NRDC Issue Paper
August 2009

# Fighting Oil Addiction

## Ranking States' Oil Vulnerability and Solutions for Change


**Report Prepared by**

David Gardiner & Associates, LLC

**Contributing Author**

Deron Lovaas
*Natural Resources Defense Council*


NRDC
THE EARTH'S BEST DEFENSE

**About the Natural Resources Defense Council**

The Natural Resources Defense Council is an international nonprofit environmental organization with more than 1.2 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. For more information, visit www.nrdc.org.

**About David Gardiner & Associates, LLC**

The mission of David Gardiner & Associates (DGA) is to help organizations and decision makers solve energy and climate challenges. By marshalling technology, policy, and finance, DGA helps its clients build consensus and advance workable solutions. DGA creates strategic advantages for its clients by helping them understand climate and energy issues and by providing advice, analysis, and strategies tailored to their needs. For more information, visit www.dgardiner.com.

*NRDC Director of Communications:* Phil Gutis
*NRDC Marketing and Operations Director:* Alexandra Kennaugh
*NRDC Publications Director:* Lisa Goffredi
*NRDC Publications Editor:* Anthony Clark
*Production:* Jon Prinsky



For additional copies of this report, send $5.00 plus $3.95 shipping and handling to NRDC Publications Department, 40 West 20th Street, New York, NY 10011. California residents must add 7.5% sales tax. Please make checks payable to NRDC in U.S. dollars. The report is also available online at www.nrdc.org/policy.

This report is printed on paper that is 100 percent post-consumer recycled fiber, processed chlorine free.

# Table of Contents

# Executive Summary

We are in the midst of the summer driving season. Although today's gasoline prices are lower than the highs of 2008, our current economic situation means that the cost of gasoline may pinch more now than ever before. Plus, gasoline prices are on the rise, and no one expects prices to remain low after the economy picks up. The challenge facing Americans is encapsulated in the statement of an Illinois driver, as noted in a recent *New York Times* article: "My husband and I both took pay cuts recently, and now the rising price of gas is taking even more out of our pockets."[1] This reality reminds us that America's addiction to oil continues to threaten not only our national security and global environmental health, but also our economic viability.

To curb this perilous addiction, we need effective government policies that will increase the availability of efficient vehicles and clean fuels and that will promote smart growth and public transit. This paper updates NRDC's 2007 and 2008 research identifying the states that are most vulnerable to spikes in oil prices—and those states that are doing the most to break their addiction to oil.

*Drivers in every state were more vulnerable in 2008 than they were in 2006.*

Like the previous editions, this paper ranks U.S. states in two critical areas related to our nation's continuing addiction to oil. First, it calculates oil vulnerability—how heavily each state's drivers are affected by increases in oil prices. Second, it ranks states on their adoption of solutions to reduce their oil dependence—measures they are taking to lessen their vulnerability and to bolster America's security. The data yield three clear conclusions:

- Oil dependence affects all states, but some drivers are hit harder economically than others.
- The trends in oil vulnerability over the past couple of years are not encouraging—drivers in every state were more vulnerable in 2008 than they were in 2006.
- While some states are pioneering solutions and many are taking some action, a fair number of states are still taking few (if any) of the steps listed in this report to reduce their oil dependence.

**Which States' Drivers Are Most at Risk?**

**NRDC research shows that the 10 states with the highest degree of oil vulnerability are:**

1) **Mississippi (also #1 in 2007 and 2006)**
2) **Montana (▲ from #20 in 2007 and #22 in 2006)**
3) **South Carolina (▼ from #2 in 2007 and 2006)**
4) **Oklahoma (▲ from #9 in 2007 and #6 in 2006)**
5) **Louisiana (▼ from #4 in 2007, from #8 in 2006)**
6) **Kentucky (▼ from #5 in 2007 and #3 in 2006)**
7) **Texas (▲ from #16 in 2007 and #11 in 2006)**
8) **New Mexico (▼ from #6 in 2007 and #5 in 2006)**
9) **Georgia (▼ from #3 in 2007 and #4 in 2006)**
10) **Arkansas (▼ from #8 in 2007 and #7 in 2006)**

NRDC's vulnerability ranking is based on the average percentage of income that states' drivers spend on gasoline. Generally, the most vulnerable drivers are in the South and South Central states, whereas the least vulnerable are in the Northeast and Mid-Atlantic. The differences are significant. Average drivers in the most vulnerable state—which for the third year in a row is Mississippi—spend more than 9 percent of their income on gasoline, while drivers in the least vulnerable state—which for the third year in a row is Connecticut—spend about 3 percent of theirs. Furthermore, NRDC's analysis shows that drivers in most states were more vulnerable in 2008 than they were the year before and that drivers in every state spent a higher percentage of their income on gasoline in 2008 than they did in 2006. These numbers are trending in the wrong direction.

As the economy struggles and oil prices go up, drivers are increasingly vulnerable – and citizens in the most at-risk states are feeling the pinch more.

## State Action on Oil Dependence: The Best and the Worst

Although some states are adopting strong measures to reduce their oil dependence, too many others are still taking little or no action.

The solutions rankings in this report are based on the range of key actions that states can take to reduce oil dependence, with particular focus on policies that can have substantial impact and can be replicated by other states.

NRDC research shows that the 10 states doing the *most* to wean themselves from oil are:

1) California
2) Massachusetts
3) Washington
4) New Mexico
5) Connecticut
6) New York
7) New Jersey
8) Pennsylvania
9) Oregon
10) Florida

In contrast, the 10 states doing the *least* to reduce their oil dependence are:

1) **West Virginia**
2) **Idaho**
3) **Wyoming**
4) **Mississippi**
5) **South Dakota**
6) **Oklahoma**
7) **Alabama**
8) **Arkansas**
9) **North Dakota**
10) **Alaska**

The failure of the 10 worst states to take meaningful action to reduce oil dependence exacerbates the national security and environmental harms associated with our current transportation habits. These and other states need to be drivers of change.

## The Benefits of Reducing Oil Dependence

Especially with the struggling economy, escalating job losses, and the return of rising gasoline and diesel prices, reducing oil dependence can yield significant benefits. These can include lowering the economic vulnerability that many residents face and creating new income from the sale of sustainable biofuels. Decreasing oil consumption also enhances America's national security by reducing dependence on sources of oil that are politically unstable or controlled by unfriendly national governments. In addition, reduced oil consumption decreases both air pollution and the greenhouse gas (GHG) emissions that cause global warming.

## State Policies for Reducing Oil Dependence

Although the Obama administration has taken some strong actions on energy and climate policy, states continue to be critical players in creating less oil-intensive transportation habits. State strategies include:

- **Clean cars (and efficient use).** Vehicles that cut global warming pollution reduce oil consumption considerably. Fifteen states have vehicle GHG emission standards based on California's "clean cars" program, which places increasingly stringent limits on global warming pollution from new vehicles. While the Obama administration's new national greenhouse gas emissions standard on cars and trucks will likely govern vehicle efficiency for model years 2012–2016, the state laws could play a crucial role before and after that period. Fifteen states offer incentives for the purchase of new hybrid-electric and plug-in hybrid cars and trucks. Thirty states have requirements for state fleet efficiency. And several states are taking action to encourage cars already on the road to use less gasoline, such as by placing restrictions on idling.

- **Clean fuels.** Biofuels—from sustainably grown sources—can make a significant dent in our oil dependence and greenhouse gas emissions. California no longer stands alone in having a low-carbon fuel standard, as Massachusetts has joined it in seeking to reduce the greenhouse gas intensity of motor vehicle fuel. And 12 states have a renewable fuel standard or mandate to encourage the blending of renewable fuels like biodiesel into regular fuel.

  Twenty states are also sponsoring grants to support research and development on clean fuels and vehicles, looking to foster the technologies that will help reduce oil dependence in the near future.

- **Smart growth and public transit.** States can reduce oil dependence by integrating land use and transportation policies and designing them to reduce vehicle-miles traveled and promote alternatives to driving. Nineteen states, including Hawaii, Georgia, Tennessee, and Maine, have adopted smart growth measures intended to curb sprawl

and reduce the associated traffic and vehicle-miles traveled. Fourteen states have created an agency or other mechanism to develop and coordinate land use policies. Six states have set targets for reducing vehicle-miles traveled. In addition, some states—led this year by New York, New Jersey, and Washington—have prioritized the funding of public transit through the allocation of state funds and/or by transferring portions of their federal highway dollars.

As policies to reduce oil dependence take root, states that adopt cutting-edge plans will be making the nation more secure, protecting drivers' wallets, and enhancing global environmental health. These states' policies can serve as examples for the many states that have thus far taken little or no such action. In addition, the work that Congress is undertaking this year on energy, climate, and transportation policies can lead the way for national policies as well.

## Federal Recommendations for Reducing Oil Vulnerability

Confronting the twin challenges of global warming and oil dependence is a tall order. That is why the federal government must enact strong energy policies that complement and support state actions. The Obama administration is off to a good start. In May, the administration unveiled new national standards that would accelerate improvements in vehicle fuel economy (to reach 35.5 mpg by 2016) and that would, for the first time, set a national greenhouse gas emissions standard on cars and trucks (250 grams per mile per vehicle in 2016).

But there is more to do. Specifically, Congress must:

- Adopt comprehensive climate and energy legislation that caps and cuts carbon dioxide emissions, includes a low-carbon fuel standard, and requires regions to adopt oil-saving blueprints for future infrastructure and development. Establishing national global warming pollution limits that get tighter every year will guide federal and state policies to reduce our oil dependence. Meanwhile, carbon dioxide captured from power plants and other sources can be used to enhance oil recovery from existing fields by billions of barrels, putting downward pressure on world oil prices and increasing our domestic production capacity.

- Fundamentally reform federal transportation policy. Since the Interstate Highway System was completed, there has been no compelling, binding vision for federal transportation policy. Congress must enact national transportation legislation that includes: incentives for smart, transit-oriented development; assistance for states and regions to save oil; and ample funding for energy-efficient transportation alternatives, including rail and bus lines, bike paths, and sidewalks.

CHAPTER 1

# Oil Vulnerability Rankings: Who Is Hardest Hit?

The economy is down, gasoline prices are once again on the rise, and global warming seems to be accelerating. So Americans continue to be concerned about the problem of oil dependence and its consequences.

America's dependence on oil is problematic in several ways, including the following:

- The United States has less than 2 percent of the world's oil supplies but is responsible for about one-quarter of the world's oil consumption.[2] We import almost two-thirds of our crude oil supply from foreign countries, and more and more of the world's future supply will come from regions that are either politically unstable or unfriendly to U.S. interests.[3]

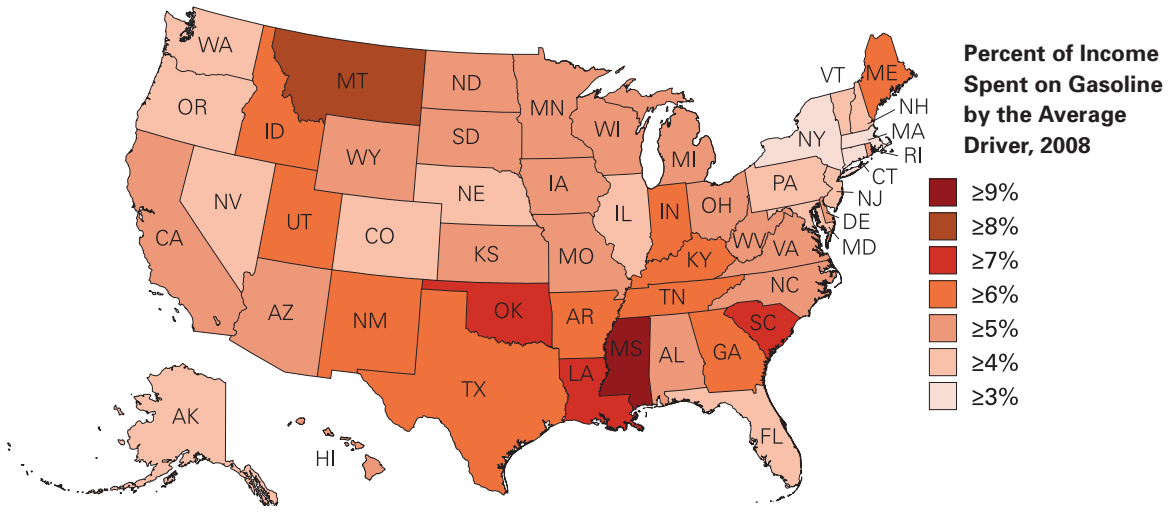
- Our unstable supply of oil threatens our national economy, particularly since about 96 percent of our transportation system relies on oil.[4]

- Oil consumption is a leading contributor to the greenhouse gas (GHG) emissions that cause global warming. In the United States, the oil-based transportation system is responsible for roughly one-third of our global warming pollution.[5]

Our national addiction to oil affects every person in every state. However, the rankings in Table 1 (mapped in Figure 1) clearly show that oil dependence hits the drivers of certain states harder than it does others. These rankings reflect the proportion of the average driver's income spent on motor gasoline last year in each state.[6]

As was the case in previous years, the hardest-hit drivers are generally in the South and South Central states, although Montana shot up to near the top of the rankings for 2008. And again, the least vulnerable are mostly in the Northeast and Mid-Atlantic. The most vulnerable state (Mississippi) and least vulnerable state (Connecticut) are unchanged from

**Figure 1: Map of U.S. Oil Vulnerability**




Source: David Gardiner and Associates.

prior years. Citizens in Mississippi spend more than 9 percent of their income on gasoline, while citizens in Connecticut spend a little over 3 percent of theirs.

What has changed, however, is that many drivers were more vulnerable in 2008 than they were the year before. Drivers in only 17 states spent a *smaller* percentage of their income on gasoline in 2008 than in 2007; drivers in the other 33 states saw their vulnerability rise. More striking is that drivers in every state were more vulnerable in 2008 than they were in 2006. These figures are trending in the wrong direction. The map in Figure 1 contains two new, darker colors this year to account for Mississippi's drivers spending more than 9 percent of their income on gasoline in 2008 and Montana's drivers spending more than 8 percent. In contrast, the highest vulnerability was in the 7 percent range in 2007 (Mississippi, at 7.87 percent) and in the 6 percent range in 2006 (Mississippi, at 6.87 percent). The trend is not only found among the most vulnerable states; the three least vulnerable states each saw their drivers' vulnerability increase in 2008 compared to 2007 and 2006 (though by less than 1 percent). These differences are shown in Table 2 (and mapped in Figure 2).

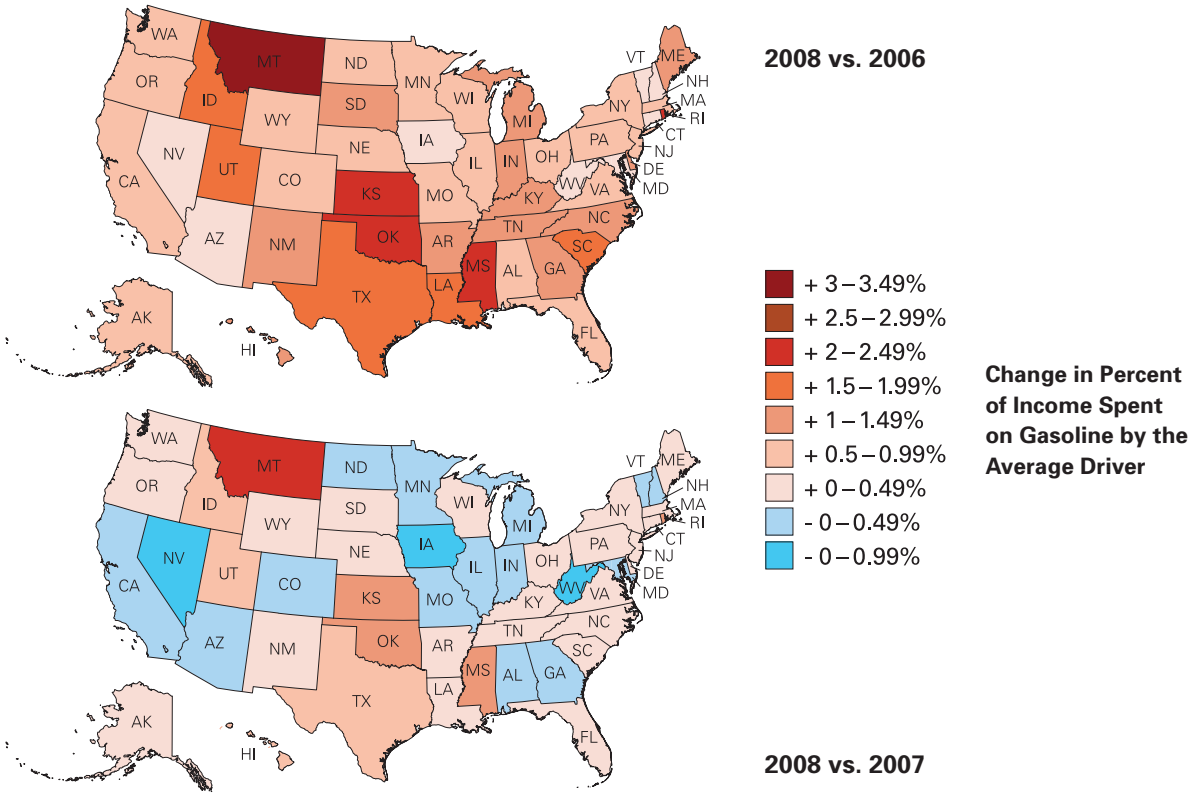
## Table 1: Oil Vulnerability Rankings (Continued)

| Rank | State | Percent of Income (and $ Amount) Spent on Gasoline by the Average Driver, 2008 |
|---|---|---|
| 1 | Mississippi | 9.14% ($2702.00) |
| 2 | Montana | 8.07% ($2762.94 |
| 3 | South Carolina | 7.59% ($2419.61) |
| 4 | Oklahoma | 7.50% ($2766.65) |
| 5 | Louisiana | 7.00% ($2540.66) |
| 6 | Kentucky | 6.84% ($2178.30) |
| 7 | Texas | 6.80% ($2622.05) |
| 8 | New Mexico | 6.79% ($2177.51) |
| 9 | Georgia | 6.71% ($2278.92) |
| 10 | Arkansas | 6.68% ($2089.00) |
| 11 | Utah | 6.61% ($2002.07) |
| 12 | Indiana | 6.44% ($2195.73) |
| 13 | Maine | 6.36% ($2250.80 |
| 14 | Tennessee | 6.25% ($2146.47) |
| 15 | Idaho | 6.20% ($1991.41) |
| 16 | Missouri | 5.94% ($2091.62) |
| 17 | South Dakota | 5.93% ($2216.13) |
| 18 | North Carolina | 5.93% ($2041.98) |
| 19 | Kansas | 5.86% ($2226.64) |
| 20 | Alabama | 5.68% ($1911.72) |
| 21 | Arizona | 5.65% ($1863.13) |
| 22 | North Dakota | 5.64% ($2217.39) |
| 23 | West Virginia | 5.62% ($1733.11) |
| 24 | Michigan | 5.58% ($1971.02) |
| 25 | Minnesota | 5.50% ($2353.87) |
| 26 | Ohio | 5.50% ($1951.67) |
| 27 | Rhode Island | 5.40% ($2214.95) |
| 28 | Delaware | 5.37% ($2195.27) |
| 29 | Wyoming | 5.36% ($2662.83) |
| 30 | Iowa | 5.25% ($1924.73) |
| 31 | Hawaii | 5.19% ($2101.98) |
| 32 | Wisconsin | 5.18% ($1931.33) |
| 33 | California | 5.16% ($2202.09) |
| 34 | Virginia | 5.14% ($2205.13) |
| 35 | Oregon | 4.91% ($1764.68) |
| 36 | Illinois | 4.78% ($2027.43) |
| 37 | Nebraska | 4.69% ($1769.97) |
| 38 | Nevada | 4.66% ($1880.38) |
| 39 | Vermont | 4.66% ($1810.06) |
| 40 | Florida | 4.65% ($1817.84) |
| 41 | Pennsylvania | 4.56% ($1836.94) |
| 42 | New Jersey | 4.49% ($2286.44) |
| 43 | Washington | 4.43% ($1875.42) |
| 44 | Alaska | 4.33% ($1874.92) |
| 45 | Colorado | 4.29% ($1817.47) |
| 46 | New Hampshire | 4.21% ($1802.59) |
| 47 | Maryland | 4.19% ($2015.49) |
| 48 | Massachusetts | 3.66% ($1856.18) |
| 49 | New York | 3.44% ($1654.17) |
| 50 | Connecticut | 3.24% ($1824.58) |

## Table 2: Change in Percent of Income Spent on Gasoline by the Average Driver (2008 Compared to 2006 and 2007)

| State | 2008 vs. 2006 | 2008 vs. 2007 |
|---|---|---|
| MT | +3.22 | +2.27 |
| MS | +2.27 | +1.27 |
| KS | +2.21 | +1.01 |
| RI | +2.15 | +1.43 |
| OK | +2.03 | +1.22 |
| LA | +1.66 | +0.17 |
| TX | +1.64 | +0.95 |
| UT | +1.57 | +0.80 |
| SC | +1.56 | +0.38 |
| ID | +1.55 | +0.50 |
| TN | +1.40 | +0.43 |
| IN | +1.40 | **-0.02** |
| AR | +1.30 | +0.40 |
| SD | +1.23 | +0.21 |
| HI | +1.21 | +0.61 |
| ME | +1.21 | +0.27 |
| NM | +1.12 | +0.23 |
| DE | +1.12 | +0.48 |
| KY | +1.07 | +0.16 |
| MI | +1.05 | **-0.20** |
| GA | +1.04 | **-0.37** |
| NC | +1.01 | +0.23 |
| PA | +0.99 | +0.15 |
| NJ | +0.96 | +0.39 |
| OH | +0.96 | +0.09 |
| IL | +0.94 | **-0.01** |
| MO | +0.92 | **-0.07** |
| FL | +0.91 | +0.02 |
| WY | +0.90 | +0.15 |
| WI | +0.88 | +0.23 |
| CA | +0.85 | **-0.22** |
| OR | +0.85 | +0.07 |
| VA | +0.79 | +0.01 |
| AK | +0.78 | +0.46 |
| NE | +0.74 | +0.05 |
| WA | +0.66 | +0.17 |
| AL | +0.65 | -0.33 |
| NY | +0.65 | +0.16 |
| MA | +0.55 | +0.15 |
| ND | +0.55 | -0.17 |
| CO | +0.51 | -0.18 |
| MN | +0.51 | -0.29 |
| VT | +0.48 | -0.40 |
| CT | +0.46 | +0.08 |
| WV | +0.45 | -0.55 |
| AZ | +0.38 | -0.41 |
| MD | +0.36 | -0.33 |
| IA | +0.21 | -0.95 |
| NH | +0.17 | -0.44 |
| NV | +0.09 | -0.71 |

## Figure 2: Change in Percent of Income Spent on Gasoline by the Average Driver



CHAPTER 2

# Breaking Our Addiction: Solutions to Oil Dependence

Identifying the problem of oil addiction is only the beginning; the next step is to adopt workable solutions. In the midst of a weak economy, rising gasoline prices underscore the need for this country to reduce its dependence on oil. By promoting more efficient vehicles, clean fuels, smart growth, and public transit, governments can put an end to an unhealthy addiction that empties our citizens' wallets and threatens our national security, economy, and environment.

Some solutions to oil dependence boast broad support that spans party lines, geographic boundaries, and policy interests (e.g., national security, energy security, economic stability, public health, and the environment). The public firmly backs efforts to reduce our nation's oil dependence that also benefit the environment. Public opinion polling shows that 89 percent of Americans worry about fuel price increases, 83 percent are concerned about dependence on foreign oil, and 71 percent worry about global warming.[7] In a survey about the federal recovery package, 80 percent of respondents said investments should help reduce oil dependence, improve the environment, and increase transportation options.[8]

## State Solutions Rankings: Who's Getting It Right?

NRDC rankings of states' adoption of solutions are based on the range of key actions that states can take to reduce oil dependence, particularly those that can have a substantial impact on oil dependence and can be replicated by other states. The rankings also take into account the level of priority being given to public transit as compared with highways.[9] As Table 3 shows, some states have already adopted significant measures to promote clean vehicles, clean fuels, and smart growth, but far too many states are failing to take adequate action.

### CLEAN VEHICLES AND EFFICIENT USE

More and more states are enacting policies to promote vehicles that use less gasoline and encourage more efficient use of existing vehicles. For example:

- **Fifteen states have adopted "clean car" standards, which also paved the way for national standards.** California led the way in 2002, passing the nation's first law to require that all new cars, pickup trucks, sport-utility vehicles, and minivans sold in the state meet global warming pollution limits, starting with the 2009 model year. Under the federal Clean Air Act, states have the option of adopting California's pollution standards if the Environmental Protection Agency (EPA) grants California a waiver (the Bush EPA had denied California's waiver request at the end of 2007, but the Obama EPA recently granted it). Arizona, Connecticut, Florida, Maine,

## Table 3: Solutions Rankings #1 Through #25

| | | CLEAN VEHICLES & EFFICIENT USE | | | | R&D | CLEAN FUELS | | SMART GROWTH & TRANSIT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rank | State | Hybrid & Plug-In Hybrid Incentives | Vehicle GHG Emissions Standards | State Fleet Efficiency | Idling Restrictions | State-Sponsored Grants for R&D on Cars/Fuels | Low-Carbon Fuel Standard | Renewable Fuel Standard | Vehicle-Miles Traveled Reduction Target | State Agency for Coordinated Smart Growth Development | Growth Management Act | Transit Spending Prioritization (Ranking & Percentage)* |
| 1 | California | ◖ | ● | ◖ | ◖ | ◖ | ●● | | ● | | ◖ | 7 (13.17%) |
| 2 | Massachusetts | | ● | ◖ | ◖ | | ●● | ● | | ◖ | ◖ | 4 (18.49%) |
| 3 | Washington | ● | ● | ◖ | | ◖ | | ● | ● | | ◖ | 3 (28.13%) |
| 4 | New Mexico | ● | ● | ◖ | | ◖ | | ● | ● | | | 23 (2.09%) |
| 5 | Connecticut | ● | ● | ◖ | | ◖ | | | ● | ◖ | ◖ | 24 (2.06%) |
| 6 | New York | | ● | ◖ | ◖ | ◖ | | | ● | ◖ | | 1 (41.23%) |
| 7 | New Jersey | ●◖ | ● | | ◖ | | | | | ◖ | ◖ | 2 (30.10%) |
| 8 | Pennsylvania | | ● | ◖ | ◖ | ◖ | | ● | | ◖ | ◖ | 11 (7.23%) |
| 9 | Oregon | ● | ● | ◖ | | | | ● | | ◖ | ◖ | 18 (3.43%) |
| 10 | Florida | ◖ | ● | ◖ | ◖ | ◖ | | ● | | | | 16 (3.74%) |
| 11 | Arizona | ◖ | ● | ◖ | | ◖ | | | | ◖ | ◖ | 9 (8.23%) |
| 12 | Maryland | ● | ● | | ◖ | | | | | ◖ | ◖ | 10 (8.09%) |
| 13 | Rhode Island | | ● | ◖ | ◖ | | | | ● | | ◖ | 22 (2.11%) |
| 14 | Colorado | ●◖ | | ◖ | | ◖ | | | | ◖ | | 8 (8.89%) |
| 15 | Hawaii | | | ◖ | ◖ | | | ● | | ◖ | ◖ | 34 (0.72%) |
| 16 | Vermont | | ● | ◖ | | ◖ | | | | ◖ | ◖ | 43 (0.29%) |
| 17 | Georgia | ◖ | | ◖ | ◖ | | | | | ◖ | ◖ | 12 (6.92%) |
| 18 | Minnesota | | | ◖ | | | | ● | | ◖ | ◖ | 17 (3.65%) |
| 19 | Louisiana | ● | | ◖ | | | | ● | | | | 37 (0.55%) |
| 20 | Maine | | ● | ◖ | ◖ | | | | | | ◖ | 40 (0.41%) |
| 21 | Virginia | ◖ | | ◖ | ◖ | ◖ | | | | | | 26 (1.79%) |
| 22 | Illinois | ◖ | | ◖ | | ◖ | | | | | | 6 (15.35%) |
| 23 | Missouri | | | ◖ | | | | ● | | | | 15 (4.50%) |
| 24 | Tennessee | | | ◖ | | ◖ | | | | | ◖ | 27 (1.58%) |
| 25 | New Hampshire | | | ◖ | ◖ | ◖ | | | | | | 36 (0.57%) |

* Ranking based on the ratio of transit spending to highway spending, from data in the Federal Highway Administration's *Highway Statistics 2007*.

## Table 3: Solutions Rankings #26 Through #50

| | | CLEAN VEHICLES & EFFICIENT USE | | | | R&D | CLEAN FUELS | | SMART GROWTH & TRANSIT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rank | State | Hybrid & Plug-In Hybrid Incentives | Vehicle GHG Emissions Standards | State Fleet Efficiency | Idling Restrictions | State-Sponsored Grants for R&D on Cars/Fuels | Low-Carbon Fuel Standard | Renewable Fuel Standard | Vehicle-Miles Traveled Reduction Target | State Agency for Coordinated Smart Growth Development | Growth Management Act | Transit Spending Prioritization (Ranking & Percentage)* |
| 26 | South Carolina | ● | | | ◖ | | | | | | | 38 (0.53%) |
| 27 | Iowa | | | | | ◖ | | ● | | | | 39 (0.52%) |
| 28 | Delaware | | | | ◖ | | | | | ◖ | ◖ | 44 (0.28%) |
| 29 | Utah | | | | ◖ | ◖ | | | | | | 5 (17.04%) |
| 30 | Nevada | | | ◖ | | | | | | | ◖ | 13 (6.73%) |
| 31 | North Carolina | | | ◖ | | ◖ | | | | | | 14 (6.16%) |
| 32 | Ohio | | | ◖ | | ◖ | | | | | | 20 (2.92%) |
| 33 | Indiana | | | ◖ | | ◖ | | | | | | 28 (1.14%) |
| 34 | Montana | | | | | | | ● | | | | 32 (0.77%) |
| 35 | Wisconsin | | | ◖ | | | | | | | ◖ | 33 (0.72%) |
| 36 | Kentucky | | | ◖ | | ◖ | | | | | | 41 (0.40%) |
| 37 | Texas | | | | | ◖ | | | | | | 19 (3.28%) |
| 38 | Michigan | | | | | ◖ | | | | | | 25 (1.95%) |
| 39 | Kansas | | | ◖ | | | | | | | | 35 (0.59%) |
| 40 | Nebraska | | | | ◖ | | | | | | | 45 (0.24%) |
| 41 | Alaska | | | | | | | | | | | 21 (2.18%) |
| 42 | North Dakota | | | | | | | | | | | 29 (0.81%) |
| 43 | Arkansas | | | | | | | | | | | 30 (0.77%) |
| 44 | Alabama | | | | | | | | | | | 31 (0.77%) |
| 45 | Oklahoma | | | | | | | | | | | 42 (0.38%) |
| 46 | South Dakota | | | | | | | | | | | 46 (0.16%) |
| 47 | Mississippi | | | | | | | | | | | 47 (0.08%) |
| 48 | Wyoming | | | | | | | | | | | 48 (0.07%) |
| 49 | Idaho | | | | | | | | | | | 49 (0.07%) |
| 50 | West Virginia | | | | | | | | | | | 50 (0.07%) |

* Ranking based on the ratio of transit spending to highway spending, from data in the Federal Highway Administration's *Highway Statistics 2007*.

Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington adopted similar legislation, and other states were considering it. All told, these states represent well more than one-third of the U.S. car market. In May 2009, the Obama administration announced a new national greenhouse gas emissions standard on cars and trucks that basically matches California's (250 grams per mile per vehicle in 2016). Although this new national greenhouse gas emissions standard on cars and trucks will likely govern vehicle efficiency for model years 2012–2016, the state laws could play a crucial role before and after that period. Cars that meet these pollution standards will have the additional benefit of using less gasoline or running on nonpetroleum fuels.

- **Several states are promoting cleaner vehicles through incentives to consumers.** Fifteen states offer incentives for hybrid-electric cars and trucks. Most important are the financial incentives to help drivers purchase a new hybrid vehicle. Some states offer usage-based incentives (e.g., hybrid use of HOV lanes), and Colorado and New Jersey offer both. Hybrids emit less global warming pollution and use less gasoline than conventional vehicles. Since the U.S. mass-market introduction of the two-door Honda Insight in 1999, major carmakers have dramatically increased their offerings of hybrid cars. Plug-in hybrids offer even greater potential for fuel savings, and some states—such as South Carolina—are offering financial incentives for plug-ins.

- **Many states are taking action to promote greater efficiency in the use of vehicles.** Thirty states, for instance, have policies mandating stronger fuel efficiency standards for the state fleet. While state fleets are usually fairly small relative to the overall number of vehicles in a state, state fleet efficiency standards can provide a good model and represent a positive step forward. As another example, 17 states have policies restricting vehicle idling. Again, the amount of oil saved is generally not very substantial, but such policies do have some effect and promote an ethic of efficiency.

## CLEAN FUELS

Given the continued uncertainty surrounding biofuels, this year's report focuses the Clean Fuels section on states' efforts to create an infrastructure and drive the development of sustainable alternative fuels. For example:

- **Massachusetts has joined California in adopting a low-carbon fuel standard.** In 2007, Governor Arnold Schwarzenegger announced an executive order calling for the adoption of a low-carbon fuel standard (LCFS) for fuels sold in the state. This measure seeks to reduce the global warming pollution "intensity" of motor vehicle fuel by 10 percent by 2020.[10] In July 2008, Massachusetts Governor Deval Patrick and the state congressional leadership enacted a similar LCFS, and Massachusetts and other states in the Regional Greenhouse Gas Initiative (RGGI) have committed to creating a regional LCFS.[11] Promoting low-carbon fuels supports the growth of oil alternatives, and sustainably produced biofuels (especially those derived with cellulosic technology), plug-in hybrid-electric vehicles, and the like can yield tremendous greenhouse gas emission reductions. California estimates that achieving the 10 percent reduction goal will reduce motor vehicle petroleum consumption by about 20 percent.[12] Such a big effect makes the LCFS one of the most important policies a state can adopt to reduce oil dependence.

- **Twelve states have a renewable fuel standard or mandate.** These policies, in states such as Louisiana and Oregon, require the blending of renewable fuels like biodiesel into regular fuel. It is important that states calculate lifecycle greenhouse gas emissions for the biofuels to ensure that they not only save oil but also reduce emissions.

- **Twenty states sponsor grants to support research and development on clean fuels and vehicles.** These states are looking to foster the technologies that will help reduce oil dependence in the near future. For example, Illinois has a Renewable Fuels Research, Development, and Demonstration Program to promote, expand the use of, and accelerate commercialization of clean, renewable transportation fuels.

## SMART GROWTH AND PUBLIC TRANSIT

States can lower oil dependence through smart growth policies that reduce sprawl and promote accessible public transit systems. In order to reduce sprawl, smart growth strategies focus on issues such as transportation, land use, zoning, and building codes. By concentrating growth and redevelopment within already existing urban areas and communities, states can reduce the need to develop further outside of cities and towns, where entirely new infrastructure (roads, buildings, etc.) must be built. New development in suburban and rural areas also increases the distance that citizens must travel for work and other activities, increasing inconvenience and pollution.

- **Nineteen states have growth management acts.** Among the most comprehensive ways of promoting smart growth is growth management legislation, such as Washington's Growth Management Act (GMA). This GMA affects 29 counties (95 percent of Washington's population) and requires, among other things, policies covering sprawl reduction, affordable housing, open space and recreation, environmental protection, natural resource industries, permit processing, concentrated urban growth, regional transportation, historic lands and buildings, and public facilities and services.[13] Despite Florida Governor Crist's weakening of his state's growth management laws this year, growth management legislation was still one of the areas of greatest improvement from last year, when only 12 states had such laws.

- **Only six states have set targets for reducing vehicle-miles traveled.** For instance, the state of Washington amended its GMA to make it even more effective at lowering oil consumption, calling for reductions in per capita vehicle-miles traveled (VMT) of 18 percent by 2020, 30 percent by 2025, and 50 percent by 2050.[14]

- **Fourteen states have an agency or other mechanism to coordinate development.** Many states have recognized that several different state entities influence development, sometimes in potentially contradictory ways, and have created mechanisms to coordinate public investment that supports development. In 2003, Massachusetts established a powerful Executive Office of Commonwealth Development.[15] Such coordination is a vital first step toward smart development, enabling a state to take into account the wide range of relevant influences. We encourage states to use coordinating mechanisms to promote smart growth.

- **Some states have prioritized the funding of public transit.** Public transit systems, such as bus, commuter rail, subway, and light rail programs, are important components in state efforts to promote smart growth and reduce oil dependence. By creating or expanding reliable and accessible public transit programs, states can reduce the number of single-passenger cars on the road, consequently lowering average VMT. And strong public transit provides a critical transportation alternative as gas prices rise. A case in point: Americans drove 1.4 billion fewer highway miles in April 2008 than in April 2007 because of soaring fuel prices; many took trains or buses instead, leading to a surge in transit ridership.[16] In 2008, public transportation saw its highest level of ridership in 52 years.[17]

  States have the ability to "flex" certain federal funds that ordinarily would be spent on highway projects and use them to pay for public transit programs. States that choose not to transfer federal funds to transit programs are not necessarily neglecting transit funding, however, as they may be spending more state dollars on transit. The best way to understand state transit prioritization is to compare the amount of total state spending (including flexed federal funds) on mass transit with the total spent on highway programs, as shown in the far right column of Table 3. By this measure, the top five states prioritizing public transit spending are New York, New Jersey, Washington, Massachusetts, and Utah.

## CHAPTER 3

# Conclusion: States Must Take Action and the Federal Government Must Lead

Drivers in all states are dependent on oil for their transportation needs. Some states are more vulnerable to oil price increases than others, however, and a number of them are taking significantly more action to curtail oil dependence.

Responsible states are making efforts to promote clean fuels, efficient vehicles, and smart growth and transit. As policies to reduce oil dependence take root, these states will be making the nation more secure, accruing savings in household budgets, and enhancing global environmental health. These states' policies can serve as examples for the states that are presently engaged in policy development and implementation aimed at reducing oil dependence, as well as for the many states that have thus far taken little or no such action.

At the same time, the federal government has a responsibility to take strong and necessary actions to reduce our oil dependence, and significant progress must be made at this level of government to complement and support state actions. By guiding states' promotion of clean fuels, efficient vehicles, and smart growth and transit, our nation's leaders have an opportunity to gauge the most effective measures and adopt them. The Obama administration is off to a good start with its recent unveiling of new national standards that would accelerate improvements in vehicle fuel economy and set a national greenhouse gas emissions standard for cars and trucks.

But there is much more to be done. In particular, Congress must accomplish the following:

- Adopt comprehensive climate and energy legislation that caps and cuts carbon dioxide emissions, includes a low-carbon fuel standard, and requires regions to adopt oil-saving blueprints for future infrastructure and development. Establishing national global warming pollution limits that get tighter every year will guide federal and state policies to reduce our oil dependence. Meanwhile, carbon dioxide captured from powerplants and other sources can be used to enhance oil recovery from existing fields by billions of barrels, putting downward pressure on world oil prices and increasing our domestic production capacity.

- Fundamentally reform federal transportation policy. Since the Interstate Highway System was completed, there has been no compelling, binding vision for federal transportation policy. Congress must enact national transportation legislation that includes: incentives for smart, transit-oriented development; assistance for states and regions to save oil; and ample funding for energy-efficient transportation alternatives, including rail and bus lines, bike paths, and sidewalks.

Solutions to our oil dependence are available today. Policies like the low-carbon fuel standard and vehicle-miles-traveled reduction targets demonstrate that we have the ability at both state and national levels to reduce oil dependence and drive progress toward energy security.

## APPENDIX 1

# Methodology

### OIL VULNERABILITY RANKING

The oil vulnerability ranking is based on data from the following sources:

*Motor Gasoline Consumption* (2008):
Federal Highway Administration, Motor Fuel Reported by States
(available at http://www.fhwa.dot.gov/ohim/mmfr/nov08/cgvgasoline4.cfm)

*Gasoline Prices by State* (2008):
Energy Information Administration
(available at http://tonto.eia.doe.gov/dnav/pet/pet_pri_allmg_a_EPM0_PTC_cpgal_a.htm)

*Gasoline Taxes by State* (2008):
University of Iowa, State Gas Taxes
(available at http://www.uiowa.edu/~ipro/Papers%202008/State_Gas_Tax.pdf)

*Licensed Drivers by State* (2007):
Federal Highway Administration, Highway Statistics 2007
(available at http://www.fhwa.dot.gov/policyinformation/statistics/2007/dl22.cfm)

*Per Capita Personal Income by State* (2008):
Bureau of Economic Analysis
(available at http://www.bea.gov/newsreleases/regional/spi/2009/pdf/spi0309.pdf)

The oil vulnerability ranking is based on the percentage of personal income spent on gasoline in each state in 2008. To calculate this percentage, the amount of motor gasoline consumed in each state is multiplied by average price to produce the total amount spent in each state on gasoline. This figure is then divided by the total number of licensed drivers to produce the amount spent on gasoline (including taxes) per driver. Finally, this number is divided by per capita income and multiplied by 100 to produce the average percentage of drivers' income spent on gasoline.

State taxes are included in the average cost of fuel per gallon in 2008, as they were in the ranking report released last year. In addition, state taxes from 2006 have been added to the data from the original ranking report released in 2007, which had initially excluded state taxes from fuel costs. This addition allows for direct comparisons to be made among the years in the vulnerability of each state to the price of oil.

## SOLUTIONS RANKING

The solutions ranking was based on data from the following sources:

### Clean Vehicles & Efficient Use

*Hybrid Incentives, State Fleet Efficiency Requirements, Idling Restrictions, and Research & Development Grants:*

- Department of Energy, Office of Energy Efficiency and Renewable Energy, Alternative Fuels Data Center (available at http://www.afdc.energy.gov/afdc/progs/ddown_matrx.php)

*Vehicle GHG Emissions Standards:*

- Pew Center on Global Climate Change, U.S. States & Regions (available at http://www.pewclimate.org/states-regions)
- Clean Cars Campaign (available at http://www.cleancarscampaign.org/web-content/stateaction/stateaction.html)
- Environmental Protection Agency, State and Regional Climate Policy, Transportation Sector (available at http://www.epa.gov/climatechange/wycd/stateandlocalgov/state_transp.html)

### Clean Fuels

*Low-Carbon Fuel Standard:*

- Pew Center on Global Climate Change, U.S. States & Regions (available at http://www.pewclimate.org/states-regions)

*Renewable Fuel Standard*

- Department of Energy, Office of Energy Efficiency and Renewable Energy, Alternative Fuels Data Center (available at http://www.afdc.energy.gov/afdc/progs/ddown_matrx.php)

### Smart Growth & Transit

*Smart Growth Policies (State Agencies/Cabinet positions and Growth Management Policies):*

- Smart Growth America (available at http://www.smartgrowth.org/search/default.asp#Resources)
- American Council for an Energy Efficient Economy (ACEEE) (available at http://www.aceee.org/energy/state/policies/vehicles.htm)

*State Transit Prioritization:*

- Federal Highway Administration's Highway Statistics (available at http://www.fhwa.dot.gov/policyinformation/statistics/2007/mt2a.cfm and http://www.fhwa.dot.gov/policyinformation/statistics/2007/sf1.cfm)

In order to calculate a solutions ranking of the 50 states, NRDC started by assigning a value of either 0.5 point, 1 point, or 2 points to each action in the table that a state currently takes. Actions with a bigger impact on oil dependence received more points:

- ***2 points:*** Low-carbon fuel standard

- ***1 point:*** Vehicle GHG emissions standards, VMT reduction target, financial incentives for hybrids, and renewable fuel standards

- ***0.5 point:*** HOV access incentives for hybrids, state fleet efficiency requirements, idling restrictions, state-sponsored grants for R&D pertaining to clean fuel and cars, coordinating state agencies for development, and growth management policies.

NRDC then added a fraction of a point to states' scores based on how their transit prioritization compared with the highest state's transit percentage (New York: 41.23 percent). In other words, New York's transit prioritization of 41.23 percent was given a value of 1 point, and all other states were given a value proportional to this score. (For example, Colorado's transit spending percentage of 8.89 was divided by New York's 41.23; the resulting 0.2156, when added to Colorado's 3 points, yields a total score of 3.2156, which was the 13th-highest score of any state.)

Some of the nuances involved in awarding points are described below.

*Vehicle GHG Emissions Standards:*

- Clean car standards received 2 points last year. Given the Obama administration's announcement, which puts these standards a little further from the cutting edge, states received only 1 point for them this year.
- In last year's report, three states—Colorado, Iowa, and Utah—got credit for being "in the process of adopting" clean cars legislation. That credit was eliminated this year—only states that have actually adopted clean cars legislation got credit.

*Idling Restrictions:*

- States did not receive credit for idling policies that are limited to school buses or that are not statewide.

# Endnotes


1 Clifford Krauss, "High Gas Prices Could Slow Recovery," *New York Times*, June 8, 2008, at http://www.nytimes.com/2009/06/09/business/09gas.html.

2 Energy Information Administration, World Proved Crude Oil Reserves, January 2008, at http://www.eia.doe.gov/pub/international/iealf/crudeoilreserves.xls; Total Consumption of Petroleum Products, 2007, at http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=54&aid=2.

3 Energy Information Administration, U.S. Crude Oil Supply & Disposition, updated May 23, 2008, at http://tonto.eia.doe.gov/dnav/pet/pet_sum_crdsnd_adc_mbbl_a.htm.

4 Energy Information Administration, *Annual Energy Review 2007*, Transportation Sector Energy Consumption, at http://www.eia.doe.gov/aer/pdf/pages/sec2_8.pdf.

5 Energy Information Administration, *Annual Energy Review 2007*, Carbon Dioxide Emissions from Energy Consumption by Sector, at http://www.eia.doe.gov/aer/pdf/pages/sec12_5.pdf.

6 For more details, see the Methodology section at the end of this report.

7 Public Agenda, "The Energy Learning Curve: Coming From Different Starting Points, the Public Sees Similar Solutions," April 2009, at http://www.publicagenda.org/pages/energy-learning-curve.

8 Hart Research Associates, 2009 Growth and Transportation Survey for National Association of Realtors, January 2009, at http://www.realtor.org/press_room/news_releases/2009/02/americans_agree_smart_growth.

9 For more details on the solutions ranking, see the Methodology section at the end of this report.

10 This standard is complementary to the goals set in California's Global Warming Solutions Act of 2006 (Assembly Bill 32). Under this act, California, the world's 12th-largest carbon emitter, will cap GHG emissions at 1990 levels by 2020, which is approximately a 25 percent reduction in emissions.

11 State of Massachusetts, Executive Office of Energy and Environmental Affairs, "Clean Energy Biofuels Act," at http://www.mass.gov/?pageID=eoeeaterminal&L=4&L0=Home&L1=Energy%2c+Utilities+%26+Clean+Technologies&L2=Alternative+Fuels&L3=Clean+Energy+Biofuels+in+Massachusetts&sid=Eoeea&b=terminalcontent&f=eea_biofuels_biofuels_act&csid=Eoeea; "11 Eastern States Commit to Regional Low Carbon Fuel Standard," Environment News Service, January 6, 2009, at http://www.ens-newswire.com/ens/jan2009/2009-01-06-091.asp.

12 David Crane and Brian Prusnek, *The Role of a Low Carbon Fuel Standard in Reducing Greenhouse Gas Emissions and Protecting Our Economy*, California Office of the Governor, 2007.

13 Municipal Research and Services Center of Washington, 2007, *Comprehensive Planning/ Growth Management*, at http://www.mrsc.org/subjects/planning/compplan.aspx.

14 Bill text, HB 2815, 2008.

15 Anthony Flint, "Agencies Working Together," *Boston Globe*, December 19, 2006, at http://www.boston.com/news/globe/editorial_opinion/oped/articles/2006/12/19/agencies_working_together/.

16 U.S. Department of Transportation, "Americans Drove 1.4 Billion Fewer Highway Miles in April of 2008 than in April 2007 While Fuel Prices and Transit Ridership Are Both on the Rise," press release, June 18, 2008, at http://www.dot.gov/affairs/dot8408.htm.

17 Reuters, "U.S. Public Transit 2008 Ridership Highest in 52 Years," March 9, 2009, at http://www.reuters.com/article/topNews/idUSTRE5283PD20090309?feedType=RSS&feedName=topNews.