under the high cost case. Other Midwestern states, like Michigan, Indiana, and Kansas show a similar pattern, and income losses are much higher than the national average.

The ACCF/NAM analysis of the Waxman Markey bill thus shows that there are significant economic costs in terms of slower growth in jobs, household income, and GDP from meeting the bill's GHG reduction targets. The report recommends that, given the wide recognition that without strong emission cuts in developing countries like China and India, U.S. emission reductions would have only negligible environmental benefits, policymakers should proceed cautiously as they develop climate change policies. In addition, given the size of projected federal deficits and state budget receipt shortfalls, policymakers may want to think carefully before imposing W-M bill on the already struggling U.S. economy.

National Black Chamber of Commerce, 2009

In this report the National Black Chamber of Commerce analyzed the potential economic impacts of ACESA.[15] The study examined key sections of the bill, particularly those provisions related to GHG cap-and-trade, renewable energy, and offsets, and focused on how these could affect performance of the U.S. economy.

The most important conclusion is that ACESA will have significant cost – see Table III-2. Therefore, the judgment about what action to take cannot be made simply on the grounds that a cap-and-trade program will create additional jobs and stimulate economic growth – it will not – but on whether the benefits are worth the cost. And it needs to be recognized that the benefits of any action by the U.S. alone are limited because of the relatively small share that the U.S. will contribute to global emissions over the next century.

The NBCC analysis found that businesses and consumers would face higher energy and transportation costs under ACESA, which would lead to increased costs of other goods and services throughout the economy. As the costs of goods and services rise, household disposable income and household consumption would fall. Wages and returns on investment would also fall, resulting in lower productivity growth and reduced employment opportunities. Impacts would differ across regions of the economy, depending on how local energy costs will change, whether local industries will be favored or harmed, and allocation formulas. It is not possible to avoid these costs through any free distribution of carbon allowances.

Although appropriate use of revenues from an auction or carbon tax can ameliorate impacts on some segments of the economy, the cost of bringing emissions down to levels required by the caps cannot be avoided. It is this cost of bringing down emissions that the NBCC analysis estimated, in terms of reductions in GDP and household consumption. Allocations shift who bears the burden across industries,

[15]National Black Chamber of Commerce, *Impact on the Economy of the American Clean Energy and Security Act of 2009 (H.R.2454)*, report prepared by CRA International, May 2009 (updated August 2009).

regions, and income groups, as do decisions about how to spend or return to taxpayers the revenues from allowance auctions.

Table III-2
Summary of Projected Economic Impacts
(change from projected baseline)

	2015	2020	2030	2040	2050
CO_2 Allowance Price (2008$/Metric Ton)	$24	$30	$49	$80	$131
Change in U.S. jobs (Millions)	-1.5	-1.8	-2.2	-3.0	-3.6
Change to Average Worker's Annual Wages: *Assumes Partial Wage Adjustment* ($2008)	-$250	-$350	-$510	-$850	-$1,250
Change in U.S. Purchasing Power ($2008 per Household)	-$760	-$810	-$880	-$990	-$1,070
Percentage Change in U.S. GDP	-0.7%	-0.8%	-1.0%	-1.3%	-1.5%
Percentage Change in Natural Gas Retail Rates*	11% ($1.30/MMBtu)	13% ($1.60/MMBtu)	17% ($2.40/MMBtu)	25% ($3.80/MMBtu)	36% ($5.70/MMBtu)
Percentage Change in Motor Fuel Cost	4% (19¢/Gallon)	5% (24¢/Gallon)	7% (38¢/Gallon)	10% (59¢/Gallon)	16% (95¢/Gallon)
Percentage Change in Electricity Retail Rates*	12% (1.3¢/ kWh)	18% (2.1¢/ kWh)	24% (2.7¢/ kWh)	41% (4.7¢/ kWh)	48% (5.8¢/ kWh)

* Percentage increases in utility bills will be smaller to the extent that there are free allowance allocations to load-serving entities and natural gas local distribution companies and/or reduced energy consumption.

Source: National Black Chamber of Commerce, 2009.

Just as it is impossible to eliminate the cost of reducing emissions to levels consistent with the cap through allocations or revenue recycling, it is impossible to bring about a net increase in labor earnings through measures that impose a net cost on the economy. NBCC found that the cap-and-trade program would lead to increases in spending on energy efficiency and renewable energy, and as a result that significant numbers of people would be employed in "green jobs." However, estimates of jobs created in these activities are incomplete if not supplemented by estimates of the reduced employment in other industries and the decline in average salaries that would result from higher energy costs and lower overall productivity in the economy.

This study found that even after accounting for green jobs, there is a substantial and long-term net reduction in total labor earnings and employment. This is the unintended but predictable consequence of investing to create a "green energy future." Further, the costs estimated in this study would be much higher if it were not for the assumed use (and availability) of international offsets authorized by the bill. Specific economic impacts resulting from ACESA include the following:[16]

- ACESA would reduce GHG emissions through decreased use of conventional energy. As the cap progressively tightens with time, the cost of reducing emissions becomes more expensive and as a result, the cost of CO_2 allowances increases. In 2015, the cost of a CO_2 allowance is estimated to be $245.[17] For GHG emissions the relevant measure is metric tons of CO_2e. By 2030, the allowance cost could increase to $49 per metric ton of CO_2 and by 2050, the allowance cost could reach $131 per metric ton of CO_2.
- Relative to energy costs in the baseline level, retail natural gas rates would rise by an estimated 11 percent ($1.30 per MMBtu) in 2015, by 17 percent ($2.40 per MMBtu) in 2030, and by 36 percent ($5.70 per MMBtu) in 2050. Retail electricity rates are estimated to increase by 12 percent (1.3 cents per kWh) relative to baseline levels in 2015, by 24 percent (2.7 cents per kWh) in 2030 and by 48 percent (5.8 cents per kWh) in 2050.[18]
- After an estimated 19 cents per gallon increase in 2015, costs of using motor fuels are estimated to increase by 7 percent (38 cents per gallon) in 2030 and by 16 percent (95 cents per gallon) in 2050, relative to baseline levels.
- A net reduction in U.S. employment of 1.5 million job-equivalents in 2015 increasing to 2.2 million in 2030 and 3.6 million in 2050. These reductions are net of substantial gains in "green jobs." While all regions of the country would be adversely impacted, Oklahoma/ Texas, the Southeast and the Midwest regions would be disproportionately affected.
- Declines in workers' wages will become more severe with time. The earnings of an average worker who remains employed would be approximately $250 less by 2015, $510 less by 2030, and $1,250 less by 2050, relative to baseline levels.
- The average American household's annual purchasing power is estimated to decline relative to the no carbon policy case by $760 in 2015, $880 in 2030, and by $1,070 in 2050. These changes are calculated against 2010 income levels (the median U.S. household

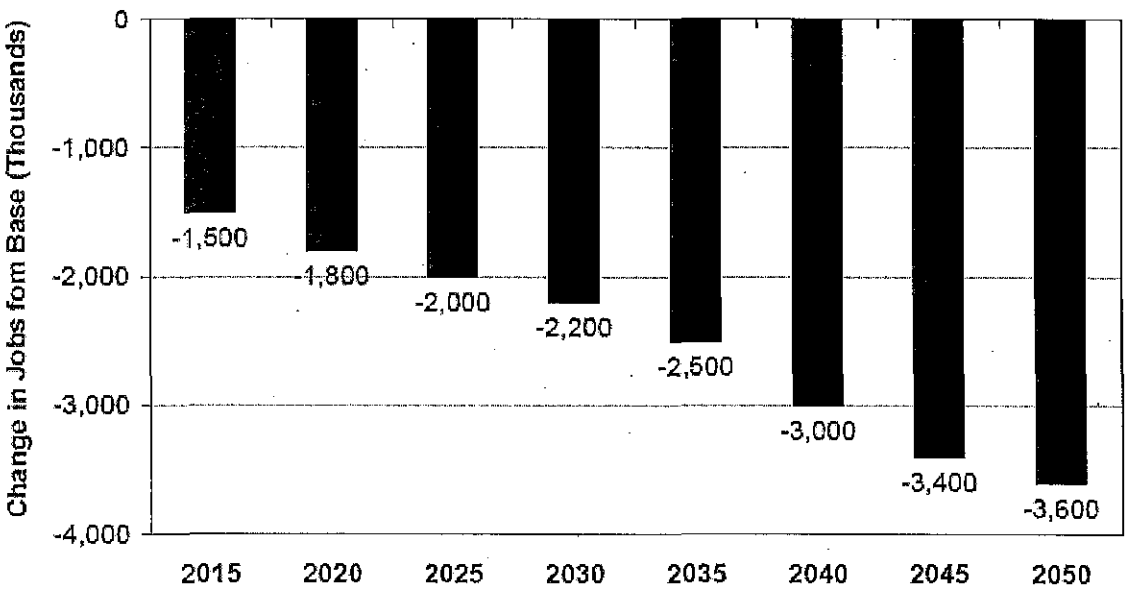
[16]All costs in this report are expressed in terms of 2008 dollars unless otherwise specified.
[17]In this report, when carbon or CO_2 allowance prices are discussed these prices are measured as dollars per metric ton of CO_2 equivalent (CO_2e).
[18]To the extent that utilities return the value of their free allocations under ACESA to customers through reductions in fixed charges, actual total bills for electricity and natural gas will not rise as much as the rates.

income in 2007 was approximately $50,000). They would be larger if stated against projected future baseline income levels.

- In 2015, U.S. GDP is estimated to be 0.7 percent ($110 billion) below the baseline level driven principally by declining consumption. In 2030, GDP is estimated to be roughly 1.0 percent ($250 billion) below the baseline level, and in 2050, GDP is estimated to be roughly 1.5 percent ($630 billion) below the baseline level.

Despite the promise of green jobs, ACESA would inevitably depress total employment from baseline levels. The bill would divert resources now used to produce additional goods and services into the work of obtaining energy from sources that are more costly than fossil fuels. It would, therefore, lower the sum of goods and services produced by the economy and hence the output per unit of labor. Worker compensation will decline as productivity falls. Although part of the decline in total compensation will show up as a decrease in earnings per worker, many factors inhibit decreases in average compensation. Another result of lowered productivity is likely, therefore, to appear in the form of lower employment levels. Figure III-1 illustrates the employment impacts ASCEA.

Figure III-1
Projected Changes To Employment Due To ACESA, Assuming Partial Wage Rate Adjustments



Source: National Black Chamber of Commerce, 2009.

The actual number of jobs that would be lost depends on whether higher-paying or lower-paying jobs are the ones that are eliminated. NBCC assumed that jobs would be shed in equal proportions across the entire wage distribution, and reported the loss in "average jobs." Figure III-1 shows that in 2015, unemployment is 1.5 million higher than in the baseline. It also shows that there would remain between about 2.5 to 3.6 million fewer average jobs in the economy far into the future relative to what would otherwise have been possible. Because these estimated employment impacts are based on the general equilibrium requirement that total payments to labor must fall to the new, lower level that can be supported by the reduced overall productivity of the entire economy, they are inclusive of all increases in "green jobs" that will be created by ASCEA.

Heritage Foundation, 2009

An August 2009 Heritage Foundation study found that ASCEA would burden families with thousands of dollars per year in direct and indirect energy costs, and estimated these by state.[19] This study is discussed in Chapter V.

A May 2009 Heritage Foundation estimated the economic, energy, and job impacts of ASCEA at the national level.[20] This study forecast that by 2035 the bill will:

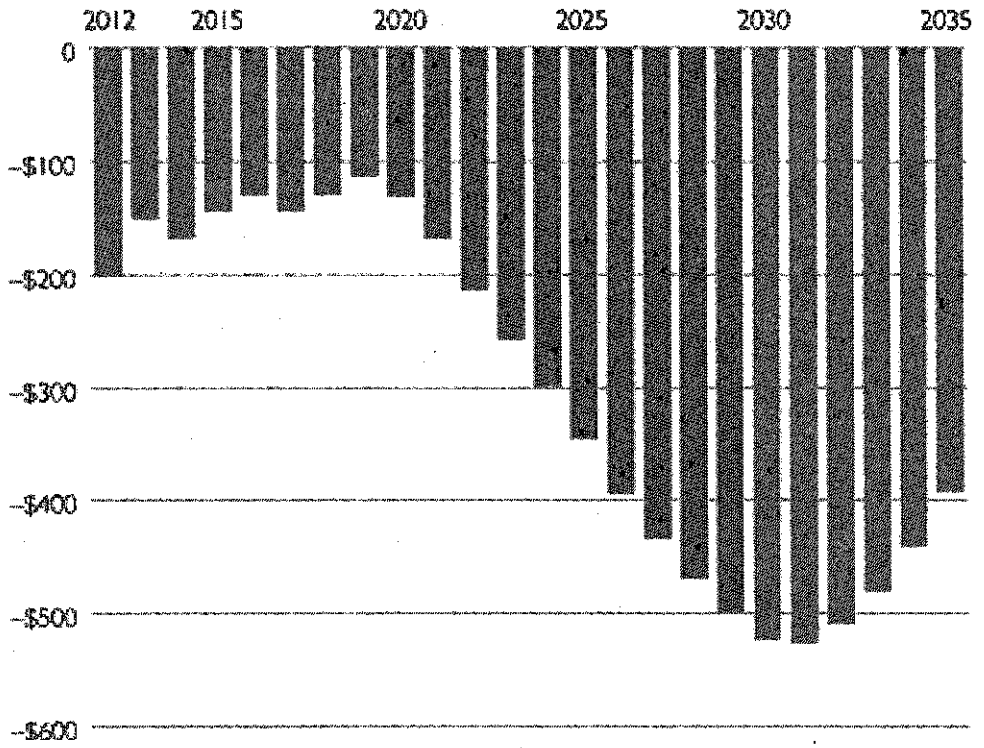
- Reduce aggregate gross domestic product (GDP) by $7.4 trillion (Figure III-2)
- Destroy 844,000 jobs on average, with peak years seeing unemployment rise by over 1,900,000 jobs
- Raise electricity rates 90 percent after adjusting for inflation
- Raise inflation-adjusted gasoline prices by 74 percent
- Raise residential natural gas prices by 55 percent
- Raise an average family's annual energy bill by $1,500
- Increase inflation-adjusted federal debt by 29 percent, or $33,400 additional federal debt per person, after adjusting for inflation

Heritage found that the 2007-2009 recession diminished near-term projections for aggregate economic activity and that as this activity declines, so does energy use. The recession has the effect of moving the economy closer to the energy cuts needed to meet the emissions targets. Nevertheless, the income (GDP) losses are over $150 billion immediately and average nearly $300 billion per year. As the economy recovers and the caps tighten, the detrimental effect of cap and trade gets more and more severe. In the worst years, GDP losses exceed $500 billion per year.

[19]David Kreutzer, Karen Campbell, William W. Beach, Ben Lieberman, and Nicolas Loris, *Impact of the Waxman–Markey Climate Change Legislation on the States*, Heritage Foundation, August 2009.
[20]William W. Beach, David Kreutzer, Karen Campbell, and Ben, Lieberman, *The Economic Impact of Waxman–Markey*, Heritage Foundation, May 2009.

Heritage determined that Waxman-Markey will cause higher energy costs to spread throughout the economy as producers try to cover their higher production costs by raising their product prices. Consumers will be most directly affected by rising energy bills and, even after adjusting for inflation, gasoline prices will rise 74 percent over the 2035 baseline price. Compared to the baseline, residential natural gas consumers will see their inflation-adjusted price rise by 55 percent. Because of its reliance on coal, the cost of electricity will rise by 90 percent after adjusting for inflation, and in addition to what the price would have been anyway in 2035.

Figure III-2
Change in GDP Due to ASCEA, 2012 -2035
(billions of constant 2009 dollars)



Source: Heritage Foundation

Cap and trade can work only when energy prices "skyrocket," and to force consumer-energy cutbacks, the prices need to rise significantly. The Heritage analysis showed the results of this strategy. By 2035:

- The typical family of four will see its direct energy costs rise by over $1,500 per year.
- This causes consumers to reduce electricity consumption by 36 percent.

- Even with this cutback, the electric bill for a family of four will be $754 more that year and $12,933 more in total from 2012 to 2035.

The higher gasoline prices will have forced households to cut consumption by 15 percent, but a family of four will still pay $596 more that year and $8,000 more between 2012 and 2035. In total, for the years 2012-2035, a family of four will see its direct energy costs rise by over $24,000. These inflation-adjusted numbers do not include the indirect energy costs consumers will pay as producers are forced to raise the price of their products to reflect the higher costs of production. Nor does the $24,000 include the higher expenditure for such things as more energy-efficient cars and appliances or the disutility of driving smaller, less safe vehicles or the discomfort of using less heating and cooling.

As the economy adjusts to shrinking GDP and rising energy prices, employment decreases. On average, employment is lower by 844,000 jobs, but in some years cap and trade reduces employment by more than 1.9 million jobs.

Heritage found that the negative economic impacts accumulate, and the national debt is no exception. Waxman-Markey drives up the national debt 29 percent by 2035. This is 29 percent above what it would be without the legislation and represents an additional $33,400 per person, or more than $133,000 for a family of four. These burdens come after adjusting for inflation and are in addition to the $450,000 per family of federal debt that will accrue over this period even without cap and trade. Heritage thus concluded that the impact of Waxman-Markey on the next generation of families is thousands of dollars per year in higher energy costs, over $100,000 of additional federal debt (above and beyond the increases already scheduled), a weaker economy, and more unemployment.

U.S. Environmental Protection Agency, 2009

EPA noted that the ASCEA establishes an economy wide cap and trade program and creates other incentives and standards for increasing energy efficiency and low-carbon energy. The analysis focused on the bill's cap and trade program, the energy efficiency provisions, and the competitiveness provisions.[21] Sensitivity analyses were conducted for H.R. 2454 without energy efficiency provisions, H.R. 2454 without rebates, H.R. 2454 with reference level nuclear, and H.R. 2454 with no international offsets.[22] EPA's major findings included:

- H.R. 2454 transforms energy production and consumption: Increased energy efficiency and reduced energy demand mean that

[21]U.S. Environmental Protection Agency, Office of Atmospheric Programs, *EPA Analysis of the American Clean Energy and Security Act of 2009 H.R. 2454 in the 111th Congress*, June 23, 2009.
[22]Several provisions outside of the cap and trade program were not modeled in this analysis (e.g. lighting standards are not in the analysis, and the renewable electricity standard is not included in economy-wide modeling but is modeled as a sensitivity in power sector analysis).

energy consumption levels that would be reached in 2015 without the policy are not reached until 2040 with the policy.

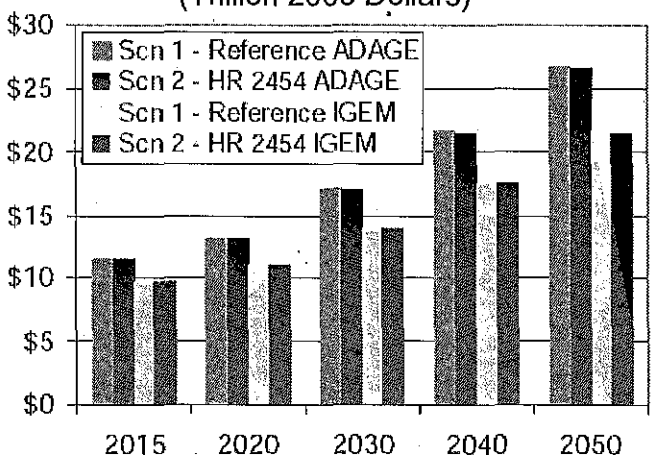
- The share of low- or zero-carbon primary energy (nuclear, renewables, and CCS) rises substantially under the policy to 18 percent of primary energy by 2020, 26 percent by 2030, and 38 percent by 2050, whereas without the policy the share would remain steady at 14 percent. Increased energy efficiency and reduced energy demand reduces primary energy needs by 7 percent in 2020, 10 percent in 2030, and 12 percent in 2050.
- Offsets and electric power supply and use represent the largest sources of emissions abatement.
- Across all scenarios modeled without constraints on international offsets, the allowance price ranges from \$13 to \$15/tCO_2e in 2015 and from \$16 to \$19/tCO_2e in 2020.
- Across all scenarios modeled that vary constraints on international offsets, the allowance price ranges from \$13 to \$24/tCO_2e in 2015 and from \$16 to \$30/tCO_2e in 2020.
- Offsets have a strong impact on cost containment, and the annual limit on domestic offsets is never reached.
- While the limits on the usage of international offsets (accounting for the extra international offsets allowed when the domestic limit is not met) are not reached, usage of international offsets averages over 1 billion tCO_2e each year.
- Without international offsets, the allowance price would increase 89 percent relative to the core policy scenario.
- The cap and trade policy has a relatively modest impact on U.S. consumers, assuming the bulk of revenues from the program are returned to households. Average household consumption is reduced by 0.03-0.08 percent in 2015, 0.10-0.11 percent in 2020, and 0.31-0.30 percent in 2030, relative to the no policy case.[23]
- Average household consumption will increase by 8-10 percent between 2010 and 2015 and 15-19 percent between 2010 and 2020 in the H.R. 2454 scenario.
- In comparison to the baseline, the 5 and 10 year average household consumption growth under the policy is only 0.1 percentage points lower for 2015 and 2020.
- Average annual household consumption is estimated to decline by \$80 to \$111 dollars per year relative to the no policy case, which represents 0.1 to 0.2 percent of household consumption.
- These costs include the effects of higher energy prices, price changes for other goods and services, impacts on wages, and returns to capital, but do not account for the benefits of avoiding the effects of climate change.

[23]Annual net present value cost per household (at a discount rate of 5 percent) averaged over 2010-2050 under the core scenario.

- A policy that failed to return revenues from the program to consumers would lead to larger losses in consumption.

While this EPA analysis contained a set of scenarios that cover some of the important uncertainties involved in modeling the economic impacts of a comprehensive climate policy, there are still remaining uncertainties that could significantly affect the results. EPA's major economic findings are summarized in Figure III-3.

Figure III-3
U.S. Consumption
(Trillion 2005 Dollars)



Source: U.S. Environmental Protection Agency, 2009

U.S. Congressional Budget Office, 2009

CBO analyzed H.R. 2454, as reported by the House Committee on Energy and Commerce on May 21, 2009, which would create a cap-and-trade program for GHG emissions.[24] It examined the average cost per household that would result from implementing the GHG cap-and-trade program under H.R. 2454, as well as how that cost would be spread among households with different levels of income.[25]

Reducing emissions to the level required by the cap would be accomplished mainly by reducing demand for carbon-based energy by increasing its price. Those higher prices would reduce households' purchasing power, but the distribution of emission allowances would improve households' financial situation. The net financial impact of the program on households in different income brackets would depend in large part on how many allowances were sold, how the free allowances were allocated,

[24]U.S. Congressional Budget Office, *The Estimated Costs to Households From the Cap-and-Trade Provisions of H.R. 2454*, June 19, 2009.
[25]The analysis did not include the effects of other aspects of the bill, such as federal efforts to speed the development of new technologies and to increase energy efficiency by specifying standards or subsidizing energy-saving investments.

and how any proceeds from selling allowances were used. The net impact would reflect both the added costs that households experienced because of higher prices and the share of the allowance value that they received in the form of benefit payments, rebates, tax decreases or credits, wages, and returns on their investments.

CBO estimated that the net annual economy-wide cost of the cap-and-trade program in 2020 would be $22 billion -- about $175 per household. That figure includes the cost of restructuring the production and use of energy and of payments made to foreign entities under the program, but it does not include the economic benefits and other benefits of the reduction in GHG emissions. Households in the lowest income quintile would see an average net benefit of about $40 in 2020, while households in the highest income quintile would see a net cost of $245. Added costs for households in the second lowest quintile would be about $40 that year; in the middle quintile, about $235; and in the fourth quintile, about $340. Overall net costs would average 0.2 percent of households' after-tax income.

Gross compliance costs would consist of the cost of emission allowances, the cost of both domestic and international offset credits, and the resource costs incurred to reduce the use of fossil fuels:

- The cost of the allowances. The cost of acquiring allowances would become a cost of doing business. In most cases, firms required to hold the allowances would not bear that cost; rather, they would pass it onto their customers in the form of higher prices.
- The cost of both domestic and international offset credits. Like the cost for allowances, the cost of acquiring offset credits would be passed on by firms to their customers in the form of higher prices.
- The resource costs associated with reducing emissions. The resource costs would include the value of the additional resources required to reduce emissions, by making improvements in energy efficiency, or by changing behavior to save energy.

According to CBO's estimates, the gross cost of complying with the GHG cap-and-trade program would be about $110 billion in 2020 (measured in terms of 2010 levels of consumption and income), or about $890 per household. Of that gross cost, 96 percent would be the cost of acquiring allowances or offset credits. The reminder would be the resource costs associated with reducing emissions.

Although households and governments would pay for the cost of the allowances in the form of higher prices, those allowances would have value and would be a source of income. The ultimate effects of the cap-and trade program on U.S. households would depend on policymakers' decisions about how to allocate that value. Allowances would be allocated among businesses, households, and governments, and the value of those allowances would ultimately be conveyed to households in various ways:

- About 30 percent of the allowance value -- $28 billion -- would be allocated in a fairly direct manner to U.S. households to compensate them for their increased expenditures.
- Roughly 50 percent of the allowance value -- $47 billion -- would be directed to U.S. businesses to offset their increased costs.
- About 10 percent of the allowance value would be allocated to the federal government and to state governments.
- Finally, H.R. 2454 would direct the federal government to spend 7 percent of the allowance value overseas, funding efforts to prevent deforestation in developing countries, to encourage the adoption of more efficient technologies, and to assist developing countries.

Taking into the account the costs of complying with the cap ($110 billion), the allowance value that would flow back to U.S. households ($85 billion), and the additional transfers and costs discussed above (providing net benefits of $2.7 billion), the net economy-wide cost of the GHG cap-and-trade program would be about $22 billion, about $175 per household -- Table III-3. Four factors account for that net cost:

- The purchase of international offset credits ($8 billion)
- The cost of producing domestic offset credits ($3 billion)
- The resource costs associated with reducing emissions ($5 billion)
- The allowance value that would be directed overseas ($6 billion)

Each of those components represents costs that would be incurred by U.S. households as a result of the cap-and-trade program but would not be offset by income resulting from the value of the allowances or from additional payments (such as increases in Social Security benefits) that would be triggered by the program. Estimates of the average net cost to households under H.R. 2454 do not reveal the wide range of effects that the cap-and-trade program would have on households in different income brackets, different sectors of the economy, and different regions of the country. In order to provide greater insight into some of those variations, CBO estimated the effect of the GHG cap-and-trade program on the average household in each fifth (quintile) of the population arrayed by income.

CBO estimated that households in the lowest income quintile would see an average net benefit of about $40, while households in the highest income quintile would see a net cost of approximately $245. Households in the second lowest quintile would see added costs of about $40 on average, those in the middle quintile would see an increase in costs of about $235, and those in the fourth quintile would pay about an additional $340 per year. Overall, costs for households would average 0.2 percent of their average after-tax income.

Table III-3
Total Cost and Average Cost of the GHG Cap-and-Trade Program in H.R. 2454

	Total Cost (Billions of dollars)	Share of Allowance Value (Percent)	Average Cost per Household (Dollars)
Gross Costs of Complying with the Cap			
Cost of Allowances and Offsets			
Market Value of Allowances	91.4	100.0	740
Domestic and International Offsets	13.3	n.a.	110
Resource Costs	4.9	n.a.	40
Total Gross Cost	109.6	n.a.	890
Disposition of Allowance Value to Domestic Entities			
Allocation of Allowances to Households			
Low-Income rebate and tax credit	-13.7	15.0	-110
LDC residential customers	-14.5	15.8	-115
Allocation of Allowances to Businesses			
Trade-exposed industries	-14.1	15.4	-115
LDC nonresidential customers	-27.1	29.7	-220
Other	-5.5	6.0	-45
Allocation of Allowances to Government			
Deficit reduction	-1.0	1.1	-10
Energy efficiency and clean energy technology	-6.9	7.5	-55
Other public purposes	-2.3	2.5	-20
Total	-85.0	93.0	-690
Other Transfers			
Low-Income Rebate and Tax Credit Not Covered by Allowance Allocation	-2.8	n.a.	-25
Automatic Indexing of Taxes and Transfers	-8.7	n.a.	-70
Net Income to Providers of Domestic Offsets	-2.7	n.a.	-20
Total	-14.3	n.a.	-115
Additional Government Costs			
Low-Income Rebate and Tax Credit Not Covered by Allowance Allocation	2.8	n.a.	25
Automatic Indexing of Taxes and Transfers	8.7	n.a.	70
Total	11.6	n.a.	95
Net Economywide Cost	21.9		175
Memorandum: Source of Net Economywide Cost			
International offsets	7.8	n.a.	65
Production cost of domestic offsets	2.7	n.a.	20
Resource costs	4.9	n.a.	40
Allowance value going overseas	6.4	7.0	50
Total	21.9	n.a.	175

Source: U.S. Congressional Budget Office, 2009.

The Brookings Institution, 2009

This 2009 report from the Brookings Institution estimated that Waxman-Markey (WM) would have severe impacts on the U.S. economy.[26] These include (prices and costs in 2008 dollars):

- An annual U.S. GDP decrease of about 1.75 percent in 2030. Based on EIA forecasts, this indicates that WM will reduce U.S.

[26]The Brookings Institution, *Consequences of Cap and Trade*, June 2009.

GDP in 2030 by about $430 billion -- a loss of about $3,100 per U.S. household per year – and things get worse after 2030.

- By 2018, WM would cause the loss of about 700,000 jobs.
- Inflation would be 4-5 percent higher over the next two decades.
- The impact on the coal industry would be devastating: By 2025, the cost of coal would more than double, increasing 110 percent; coal production in 2025 would be 40 percent lower, and by 2025, employment in the coal sector would decline by 50 percent.
- The petroleum sector would also be severely affected: By 2025, crude oil costs would increase 40 percent; crude oil production in 2025 would decline by more than 40 percent, and by 2025, jobs in the crude oil sector would decline by nearly 40 percent.
- CO_2 prices would increase continuously: $45/ton in 2020, $80/ton in 2030, $100/ton in 2040, and more than $120/ton in 2020.
- Allowance values increase rapidly, reaching over $320 billion per year by 2025
- Finally, over the next four decades, WM would result in a wealth transfer via allowances of $9.2 trillion.

The authors noted that the U.S. Congress continues to debate a potential cap-and-trade program for the control of GHG emissions. The economic effects of such a bill remain in dispute, with some arguing that a cap-and-trade program would create jobs and improve economic growth and others arguing that the program would shift jobs overseas and hit households with large energy price increases.

Brookings used a global economic model to evaluate different emission reduction paths and to develop insights for policymakers about how to the design the C&T program to lower the costs of achieving long-run environmental goals. The study examined GHG emissions reduction paths that are broadly consistent with proposals by President Obama and with Waxman-Markey, and also evaluated two cost minimizing paths that reach similar goals. The study estimated that alternative paths to reach an emission reduction target of 83 percent below 2005 levels by 2050:

- Reduce cumulative U.S. emissions by 38 percent to 49 percent, about 110 to 140 billion metric tons CO_2
- Reduce personal consumption by 0.3 percent to 0.5 percent -- about $1 to $2 trillion in discounted present value, 2010 to 2050
- Reduce the level of U.S. GDP by around 2.5 percent relative to what it otherwise would have been in 2050
- Reduce employment levels by 0.5 percent in the first decade, with large differences across sectors
- Create an annual value of emission allowances of over $300 billion by 2030, and a total value of over $9 trillion, 2012 - 2050

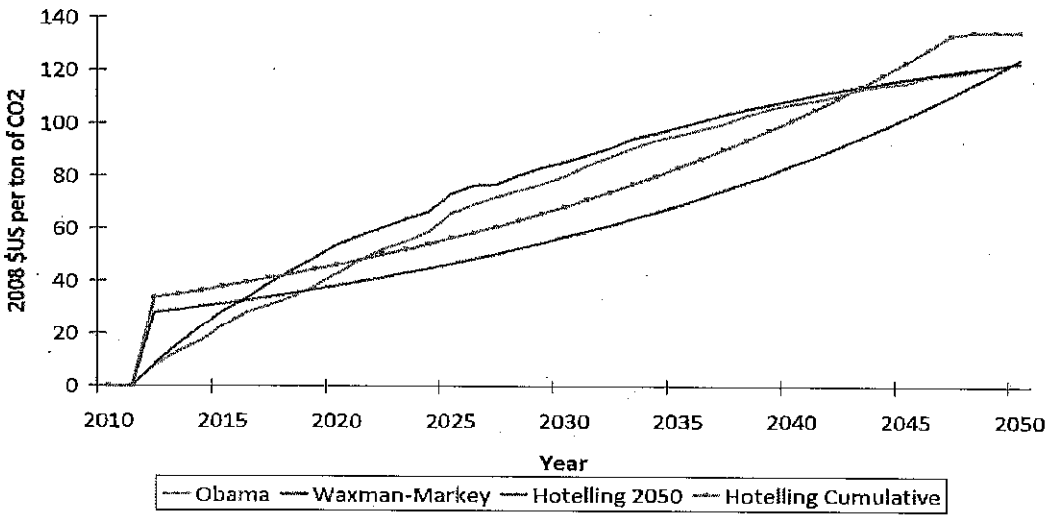
The authors examined four scenarios:

- Obama – GHG emissions 14 percent lower by 2020
- Waxman□Markey -- GHG emissions 20 percent lower by 2020 and 40 percent lower by 2030
- Hotelling 2050 -- Least cost path to 83 percent reduction by 2050
- Hotelling Cumulative -- least cost path with the same cumulative emissions as Obama

The major findings are illustrated in Figures III-4 through III-8

Carbon prices would increase continuously, from $45/ton in 2020 to more than $120/ton by 2050 – Figure III-4.

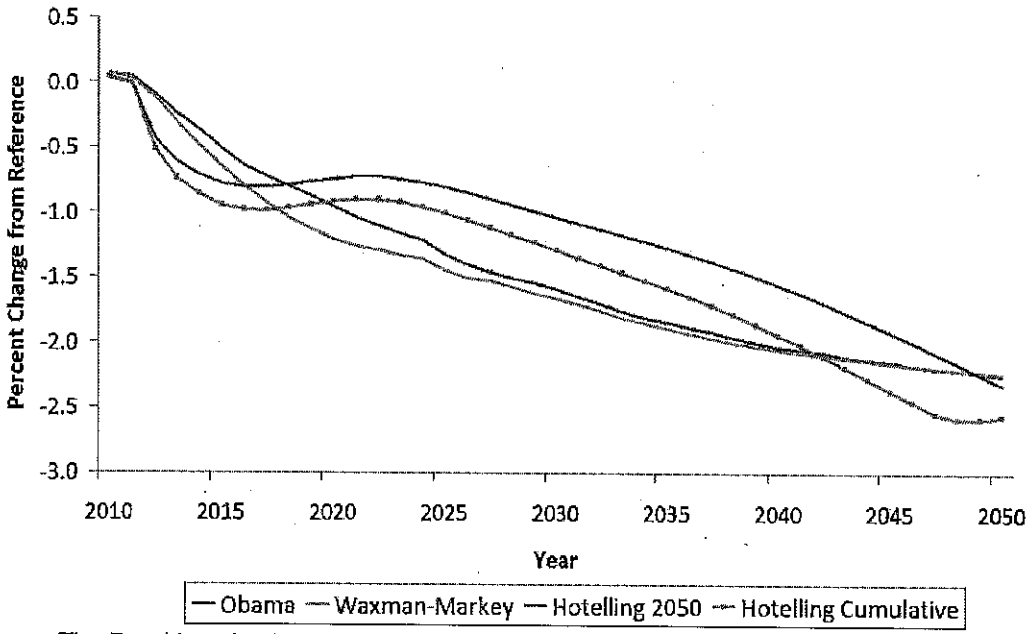
Figure III-4
Carbon Prices Under Alternative Policies



Source: The Brookings Institution, 2009

U.S. GDP would decline continuously – Figure III-5.

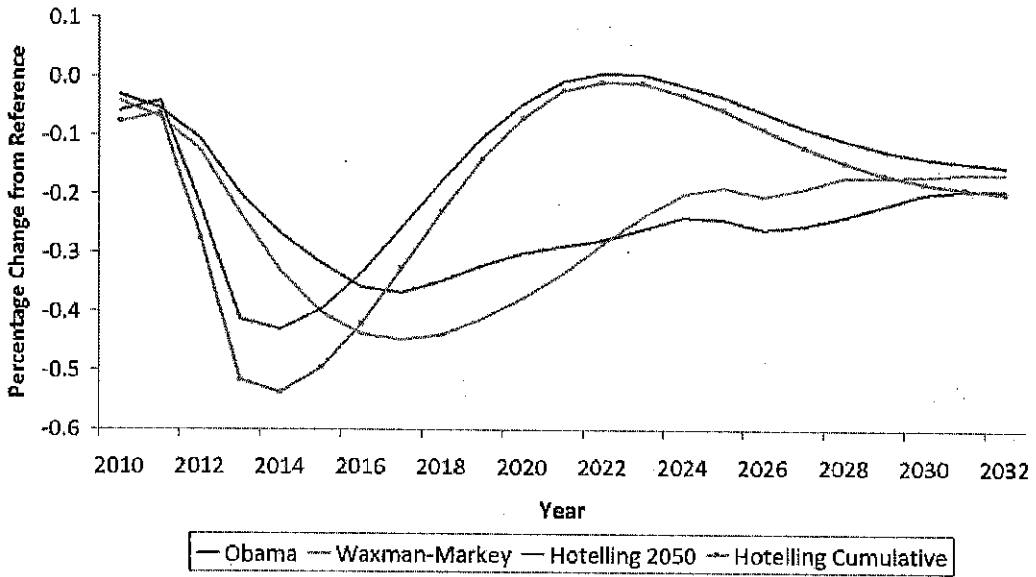
Figure III-5
Effect of Alternative Policies on US GDP



Source: The Brookings Institution, 2009

Total employment would be reduced – Figure III-6.

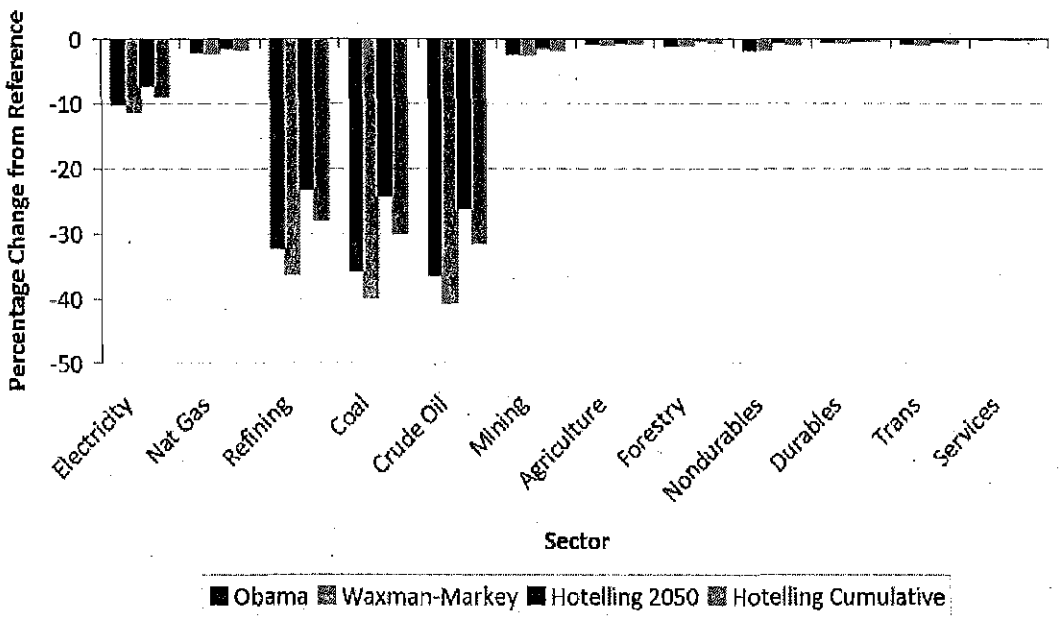
Figure III-6
Effect of Alternative Policies on US Employment



Source: The Brookings Institution, 2009

The U.S. coal and petroleum sectors would be devastated – Figure III-7.

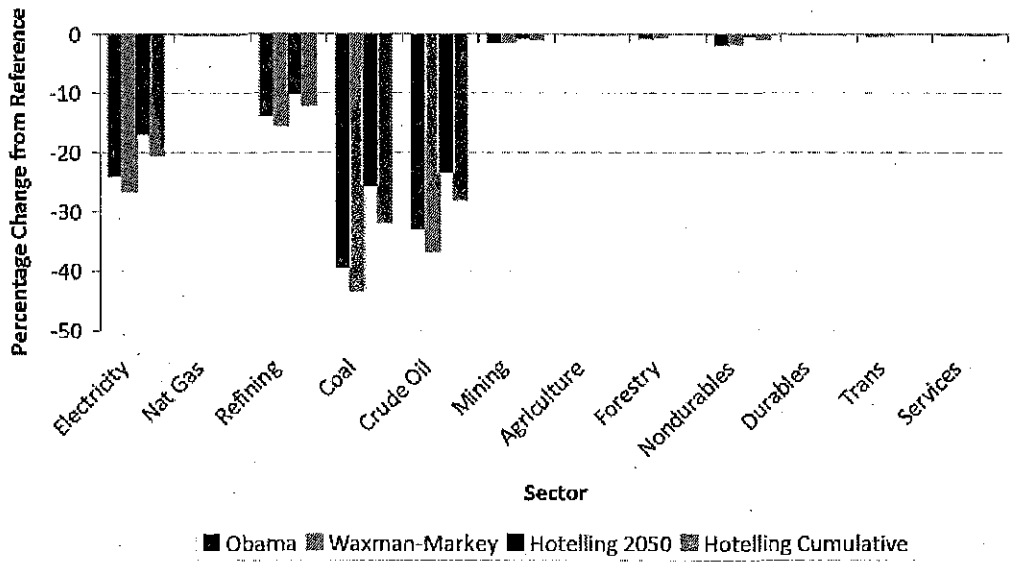
Figure III-7
Effect on Production in 2025



Source: The Brookings Institution, 2009

Employment in the U.S. domestic coal and petroleum sectors would decline drastically – Figure III-8.

Figure III-8
Effect on Employment in 2025



Source: The Brookings Institution, 2009

III.B. Recent Studies of the Impact of Climate Change Legislation

Coalition for Affordable American Energy, 2009

This CAAE report analyzed the potential economic impacts of the climate provisions contained in the Obama Administration's FY 2010 Budget Proposal.[27] The study examined the cap and trade policy described in the Administration's FY 2010 Budget Proposal, including the stated caps on U.S. GHG emissions and proposals for use of the revenues to fund renewable energy programs, the "Making Work Pay" tax credits, and other transfer payments.

The report found that these climate provisions would have significant economic and energy market impacts and that market shares would shift within the energy sector. Natural gas is projected to expand its market share, particularly for power generation. Increased imports of natural gas are estimated to supply most of the increased domestic demand for natural gas, whereas domestic natural gas production is projected to increase slightly. Both oil and coal are estimated to decline in market share. These measures would tend to lower rates of return on investments in the production of domestic oil and petroleum products. With lower rates of return, domestic investment levels would fall. Domestic crude oil and refined products production are projected to decline, while the share of renewable energy is estimated to rise.

The results also indicated that business users and consumers would face higher energy costs and the resulting higher energy production and transportation costs would lead to increased costs of goods and services throughout the economy. As these latter costs rise, household disposable income and household consumption would fall. The cap and trade policy would cause more investment in costly forms of renewable energy, thereby directing funding away from investments with greater potential to enhance productivity, and the economy would grow more slowly and job growth would decline. Overall, the economy would be expected to grow more slowly, leading to substantial differences in disposable income and personal consumption -- Table III-4. Specific economic impacts, beginning in the 2012, include the following:

- CO_2 emissions would be reduced through decreased use of conventional energy. As the cap progressively tightens, the cost of reducing emissions becomes more expensive and the cost of a carbon allowance increases. In 2015, the cost of a carbon allowance is estimated to be \$29/mtCO_2. By 2020, the allowance cost increases to \$66/mtCO_2 and by 2030 the allowance cost could reach \$116/mtCO_2.
- The cost of energy is projected to increase relative to the baseline as a result of the substitution away from less costly conventional fuels. Natural gas demand, primarily for electricity generation, is projected to increase as coal-generated electricity is backed out

[27]Coalition for Affordable American Energy, *Impact on the Economy of the Climate Provision in the Obama Administration's FY 2010 Budget*, report prepared by CRA International, April 2009.

due to tightening GHG emission caps, and motor fuel costs are projected to increase. After a 39 percent increase ($4.70 per MMBtu) in natural gas costs by 2020, natural gas costs increase by 56 percent ($7.20 per MMBtu) by 2025. After an estimated 48 ¢/gal increase in 2020, motor fuel costs increase 19 percent (74 ¢/gal). Electricity costs increase 27 percent (3.6 ¢/ kWh) in 2020, rising by 44 percent (5.8 ¢/kWh) in 2025.

- After an initial net job loss of 800,000 in 2015, net job losses are projected to more than double by 2020 to 1.9 million and continue to increase to 3.2 million jobs by 2025. This estimated employment impact is inclusive of jobs that would be created by the budget proposal. While all regions of the country would be adversely impacted, the Southeast, Oklahoma, Texas, and California would be disproportionately affected.

Table III-4
Summary of Projected Economic Impacts
(Change from Projected Baseline)

	2015	2020	2025	2030
U.S. Job Losses (Millions)	0.8	1.9	3..2	3.2
Change in U.S. Household Purchasing Power ($2008 per Household)	-$1020	-$1,381	-$1,823	-$2127
Percent Change in U.S. GDP	-0.3%	-0.4%	-0.7%	-0.2%
Percent Change in U.S. Investment	-1.3%	+0.6%	+0.3%	+5.6%
Percent Change in Natural Gas Cost	16% ($1.90 /MMBtu)	39% ($4.70 /MMBtu)	56% ($7.2 0/MMBtu)	53% ($7.70 /MMBtu)
Percent Change in Motor Fuel Cost	6% (21 Cents/Gallon)	13% (48 Cents/Gallon)	19% (74 Cents/Gallon)	20% (78 Cents/Gallon)
Percent Change in Electricity Cost	15% (2 Cents/ kWh)	27% (3.6 Cents/ kWh)	44% (5.8 Cents/ kWh)	51% (6.6 Cents/ kWh)

Source: Coalition for Affordable American Energy, 2009.

- Projected impacts on household purchasing power would be severe: Per household purchasing power is estimated to decline by $1,020 in 2015, by $1,381 in 2020, and $2,127 by 2030.
- Aggregate U.S. investment is projected to drop by 1.3 percent below the baseline level in 2015, but then is projected to increase over the 2020 – 2030 timeframe as required investments in lower emitting GHG technologies and energy efficiency improvements are put in place to comply with ever more stringent carbon caps. By 2030, investment is 5.6 percent above the baseline level. The increasingly stringent carbon caps redirect capital from higher to lower productive uses, and this shift would have a large adverse impact on productivity growth.

- By 2025, GDP is estimated to be 0.7 percent ($150 billon) below the baseline level, driven principally by declining consumption. Commercial transportation services, electric generation, and agriculture would be among the most affected sectors. In 2030, GDP is 0.2 percent ($39 billon) below the baseline level.

There would be significant changes to energy supply and consumption:

- There would be a shift towards the use of natural gas in the next decade in large measure because of increased use of natural gas for electricity generation. By 2025, U.S. demand for natural gas is estimated to increase by 3.0 Tcf relative to the baseline level. This demand increase would result in an estimated cost increase of natural gas to consumers of 56 percent ($7.20 per MMBtu) by 2025. By 2030, the impact on demand lessens to 1.5 Tcf.
- Most of the estimated natural gas demand growth would be met by imports. Increased costs for domestic oil and natural gas producers retard development of domestic natural gas resources. By 2025, natural gas imports rise by 160 percent (2.0 Tcf) above the baseline level, whereas domestic natural gas production increases by only 5 percent (0.7 Tcf).
- The increased costs imposed on U.S.-located refineries to cover facility GHG emissions would not be faced by refineries located outside the U.S., which would put U.S. refineries at a competitive disadvantage.
- Demand for refined products would be reduced, and this decline would fall disproportionately on U.S. producers. U.S. production of refined products is projected to decline relative to baseline levels by 604 - 2,151 MBOE/day (3.9 to 13.6 percent annually), 2020-2030.

Higher energy costs would cause decreases in demand for goods and services and, in addition, as the expected costs of energy services climb, the productivity of capital and labor tend to fall. Business activity is likely to contract, the demand for labor would tend to weaken, and employment is projected to decline relative to the baseline. Table III-4 illustrates that 2015 job losses are estimated to be 0.8 million, they more than double by 2020 to 1.9 million job losses, and by 2025 - 2030, job losses increase to 3.2 million. These employment impacts are inclusive of jobs that would be created. While job losses would be distributed throughout the country, the southeast, California, Oklahoma, and Texas would be disproportionately affected.

Heritage Foundation, 2008

This Heritage Foundation report estimated the economic impacts of Senate bill 2191, "America's Climate Security Act of 2007," sponsored by Joseph Lieberman (I-CT) and John Warner (R-VA).[28] S. 2191 imposes strict upper limits on the emission of six GHGs with the primary emphasis on CO_2, and would establish a cap-and-trade system. Heritage estimated the cost of S. 2191 at $800 to $1,300 per household by 2015, rising to $1,500 to $2,500 by 2050. Electricity prices could increase 36 to 65 percent by 2015 and 80 to 125 percent by 2050.

The Heritage analysis found that S. 2191 posed extraordinary perils for the American economy. Arbitrary restrictions predicated on multiple, untested, and undeveloped technologies would lead to severe restrictions on energy use and large increases in energy costs. In addition to the direct impact on consumers' budgets, these higher energy costs will spread through the economy and inject unnecessary inefficiencies at virtually every stage of production and consumption.

S. 2191 extracts trillions of dollars from U.S. energy consumers and delivers this wealth to permanently identified classes of recipients, such as tribal groups and preferred technology sectors, while largely circumventing the normal congressional appropriations process. Unbound by the periodic review of the normal budgetary process, this de facto tax-and-spend program threatens to become permanent -- independent of the goals of the legislation. Heritage found that implementing S. 2191 will be very costly:

- Cumulative GDP losses are at least $1.7 trillion and could reach $4.8 trillion by 2030 (in inflation-adjusted 2006 dollars).[29]
- Single-year GDP losses total at least $155 billion and could exceed $500 billion (in inflation-adjusted 2006 dollars).
- Annual job losses exceed 500,000, and could approach 1,000,000.
- Annual costs of emission permits will be at least $100 billion by 2020 and could exceed $300 billion by 2030 (2006 dollars).[30]
- The average household will pay $467 more each year for its natural gas and electricity (in inflation-adjusted 2006 dollars). This means that the average household would spend an additional $8,870 to purchase energy over the period 2012 through 2030.
- The cost of the allowances will be significant and will lead to large increases in the cost of energy. Because the allowances have an economic effect much like an energy tax, the increase in energy

[28]Heritage Foundation, *The Economic Costs of the Lieberman-Warner Climate Change Legislation*, Heritage Foundation Center for Data Analysis Report #08-02, May 2008.

[29]The analysis did not extend beyond 2030, at which point S. 2191 mandates GHG reductions to 33 percent below the 2005 level. However, it should be noted that the mandated GHG reductions continue to become more severe and must be 70 per-cent below the 2005 level by 2050.

[30]To put these numbers in perspective, the report noted the federal government spent $43 billion on the Department of Homeland Security in 2007, $155 billion on U.S. highways in 2005, and $549 billion on the Department of Defense in 2007.

costs creates correspondingly large transfers of income from private energy consumers to special interests.

With S. 2191, there is an initial small employment increase as firms build and purchase the newer more CO2-friendly plants and equipment. However, any "green-collar" jobs created are more than offset by other job losses, and the initial uptick is small compared to the hundreds of thousands of lost jobs in later years.

The slowdown in GDP is seen more dramatically in the decline in manufacturing output. Manufacturing benefits from the initial investment in new energy production and fuel sources, but the sector's declines are sharp thereafter. By 2020, manufacturing output is 2.4 percent to 5.8 percent below what it would be if S. 2191 never becomes law. By 2030, the manufacturing sector has lost $319 billion to $767 billion in output.

Employment growth slows sharply following the boomlet of the first few years and potential employment decreases sharply. In 2025, nearly 500,000 jobs per year fail to materialize and job losses expand to more than 600,000 in 2026. In no year after the boomlet does the economy outperform the base-line economy, and for manufacturing workers, the news is especially grim. That sector would likely continue declining in numbers thanks to increased productivity: The baseline contains a 9 percent decline between 2008 and 2030. Lieberman-Warner accelerates this decrease substantially: Employment in manufacturing declines by 23 percent over that same time period, or more than twice the rate without Lieberman-Warner.

Other, less energy-intensive sectors do not suffer such decreases. Employment in retail establishments ends the 22-year period 2 percent ahead of its 2008 level, despite significant cutbacks on household consumption levels. Employment in information businesses grows by 29 percent over this same time period. Because the distribution of energy-intensive jobs across the country is unequal, some states and congressional districts will be hit particularly hard. Notable among the most adversely affected states are Wisconsin, New Hampshire, Illinois, and Maryland.

The report concluded that the Lieberman-Warner climate change bill is, in many respects, an unprecedented proposal. Its limits on GHGs would impose significant costs on the entire American economy. In addition, complicated tariff rules, dependent on evaluating the GHG restrictions of all trading partners, add another unknowable dimension to the costs, fueling the overall uncertainty. The problems for the U.S. economy are increased by S. 2191's reliance on complex and costly technologies that have yet to be developed. The fact that this large-scale transformation of the economy must occur over relatively tight timeframes only amplifies the costs and uncertainties.

Even under optimistic assumptions, the economic impact of S. 2191 is likely to be serious for the job market, household budgets, energy prices, and the economy overall. The burden will be shouldered by the average American. The bill would have the same effect as a major new energy tax -- only worse. In the case of S. 2191, increases in the tax rate are set by forces beyond legislative control. Under a realistic

set of assumptions, the impact would be severe. More significant than the wealth destroyed by S. 2191 is the wealth transferred from the energy-using public to a list of selected special interests. The reported concluded that, overall, S. 2191 would likely be -- by far -- the most expensive environmental undertaking in history.

American Council for Capital Formation and National Association of Manufacturers, 2008

The American Council for Capital Formation (ACCF) and the National Association of Manufacturers (NAM) commissioned this report by SAIC to examine the potential costs that enactment of the Lieberman-Warner (LW) Climate Security Act (S. 2191) would impose on the U.S. economy.[31] They felt that the cost to U.S. consumers and employers of implementing GHG emission reductions is highly dependent on the market penetration achieved by key technologies and the availability of carbon offsets by 2030. Understanding the potential economic impacts at the national, state, and individual household levels can help guide choices on policy to minimize the impacts on economic growth and maximize environmental benefits. GHG reduction policies should consider impacts on energy security, economic growth, and U.S. competitiveness.

The ACCF/NAM analysis was conducted using EIA's NEMS model, and the study applied assumptions about the cost and availability of new energy technologies, oil prices, and other key factors. It found substantial and growing impacts to consumers and the economy of meeting the increasingly stringent emission targets through 2030 established by LW. Among the study's major findings are:

- The CO_2 emissions allowance price needed to reduce energy use to meet the S.2191 targets is estimated at $55 to $64/mt$CO_2$ in 2020, rising to between $227 to $271/mt$CO_2$ in 2030.
- The cost of the allowances raises energy prices for residential consumers by: Natural gas -- 26 percent to 36 percent in 2020, and 108 percent to 146 percent in 2030; Electricity -- 28 percent to 33 percent in 2020, and 101 percent to 129 percent in 2030.
- These increased costs slow the economy by $151 - $210 billion in 2020 and $631 - $669 billion in 2030 (2007 dollars). This causes job losses of 1.2 - 1.8 million in 2020 and 3 - 4 million by 2030.
- Manufacturing slows: The value of shipments falls by 3.2 percent to 4 percent in 2020 and in 2030 by 8.3 - 8.5 percent. Higher energy costs, lower economic activity, and fewer jobs in turn lowers average household income by $739 - $2,927 in 2020 and between $4,022 and $6,752 in 2030 (2007 dollars).

[31]The American Council for Capital Formation and the National Association of Manufacturers, *Analysis of the Lieberman-Warner Climate Security Act (S. 2191) Using the National Energy Modeling System (NEMS/ACCF/NAM)*, report prepared by SAIC, March 2008.

Obtaining allowances becomes a cost of doing business for firms subject to the CO_2 cap. However, those firms would not ultimately bear most of the costs of the allowances. Instead, they would pass along most costs to their customers in the form of higher prices. By attaching a cost to CO_2 emissions, a cap-and-trade program would thus lead to price increases for energy and energy-intensive goods and services. Such price increases would stem from the restriction on emissions and would occur regardless of whether the government sold emission allowances or gave them away. The price increases would be essential to the success of a cap-and-trade program because they would be the most important mechanism through which businesses and households were encouraged to make investments and behavioral changes that reduced CO_2 emissions. The rise in prices for energy and energy-intensive goods and services would be regressive and would impose a larger burden, relative to income, on low-income households than on high-income households.

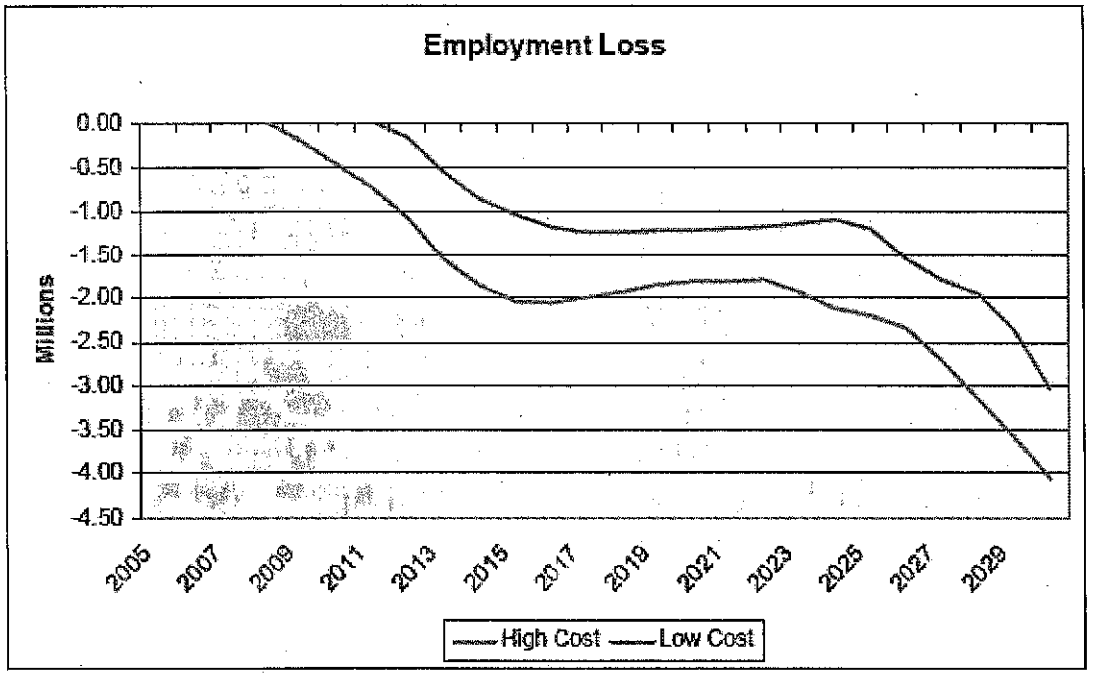
The ACCF/NAM analysis investigated the sensitivity of assumptions that have proven in the past to significantly impact the cost of limiting CO_2 emissions from energy – particularly the availability of improved technology in the early decades of a long-term effort to reduce GHGs. These assumptions include the availability of nuclear power technology, the availability of CCS for coal and natural gas-based power generation technologies, the availability of wind and biomass technologies, and the availability of low-cost offsets (international and domestic).

The study's key finding is that S. 2191 would cause significant employment loss due to the loss of revenues resulting from higher fuel and electricity costs. In 2020, job loss is projected to range from 1.2 million to 1.8 million jobs/year, and from 3 million jobs to 4 million jobs in 2030. Under S. 2191 the U.S. economy would begin to shed approximately 850,000 jobs a year by 2014 under the low cost scenario (Figure III-8). This is primarily a result of higher carbon prices resulting in higher fuel costs for industry and higher cost to industry to comply with emissions limits. As the cap becomes more restrictive and the economy has less freedom to deal with reducing emissions, carbon prices and fuel prices increase rapidly, leading to greater job losses of between 1.2 and 1.8 million jobs in 2020 and between 3 and 4 fewer million jobs in 2030. These job losses are net of the new jobs which may be generated by increased spending on renewable energy, energy efficiency, and carbon capture and storage.

III.C. U.S. Energy Information Administration Reports

EIA has conducted numerous studies of the impact of climate change legislation. Several of the more notable of these are summarized below.

Figure III-8
Estimated Job Losses from Lieberman-Warner



Source: American Council for Capital Formation and National Association of Manufacturers, 2008.

EIA, August 2009

This report examined the energy-related provisions in ACESA that can be analyzed using EIA's National Energy Modeling System (NEMS).[32] The Reference Case used as the starting point for the analysis was an updated version of the *Annual Energy Outlook 2009* (*AEO2009*) Reference Case issued in April 2009. Key provisions of ACESA analyzed include:[33]

- The GHG cap-and-trade program for gases other than HFCs,
- The combined efficiency and renewable electricity standard
- The CCS demonstration and early deployment program
- Federal building code updates
- Federal efficiency standards for lighting and other appliances
- Technology improvements
- The smart grid peak savings program

[32]U.S. Energy Information Administration, *Energy Market and Economic Impacts of H.R. 2454, the American Clean Energy and Security Act of 2009*, SR/OIAF/2009-05 August 2009.
[33]EIA did not address all the provisions of ACESA, and its analysis did not account for any possible health or environmental benefits that might be associated with curtailing GHG emissions.

While the emissions caps decline through 2050, the modeling horizon in this report runs only through 2030, the projection limit of NEMS.[34] EIA prepared a range of analysis cases, and the six main analysis cases focused on two key areas of uncertainty that impact the analysis results. First, the role of offsets is a large area of uncertainty in any analysis of ACESA. The 2-BMT annual limit on total offsets in ACESA is equivalent to 1/3 of total energy-related 2008 GHG emissions and represents nearly six times the projected growth in energy-related emissions through 2030.

The other major area of uncertainty involves the timing, cost, and public acceptance of low- and no-carbon technologies. For the period prior to 2030, the availability and cost of low- and no-carbon baseload electricity technologies, such as nuclear power and fossil with CCS, which can potentially displace a large amount of conventional coal-fired generation, is a key issue. However, technology availability over an extended horizon is a two-sided issue. R&D breakthroughs over the next two decades could expand the set of reasonably priced and scalable low- and no-carbon energy technologies, with opportunities for widespread deployment beyond 2030. The achievement of significant near-term progress towards such an outcome, however, could significantly reduce the size of the bank of allowances that covered entities and other market participants would want to carry forward to meet compliance requirements beyond 2030.

The main analysis cases discussed in this report are as follows:[35]

- The ACESA Basic Case assumed that key low-emissions technologies, including nuclear, fossil with CCS, and renewables, are deployed in a timeframe consistent with the emissions reduction requirements and that use of offsets is not constrained.
- The ACESA Zero Bank Case is similar to the Basic Case except that no banked allowances are held in 2030.
- The ACESA High Offsets Case is similar to the Basic Case except that it assumed the near immediate use of international offsets.
- The ACESA High Cost Case is similar to the Basic Case except that the costs of nuclear, coal with CCS, and biomass are assumed to be 50 percent higher.
- The ACESA No International Case is similar to the Basic Case, but assumed that the use of international offsets is severely limited.
- The ACESA No International/Limited Case combined the treatment of offsets in the ACESA No International Case with an assumption that deployment of key technologies cannot expand beyond their Reference Case levels through 2030.

[34]As in EIA analyses of earlier cap-and-trade proposals, the need to pursue higher-cost emissions reductions beyond 2030, driven by tighter caps and continued economic and population growth, can be analyzed by assuming that a positive bank of allowances is held at the end of 2030 in all but one case.
[35]EIA also discussed a number of additional analysis cases, including an enhanced CAFE standards case, a 5-percent discount case, a case with limitations to the penetration of nuclear, CCS, and biomass gasification, an accelerated energy technology case, and a higher level of allowance banking case.

EIA found that the reduction in covered emissions is exceeded by the amount of compliance generated through offsets in most of the main analysis cases. Cumulative compliance between 2012 and 2030 ranges from 24.4 BMT to 37.6 BMT CO_2-equivalent emissions in the main analysis cases, representing a 21 - 33 percent reduction from the cumulative covered emissions projected in the Reference Case.

Most reductions in energy-related emissions are expected to occur in the electric power sector. Across the ACESA main cases, the electricity sector accounts for between 80 and 88 percent of the total reduction in energy-related CO_2 emissions in 2030. Reductions in electricity-sector emissions are primarily achieved by reducing conventional coal-fired generation and increasing the use of no- or low-carbon generation technologies. In addition, a portion of the electricity-related CO_2 emissions reductions results from reduced electricity demand. If new nuclear, renewable, and fossil plants with CCS are not deployed in a timeframe consistent with emissions reduction requirements under ACESA, covered entities respond by increasing their use of offsets and by increasing natural gas use to offset reductions in coal generation.

Emissions reductions from changes in fossil fuel use in the residential, commercial, industrial, and transportation sectors are small relative to those in the electric power sector. Taken together, changes in fossil fuel use in these sectors account for between 12 percent and 20 percent of the total reduction in energy-related CO_2 emissions relative to the Reference Case in 2030.

GHG allowance prices are sensitive to the cost and availability of emissions offsets and low-and no-carbon generating technologies. Allowance prices in the ACESA Basic Case are projected at $32/mt in 2020 and $65/mt in 2030. Across all main analysis cases, allowance prices range from $20/mt to $93/mt in 2020 and from $41/mt to $191/mt (2007 dollars) in 2030.

ACESA increases energy prices, but effects on electricity and natural gas bills are mitigated through 2025 by the allocation of free allowances to utilities. Electricity prices in five of the six main ACESA cases range from 9.5¢/kWh to 9.6¢/kWh in 2020, only 3 to 4 percent above the Reference Case level. Average impacts on electricity prices in 2030 are projected to be substantially greater and in 2030 range from 10.7¢/kWh to 17.8 ¢/kWh. ACESA thus increases the cost of using energy, which reduces real economic output and purchasing power, and lowers aggregate demand. The result is that projected real GDP generally falls relative to the Reference Case. Total discounted GDP losses over the 2012 to 2030 time period are $566 billion (-0.3 percent) in the ACESA Basic Case, with a range from $432 billion (-0.2 percent) to $1,897 billion (-0.9 percent) across the main ACESA cases (Table III-5).

Consumption and energy bill impacts can also be expressed on a per household basis. In 2020, the reduction in household consumption is $134 (2007 dollars) in the ACESA Basic Case, with a range of $30 to $362 across all main ACESA cases. In 2030, household consumption is reduced by $339 in the ACESA Basic Case, with a range of $157 to $850 across all main ACESA cases.

Table III-5
Macroeconomic Impacts of ACESA Cases Relative to the Reference Case
(billion 2000 dollars, except where noted)

	Basic	Zero Bank	High Offsets	High Cost	No International	No Int / Limited
Cumulative Real Impacts 2012-2030 (present value using 4-percent discount rate)						
GDP						
Change	-566	-432	-523	-781	-717	-1897
Percent Change	-0.3%	-0.2%	-0.2%	-0.4%	-0.3%	-0.9%
Consumption						
Change	-273	-196	-252	-384	-323	-988
Percent Change	-0.2%	-0.1%	-0.2%	-0.3%	-0.2%	-0.7%
Industrial Shipments (excludes services)						
Change	-910	-753	-480	-958	-1720	-2877
Percent Change	-1.0%	-0.8%	-0.5%	-1.1%	-1.9%	-3.2%
Nominal Revenue Collected 2012-2030[a]	2971	1292	1332	2299	3462	6350
2020 Impacts (not discounted)						
GDP						
Change	-50	-19	-26	-70	-34	-112
Percent Change	-0.3%	-0.1%	-0.2%	-0.5%	-0.2%	-0.7%
Consumption						
Change	-21	-7	-11	-30	-15	-64
Percent Change	-0.2%	-0.1%	-0.1%	-0.3%	-0.1%	-0.6%
Industrial Shipments (excludes services)						
Change	-68	-54	-32	-69	-108	-186
Percent Change	-1.0%	-0.8%	-0.5%	-1.0%	-1.6%	-2.8%
Nominal Revenue Collected[a]	71	44	46	79	118	215
2030 Impacts (not discounted)						
GDP						
Change	-161	-104	-120	-214	-226	-453
Percent Change	-0.8%	-0.5%	-0.6%	-1.1%	-1.1%	-2.3%
Consumption						
Change	-63	-36	-50	-97	-69	-180
Percent Change	-0.4%	-0.3%	-0.4%	-0.7%	-0.5%	-1.3%
Industrial Shipments (excludes services)						
Change	-183	-125	-87	-198	-338	-506
Percent Change	-2.5%	-1.7%	-1.2%	-2.7%	-4.6%	-6.8%
Nominal Revenue Collected[a]	330	205	211	367	556	1030

Source: U.S. Energy Information Administration, 2009.

EIA, April 2008

This report was a response to a request from Senators Lieberman and Warner for an analysis of S. 2191, the Lieberman-Warner Climate Security Act of 2007, a complex bill regulating emissions GHGs through market-based mechanisms, energy efficiency programs, and economic incentives.[36] To analyze the provisions of S. 2191, several alternative cases were prepared:

[36]U.S. Energy Information Administration, *Energy Market and Economic Impacts of S. 2191, the Lieberman-Warner Climate Security Act of 2007*, SR/OIAF/2008-01, April 2008.

- The S. 2191 Core Case assumed that key low-emissions technologies, including nuclear, fossil with CCS, and various renewables, are deployed in a timeframe consistent with the emissions reduction requirements.
- The S. 2191 No International Offsets Case, is similar to the S. 2191 Core Case, but assumed that use of international offsets is limited.
- The S. 2191 High Cost Case is similar to the S.2191 Core Case except that the costs of nuclear, coal with CCS, and biomass are assumed to be 50 percent higher than in the Core Case.
- The S. 2191 Limited Alternatives Case assumes the deployment of key technologies, including nuclear, fossil with CCS, and various renewables, is held to their Reference Case level through 2030, as are imports of LNG.

EIA's key findings included the following:

- S. 2191 significantly reduces projected GHG emissions compared to the Reference Case. Projected covered emissions in the S. 2191 cases, net of offsets, are 27 percent to 36 percent lower in 2020 and 45 percent to 56 percent lower in 2030.
- The electric power sector accounts for most of the emissions reductions, with new nuclear, renewable, and fossil plants with CCS serving as the key compliance technologies. Electric power accounts for 82 - 87 percent of energy-related CO_2 emissions reductions in 2020 and 82 - 92 percent of such reductions in 2030.
- If new nuclear, renewable, and fossil plants with CCS are not deployed rapidly enough, covered entities are projected to turn to increased natural gas use to offset reductions in coal generation, resulting in markedly higher delivered prices of natural gas.
- Emissions reductions in the residential, commercial, industrial, and transportation sectors are small relative to those in the electric power sector, and energy price increases are not large enough to induce consumers to make large changes in their energy use.
- Coal consumption is significantly reduced, and total coal consumption in 2030 ranges between 62 and 89 percent below the Reference Case level.
- GHG allowance prices are sensitive to the cost and availability of low-carbon generating technologies and emissions offsets. Estimated allowance prices range from \$30 to \$76/mtCO_2e in 2020 and from \$61 to \$156/mtCO_2e in 2030.
- S. 2191 increases energy prices and energy bills for consumers. Relative to the Reference Case, the price of using coal for power generation is 161 - 413 percent higher in 2020 and 305 - 804 percent higher in 2030. The price of electricity is 5 - 27 percent higher in 2020 and 11 - 64 percent higher in 2030. Under S. 2191,

average annual household energy bills, excluding transportation costs, are $30 - $325 higher in 2020 and $76 - $723 higher in 2030.

- S. 2191 increases the cost of using energy, which reduces real economic output, reduces purchasing power, and lowers aggregate demand, and GDP falls relative to the Reference Case. Adverse economic impacts increase over time, and discounted GDP losses, 2009 – 2030, range from $444 billion (-0.2 percent) to $1,308 billion (-0.6 percent) -- Table III-6.
- S. 2191 impacts industrial activity, including manufacturing, to a greater extent than the overall economy. Industrial shipments in 2030 are reduced by $233 - $589 billion (-2.9 to -7.4 percent).

Table III-6
Macroeconomic Impacts of S. 2191 Cases and S. 1766 Update Cases
(billion 2000 dollars, except where noted)

	S. 2191 Cases					S1766 Update
	Core	High Cost	Limited Alternatives	No International Offsets	Limited Alternatives No International	
Cumulative Real Impacts 2009-2030 (Present Value using 4% Discount Rate)						
GDP						
Change	(444)	(729)	(912)	(546)	(1,306)	(66)
Percent Change	-0.2%	-0.3%	-0.4%	-0.2%	-0.6%	-0.03%
Consumption						
Change	(558)	(785)	(946)	(780)	(1,422)	(145)
Percent Change	-0.3%	-0.5%	-0.6%	-0.5%	-0.9%	-0.1%
Industrial Shipments (excludes services)						
Change	(1,340)	(1,723)	(2,031)	(2,430)	(3,684)	(722)
Percent Change	-1.3%	-1.7%	-2.0%	-2.4%	-3.6%	-0.7%
Nominal Revenue collected 2012-2030[a]	2,851	3,650	4,282	4,416	7,659	987

Source: U.S. Energy Information Administration, 2008.

EIA, January 2007

This EIA report responded to a request from Senators Bingaman, Landrieu, Murkowski, Specter, Salazar, and Lugar for an analysis of a proposal that would regulate GHG emissions through a cap-and-trade system. The proposal was modeled using NEMS and compared to the reference case projections from the *Annual Energy Outlook 2006* (AEO 2006).[37] The major findings included:

- The proposal leads to lower GHG emissions, but the intensity reduction targets are not fully achieved after 2025.
- Relative to the reference case, covered GHG emissions less offsets are 562 MMTCO$_2$e (7.4 percent) lower in 2020 and 1,259

[37]U.S. Energy Information Administration, *Energy Market and Economic Impacts of a Proposal to Reduce Greenhouse Gas Intensity With a Cap and Trade System*, SR/OIAF/2007-01, January 2007.

$MMTCO_2e$ (14.4 percent) lower in 2030 in the Phased Auction case. Covered GHG emissions grow by 24 percent between 2004 and 2030, about half the increase in the reference case.

- Initially, when allowance prices are relatively low, reductions in GHG emissions outside the energy sector are the predominant source of emissions reductions. By 2030, the reduction in energy related CO_2 emissions account for most emissions reductions.
- In 2004 dollars, the allowance prices rise from \$3.70/$mtCO_2$ in 2012 to the safety valve price of \$14.18/$mtCO_2$ in 2030.
- The cost of GHG allowances is passed through to consumers, raising the price of fossil fuels charged and providing an incentive to lower energy use and shift away from fossil fuels.
- The average delivered price of coal to power plants in 2020 increases from \$1.39/MMBTU in the reference case to \$2.06, an increase of 48 percent. By 2030 the change grows from \$1.51/ MMBTU to \$2.73/ MMBTU, an increase of 81 percent.
- Electricity prices are lower in the Phased Auction case than in the Full Auction case because the Phased Auction provides a portion of the allowances to the electric power sector for free.
- Relative to the reference case, annual per household energy expenditures in 2020 are 2.6 percent (\$41) higher in the Phased Auction case and 3.6 percent (\$58) higher in the Full Auction case. By 2030, projected annual household energy expenditures range from 7.0 percent to 8.1 percent (\$118 to \$136) higher.
- Coal use is projected to continue to grow, but at a much slower rate than in the reference case. Total energy from coal increases by 23 percent between 2004 and 2030, less than half the 53 percent increase projected in the reference case.
- The proposal significantly increases nuclear capacity additions and generation. The projected 47 GW increase in nuclear capacity between 2004 and 2030 allows nuclear to continue to provide about 20 percent of U.S. electricity in 2030.
- The proposal adds significantly to renewable generation. In the reference case, renewable generation is projected to increase from 358 BkWh in 2004 to 559 BkWh in 2030.
- Retail gasoline prices in 2030 are 11 ¢/gal higher in 2030, leading to modest changes in vehicle purchase and travel decisions.
- The Phased Auction and Full Auction cases have similar energy market impacts, but the macroeconomic impacts differ – Table III-7.
- In the Phased Auction case, wholesale energy prices rise steadily and, by 2030, are 12 percent above the reference case levels. This represents 8 percent higher energy prices at the consumer level by 2030 and a 1 percent increase in the CPI.
- In the Phased Auction case, discounted total GDP (2000 dollars) over the 2009-2030 time period is \$232 billion (0.10 percent) lower than in the reference case, while discounted real consumer

spending is $236 billion (0.14 percent) lower. In 2030, in the Phased Auction case, real GDP is $59 billion (0.26 percent) lower and consumption expenditures are $55 billion (0.36 percent) lower.

Table III-7
Economic Impacts of Phased and Full Auction Cases

Projection	2004	2020			2030		
		AEO2006 Reference	Phased Auction	Full Auction	AEO2006 Reference	Phased Auction	Full Auction
Allocation of Allowance Revenue (billion nominal dollars)							
Private Spending	-	-	39.0	0.0	-	58.6	0.0
States	-	-	21.4	0.0	-	54.9	0.0
Government Spending	-	-	0.0	0.0	-	0.0	0.0
Debt Reduction	-	-	13.3	73.7	-	86.4	199.9
Total Revenue	-	-	73.7	73.7	-	199.9	199.9
Aggregate Prices in the Economy							
WPI – Fuel & Power (1982 =1.0)	1.27	1.77	1.88	1.88	2.49	2.79	2.79
CPI – Energy (1982/84 = 1.0)	1.51	2.19	2.27	2.28	2.96	3.20	3.20
CPI – All Urban (1982/84 = 1.0)	1.89	2.86	2.88	2.87	3.78	3.82	3.80
Inflation Rate, Unemployment Rate and the Federal Funds Rate (percent)							
Inflation	2.68	3.06	3.13	3.10	2.67	2.68	2.68
Unemployment Rate	5.53	4.37	4.44	4.46	4.90	5.01	5.02
Federal Funds Rate	1.35	5.24	5.24	5.16	5.04	4.96	4.86
Components of GDP (billion 2000 dollars)							
GDP	10,756	17,541	17,520	17,503	23,112	23,053	23,018
Disposable Income	8,004	13,057	13,037	12,991	17,562	17,468	17,367
Consumption	7,589	11,916	11,898	11,880	15,352	15,298	15,247
Investment	1,810	3,293	3,291	3,288	4,985	4,990	4,973
Government	1,952	2,464	2,474	2,464	2,838	2,861	2,839
Exports	1,118	3,776	3,759	3,765	6,833	6,785	6,813
Imports	1,719	3,659	3,660	3,647	6,156	6,165	6,121

Source: U.S. Energy Information Administration, 2008.

IV. IMPACTS OF CO_2 REGULATION ON THE NATIONAL ECONOMY

IV.A. Summary Results of Studies

To estimate the likely effects of the EPA Endangerment Finding, we used the findings of various comprehensive studies conducted in recent years of the impacts of carbon restrictions on the U.S. economy, jobs, and energy markets. As discussed in Chapter III, these studies were conducted over the years by a number of organizations and analyzed a variety of proposed carbon restriction programs. As might be expected, their findings differed depending on the proposal being assessed, the time frame studied, the level of detail included, and other factors. However, the studies all indicated that the kind of carbon restrictions contained in the EPA Finding would have serious negative effects on the U.S. economy.

First, all of the studies forecast that carbon restrictions would significantly reduce U.S. GDP every year over the next two decades. For example, by 2030:

- In 2009, ACCF and NAM estimated that ASCEA would reduce U.S. GDP by more than $570 billion.
- In 2009, NBCC estimated that ASCEA would reduce U.S. GDP by about $250 billion.
- In 2009, the Heritage Foundation estimated that ASCEA would reduce U.S. GDP by $525 billion.
- In 2009, the Brookings Institution estimated that ASCEA would reduce U.S. GDP by $430 billion.
- In 2009, CAAE estimated that the carbon restrictions contained in the Obama Administration's FY 2010 budget proposals would reduce U.S. GDP by about $50 billion.
- In 2008, the Heritage Foundation estimated that the proposed Lieberman-Warner Bill would reduce U.S. GDP by $450 billion.
- In 2008, ACCF and NAM estimated that the proposed Lieberman-Warner Bill would reduce U.S. GDP by $65 billion.
- In 2008, EIA estimated that the proposed Lieberman-Warner Bill would reduce U.S. GDP by $450 billion.
- In 2007, EIA estimated that a U.S. Senate proposal to restrict carbon emissions would reduce U.S. GDP by $230 billion.

Second, the studies forecast that carbon restrictions would significantly reduce U.S. employment over the next two decades. For example, by 2030:

- In 2009, ACCF and NAM estimated that ASCEA would result in the loss of 2.4 million U.S. jobs.

- In 2009, NBCC estimated that ASCEA would result in the loss of 2.2 million U.S. jobs.
- In 2009, the Heritage Foundation estimated that ASCEA would result in the loss of 1.5 million U.S. jobs.
- In 2009, the Brookings Institution estimated that ASCEA would result in the loss of 700,000 U.S. jobs.
- In 2009, CAAE estimated that the carbon restrictions contained in the Obama Administration's FY 2010 budget proposals would result in the loss of 3.2 million U.S. jobs.
- In 2008, the Heritage Foundation estimated that the proposed Lieberman-Warner Bill would result in the loss of 450,000 U.S. jobs.
- In 2008, ACCF and NAM estimated that the proposed Lieberman-Warner Bill would result in the loss of 3.5 million U.S. jobs.

Third, the studies forecast that carbon restrictions would significantly reduce U.S. household incomes over the next two decades. For example, by 2030:

- In 2009, ACCF and NAM estimated that ASCEA would result in a reduction in average household income of about $1,250.
- In 2009, NBCC estimated that ASCEA would result in a reduction in average household income of about $900.
- In 2009, the Heritage Foundation estimated that ASCEA would result in a reduction in average household income of about $2,700
- In 2009, CBO estimated that ASCEA would result in a reduction in average household income of about $1,000.
- In 2009, CAAE estimated that the carbon restrictions contained in the Obama Administration's FY 2010 budget proposals would result in a reduction in average household income of about $2,130.

Finally, all of the studies forecast that carbon restrictions would significantly increase U.S. energy costs. This is to be expected and is the major effect of implementing regulations such as the Endangerment Finding. The price increases would be essential to the program because they would be the most important mechanism through which businesses and households were encouraged to make investments and behavioral changes that reduced CO_2 emissions. Nevertheless, the rise in prices for energy and energy-intensive goods and services would be regressive and would impose a larger burden, relative to income, on low-income households than on high-income households.

The EPA Finding would reduce CO_2 emissions from all sectors of the economy -- transportation, residential, commercial, and industrial; however, as the largest emitter of CO_2, the primary impact would fall on the electric power sector. The Finding would result in the electric industry shutting down most carbon-based generation or using expensive, as yet unproven technology, to capture and store CO_2. To meet the stringent EPA goals, the electric industry would also have to substitute high cost technologies, such as biomass and wind, for conventional generation.

For example, in 2009 ACCF and NAM estimated that by 2030 ASCEA would increase (above the 2030 reference case):

- Gasoline prices by 26 percent
- Residential electricity prices by 50 percent
- Industrial electricity prices by 76 percent
- Residential natural gas prices by 73 percent
- Industrial natural gas prices by 115 percent
- Electric utility coal prices by 760 percent

In 2009, NBCC estimated that by 2030 ASCEA would increase (above the 2030 reference case):

- Natural gas prices by 17 percent
- Motor fuel prices by 7 percent
- Electricity prices by 24 percent

In 2009, the Heritage Foundation estimated that by 2030 ASCEA would increase (above the 2030 reference case):

- Gasoline prices by $475 per year
- Residential electricity prices by $500 per year
- Residential natural gas prices by $180 per year
- Heating oil prices by $50 per year

In 2009, EIA estimated that by 2030 ASCEA would increase (above the 2030 reference case):

- Gasoline prices by $1.50/gal.
- Jet fuel prices by 90¢/gal.
- Diesel prices by 80¢/gal
- Residential natural gas prices by $5/mcf
- Electricity prices by $3.70/kWh
- Coal prices to the electric power sector by $6.65 per MMBTU

In 2009, CAAE estimated that by 2030 the carbon restrictions contained in the Obama Administration's FY 2010 budget proposals would increase (above the 2030 reference case):

- Motor fuel prices by 20 percent
- Electricity prices by 51 percent
- Natural gas prices by 53 percent

In 2008, the Heritage Foundation estimated 2008 that by 2030 the proposed Lieberman-Warner Bill would increase (above the 2030 reference case):

- Electricity prices by $550 per year
- Natural gas prices by $300 per year
- Heating oil prices by $600 per year

In 2008, EIA estimated that the proposed Lieberman-Warner Bill would increase (above the 2030 reference case):

- Gasoline prices by 60¢/gal.
- Jet fuel prices by $1.00/gal.
- Diesel prices by 70¢/gal
- Residential natural gas prices by $7/mcf
- Electricity prices by $3.20/kWh
- Coal prices to the electric power sector by $7.20 per MMBTU

IV.B. Impacts on GDP, Jobs, and Incomes

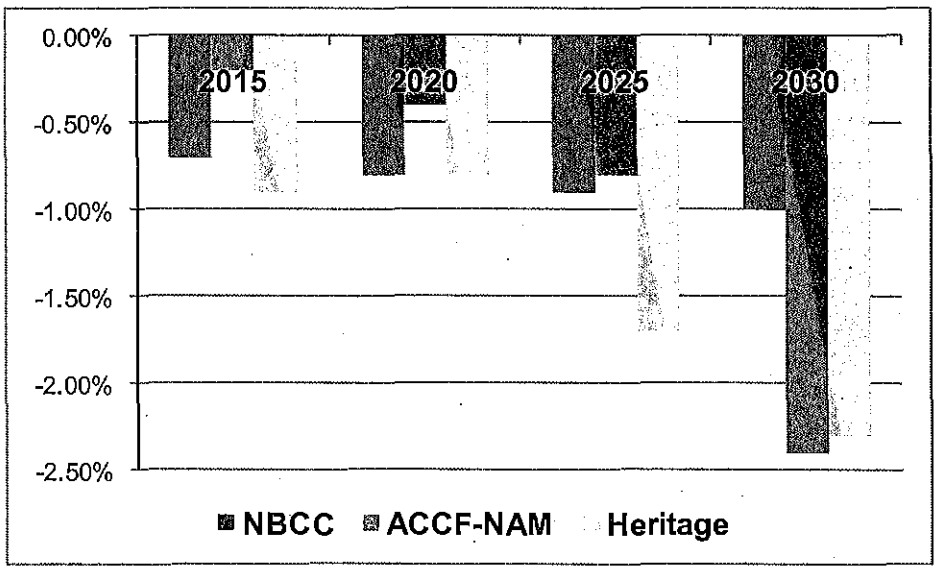
Here we relied heavily on the studies of the impact of ASCEA conducted in 2009 by ACCF/NAM, NBCC, and the Heritage Foundation. These three studies are recent, comprehensive, detailed, and credible. Further, the ACCF/NAM and the Heritage Foundation studies estimated impacts by state – which are of interest here.

The EPA Finding would significantly increase energy costs, and these higher fuel prices "force" the economy to undergo a significant shift in fuel conversion technology selection and utilization and fossil fuel consumption to satisfy the regulation. This results in reduced wages and incomes, lower commercial and industrial output, and lower employment and thus causes losses in GDP over the forecast period. As shown in Figure IV-1, the three studies forecast significant declines in GDP from the reference case, although with some variations, both in total and year-by-year.

Carbon restrictions will create substantial job losses due to reduced revenues resulting from higher fuel and electricity costs. This is primarily a result of higher carbon prices causing higher fuel costs for industry and higher costs to industry to comply with the emissions limits. The major causes of job losses are lower industrial output due to higher energy prices, the high cost of complying with required emissions cuts, and greater competition from overseas manufacturers with lower energy costs.

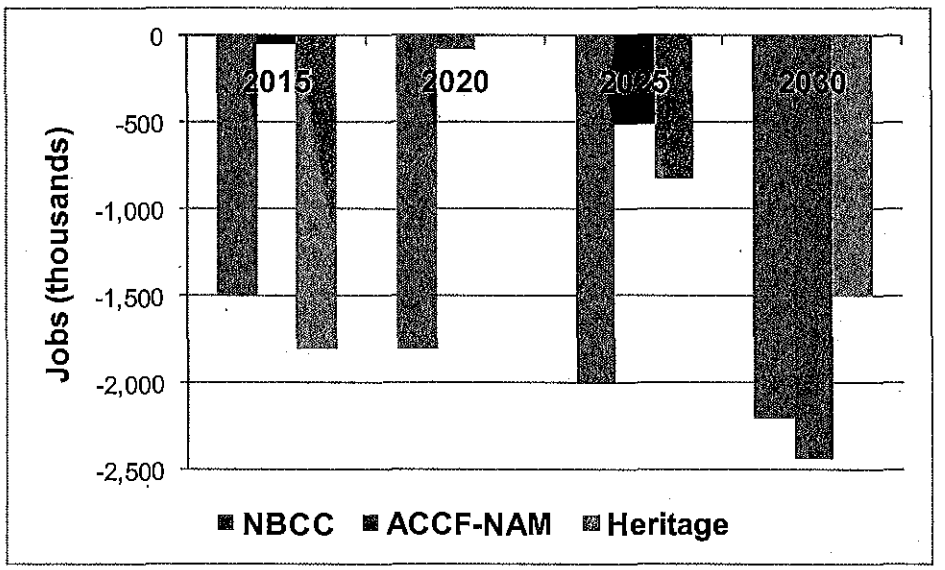
These job losses are net of any new jobs that may be generated by increased spending on renewable energy, energy efficiency, clean coal technologies, or other programs. Figure IV-2 shows that the ACCF/NAM estimates of job losses are less than those from NBCC and Heritage until 2030, when the opposite is the case. In general, NBCC forecasts the most jobs losses from ASCEA.

Figure IV-1
Likely Impact of ASCEA on U.S. GDP



Source: Management Information Services, Inc., 2010.

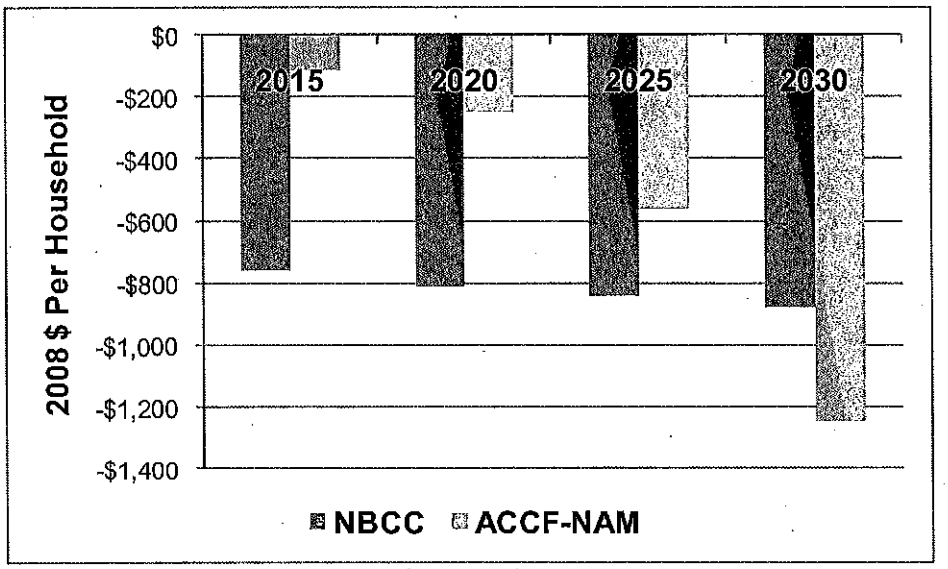
Figure IV-2
Likely Impact of ASCEA on U.S. Jobs



Source: Management Information Services, Inc., 2010.

ASCEA will cause significant household income losses resulting from higher payments for fuels and electricity. Higher energy prices will have ripple impacts on prices throughout the economy and will impose financial costs that increase every year. Although ASCEA (unlike the EPA Endangerment Finding) provides some consumer relief for electricity and natural gas customers during the early years, higher energy prices would ultimately impose a financial cost of up to $1,250 per household by 2030 – Figure IV-3.

Figure IV-3
Household Income Losses Resulting From ASCEA

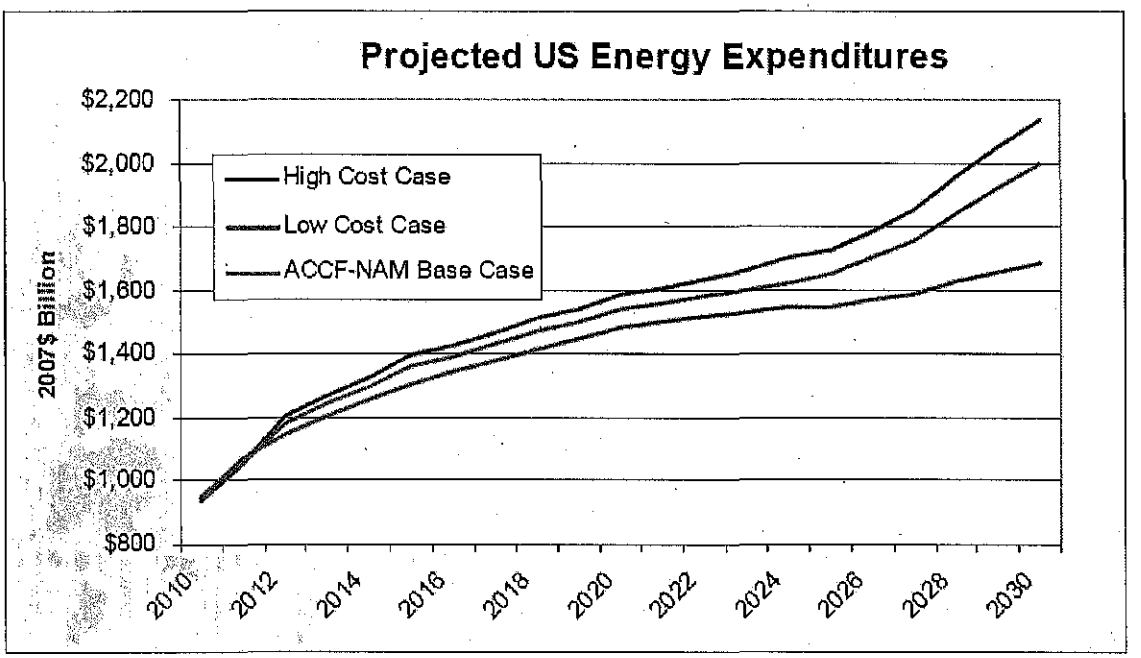


Source: Management Information Services, Inc., 2010.

IV.C. Impacts on Energy Expenditures

By 2030, ASCEA could cause gross U.S. energy expenditures to increase by nearly 30 percent – Figure IV-4. These significant increases reflect the impacts of increased fuel costs and changes to energy conversion technology infrastructure costs. The estimates shown in the figure include consumer price rebates for electricity, natural gas, and home heating oil purchases based on partial return of free allowance allocations – none of which pertain to the EPA Endangerment Finding.

Figure IV-4
Forecast Increase in U.S. Energy Expenditures Resulting From ASCEA



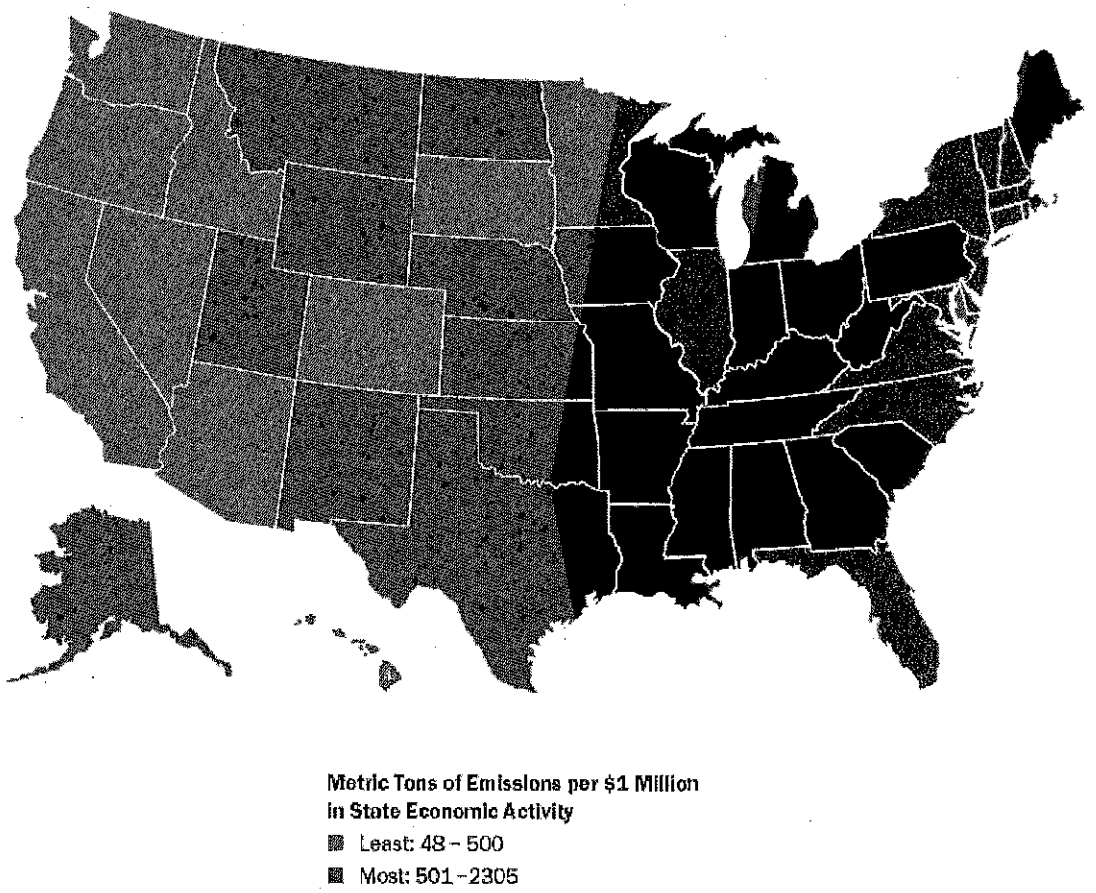
Source: American Council for Capital Formation and the National Association of Manufacturers.

V. STATE IMPACTS

V.A. Impacts of CO_2 Restrictions on Individual States

The states with the highest CO_2 emissions per dollar of economic activity will face the greatest difficulties and highest costs in reducing emissions. As shown in Figure V-1 and Table V-1, states in the south and the Midwest will be especially impacted.[38]

Figure V-1
Relative CO_2 Emissions Per State



Source: U.S. Environmental Protection Agency, 2009.

[38]Figure V-1 is from U.S. Environmental Protection Agency, "Energy CO_2 Emissions by State," 2009; Table V-1 is from American Petroleum Institute, "Waxman Markey Impact," October 2009.

Table V-1
CO_2 Emissions Ranked by State

Rank	State	Total CO_2 Emissions (2006 MMT CO_2)
1	Texas	663.87
2	California	390.64
3	Pennsylvania	277.00
4	Ohio	269.97
5	Florida	260.74
6	Illinois	242.81
7	Indiana	231.59
8	New York	210.91
9	Louisiana	191.56
10	Michigan	189.58
11	Georgia	184.00
12	North Carolina	153.51
13	Kentucky	152.15
14	Missouri	141.11
15	Alabama	141.10
16	New Jersey	134.54
17	Virginia	128.93
18	Tennessee	127.25
19	West Virginia	113.13
20	Wisconsin	110.53
21	Oklahoma	106.09
22	Minnesota	100.66
23	Arizona	97.17
24	Colorado	94.34
25	South Carolina	87.24
26	Washington	85.61
27	Massachusetts	84.53
28	Maryland	83.91
29	Iowa	79.67
30	Kansas	72.46
31	Utah	66.06
32	Mississippi	63.58
33	Wyoming	62.87
34	Arkansas	60.54
35	New Mexico	56.98
36	Nevada	49.56
37	North Dakota	49.16
38	Alaska	47.12
39	Connecticut	43.30
40	Nebraska	43.10
41	Oregon	42.67
42	Montana	36.27
43	Hawaii	23.05
44	Maine	22.93
45	New Hampshire	21.21
46	Delaware	17.75
47	Idaho	15.83
48	South Dakota	13.19
49	Rhode Island	11.28
50	Vermont	8.79
51	District of Columbia	3.94

Rank	State	Total CO_2/ $ Millions of GSP
1	Wyoming	2,306.47
2	West Virginia	2,132.54
3	North Dakota	2,015.01
4	Montana	1,213.64
5	Alaska	1,198.64
6	Louisiana	1,138.84
7	Kentucky	1,082.90
8	Indiana	970.74
9	Alabama	930.69
10	Oklahoma	873.24
11	New Mexico	866.37
12	Mississippi	781.89
13	Utah	727.66
14	Iowa	701.83
15	Arkansas	697.84
16	Kansas	686.34
17	Texas	670.95
18	Missouri	653.09
19	South Carolina	623.05
20	Ohio	612.27
21	Nebraska	609.85
22	Pennsylvania	566.44
23	Tennessee	565.15
24	Wisconsin	510.94
25	Maine	509.83
26	Georgia	505.73
27	Michigan	503.88
28	Arizona	448.76
29	Nevada	445.12
30	North Carolina	442.88
31	Colorado	436.68
32	Illinois	433.57
33	Minnesota	429.12
34	Hawaii	426.69
35	South Dakota	426.56
36	Florida	387.26
37	New Hampshire	385.23
38	Virginia	366.37
39	Maryland	340.77
40	Idaho	336.57
41	Washington	320.28
42	Delaware	314.20
43	New Jersey	312.11
44	Oregon	295.73
45	Vermont	294.29
46	Massachusetts	260.29
47	Rhode Island	257.62
48	California	240.82
49	Connecticut	223.50
50	New York	220.18
51	District of Columbia	48.21

Source: American Petroleum Institute, 2009.

As noted in Chapter III, an August 2009 Heritage Foundation study found that ASCEA would burden families with thousands of dollars per year in direct and indirect energy costs.[39] The report forecast severe consequences -- including greatly increased energy costs, millions of jobs lost, and declining household incomes -- if Congress enacts ASCEA. It found that the Bill will affect each state differently, since some states are more energy-intensive than others (Table V-1), and because some rely heavily on manufacturing. Nevertheless, the costs in every state are significant, as are increases in electricity and gasoline prices. Moreover, the projected losses in jobs and Gross State Product (GSP) illustrate how each state's economy will affected by ASCEA. The study produced 50 state-by-state breakouts of the impact that ASCEA would have on jobs and the economy -- Table V-2

The impacts of ASCEA on state GSP and jobs were also estimated in the ACCF/NAM study – Tables V-3 and V-4. The details differ somewhat from the Heritage Foundation state estimates. For example, the Heritage estimates are given as annual averages in each state, whereas the ACCF/NAM findings are given as high and low impact estimates for 2020 and 2030. Nevertheless, the bottom line in both studies is that the impacts in each state will be significant and negative, and some states will be affected more adversely than others.

[39]David Kreutzer, Ph.D., Karen Campbell, Ph.D., William W. Beach, Ben Lieberman, and Nicolas Loris, *Impact of the Waxman–Markey Climate Change Legislation on the States*, op. cit..

Table V-2
Estimated Impact of ACESA on the States

	Average Personal Income Loss, 2012–2035 (in Millions)	Average GDP Loss, 2012–2035 (in Millions)	Average Non-Farm Job Loss, 2012–2035
Alabama	–$1,524	–$3,793	–19,090
Alaska	–$293	–$1,019	–2,051
Arizona	–$2,069	–$5,652	–24,472
Arkansas	–$868	–$2,182	–10,807
California	–$15,268	–$41,481	–134,396
Colorado	–$2,043	–$5,407	–19,870
Connecticut	–$1,910	–$4,948	–13,649
Delaware	–$347	–$1,376	–3,265
District of Columbia	–$376	–$2,147	–529
Florida	–$6,920	–$16,806	–66,938
Georgia	–$3,191	–$9,072	–38,389
Hawaii	–$507	–$1,408	–3,738
Idaho	–$475	–$1,170	–6,534
Illinois	–$5,318	–$13,947	–50,178
Indiana	–$2,107	–$5,639	–29,154
Iowa	–$1,070	–$2,952	–13,395
Kansas	–$1,036	–$2,684	–11,136
Kentucky	–$1,322	–$3,528	–16,254
Louisiana	–$1,564	–$4,945	–15,438
Maine	–$454	–$1,101	–5,209
Maryland	–$2,641	–$6,148	–17,781
Massachusetts	–$3,207	–$8,043	–21,810
Michigan	–$3,417	–$8,739	–39,445
Minnesota	–$2,173	–$5,834	–22,963
Mississippi	–$842	–$2,026	–10,694
Missouri	–$2,026	–$5,250	–23,058
Montana	–$323	–$784	–3,438
Nebraska	–$652	–$1,833	–7,137
Nevada	–$1,017	–$2,911	–9,279
New Hampshire	–$546	–$1,312	–6,060
New Jersey	–$4,291	–$10,650	–30,685
New Mexico	–$621	–$1,743	–6,209
New York	–$9,101	–$25,237	–55,878
North Carolina	–$3,091	–$9,139	–38,907
North Dakota	–$245	–$634	–2,361
Ohio	–$3,966	–$10,669	–46,065
Oklahoma	–$1,317	–$3,188	–12,622
Oregon	–$1,325	–$3,620	–15,644
Pennsylvania	–$4,888	–$12,152	–46,762
Rhode Island	–$417	–$1,073	–3,870
South Carolina	–$1,389	–$3,497	–18,572
South Dakota	–$291	–$776	–2,718
Tennessee	–$2,074	–$5,580	–25,628
Texas	–$9,187	–$26,128	–94,041
Utah	–$806	–$2,417	–11,170
Vermont	–$235	–$562	–2,667
Virginia	–$3,247	–$8,762	–26,604
Washington	–$2,697	–$7,122	–25,718
West Virginia	–$549	–$1,320	–5,611
Wisconsin	–$2,040	–$5,315	–26,759
Wyoming	–$258	–$721	–1,949

Source: Heritage Foundation, 2009.

Table V-3
Loss in State GDP Resulting From ASCEA
(2007 Dollars)

State	LOW CASE PROJECTION		HIGH CASE PROJECTION	
	2020	2030	2020	2030
Alabama	-444	-4676	-762	-6379
Alaska	-100	-1051	-171	-1434
Arizona	-662	-6976	-1138	-9517
Arkansas	-256	-2701	-440	-3685
California	-4954	-52208	-8513	-71226
Colorado	-638	-6722	-1096	-9171
Connecticut	-581	-6124	-999	-8355
Delaware	-236	-2487	-406	-3393
DC	-163	-1715	-280	-2340
Florida	-1955	-20607	-3360	-28113
Georgia	-1085	-11432	-1864	-15597
Hawaii	-158	-1665	-271	-2271
Idaho	-141	-1483	-242	-2024
Illinois	-1676	-17665	-2881	-24100
Indiana	-704	-7414	-1209	-10115
Iowa	-347	-3657	-596	-4990
Kansas	-310	-3262	-532	-4450
Kentucky	-418	-4402	-718	-6005
Louisiana	-483	-5089	-830	-6943
Maine	-992	-10457	-1705	-14267
Maryland	-719	-7573	-1235	-10331
Massachusetts	-132	-1392	-227	-1899
Michigan	-1144	-12058	-1966	-16450
Minnesota	-703	-7407	-1208	-10105
Mississippi	-234	-2467	-402	-3365
Missouri	-638	-6722	-1096	-9171
Montana	-85	-900	-147	-1228
Nebraska	-71	-750	-122	-1023
Nevada	-196	-2066	-337	-2819
New Hampshire	-163	-1722	-281	-2349
New Jersey	-1291	-13600	-2218	-18554
New Mexico	-322	-3397	-554	-4635
New York	-2958	-31171	-5083	-42526
North Carolina	-1057	-11142	-1817	-15201
North Dakota	-213	-2242	-366	-3059
Ohio	-1315	-13860	-2260	-18909
Oklahoma	-340	-3580	-584	-4884
Oregon	-446	-4697	-766	-6407
Pennsylvania	-1439	-15162	-2472	-20685
Rhode Island	-129	-1355	-221	-1848
South Carolina	-417	-4399	-717	-6001
South Dakota	-92	-969	-158	-1322
Tennessee	-680	-7164	-1168	-9774
Texas	-2836	-29887	-4874	-40775
Utah	-265	-2791	-455	-3807
Vermont	-70	-736	-120	-1004
Virginia	-1033	-10883	-1775	-14847
Washington	-821	-8653	-1411	-11805
West Virginia	-150	-1586	-259	-2163
Wisconsin	-647	-6815	-1111	-9297
Wyoming	-67	-710	-116	-968

Source: American Council for Capital Formation and the National Association of Manufacturers, 2009.

Table V-4
Jobs Losses by State Resulting From ASCEA
(Thousands of jobs)

	LOW CASE PROJECTION		HIGH CASE PROJECTION	
State	2020	2030	2020	2030
Alabama	0.18	-27.94	-1.25	-38.05
Alaska	0.02	-4.28	-0.17	-5.82
Arizona	0.18	-29.61	-1.26	-40.32
Arkansas	0.10	-17.10	-0.70	-23.28
California	1.26	-221.27	-8.76	-301.36
Colorado	0.16	-26.32	-1.12	-35.85
Connecticut	0.12	-17.28	-0.82	-23.53
Delaware	0.03	-4.49	-0.19	-6.12
DC	0.02	-3.23	-0.14	-4.40
Florida	0.55	-90.63	-3.79	-123.43
Georgia	0.29	-47.72	-2.00	-64.99
Hawaii	0.05	-8.14	-0.32	-11.09
Idaho	0.05	-7.38	-0.31	-10.05
Illinois	0.57	-88.36	-3.97	-120.34
Indiana	0.28	-43.51	-1.95	-59.26
Iowa	0.15	-24.02	-1.01	-32.72
Kansas	0.13	-21.42	-0.90	-29.17
Kentucky	0.17	-25.71	-1.15	-35.01
Louisiana	0.15	-26.07	-1.07	-35.50
Maine	0.05	-6.59	-0.31	-8.98
Maryland	0.18	-30.44	-1.27	-41.45
Massachusetts	0.22	-32.08	-1.53	-43.70
Michigan	0.43	-66.66	-2.99	-90.79
Minnesota	0.25	-42.09	-1.77	-57.32
Mississippi	0.11	-16.59	-0.74	-22.60
Missouri	0.26	-43.26	-1.82	-58.91
Montana	0.03	-4.96	-0.21	-6.76
Nebraska	0.09	-14.42	-0.61	-19.63
Nevada	0.08	-12.72	-0.54	-17.32
New Hampshire	0.05	-6.97	-0.33	-9.50
New Jersey	0.29	-50.70	-2.03	-69.05
New Mexico	0.06	-9.33	-0.40	-12.71
New York	0.62	-108.26	-4.32	-147.44
North Carolina	0.27	-44.87	-1.88	-61.11
North Dakota	0.03	-5.31	-0.22	-7.23
Ohio	0.51	-79.76	-3.58	-108.63
Oklahoma	0.13	-22.10	-0.91	-30.10
Oregon	0.13	-23.45	-0.93	-31.94
Pennsylvania	0.41	-71.58	-2.86	-97.49
Rhode Island	0.04	-5.29	-0.25	-7.21
South Carolina	0.13	-21.02	-0.88	-28.63
South Dakota	0.04	-6.42	-0.27	-8.74
Tennessee	0.25	-38.20	-1.71	-52.03
Texas	0.85	-144.60	-5.93	-196.93
Utah	0.08	-13.31	-0.56	-18.12
Vermont	0.02	-3.36	-0.16	-4.57
Virginia	0.25	-41.40	-1.73	-56.39
Washington	0.24	-41.46	-1.64	-56.46
West Virginia	0.05	-8.21	-0.34	-11.18
Wisconsin	0.27	-41.66	-1.87	-56.74
Wyoming	0.02	-2.87	-0.12	-3.91

Source: American Council for Capital Formation and the National Association of Manufacturers, 2009.

V.B. State Concentrations of the Black and Hispanic Populations

Table V-5 Indicates that the Hispanic population, while growing rapidly in both absolute and percentage terms, is becoming gradually more dispersed geographically throughout the U.S.:

- In 2000, about 86 percent of the Hispanic population was concentrated in ten states; by 2025, only 82 percent of a much larger Hispanic population will be residing in these states.
- In 2000, more than 73 percent of the Hispanic population was concentrated in five states – California, Texas, Florida, New York, and Illinois; by 2025, only 70 percent of a much larger Hispanic population will be residing in these five states.

Table V-6 Indicates that the Black population, while growing rapidly, is becoming gradually more concentrated geographically:

- In 2000, about 59 percent of the Black population was concentrated in ten states; by 2025, nearly 66 percent of a larger Black population will be residing in these states.
- In 2000, 36 percent of the Black population was concentrated in five states – New York, Texas, Florida, California, and Georgia; by 2025, 42 percent of a larger Black population will be residing in these five states.

Table V-5
Concentration of the Hispanic Population by State, 2000 and 2025

	Percent of Total U.S. Hispanic Population	
	2000	**2025**
California	34.0	34.6
Texas	18.7	16.7
Florida	7.6	8.0
New York	8.9	7.0
Illinois	4.0	3.7
Arizona	3.4	3.4
New Jersey	3.3	3.0
New Mexico	2.3	2.0
Colorado	1.9	1.7
Massachusetts	14	1.5
Total	85.5	81.6

Source: U.S. Bureau of the Census and Management Information Services, Inc, 2010.

Table V-6
Concentration of the Black Population by State, 2000 and 2025

	Percent of Total U.S. Black Population	
	2000	**2025**
New York	9.3	9.3
Texas	7.2	8.9
Florida	6.6	8.2
California	6.8	7.9
Georgia	6.4	7.6
North Carolina	4.9	5.2
Illinois	5.3	5.0
Maryland	4.2	4.8
Virginia	4.0	4.5
Louisiana	4.1	4.2
Total	58.8	65.6

Source: U.S. Bureau of the Census and Management Information Services, Inc., 2010.

V.C. Impacts on States Where Black and Hispanic Populations are Concentrated

African Americans and Hispanics are thus disproportionately located in certain states such as California, Texas, Florida, New York, and Illinois, and their populations will increase over time. For the seven states with the highest concentrations of Hispanics and African Americans – Arizona, California, Florida, Georgia, Illinois, New York, and Texas -- ASCEA would likely have the following impacts.

In Arizona, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $5.7 Billion
- Reduce personal income by $2.1 billion
- Destroy 24,500 jobs
- Increase electricity prices by $620 per household
- Increase gasoline prices by $0.62 per gallon

In California, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $41.5 billion
- Reduce personal income by $15.3 billion
- Destroy 134,400 jobs
- Increase electricity prices by $531 per household
- Increase gasoline prices by $0.72 per gallon

In Florida, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $16.8 billion
- Reduce personal income by $6.9 billion
- Destroy 76,000 jobs
- Increase electricity prices by $830 per household
- Increase gasoline prices by $0.65 per gallon

In Georgia, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $9.1 billion
- Reduce personal income by $3.2 billion
- Destroy 38,400 jobs
- Increase electricity prices by $677 per household
- Increase gasoline prices by $0.61 per gallon

In Illinois, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $14 billion
- Reduce personal income by $5.3 billion
- Destroy 50,200 jobs
- Increase electricity prices by $436 per household
- Increase gasoline prices by $0.63 per gallon

In New York, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $25.2 billion
- Reduce personal income by $9.1 billion
- Destroy 56,000 jobs
- Increase electricity prices by $371 per household
- Increase gasoline prices by $0.66 per gallon

In Texas, over the 2012–2035 timeframe, on average ASCEA would annually:

- Reduce GSP by $26.1 billion
- Reduce personal income by $9.2 billion
- Destroy 94,000 jobs
- Increase electricity prices by $891 per household
- Increase gasoline prices by $0.62 per gallon

VI. POPULATION AND DEMOGRAPHIC TRENDS

VI.A. Definitions of Race and Ethnicity

The classification of individuals by race and ethnicity is complex and controversial, and the concepts of race and ethnicity lack precise and universally accepted definition. Their economic and social significance depend on a variety of factors, including how individuals identify themselves and how others identify and treat them. Most of the primary data utilized in this report were obtained from Federal government statistical sources, and these are collected through household surveys and decennial censuses in which respondents are asked to identify their race in one question and whether or not they are of Hispanic origin in a separate question.

The basic racial categories used by the U.S. Bureau of the Census are American Indian or Alaska Native, Asian or Pacific Islander, Black, and White. The Bureau identifies Hispanic origin as an ethnicity, and Hispanics may be of any race. Here we use the following five categories:

- Hispanic -- which may be of any race
- White, not of Hispanic origin
- Black
- Asian, including Pacific Islander
- American Indian, including Alaska native (Alaskan Eskimo and Aleut)

African Americans represent a relatively homogeneous demographic category, while Hispanics are highly diverse. Hispanics are usually disaggregated into persons of Mexican, Puerto Rican, Cuban, and Other Hispanic Origin; the major groups in the latter category include Dominicans, Salvadorans, Guatemalans, Nicaraguans, Hondurans, Panamanians, Costa Ricans, Colombians, Ecuadorians, Peruvians, Chileans, and other Central and South Americans. Mexicans are the largest Hispanic group, comprising about 65 percent of the total, Puerto Ricans are the second largest, comprising about nine percent, and Cubans are the third largest, accounting for about four percent of U.S. Hispanics.[40]

VI.B. Black and Hispanic Populations

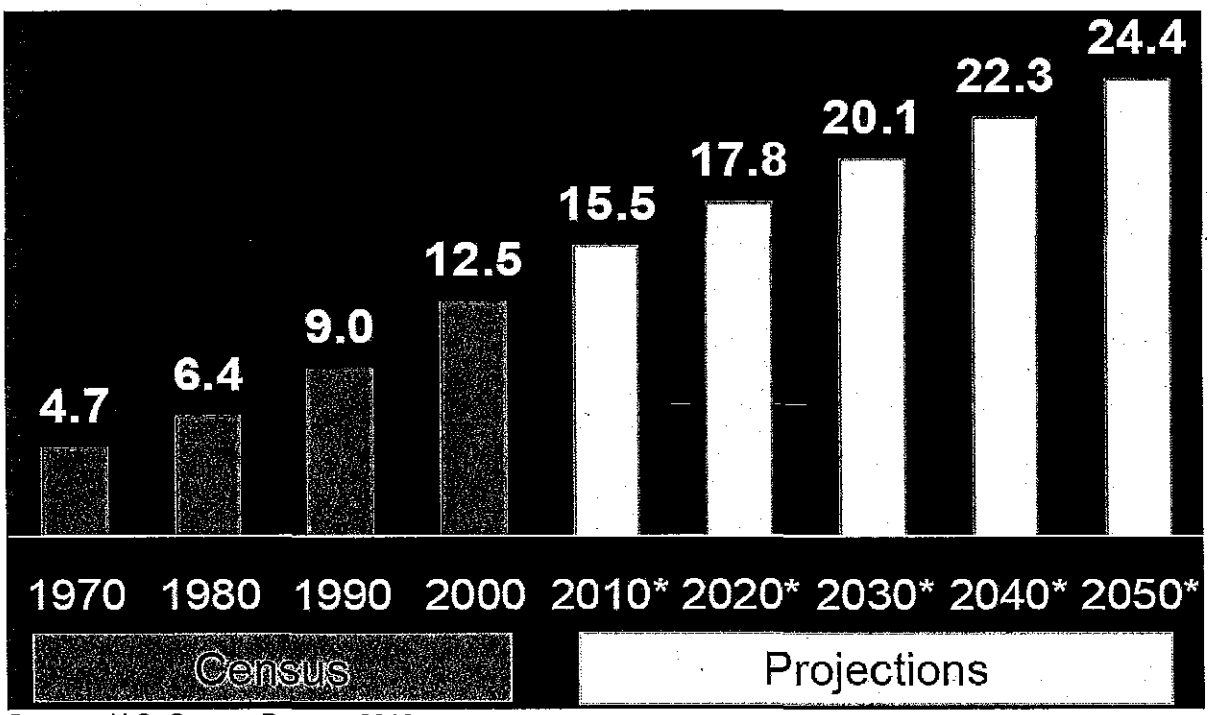
African Americans have been counted as a separate demographic group since the first U.S.
census was conducted in 1790, and we thus have a good historical record of the Black population. However, Hispanics have not always appeared in the census as a separate

[40]Pew Hispanic Center, "Country of Origin Profiles, October 2009.

ethnic group.[41] The Census Bureau makes population projections based on a high, middle, and low series, and on several variations within these series, and the major factors affecting future population growth are projected fertility rates, projected survival rates, and future net immigration. Variations in the assumed values of these variables can significantly affect the projections, and, obviously, the further into the future, the more the projections can vary. In this report, all of the population projections used are based on the Census Bureau's "middle" series.

Figure VI-1 indicates that the growth in the Hispanic population is the salient U.S. demographic development, both historical and forecast:[42]

Figure VI-1
Percent Hispanic of the Total U.S. Population: 1970 - 2050



Source: U.S. Census Bureau, 2010.

- In 1970, less than five percent of the U.S, population was Hispanic.
- In 2000, about 13 percent of the U.S, population was Hispanic.

[41]For example, the 1930 census contained a category for "Mexican," in the 1940 census the classification was "persons of Spanish mother tongue," in the 1950 and 1960 censuses the category was titled "persons of Spanish surname." The 1970 census asked persons about their "origin" and respondents could choose among several Hispanic origins listed on the questionnaire. In the 1980 and 1990 censuses persons of "Spanish/Hispanic" origin reported as Mexican, Puerto Rican, Cuban or other Hispanic, and the 1990 census tabulated information for 30 additional Hispanic-origin groups.
[42]U.S. Census Bureau, "Hispanics in the United States," 2009.

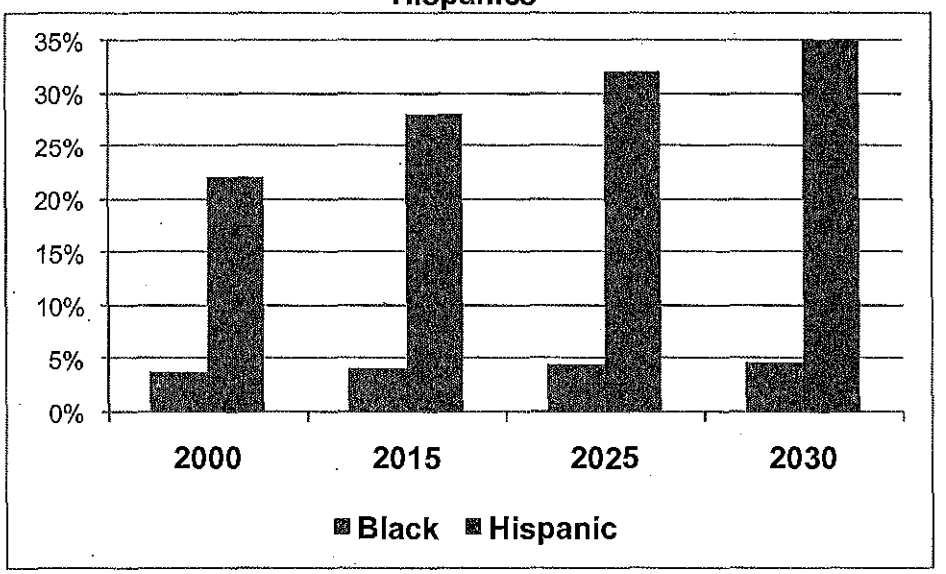
- In 2030, about 20 percent of the U.S, population will be Hispanic.
- In 2050, about 25 percent of the U.S, population will be Hispanic.
- In recent years, about one of every two persons added to the U.S. population was Hispanic.

Hispanics have displaced African Americans as the largest U.S. minority group, and their numerical dominance will continue to increase. The portion of the population that is non-Hispanic White declines from 80 percent in 1980 to about 50 percent in 2050. The portion of the U.S. that is Black will remain at about 13 percent over the next several decades.

VI.C. State Black and Hispanic Population Trends

The portions of the populations of the seven states of interest here comprised of African Americans and Hispanics will increase through 2030, as shown in Figures VI-2 through VI-8.

Figure VI-2
Portions of the Arizona Population Comprised of African Americans and Hispanics



Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

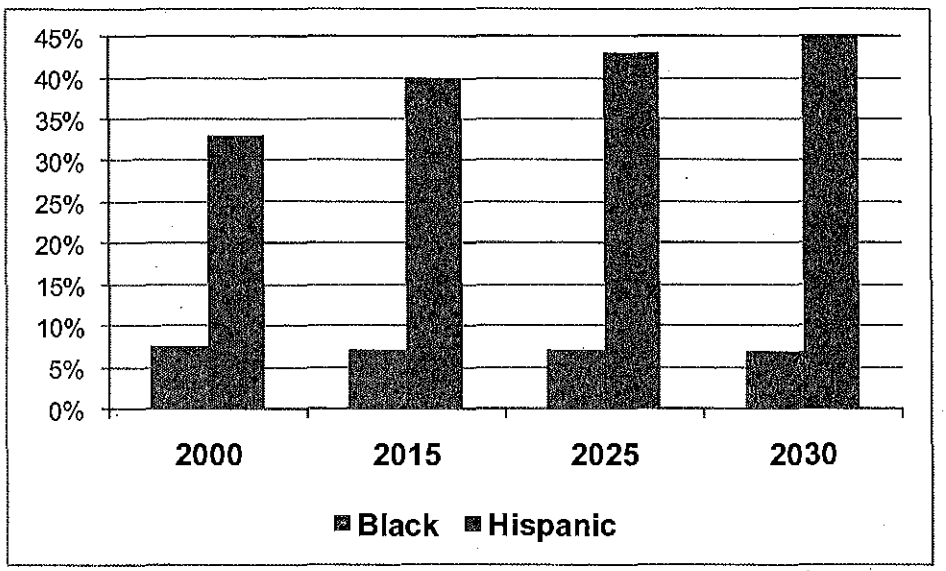
These figures reveal some important trends:

- In each of the seven states, both the Black percentage of the population and the Hispanic percentage of the population increases through 2030.

- In each of the seven states, both the Black percentage of the population and the Hispanic percentage of the population is higher in 2030 than in 2000.[43]
- As may be expected from the national trends, the increase in the Hispanic population is especially pronounced. For example:
  -- The percent of the Arizona population comprised of Hispanics increases from 22 percent in 2000 to 35 percent in 2030
  -- The percent of the California population comprised of Hispanics increases from 33 percent in 2000 to 45 percent in 2030
  -- The percent of the Florida population comprised of Hispanics increases from 16 percent in 2000 to 28 percent in 2030
  -- The percent of the Texas population comprised of Hispanics increases from 30 percent in 2000 to 40 percent in 2030.
- The rate of growth of the Hispanic population is much higher than that of the Black population, and even in states such as Illinois and New York where in 2000 African Americans outnumbered Hispanics, by 2030 the reverse is true.
- Trends in these states reflect the fact that the U.S. is becoming a "minority majority" nation, and by 2030 in both California and Texas African Americans and Hispanics combined will comprise a majority of the population.
- By 2030, in Arizona, Florida, Georgia, and New York, African Americans and Hispanics combined will comprise 40 percent or more of the population.

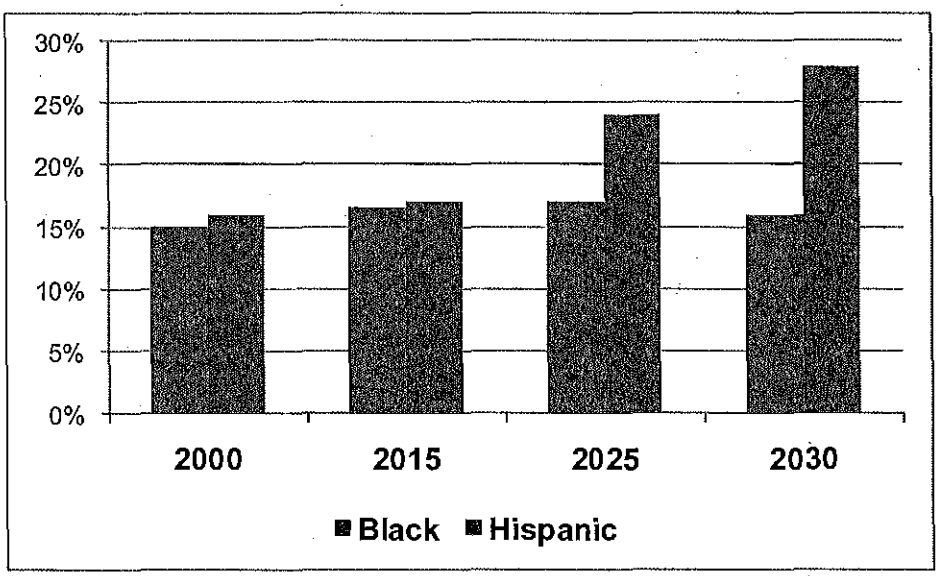
[43]Except for African Americans in California.

Figure VI-3
Portions of the California Population Comprised of African Americans and Hispanics



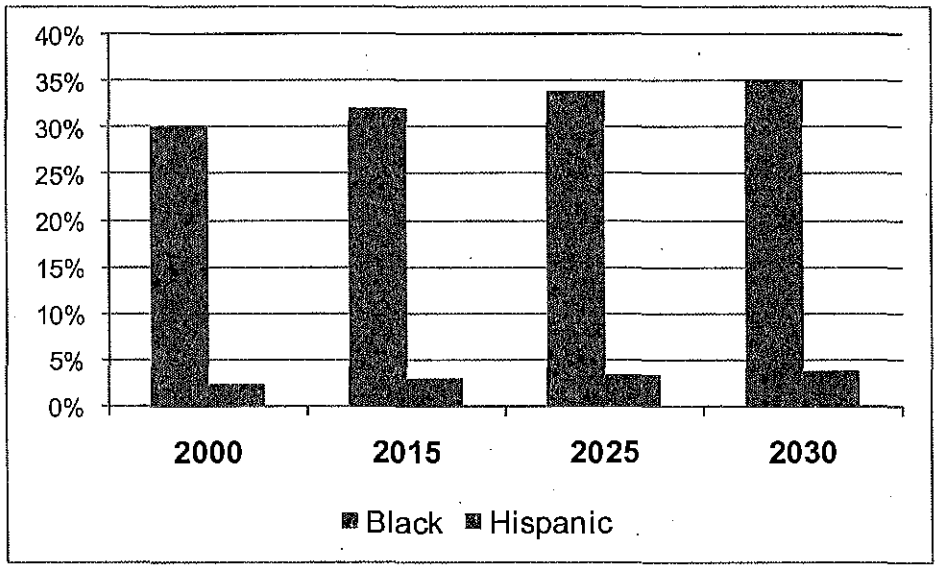
Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

Figure VI-4
Portions of the Florida Population Comprised of African Americans and Hispanics



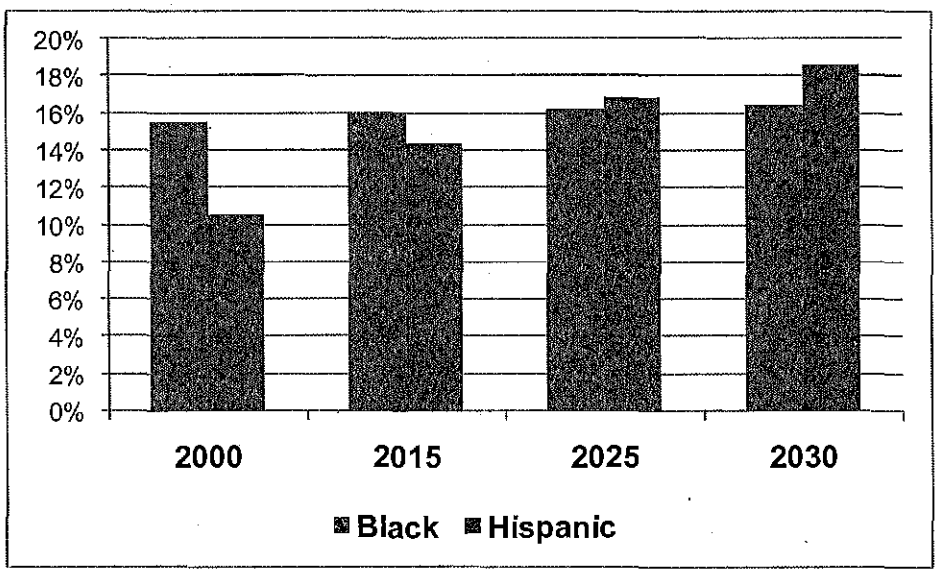
Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

Figure VI-5
Portions of the Georgia Population Comprised of African Americans and Hispanics



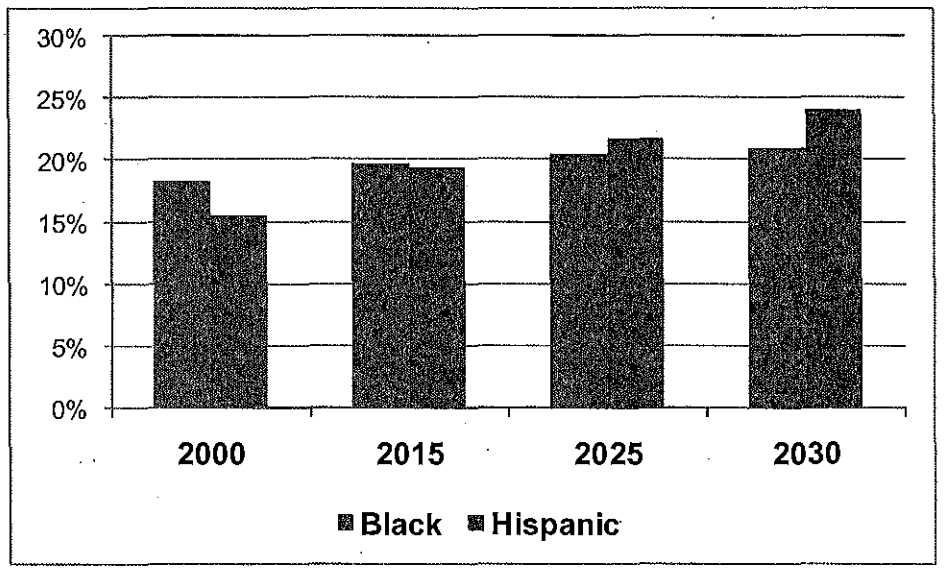
Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

Figure VI-6
Portions of the Illinois Population Comprised of African Americans and Hispanics



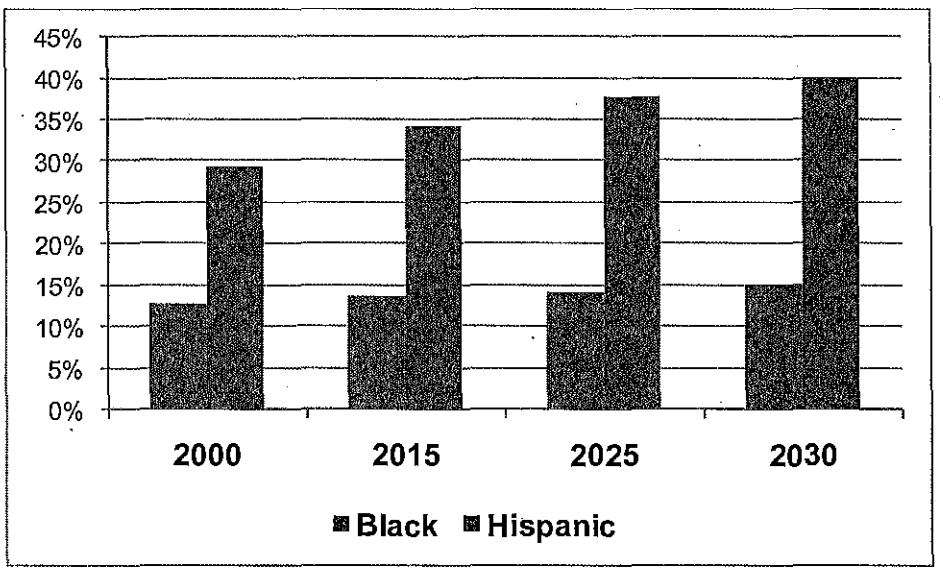
Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

Figure VI-7
Portions of the New York Population Comprised of African Americans and Hispanics



Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

Figure VI-8
Portions of the Texas Population Comprised of African Americans and Hispanics



Source: U.S. Census Bureau and Management Information Services, Inc., 2010.

VII. IMPACTS OF THE EPA ENDANGERMENT FINDING ON LOW-INCOME PERSONS, AFRICAN AMERICANS AND HISPANICS

VII.A. Economic Status of African Americans and Hispanics

VII.A.1. Income, Earnings, and Wealth

The average (real) income of American families has fluctuated over the past four decades, but White income has remained significantly higher than Hispanic income or Black income:[44]

- Black incomes are only about 65 percent that of the U.S. average, and these disparities will be exacerbated if the EPA Endangerment Finding is implemented.
- Hispanic incomes are only about 74 percent that of the U.S. average, and these disparities will be exacerbated if the EPA Endangerment Finding is implemented.
- The income of White families is nearly twice that of Black and Hispanic families.
- The average weekly earnings of African Americans and Hispanics are significantly below those of Whites.
- The wage gap between Black workers and White workers has remained relatively constant over the past several decades.
- The average wage gap between Hispanics and African Americans and Whites has widened over the past two decades -- due, in part, to the widening gap in educational attainment between Hispanics and the rest of the population.

Incomes and earnings provide a measure of the economic differences between demographic groups. Another measure is the poverty rate and, while there are several different measures of this rate, here we use the Federal government's official definition.[45] Some of the disparities in poverty rates between the demographic groups can be explained by differences in factors such as age distribution, family structure, and educational attainment. However, substantial differences between groups exist among individuals with similar characteristics. For example, in 2008:[46]

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[44]Data based on 2009 and 2010 Census Bureau sources.

[45]See the discussion in Constance F. Citro and Robert T Michael, eds. *Measuring Poverty: A New Approach*, Washington, D.C.: National Academy Press, 1995.

[46]"Who is Poor?" Institute for Research on Poverty, University of Wisconsin -- Madison, September 2009. IRP developed the poverty estimates using the official Census definition of poverty.

- The overall U.S. poverty rate was 13.2 percent
- For non-Hispanic Whites, the poverty rate was 8.6 percent
- For Hispanics it was 23.2 percent
- For African Americans it was 24.7 percent
- Thus, the poverty rate for African Americans is slightly higher than that for Hispanics, and the poverty rates for African Americans and Hispanics are nearly twice the national average and nearly three times as high as the rate for non-Hispanic Whites.

Further:

- The poverty rate for African Americans and Hispanics has historically been about three times that of Whites.
- Poverty rates among the elderly are considerably higher for African Americans and Hispanics than for Whites.
- While poverty rates are relatively high for all children in single-parent families maintained by women, they are significantly higher for Hispanic and Black children than for White children in such families.
- Among persons aged 25 and over without a high school degree, poverty rates for African Americans and Hispanics are well above those of Whites.

Incomes, earnings, and poverty rates thus indicate that African Americans and Hispanics are
significantly less well off than Whites:

- The net worth of White households is nearly five times that of Black and Hispanic households.[47]
- Even among households with similar monthly incomes, net asset holdings are far higher among Whites than African Americans or Hispanics.

VII.A.2. The Economic Vulnerability of African Americans and Hispanics

By virtually every measure of economic well being and security, African Americans and Hispanics are worse off than Whites, and they tend to be especially

[47]Net worth is defined as the sum of the market value of the assets owned by household members minus liabilities (secured and unsecured). Assets not included are the cash value of life insurance policies, equities in pension plans, and value of home furnishings and jewelry.

vulnerable to the economic downturn and job losses likely to result from implementing the EPA CO_2 restrictions.[48] For example:

- Black and Hispanic family incomes are less than two-thirds the overall U.S. average, and this disparity will likely be exacerbated by implementation of the EPA CO_2 restrictions
- Black and Hispanic family incomes are significantly less than White family incomes.
- There is a large gap between the wages of Whites and those of African Americans and Hispanics, which has remained relatively constant over the past four decades.
- Poverty rates for African Americans and Hispanics have consistently been much higher than those for Whites, and are currently more than three times as high.
- The disparity in poverty rates among elderly Black and Hispanics and their White counterparts is especially marked.

Minority families have assets that are, on average, about 20 percent of those of White families, and they thus have little to cushion themselves from the economic downturn and job losses that will likely result from implementing the EPA Finding:

- Whites have, on average, a net worth that is nearly five times that of African Americans and Hispanics, and Whites are thus much better prepared to cope with economic downturns and periods of unemployment.
- Whites own a much broader range of financial assets than African Americans and Hispanics, and these assets are more than three times as large of those owned by African Americans and Hispanics. This also gives Whites a much better capacity to cope with downturns in the economy.
- African Americans and Hispanics are much less likely than Whites to have discretionary income, and the amount of discretionary income they have is less.[49]
- African Americans and Hispanics still suffer from the "last hired, first fired" syndrome, and those who are employed are generally less secure than their White counterparts. Thus, the job losses resulting from implementing the EPA regulation will be disproportionately felt by African Americans and Hispanics
- African Americans and Hispanics are disproportionately concentrated in jobs that pay the minimum wage or below.

[48]Data in this section were obtained from the U.S. Department of Labor, the U.S. Census Bureau, and the Federal Reserve Board, 2010.

[49]Discretionary income is estimated by first subtracting Federal, state, and local income, payroll, and property taxes from household income to yield disposable income. Next, basic, necessary household expenses are subtracted from disposable income. The resulting figure is multiplied by 0.75 to yield a conservative estimate of discretionary income.

- African Americans and Hispanics have a much lower rate of home ownership than do Whites.
- About 20 percent of African Americans lack health insurance and about one-third of Hispanics lack health insurance.

VII.A.3. Implications for African Americans and Hispanics

The impacts of EPA CO_2 restrictions would seriously affect U.S. consumers, since all energy-containing products and services in the average consumer's market basket would increase markedly in price. The impacts will be especially harmful to low-income persons and minorities. For example, U.S. African Americans and Hispanics are vulnerable and will experience disproportionately large negative effects:

- The unemployment rates for African Americans and Hispanics are nearly twice the national average, and those who are employed are generally less secure than their non-Hispanic counterparts. Thus, the job losses resulting from the EPA regulation are likely to disproportionately harm African Americans and Hispanics.
- Black and Hispanic incomes are only about two-thirds to three-quarters that of the U.S. average, and these disparities will be exacerbated.
- Black and Hispanic families have assets that are, on average, much smaller than those of non-Hispanic White families, and therefore they have little to cushion themselves from the impending economic and job losses.
- African Americans and Hispanics have relatively little discretionary income, and are especially vulnerable to the income losses that will result from the EPA Finding.
- Both African Americans and Hispanics are disproportionately affected by energy price increases and resulting economic disruptions, as was illustrated during the "energy crisis" of the 1970's.[50]

It is therefore especially important to estimate the impact of the EPA proposed regulation on African Americans and Hispanics. They remain economically disadvantaged minorities and thus highly vulnerable to negative economic impacts. Further, Hispanics are the largest U.S. minority group and are also the most rapidly growing demographic group. In addition, as noted, the Black and Hispanic populations are heavily concentrated within a relatively small number of states. A previous study estimated the potential impact of the McCain-Lieberman Bill on Hispanics at the national

[50]See Management Information Services, Inc., *Impacts on Hispanics of Federal Electric Utility Multiple Emissions Legislation*, Washington, D.C., April 2003.

level;[51] here we focus on the impact of the EPA rule on African Americans and Hispanics nationally and in Arizona, California, Florida, Georgia, Illinois, New York, and Texas.

VII.A.4. Implications for Energy Burdens on Low Income Groups and Minorities

The "energy burden" is defined as the percentage of gross annual household income that is used to pay annual residential energy bills.[52] The energy burden concept can be used to compare energy expenditures among households and groups of households.[53] For example, consider the case where one household has an energy bill of $1,000 and an income of $10,000 and a second household has an energy bill of $1,200 and an income of $24,000. While the first household has a lower energy bill ($1,000 for the first household compared to $1,200 for the second), the first household has a much higher energy burden (10 percent of income for the first household compared to five percent of income for the second).

Energy burden is a function of income and energy expenditures. Since residential energy expenditures increase more slowly than income, lower income households have higher energy burdens. High burden households are those with the lowest incomes and highest energy expenditures.

As shown in Figure VII-1, in 2001:

- Families earning more than $50,000 per year spent only four percent of their income to cover energy-related expenses.
- Families earning between $10,000 and $25,000 per year (29 percent of the U.S. population) spent 13 percent of income on energy.
- Those earning less than $10,000 per year (13 percent of population) spent 29 percent of income on energy costs.
- Thus, for 42 percent of households – mostly senior citizens, single parents, and minorities – rising energy costs force hard decisions about what bills to pay: Housing, food, education, health care, and other necessities.

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[51] *Potential Impact on Hispanics of S. 139, the McCain-Lieberman Bill.* Report prepared for Americans for Balanced Energy Choices, Management Information Services, Inc., Washington, D.C., September 2003.

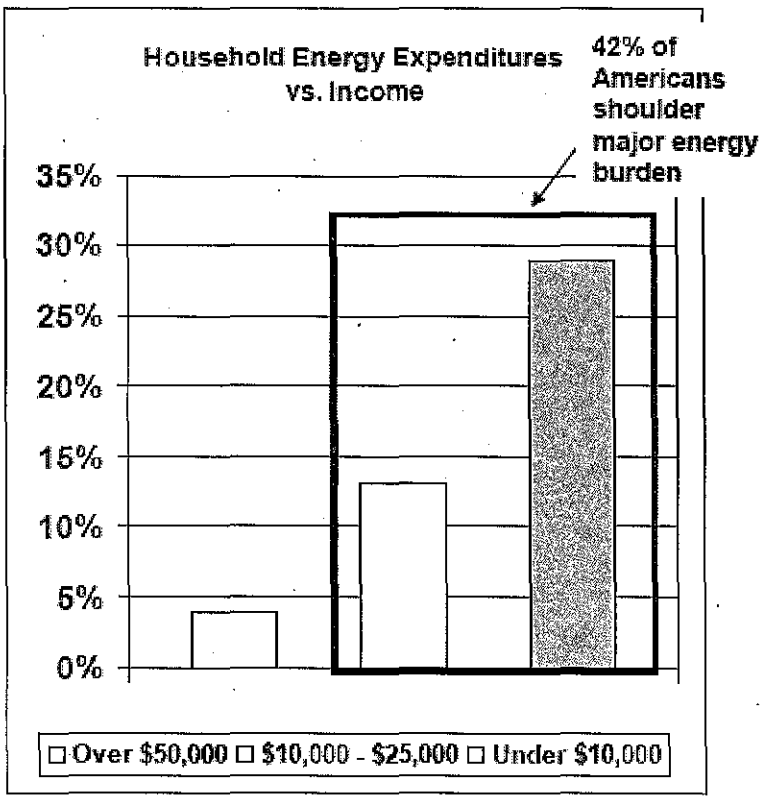
[52] The individual household energy burden is calculated for each household and then averaged within income/origin categories. See the discussion in Applied Public Policy Research Institute for Study and Evaluation, *LIHEAP Energy Burden Evaluation Study*, report prepared for the Office of Community Services, U.S. Department of Health and Human Services, July 2005.

[53] The concept is often used in the Low Income Home Energy Assistance Program (LIHEAP) to estimate required payments. The statutory intent of LIHEAP is to reduce home heating and cooling costs for low-income households.

The energy burden is even more discriminatory for low-income African Americans and Hispanics. For example:

- The energy burden for Black households with annual incomes less than $10,000 is four times that of the overall energy burden for non-Hispanic Whites
- The energy burden for Hispanic households with annual incomes less than $10,000 is more than three times that of the overall energy burden for non-Hispanic Whites
- The energy burden for Black households with annual incomes less than $10,000 is nearly ten times that of the energy burden for non-Hispanic White households with annual earnings of more than $50,000 per year
- The energy burden for Hispanic households with annual incomes less than $10,000 is eight times that of the energy burden for non-Hispanic White households with annual earnings of more than $50,000 per year
- Across all household income categories, the energy burden for Black and Hispanic households is greater than that for non-Hispanic White households.

FigureVII-1



Source: American Association of African Americans in Energy.

When families with income constraints are faced with rising costs of essential energy, they are increasingly forced to choose between paying for that energy use and other necessities (also often energy-sensitive) such as food, housing, or health care. Because all of these expenditures are necessities, families who must make such choices face sharply diminished standards of living.

Cost increases for any basic necessity are regressive in nature, since expenditures for essentials such as energy consume larger shares of the budgets of low-income families than they do for those of higher-income families. Whereas higher-income families may be able to trade off luxury goods in order to afford the higher cost of consuming a necessity such as energy, low-income families will always be forced to trade off other necessities to afford the higher-cost good.

Tables VII-1 and VII-2 show that households in the lowest-income classes spend the largest shares of their disposable income to meet their energy needs. For example, of the 8.7 million American households earning less $10,000 per year in 2008, 60 percent of the average after-tax income was used to meet those households' energy needs. Among the highest earners, the 56 million households making more than $50,000 per year, only 10 percent of the average after-tax income was spent on those households' energy needs. The national average for energy costs as a percentage of household income is about 12 percent.[54]

Table VII-2 shows that energy costs as a percentage of after-tax income doubled between 2001 and 2009, from a national average of 6.0 percent to 11.9 percent. For households earning less than $10,000, this has meant an increase of $1,525 in energy costs. Thus, in 2008 just the *increase* in energy prices since 2001 consumed 30 percent of the after-tax income for households in this category. This impact is much less pronounced in other income classes, as can be seen from Table VII-3. However, while the share of disposable income that is consumed by the *increase* in energy prices declines to 6.5 percent for the average household, this is still a significant cost in absolute terms – it amounts to an extra $3,403 in energy expenditures per household.

These tables confirm the extremely regressive nature of rising energy prices, and increased energy costs have further encroached upon the already-strained resources of the lowest-income households. As a result, these families have experienced a rapidly diminishing quality of life as they become increasingly unable to provide for their most basic needs.

Across racial categories, minority families are statistically more likely to be found among the lowest-income households. Table VII-4 shows that Hispanic, and especially Black, families are disproportionately found in the lower income categories.

[54]Sources for these statistics are shown in the table in the following page.

Table VII-1
Household Energy Expenditures as a Percentage of Income, 2008

Income Category	Less than $10K	$10K-$30K	$30K-$50K	More than $50K	Totals
Households (thousands)[55]	8,689	27,247	23,649	56,417	116,000
Avg. Pre-Tax Income	$5,359	$19,809	$39,229	$109,699	$66,570
Est. After-Tax Income[56]	$5,171	$17,491	$32,129	$77,338	$52,586
Residential Energy Cost[57]	$1,545	$1,883	$2,181	$2,729	$2,227
Transportation Energy Cost[58]	$1,543	$2,618	$4,932	$4,991	$4,042
Total Energy Cost	$3,088	$4,501	$7,113	$7,720	$6,268
Energy Cost as % of Income	59.7%	25.7%	22.1%	10.0%	11.9%

Source: Various sources as shown in the footnotes below.

[55]*Current Population Survey, Annual Social and Economic Supplement*, U.S. Bureau of the Census, 2008.

[56]Effective federal tax rates for these income categories have been interpolated from the tax rates by income quintile as reported in Congressional Budget Office, "Effective Federal Tax Rates Under Current Law, 2001 to 2014," (August 2004). Estimates of state income tax rates were taken from Federation of Tax Administrators, http://www.taxadmin.org/fta/rate/ind_inc.html.

[57]Household energy consumption levels are estimated by income and race from U.S. Department of Energy, Energy Information Administration, "Residential Energy Consumption Survey (2001)." These consumption data have been updated for 2008 with residential energy price projections contained in U.S. Department of Energy, Energy Information Administration, "Short-Term Energy Outlook," June 2008.

[58]Energy use estimates for transportation per household by income category and race are taken from U.S. Department of Energy, Energy Information Administration, "Household Vehicles Energy Use: Latest Data and Trends" (November 2005). These data have been updated for 2008 with residential energy price projections contained in U.S. Department of Energy, Energy Information Administration, "Short-Term Energy Outlook," (June 2008).

Table VII-2
Household Energy Expenditures as a Percentage of Income, 2001

Income Category	Less than $10K	$10K-$30K	$30K-$50K	More than $50K	Totals
Households (thousands)[59]	9,800	28,900	23,600	47,000	109,300
Avg. Pre-Tax Income	$5,733	$19,707	$39,201	$107,649	$60,488
Est. After-Tax Income[60]	$5,532	$17,520	$32,380	$76,054	$47,396
Residential Energy Cost[61]	$1,039	$1,260	$1,456	$1,836	$1,493
Transportation Energy Cost[62]	$524	$888	$1,674	$1,694	$1,372
Total Energy Cost	$1,563	$2,148	$3,130	$3,530	$2,865
Energy Cost as % of Income	28.3%	12.3%	9.7%	4.6%	6.0%

Source: Various sources, as outlined in the footnotes.

Table VII-3
Share of Income Consumed by Increase in Energy Prices Since 2001

Income Category	Less than $10K	$10K-$30K	$30K-$50K	More than $50K	Totals
Increase in Energy Costs Since 2001	$1,525	$2,353	$3,983	$4,190	$3,403
Increase as % of 2008 After-tax Income	29.5%	13.5%	12.4%	5.4%	6.5%

Source: Various sources, as outlined in the footnotes.

[59] *2001 Survey of Residential Energy Consumption (RECS)*, op cit.
[60] U.S. Congressional Budget Office, *Effects of Gasoline Prices on Driving Behavior and Vehicle Markets*, January 2008.
[61] *Steven H. Wade, Price Responsiveness in the AEO2003 NEMS Residential and Commercial Buildings Sector Models*, Energy Information Administration, U.S. Department of Energy, 2008.
[62] "Short-Term Energy Outlook," op cit.

Table VII-4
Breakdown of Income Categories by Race (2008)[63]

Income Category	Less than $10K	$10K-$30K	$30K-$50K	More than $50K	Totals
White Households	5.8%	21.7%	19.6%	52.9%	100%
Hispanic Households	9.2%	29.1%	25.0%	36.7%	100%
Black Households	15.8%	30.3%	21.7%	32.3%	100%

Source: Various sources, as outlined in the footnotes.

VII.B. Effects on Low-Income Groups, the Elderly, African Americans, and Hispanics

VII.B.1. Impacts on Cost of Living and Poverty Rates

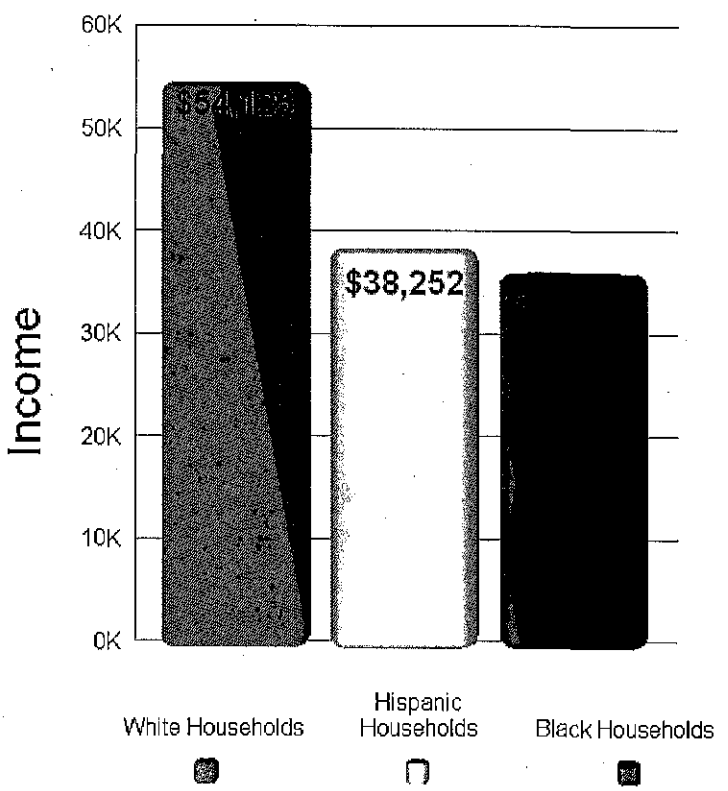
As discussed, one of the major effects of implementing the EPA CO_2 restrictions will be to substantially increase the costs of energy and, especially, electricity. This will impact minorities disproportionately, both because they have lower incomes to begin with, but also because they have to spend proportionately more of their incomes on utilities and electricity. For example:

- Whites spend, on average, about six percent of their income on utilities, whereas African Americans spend ten percent and Hispanics spend seven percent.
- Whites spend, on average, about two percent of their income on electricity, whereas African Americans spend nearly four percent and Hispanics three percent.

As shown in Figure VII-2, there is an average income disparity of $15,870 between non-Hispanic white families and Hispanic families and an average income disparity of $18,165 between non-Hispanic white families and black families.

[63] *2001 Survey of Residential Energy Consumption (RECS)*, op. cit.

Figure VII-2
Racial Income Disparities

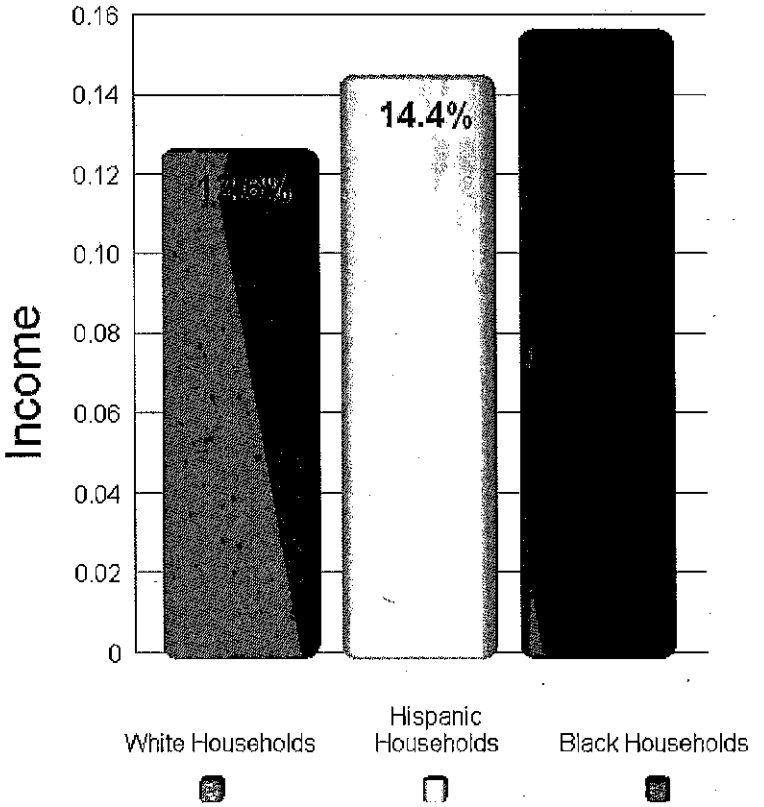


Source: U.S. Energy Information Administration, "Residential Energy Consumption Survey (2001)"

The implication of these data is that rising energy costs inflict greater harm on minority families. Lower-income families are forced to allocate larger shares of the family budget for energy expenditures, and minority families are significantly more likely to be found among the lower-income brackets. Figure VII-3 shows that, in the aggregate, Hispanic families must dedicate almost two percent more of their after-tax income to energy expenditures than white families. Black families must dedicate almost three percent more than white families.[64]

[64]Steven H. Wade, op. cit.

Figure VII-3
Energy Expenditures As a Percentage of After Tax Income



Source: U.S. Energy Information Administration, "Residential Energy Consumption Survey (2001)"

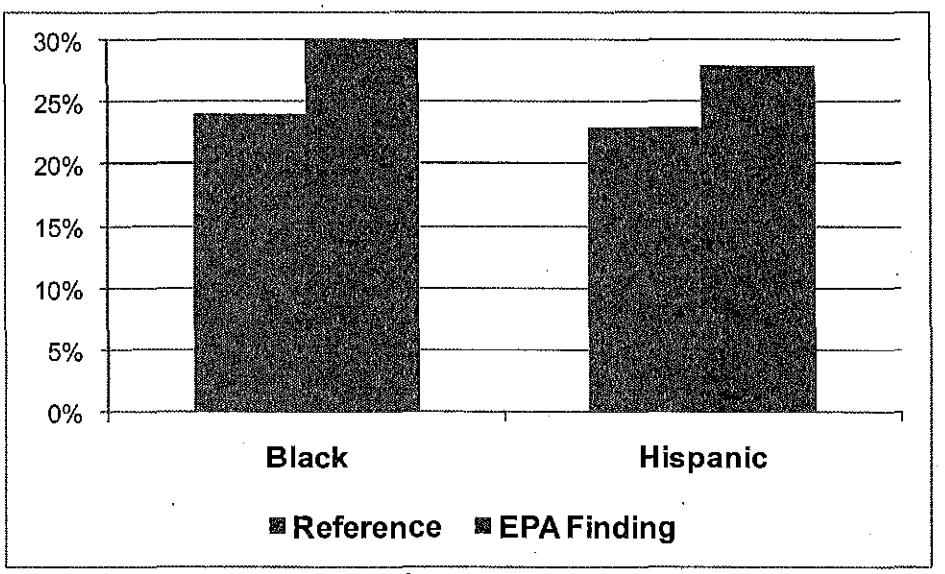
This disparity between racial groups means that rising energy costs have a disproportionately negative effect on the ability of minority families to acquire other necessities such as food, housing, childcare, or healthcare. Essentially, the EPA Finding will have the effect of a discriminatory tax based on race.

Black and Hispanic workers -- and their families – will likely be adversely affected threefold if the EPA Endangerment Finding is implemented: Their incomes will be substantially less than they would without the regulation, their rates of unemployment will increase substantially, and it will take those who are out of work much longer to find another job. As might be expected, these impacts on earnings and employment will increase the rates of poverty among African Americans and Hispanics.

The poverty rate for African Americans is slightly higher than that for Hispanics, the poverty rates for African Americans and Hispanics are nearly twice the national average and nearly three times as high as the rate for non-Hispanic Whites. As shown in Figure VII-4, we estimate that one of the impacts of implementing the EPA Finding will be to, by 2025:

- Increase the poverty rate for Hispanics from 23 percent to about 28 percent. This represents an increase in Hispanic poverty of nearly 22 percent.
- Increase the poverty rate for African Americans from 24 percent to about 30 percent. This represents an increase in Black poverty of 20 percent.

Figure VII-4
Increases in 2025 Poverty Rates Caused by the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

This must be considered one of the more troubling potential impacts of the EPA Finding. While it is possible to debate specific estimates, timelines, and percentages, an unintended result of the EPA regulation will likely be to force millions of African Americans and Hispanics below the poverty line -- many of whom have only recently managed to work their way out of poverty. Further, it should also be recognized that the welfare reforms of the 1990s and the 2007 – 2009 recession have made the social safety net at both the Federal and state levels less comprehensive and much stricter. This will have unfortunate implications for those African Americans and Hispanics whose incomes are reduced below the poverty level over the next decade because of the EPA action.

In addition, the EPA CO_2 restrictions, by increasing the costs of energy and energy-intensive building materials, will also increase the costs of housing. This will seriously affect African Americans and Hispanics because they have higher housing costs and a lower rate of home ownership than Whites:

- Only about ten percent of Whites pay 50 percent or more of their income in housing costs; the comparable percentage for African Americans and Hispanics is about 20 percent.
- Whereas 25 percent of Whites pay 30 percent or more of their income in housing costs, the comparable percent for African Americans is 40 percent, and for Hispanics it is 45 percent.

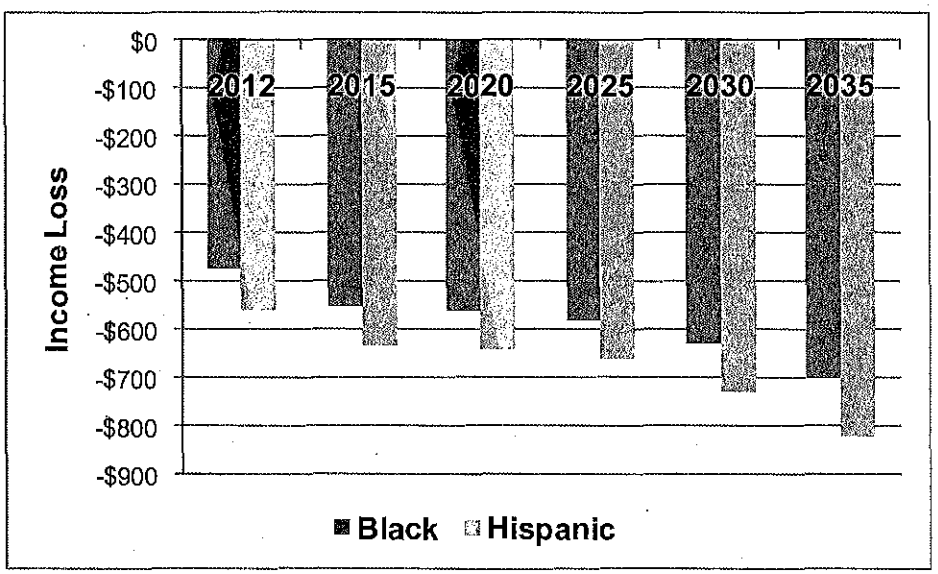
VII.B.2. Impacts on Incomes

Consumers and households will ultimately bear the added costs that will result from the EPA Endangerment Finding. The Finding will result in fuel switching away from less costly conventional fuels, such as coal, towards more costly lower carbon alternatives. Further, costs for all carbon-based energy sources (e.g., coal, oil, and natural gas) will increase significantly. As discussed, these added costs will reduce GDP, economic activity, and household incomes, and higher energy prices will increase prices throughout the economy and will impose increased financial costs on households.

As shown in Figure VII-5, implementation of the EPA Endangerment Finding will reduce Black and Hispanic household incomes by increasing amounts each year:

- In 2015, Black median household income will decrease about $550 compared to the reference case (which assumes that the EPA Finding is not implemented), and Hispanic median household income will decrease more than $630 compared to the reference case.
- In 2025, Black median household income will be nearly $600 less than under the reference case, and Hispanic median household income will be about $660 less than under the reference case
- In 2035, Black median household income will be $700 less than under the reference case, and Hispanic median household income will be $820 less.
- The cumulative loss in Black median household income over the period 2012 – 2035 will exceed $13,000.
- The cumulative loss in Hispanic median household income over the period 2012 – 2035 will exceed $15,000.

Figure VII-5
Losses in Black and Hispanic Median Household Incomes Caused by the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

VII.B.3. Impacts on Jobs and Unemployment

If implemented, the EPA Endangerment Finding would divert resources currently used to produce goods and services into the task of obtaining energy from sources that are less energy efficient and more costly than fossil fuels. As consumers and businesses are forced to spend more on energy due to its higher costs, they have less to spend on other goods and services, thus causing decreases in demand for the quantities of goods and services produced by the economy. In addition, as the resources are diverted to more expensive energy sources, labor productivity will decrease. Business activity is likely to contract relative to the levels that would have prevailed without the EPA policy-induced energy cost increases. Demand for labor will weaken because employers need to spend less on labor in order to supply the reduced amount of goods and services demanded by consumers.

As a result, payments to labor will decline relative to that which would have prevailed without the higher energy costs. This will be reflected in a combination of reduced employment, and lower wages for those workers not losing their job.[65] The actual number of jobs that would be lost depends on whether higher-paying or lower-paying jobs are the ones that are eliminated. In our estimates, we assumed that jobs would be lost in equal proportions across the entire wage distribution, and estimated the

[65]Because these average losses in employment assume that workers absorb some of the reductions in equilibrium payments to labor, there is still some depression in the average salaries for those who retain their jobs.

loss in "average jobs." The job estimates are inclusive of all increases in so-called "green jobs" that may be created as a result of the proposed EPA action.

It should be noted that the economic impact of the EPA Finding will not be a short-term phenomenon that consists of a few years of belt-tightening, after which the economy will be on a different (lower-carbon) track. Rather, getting to the lower-carbon future will require a long-term, sustained effort to continue increasing investments in more costly forms of energy, and this implies that for several decades payments to workers will remain lower than under the reference case that assumes no EPA CO_2 regulation.

The most salient characteristic of the employment status of the demographic groups is the fact that the unemployment rates for African Americans and Hispanics have consistently been much higher than average and than those for Whites:

- The unemployment rate for African Americans has historically been about twice that of Whites.
- The unemployment rate for Hispanics has been significantly higher than that for Whites, but lower than that for African Americans.
- Unemployment rates for African Americans and Hispanics tend to increase more during recessions, and decrease less during recoveries than do those for Whites.
- The duration of unemployment tends to be longer for African Americans and Hispanics than for Whites
- While different levels of educational attainment explain some of the differences in unemployment rates, they do not account for all of the differences.

African Americans and Hispanics are also at a disadvantage in the labor force when they are employed, for they tend to be disproportionably concentrated in lower paid jobs. Even when standardized for levels of education, Black workers tend to make less than their White counterparts. For example, African Americans and Hispanics are disproportionately concentrated in jobs that pay the minimum wage or below.

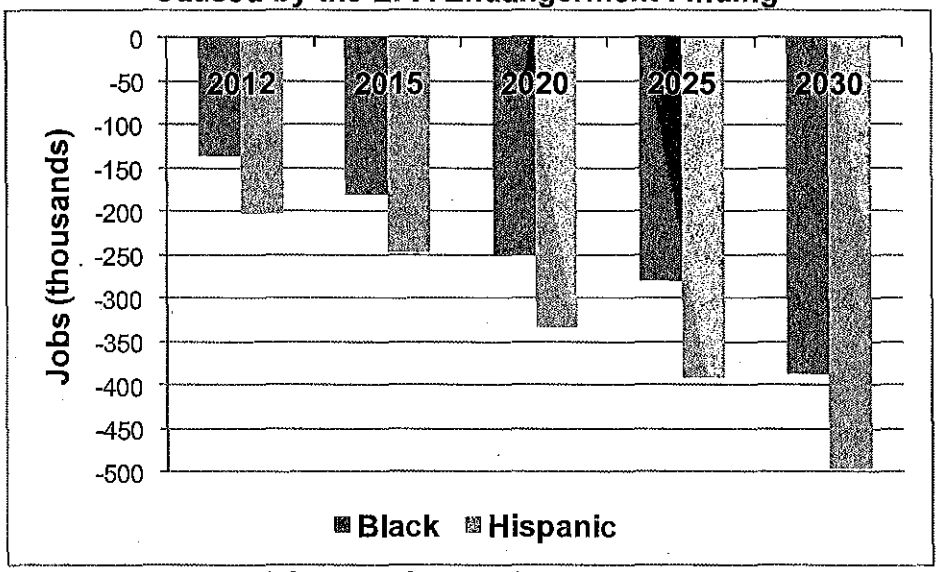
In addition to increased difficulty in paying home energy costs, sustained high energy prices could have an impact on the employment rate of low-wage workers. High energy prices cause businesses to cut costs by laying off workers. Experience has shown that those workers on the margin are usually the first to go, and implementation of the EPA Finding will likely result in a significant increase in unemployment among low-wage workers – who are disproportionately Black and Hispanic.

Figure VII-6 shows that, nationwide, implementation of the EPA Finding would result in the loss of an increasingly large number of Black and Hispanic jobs:

- In 2015, 180,000 Black jobs would be lost and nearly 250,000 Hispanic jobs would be lost.

- In 2025, more than 300,000 Black jobs would be lost and nearly 400,000 Hispanic jobs would be lost.
- In 2030, nearly 390,000 Black jobs would be lost and nearly 500,000 Hispanic jobs would be lost.

Figure VII-6
Black and Hispanic Job Losses
Caused by the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

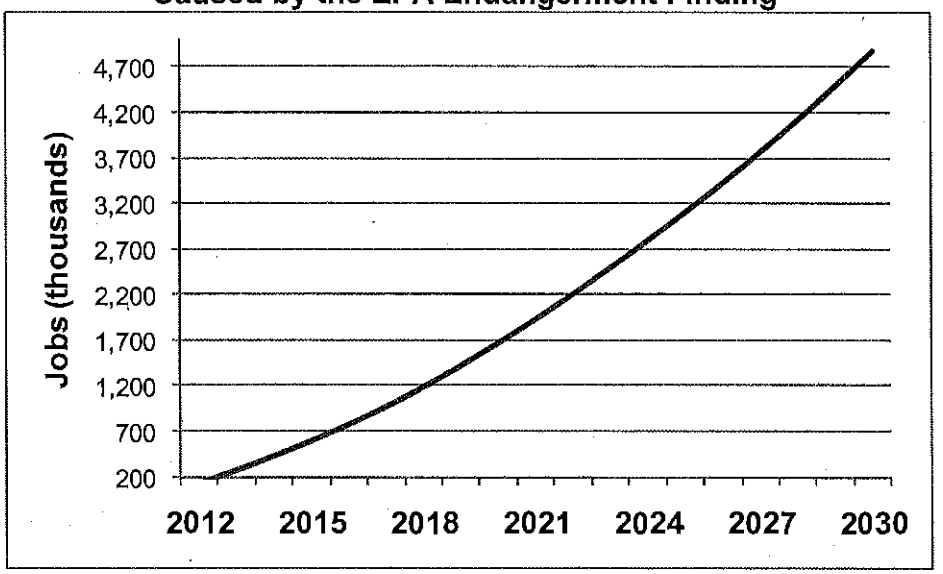
The job losses increase every year and the cumulative losses for African Americans and Hispanics will increase rapidly over the next two decades if the EPA regulation is enacted. As shown in Figure VII-7:

- By 2020, cumulative job losses for African Americans will total nearly 1.7 million.
- By 2030, cumulative job losses for African Americans will total about 4.9 million.

As shown in Figure VII-8:

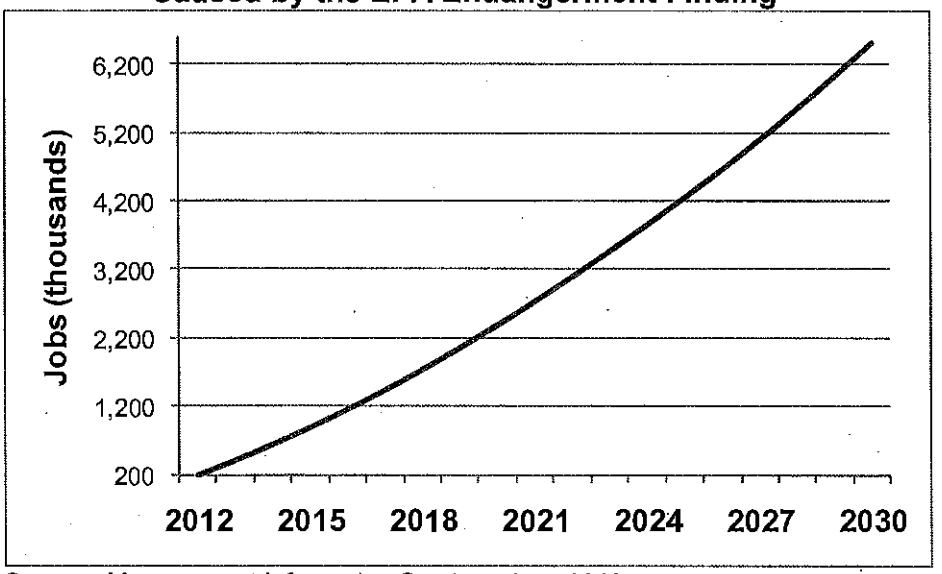
- By 2020, cumulative job losses for Hispanics will total 2.4 million.
- By 2030, cumulative job losses for Hispanics will total more than 6.5 million.

Figure VII-7
Cumulative Black Job Losses
Caused by the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

Figure VII-8
Cumulative Hispanic Job Losses
Caused by the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

VII.B.4. Impacts on Basic Expenditures and Discretionary Income

As discussed, African Americans and Hispanics have, on average, significantly lower incomes than Whites, and have to spend proportionately larger shares of their incomes on basic necessities such as food, housing, clothing, and utilities. Implementing the EPA Finding will significantly increase the costs of all fossil fuels and, since energy is a basic component in the production of all commodities, the prices of all goods will increase as the energy price increases work their way through the economy. Thus, the EPA Finding will likely have a doubly negative impact on the living standards of African Americans and Hispanics:

- First, implementing the Finding will decrease Black and Hispanic incomes below where they would be in the absence of the regulation.
- Second, the Finding will increase the costs of the basic goods upon which African Americans and Hispanics must spend their reduced incomes.

In the face of reduced incomes and rising prices, the trade-offs that African Americans and Hispanics will face involve reallocating spending between food, clothing, housing, and heat. For example, proportionately:

- African Americans spend 20 percent more of their income on food, ten percent more on housing, 40 percent more on clothing, and 50 percent more on utilities than do Whites.
- Hispanics spend 90 percent more of their income on food, five percent more on housing, 40 percent more on clothing, and 10 percent more on utilities than do Whites.

Implementing the EPA Finding will likely exacerbate this situation by forcing African Americans and Hispanics to spend an even more disproportionate share of their incomes -- which will have been reduced due to the effects of the CO_2 restrictions -- on basic necessities.

Finally, the cumulative impact of increased unemployment, reduced incomes, and increased prices for housing, basic necessities, energy, and utilities resulting from implementation of the EPA Finding will be to further reduce Black and Hispanic discretionary incomes. Discretionary income is the money that remains for spending or saving after people pay their taxes and purchase necessities. It is an important concept both because of the financial flexibility it gives individuals and because many businesses depend on discretionary spending for sales and profits. Implementing the EPA Finding will reduce the average discretionary incomes of both African Americans and Hispanics.

VII.B.5. Impacts of Higher Energy Burdens: Increased Energy Poverty

One of the more serious, but less recognized effects of implementing the EPA Finding will be to significantly increase the energy burdens for the elderly, African Americans, and Hispanics and increase the numbers of African Americans and Hispanics suffering from "energy poverty."

The EPA Finding will greatly increase energy prices and set off repercussions throughout the economy, but nowhere do high prices bring consequences as swiftly and harshly as in low-income and minority households. For the tens of millions of low-income households throughout the country, the higher energy prices will intensify the difficulty of meeting the costs of basic human needs, while increasing energy burdens that are already excessive. At the same time, the EPA regulation will threaten low-income access to vital energy and utility services, thereby endangering health and safety while creating additional barriers to meaningful low-income participation in the economy. While home energy costs average about four percent per year in middle class households, they can reach a staggering 70 percent of monthly income for low-income families and seniors.

Low-income households, in order to make ends meet, are forced to spend less on home energy than their higher-income counterparts.[66] For the low-income elderly who are particularly susceptible to weather-related illness such as potentially-fatal hypothermia, a high energy burden can represent a life-threatening challenge. Given their susceptibility to temperature-related illnesses, elderly households tend to require more energy to keep their homes at a reasonable comfort level. However, despite this requirement, low-income elderly households spend 16 percent less on residential energy than all households. Implementation of the EPA Finding would place many elderly households at serious risk by forcing them to heat and cool their homes at levels that are inadequate for maintenance of health.

The price increases resulting from carbon restrictions would be highly regressive -- they would place a relatively greater burden on lower-income households than on higher-income ones. For example, one study estimated that the price increases resulting from a 15 percent reduction in carbon emissions would cost the average household in the lowest one-fifth of the income distribution about $560 a year, or 3.3 percent of its average income. Households in the top one-fifth of the income distribution would pay an additional $1,800 a year, or 1.7 percent of their average income.[67]

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[66]U.S. Congressional Budget Office, "Shifting the Cost Burden of a Carbon Cap-and-Trade Program," July 2003.
[67]Ibid.

It has been widely documented that, in addition to health risks, excessive energy burdens cause a variety of difficulties for low-income households.[68] Low-income households with high energy burdens are more likely than higher-income households to incur utility service disruptions because of an inability pay their bills. In turn, service disruptions represent major crises for affected customers, often threatening the customer's home. Studies have demonstrated a clear link between homelessness and utility terminations.[69]

The consequences of loss of heat in the winter include health and safety risks associated with alternative heat and lighting sources such as kerosene and candles, hunger and malnutrition, hypothermia, eviction, and increased homelessness and failure of children to thrive. In the summers, the dangers from loss of cooling are particularly acute for the elderly.

Low-income households have made efforts to reduce their energy consumption, but these gains have been partially offset by an increase in cooling energy consumption, a result of the increased use of air conditioning. Despite these conservation efforts, rising costs of energy have caused energy bills to increase, particularly heating bills. From 1981 through 2005, overall energy expenditures for space heating and cooling for low-income households increased 37 percent and heating costs, the predominant portion of the total energy bill, increased 22 percent.[70]

The high percentage of income paid by low-income households on home energy costs is more than just a statistical fact. That higher percentage translates into serious family and social problems. For example, several studies have demonstrated a strong connection between a family's inability to pay its home energy bills and some obvious- and not so obvious-consequences, including homelessness, malnutrition, heart disease, heat stroke, and the disintegration of families – including children removed from their homes because of loss of heat or electricity. Senior homeowners are forced to sell their homes because they cannot afford their energy bills. Further, children's educations are disrupted because their parents cannot pay the energy bills and are more likely to move frequently, changing schools and interrupting their children's educational development. Finally, "Inability to pay utilities is second only to inability to pay rent as a reason for homelessness."[71]

A major negative effect of promulgating the EPA regulation would be to significantly increase the energy burdens for African Americans and Hispanics and to

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[68]See the discussion in American Gas Association, "The Increasing Burden of Energy Costs on Low-Income Consumers," September 2007; the National Consumer Law Center, "High Fuel Costs and Low-Income Families," October 2000; Meg Power, *The Cold Facts*, Citizen's Energy Corporation, 2003; and Meg Power, "Low-Income Consumers' Energy Bills and Energy Savings In 2003 and FY 2004," Economic Opportunity Studies, 2007.

[69]For example, a study conducted in the City of Philadelphia found a discernable relationship between utility termination and homelessness, and a study of homelessness in Northern Kentucky indicated that utility shutoffs were among the primary causes of homelessness in that region. Ibid.

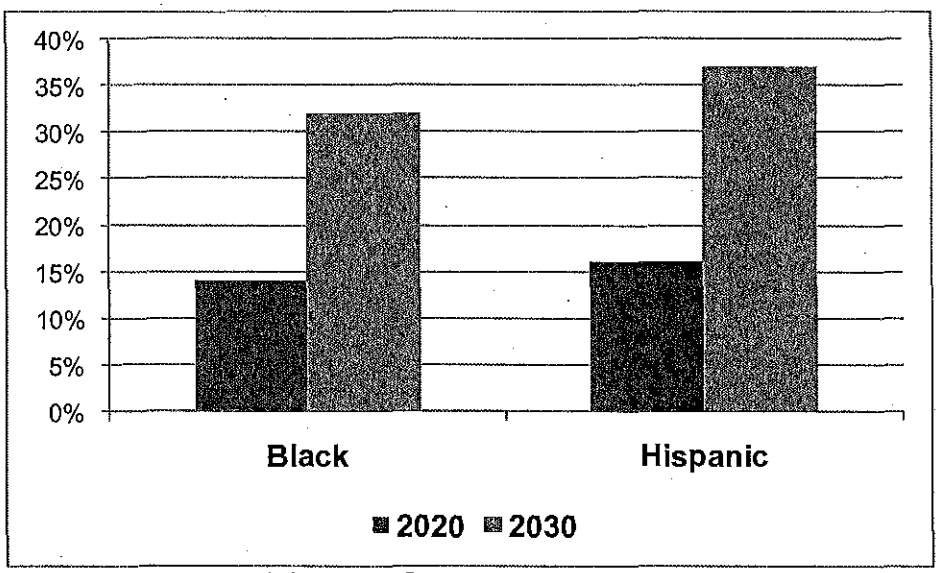
[70]Ibid.

[71]Ibid.

force large numbers of both groups into energy poverty. As shown in Figure VII-9, implementing the EPA Finding would:

- In 2020, increase the energy burden of African Americans by 14 percent and Hispanics by 16 percent
- In 2030, increase the energy burden of African Americans by nearly one-third and Hispanics by more than 35 percent

Figure VII-9
Increases in Black and Hispanic Energy Burdens
Resulting From the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

VII.B.6. Impacts on Minority Small Businesses

Electricity costs and reliability are critical to low-income households and small businesses. Given the socioeconomic profile of many minority-based communities, the consequences of cost increases and extended electricity outages are severe,[72] and include:

- Loss revenue for small businesses, which may result in price increases for local consumers
- Lost wages due to an inability to get to work
- Job losses if small businesses are significantly affected
- Disruptions in mass transit

[72]Frank M. Stewart, "An Uneven Burden: Higher Prices/Less Reliability," American Association of African Americans in Energy, 2008.

- Health and mortality concerns
- Impacts on families if schools are closed

Small businesses will face the same higher costs for energy and other products as homeowners as a result of the EPA Finding, and the impact on Black and Hispanic small businesses will be especially severe. According to a 2008 National Federation of Independent Business survey, energy costs are the second biggest problem facing small business,[73] and the Endangerment Finding would exacerbate those concerns. Further, by damaging the overall economy, the Finding would make it more difficult for small businesses to operate. As discussed, we estimate that under this regulation GDP could decline by an average of $400 billion or more annually below where it would otherwise be from 2012 to 2035; cumulative GDP losses could total more than $10 trillion by 2035. This means that, if the EPA Endangerment Finding is implemented, in the coming decades small business owners will be operating in a weakened economy, making it even harder for them to attract customers, expand their business, and create jobs.

Black- and Hispanic-owned businesses represent a disproportionately small share of total businesses, tend to be smaller and less well capitalized than White-owned businesses, and are much more vulnerable to the economic dislocations likely to result from the EPA CO_2 restrictions. For example:

- Black businesses represent less than five percent of the total businesses in the U.S., and account for less than two percent of business receipts.
- Hispanic businesses represent less than seven percent of the total businesses in the U.S., and account for less than four percent of total business receipts.
- Receipts of the average Black business are only about one-fourth as large as the average business, and receipts of Hispanic businesses are less than half as large.
- The typical Black business has less than half as many employees as the average business, and the typical Hispanic business has only about one third as many employees.
- Although there are about 1.2 million Black-owned businesses in the U.S., only about 11,000 of them have annual revenues in excess of $1 million.
- Although there are 1.6 million Hispanic-owned businesses in the U.S., only about 29,000 of them have annual revenues in excess of $1 million.

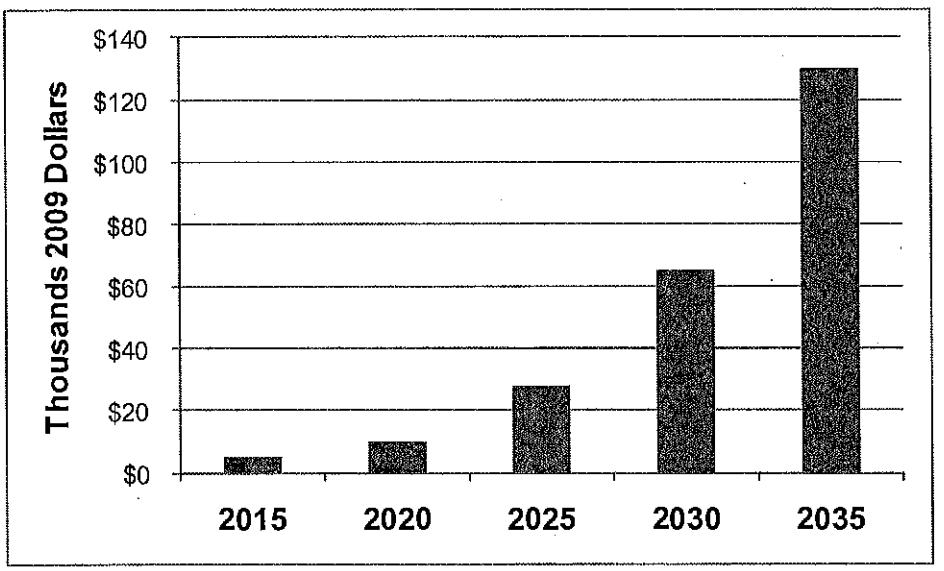
Thus, the potential impact of the EPA regulation on Black and Hispanic businesses is significant.

[73]Bruce Phillips and Holly Wade, "Small Business Problems and Priorities," National Federation of Independent Business Research Foundation, June 2008.

VII.B.7. Impacts on the Federal Debt Burden

As the economy adjusts to a reduced GDP and rising energy prices caused by the EPA Finding, economic activity declines, personal incomes decline, and employment decreases as millions of jobs are lost. The negative economic impacts accumulate, and the national debt will be affected. We estimate that the EPA regulation could increase the federal debt by nearly 30 percent by 2035 – over and above what it would be without the regulation (Figure VII-10).[74] This represents an additional $33,000 per person, or more than $130,000 for a family of four.[75] Since Black and Hispanic incomes are well below the U.S. average, the increased burden of this incremental debt would be 25 percent higher for Hispanic families and about 33 percent higher for Hispanic families.

Figure VII-10
Increased Federal Debt Burden For a Family of Four
Resulting From the EPA Endangerment Finding



Source: Heritage Foundation and Management Information Services, Inc., 2010.

[74]These estimates are based on the Heritage Foundation studies, op. cit.
[75]these burdens come after adjusting for inflation and are in addition to the $450,000 per family of federal debt that will accrue over this period even without cap and trade.

VII.C. Impacts on African Americans and Hispanics by State

VII.C.1. Disparate Impacts on States

The previous discussion indicates that the impact of implementing the EPA Finding on the U.S. economy, and on low-income groups, African Americans, and Hispanics, will be severe. The regulation will cause higher energy costs to spread throughout the economy as producers try to cover their higher production costs by raising their product prices, and these impacts will be felt to varying degrees in different states. For example, because virtually all businesses rely on electricity to produce and sell goods and services, the economic impacts of coal-based energy extend far beyond the generation and sale of electricity. The availability of low-cost electricity produces powerful ripple effects that benefit state economies as a whole, but implementation of the EPA regulation would greatly increase electricity prices – and much more in some states than in others.

For example, consumers in the Midwest and Southeast will literally face double the impacts of carbon caps than consumers elsewhere in the country. Oak Ridge National Laboratory found that the carbon intensity of heating fuel and electricity generation will lead to very different cost increases in residential fuels. The Oak Ridge findings reveal dramatic variation in impacts across the regions by 2030, with vulnerable consumers in the South and Midwest incurring price increases more than double those of lower-income consumers in the Northeast and West.[76]

Since the proposed CO_2 restrictions would require continuing and increasingly severe reductions in the use of fossil energy to produce electricity in the states and cause large energy price increases, if the regulation is implemented all states will suffer substantial and increasingly severe economic and jobs impacts:

- Residents of all states will face increased costs for energy, utilities, and for other goods and services and will experience increased costs of living, beginning in 2012.
- Energy and electricity prices in each state would increase substantially, but to different degrees.
- The growth rates of state wages and incomes would be negatively affected over the next two decades, and by 2030 states' per capita personal incomes would be significantly lower than in the absence of the EPA regulation.
- Millions of jobs would be lost in the states, employment would be lower, and unemployment higher.
- Industries and firms will relocate among states, thus causing a further loss of jobs in many states.

[76]National Community Action Foundation, National Consumer Law Center, Public Citizen, and Friends of the Earth, "Statement on Consumer Impacts of a Cap-and-Trade Climate Change Policy," March 12, 2009.

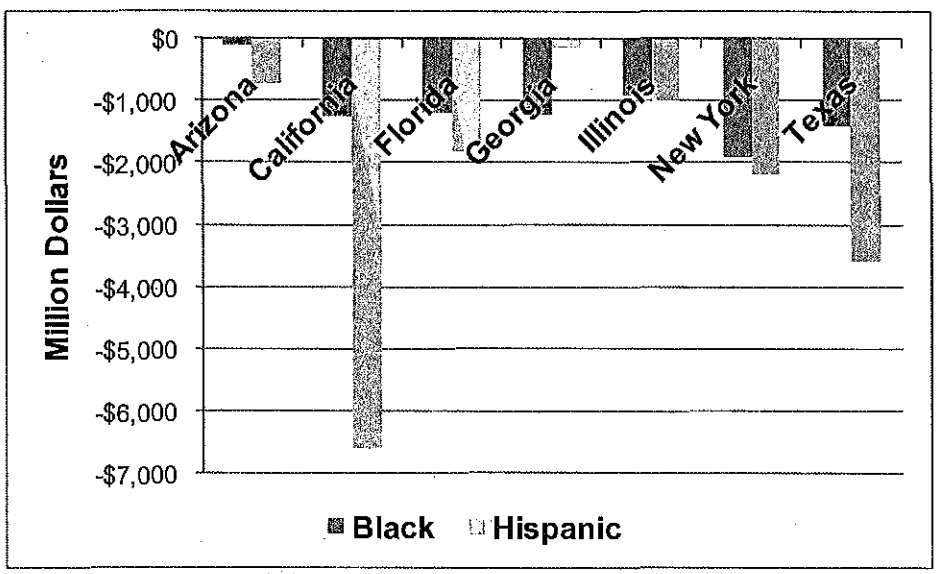
- New firms will hesitate to locate in some states, thus causing a reduction in the number of new jobs created.
- The combination of reduced economic activity in the states, decreased personal incomes for states' residents, and increased unemployment will strain state and local government budgets and result in reduced public services and increased taxes.

VII.C.2. Black and Hispanic Incomes

As part of this research we estimated the impacts of the EPA finding on African Americans and Hispanics in the seven states where they are the most heavily concentrated: Arizona, California, Florida, Georgia, Illinois, New York, and Texas. Figure VII-11 shows the average annual impacts in these states, 2012-2035, of the EPA endangerment finding on Black and Hispanic personal incomes. This figure illustrates that, in all states (except Georgia), the impacts on Hispanic incomes exceed the impacts on Black incomes, since there are more Hispanics than African Americans residing in these states. Further, the growth rates of the Hispanic population exceed those of African Americans in all of these states.

This figure also shows that the impacts vary widely among the states. The greatest loss of income will be experienced by Hispanics in California, since this state has, by far, the largest number of Hispanic residents and the most rapidly growing Hispanic population.

Figure VII-11
Average Annual Impact in Selected States, 2012-2035, of the EPA Endangerment Finding on Black and Hispanic Personal Incomes



Source: Management Information Services, Inc., 2010.

VII.C.3. Black and Hispanic Jobs

Figure VII-12 shows the average annual impacts in the seven states, 2012-2035, of the EPA endangerment finding on Black and Hispanic jobs. The jobs concept here is annual, full time equivalent jobs.[77] This figure illustrates that, in all states (except for Georgia), Hispanic job losses exceed Black job losses, since there are more Hispanics than African Americans residing in these states. Further, the growth rates of the Hispanic population exceed those of African Americans in all of these states.

This figure also shows that the impacts vary widely among the states. The greatest job losses will be experienced by Hispanics in California, since this state has, by far, the largest number of Hispanic residents. Nevertheless, the job losses are substantial in every state. For example, every year 2012 – 2035, average Hispanic job losses will total:

- Nearly 70,000 in California
- Nearly 40,000 in Texas
- Nearly 20,000 in Florida
- Nearly 13,000 in New York

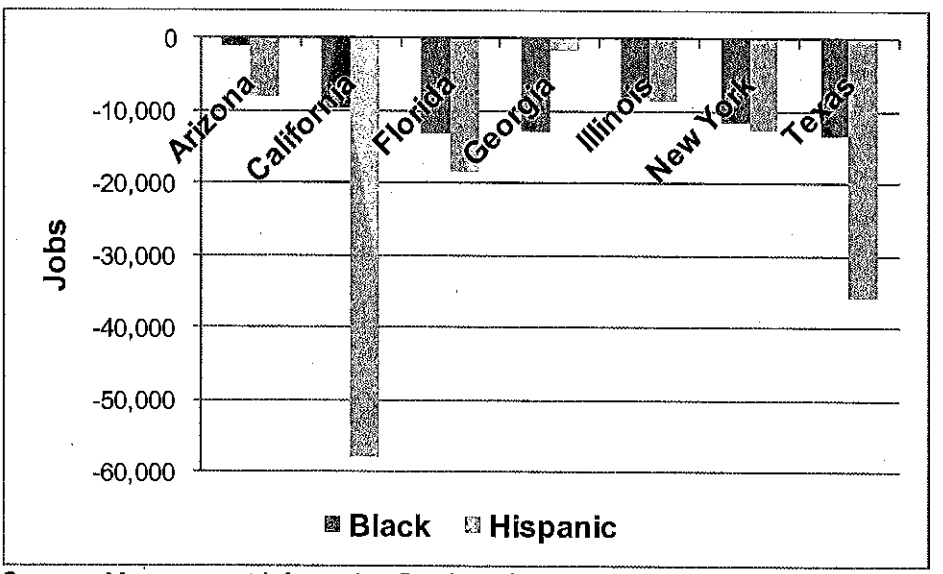
Every year 2012 – 2035, average Black job losses will total:

- More than 13,000 in Texas
- More than 13,000 in Florida
- Nearly 13,000 in Georgia
- Nearly 12,000 in New York

While Hispanic jobs losses exceed Black job losses in all of the states except Georgia, in some states job losses for the two groups are about the same – for example, in New York and in Illinois.

[77] An FTE job is defined as 2,080 hours worked in a year's time, and adjusts for part time and seasonal employment and for labor turnover. Thus, two workers each working six months of the year would be counted as one FTE job.

Figure VII-12
Average Annual Impact in Selected States, 2012-2035, of the EPA Endangerment Finding on Black and Hispanic Jobs



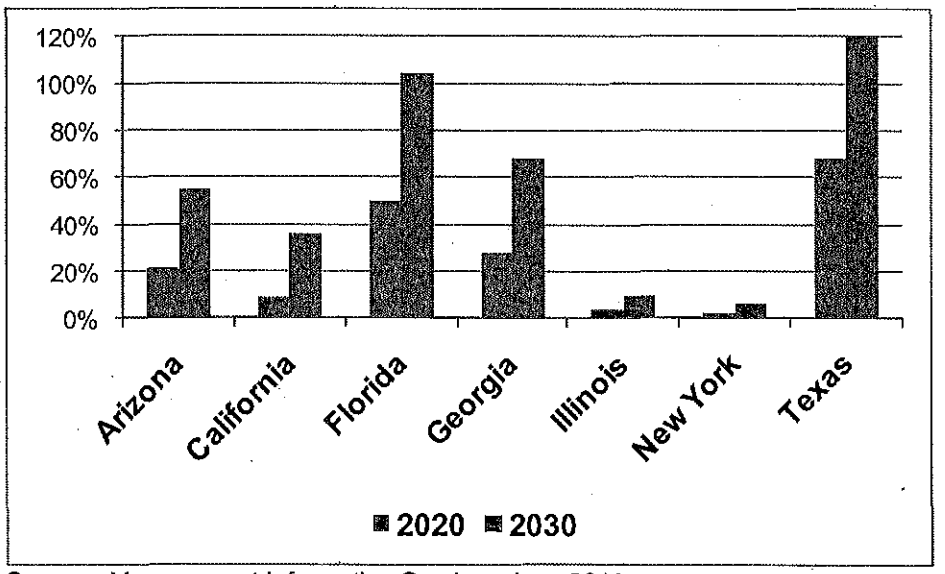
Source: Management Information Services, Inc., 2010.

VII.C.4. Black and Hispanic Energy Burdens

Figures VII-13 and VII-14 show the increases in Hispanic and Black energy burdens in the states in 2020 and 2030 resulting from the EPA Endangerment Finding. These figures illustrate that:

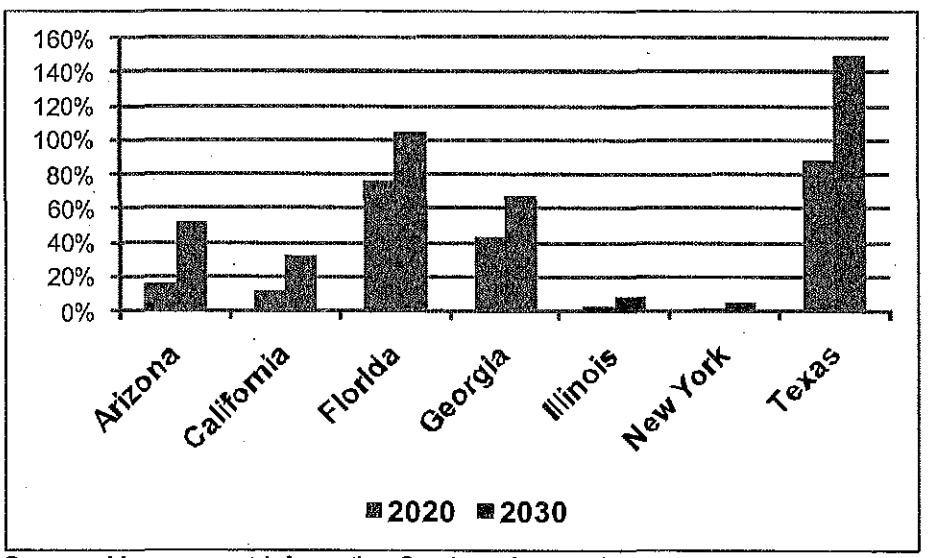
- The energy burdens for both African Americans and Hispanics increase in each year.
- For each group, the increases in energy burdens in 2030 are much larger than those in 2020.
- For each group, the increases in energy burdens are the largest in Texas, Florida, Georgia, and Arizona.
- In some states, such as Florida, Georgia, and Texas, the increased energy burden is larger for African Americans than for Hispanics
- In some other states, such as Arizona, California, and Illinois, the increased energy burden is larger for Hispanics than for African Americans

Figure VII-13
Increase in Hispanic Energy Burdens in Selected States
Resulting From the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

Figure VII-14
Increase in Black Energy Burdens in Selected States
Resulting From the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.

VIII. FINDINGS AND IMPLICATIONS

Our major finding is that the CO_2 restrictions implied in the EPA Endangerment Finding would have serious economic, employment, and energy market impacts at the national level and for all states, and that the impacts on low-income groups, the elderly, African Americans, and Hispanics would be especially severe. On the basis of studies of the economic impact of carbon restrictions, we estimated that implementation of the EPA Finding would:

- Significantly reduce U.S. GDP every year over the next two decades, and by 2030 GDP would be about $500 billion less than in the reference case – which assumed no EPA carbon restrictions
- Significantly reduce U.S. employment over the next two decades, and by 2030 would result in the loss of 2.5 million jobs
- Significantly reduce U.S. household incomes over the next two decades, and by 2030 average household income would be reduced by about $1,200 annually

In addition, the EPA carbon restrictions would significantly greatly U.S. energy costs, and by 2030 these increases (above the reference case) could total:

- 50 percent for gasoline prices
- 50 percent for residential electricity prices
- 75 percent for industrial electricity prices
- 75 percent for residential natural gas prices
- 100 percent for industrial natural gas prices
- 40 percent for jet fuel prices
- 40 percent for diesel prices
- 600 percent for electric utility coal prices

The EPA regulation will impact low income groups, the elderly, and minorities disproportionately, both because they have lower incomes to begin with, but also because they have to spend proportionately more of their incomes on energy, and rising energy costs inflict great harm on minority families. Lower-income families are forced to allocate larger shares of the family budget for energy expenditures, and minority families are significantly more likely to be found among the lower-income brackets.

This disparity between racial groups means that rising energy costs have a disproportionately negative effect on the ability of minority families to acquire other necessities such as food, housing, childcare, or healthcare. Essentially, the EPA Finding will have the effect of a discriminatory tax based on race.

Impact on Poverty

Black and Hispanic workers -- and their families – will likely be adversely affected threefold if the EPA Endangerment Finding is implemented: Their incomes will be substantially less than they would without the regulation, their rates of unemployment will increase substantially, and it will take those who are out of work much longer to find another job. These impacts on earnings and employment will increase the rates of poverty among African Americans and Hispanics, and we estimate that one of the impacts of implementing the EPA Finding will be to, by 2025:

- Increase the poverty rate for Hispanics from 23 percent to about 28 percent. This represents an increase in Hispanic poverty of nearly 22 percent
- Increase the poverty rate for African Americans from 24 percent to about 30 percent. This represents an increase in Black poverty of 20 percent

This must be considered one of the more troubling potential impacts of the EPA Finding. An unintended result of the EPA regulation will likely be to force millions of African Americans and Hispanics below the poverty line -- many of whom have only recently managed to work their way out of poverty.

In addition, the EPA CO_2 restrictions, by increasing the costs of energy and energy-intensive building materials, will tend to increase the costs of housing. This will seriously affect African Americans and Hispanics because they have higher housing costs and a lower rate of home ownership than Whites:

- Only about ten percent of Whites pay 50 percent or more of their income in housing costs; the comparable percentage for African Americans and Hispanics is about 20 percent.
- Whereas 25 percent of Whites pay 30 percent or more of their income in housing costs, the comparable percent for African Americans is 40 percent, and for Hispanics it is 45 percent.

Impact on Incomes

Consumers and households will ultimately bear the added costs that will result from the EPA Endangerment Finding, and implementation of the Finding will reduce Black and Hispanic household incomes by increasing amounts each year:

- In 2015, Black median household income will decrease about $550 compared to the reference case (which assumes that the EPA Finding is not implemented), and Hispanic median household income will decrease $630 compared to the reference case.

- In 2025, Black median household income will be nearly $600 less than under the reference case, and Hispanic median household income will be about $660 less than under the reference case.
- In 2035, Black median household income will be $700 less than under the reference case, and Hispanic median household income will be $820 less.
- The cumulative loss in Black median household income over the period 2012 – 2035 will exceed $13,000.
- The cumulative loss in Hispanic median household income over the period 2012 – 2035 will exceed $15,000.

Impact on Jobs

If implemented, the EPA Endangerment Finding would divert resources currently used to produce goods and services into the task of obtaining energy from sources that are less energy efficient and more costly than fossil fuels. Business activity is likely to contract relative to the levels that would have prevailed without the EPA policy-induced energy cost increases, demand for labor will weaken, and jobs will be lost.

The most salient characteristic of the employment status of the demographic groups is the fact that the unemployment rates for African Americans and Hispanics have consistently been much higher than average and than those for Whites. African Americans and Hispanics are also at a disadvantage in the labor force when they are employed, for they tend to be disproportionably concentrated in lower paid jobs. Nationwide, implementation of the EPA Finding would result in the loss of an increasingly large number of Black and Hispanic jobs:

- In 2015, 180,000 Black jobs would be lost and nearly 250,000 Hispanic jobs would be lost.
- In 2025, more than 300,000 Black jobs would be lost and nearly 400,000 Hispanic jobs would be lost.
- In 2030, nearly 390,000 Black jobs would be lost and nearly 500,000 Hispanic jobs would be lost.

The job losses increase every year, and the cumulative losses for African Americans and Hispanics will increase rapidly over the next two decades if the EPA regulation is enacted:

- By 2020, cumulative job losses for African Americans will total nearly 1.7 million.
- By 2030, cumulative job losses for African Americans will total about 4.9 million.
- By 2020, cumulative job losses for Hispanics will total 2.4 million.
- By 2030, cumulative job losses for Hispanics will total more than 6.5 million.

Impact on Basic Expenditures and Discretionary Income

African Americans and Hispanics have, on average, significantly lower incomes than Whites, and have to spend proportionately larger shares of their incomes on basic necessities such as food, housing, clothing, and utilities. Implementing the EPA Finding will significantly increase the costs of all fossil fuels and, since energy is a basic component in the production of all commodities, the prices of all goods will increase as the energy price increases work their way through the economy. Thus, the EPA Finding will likely have a doubly negative impact on the living standards of African Americans and Hispanics:

- First, implementing the Finding will decrease Black and Hispanic incomes below where they would be in the absence of the regulation.
- Second, the Finding will increase the costs of the basic goods upon which African Americans and Hispanics must spend their reduced incomes.

In the face of reduced incomes and rising prices, the trade-offs that African Americans and
Hispanics will face involve reallocating spending between food, clothing, housing, and heat. For example, proportionately:

- African Americans spend 20 percent more of their income on food, ten percent more on housing, 40 percent more on clothing, and 50 percent more on utilities than do Whites.
- Hispanics spend 90 percent more of their income on food, five percent more on housing, 40 percent more on clothing, and 10 percent more on utilities than do Whites.

Implementing the EPA Finding will exacerbate this situation by forcing African Americans and Hispanics to spend an even more disproportionate share of their incomes -- which will have been reduced due to the effects of the CO_2 restrictions -- on basic necessities.

Finally, the cumulative impact of increased unemployment, reduced incomes, and increased prices for housing, basic necessities, energy, and utilities resulting from the EPA Finding will be to further reduce Black and Hispanic discretionary incomes. Discretionary income is the money that remains for spending or saving after people pay their taxes and purchase necessities. It is an important concept both because of the financial flexibility it gives individuals and because many businesses depend on discretionary spending for sales and profits. Implementing the EPA Finding will reduce the average discretionary incomes of both African Americans and Hispanics.

Increased Energy Poverty

One of the more serious, but less recognized effects of implementing the EPA Finding will be to significantly increase the energy burdens for the elderly, African Americans, and Hispanics and increase the numbers of African Americans and Hispanics suffering from "energy poverty." The Finding will greatly increase energy prices and set off repercussions throughout the economy, but nowhere do high prices bring consequences as swiftly and harshly as in low-income and minority households. For the tens of millions of low-income households, the higher energy prices will intensify the difficulty of meeting the costs of basic human needs, while increasing energy burdens that are already excessive. At the same time, the EPA regulation will threaten low-income access to vital energy and utility services, thereby endangering health and safety while creating additional barriers to meaningful low-income participation in the economy. While home energy costs average about four percent per year in middle class households, they can reach a staggering 70 percent of monthly income for low-income families and seniors.

For the low-income elderly who are particularly susceptible to weather-related illness such as hypothermia, a high energy burden can represent a life-threatening challenge. Given their susceptibility to temperature-related illnesses, elderly households tend to require more energy to keep their homes at a reasonable comfort level. However, despite this requirement, low-income elderly households spend 16 percent less on residential energy than all households. Implementation of the EPA Finding would place many elderly households at serious risk by forcing them to heat and cool their homes at levels that are inadequate for maintenance of health. The price increases resulting from carbon restrictions would be highly regressive -- they would place a relatively greater burden on lower-income households than on higher-income ones.

It has been widely documented that, in addition to health risks, excessive energy burdens cause a variety of difficulties for low-income households. Further, "Inability to pay utilities is second only to inability to pay rent as a reason for homelessness."

A major negative effect of promulgating the EPA regulation would be to significantly increase the energy burdens for African Americans and Hispanics and to force large numbers of both groups into energy poverty. Implementing the EPA Finding would:

- In 2020, increase the energy burden of African Americans by 14 percent and Hispanics by 16 percent
- In 2030, increase the energy burden of African Americans by nearly one-third and Hispanics by more than 35 percent

Impact on Minority Small Businesses

Electricity costs and reliability are critical to low-income households and small businesses. Given the socioeconomic profile of many minority-based communities, the

consequences of cost increases and extended electricity outages are severe. Small businesses will face higher costs for energy and other products as a result of the EPA Finding, and the impact on Black and Hispanic small businesses will be especially severe. Black- and Hispanic-owned businesses represent a disproportionately small share of total businesses, tend to be smaller and less well capitalized than White-owned businesses, and are much more vulnerable to the economic dislocations likely to result from the EPA CO_2 restrictions. Thus, the potential impact of the EPA regulation on Black and Hispanic Businesses is significant.

Impacts on the Federal Debt Burden

As the economy adjusts to a reduced GDP and rising energy prices caused by the EPA Finding, economic activity declines, personal incomes decline, and employment decreases as millions of jobs are lost. The negative economic impacts accumulate, and the national debt will be affected. We estimate that the EPA regulation could increase the federal debt by nearly 30 percent by 2035 – over and above what it would be without the regulation. This represents an additional $33,000 per person, or more than $130,000 for a family of four. Since Black and Hispanic incomes are well below the U.S. average, the increased burden of this incremental debt would be 25 percent higher for Hispanic families and about 33 percent higher for Hispanic families.

Impacts on African Americans and Hispanics by State

The impact of implementing the EPA Finding on the U.S. economy, and on low-income groups, African Americans, and Hispanics, will be severe. The regulation will cause higher energy costs to spread throughout the economy as producers try to cover their higher production costs by raising their product prices, and these impacts will be felt to varying degrees in different states. For example, because virtually all businesses rely on electricity to produce and sell goods and services, the economic impacts of coal-based energy extend far beyond the generation and sale of electricity. The availability of low-cost electricity produces powerful ripple effects that benefit state economies as a whole, but implementation of the EPA regulation would greatly increase electricity prices – and much more in some states than in others. For example, consumers in the Midwest and Southeast will literally face double the impacts of carbon caps than consumers elsewhere in the country.

Since the proposed CO_2 restrictions would require continuing and increasingly severe reductions in the use of fossil energy to produce electricity in the states and cause large energy price increases, if the regulation is implemented all states will suffer substantial and increasingly severe economic and jobs impacts:

- Residents of all states will face increased costs for energy, utilities, and for other goods and services and will experience increased costs of living, beginning in 2012.
- Energy and electricity prices in each state would increase substantially, but to different degrees.

- The growth rates of state wages and incomes would be negatively affected over the next two decades, and by 2030 state per capita personal incomes would be significantly lower than in the absence of the EPA regulation.
- Millions of jobs would be lost in the states, employment would be lower, and unemployment higher.
- Industries and firms will relocate among states, thus causing a further loss of jobs in many states.
- New firms will hesitate to locate in some states, thus causing a reduction in the number of new jobs created.
- The combination of reduced economic activity in the states, decreased personal incomes for states' residents, and increased unemployment will strain state and local government budgets and result in reduced public services and increased taxes.

We estimated the impacts of the EPA Finding on African Americans and Hispanics in the seven states where they are the most heavily concentrated: Arizona, California, Florida, Georgia, Illinois, New York, and Texas. In all states (except Georgia), the impacts on Hispanic incomes exceed the impacts on Black incomes, since there are more Hispanics than African Americans residing in these states. Further, the growth rates of the Hispanic population exceed those of African Americans in all of these states.

The impacts vary widely among the states. The greatest loss of income will be experienced by Hispanics in California, since this state has, by far, the largest number of Hispanic residents and the most rapidly growing Hispanic population. In all states (except for Georgia), Hispanic job losses exceed Black job losses. The impacts vary widely among the states. While Hispanic jobs losses exceed Black job losses in all of the states except Georgia, in some states job losses for the two groups are about the same – for example, in New York and in Illinois.

We estimated the increases in Hispanic and Black energy burdens in the states in 2020 and 2030 resulting from the EPA Endangerment Finding and found that:

- The energy burdens for both African Americans and Hispanics increase in each year.
- For each group, the increases in energy burdens in 2030 are much larger than those in 2020.
- For each group, the increases in energy burdens are the largest in Texas, Florida, Georgia, and Arizona.
- In some states, such as Florida, Georgia, and Texas, the increased energy burden is larger for African Americans than for Hispanics.
- In some other states, such as Arizona, California, and Illinois, the increased energy burden is larger for Hispanics than for African Americans.

Conservative Estimates

The results derived here should be viewed as conservative and as indicating the minimal negative effects that may be expected. The reason is that the CO_2 restriction programs and legislation that have been analyzed contain numerous subsidy, rebate, compensation, and incentive provisions to lessen the burden of the CO_2 restrictions – at least in the short run. The EPA Finding contains no such provisions, and EPA is not permitted to consider economic impacts in developing regulations. Thus, the impacts of the EPA Finding on the economy and labor market are likely to be even more severe than those estimated here.

MANAGEMENT INFORMATION SERVICES, INC.

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NLBMDA
NATIONAL LUMBER AND BUILDING MATERIAL DEALERS ASSOCIATION

January 10, 2011

The Honorable Darrell Issa
Chairman
Committee on Oversight and Government Reform
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Issa:

On behalf of the National Lumber and Building Material Dealers Association (NLBMDA), I would like to thank you for the opportunity to identify existing or proposed regulations that threaten to negatively impact job growth in our sector.

NLBMDA is the national association representing lumber and building material dealers with over 6,000 members operating single or multiple lumber yards and component parts serving homebuilders, subcontractors, general contractors, and consumers in the new construction, repair and remodeling of residential and light commercial structures.

NLBMDA supports programs and regimes that create safe and healthy workplace and living environments; however, we also believe that effective and informed public policy must include an appropriate level of Congressional oversight. We believe costs associated with regulations must be measured against the incremental benefits expected and that regulatory agencies should be required demonstrate proposals are based on data and measurable outcomes, consistent with long standing policy articulated in Executive Order 12866, "Regulatory Planning and Review" –

> Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well-being of the American people. In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that

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maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

In this spirit we recommend the following for your review:

EPA Lead: Renovation, Repair and Painting Rule

NLBMDA has joined other building industry associations to raise our concerns about the U.S. Environmental Protection Agency's (EPA) *Lead: Renovation, Repair and Painting* (LRRP) Rule and its proposed amendments. Our concerns, outlined in a separate joint industry letter, include implementation without appropriate number of certified renovators, inadequate test kits and poor consumer awareness programs. We are also concerned with the agency's elimination of the previously justified "opt-out" provision. Related to this regime is the additional agency proposal to require clearance testing in residential and commercial buildings. In part and whole, these regulations immediately threaten the recovery of our residential construction and renovation markets and the many jobs associated with construction and renovation. A more narrow and tailored approach is called for.

We also note several items on the regulatory agenda of the Occupational Safety and Health Administration (OSHA) that risk being over-broad in scope and mandate. The costs associated with an overly broad regulatory approach would threaten job growth in this sector, currently undergoing the worse economic conditions since the Great Depression.

OSHA Combustible Dust Proposal

OSHA has begun a rulemaking to develop a combustible dust standard for general industry. The Agency issued its Advance Notice of Proposed Rulemaking in October 2009 and held stakeholder meetings in 2009 and 2010. The next step in this rulemaking will be to initiate SBREFA in April 2011. We note that this ambitious effort may be better served by a more narrowly targeted, perhaps industry-specific focus, identifying high risk settings and determining how best to address the hazards therein. At risk will be a one-size-must-fit-all approach that is difficult and costly for many covered entities to implement and equally challenging for regulators and inspectors to fairly monitor.

OSHA Injury and Illness Protection Program

OSHA is also developing a new regulation that would mandate a standard for employers' safety and health programs, referred to as an Injury and Illness Prevention Program (I2P2). This risks overlaying specific standards with a vague mandate that employers "find and fix" all other, unidentified workplace hazards. We are concerned that this new proposal may not take into account the efforts by employers who already have effective

safety and health programs in place or how this new mandate would disrupt safety programs that have measurable successes. We are also concerned that it may allow OSHA investigators to substitute their judgment of the employer's plan on how to achieve compliance or how to address an injury not regulated under a specific standard.

OSHA Noise Proposal

OSHA recently indicated that it plans to enforce noise level standards in a dramatically different way by redefining what would be deemed "feasible" for employers to reduce overall noise in the workplace and requiring implementation of these actions unless an employer can prove making such changes will put it out of business. OSHA's proposal would alter current and effective policy that allows employers to provide personal protective equipment (such as ear plugs and ear muffs) if they are more cost-effective than engineering controls (such as noise-dampening equipment and muffling systems) in order to protect their employees from high noise levels.

In addition to the fact that it is inappropriate to push a regulatory regime's reach to the point of putting a covered entity out of business, we are concerned that the costs of compliance will outweigh the incremental protections that may be achieved in many workplace environments where the use of personal protective equipment appropriately addresses all hazards.

Again, thank you for your oversight role and your interest in aligning important regulatory regimes with other national policy objectives. We look forward to working with the Committee in the 112th Congress.

Sincerely,

Scott Lynch
Executive Vice President

National Marine Manufacturers Association

January 19, 2011

The Honorable Darrell Issa
Chairman
Committee on Oversight and Government Reform
U.S. House of Representatives
Washington, DC 20515

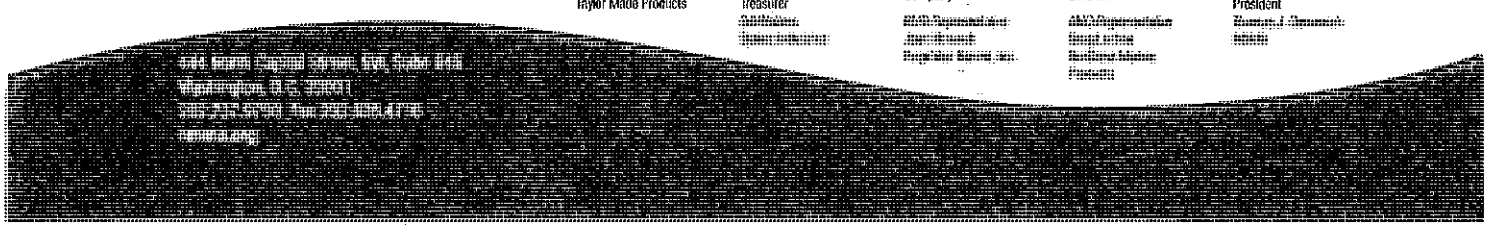
Dear Chairman Issa:

On behalf of the National Marine Manufacturers Association (NMMA) thank you for the opportunity to identify existing and proposed regulations that will negatively impact the economy and jobs.

NMMA is the leading national recreational marine trade association, with nearly 1,500 members involved in every aspect of the boating industry. NMMA members manufacture over 80 percent of recreational boats, engines, trailers, accessories, and gear used in the United States. Recreational boating contributes significantly to the U.S. economy, generating $30.8 billion in sales and services during 2009. In 2008, there were 5,284 recreational marine manufacturers, employing slightly more than 135,900 people. There were more than 33,000 retail / service boating businesses, employing 217,718 people in 2008. Over ninety percent of these businesses qualify as "small businesses" under the Small Business Administration definitions. Importantly, the export value of boats and engines was greater than imported boats and engines in 2009, resulting in the third highest trade surplus for recreational boats on record.

A robust boating industry depends on an active and employed boating public. Demographic data affirms that American boat owners are largely middle-class. Boaters' habits have been impacted by the economy with the cost of fuel for the boat, reduced income, and unemployment among the top reasons cited by active boaters as to why they had not taken their boat out on the water as much as previous years. NMMA is therefore concerned about the impact of regulations on our members and consumers as well as the impact of regulations generally on the overall health of the economy.

NMMA encourages you to push for a more thoughtful regulatory environment that provides incentives to the creation of jobs in the United States. Importantly, this environment must recognize that small businesses do not have the ability to hire large staffs just for the purpose of filling out government paperwork or parsing confusing and often contradictory regulatory mandates. More immediately, below are a few areas where there are either proposals in their formative stages or just completed agency actions now being implemented that deserve heightened scrutiny.



Corps Set to Impose Adult Life Jacket Wear on Millions of Adult Boaters Without Any Public Comment Opportunity

NMMA has long advocated that adults and children should be educated about life jackets and wear them in appropriate situations. NMMA has supported state and federal mandates requiring children aged 12 and under to wear life jackets on deck. NMMA has also supported mandates for those riding personal watercraft to wear life jackets due to the unique nature of that boating experience. However, NMMA and its members have long believed that adult boaters can best determine if their boating situation warrants the use of a life jacket. Boaters can be on the water for extended periods of time while participating in activities that may not be life jacket friendly. Boating is indeed a safe activity with over 66 million adults taking to the water in 2009. The National Transportation Safety Board on November, 16, 2010 dropped recreational boating from its "most wanted list" because of the substantial progress that has been made in boating safety. Despite this, the nation's largest provider of recreation on federal public lands has taken it upon itself to take boaters' choice away.

The U.S. Army Corps of Engineers recently announced that it plans on expanding a pilot test of mandatory wear of life jackets while boating and swimming from its "test lakes" to potentially all of the waters under USACE jurisdiction. From the Corps statements it appears that this plan will be done by decree with no proposed rule, public comment or even outreach to the affected communities prior to the final decision being made. To date, the only outreach to the affected boating public has been in the form of notices letting boaters know of the new rules once put in place.

The Corps recently announced that this spring, summer and fall it will continue to "test" the life jacket mandate on all boaters in the Pittsburg Region (the Youghiogheny River Lake and Shenago River Lake in Western PA), the Vicksburg Region (Grenada Lake, Enid Lake, Arkabutla Lake, Sardis Lake in Mississippi), and will begin in the Sacramento Region (Pine Flat Lake in Central CA). Meanwhile, other Corps regional divisions are considering moving forward with their own life jacket mandates. Once this "test" is complete, the Corps announced it will issue a report on its findings and its leadership will consider whether to adopt the policy system-wide at the end of 2011. A system-wide mandate could cover 12 million acres of public lands and waters at more than 400 lake and river projects in 43 states. The Corps has not announced any plan for offering the opportunity for public comment on its report on the test lakes or on proposed recommendations to the Corps leadership. These waters are paid for by the public and the public deserves to have a say in how they are managed before new mandates are placed on them. The Corps should be required to follow the Administrative Procedures Act and conduct public scoping sessions and the opportunity for public comment before any other "test lakes" or other sites are allowed to adopt mandatory wear mandates.

E15 Waiver & Misfueling Controls

The Environmental Protection Agency (EPA) has recently approved, via a waiver, the use of a 15 percent ethanol motor fuel blend (E15) for 2007 model year and new light-duty motor vehicles. EPA took this action despite its own awareness of the shortcomings of ethanol,

including its corrosive properties and tendency to clog motors not designed to accommodate biofuels. Many consumers have already experienced difficulties using gasoline with 10 percent ethanol (E10) finding that it causes problems in older cars, snowmobiles, boats, and lawnmowers. Given these experiences, it is incumbent upon EPA to evaluate the impact E15 can have before giving a waiver to E15. The introduction of new fuel blends containing higher amounts of ethanol increases the chances of misfueling and damaging the more than 200 million engines in use in the United States today that are not approved for the use of E15.

EPA's decision to allow E15 into the marketplace for the 2007 model year and newer light-duty motor vehicles, while prohibiting its use for older vehicles and boats, will cause confusion at the gas pump for consumers. Allowing E15 into the market without substantial precautionary measures will also cause significant rates of misfueling, especially since E15 will likely cost less than other available fuels. Misfueling will create undesirable emissions, failing or malfunctioning engines in boats and power tools. For boaters, the loss of a boat engine will likely mean the loss of a lifetime of boating as replacing equipment in difficult economic times will be much more unlikely.

EPA recently proposed extremely weak misfueling measures of only a tepid warning label to warn consumers and no engineering controls (such as a different sized nozzle as was done with unleaded fuel). EPA should reassess its E15 waiver and misfueling controls by doing the following: 1) reassess how the introduction and impact of E15 stands in contrast to other fuel introduction programs; 2) examine what level of E15 misfueling may occur, considering factors such as availability and cost; 3) explain how the public information and outreach campaign will prevent misfueling 4) determine steps to be taken if the initial labeling and public efforts are ineffective. Finally, EPA should ensure that manufacturers will not be held liable for consumer misfueling caused by the agency's action and the lack of robust misfueling controls.

NMMA appreciates your efforts to conduct oversight on the impact of regulations on the recreational marine industry and the boating and general public.

Sincerely,

Cindy L. Squires, Esq.
Chief Counsel for Public Affairs and Director of Regulatory Affairs

January 6, 2011

The Honorable Darrell Issa
Chairman, Committee on Oversight and Government Reform
2157 Rayburn House Office Building
Washington, D.C. 20515-6143

Dear Chairman Issa:

Thank you for the opportunity to provide the enclosed examples of proposed and existing regulations and policies that impede economic growth and the creation of jobs. We welcome your early attention to the growing regulatory burdens on U.S. businesses.

As the national trade association for the U.S. mining industry, the National Mining Association's (NMA) members produce the coal, minerals, metals and materials that serve as the foundation of our economy. Virtually every sector of our economy depends upon mining including agriculture, manufacturing, transportation, housing, technology and services. Regulatory costs and inefficient permitting systems directly affect our ability to create jobs and our global competitiveness.

NMA appreciates the opportunity to work with you as you examine regulations that harm economic growth, compromise our global competitiveness and hinder our ability to put more Americans to work in family-wage jobs. Please do not hesitate to contact me at kbennett@nma.org or 202-463-3240 should you need additional information or assistance.

Sincerely,

Karen C. Bennett

Karen Bennett
Vice President, Environmental Affairs

National Mining Association 101 Constitution Avenue, NW • Suite 500 East • Washington, DC 20001 • (202) 463-2600

Attachment 1

EPA's April 1, 2010 Detailed Guidance on Reviewing Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act and the Environmental Justice Executive Order:

Summary

Beginning on its very first days of the new administration, the Environmental Protection Agency (EPA) began targeting the coal mining industry, particularly eastern Appalachian coal, with new regulatory policies intended to slow or prevent the issuance of Clean Water Act (CWA) § 404 permits necessary to open or expand coal mines. These changes to current regulations and long-standing agency policies occurred through various "guidance documents" in lieu of following proper rulemaking procedures under the Administrative Procedures Act. In this way, EPA has rewritten several sections of the Clean Water Act, the National Environmental Policy Act (NEPA) and the Surface Mining Reclamation and Control Act (SMCRA) while avoiding transparency and public involvement. In addition to evading these important procedural requirements, EPA's actions interfere with the authority of the states to regulate water quality and coal mining in their states as delegated by Congress under both the CWA and SMCRA.

Background

On April 1, 2010, Peter S. Silva, assistant administrator for the Office of Water, and Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assistance, released Summary and Detailed Guidance on "Improving EPA Review of Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order."

In announcing the April 1 Guidance, Administrator Jackson said: "this is a sweeping regulatory action" and "you're talking about no, or very few, valley fills that are going to meet this [new] standard." http://www.washingtonpost.com/wpdyn/content/articl/2010/04/01/AR2010040102312.html. Jackson's statements have proven correct as very few permits have been issued since. Recently, the U.S. Government Accountability Office published a report finding that of 79 permits undergoing the "enhanced review" process created by the April 1 Guidance, only six permits were issued, 36 were withdrawn and 36 are awaiting EPA's newly created enhanced review. EPA AND THE CORPS' REVIEW OF SECTION 404 PERMITS (2010) GAO-11-101R. There are at least as many other CWA 404 permits backlogged at the U.S. Army Corps of Engineers.

These documents purport to clarify "how EPA is carrying out our responsibilities, in coordinating with our Federal and State partners" (Summary Guidance) and "to provide further clarification of EPA's roles and expectations, in coordinating with our

Federal and State partners" (Detailed Guidance). However, these Guidances go far beyond clarification and coordination and "empower" EPA to commandeer the roles and authority of other agencies, including the Army Corps of Engineers under the CWA, the Office of Surface Mining under SMCRA and the states under both laws. As Randy Huffman, director of West Virginia's Department of Environmental Protection, observed in a Dec. 2, 2009, letter to Sen. Inhofe, EPA's recent actions "represent a stark change in regulatory direction," which, "has been undertaken in the absence of any change in statute, regulation or formal policy which would necessarily require transparency in the process."

Impact

EPA's Guidance amounts to a de-facto moratorium on the issuance of coal mining permits by rewriting the underlying statutory and regulatory permitting framework. The Guidance ignores and dramatically alters regulatory timelines, imposes new substantive requirements and creates legal presumptions in complete disregard of existing federal law and procedure. In addition, EPA has displaced the U.S. Army Corps of Engineers (Corps), the Office of Surface Mining Reclamation and Enforcement (OSM) and states as permitting authorities for coal mining under SMCRA and CWA.

The impact of EPA's actions has been profound. Experts at Marshall University's Center for Business and Economic Research have concluded that a ban on valley fills would result in the loss of thousands of jobs and hundreds of millions of dollars of income in West Virginia alone. Hicks and Burton, *The Fiscal Implications of Judicially Imposed Surface Mining Restrictions in West Virginia* (Feb. 2001). The scope of EPA's actions are much broader, applying to both surface and underground mining operations within a six-state Appalachian region but potentially spilling over to states such as Alabama and the Midwestern coal basin states such as Illinois and Indiana. Another report, issued by the U.S. Senate Committee on Environment and Public Works found "the Obama Administration is using the CWA Section 404 permitting process to dismantle the coal industry in the Appalachian region." U.S. Senate Committee on Environment and Public Works, Minority Staff, *The Obama Administration's Obstruction of Coal Mining Permits in Appalachia* (May 2010). The report concludes that after thorough investigation of 235 coal mining permits that were under review by EPA as of May 11, 2009, roughly one in every four coal mining jobs in the Appalachian region will be at risk of elimination, 81 small businesses will lose significant income and will be at risk of bankruptcy and more than two years of America's coal supply will be in jeopardy.

Oversight Analysis

Through guidance, EPA has exceeded its authority under the CWA, displaced the Corps as the § 404 permit authority as well as states' role and authority under the CWA and SMCRA. According to Mr. Huffman in his Dec. 2, 2009 letter, "**EPA has manipulated the Federal CWA 404 permitting process so as to intrude on**

the State's primacy under SMCRA and its delegated authority under the CWA. I am deeply concerned that the April 1st Guidances represent further intrusion into State authority, again without any change in statue or regulation."

EPA's Guidance Usurps the U.S. Army Corps of Engineers' Authority to Make Section 404 Permit Decisions

The CWA delegates to the Corps the authority for the review and issuance of § 404 permits. The EPA may comment on a permit and it may also restrict or prohibit the use of an area for placement of fill material. Under the new guidance, EPA has placed itself in the position of deciding when, where and how the Corps reviews and issues a § 404 permit. In doing so, it has also ignored the existing Corps regulations that establish criteria for evaluating and time frames for deciding whether to issue a permit.

For example, the Guidance imposes new substantive requirements by presuming that "[p]rojects projected to increase conductivity levels above 300 uS/cm should include permit conditions requiring adaptive remedial action to prevent conductivity levels from rising to levels that may contribute to water quality degradation." Detailed Guidance at 22.

Under the Guidance, EPA imposes a pre-screening requirement that allows it to tell the Corps whether it can proceed with review of a permit and allows EPA to suspend that process at any point until it decides disagreements have been resolved. This is all done in contravention of duly promulgated regulations that set forth the content and time frames for the Corps to review and decide on permit applications.

The Guidance also imposes several de facto changes to the 404(b)(1) guidelines and imposes EPA's interpretation of these guidelines on the Corps in lieu of the organization's longstanding interpretation. EPA's actions are contrary to the agency's own regulations requiring that any substantive changes to the guidelines must be done by notice and comment rulemaking. 40 C.F.R. 230.2(c).

EPA's Guidance Interferes with States Authority under CWA Section 401 and 402

Section 401(a)(1) of the CWA gives states the authority to determine if an activity that is the subject of a federal license or permit will meet water quality requirements in that state. Notwithstanding the limits of EPA's authority under section 401(a) of the CWA, the Detailed Guidance states that "EPA retains its responsibility for ensuring that neither numeric nor narrative water quality standards are exceeded due to discharges of fill material even if a State has issued a water quality certification under Section 401 of the CWA." Detailed Guidance, at 18. EPA simply does not have the authority to second guess a state water quality

certification. Courts have held that a § 401 certification is considered conclusive, and no independent analysis of the certification is required.

Under section 402(b) of the CWA, Congress established the National Pollutant Discharge Elimination System (NPDES) permitting program. 33 U.S.C. § 1342. Conforming to the statute's goal of allocating the "primary responsibilities" for water pollution control to the states, the CWA establishes a system whereby a state may assume primary administration and enforcement of the NPDES permitting program. 33 U.S.C. 1342(b). Once EPA approves a proposed state permitting program, EPA must suspend its own program. 33 U.S.C. 1342(c)(1). Under such delegated permitting programs, states have exclusive authority to implement the NPDES program within their boundaries, and EPA has only limited authority to review state action. Once states are authorized to implement the CWA, they develop EPA-approved water quality standards and issue permits that implement those standards and the state's decisions, particularly the decisions about compliance with state water quality standards, are given deference. However, in the Guidance, EPA creates a presumption that "EPA expects that in many, if not most, cases the available science will demonstrate that there is a reasonable potential for these discharges to cause or contribute to an excursion above numeric or narrative water quality standards, thus making water quality-based effluent limits necessary." Detailed Guidance at 8. Such a blanket statement about the need for water quality-based limits ignores the role of the delegated states under Section 402 and the existing protections under the CWA and its implementing regulations prohibiting states from approving any such discharge. Since all of the states subject to EPA's Guidance have delegated authority, the states, not EPA, have the duty to determine whether any proposed discharges will cause, or have the reasonable potential to cause, or contribute to an in-stream excursion above a numeric or narrative criteria within an applicable water quality standard. 40 C.F.R. Section 122.44(d).

EPA's Guidance Imposes a De-facto Water Quality Standard on Primacy States in Violation of the CWA

By asserting the authority to interpret the state narrative water quality standards as requiring conductivity levels between 300 and 500 uS/cm, EPA substitutes an authorized state's interpretation of its narrative water quality standards with numeric standards without following the procedures required under CWA Section 303(c). EPA has not taken the steps necessary to make a determination that numeric conductivity standards are necessary in the Appalachian region and EPA has not gone through notice and comment rulemaking to establish numeric federal standards for conductivity for the Appalachian states.

EPA is Usurping State Authority under SMCRA

Under SMCRA, states have "exclusive jurisdiction over the regulation of surface coal mining and reclamation operations" on non-federal lands, so long as their

regulatory program has been approved by the Secretary of the Interior as satisfying the SMCRA's minimum requirements. 30 U.S.C. § 1253. Once a state's SMCRA program has been approved, anyone wishing to engage in surface coal mining operations within the state must first obtain a permit from the state's regulatory authority. 30 U.S.C. § 1256(a). In almost all coal producing states, SMCRA regulatory jurisdiction and authority has been assumed by the states.

Regulation of the disposal of excess spoil material from surface coal mining operations is within SMCRA's purview. As part of its environmental protection performance standards, SMCRA requires that all excess spoil material from surface mining operations be disposed of "in a controlled manner . . . and in such a way to assure mass stability and to prevent mass movement." 30 U.S.C. § 1265(b)(22)(A). SMCRA clearly contemplates that valley fills will be used in the disposal process. 30 U.S.C. § 1265(b)(22)(D) (requiring that, where the disposal area contains "springs, natural water courses, or wet weather seeps . . . lateral drains [must be] constructed from the wet areas to the main underdrains in such a manner that filtration of the water into the spoil pile will be prevented.").

Thus, it is clear that SMCRA contemplates that excess spoil material will be placed into waters of the United States. Notwithstanding Congressional approval of this activity, EPA is attempting to ban it. In fact, in announcing the Guidance, EPA has asserted that the Guidance is "tantamount to banning valley fills."

By disregarding state authority under SMCRA, EPA is attempting to federalize every aspect of a surface mining project under NEPA and trammeling a state's authority over land use. Again, courts have rejected such extensive federal interference.

Underlying Science is Seriously Flawed

EPA cites emerging science as a basis for adopting its newly fashioned approach to reviewing coal mining permits, including immediate implementation of the conductivity limits. EPA has issued these significant new policies prior to submitting its newly emerging science to outside scientific peer review or making it available for public comment. In the real world, EPA's "emerging science" is having the effect of a de facto water quality standard and is now forming the basis for third party permit appeals.

Various experts have repeatedly expressed grave doubts and concerns with EPA's studies underlying and forming the basis for new policies, presumptions and de facto water quality standards. See *Final Report, Technical Review: A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams*, GEI Consultants, Submitted to EPA September 2010 (GEI 2010), attached.

These concerns with EPA's science and field data methodology have been largely ignored by EPA and its Science Advisory Panel(SAB).

Attachment 2

CERCLA 108(b) – Financial Responsibility Requirements for the Hardrock Mining Industry

Issue: The U.S. Environmental Protection Agency (EPA) last year targeted the hardrock mining industry as the agency's first priority in the development of financial responsibility requirements under Section 108(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under this provision, EPA has discretionary authority to impose financial responsibility requirements on industrial sectors "consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances." The statute directs EPA to focus on those industries that "present the highest level of risk of injury." While the statute does not provide a methodology for evaluating risk or injury, it is apparent that both terms are tied to the potential for a future release of hazardous substances and a potential risk that the government will be called upon to cover future remediation costs at abandoned or bankrupt facilities. EPA is expected to publish a proposed rule for the hardrock mining industry in the fall.

Impact: EPA's proposed regulations will duplicate and preempt financial responsibility requirements already imposed on the hardrock mining by the Bureau of Land Management and U.S. Forest Service on public lands and by the states on private lands. Hardrock mining companies already post millions to hundreds of millions of dollars in financial assurance (i.e., cash, surety bonds, letters of credit, trusts, corporate guarantees) under federal and state programs to cover a range of costs associated with the reclamation and closure of their facilities. EPA has indicated that its program will not be limited to filling any yet-to-be defined "gaps" in existing financial assurance requirements for the industry. Instead, it is conceivable that EPA's regulatory program will be a worst-case scenario cost figure that is applied across the hardrock mining industry without consideration of the unique aspects of each facility (i.e., types and volumes of hazardous substances managed on site, size of the facility or types of industrial processes involved). If hardrock mining facilities are unable to secure financial assurance instruments in the dollar amounts necessary to comply with the new requirements, they will be forced to shut down operation.

Oversight Need: The statute and good public policy demand that EPA more thoroughly analyze the issue before hastily promulgating regulations. The approach EPA takes for hardrock mining will become the template for the agency when it expands its financial assurance requirements to other industries. For example, EPA should provide to the public and Congress for review and comment an analysis of the specific federal and state programs that impose financial assurance requirements on the hardrock mining industry for the types of risks associated with CERCLA liability. This analysis should also identify whether any "gaps" exist in these programs that would warrant additional financial assurance requirements, and whether those "gaps" could be filled through existing federal and state programs. EPA should also provide to the public and Congress for review and

comment a thorough analysis of the capacity of the financial and credit markets to provide the necessary instruments (surety bonds, letters of credit, insurance, trusts) for meeting any new requirements. EPA should not, as a matter of policy and in this strained economy, impose a new regulatory program if the financial and credit markets cannot serve the demand for additional financial assurance.

EPA Draft IRIS Assessment of Inorganic Arsenic

Issue: The U.S. Environmental Protection Agency (EPA) is in the process of finalizing a highly controversial assessment of the cancer risks of inorganic arsenic under the Integrated Risk Information System (IRIS) program. EPA's assessment ignores what experts agree is the best, most current scientific evidence that demonstrates that a "threshold" exists for inorganic arsenic – a point below which no increased cancer risks are likely to occur and instead relies on outdated linear extrapolations from epidemiology studies conducted in south Taiwan to propose a 17-fold increase in the cancer risk "slope" factor-from the current 1.5 mg/kg/day to 25.7 mg/kg/day.

EPA's Science Advisory Board (SAB) was assigned to review the draft assessment but this review has proven to be woefully inadequate. EPA's charge questions to the SAB were extremely narrow and did not provide an opportunity for a thorough or comprehensive review of the cancer slope factor, the modeling used in the assessment, or other important issues previously posed by the SAB in 2007.

Impact: If finalized, the assessment would have significant implications for various regulatory programs. For example, the EPA maximum contaminant level (MCL) for drinking water would have to be reduced from 10 ppb to 0.1 ppb for minimal compliance with the upper limit of EPA's target risk range (i.e., 1 in 10,000). This may be technologically unachievable and at an enormous cost to municipalities. In addition, the assessment would ratchet down soil cleanup levels under Superfund to below background levels. Soil cleanup levels in Western states are typically 100 parts per million (ppm). The new slope factor would force this level to be reduced to 8 ppm or lower, despite the fact that the soil in many Western states has average background levels above 8 ppm. This would lead to exorbitant cleanup costs with no associated human health benefits.

Oversight Need: EPA's draft IRIS review of inorganic arsenic deserves a more rigorous, independent and current review of the best available science on inorganic arsenic. Given the complex scientific issues involved and the impact the assessment will have on future regulatory programs, the draft assessment deserves a full peer review by the National Academy of Sciences. Moreover, the inorganic arsenic assessment is a primary example of the IRIS process and Scientific Advisory Board process not living up to the scientific integrity principles and providing a fair opportunity for using credible U.S.-based science.

Mine Safety and Health Administration – Respirable Coal Mine Dust Regulation

***Issue*:** The Department of Labor's Mine Safety and Health Administration (MSHA) has proposed regulations that will lower by 50 percent the permissible respirable coal mine dust exposure standard for coal mines. The proposal is based on the agency's belief that the current standard is not sufficiently protective to prevent coal miners from developing Coal Worker's Pneumoconiosis (CWP) and Chronic Obstructive Pulmonary Disease (COPD). The proposal will also drastically alter the current dust sampling program by requiring operators to take action, including the possibility of reducing production, to achieve compliance with the reduced dust limit.

MSHA's proposal relies upon three data sources, all of which have methodological and other flaws: (1) a 1995 National Institute for Occupational Safety and Health (NIOSH) criteria document;(2) a 2010 NIOSH report which was an update of the 1995 criteria document; and (3) the results of enhanced medical surveillance studies conducted by NIOSH's Division of Respiratory Disease Surveillance Studies (DRDS) that form the basis for several published articles.

***Impact*:** If finalized, the proposed rule will have a significant impact on the underground coal industry both in terms of increasing operating costs, lowering productivity and job loss. Compliance determinations are currently made on the basis of the average of five samples, whereas the proposed rule will require these determinations to be made on the basis of a single sample. The absence of new engineering control technology to further reduce dust levels will potentially necessitate production reductions and closure of marginal mines that can no longer remain economically viable at reduced production levels.

***Oversight Need*:** Despite repeated requests, the National Institute for Occupational Safety and Health refuses to release any documents or data that serves as the basis for its criteria document, which serves as the predicate for MSHA's claim that the prevalence rate of black lung is increasing in our nation's coal miners. Without this data, it is impossible to assess the underlying findings that serve as MSHA's justification for lowering the exposure limit. Moreover, this rule serves as an opportunity to evaluate why MSHA does not allow the use of personal protection and administrative controls to protect miners against harmful exposures.

EPA Utility Maximum Achievable Control Technology Emission Standards for Hazardous Air Pollutants

***Issue*:** The EPA has announced its intention to move forward with a number of environmental rulemakings that will require electric generators to add expensive control technologies or shut down: The Clean Air Transport Rule; the air toxics rule (MACT-maximum achievable control technology); coal combustion residuals (fly ash); and cooling water intake structures. The second rule, air toxics MACT, will

potentially have the greatest impact on the electricity generating capacity in the U.S. Under a consent decree, EPA must propose in March and finalized by November 2011 emission standards for certain hazardous air pollutants (HAPS) at coal- and oil-fired electric generating units (EGU). EPA will evaluate and then choose the performance level of the best – performing 12 percent of existing power plants and require all plants reduce their emissions to that level.

Impact: Various sources have estimated that these suite of EPA rules for EGUs could force the retirement of anywhere from 40-100 GW of the existing 310 GW of coal-fueled power plants in a relatively short period of time. Those plants that are not retired will need to make expensive retrofits to add control technologies. The capital expenditures have been estimated to exceed $80 billion. Under all scenarios, electricity prices will increase and greater demand for natural gas will result in increased natural gas prices for industrial, commercial and agricultural customers using natural gas for heating or feedstock for their production processes. The forced retirements of coal based units could also pose electricity reliability issues in various states and regions along with price spikes. Substantial job losses would follow in the coal mining, railroad and utility sectors as well as displacement in manufacturing and other sectors confronted with higher electricity and energy costs.

Oversight Need: EPA has chosen not to evaluate the cumulative economic impact or feasibility of meeting these series of rules although they have been planned for some time. Instead, they have chosen to evaluate the impacts in isolation, focusing on each rule individually and not cumulatively. Decisions by electric generators will not be made on the basis of any single rule but in an assessment of the full cost of compliance of all the rules that apply to their system. Moreover, a fuller examination of the impact of these rules on the reliability and cost of electricity regionally is necessary to fully understand the impact on businesses and households.

DOI Permitting Delays

Issue: "Permitting delays in the United States are the most significant risk to mining projects. The United States is ranked next to lowest due to the average 5-year to 7-year period required before mine development can commence." ~ Behre Dolbear, "Where Not to Invest, 2009." There are many choke-points in the current protracted process for reviewing and approving plans of operations and other authorizations for mining operations and facilities on public lands. However, one example of a purely bureaucratic delay is the inexplicable Department of the Interior (DOI) policy for processing certain administrative notices under the National Environmental Policy Act (NEPA) for mining operations and other commercial enterprises on public lands. This "clearance process" for NEPA *Federal Register* notices requires such notices to be sent from Bureau of Land Management (BLM) state offices to undergo 14 separate levels of review within DOI. (See attached chart.) Delays have exacerbated further by a December 2009 decision to

eliminate the categories of routine notices that were previously exempt from review.

DOI has never adequately explained the need for this review process given the extensive environmental reviews already required for mining operations. In fact, in the mining industry's experience, the review process has never resulted in a final product that differed substantively from what was submitted by the state BLM offices.

Impact: The impacts of these delays can be significant – lost federal, state and local revenues, fewer jobs, and lost opportunities. For example, one mining company indicated that the delays are preventing the hiring of more than 1000 new employees, and another stated that for each month of delay the company loses more than $1 million in net present value. Furthermore, the uncertainties regarding length of time for approval of mining activities has contributed to an all-time low amount of mineral exploration dollars being invested in the United States and to increased reliance on foreign supplies of minerals.

***Oversight Need*:** Over the last year, many senators, congressmen and governors have brought this problem to the attention of DOI, particularly the economic impacts of delaying shovel ready, high-paying jobs. Yet no progress has been made in reforming the process. There is no transparency in the review process and the project applicants have no way to obtain accurate information about the number of notices in the review backlog or where any specific notice may be pending. Some agency personnel have indicated that, at any given time, about 150-200 notices are stuck in the review process.

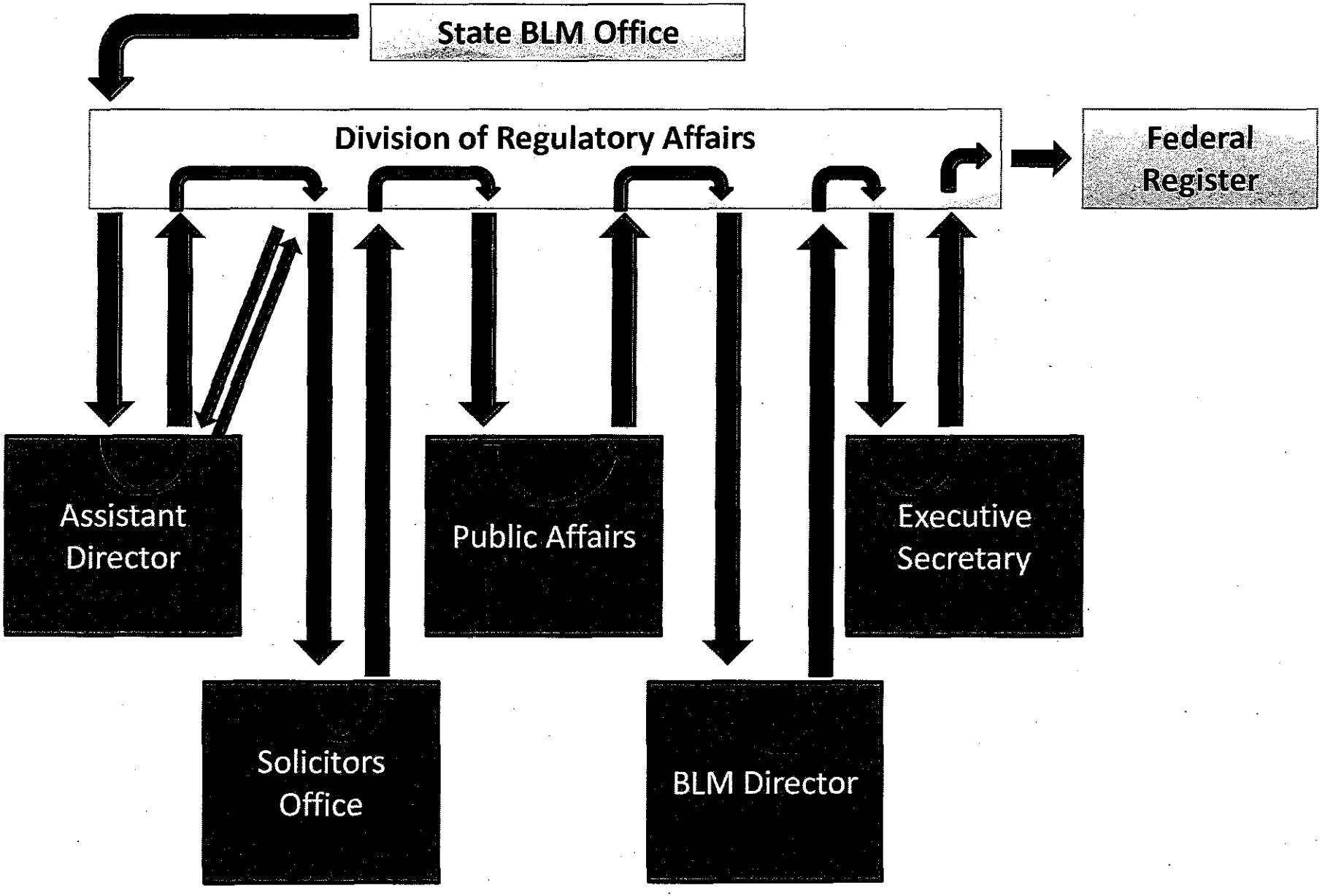
OSM Stream Protection Rule

Issue: The Department of Interior's Office of Surface Mining (OSM) is developing the most sweeping changes to its regulatory program since 1983 through the proposed "stream protection rule." The rule is intended to displace a 2008 regulation that was the product of a five-year comprehensive rulemaking that provided the coal industry and state regulators clarity and certainty. Shortly after assuming office in 2009, the new administration entered a settlement with environmental groups agreeing to conduct a new rulemaking even after a federal court refused to set aside the 2008 rule. While the rule is ostensibly called the "stream protection rule," Wyoming Gov. Dave Freudenthal noted in a letter last month to DOI, the label is "misleading" and OSM's action is "a major revision of the law that has served the country well for over 40 years." The agency has not identified any basis or need for these significant regulatory changes, most of which will only add burdens on companies and states through a complex and duplicative standards that recreate the uncertainty that was corrected by the 2008 rule. Many of the states that were enlisted to be cooperating agencies in this rulemaking have now raised serious objections about its necessity, objectives and manner in which the federal agency has proceeded.

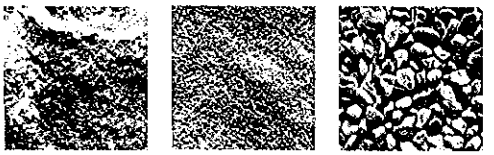
Impact: The rulemaking options under consideration would cost thousands of mining jobs, sterilize millions of tons of coal reserves and impair the fuel supply critical to our nation's electricity backbone without any demonstrated environmental benefit over the current rules they are trying to rewrite. Additional sampling and monitoring requirements will add enormous information collection burdens. Prohibitions on mining near streams could sterilize millions of tons of coal reserves and render many mines uneconomical. Requiring full restoration of stream form and function before any additional mining can take place could paralyze many mining operations, and establishing corrective action thresholds could interfere with legitimate mining operations that have not violated any water quality standards. Dictating certain post-mining land uses would be contrary to goals of wildlife managers and/or landowners who desire more flexible uses for reclaimed mine lands. Finally, the new so-called coordination procedures will add months and even years of delay to critically needed mining permits. Many of OSM's proposals would also duplicate or contradict authorities under the Clean Water Act that are reserved to the states.

Oversight Need: This rulemaking is a classic example of politics trumping sound policy and resource stewardship. Before implementation of the 2008 rule that restored much needed regulatory certainty, the agency, without any discernable basis or need, decided to rewrite the rule and expand the scope of rulemaking to other long-settled regulatory matters under a schedule agreed to in a settlement with environmental groups. The rush to judgment is reflected in the initial documents setting forth the agency's plan that Gov. Freudenthal noted were "poorly written, unclear and internally inconsistent." Moreover, the agency should be required to explain the purpose and need of this rulemaking as well as why states that are responsible for implementing the regulatory program were not afforded meaningful opportunities to discuss and comment on the need or options under consideration as well as the lack of appropriate scientific and factual information to support a rule change of this magnitude on a national scale.

FEDERAL REGISTER CLEARANCE PROCESS



NATIONAL STONE, SAND & GRAVEL ASSOCIATION



Natural building blocks for quality of life

January 7, 2011

The Honorable Darrell E. Issa
Chairman
House Committee on Oversight &
Government Reform
2157 RHOB
Washington, DC 20515-6143

Dear Mr. Chairman:

Thank you for the opportunity to identify existing and proposed regulations that are especially burdensome and have adversely affected job growth in the aggregates, or stone, sand and gravel industries. The number one legislative priority of the aggregates industry is passage of a multi-year surface transportation reauthorization. We cannot, however, ignore the potential impacts of environmental, labor or other federal regulations that have or could impose increased costs and regulatory burden on the industry which is the foundation of America's built environment.

The National Stone, Sand and Gravel Association (NSSGA) is the largest mining association in the world by product volume according to the U.S. Geological Survey. During 2009 nearly two billion metric tons of aggregates valued at roughly $17.2 billion were produced and sold in the U.S. There are more than 10,000 construction aggregates operations nationwide. Almost every congressional district is home to a crushed stone, sand, or gravel operation. Proximity to market is critical due to high transportation costs, so 70 percent of our nation's counties include an aggregates operation.

Aggregates' markets have changed considerably in the past four years. At a 3 billion metric ton production peak in 2006, the combined markets for aggregates by residential, commercial and non-road public construction projects formed around 60 percent of the aggregates market. Highways and other surface transportation projects continued as the single largest market for aggregates at roughly 40 percent.

The ongoing recession has resulted in a dramatic shift in the aggregates market. We believe that the road, highway and surface transportation segment is now by far the dominant market for aggregates products nationwide, but it is a higher percentage of much reduced total tonnage produced – 1.9 billion tons in 2009, a 37 percent decrease from 2006. This has put tremendous pressure on our members and our association to what already has been our top legislative goal: to secure a well-funded, long-term surface transportation law.

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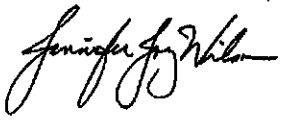
To provide further perspective, the 2009 average value of an aggregates operation as calculated by USGS is $1.6 million, whereas an average coal mine is valued at $25.1 million. That is one of many differences between the aggregates sector and other mining sectors regulated by MSHA.

Further challenging NSSGA members has been the proliferation of federal regulations from EPA and the Mine Safety & Health Administration which are the primary regulatory agencies of jurisdiction over the aggregates industry. While the aggregates industry has set safety and health records in ten consecutive years of reducing national accident incidence rates beyond prior year (most closely now approximating the incidence rate of the motion picture production industry), and while there are many environmental benefits to using stone, sand and gravel as well as a strong industry commitment to sustainability and environment, safety and health guiding principles, the number and impact of new regulatory proposals on top of existing heavily regulated operations seem to continue unabated.

In the enclosed document, we have attempted to focus on those rules, regulations and agency actions that are the most burdensome, unnecessary, and have the greatest potential to further depress an industry that is the vascular system of the country and imperative to economic growth and maintaining our country's global competitiveness as well as the freedom of mobility which is valued by every American.

Again, thank you for this opportunity and please call on me with any questions. We would be happy to provide a witness at any future hearings on this issue to discuss our concerns about these regulations and their impacts in more depth.

Sincerely,



Jennifer Joy Wilson
President and CEO

Enclosure

NSSGA'S RESPONSE TO HOUSE OVERSIGHT & GOVERNMENT REFORM COMMITTEE CHAIRMAN ISSA'S REQUEST FOR REGULATORY REFORM IDEAS

NSSGA believes that, at this challenging time for our Nation's economy, government should consider the cumulative impact of the costs of compliance before more rules are imposed on industry. This would allow the capital costs and feasibility of compliance associated with a new rule to be more thoughtfully understood both by regulators and stakeholders. Federal regulatory decision-makers must wield their authority with care, and should base regulatory decisions on published, peer -reviewed assessments of risk. Rules thus based on "sound science" - defining the problem as well as a feasible solution to mitigate or reduce risk - may be debated from one scientific perspective or another...but the basic rationale of risk may find common ground. We are wary of rules that create more stringent or even unattainable standards without sufficient statistical or analytical justification.

Further, agencies' more frequent issuance of "guidance" that circumvents formal notice and comment rulemakings allows the government to avoid providing needed notice to the regulated and interested publics. In these unfortunate instances, industry, and citizens are bereft of a suitable opportunity to analyze risk, as well as abatement, management and compliance costs. Also, this Government failure to provide notice and comment, leaves no chance for stakeholders to provide input, and/or to assure sufficient time for compliance.

NSSGA members long ago committed to Guiding Principles for environmental compliance, and recognize that the Earth's resources, upon which all of life depends, are finite and that wise environmental stewardship is necessary today to preserve the potential for a quality life for future generations. NSSGA members are committed to full compliance with all pertinent environmental law and regulations. Earlier, NSSGA members committed to Guiding Principles for Safety & Health to assure safe and healthy workplaces and practices for aggregates stone, sand and gravel workers. In this effort, NSSGA since 2003 has worked with the Mine Safety & Health Administration (MSHA) through an Alliance for education and training. Also, NSSGA Member Company CEOs representing more than 70 percent of all operations signed the NSSGA Safety Pledge, committing their companies to contribute to the industry's national incidence rate reduction of injuries by ten percent annually. This work has enabled the aggregates industry to attain nine consecutive years of injury rate reductions from prior-year levels. The last official level was a record low of 2.37 injuries per 200,000 hours worked. The industry leaders and their workforces are committed to continuous improvement.

The following paragraphs outline rulemakings or other practices that our members have found to be overly-burdensome, costly, or unnecessary. We have attempted to categorize them in several general areas, and provide examples for each.

1. **ELIMINATE UNNECESSARY RULEMAKINGS**

EPA – Regulation of Small Stationary Engines at Area Sources

Background:

EPA's final rule for engines sets strict emission limits and requires performance tests for new reciprocating internal combustion engines (RICE) used to power stationary equipment, including aggregates production equipment. EPA's success in air quality improvement has typically come from regulating very large or mobile sources. Regulating very small sources is of limited value environmentally, in comparison to the high cost to comply for affected industries. The impact of emissions from these types of smaller engines are usually limited to the immediate vicinity of the emission source itself; therefore, EPA's rational that this rule is needed to protect public health beyond the property lines of the facility are unfounded.

Impact:

Previously unregulated small engines at tens of thousands of facilities, including aggregate operations, will need to undergo costly testing and upgrades, with very little positive net impact on overall air quality.

Recommendation:

EPA should exempt engines at minor industrial sources of air emissions from this rule as the cost-benefit analysis of environmental benefit versus economic impact does not justify the agency's action.

2. ELIMINATE DUPLICATIVE STANDARDS

MSHA – Mandated Use of Safety & Health Management Systems

Background:

The agency is preparing to propose a rule mandating the use of safety and health management systems (SHMS), on top of the standards mandated by the Mine Act. The effect could be that of duplication, given the wide tentacles of the Mine Act. The merits of SHMSs are well-documented; in fact, almost a half dozen NSSGA members testified at recent MSHA public meetings about the utility of SHMSs that these companies created for themselves. However, this rule will likely produce a one-size-fits-all approach to operators managing their facilities to reduce injuries and illnesses; whereas, operators need flexibility to tailor their efforts at hazards and risks unique to the size and complexity of their facilities.

Impact:

Once a SHMS rule is implemented, aggregates operators will likely be held to comply not just with the hundreds of standards implemented in support of the 1977 Mine Act, but

additional standards the company has/will have implemented of its own to ensure health and safety vis a vis a SHMS. With continually reduced injuries and fatalities, industry sees no justification for this increased compliance burden.

Recommended Action:

Agencies should not require mandatory adoption of a "one-size-fits-all" rule on SHMSs. This is particularly burdensome to small businesses that do not have the necessity or resources to implement all the requirements of such a system. Rather, SHMS adoption, certainly appropriate to be encouraged, should only be voluntary.

3. FAIR NOTICE SHOULD BE PROVIDED TO OPERATORS WHEN GOVERNMENT CHANGES COMPLIANCE STANDARDS

MSHA – Citations Issued Before Industry is Given Notice of Rule Changes

Background:

MSHA by law (The Federal Mine Safety & Health Act of 1977) is required to inspect all mines (surface operations) two times every year; underground mines are required to be inspected four times every year. Inspectors in the field may be newly assigned to a mining sector and they use their old sector's knowledge to judge their new beat. Or, inspectors may just have been assigned to a new territory, and decide to interpret a standard differently than previous MSHA inspectors had used. [Note: two exceptions in the past year ("Rules to Live By" program, and ramped-up enforcement of 56.5002, standards for compliance with exposure to dust), are examples of the agency having provided fair notice. This should be the rule, and not the exception.] But, if cited for behavior or actions that have previously passed government inspection without any prior notification of the changed interpretation, then operator efforts toward safety, health and compliance needlessly suffer. When the agency whether at the field, district or headquarters level, refuses to provide operators with fair notice of changes in how the agency interprets what is needed for stakeholder compliance, it amounts to a regrettable lack of transparency.

Impact:

Without prior notice, the operator only learns of a changed interpretation once the citation is issued. Two stark examples of this are on the issues of fall protection/safe access for mobile equipment, and berms/guardrails for truck scales. In each case, MSHA wrote citations prior to providing notice to any operators.

Recommended Action:

It is imperative that the regulated sectors be given fair notice of changes in interpretation of standard with which they must comply before citations are issued against the changed interpretations. If the interpretation is so far removed from former interpretation by the

government, as in, creating essentially a new standard or establishing a new level of risk management, more than prior notice should be required.

4. INSPECTOR TRAINING SHOULD NOT ARBITRARILY LEAD TO INTENSIFIED ENFORCEMENT

MSHA – Increased Inspections for Accountability

Background:

With MSHA's problems in cross-training inspectors in the various mining sectors of its jurisdiction, the agency recently has decided to increase reliance on accountability teams to double-check inspector performance. This has spawned harsher enforcement. For instance, MSHA is increasingly elevating less serious non-S&S citations to "Significant and Substantial" designation without valid or sufficient justification.

Impact:

Undoubtedly, this accountability in enforcement focus has resulted in increasing numbers of citations written by MSHA for fear that an inspector might be found to have missed opportunities for alleging violations (e.g., if an inspector is found to have issued few citations than expected at the initial inspection). This comes in the form of follow-up inspections by another group of inspectors, which might include the original inspector, area supervisor and someone from district office, or from another district. A review of data – drawn from a period in which industry injury rates continue to fall - shows there has been a 50 percent increase in citations labeled 'Significant & Substantial.'

This behavior presumes that all workplaces violate standards. Instead of recognizing safe operators, MSHA sends more personnel to write a maximum number of citations. This is a cost not just to the operator (as employees must accompany each person during the inspection, resulting in lost production), but also a cost to taxpayers for a subsequent, unnecessary inspection.

The agency should improve its means of training inspectors on both recognition of hazards, and on the burdens imposed by an undue escalation in evaluations of higher degrees of gravity, negligence, etc., which drive up penalty assessment costs.

Recommended Action:

There should be increased cross-training of inspectors in the various mining sectors of agency jurisdiction for more accurate and appropriate evaluation of risk.

5. METRICS FOR DETERMINING AGENCY'S SUCCESS SHOULD BE INDUSTRY IMPROVEMENTS

MSHA- Industry Improvemcnts in Health and Safety Should be Recognized

Background:

MSHA is focused on demonstrating its success strictly in terms of the number of citations written. But, this metric is flawed. We would submit that a critical criterion in evaluating MSHA's performance is improved safety and health of stone, sand and gravel workers, as demonstrated by commonly used total case incidence rates.

Impact:

Operations are hammered with excessive citations with no agency recognition of the aggregates industry's decades-worth of improvements in reducing injuries and fatalities. We would submit that, if injury and illness rates continue to decline, then so should the number of citations and assessment amounts.

Recommended Action:

The focus should be on improvements in safety and health, not an undue reliance on issuance of citations.

6. AGENCIES' DECISIONS BASED ON LACK OF SOUND SCIENCE

EPA – Proposed Rule to Reduce National Ambient Air Quality Standard (NAAQS) for Particulate Matter (PM10)

Background:

EPA and their scientific advisory committee are recommending a reduction in the NAAQS for PM 10 from the present level of 150 to either 65 or 75 micrograms of dust per cubic meter of air. This expected change is difficult, if not impossible, to meet for mining, farming, ranching, transportation and other sources of coarse crustal fugitive dust emissions found in parts of the West, Southwest, Midwest and East. The proposed rule is expected in March. EPA admits there is very little health effects data to justify this new standard.

Impact:

Many areas of the U.S. would fall into non-attainment, which would require states to reduce emissions of PM10 or face losing highway funding. Aggregates facilities already use best available dust control technologies to control for air emissions from rock crushing facilities. Most of the PM10 dust is generated from windblown dust from uncontrollable sources such as arid un-vegetated surfaces in rural areas, unpaved roads, and dry land farming and tilling. Industrial sources of PM10 are very small compared to these natural, municipal and agricultural sources. The only option for NSSGA members to reduce PM10 would be to reduce aggregate production and/or limit sales. One NSSGA member estimates that in order to meet this reduced air standard, they would

have to reduce production by more than two-thirds, thus eliminating a majority of jobs at each facility.

With the anticipated PM 10 NAAQS, NSSGA member companies will have extreme difficulty in expanding existing facilities or opening new ones to meet construction demands for aggregates. Prevailing background levels of PM10 due to natural dust sources, unpaved roads, agricultural operations, and industrial sources are already at levels at or above the anticipated PM10 NAAQS.

The dominance of natural dust sources (i.e. windblown dust from arid lands) and municipal unpaved roads is the main reason that some areas in the West and Southwest have been in continual non-attainment with PM10 standards since the late 1980s. There is no practical way to control these sources and reduce the PM10 ambient air concentrations. EPA has turned a blind eye to this long-term non-attainment condition, and claimed that attainment of a NAAQS is strictly a state-problem. This unusual position gives EPA the license to promulgate unworkable standards that hurt job growth without any health benefits.

Taken further, this cut in aggregate production would lead to a shortage of stone, concrete and asphalt for state and federal road building/repair, commercial and residential construction, which in turn would cause an increase in the price of stone for these projects ranging from 80 percent to 180 percent and further suppress employment in the construction industries.

The Clean Air Act requires EPA to set National Ambient Air Quality Standards to protect public health. However, in evaluating health effects of possible changes in the Standards, EPA has failed to consider the very significant adverse health effects caused by forced unemployment.

Recommended action:

Maintain the existing air standard until EPA has enough health effects data to determine an appropriate revised NAAQS.

EPA- Proposed Rule to Re-designate Coal Combustion Residue/Fly Ash as Hazardous Waste

Background:

EPA proposes to designate coal ash/ fly ash as hazardous solid waste. NSSGA supports the beneficial reuse of coal ash/fly ash in final manufactured and encapsulated products.

Impact:

Many aggregates facilities have ready mix concrete or asphalt plants co-located at aggregate facilities that use these materials in their final manufactured product. Fly ash

can also be used as a component in road base in highway projects. Changing the hazard designation or restricting use would lead to more of these materials being disposed of instead of reused and would require labeling of roadways and brick and mortar construction projects as containing hazardous materials.

Recommended Action:

Maintain non-hazardous waste designation for beneficial reuse of coal combustion residue by products.

OSHA/MSHA – Proposed Rule to Reduce Crystalline Silica Standard

Background:

The Department of Labor has on its regulatory agenda an April, 2011 deadline for a proposed rulemaking on worker exposure to silica, the world's second most common mineral. It is anticipated that the proposal will include a call for a substantial reduction in the permissible exposure limit (PEL) from the current 100 micrograms of silica per cubic meter of air down to as little as 50 or 25 micrograms. Unfortunately, the Department has not been consistently enforcing the current standard. Further, CDC-NIOSH data show a precipitous, downward trend in silicosis cases, and we know of no cases of lung cancer in the aggregates industry from silica exposure. Enforcement of the current silica limit within OSHA-regulated facilities is even more problematic. Why reduce the limit if the higher limit is not being effectively enforced and the resulting health benefits are questionable or non-existent?

Impact:

Implementation of a new silica rulemaking with lowered PEL would add millions of dollars in costs onto operators of stone, sand and gravel facilities, with no known health benefit. Unless and until the Labor Department can clearly prove either an association between contracting of the disease with some level(s) of exposure below the current PEL, or that a new PEL reduction would improve the health of our workers, there should be no mandatory PEL reduction.

Recommended action:

MSHA should maintain and enforce the current standard.

7. AGENCY OVERREACH

EPA – Use of Veto Authority to Revoke Previously Issued Operating Permits

Background:

In an attempt to stop mountaintop coal mining, EPA plans to use its questionable veto authority under the Clean Water Act to revoke previously issued, federally-approved U.S. Army Corps of Engineers' operating permits for mining operations.

Impact:

If allowed to stand, this action will disallow a previously permitted mountaintop coal mine. This, in turn, threatens recipients of all federally-issued Clean Water Act permits, including 402 NPDES permits issued by EPA or delegated states and 404 dredge-and-fill permits. This action calls into jeopardy all previously issued legal operating permits for any mining operation, including the ability to rely on the integrity of such permits and the permit process. It could also impact state-issued 401 Water Quality Certifications,

Recommended action:

EPA should only use their veto authority within a set time frame and statute of limitations.

8. AGENCY USE OF GUIDANCE CIRCUMVENTS RULEMAKING

MSHA – Use of Program Policy Letters Constitutes Rulemaking

Background:

The agency issues Program Policy Letters (PPLs) to operators announcing new mandates that sometimes constitute new policy. Yet, major, new policy changes require notice and comment rulemaking the likes of which the agency avoids.

In mid-2010, MSHA issued a PPL declaring a new policy in regard to standard 56.9300: that weigh scales traversed by slow-moving mine trucks, which are 16 inches or more off the ground, had to be retrofitted with the same guarding needed for bridges for high-speed passenger and freight vehicles. This constitutes a major policy change.

It is important to note that the weigh scales come from the manufacturer equipped with bumpers to keep the slow-moving trucks from accidentally driving off the edge onto the ground, one or two feet below the scale's edge. But, the agency failed to provide any justification or injury data demonstrating why a seemingly arbitrary 16 inch drop-off posed a safety hazard for slow-moving trucks on a scale.

While we appreciate guidance, we believe it should be developed consistent with the Administrative Procedures Act (APA). The type of policy change described here should be vetted through the APA-required notice and comment rulemaking process.

Impact:

Stakeholders do not get advanced notice of or ability to comment on, the agency's proposal for new policy, or to offer comments warranting agency review and analysis. This makes a mockery of the President's pledge of transparency in government operations.

Recommended Action:

MSHA should issue this change as a proposed rulemaking and allow for public notice and comment.

EPA – Creation of a New Water Quality Standard for Conductivity

Background:

As a further attempt to stop mountaintop coal mining, EPA has issued guidance on a new water quality standard (conductivity) with limited scientific supporting data and not allowing for notice and comment by industry. The "guidance" recommends a range of 300 to 500 micro-siemens per centimeter of conductivity, as an indicator of water pollution to protect aquatic life.

Impact:

In issuing this guidance, EPA has circumvented the rulemaking process, which allows for industry and public notice and comment. This level has been arbitrarily and capriciously set and has no basis in sound science, and could be applied to any mining facility with a water discharge in the U.S., with no indication that this will improve water quality or the environment.

Recommended action:

EPA should issue this change as proposed rulemaking and allow for public notice and comment.

EPA – Clean Water Protection Guidance

Background:

On December 20, 2010, EPA sent a new draft guidance document to the White House for review that will expand the scope of jurisdiction under the Clean Water Act (CWA). Although the document has not been publicly released, it is reported that this document will use a broad test for determining CWA jurisdiction that will subject waters near traditionally navigable waters to federal jurisdiction, including those waters suspected of only tenuous groundwater connections - not just surface waters. This agency action is in lieu of action by the 111th Congress on the Clean Water Restoration Act, which would have removed the term "navigable" from the CWA and redefined "waters of the United States" using very broad and inclusive terms. EPA is attempting to circumvent the

rulemaking process again by issuing "guidance" that is, in fact, a rule without allowing for industry and public notice and comment.

Impact:

EPA's guidance is expected to expand the CWA beyond original Congressional intent and eliminate the federal/state partnership inherent in the law. By expanding jurisdiction under the CWA in such a way, aggregate operators will have to seek additional federal approvals and permits in order to complete reclamation projects at significant cost and delay. The guidance will also delay the permitting process for citing a new operation or expanding an existing operation.

Recommended Action:

EPA should issue this change as proposed rulemaking and allow for public notice and comment.

EPA – Storm Water Guidance

Background:

On November 12, 2010, EPA issued a memo to regional water directors with broad policy changes, including recommending stormwater permits include numeric flow limits. Additionally, EPA is developing revised construction and development effluent limitations guidelines which place a strict numeric discharge limit on turbidity; these limits may be applied to other types of activities. Previously, stormwater management has consisted of facilities adopting best management practices to prevent impact to the environment. As with other recent EPA actions, these have the potential to drastically change EPA policy without allowing for public notice and comment via rulemaking. Furthermore, EPA does not specify how facilities should measure flow, or provide any evidence that these costly changes will improve the environment.

Impact:

EPA's guidance could require aggregates facilities to measure storm-water runoff by installing expensive equipment and possibly meet strict numeric limits on turbidity with no environmental improvement. This could cause delays in permitting as well as decreased production/job loss if limits cannot be met due to weather or other uncontrollable events.

Recommended Action:

EPA should issue this change as proposed rulemaking and allow for public notice and comment.

Lessening the Regulatory Impact on Small Businesses

Expansion of SBREFA
NFIB's top regulatory priority is to make regulation less costly and burdensome for small businesses. Many studies, including a 2010 study for the U.S. Small Business Administration, showed that small businesses spend 36 percent more per employee to comply with regulations than their larger counterparts. NFIB believes that the Small Business Regulatory and Enforcement Fairness Act should be expanded to cover all agencies whose rules affect small businesses, as a means to require these agencies to evaluate the burdens their rules place on small employers.

Indirect costs of regulation
Regulatory agencies often proclaim indirect benefits for regulatory proposals, but decline to analyze and make publicly available the indirect costs to consumers, such as higher energy costs, jobs lost, and higher prices. Agencies should be required to make public a reasonable estimate of indirect impact. This requirement exists if agencies follow the Regulatory Impact Analysis (RIA) mandate contained in Executive Order 12866 signed during the Clinton Administration. Congress should hold agencies accountable for providing a balanced statement of costs and benefits in public regulatory proposals.

Current and Proposed Regulations Negatively Impacting the Economy and Jobs

Lead; Renovation, Repair, and Painting Program – EPA
Two separate rules, one affecting pre-1978 housing (finalized in 2008) and one affecting public and commercial buildings (tentatively expected to be proposed in Dec. 2011), are having an impact on small contractors and construction companies. The 2008 rule required small businesses to pay for expensive certification and training, and to conduct costly testing that drove up the price of projects, even when there were no potential risks. Even worse, the EPA's inability to adequately enforce the rule has decreased the likelihood that a compliant small business can compete for work since non-certified firms – by doing the work illegally – can charge lower prices.

Boiler MACT – EPA
In June, EPA proposed the most expensive control technology standard it has ever conceived to regulate boilers. Rather than set limits based on levels of emissions that harm public health, the EPA sought to establish a standard based on technology that few if any real-life boilers can attain. One study places the cost of the rule at $20 billion. Using a health based standard could cut that price tag in half. Fortunately, the EPA has asked for an extension so it can propose a new standard available for public comment.

National Ambient Air Quality Standard for Ozone – EPA
Federal law requires the EPA to establish air standards for ozone every five years. The standard was last finalized in 2008 at a level that results in no expectation of harm to humans. Yet, with no new information at its disposal, the EPA reconsidered and proposed a lower standard that a significant number of counties in America cannot attain. Increased nonattainment means that new emissions of a pollutant from a project need to be offset with a reduction of an equivalent amount – which could be entirely out of the new projects control. This lack of attainment results in increased permitting costs and delays or cancellations of job-creating projects.

Engineering and Administrative Controls for Noise – OSHA
OSHA requires employers to use engineering or administrative controls – such as isolating loud equipment in a separate room or purchasing quieter machinery – to limit employee exposure to loud noises. However, the law requires OSHA to consider whether such requirements are economically feasible. OSHA is currently proposing to define economically feasible as "when the cost of implementing such controls will not threaten the employer's ability to stay in business." Short of shutting a business's doors – even if it means the layoff of several employees – OSHA wants small businesses to make these costly improvements that may yield little marginal improvement in hearing safety. Furthermore, the definition would give OSHA inspectors broad discretion to rule that any controls are not sufficient.

Addition of Musculoskeletal Disorders (MSDs) to OSHA 300 Log – OSHA
OSHA wants to add the musculoskeletal disorders column back to the OSHA 300 log to obtain data on how many injuries of this type take place. MSDs are so difficult to determine that even medical professionals can have a hard time making a diagnosis. OSHA thinks that not only can small business owners make this determination – but they can do it in about five minutes and at virtually no cost. More worrisome, this action is widely considered to be the first step toward some sort of ergonomics rule like the one Congress overturned in 2001 using the Congressional Review Act.

Injury and Illness Prevention Program – OSHA
OSHA is developing a rule requiring employers to implement an Injury and Illness Prevention Program. It involves planning, implementing, evaluating, and improving processes and activities affecting employee safety and health. Developing a formal program could be a costly exercise for small businesses and become a paperwork nightmare. Furthermore, the program would likely require small businesses to address all "foreseeable" hazards – meaning that any workplace accident, no matter how unlikely, could be interpreted as foreseeable and expose small firms to fines and penalties.

Cooperative Agreements – OSHA
OSHA is about to finalize a rule that would significantly reduce incentives for small businesses to participate in a voluntary program that educates small employers on hazards in the workplace. Small businesses rely on compliance assistance from agencies because they lack the resources to employ specialized staff devoted to regulatory compliance. The reduction of these key incentives, while at the same time beefing up enforcement, shows that the agency wants to levy fines and penalties instead of helping small businesses comply. Ironically, reduced participation by businesses will ultimately lead to more dangerous workplaces, not safer ones.

Right to Know Under the Fair Labor Standards Act – DOL
The DOL wants to require businesses to conduct an analysis and disclose to workers their status as the employer's employee or an independent contractor and how their pay is computed. Expected to be proposed in the spring, these analyses will require small business owners, the main regulatory compliance person at almost every small business, to perform potentially lengthy paperwork for every new employee they hire. The additional paperwork will require more time away from running the business and open the door to paperwork mistakes that could lead to fines and penalties.

August 18, 2010

EPA Docket Center (EPA/DC)
Environmental Protection Agency
Mailcode: 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Docket IDs: EPA-HQ-OAR-2006-0790; EPA-HQ-OAR-2003-0119;

These comments are submitted for the record to the Environmental Protection Agency (EPA) on behalf of the National Federation of Independent Business (NFIB) and the NFIB Small Business Legal Center in response to the Notice of Proposed Rulemakings (NPRMs) concerning standards for boiler emissions and solid waste incinerator performance published in the June 4, 2010 edition of the *Federal Register*.

NFIB is the nation's leading small business advocacy association, representing members in Washington, D.C. and all 50 state capitals. Founded in 1943 as a nonprofit, nonpartisan organization, NFIB's mission is to promote and protect the right of its members to own, operate, and grow their businesses. NFIB represents about 350,000 independent business owners who are located throughout the United States — including at least 50,000 members that could potentially be affected by these notices.

The NFIB Small Business Legal Center is a nonprofit, public interest law firm established to provide legal resources and be the voice for small businesses in the nation's courts through representation on issues of public interest affecting small businesses.

NFIB is very concerned about the economic impact these rules will have on small businesses already struggling in the current economic climate. In general, the rules are expensive, affect too many facilities, and compliance will be extremely difficult — if not impossible — given current technology. Moreover, we believe EPA could achieve the desired health effects with a much less burdensome rule. Our concerns are detailed below.

The Impact of Regulation on Small Business

Regulation affects small businesses in a substantially different way than it does large businesses. When a large business needs to comply with a new regulation, it designates its regulatory compliance officer — or officers — with the task. These individuals know their way around regulatory technicalities that most lay persons do not easily understand.

For the small business owner, there is no regulatory compliance officer. This burden falls squarely on the owner, who, more times than not, is responsible for everything from ordering inventory and hiring employees, to taking out the trash at the end of the day. And while they may be expert in their craft,

comprehending regulations, formalizing plans for their implementation and filling out paperwork is an extremely burdensome exercise.

Even beyond the significant time regulations take away from a small business owner trying to make a living, the per-employee cost of regulation is significantly greater for small businesses. A study performed by economist Mark Crain for the U.S. Small Business Administration estimated that regulations cost Americans $1.1 trillion annually. Importantly, the study also showed that small businesses face a 45 percent greater regulatory burden than their larger counterparts.[1] The compliance burdens presented by these rules are great because small business owners will need to spend significant time to understand these rules, make expenditures to expensive consultants to bring the facility up to compliance, and greatly increase the amount of time he or she spends on paperwork compliance.

EPA has aimed for the platinum standard with this rule when the gold standard would be effective. The result will have serious and harmful consequences for the small businesses forced to comply with this rule.

National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers; Proposed Rule [EPA-HQ-OAR-2006-0790]

NFIB has several concerns regarding the area source rule. Particularly troublesome is how economically burdensome this rule is despite the EPA having specific authority in Section 112 of the Clean Air Act to consider alternatives in situations where there are economic limitations. In particular, Section 112(d)(4) allows the EPA to set health-based standards for certain emissions. These health-based standards set a limit that is no more stringent or no less stringent than necessary.

In formulating Section 112(d)(4), Congress recognized that, "For some pollutants a MACT emissions limitation may be far more stringent than is necessary to protect public health and the environment."[2] The intent of Congress is clear — standards should only be as stringent as they need to be. Instead, EPA has chosen an approach that is similar to using a sledgehammer to drive in a nail.

The four main burdens presented by this rule are:

- The cost of obtaining, installing, and maintaining the newly required controls: The controls, if available, will pose a great financial challenge for small businesses — most of which do not generate a profit. Requiring financially challenged firms to spend scarce resources on these controls in this economy will force small businesses to cut back hours, eliminate jobs, or worse, close their doors for good.

- Excessive requirements on new boilers: The excessive requirements on new boilers are a disincentive for small businesses to purchase one. Boilers are already expensive; the requirements will make new ones even more so. This runs counter to limiting air emissions. New boilers already run cleaner than older ones. EPA could achieve its goal of reducing air emissions by incentivizing the purchase of newer, more efficient boilers. For example, EPA could exempt new boilers entirely, or allow the purchase of a new boiler to waive the annual testing requirements for at least five years.

- The lack of a limited-use exemption: EPA could have reduced the burden on small entities by providing an exemption on boilers that are only used once or twice per week or for a total of a

[1] Crain, W. Mark, The Impact of Regulatory Costs on Small Firms, 2005, http://www.sba.gov/advo/research/rs264.pdf.
[2] S. Rep. No. 101-228 (1990) at 171.

few hours. Instead, the rule now broadly affects the smallest of small businesses — and is likely to impact small institutions like schools and churches.

- The continuous testing and monitoring requirements create considerable new paperwork and recordkeeping burdens: These requirements will require small business owners to spend more money on outside testing. The monitoring requirement will mean less time the business owner has to spend running the business and could become a paperwork nightmare. It is also unclear whether area source facilities will have to prepare and maintain written, formal energy management programs. Written programs would add to the paperwork burden significantly.

- EPA's proposal requires a one-time energy assessment to be performed by an outside consultant: Never before has such a requirement been added to a MACT standard. This work practice requirement is an excessive measure that EPA argues is justified in light of the emissions reductions and cost savings that can be realized by identifying and implementing energy efficiency projects. This proposed requirement is beyond EPA's authority and should not be included in the final rule.

  Section 112(d) of the Clean Air Act permits EPA to regulate sources of hazardous air pollutants (HAPs). Because the proposed energy assessment requirement would apply to processes that demand energy from affected boilers, but are not necessarily sources of HAPs themselves, EPA's proposal exceeds its limited authority to regulate only HAP sources.

Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Proposed Rule [EPA- HQ–OAR–2003–0119]

EPA has also issued an NPRM affecting commercial and industrial solid waste incineration (CISWI) units. Similar to the area source boiler rule, this proposal will broaden the regulated community, impose excessively stringent emissions requirements, and increase the paperwork burden on small business owners.

NFIB's five primary concerns with this rule are:

- Reduction of the types of exempt incineration units: EPA has reduced the types of incineration units exempt from CISWI rules from 15 to nine. This reduction increases the number of small businesses that will be affected. In addition, some of the industries that can least afford expensive new regulation — such as the small farming industry — may now be covered.

- Inclusion of units that recover energy from the combustion of solid wastes: This proposal would create a subcategory of CISWI units that recover energy from the materials they burn. Previously, such units were exempt from CISWI requirements because they essentially turned waste into a useable source of energy. This new inclusion reduces the incentive for a facility to use an incinerator that recovers energy since it is now subject to complex and burdensome regulatory requirements.

- Requirement to be in compliance with emission limits even during startup, shutdown, and malfunctions: The proposal requires units to keep emissions below limits even during the brief, emission-heavy periods of startup and shutdown, and during unforeseen malfunctions. This proposal may unnecessarily bring more units over the emissions limits and thereby subject more facilities to potential violations and additional reporting and recordkeeping requirements.

This proposal could add substantial cost to the regulated community at little, if any, gain to the public.

- Standards for new units are far too stringent: EPA's proposal includes standards on new units that are so difficult to meet the agency itself does not anticipate any new units being constructed for three years because it will be too expensive to add controls that will allow the new units to comply with the proposed emission limits. This proposal would seem to run counterintuitive to reducing emissions. Newer units run cleaner and more efficiently than older ones. Yet, instead of providing incentives for facilities to purchase cleaner burning units, EPA has gone out of its way to ensure that no new units will be constructed, let alone used, in the foreseeable future.

- EPA has based limits on incinerator subcategories on a *proposed* definition of solid waste that may change: EPA set its proposed emission limits for the new subcategories using the maximum achievable control technology (MACT) procedures for new and existing sources. In order to do this, the agency used the *proposed* definition of solid waste. This definition of course, could change depending on the comments and feedback EPA receives. The result is that the proposed emission limits could be rendered useless, and could wind up even more stringent than this proposal. EPA should have finalized its definition first so that the regulated community could have a full understanding of the burdens of the CISWI rule.

Conclusion

NFIB is concerned about the impact of these two proposed rules. Both will substantially enlarge the regulated community, increase standards to near impossible levels, and impose severe paperwork and compliance burdens on small business owners.

The EPA has the authority under Section 112(d)(4) of the Clean Air Act to reduce the burden these proposals will have on small businesses. In particular, the current economic conditions should provide the EPA all the reasons it needs to take advantage of its ability to create health-based standards for certain emissions.

Thank you for your time and consideration. Should you require further information, please contact Daniel Bosch at 202-314-2052.

Sincerely,

Susan Eckerly

Susan Eckerly
Senior Vice President
Public Policy

June 29, 2010

U.S. Department of Labor
Occupational Safety & Health Administration
200 Constitution Avenue
Washington, D.C. 20210

Written Comments for OSHA's Injury and Illness Prevention Program Stakeholder Meeting

These comments are submitted to the Occupational Safety & Health Administration (OSHA) on behalf of the National Federation of Independent Business (NFIB) and the NFIB Small Business Legal Center as our input on OSHA's Injury and Illness Prevention Program (I2P2) Stakeholder Meeting.

NFIB is the nation's leading small business advocacy association, representing members in Washington, D.C. and all 50 state capitals. Founded in 1943 as a nonprofit, nonpartisan organization, NFIB's mission is to promote and protect the right of its members to own, operate, and grow their businesses. NFIB represents about 350,000 independent business owners who are located throughout the United States. The NFIB Small Business Legal Center is a nonprofit, public interest law firm established to provide legal resources and be the voice for small businesses in the nation's courts through representation on issues of public interest affecting small businesses.

NFIB members and small business owners in general are committed to the safety of their employees. For these businesses, employees are like members of an extended family. Though it may not be formalized in a "program," small business owners take great pains at the business's expense to provide a safe workplace. Because of this fact, NFIB has serious concerns about the formalized nature of OSHA's vision for the I2P2 program.

The Impact of Regulation on Small Business

Regulation affects small businesses in a substantially different way than it does a large business. When a large business needs to comply with a new regulation, it designates its regulatory compliance officer — or officers — with the task. These individuals know their way around regulatory technicalities that most lay persons do not easily understand.

For the small business owner, there is no regulatory compliance officer. This burden falls squarely on the owner, who, more times than not, is responsible for everything from ordering

inventory and hiring employees, to taking out the trash at the end of the day. And while they may be expert in their craft, comprehending regulations, formalizing plans for their implementation and filling out paperwork is an extremely burdensome exercise.

Even beyond the significant time regulations take away from a small business owner trying to make a living, the per-employee cost of regulation is significantly greater for small businesses. A study performed by economist Mark Crain for the U.S. Small Business Administration estimated that regulations cost Americans $1.1 trillion annually. Importantly, the study also showed that small businesses face a 45 percent greater regulatory burden than their larger counterparts.[1] The compliance burdens presented by requiring formalized or written I2P2 programs places small businesses at a further disadvantage from the large businesses that are already likely to have some sort of plan in place.

Concern About OSHA Using the I2P2 Program to Avoid the Regulatory Process

Presumably, one reason that an I2P2 rule seems attractive to OSHA is that it could offer OSHA a way around the roadblocks that the rulemaking process represents. Rather than continuing issue-by-issue regulation, a safety and health program requirement would place the burden on each employer to assess its workplace, identify the hazards, and protect employees from them. We assume that OSHA's goal would be that an employer that fails to do so, or whose program is not sufficient in OSHA's eyes, could be cited for its failures.

At first blush, it is difficult to argue against this type of approach, since small businesses should know what their employees are exposed to and protect them accordingly. But NFIB is concerned that an I2P2 requirement as current envisioned by OSHA would allow the agency to engage in significant "Monday-morning quarterbacking" after an accident. For example, OSHA may argue that any accident — no matter how freakish — is evidence that the employer's safety and health program is inadequate because it failed to anticipate the hazard or combination of hazards that resulted in the accident. It is one thing to undertake self-evaluation voluntarily; it is quite another to face penalties and adverse publicity if OSHA uses hindsight to allege that the employer's program fails to protect employees.

NFIB was pleased to see that Administrator David Michaels went on record in an April 21, 2010, web chat to say the following:

> "The i2p2 standard is not a substitute for other OSHA standards…The i2p2 standard simply provides a mechanism for employers to identify hazards; however, the control of those hazards will be required by existing OSHA standards and the general duty clause, as is currently the case."

NFIB believes that an I2P2 rule should explicitly state that OSHA will not issue fines or penalties for the aspects of workplace safety not covered by an applicable OSHA standard.

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[1] Crain, W. Mark, The Impact of Regulatory Costs on Small Firms, 2005, http://www.sba.gov/advo/research/rs264.pdf.

Compliance Concerns

There is also concern that a proposed rule would allow OSHA to dictate not just safety standards, but also the specific procedures that must be in place to meet those standards. It appears clear from recent OSHA proposals and comments made by OSHA officials that a primary goal of the agency is to ensure compliance by employers, even in instances where no injury or incident has taken place. As further evidence, over the past 18 months OSHA has ramped up enforcement at the expense of compliance assistance.

NFIB is concerned that the eventual proposed rule will focus heavily on process rather than outcomes. The more complicated the process, the more difficult compliance becomes for small business owners. Penalizing small businesses for minor technical omissions in their I2P2 plans will not improve employee safety and damages the viability of small businesses operating at slim, if any, profit margins.

Furthermore, NFIB fears the I2P2 proposal will eliminate the concept of a "voluntary audit." These valuable audits, conducted by third parties, such as insurers, to assess the safety of a workplace, aim to help businesses achieve the goal that the I2P2 program purports to — help employers develop a culture of workplace safety and take steps to continually make improvements toward that end.

Currently, OSHA will only ask for the results of a voluntary safety audit in an inspection under extraordinary circumstances. Under the I2P2 program, there will be no such thing as a voluntary safety audit. The I2P2 program will make regular safety audits mandatory, which will make all self conducted audits subject to inspection. This is yet another area in which OSHA chooses to enforce its technical rules rather than help a small business comply.

Suggestions for the Proposed Rule

Conduct an SBAR Panel

OSHA should take advantage of its legal requirement under the Small Business Regulatory Enforcement and Fairness Act to conduct a Small Business Advocacy Review Panel (SBAR Panel) to assess the rule's impact on small businesses, learn how small businesses actually deal with regulatory compliance and paperwork, and ideas on how to make the rule less burdensome. The SBAR Panel will also help give OSHA the necessary background on the unique challenges that regulations place on small businesses.

Focus on Outcomes Rather than Processes

Throughout this process, OSHA should focus its effort on achieving the safety outcomes it desires, rather than require complicated, technical assessments of every potential health danger in the workplace. Small business owners, despite their best efforts, have more difficulty than larger firms when it comes to complying with regulations because it is one of many tasks and problems that they need to complete and solve. Whereas as a larger firm has dedicated personnel, a small business owner has no such luxury. NFIB is deeply concerned about the potential for a rule that opens up small businesses to fines and penalties for minor violations that have not even led — or could be foreseen to lead to — an injury.

Avoid Using the Rule as a Way Around the Regulatory Process

As stated earlier, NFIB is concerned that OSHA may use the I2P2 rule as a *de facto* regulation for those issues where the agency feels it would not be able to work through the regulatory process as quickly as it would like. We hope that Dr. Michaels's comments from his April web chat — chiefly, that this rule will not be used as a way around the regulatory process — are accurate. However, to ensure that this does not happen, OSHA should not require I2P2 plans for those aspects of workplace safety that it does not currently regulate, such as musculoskeletal disorders.

Do Not Require Audits as Part of the "Program Evaluation and Improvement" Component

As mentioned above, the voluntary audit process helps achieve the workplace safety culture changes that this rule is intended to produce. By requiring audits as part of the I2P2 process, and making such audits available for inspection and penalty, OSHA would be removing this valuable opportunity for employers to make improvements on their facilities even when no injuries have taken place.

Opening up audits for inspection and penalty could open up any aspect of an employer's safety program to penalty. Any accident, regardless of how freakish, unforeseeable, and unlikely the event may be, could now be used by OSHA as grounds to fine a small business for a faulty audit and I2P2 program.

Conclusion

To reiterate, small business owners care deeply about their employees and work tirelessly to ensure their safety. Because of this fact, OSHA should be careful when crafting an I2P2 regulatory scheme that bogs down small businesses in technical processes, rather than achieving successful outcomes.

NFIB and its members are concerned about the potential for OSHA to use this proposal as a means of regulating workplace safety without going through required regulatory processes.

Lastly, OSHA should be sure to conduct a legally required SBAR panel to provide the agency with the proper context regarding the unique challenges that regulations have on small businesses.

NFIB appreciates the opportunity to participate in today's panel and submit these comments for OSHA's consideration.

Sincerely,

Susan Eckerly

Susan Eckerly
Senior Vice President
Public Policy

November 2, 2010

OSHA Docket Office
Docket No. OSHA–2010-0010
U.S. Department of Labor
Room N–2625
200 Constitution Avenue NW
Washington, DC 20210

Re: Consultation Agreements: Proposed Changes to Consultation Procedures — Docket No. OSHA–2010-0010

These comments are submitted for the record to the Occupational Safety and Health Administration (OSHA) on behalf of the National Federation of Independent Business (NFIB) and the NFIB Small Business Legal Center in response to the Notice of Proposed Rulemaking (NPRM) for Consultation Agreements: Proposed Changes to Consultation Procedures published in the *Federal Register* on September 3, 2010.

NFIB is the nation's leading small business advocacy association, representing members in Washington, D.C. and all 50 state capitals. Founded in 1943 as a nonprofit, nonpartisan organization, NFIB's mission is to promote and protect the right of its members to own, operate, and grow their businesses. NFIB represents about 350,000 independent business owners who are located throughout the United States, in varying industries that cover virtually all of the industries potentially affected by this rule. The NFIB Small Business Legal Center is a nonprofit, public interest law firm established to provide legal resources and be the voice for small businesses in the nation's courts through representation on issues of public interest affecting small businesses.

NFIB's national membership spans the spectrum of business operations, ranging from sole proprietor enterprises to firms with hundreds of employees. While there is no standard definition of a "small business," the typical NFIB member employs approximately 10 people and reports gross sales of about $500,000 a year. The NFIB membership is a reflection of American small business.

OSHA's Proposal

OSHA is proposing to revise its regulations for the federally-funded On-site Consultation Program (OCP). In the NPRM, OSHA says the purpose of the proposal is to clarify the ability of the Assistant Secretary for Occupational Safety and Health to define sites which would receive inspections regardless of participation in the Safety and Health Achievement and Recognition Program (SHARP).

The proposal also allows OSHA compliance officers to proceed with enforcement visits resulting from referrals at sites undergoing consultation visits or have attained SHARP status. Lastly, the proposal limits the deletion period from OSHA's programmed inspection schedule for those employers participating in the SHARP program.

NFIB believes that this NPRM proposes greater changes to the OCP than a mere "clarification." We believe that OSHA is making significant changes to the OCP that will result in decreased participation by small businesses. Our concerns are detailed below.

OSHA's On-site Consultation Program

OSHA's OCP is an example of a program that addresses a continual concern of NFIB and its member businesses — regulatory compliance. The OCP acknowledges that small businesses have a more difficult time complying with complicated regulations than larger companies that can devote resources to employ compliance personnel. For most small businesses, there is no safety or compliance officer on staff with the expertise to fully identify hazards and implement solutions.

The OCP offers small businesses the opportunity to tap expertise. Small businesses can request a free consultation with a state-certified consultant. The consultant meets with management and employees, performs a walk through of the facility to identify hazards, and provides a written report on its findings. This report includes identification of potential hazards and how to address them.

Small businesses can derive significant benefits. For starters, the information they are provided by consultants leads to fewer workplace injuries — the most significant benefit of all. Additionally, through involvement in the SHARP program small businesses can receive exemptions from programmed OSHA inspections for a period not less than one year and usually longer. Many businesses participating in the program can also save on insurance premiums.

The program is useful to small businesses. Between January 1 and March 31, 2010, OSHA consultants visited 14,441 sites. Fifty six percent of those sites were small businesses with fewer than 26 employees.[1] Assuming that this was an average quarter, approximately 30,000 businesses with 25 or fewer employers use the service annually.

Members that we spoke to about the program — all of which currently hold SHARP status — tell us that the program is an invaluable way to help ensure the safety of their employees and reduce employee turnover. Our members tell us that achieving SHARP status is also a source of pride not only for employers, but employees as well. One member specifically said that the OCP and SHARP are "priceless." Another indicated that it would be "disappointing" if the reduced participation that may stem from the proposed changes ultimately led to the elimination of the program.

NFIB's Concerns

NFIB believes that OSHA's proposal goes beyond a simple clarification of existing expectations, as OSHA suggests, and instead imposes greater restrictions on the benefits of participating in the consultation program.

OSHA's proposal specifically adds a new category under which an ongoing consultation can be terminated or a business in pre-SHARP or SHARP can receive inspections — referrals. Referrals are allegations of potential workplace hazards or violations from state or local health departments, media, and other sources. With this change, referrals will now be a basis to initiate enforcement activity at worksites subject to deferrals or deletions from programmed inspections as a result of either an in progress consultation visit, or at a worksite in pre-SHARP or SHARP status — at the discretion of the regional administrator.

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[1] *On-site Consultation Visits by Number of Employees: FY 2010 – 2nd Quarter*
http://www.osha.gov/dcsp/smallbusiness/consultchart_1.html

Additionally, OSHA is proposing to change the length of time that businesses in the SHARP program are deleted from programmed inspection schedule lists. Currently, SHARP businesses are exempt for a period of not less than one year. The NPRM proposes to change this exemption to a period of one year. The distinction may be small, but businesses that currently have *at least* one year of deletion and up to two years, will have *at most* one year if the proposal is finalized.

Businesses that are in pre-SHARP status, or working toward achieving SHARP status, currently enjoy a deferral of up to 18 months of programmed inspections while they work toward SHARP status. The proposal would eliminate this deferral.

Each of the three elements described above will have the effect of reducing participation in the SHARP program. The proposal significantly alters the incentive structure that the program was founded upon. Small businesses need the information and training that the OCP provides. The proposed rule would greatly reduce incentives to small business and deprive them of needed compliance assistance.

NFIB asks OSHA to demonstrate the need to change the incentive structure. In the NPRM, there are no specific examples provided to show why these formal changes need to take place. If, as OSHA suggests, these changes are merely a clarification of existing procedures then why are changes necessary? In the absence of demonstrated need, small businesses cannot support the proposed changes to a helpful compliance assistance program.

As we reached out to members, many were alarmed to hear about the changes. Some said that if they were not already at SHARP status, the proposed changes would keep them from considering participating. They emphasized that even though access to the consultant is free of charge, the upgrades they have to make as a result of the program often come at considerable cost. Therefore, the incentives OSHA provides are critical to their participation in the program. As the incentives are reduced, participation will decrease.

One member pointed out that OSHA has a cost and mission interest in ensuring participation in the program. OSHA does not have enough enforcement resources to inspect all job sites and facilities. Through the OCP, it is able to get voluntary compliance from thousands of businesses. Though OSHA gives up some of its enforcement capability to these participants, what it gets in return is much more valuable. OSHA receives an honest effort to attain full compliance and a commitment to workplace safety. The program is the ideal win-win. However, NFIB and its members are deeply concerned the proposed changes will lead to fewer businesses participating, meaning more injuries could be likely.

NFIB Members' Experiences

NFIB has long maintained that the OCP is a valuable program for small businesses. In fact, from June 2004 until June 2008, NFIB was an OSHA Alliance partner working to make health and safety information and compliance assistance resources available to all employers, especially small and independent businesses. As part of the Alliance, NFIB promoted the OCP within its membership as a valuable compliance assistance tool.

NFIB continues to believe that one of the great challenges small businesses face complying with regulations is that small companies lack specialized, expert staff devoted to compliance. Often, the safety compliance person has additional, unrelated responsibilities. The OCP is a terrific tool to assist companies like this.

Take for example recent SHARP awardee Seed Consultants, Inc. (SCI) in Washington Court House, Ohio. Marcia Boeck, the safety director for this NFIB member, originally found out about the program

at a meeting near her business held by NFIB to discuss personal protective equipment requirements. Ms. Boeck recognized that SCI needed help because, as she said, the responsibility of handling safety compliance "just kind of fell into my lap," as an extra priority in addition to her other duties.

With the help of the program's consultants SCI devised a comprehensive safety manual and program for its company. Boeck told us that without the consultation program she would not have known where to begin to develop such a safety program.

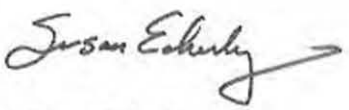
Another member — also a SHARP awardee — told us that aside from the pride the company gets knowing they provide the safest possible workplace for their employees, they enjoy the insurance savings they receive as a result of being involved in the OCP. That member also says that the inspection they get by participating in the program is more thorough than a regular programmed OSHA inspection, which they prefer because it allows them to make their workplace safer than if OSHA relied on an enforcement model alone.

Conclusion

NFIB and its member businesses oppose the proposed changes to the OCP because it reduces much-needed incentives for small businesses to participate. If this proposal were to be finalized as currently written, we believe that significantly fewer businesses would participate. A logical result of reduced participation is that injuries would increase. With OSHA's clear mission being to provide a safe workplace for employees, the proposal runs counter to the agency's purpose. We believe that the OCP should be left alone, so that many thousands of small businesses can have this valuable resource to make their workplace safer.

Thank you for your time and consideration. Should you require further information, please contact Daniel Bosch at 202-314-2052.

Sincerely,



Susan Eckerly
Senior Vice President
Public Policy

UNITED STATES DEPARTMENT OF LABOR

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Occupational Injury and Illness Recording and Reporting Requirements:

Proposed Rule

OSHA Docket Number OSHA-2009-0044 (RIN: 1218-AC45)

COMMENTS OF NATIONAL FEDERATION OF INDEPENDENT BUSINESS

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