollars. Americans of all income levels, including low- and middle-income drivers, would suffer more pain at the pump. While climate legislation may attempt to mitigate its increased energy costs in other sectors, such as helping low-income households on their electricity bills, it leaves all drivers exposed to higher gas taxes.

The Kerry-Lieberman climate bill would impose between $2.3 trillion and $7.6 trillion in additional gas taxes on the American people. Using U.S. EPA estimates of future carbon prices, Kerry-Lieberman would impose a $3.4 trillion total gas tax. Families and workers would suffer from between $1.3 trillion and $4.2 trillion in new gasoline taxes. Farmers and truckers would suffer under a between $744 billion and $2.5 trillion in new diesel taxes. Air passengers would suffer under between $294 billion and $963 billion in new jet fuel taxes. Using EPA projections of the future gas tax rate, Kerry-Lieberman would impose a $1.9 trillion gasoline tax, $1.1 trillion diesel tax, and a $425 billion jet fuel tax.

Measures designed to mitigate the new gas tax would reduce it by only 2 percent. Kerry-Lieberman does refund some of the new gas tax collected at the pump back to consumers in the form of power bill, heating and tax relief subsidies. Over the life of the bill, these refund and relief programs amount to approximately 69 percent of the revenues it collects.

However, Kerry-Lieberman proposes the government keep the remaining 31 percent of its new tax and fee revenues and spend it on new government programs and deficit reduction. Applying this 69/31 refund/spending ratio to the new gas tax means that U.S. consumers would still face a net tax burden of between $733 billion and $2.4 trillion, or $1.1 trillion using EPA estimates.

Annual Energy Outlook 2010
U.S. Energy Information Administration
Liquid Fuels Supply and Disposition
(million barrels per day)

Year	Gasoline	Diesel	Jet Fuel
2013	9.43	3.49	1.53
2014	9.40	3.53	1.55
2015	9.37	3.56	1.57
2016	9.29	3.59	1.59
2017	9.30	3.62	1.62
2018	9.24	3.66	1.64
2019	9.25	3.71	1.66
2020	9.24	3.75	1.68
2021	9.23	3.77	1.70
2022	9.12	3.80	1.71
2023	9.20	3.83	1.72
2024	9.27	3.88	1.74
2025	9.32	3.93	1.75
2026	9.33	3.99	1.76
2027	9.35	4.04	1.77
2028	9.33	4.09	1.78
2029	9.29	4.14	1.79
2030	9.35	4.20	1.80
2031	9.26	4.25	1.80
2032	9.21	4.30	1.81
2033	9.24	4.36	1.82
2034	9.14	4.41	1.83
2035	9.06	4.48	1.84

KERRY-LIEBERMAN TOTAL GAS TAX BY YEAR

(includes gasoline, diesel and jet fuels)

Year	Fuel Consum. Mbbl/day	Fuel Consumption gal/yr	CO2 Emitted mtCO2	Refiner Cost Contain. Asst. mtCO2	K-L Price Floor $/ton	Minimum Fuel Tax	EPA Est. Carbon Prices	Fuel Tax at EPA Estimated Levels	K-L Price Ceiling $/ton	Maximum Fuel Tax
2013	14.45	221,518,500,000	2,038,647,134	203,046,000	$12.00	$22,027,213,614	$16.32	$29,953,339,312	$25.00	$45,890,028,362
2014	14.48	221,978,400,000	2,043,778,372	199,305,000	$12.59	$23,218,230,809	$17.39	$32,082,769,835	$26.73	$49,293,550,871
2015	14.50	222,285,000,000	2,047,363,711	195,564,000	$13.20	$24,452,667,047	$18.47	$34,202,740,665	$29.57	$52,904,112,243
2016	14.47	221,825,100,000	2,044,212,872	207,150,000	$13.85	$25,446,715,278	$19.55	$35,907,230,894	$30.54	$56,104,428,676
2017	14.54	222,898,200,000	2,054,681,829	203,137,500	$14.53	$20,595,033,749	$20.62	$38,182,547,143	$32.65	$60,448,418,589
2018	14.54	222,898,200,000	2,055,771,359	199,125,000	$15.24	$28,300,093,951	$21.70	$40,285,512,702	$34.90	$64,797,421,617
2019	14.62	224,124,600,000	2,067,837,438	195,075,000	$15.99	$29,994,486,179	$22.77	$42,650,291,767	$37.31	$69,869,708,297
2020	14.67	224,891,100,000	2,075,663,147	191,062,500	$16.77	$31,610,327,786	$23.85	$44,947,725,435	$39.88	$75,162,857,247
2021	14.70	225,351,000,000	2,080,397,059	185,287,500	$17.59	$33,344,136,395	$25.18	$47,726,439,130	$42.63	$80,797,137,083
2022	14.63	224,277,900,000	2,071,709,838	179,550,000	$18.46	$34,923,556,132	$26.52	$50,176,294,573	$45.58	$86,237,702,071
2023	14.75	226,117,500,000	2,088,620,094	173,775,000	$19.36	$37,074,028,066	$27.85	$53,332,265,553	$48.72	$93,293,354,091
2024	14.89	228,263,700,000	2,108,769,587	168,037,500	$20.31	$39,416,422,317	$29.19	$56,642,206,684	$52.08	$101,078,863,970
2025	15.00	229,950,000,000	2,124,729,933	162,262,500	$21.31	$41,810,904,505	$30.52	$59,894,506,066	$55.68	$109,263,455,127
2026	15.08	231,176,400,000	2,136,847,236	125,220,000	$22.35	$44,958,322,631	$32.19	$64,746,234,217	$59.52	$119,728,539,110
2027	15.16	232,402,800,000	2,148,765,876	90,472,500	$23.44	$48,255,337,459	$33.85	$69,677,347,351	$63.63	$130,958,942,032
2028	15.20	233,016,000,000	2,155,295,573	58,005,000	$24.59	$51,578,911,608	$35.52	$74,491,566,558	$68.02	$142,647,508,787
2029	15.22	233,322,600,000	2,159,130,798	27,855,000	$25.80	$54,983,035,223	$37.18	$79,249,359,286	$72.71	$154,961,190,903
2030	15.35	235,315,500,000	2,177,984,279	0	$27.06	$58,941,242,410	$38.85	$84,614,689,247	$77.73	$169,283,931,983
2031	15.31	234,702,300,000	2,173,588,652	0	$28.39	$61,704,578,706	$41.00	$89,125,829,070	$83.09	$180,599,299,048
2032	15.32	234,855,600,000	2,176,076,642	0	$29.78	$64,802,193,841	$43.16	$93,915,115,698	$88.82	$193,281,636,824
2033	15.42	236,388600,000	2,190,888,416	0	$32.24	$68,440,199,832	$45.31	$99,273,535,885	$94.95	208,024,444,929
2034	15.39	235,928,700,000	2,187,987,463	0	$32.77	$71,698,707,583	$47.47	$103,855,012,915	$101.50	$222,083,681,022
2035	15.38	235,775,400,000	2,188,178,308	0	$34.37	$75,218,504,531	$49.62	$108,577,407,625	$108.50	$237,428,162,606
2036	15.39	235,990,020,000	2,191,096,239	0	$36.06	$79,009,429,854	$52.34	$114,681,977,141	$115.99	$254,149,161,873
2037	15.41	236,204,640,000	2,194,014,170	0	$37.83	$82,991,266,229	$55.06	$120,802,420,203	$124.00	$272,047,263,556
2038	15.42	236.419,260,000	2,196,932,101	0	$39.68	$87,173,620,928	$57.78	$126,938,736,811	$132.55	$291,205,299,112
2039	15.44	236,633,880,000	2,199,850,032	0	$41.62	$91,566,584,358	$60.50	$133,090,926,964	$141.70	$311,711,926,533
2040	15.45	236,848,500,000	2,202,767,964	0	$43.66	$96,180,754,339	$63.22	$139,258,990,664	$151.47	$333,662,040,152
2041	15.46	237,063,120,000	2,205685,895	0	$45.80	$101,027,261,610	$66.66	$147,026,610,381	$161.93	$357,157,208,945
2042	15.48	237,277,740,000	2,208,603,826	0	$48.05	$98,497,286,143	$70.10	$143,696,800,000	$173.10	$354,852,051,852
2043	15.49	237,492,360,000	2,211,521,757	0	$50.40	$96,973,028,628	$73.53	$141,479,416,000	$185.04	$356,021,505,736
2044	15.51	237,706,980,000	2,214,439,689	0	$52.87	$95,062,901,892	$76.97	$138,3958,656,000	$197.81	$355,662,893,637
2045	15.52	237,921,600,000	2,217,357,620	0	$55.46	$92,788,212,667	$80.41	$134,525,930,000	$211.46	$353,771,233,876
2046	15.53	238,136,220,000	2,220,275,551	0	$58.18	$90,004,178,051	$84.80	$131,191,788,000	$226.05	$349,699,164,150
2047	15.55	238,350,840,000	2,223,193,482	0	$61.03	$86,724,523,545	$89.20	$126,750,358,000	$241.65	$343,380,843,958
2048	15.56	238,565,460,000	2,226,111,413	0	$64.02	$82,907,362,866	$93.59	$121,201,640,000	$258.32	$334,525,677,859
2049	15.58	238,780,080,000	2,229,029,345	0	$67.16	$78,507,894,859	$97.99	$114,545,634,000	$276.15	$322.813,662,640
2050	15.59	238,994,700,000	2,231,947,276	0	$70.45	$73,478,218,410	$102.38	$106,782,340,000	$295.20	$307,892,712,569
Total	**575.45**	**8,821,648,500,000**	**81,769,751,974**	**2,763,930,000**		**$2,331,946,368,695**		**$3,373,879,191,771**		**$7,602,691,021,954**

KERRY-LIEBERMAN TOTAL GASOLINE TAX BY YEAR

Year	Gasoline Consumption Mbbl/day	Gasoline Consumption gal/yr	CO2 Emitted mtCO2	Refiner Cost Containment Asst. mtCO2	K-L Price Floor $/ton	Minimum Gasoline Tax	EPA Est. Carbon Prices	Gasoline Tax at EPA Estimated Levels	K-L Price Ceiling $/ton	Maximum Gasoline Tax
2013	9.43	144,561,900,000	1,270,443,226	126,534,117	$12.00	$13,726,909,311	$16.32	$18,666,308,845	$25.00	$28,597,727,732
2014	9.40	144,102,000,000	1,266,401,519	123,496,832	$12.59	$14,386,884,202	$17.39	$19,879,684,129	$26.73	$30,544,127,765
2015	9.37	143,642,100,000	1,262,359,812	120,580,497	$13.20	$15,076,981,203	$18.47	$21,088,663,952	$28.57	$32,619,521,801
2016	9.29	142,415,700,000	1,251,581,927	126,828,864	$13.85	$15,579,908,231	$19.55	$21,984,423,374	$30.54	$34,350,282,171
2017	9.30	142,569,000,000	1,252,929,163	123,871,684	$14.53	$16,405,869,428	$20.62	$23,283,423,133	$32.65	$36,860,980,347
2018	9.24	141,649,200,000	1,244,845,749	120,577,567	$15.24	$17,136,755,745	$21.70	$24,394,371,001	$34.90	$39,237,240,308
2019	9.25	141,802,500,000	1,246,192,985	117,562,963	$15.99	$18,046,200,303	$22.77	$25,703,420,109	$37.31	$42,107,343,018
2020	9.24	141,649,200,000	1,244,845,749	114,586,676	$16.77	$18,957,788,127	$23.85	$26,956,678,885	$39.88	$45,077,720,558
2021	9.23	141,495,900,000	1,243,498,513	110,750,364	$17.59	$19,930,514,637	$25.18	$28,527,129,400	$42.63	$48,294,203,941
2022	9.12	139,809,600,000	1,228,678,921	106,486,582	$18.46	$20,712,281,463	$26.52	$29,758,296,436	$45.58	$51,145,408,884
2023	9.20	141,036,000,000	1,239,456,806	103,123,879	$19.36	$22,000,964,445	$27.85	$31,649,144,682	$48.72	$55,363,387,076
2024	9.27	142,109,100,000	1,248,887,456	99,517,713	$20.31	$23,343,790,473	$29.19	$33,545,505,325	$52.08	$59,862,455,368
2025	9.32	142,875,600,000	1,255,623,634	95,890,130	$21.31	$24,708,438,959	$30.52	$35,395,066,542	$55.68	$64,569,983,440
2026	9.33	143,028,900,000	1,256,970,870	73,658,935	$22.35	$26,446,112,269	$32.19	$38,086,077,925	$59.52	$70,428,659,296
2027	9.35	143,335,500,000	1,259,665,341	53,037,455	$23.44	$28,288,598,964	$33.85	$40,846,767,216	$63.63	$76,771,714,529
2028	9.33	143,028,900,000	1,256,970,870	33,828,583	$24.59	$30,080,880,884	$35.52	$43,443,567,742	$68.02	$83,192,192,050
2029	9.29	142,415,700,000	1,251,581,927	16,146,689	$25.80	$31,871,979,800	$37.18	$45,938,423,879	$72.71	$89,826,251,428
2030	9.35	143,335,500,000	1,259,665,341	0	$27.06	$34,089,428,899	$38.85	$48,937,998,504	$77.73	$97,907,548,723
2031	9.26	141,955,800,000	1,247,540,220	0	$28.39	$35,415,598,831	$41.00	$51,154,139,190	$83.09	$103,655,716,616
2032	9.21	141,189,300,000	1,240,804,042	0	$29.78	$36,950,364,021	$43.16	$53,550,620,842	$88.82	$110,209,645,938
2033	9.24	141,649,200,000	1,244,845,749	0	$31.24	$38,887,188,965	$45.31	$56,406,450,575	$94.95	$118,197,870,828
2034	9.15	140,269,500,000	1,232,720,628	0	$32.77	$40,395,330,108	$47.47	$58,512,317,328	$101.50	$125,122,807,774
2035	9.06	138,889,800,000	1,220,595,507	0	$34.37	$41,957,900,943	$49.62	$60,565,949,060	$108.50	$132,440,645,954
2036	9.02	138,276,600,000	1,215,206,564	0	$36.06	$43,819,516,508	$52.34	$63,603,911,582	$115.99	$140,953,977,454
2037	8.98	137,663,400,000	1,209,817,622	0	$37.83	$45,762,829,479	$55.06	$66,612,558,255	$124.00	$150,011,598,786
2038	8.94	137,050,200,000	1,204,428,679	0	$39.68	$47,791,376,461	$57.78	$69,591,889,081	$132.55	$159,648,089,975
2039	8.90	136,437,000,000	1,199,039,737	0	$41.62	$49,908,844,494	$60.50	$72,541,904,059	$141.70	$169,900,211,726
2040	8.86	135,823,800,000	1,193,650,794	0	$43.66	$52,119,077,300	$63.22	$75,462,603,189	$151.47	$180,807,041,722
2041	8.82	135,210,600,000	1,188,261,851	0	$45.80	$54,426,081,785	$66.66	$79,207,158,480	$161.93	$192,410,119,350
2042	8.78	135,597,400,000	1,182,872,909	0	$48.05	$52,752,680,210	$70.10	$76,960,408,093	$173.10	$190,049,873,924
2043	8.74	133,984,200,000	1,177,483,966	0	$50.40	$51,631,500,329	$73.53	$75,328,105,321	$185.04	$189,557,083,560
2044	8.70	133,371,000,000	1,172,095,023	0	$52.87	$50,316,454,672	$76.97	$73,252,326,758	$197.81	$188,251,100,167
2045	8.66	132,757,800,000	1,166,706,081	0	$55.46	$48,882,332,930	$80.41	$70,783,449,249	$211.46	$186,143,654,080
2046	8.62	132,144,600,000	1,161,317,138	0	$58.18	$47,076,766,856	$84.80	$68,619,983,548	$226.05	$182,910,464,569
2047	8.58	131,531,400,000	1,155,928,195	0	$61.03	$45,091,586,857	$89.20	$65,902,636,801	$241.65	$178,537,586,804
2048	8.54	130,918,200,000	1,150,539,253	0	$64.02	$42,849,686,117	$93.59	$62,641,628,575	$258.32	$172,895,624,690
2049	8.50	130,305,000,000	1,145,150,310	0	$67.16	$40,332,954,955	$97.99	$58,847,124,925	$276.15	$165,843,561,815
2050	8.46	129,691,800,000	1,139,761,368	0	$70.45	$37,522,228,059	$102.38	$54,529,238,744	$259.20	$157,227,826,542
Total	**344.33**	**5,278,578,900,000**	**46,389,365,446**	**1,166,479,532**		**$1,294,620,587,225**		**$1,872,159,354,934**		**$4,181,531,250,709**

KERRY-LIEBERMAN TOTAL DIESEL TAX BY YEAR

Year	Diesel Consumption Mbbl/day	Diesel Consumption gal/yr	CO2 Emitted mtCO2	Refiner Cost Containment Asst. mtCO2	K-L Price Floor $/ton	Minimum Diesel Tax	EPA Est. Carbon Prices	Diesel Tax at EPA Estimated Levels	K-L Price Ceiling $/ton	Maximum Diesel Tax
2013	3.49	53,501,700,000	539,518,633	53,735,195	$12.00	$5,829,401,262	$16.32	$7,927,014,149	$25.00	$12,144,585,963
2014	3.53	54,114,900,000	545,702,228	53,215,742	$12.59	$6,199,419,882	$17.39	$8,566,309,933	$26.73	$13,161,701,331
2015	3.56	54,574,800,000	550,339,924	52,568,421	$13.20	$6,572,979,116	$18.47	$9,193,839,660	$28.57	$14,220,846,514
2016	3.59	55,034,700,000	554,977,620	56,238,573	$13.85	$6,908,457,366	$19.55	$9,748,353,415	$30.54	$15,231,633,998
2017	3.62	55,494,600,000	559,615,316	55,326,744	$14.53	$7,327,609,629	$20.62	$10,399,438,918	$32.65	$16,463,795,211
2018	3.66	56,107,800,000	565,798,910	54,804,104	$15.24	$7,788,882,867	$21.70	$11,087,565,300	$34.90	$17,833,846,345
2019	3.71	56,874,300,000	573,528,404	54,105,343	$15.99	$8,305,301,489	$22.77	$11,829,340,788	$37.31	$19,378,826,169
2020	3.75	57,487,500,000	579,711,998	53,361,849	$16.77	$8,828,449,024	$23.85	$12,553,451,057	$39.88	$20,992,235,772
2021	3.77	57,794,100,000	582,803,796	51,906,562	$17.59	$9,341,048,224	$25.18	$13,370,115,938	$42.63	$22,634,562,938
2022	3.80	58,254,000,000	587,441,492	50,912,110	$18.46	$9,902,712,017	$26.52	$14,227,686,132	$45.58	$24,453,040,389
2023	3.83	58,713,900,000	592,079,188	49,261,501	$19.36	$10,509,695,124	$27.85	$15,118,558,206	$48.72	$24,446,673,312
2024	3.88	59,480,400,000	599,808,681	47,795,810	$20.31	$11,211,425,100	$29.19	$16,111,047,639	$52.08	$28,750,405,185
2025	3.93	60,246,900,000	607,538,174	46,396,797	$21.31	$11,955,270,260	$30.52	$17,126,034,837	$55.68	$31,242,427,091
2026	3.99	61,166,700,000	616,813,566	36,145,492	$22.35	$12,977,485,167	$32.19	$18,689,382,633	$59.52	$34,560,349,441
2027	4.04	61,933,200,000	624,543,059	26,296,011	$23.44	$14,025,509,449	$33.85	$20,251,859,071	$63.63	$38,063,475,992
2028	4.09	62,699,700,000	632,272,553	17,016,213	$24.59	$15,131,070,896	$35.52	$21,852,674,661	$68.02	$41,846,745,139
2029	4.14	63,466,200,000	640,002,046	8,256,682	$25.80	$16,297,880,179	$37.18	$23,490,819,607	$72.71	$45,933,057,561
2030	4.20	64,386,000,000	649,277,438	0	$27.06	$17,570,934,387	$38.85	$25,224,428,468	$77.73	$50,465,119,840
2031	4.25	65,152,500,000	657,006,931	0	$28.39	$18,651,337,674	$41.00	$26,939,912,213	$83.09	$54,589,441,836
2032	4.30	65,919,000,000	664,736,425	0	$29.78	$19,795,432,670	$43.16	$28,688,694,615	$88.82	$59,042,655,833
2033	4.36	66,838,800,000	674,011,817	0	$31.24	$21,055,158,762	$45.31	$30,540,823,435	$94.95	$63,997,295,816
2034	4.41	67,605,300,000	681,741,310	0	$32.77	$22,340,151,238	$47.47	$32,359,533,018	$101.50	$69,197,663,233
2035	4.48	68,678,400,000	692,562,601	0	$34.37	$23,806,799,897	$49.62	$34,364,956,241	$108.50	$75,146,465,519
2036	4.53	69,383,580,000	699,673,734	0	$36.06	$25,229,755,709	$52.34	$36,620,923,260	$115.99	$81,156,404,742
2037	4.57	70,088,760,000	706,784,868	0	$37.83	$26,735,001,063	$55.06	$38,915,574,847	$124.00	$87,637,943,255
2038	4.62	70,793,940,000	713,896,002	0	$39.68	$28,327,183,819	$57.78	$41,248,911,002	$132.55	$94,627,548,439
2039	4.66	71,499,120,000	721,007,136	0	$41.62	$30,011,209,747	$60.50	$43,620,931,725	$141.70	$102,164,474,892
2040	4.71	72,204,300,000	728,118,270	0	$43.66	$31,792,256,648	$63.22	$46,031,637,017	$151.47	$110,290,975,436
2041	4.76	72,909,480,000	735,229,404	0	$45.80	$33,675,789,231	$66.66	$49,088,921,588	$161.93	$119,052,527,991
2042	4.80	73,614,660,000	742,340,537	0	$48.05	$33,106,221,891	$70.10	$48,298,367,723	$173.10	$119,270,400,508
2043	4.85	74,319,840,000	749,451,671	0	$50.40	$32,862,710,095	$73.53	$47,945,259,607	$185.04	$120,650,367,388
2044	4.89	75,025,020,000	756,562,805	0	$52.87	$32,478,218,349	$76.97	$47,282,843,724	$197.81	$121,512,144,993
2045	4.94	75,730,200,000	763,673,939	0	$55.46	$31,956,928,928	$80.41	$46,331,699,475	$211.46	$121,841,361,667
2046	4.99	76,435,380,000	770,785,073	0	$58.18	$31,245,615,847	$84.80	$45,544,199,157	$226.05	$121,400,650,298
2047	5.03	77,140,560,000	777,896,207	0	$61.03	$30,344,942,281	$89.20	$44,349,996,292	$241.65	$120,149,081,994
2048	5.08	77,845,740,000	785,007,341	0	$64.02	$29,236,132,588	$93.59	$42,740,078,739	$258.32	$117,965,844,455
2049	5.12	78,550,920,000	792,118,474	0	$67.16	$27,898,939,086	$97.99	$40,705,481,548	$276.15	$114,716,599,220
2050	5.17	79,256,100,000	799,229,608	0	$70.45	$26,311,538,965	$102.38	$38,237,286,648	$295.20	$110,252,143,822
Total	**163.10**	**2,500,323,000,000**	**25,213,607,177**	**767,343,149**		**$743,544,855,932**		**$1,076,543,952,285**		**$2,458,485,319,525**

KERRY-LIEBERMAN TOTAL JET FUEL TAX BY YEAR

Year	Jet Fuel Consumption Mbbl/day	Jet Fuel Consumption gal/yr	CO2 Emitted mtCO2	Refiner Cost Containment Asst. mtCO2	K-L Price Floor $/ton	Minimum Jet Fuel Tax	EPA Est. Carbon Prices	Jet Fuel Tax at EPA Estimated Levels	K-L Price Ceiling $/ton	Maximum Jet Fuel Tax
2013	1.53	23,454,900,000	228,685,275	22,776,688	$12.00	$2,470,903,040	$16.32	$3,360,016,318	$25.00	$5,147,714,667
2014	1.55	23,761,500,000	231,674,625	22,592,426	$12.59	$2,631,926,724	$17.39	$3,636,775,774	$26.73	$5,587,721,775
2015	1.57	24,068,100,000	234,663,975	22,415,082	$13.20	$2,802,706,728	$18.47	$3,920,237,052	$28.57	$6,063,743,928
2016	1.59	24,374,700,000	237,653,325	24,082,563	$13.85	$2,958,349,680	$19.55	$4,174,454,104	$30.54	$6,552,512,506
2017	1.62	24,834,600,000	242,137,350	23,939,072	$14.53	$3,170,549,354	$20.62	$4,499,684,892	$32.65	$7,123,643,031
2018	1.64	25,141,200,000	245,126,700	23,743,328	$15.24	$3,374,455,340	$21.70	$4,803,576,401	$34.90	$7,726,334,963
2019	1.66	25,447,800,000	248,116,050	23,406,694	$15.99	$3,592,984,387	$22.77	$5,117,530,870	$37.31	$8,383,539,111
2020	1.68	25,754,400,000	251,105,400	23,113,975	$16.77	$3,824,090,635	$23.85	$5,437,595,493	$39.88	$9,092,900,917
2021	1.70	26,061,000,000	254,094,750	22,630,575	$17.59	$4,072,573,534	$25.18	$5,829,193,791	$42.63	$9,868,370,204
2022	1.71	26,214,300,000	255,589,425	22,151,307	$18.46	$4,308,562,651	$26.52	$6,190,312,005	$45.58	$10,639,252,798
2023	1.72	26,267,600,000	257,084,100	21,389,620	$19.36	$4,563,368,497	$27.85	$6,564,562,666	$48.72	$11,483,293,703
2024	1.74	26,674,200,000	260,073,450	20,723,977	$20.31	$4,861,206,745	$29.19	$6,985,653,720	$52.08	$12,466,003,417
2025	1.75	26,827,500,000	261,568,125	19,975,573	$21.31	$5,147,195,285	$30.52	$7,373,404,687	$55.68	$13,451,044,596
2026	1.76	29,980,800,000	263,062,800	15,415,573	$22.35	$5,534,725,195	$32.19	$7,970,773,659	$59.52	$14,739,530,373
2027	1.77	27,134,100,000	264,557,475	11,139,034	$23.44	$5,941,229,046	$33.85	$8,578,721,065	$63.63	$16,123,751,510
2028	1.78	27,287,400,000	266,052,150	7,160,204	$24.59	$6,366,959,828	$35.52	$9,195,324,155	$68.02	$17,608,571,598
2029	1.79	27,440,700,000	267,546,825	3,421,628	$25.80	$6,813,175,244	$37.18	$9,820,115,797	$72.71	$19,201,881,913
2030	1.80	27,594,000,000	269,041,500	0	$27.06	$7,280,879,124	$38.85	$10,452,262,275	$77.73	$20,911,263,420
2031	1.80	27,594,000,000	269,041,500	0	$28.39	$7,637,642,201	$41.00	$11,031,777,666	$83.09	$22,354,140,596
2032	1.81	27,747,300,000	270,536,175	0	$29.78	$8,056,397,150	$43.16	$11,675,800,241	$88.82	$24,029,335,054
2033	1.82	27,900,600,000	272,030,850	0	$31.24	$8,497,852,105	$45.31	$12,326,261,875	$94.95	$25,829,278,284
2034	1.83	28,053,900,000	273,525,525	0	$32.77	$8,963,226,237	$47.47	$12,983,162,570	$101.50	$27,763,210,016
2035	1.84	28,207,200,000	275,020,200	0	$34.37	$9,453,803,690	$49.62	$13,646,502,324	$108.50	$29,841,051,133
2036	1.85	28,329,840,000	276,215,940	0	$36.06	$9,960,157,637	$52.34	$14,457,142,300	$115.99	$32,038,779,667
2037	1.86	28,452,480,000	277,411,680	0	$37.83	$10,493,435,687	$55.06	$15,274,287,101	$124.00	$34,397,721,516
2038	1.86	28,575,120,000	278,607,420	0	$39.68	$11,055,060,648	$57.78	$16,097,936,728	$132.55	$36,929,660,698
2039	1.87	28,697,760,000	279,803,160	0	$41.62	$11,646,530,116	$60.50	$16,928,091,180	$141.70	$39,647,239,935
2040	1.88	28,820,400,000	280,998,900	0	$43.66	$12,269,420,391	$63.22	$17,764,750,458	$151.47	$42,564,022,993
2041	1.89	28,943,040,000	282,194,640	0	$45.80	$12,925,390,595	$66.66	$18,810,530,313	$161.93	$45,694,561,603
2042	1.90	29,065,680,000	283,390,380	0	$48.05	$12,638,384,041	$70.10	$18,438,024,183	$173.10	$45,531,777,420
2043	1.90	29,188,320,000	284,586,120	0	$50.40	$12,478,818,203	$73.53	$18,206,051,072	$185.04	$45,814,054,788
2044	1.91	29,310,960,000	285,781,860	0	$52.87	$12,268,228,871	$76.97	$17,860,458,518	$197.81	$45,899,648,477
2045	1.92	29,433,600,000	286,977,600	0	$55.46	$12,008,950,808	$80.41	$17,410,781,277	$211.46	$45,786,218,129
2046	1.93	29,556,240,000	288,173,340	0	$58.18	$11,681,795,348	$84.80	$17,027,605,296	$226.05	$45,388,049,283
2047	1.94	29,678,880,000	289,369,080	0	$61.03	$11,287,994,407	$89.20	$16,497,724,907	$241.65	$44,694,175,160
2048	1.94	29,801,520,000	290,564,820	0	$64.02	$10,821,544,161	$93.59	$15,819,932,686	$258.32	$43,664,208,714
2049	1.95	29,924,160,000	291,760,560	0	$67.16	$10,276,000,818	$97.99	$14,993,027,527	$276.15	$42,253,501,605
2050	1.96	30,046,800,000	292,956,300	0	$70.45	$9,644,451,385	$102.38	$14,045,814,608	$295.20	$40,412,742,205
Total	**68.02**	**1,042,746,600,000**	**10,166,779,350**	**330,107,319**		**$293,780,925,538**		**$425,175,884,552**		**$962,674,451,719**

Kerry-Lieberman Gas Tax Calculation Notes:

Fuel Consumption Mbbl/day from the U.S. Energy Information Administration Annual Energy Outlook 2010, Liquid Fuels Supply and Disposition. Figures for the years 2036 to 2050 calculated by applying the average annual fuel change from the years 2030 to 2035.

Fuel Consumption gal/yr calculated by multiplying the Fuel Consumption Mbbl/day by 42 and again by 365 and then by 1,000,000.

CO2 Emitted mtCO2 calculated by using the EPA CO2 Emissions Methodology (gCO2/gal of fuel x 0.99 oxidation conversion factor x (44/12) molecular weight of carbon to CO2 / 1,000,000 g/mt) applied to Fuel Consumption gal/yr.

Refiner Cost Containment Asst. mtCO2 calculated by multiplying the number of emissions allowances established by the EPA Administrator through American Power Act §721(e)(1) times the percentage of emissions allowances allocated by the EPA Administrator to refiners through American Power Act §781(b)(3).

K-L Price Floor $/ton calculated using the reserve auction price formula of American Power Act §790(d) of a starting price of $12 in 2013 with each following year rising by 3 percent plus the rate of inflation as measured by the Consumer Price Index. This report applies the Congressional Budget Office CPI assumption of 1.9% for the years 2014 to 2019 to all future years.

Minimum Fuel Tax calculated by multiplying the K-L Price Floor $/ton times the difference of CO2 Emitted mtCO2 minus Refiner Cost Containment Asst. mtCO2.

EPA Estimated Carbon Prices from U.S. EPA Analysis of the American Power Act in the 11th Congress, Data Annex. EPA analysis provides estimates for years between 2015 and 2050 in five year increments. Figures for intervening years calculated from the average yearly change between each five year increment.

Tax at EPA Estimated Levels calculated by multiplying the EPA Estimated Carbon Price times the difference of the CO@ Emitted mtCO2 minus Refiner Cost Containment Asst. mtCO2.

K-L Price Ceiling $/ton calculated using the cost containment reserve price formula of American Power Act §726(b)3) of a starting price of $25 in 2013 with each following year rising by 5 percent plus the rate of inflation as measured by the Consumer Price Index. This report applies the Congressional Budget Office CPI assumption of 1.9% for the years 2014 to 2019 to all future years.

Maximum Fuel Tax calculated by multiplying the K-L Ceiling Floor $/ton times the difference of CO2 Emitted mtCO2 minus Refiner Cost Containment Asst. mtCO2.

References:

1. Harvard Kennedy School, *Analysis of Policies to Reduce Oil Consumption and Greenhouse Gas Emissions from the U.S. Transportation Center,* 2010.

2. U.S. Energy Information Administration, *Annual Energy Outlook 2010,* at http://www/eia/gov/oiaf/aeo/aeoref_tab.html and reprinted above.

3. Greenhouse Gas Reporting Rule at 74 Fed. Reg. 56260, 56497 (2009). Under the American Power Act, EPA will conduct a rulemaking to further tweak its figures on the margins to account for factors such as increasing ethanol mandates, but those actions will change carbon content figures only modestly.

4. U.S. Environmental Protection Agency, *Carbon Emissions Conversion Methodology* at http://epa.gov/oms/climate/420f05001.htm and reprinted above.

5. American Power Act, §729(b)(2).

6. Id. at §726(b) (price ceiling) and §790(d) (price floor).

7. U.S. Environmental Protection Agency, *EPA Analysis of the American Power Act in the 111th Congress* at http://www.epa.gov/climatechange/economics/economicanalyses.html

8. Id. at §781(a)(1).

9. Id. at §781(a)(2).

10. Id. at §781(a)(2).

11. Id. at §781(b)(3).

12. Id. at §781(a)(4)(4)(B).

13. Id. at §781(b)(1)(A).

14. Id. at §781(a)(5).

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