

2008

# 10 in 8: A Realistic Approach to Oil Reduction in America

Will Brehm

Follow this and additional works at: <http://preserve.lehigh.edu/cas-lehighreview-vol-16>

---

## Recommended Citation

Brehm, Will, "10 in 8: A Realistic Approach to Oil Reduction in America" (2008). *Volume 16 - 2008*. Paper 1.  
<http://preserve.lehigh.edu/cas-lehighreview-vol-16/1>

This Article is brought to you for free and open access by the Lehigh Review at Lehigh Preserve. It has been accepted for inclusion in Volume 16 - 2008 by an authorized administrator of Lehigh Preserve. For more information, please contact [preserve@lehigh.edu](mailto:preserve@lehigh.edu).

# 10 in 8: A Realistic Approach to Oil Reduction in America



by Will Brehm

### ***Mountain Bike Trails***

***Laced throughout Lehigh's 670 acres of woods is a complex network of mountain bike trails that run for miles and miles. Friendly to all skill levels, the South Mountain trails offer a wide variety ranging from easy-rolling single track to steep descents, technical bridges, and large jumps.***

### ***Sculpture Garden***

***Commonly mistaken for the former site of a fraternity, this field is tucked away through the woods at the top of The Hill and contains an eclectic mix of artistic pieces designed by students and local artists alike (including several pieces by Mr. Imagination). Initially the site of the campus leaf dump, the garden was founded several years ago by religious studies professor Norman Girardot while searching for a 'spiritual place' for the student body.***

**I**t's easy for a President to say, "America is addicted to oil." American presidents are notorious for proposing long-term instead of short-term energy strategies. Many of these strategies will not come into effect until after his or her presidency,

and often rely on technologies that are not completely developed or economically feasible. The frightening reality is, however, that like any finite resource, oil will eventually run out. As of right now, the conservative Cambridge Energy Research Associates, Inc. predicts that in 20 or 30 years, the world will have already used half of all proven oil reserves under the Earth's surface. More liberal estimates suggest that the world has already used up half of the Earth's oil reserves. While oil will undoubtedly continue to be a major source of energy for many years to come, the truth of the matter is: one day the world will have to function without oil.

America can either continue its reckless approach to oil consumption or it can phase in continuous small reductions to wean itself off of oil. The longer America waits to take action, the more severe the consequences will be, particularly because Americans currently consume almost twenty-five percent of the world's oil. Alternatively, we can make small sacrifices now, which are engineered to improve our standard of living, and slowly, deliberately phase out oil before it phases out naturally. In the past, it has been difficult for a President to propose short-term goals in the beginning of an administration that can have an immediate impact on oil consumption within four or eight

years. These policies put a president's credibility and accountability on the line because if his policies drastically reduce the standard of living for Americans, re-election becomes problematic. However, it is by adopting a short-term policy that we can slowly begin to phase out oil consumption, and guarantee that there will be no drastic changes to our standard of living in the future. Each successive President thereafter can administer other small decreases so that over an extended period of time, America will be able to reduce its oil consumption.

Although it may seem radical, this policy aims to reduce America's consumption of oil by ten percent in eight years. Ten percent is not a drastic change to either total consumption or the average American standard of living, although it might be just the boost America needs to begin the road to energy independence. As oil reduces slowly, Americans can learn to adapt to new lifestyles that less consumption requires. In 2006, a 10% decrease equaled approximately 2.0 to 2.2 million barrels per day (mbpd). Population increases will likely contribute to increased oil consumption; by 2015 World oil consumption is predicted to reach 103.0mbpd (Schlesinger and Giusti, p. 6). By 2025, total World oil consumption is predicted to equal 120.0mbpd (Energy Information Administra-



tion Annual Energy Outlook 2007, table B4). Assuming America will continue to consume approximately 25% of World consumption, America will consume between 25.7 to 30mbpd. This policy aims to reduce oil consumption between 2.6mbpd to 3.1mbpd—to overcompensate for long-term projections—within eight years, or by 2017.

To reach this goal, this policy will take a look at several approaches to energy efficiency, although the main focus will be on transportation. This policy combines old and new methods to counter the growing energy dilemma. According to “Winning the Oil End Game” by Amory

**While oil will undoubtedly continue to be a major source of energy for many years to come, the truth of the matter is: one day the world will have to function without oil.**

Lovins and Kyle Datta, oil used in the transportation sector is predicted to increase by 72.8% by 2025, which makes transportation one of the most logical areas for improvement. For short-term approaches, conservation can quickly decrease consumption. Therefore, conservation in the transportation sector will be the main approach. However, combining different approaches, which reduce oil consumption by a small amount each, work together in a timely manner to add up to the 2.6–3.1mbpd target.

The design of this energy policy assumes an eight-year time frame, the typical tenure for an American president, so the President would be held accountable for his or her policy. The approaches taken, however, must be more immediate than one might assume. Recently, the Bush administration has been working to implement mid-term goals such as Corporate Average Fuel Economy (CAFE) standards. These standards, a specific average mile per gallon minimum for an entire manufacturer's fleet of cars in one year, aim to increase automobile efficiency. This much-needed piece of legislation will undoubtedly reduce oil consumption, but will take longer than eight years to fully take effect. Even if new, more drastic CAFE standards are passed in the beginning of the next President's tenure, the standards will take time to come into effect because of the 6% car turnover rate in America (Mahedy). For 50% of American cars to meet new CAFE standards would take nine years, so even though CAFE standards will eventually reduce oil consumption, more needs to be done to decrease oil con-

sumption in the immediate future.

Reducing the number of vehicles on the road will undoubtedly reduce the consumption of oil. There exist a number of ways to achieve this goal, mainly at a small expense to the average citizen (i.e. increased gasoline prices). Without accounting for negative externalities—increased damage to the environment, congestion, and chance for accidents – the true price of driving becomes skewed. Americans must be made aware of these externalities and be held accountable. To hold the citizenry accountable, the President should consider the imple-

mentation of two approaches.

The first approach centers on reworking the price of gasoline to reflect its true cost. Oil companies could increase the cost at which they sell oil to accomplish this goal. The government would need to force oil companies to push gasoline prices up by increasing corporate taxes. Many oil companies receive reduced corporate income taxes that skew gasoline prices. For example, the average price/gallon of gasoline in America in 2005 was \$2.27. The average price/gallon in Beirut, Lebanon was \$2.63, \$4.24 in Tokyo, Japan, and \$6.48 in Amsterdam, Netherlands (CNNMoney.com). If American oil companies had to pay more money to the government, the price of oil would increase as oil companies try to keep profit margins equal, if not increasing. The companies—not the American government—would indirectly pass the price burden onto the consumers. This approach, however, could result in the tax being wrongly allocated once in the government's control; the new money would come from companies, not consumers. The second approach provides stronger guarantees for proper reallocation (mainly to increase the standard of living of citizens to offset the loss of standard of living from increased gasoline costs) of the taxed money.

The second and even more aggressive approach is a government-implemented tax on gasoline. Though this would likely suffer severe political backlash, raising the federal and state taxes on gasoline, which the Energy Information Administration reported stood at 19% of the

*(Right) The Bethlehem Steel Co. Band at Lehigh. Courtesy of Special Collections, Lehigh University Libraries.*

*(Below) The Bethlehem Steel Co. Baseball team in 1918. Courtesy of Special Collections, Lehigh University Libraries.*



Congressional Budget office predicts that a 46 cent-per-gallon increase would cost the economy, mainly the consumers, \$2.9 billion, but would save 90.5 billion barrels within 14 years (Dinan and Austin). By the 15th year a 10% reduction in oil consumption would occur. Using a gasoline tax in conjunction with other policy approaches could achieve 10% within 8 years. The \$2.9 billion could be invested into a gasoline fund that provides tremendous advantages.

The money earned from a tax could be used for various programs that would help the citizenry, such as

total cost of one gallon of gasoline in 2005 (or 43 cents), it would decrease consumption as well as help long-term goals like combating global warming (one of the negative externalities) and funding alternative fuels. The

increasing the social security fund or even as rewards for private companies conducting research and design in alternative fuel. A tax on the citizens would provide certain guarantees. First, the new money would be put into

an interest-earning fund. The fund could financially support research and design into long-term energy policy approaches. Second, the allocation of the fund would support the tax-paying citizens through fixing social security or funding universal health care. The welfare state in America increases, and thus the standard of living for Americans will increase even as the price to drive goes up. Of course, this thinking requires Washington to break from the conventional approach to legis-

but other approaches to reduce congestion exist as well. For example, increasing tolls or putting in driving restrictions like that proposed in New York City would cause a disincentive for Americans to drive in normally areas of congestion. Recently, New York City proposed even more radical ideas, such as taxicab stands in certain areas of the city, than Mayor Bloomberg's congestion pricing proposal that charges cars to drive in certain areas of Manhattan (Neuman). Implementing a federal

The last short-term policy approach centers on reducing electricity generation from petroleum. If electricity generation did not come from petroleum, America could save 197 thousand bpd. The Energy Information Agency reports that America received about 3% of electricity from petroleum in 2005. To reduce the use of petroleum, various incentives should persuade buildings to switch from petroleum to natural gas electricity. If overall electricity generation reduces, then

**The longer America waits to take action, the more severe the consequences will be, particularly because Americans currently consume almost twenty-five percent of the world's oil.**

lating: Congress essentially needs to emphasize the true cost of driving while providing approaches (a gasoline fund) that benefit Americans.

The other policy approach that reveals the true costs of driving has to do with congestion control. Waiting in traffic costs money not only in the productivity lost for the people inside the cars or damage to the environment due to more carbon dioxide emissions, but also for the fuel wasted while sitting idle. Too many cars on the road require American drivers to fill up more often. The Texas Transportation Institute estimates that 2.9 billion gallons (approximately 180 thousand bpd or about 6% of the target goal of 2.6 –3.1mbpd target reduction) of fuel were wasted due to congestion in 2005. If the government could reduce congestion, fuel consumption would decrease. Of course higher gasoline prices would reduce American automobile travel,

law on city congestion would reduce driving and, therefore, oil consumption. Another approach is city planning: with the construction of denser communities, the ability for effective public transportation systems increases as well as the likelihood for foot and bike commuters.

The last transportation policy initiative is to reduce the highway speed limit from 75 miles per hour (mph) to 65mph (or from 65 to 55 mph). As automobiles travel faster, air resistance increases and causes less fuel-efficient driving. Highway driving consumed 4.9mbpd in 2004 (Bureau of Transportation Statistics). The National Resource Defense Council (NRDC) reports that driving 10 mph slower will reduce highway gasoline consumption by 15%. This translates into approximately 745 thousand bpd saved, or about 26% of the average target goal (2.85mbpd) to reduce oil consumption by 10%.

petroleum can be phased out and replaced by the other forms of electricity generation without increasing overall output. First, all government buildings must be high efficiency. Simple measures include switching incandescent light bulbs to compact florescent light bulbs or the installation of solar power to generate a portion of electricity. Second, discounts or tax breaks should provide the incentive for other companies to follow suit. Eventually, America could wean itself off 3% of electricity and easily replace the petroleum-generated electricity with other, potentially cleaner forms. Thus, another 197 thousand barrels of oil would be saved per year, or about 7% of the average target goal.

Between a large effort to reduce consumption of oil in the transportation sector and a small push to stop petroleum-generated electricity, America could realistically reduce oil consumption by 10% within eight



years. Through lowering the speed limit, clearing congestion, and reducing petroleum-generated electricity, America can quickly reduce oil consumption by four percent. If an increase in gasoline prices can reduce consumption 10% within 15 years, a reduction of six percent within eight years is absolutely feasible. If the government increases the Gas-tax and puts the money into an interest-earning fund, the small decline in the standard of living will be elevated by the increase in the social institutions of America.

Education rests at the heart of true change in the American understanding of oil. The government should begin to design an educational approach for public schools to inform students (and soon-to-be drivers) of the issues of over abundant energy consumption and its effects on America's future, especially in terms of global warming. This effort could profoundly change the energy discourse, allowing for different governmental regulations to pass with great public support. Over time, as Americans begin to understand that oil is finite, future energy legislation will gain the support of American citizens. Each small step America takes now reduces the drastic lifestyle shift that will inevitably occur when the fateful oil draught reaches American gas stations. Phasing in small reductions in consumption will ease the shift away from a petroleum economy. Unless America has informed citizens, wise decisions and support for the slow change will be unlikely.

ANGELA CUMMIN  
Chesterfield's  
Girl of the Month

*At all the Games*  
**It's CHESTERFIELD**

For MILDNESS, for BETTER TASTE and COOLER SMOKING,  
Chesterfield is the winning cigarette... they're quick to satisfy with  
their right combination of the world's best cigarette tobaccos.  
All around you, pack after pack, you'll see Chesterfields  
giving smokers a lot more pleasure. Join in, light 'em up,  
and you've got a cigarette to cheer about.

Everywhere you go...  
it's have a Chesterfield *They Satisfy*

Copyright 1941, E. & W. Tobacco Co.

**Lehigh Bachelor: "Chesterfield Ad", Courtesy of Special Collections, Lehigh University Libraries**