Potential Economic Impact of the EPA Endangerment Finding on Low Income Groups and Minorities

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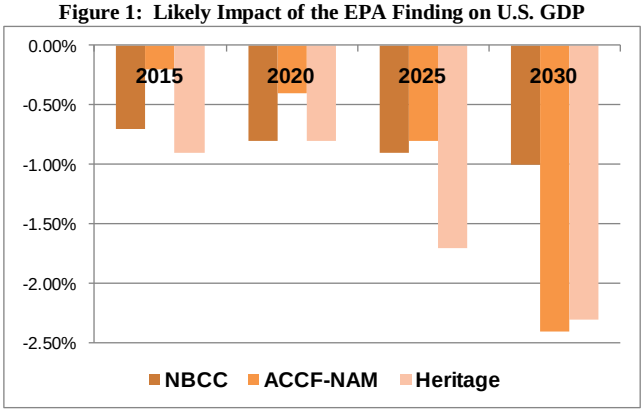
ABSTRACT

On 12-7-09, the U.S. EPA issued its long-anticipated "Endangerment Finding," which was a prerequisite to finalizing EPA's proposed greenhouse gas emission standards. Implementation of this Finding could affect millions of entities and lead to the most comprehensive, restrictive, and intrusive environmental regulations in U.S. history. A major impact of this Finding would be restrictions on the availability and increases in the prices of fossil fuels. The economic impacts of the Finding in terms of GDP, incomes, industrial activity, jobs, and other indicators would likely be severe. Due to their economic vulnerability, the impacts on low-income groups, Blacks, and Hispanics would be disproportionate and especially serious. This paper analyzes the likely economic, employment, and energy market impacts of the EPA Finding with special emphasis on the impacts on low-income groups, the elderly, Blacks, and Hispanics. We find that the CO_2 restrictions implied in the EPA regulation 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, Blacks, and Hispanics would be especially severe. We estimate the likely impacts on GDP, incomes, energy prices, jobs, poverty, and energy burdens.

MAJOR FINDING

Our major finding is that the CO_2 restrictions implied in the EPA regulation would have serious economic, employment, and energy market impacts at the national level (Figures 1 and 2) and for all states, and that the impacts on low-income groups, the elderly, Blacks, and Hispanics would be especially severe. We estimated that implementation of the EPA Finding would: 1) 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; 2) Significantly reduce U.S. employment over the next two decades, and by 2030 would result in the loss of 2.5 million jobs; 3) 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 greatly increase 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, and 600 percent for electric utility coal prices.

Figure 1: Likely Impact of the EPA Finding on U.S. GDP

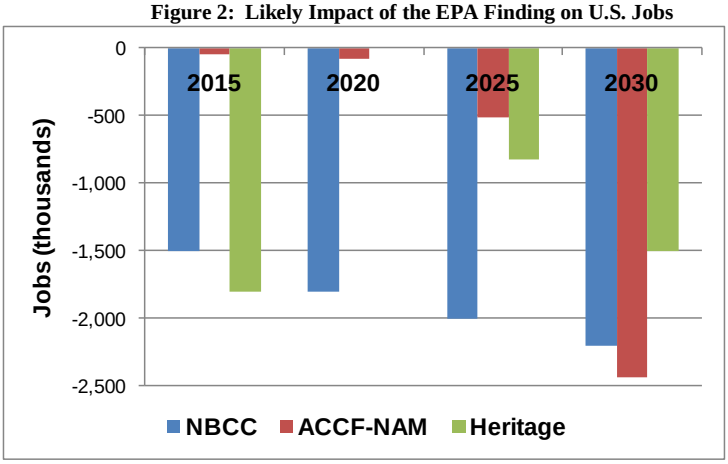


Source: Management Information Services, Inc., 2010.

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.

Figure 2: Likely Impact of the EPA Finding on U.S. Jobs

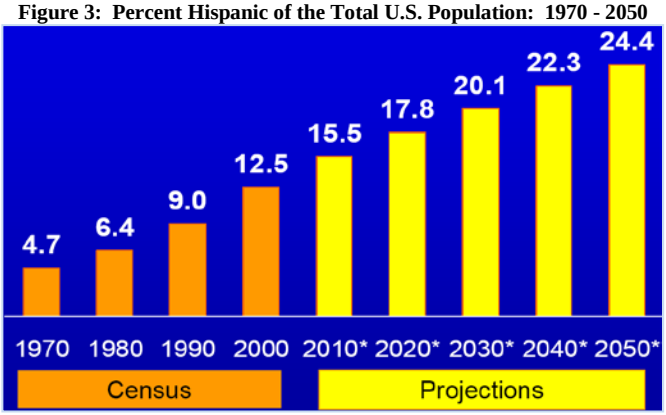


Source: Management Information Services, Inc., 2010.

DEMOGRAPHIC CHANGES

Figure 3 indicates that the growth in the Hispanic population is the salient U.S. demographic development: 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; 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 Blacks as the largest U.S. minority group, and their 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.

Figure 3: Percent Hispanic of the Total U.S. Population: 1970 - 2050

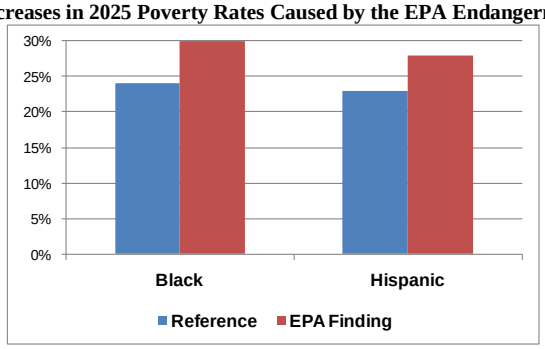


Source: U.S. Census Bureau, 2010.

IMPACT ON POVERTY RATES

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 Blacks and Hispanics, and we estimate that one of the impacts of implementing the EPA Finding will be to, by 2025 (Figure 4): 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 Blacks from 24 percent to about 30 percent. This represents an increase in Black poverty of 20 percent.

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



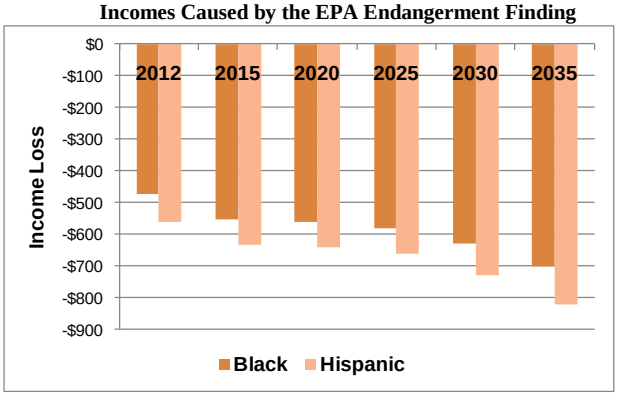
Source: Management Information Services, Inc., 2010.

This is 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 Blacks 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 increase the costs of housing. This will seriously affect Blacks 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 Blacks 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 Blacks is 40 percent, and for Hispanics it is 45 percent.

IMPACT ON INCOMES AND JOBS

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 (Figure 5): 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.

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

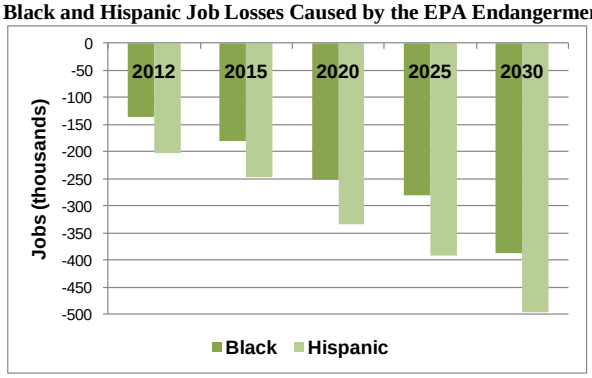


Source: Management Information Services, Inc., 2010.

The most salient characteristic of the employment status of Blacks and Hispanics is the fact that their unemployment rates have consistently been much higher than average and than those for Whites. Blacks 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 (Figure 6): 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 Blacks and Hispanics will grow rapidly over the next two decades if the EPA regulation is enacted: By 2020, cumulative job losses for Blacks will total nearly 1.7 million. By 2030, cumulative job losses for Blacks 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.

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



Source: Management Information Services, Inc., 2010.

IMPACT ON BASIC EXPENDITURES AND DISCRETIONARY INCOME

Blacks 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 Blacks 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 Blacks and Hispanics must spend their reduced incomes.

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

INCREASED ENERGY POVERTY

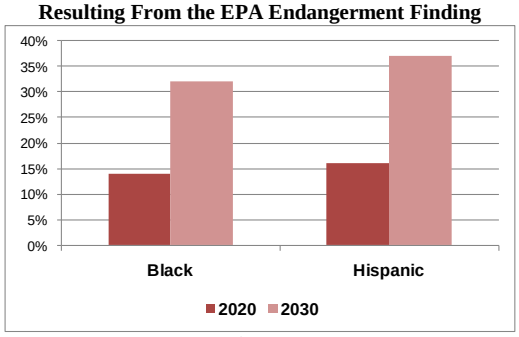
One of the more serious, but less recognized effects of implementing the EPA Finding will be to significantly increase the energy burdens for the elderly, Blacks, and Hispanics and increase the numbers of Blacks and Hispanics suffering from "energy poverty." For tens of millions of low-income households, 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.

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. 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. In addition to health risks, excessive energy burdens cause a variety of difficulties for low-income households, and "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 Blacks and Hispanics and to force large numbers of both groups into energy poverty. Implementing the EPA Finding would (Figure 7): In 2020, increase the energy burden of Blacks by 14 percent and Hispanics by 16 percent; in 2030, increase the energy burden of Blacks by nearly one-third and Hispanics by more than 35 percent.

IMPACTS ON MINORITY SMALL BUSINESSES

Small businesses will face higher costs for energy and other products as a result of the 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.

Figure 7: Increases in Black and Hispanic Energy Burdens Resulting From the EPA Endangerment Finding



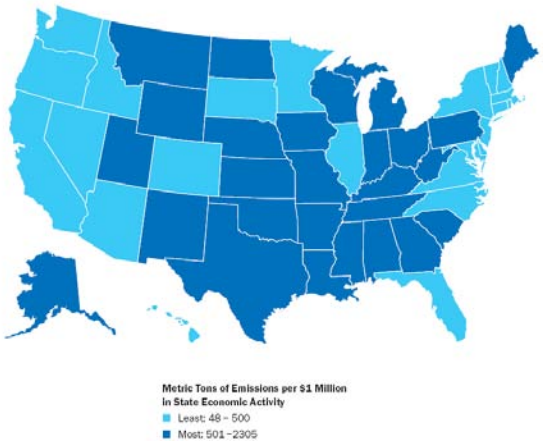
Source: Management Information Services, Inc., 2010.

IMPACTS ON BLACKS AND HISPANICS BY STATE

The impact of implementing the EPA Finding on the U.S. economy, and on low-income groups, Blacks, 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 – much more in some states than in others. For example, consumers in the Midwest and the Southeast will literally face double the impacts of carbon caps than consumers elsewhere in the country (Figure 8).

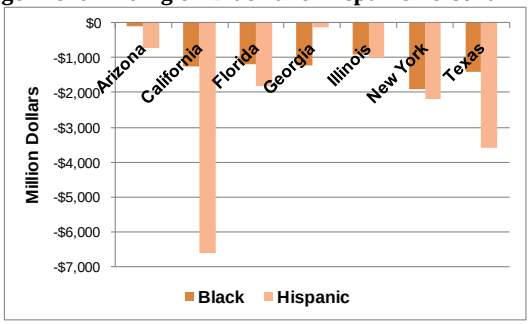
Since the proposed CO_2 restrictions would require increasingly severe reductions in the use of fossil energy to produce electricity in the states and cause large energy price increases, if the regulation is implemented all states will suffer substantial and increasingly severe economic and jobs impacts: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

Figure 8: Relative CO_2 Emissions Per State



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

Figure 9: Average Annual Impact in Selected States, 2012-2035, of the EPA Endangerment Finding on Black and Hispanic Personal Incomes



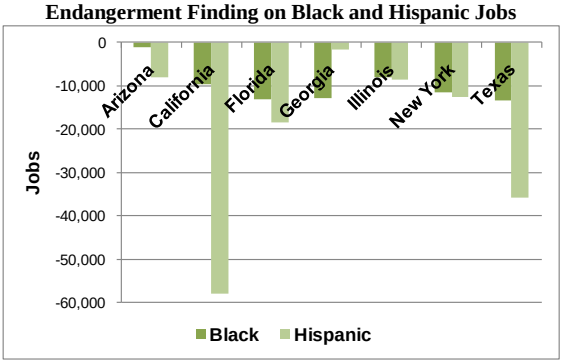
Source: Management Information Services, Inc., 2010.

Blacks and Hispanics are disproportionately located in certain states, and their population concentration in these states will increase over time. We estimated the impacts of the EPA Finding on incomes in the seven states with the highest concentrations of Blacks and Hispanics: Arizona, California, Florida, Georgia, Illinois, New York, and Texas (Figure 9). In all states (except Georgia), the impacts on Hispanic incomes exceed the impacts on Black incomes, since there are more Hispanics than Blacks residing in these states. Further, the growth rates of the Hispanic population exceed those of Blacks 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.

We estimated the average annual impacts in the seven states, 2012-2035, of the EPA Finding on Black and Hispanic jobs (Figure 10). In all states (except for Georgia), Hispanic job losses exceed Black job losses, since there are more Hispanics than Blacks residing in these 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, and 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, and 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.

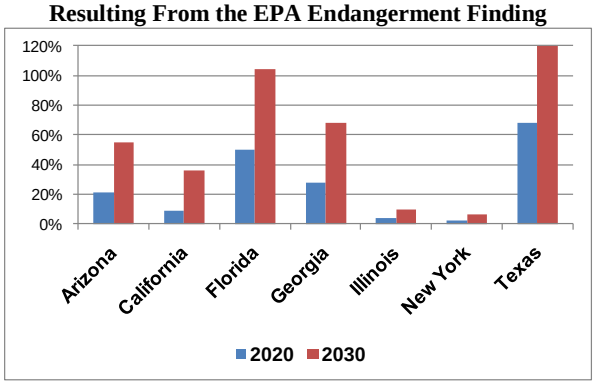
We estimated the increases in Hispanic and Black energy burdens in the states in 2020 and 2030 resulting from the EPA Endangerment Finding and found that (Figures 11 and 12): The energy burdens for both Blacks and Hispanics increase in each year; for each group, the increases in energy burdens in 2030 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 Blacks than for Hispanics; in some other states, such as Arizona, California, and Illinois, the increased energy burden is larger for Hispanics than for Blacks.

Figure 10: Average Annual Impact in Selected States, 2012-2035, of the EPA Endangerment Finding on Black and Hispanic Jobs



Source: Management Information Services, Inc., 2010.

Figure 11: Increase in Hispanic Energy Burdens in Selected States Resulting From the EPA Endangerment Finding

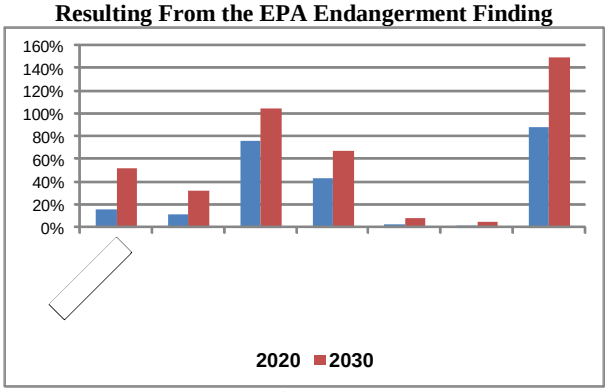


Source: Management Information Services, Inc., 2010.

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.

Figure 12: Increase in Black Energy Burdens in Selected States Resulting From the EPA Endangerment Finding



Source: Management Information Services, Inc., 2010.