

## **WASHINGTON WEIGHS GRAINS, CANES AND AUTOMOBILES**

Congress recently failed in its attempt to shape our neighborhoods ethnically by reforming the immigration laws, despite vocal support from President Bush. However, prospects are better for this Congress and the Bush Administration to shape the kind of cars we buy and what type of fuel we use to power them.

In January 2001, while Laura Bush was packing to move into the White House, consumers were paying \$1.38 for a gallon of gasoline. As vacationers drove to their Independence Day celebrations this year, they paid \$2.93 per gallon to fill up. On June 21, the Senate voted 65 to 27 to pass The CLEAN Energy Act, a bill increasing car fuel efficiency and encouraging energy independence through renewable energy, and included important elements advocated by President Bush. In keeping with the goals of her "Six for 06" centered legislative agenda, Speaker Pelosi promises that the House will take up broad-based energy reform by fall. As an automobile owner, this may interest you personally; as an investor, it is time to evaluate alternative energy and automotive holdings.

### **Boosting Fuel Efficiency: What's Good for the U.S. is Not Good for General Motors**

Twenty-one years have passed since regulators raised corporate-wide fleet mileage minimums on newly manufactured passenger cars, known as "corporate average fuel efficiency" (CAFE) standards, to a current limit of 27.5 miles per gallon. Fuel efficiency minimums on new SUVs and mini-vans fleets, which regulators consider "small trucks," are increasing slowly over time, reaching 20.7mpg in 2000, 22.2 mpg this year, and scheduled to rise to 24.0 mpg in 2011.

The recently-passed Senate energy bill includes a provision to increase the overall CAFE standard from 25 mpg to 35 mpg over 13 years. Senate Democrats cite three reasons to do this:

- ◆ America's alarming dependence on foreign oil supplies threatens national security, boosting defense spending in the Middle East and increasing chances of war.
- ◆ Inefficient autos produce 20 percent of U.S. carbon dioxide emissions, contributing to global warming.
- ◆ The public wants it. An April 2007 *New York Times* poll found that 92 percent support for compelling the industry to make more fuel efficient autos.

Congressional Democrats are unimpressed with industry arguments that boosting overall U.S. mileage standards to 35 miles per gallon between now and 2020 is impractical. They point out that Europe's car fleet averages over 40 mpg and Japan's is over 46 mpg, and that the companies who are now complaining built these fleets. The industry replies that their American customers demonstrate daily that they do not want Europe's smaller, lighter cars, loaded with

expensive fuel-saving technology, and that Europeans only buy such cars because gas costs \$6.90 per gallon there.

Investors may care more about manufacturers' claims that such legislation will hurt their profits if they are forced to absorb costly R & D costs and retooling expenses to make unpopular cars able to meet higher fuel efficiency standards. GM President Chairman Rick Wagoner recently warned the UAW that mandatory CAFE increases will cost the company \$40 billion over the next ten years. In 2003, the Congressional Budget Office (see Table 3.1 in [http://www.cbo.gov/ftpdocs/49xx/doc4917/12-24-03\\_CAFE.pdf](http://www.cbo.gov/ftpdocs/49xx/doc4917/12-24-03_CAFE.pdf)) found that the long-run impact of just a 3.8 miles per gallon CAFE boost would cost the industry \$0.8 billion in lost profits annually, mostly due lower margins. Interpolating this result to a 10 mpg increase, which the Senate has adopted, results in potential long-run, recurring annual profit declines of \$2.1 billion. If investors discount these lost expected profits, higher fuel efficiency standards potentially could slice \$25 billion off auto manufacturers' market valuations.

### **Revvig Up for a Burst of Technology Investments**

The industry knows higher CAFE standards are coming, so it is now trying to negotiate from weakness to limit how fast and far they rise. Lobbyists say the industry is backing a proposal by Congressman Baron Hill (D-IN) and Lee Terry (R-NE) which raises car CAFE standards to 35 mpg in 2022 – not 2020, as the Senate would do. Furthermore, the SUV/mini-van limit would be 32 mpg in 2022. The industry also wants credit to reduce their CAFE requirements to the extent they produce vehicles that run on biofuels or have reduced carbon dioxide emissions. Investors should interpret this as a white flag.

History says that the industry is right to fear higher CAFE standards. When the auto industry was first forced to raise fuel efficiency under Congressional order in the late 1970s, its R & D expenses shot up by more than 1 percent of sales for several years; its retooling expenses spiked by almost another 2 percent of sales. This is documented by the well-respected National Academy of Sciences, which notes that some of this added industry spending and corresponding drop in profits may have been necessary expenses to keep up with competition from more fuel-efficient Japanese manufacturers (see <http://www.nap.edu/html/cafe>, figures 2-11 thru 2-13).

What is bad news for auto manufacturers could be wonderful news to industrial machinery companies. A 2 percent of sales spike in unwanted auto industry retooling expenses represents \$8 billion in unexpected orders to companies specializing in building the tools auto manufacturers must order to meet new fuel efficiency standards. Institutional investors who are not choosy can buy a basket of motor parts retooling companies, and they will probably do well. Independent auto “Original Equipment Manufacturers” identified as such by S & P include **Dana, Johnson Controls, Magna International, Superior Industries, and Tenneco**. For more precision in identifying companies that could benefit, review The National Academy of Sciences report, “Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards.” (<http://www.nap.edu/html/cafe>, Chapter 3, Technologies for Improving the Fuel Economy of Passenger Cars and Light-Duty Trucks, pgs. 31-62). It specifies how fuel efficiency can be enhanced using existing technology, and without reducing car weight.

## **CAFE Does Not Satisfy the U.S. Energy Appetite**

Over a very long time, boosting auto fuel efficiency will have a significant impact on imported national gasoline consumption. In the next decade, however, it hardly matters. Raising fuel efficiency from 25 mpg to 35 is a 40 percent increase. However, it will take 38 years to get there. There are two reasons for this. First, fuel efficiency on new cars would be raised slowly from 25 mpg to 35 mpg over a long transition period – thirteen years – and would not go into full effect until 2020. Second, it takes 25 years before all the cars in the U.S. are replaced because they are much more durable than in the past. A car bought today, for example, may not be junked until 2032. Ten years from now, sixty percent of the existing car fleet, which gets only 25 mpg, will still be on the road. Therefore, it will take 25 years *after* 2020, or 2045, to get all car fleets produced before 2020, which would get less than 35 mpg, off the road.

Think of the U.S. as taking 38 annual baby steps, with national auto fuel efficiency growing by only 0.26 mpg every year. In the meantime, our population also will grow by 40 percent over the next 38 years and so will the number of drivers and therefore the number of miles driven also will go up by approximately 40 percent. Forty percent greater efficiency will be offset by 40 percent more miles driven. Despite the damage it may do to auto manufacturers, higher fuel efficiency standards will not be enough to save us from OPEC. It is only a way to tread water.

A complementary way to cut consumption of imported gasoline from volatile sources is to produce a North American substitute. If oil prices remain high, tertiary recovery techniques may become economic in old U.S. oil fields, boosting domestic output. Oil from Canadian tar sands or from oil shale in the U.S. Rockies may also come on stream due to high market prices.

## **President Bush and Congress: Money Does Grow on Trees – and Stalks**

Congress and the Administration appear to agree on taking out an insurance policy: let's grow our own auto fuel down on the farm. In this year's State of the Union address, President Bush set a goal of increasing domestic use of alternative and renewable fuels to 35 billion gallons by 2017. The Senate agrees. Its recent bill adopted a 36 billion gallon biofuels requirement by 2022. By comparison, the U.S. currently consumes 140 billion gallons of gasoline annually, with 5 billion gallons coming from corn-based ethanol.

Industry already had made commitments to boost corn-based ethanol production capacity to 11.7 billion gallons per year by 2009 according to the Senate Committee on Energy and Natural Resources, which refiners would have to snap up under its bill. Rapidly growing sales for ethanol produces **Archer Daniels, VeraSun, Pacific Ethanol, and Aventine** seem assured, with their level of profits depending mostly on the price of corn. The weather and farmers determine the amount of corn produced, and therefore corn prices. Farmers seem to have gotten the memo that long-term prices and demand for corn will be high. The Department of Agriculture reports that farmers have dedicated 93 million acres to corn this year – the highest amount since 1944. This is an area the size of Oregon.

## Spreading the Wealth

Rising corn prices are putting pressure on the prices of animals that eat corn – poultry, hogs, and cattle. To prevent rural America from becoming one big corn-based ethanol plant, the Senate bill limits the amount of ethanol refiners can blend to 15 billion gallons by 2015. Both the Senate and Bush want America to consume another 21 billion gallons of renewable or alternate fuel per year by 2022. Where would it come from?

Some think that making ethanol from sugar cane or sugar beets can help fill the gap. Brazil currently produces 5 billion gallons of ethanol annually, and at a cost per gallon lower than doing so from corn. Economics is one thing. Politics is another. The U.S. sugar lobby has erected an astonishingly effective set of barriers against anyone trying to cut U.S. sugar prices which are about 50 percent higher than world prices. First, the domestic price of sugar is supported by the federal government which promises to buy sugar at 20 cents to 27 cents per pound while the world prices for raw sugar averages 15 cents. Second, any sugar in excess of 1.544 million short tons imported into the U.S. annually faces a prohibitive tariff of 78 percent. As long as these policies remain in effect, there will be no domestic sugar-based ethanol industry. The cost of sugar as an ethanol feedstock, from foreign or domestic sources, will be too high. Corn farmers will be happy to help sugar producers lobby Congress to keep sugar policy just the way it is. They do not want sugar-based ethanol to undercut demand for corn. Importing Brazilian ethanol would make sense. However, their currently is a 54 cent per gallon import tariff on this! A July 2006 USDA analysis shows why it is uneconomic to import Brazilian ethanol since there is a 54 cent per gallon tariff:

### **Estimated Ethanol Production Costs (dollars per gallon)**

	U.S. Corn – dry milling	U.S. Sugar Cane	Brazil Sugar Cane
Feedstock costs	0.40	1.48	0.30
Processing costs	0.63	0.92	0.51
Total Cost	1.03	2.40	0.81

Source: USDA, “The Economic Feasibility of Ethanol Production from Sugar in the United States (<http://www.usda.gov/oce/EthanolSugarFeasibilityReport3.pdf>)

The Senate and President Bush both believe the 21 billion gallon renewable and alternative fuel gap should be filled from “cellulosic sources” – inexpensive feedstock like switchgrass and biomass waste such as logging farming or wood processing residues. The Senate bill requires America to use 3 billion gallons of cellulosic fuel by 2016, with the total rising in 3 billion increments annual until it hits 21 billion gallons by 2022. The problem is no one knows how to make ethanol from cellulosic sources – yet. In February, the Department of Energy announced it would help fund \$1.2 billion in plans to build six cellulosic ethanol plants, including joint ventures with **Abengoa Bioenergy**, **ALICO**, and **BlueFire Ethanol** (see <http://www.energy.gov/print/4827.htm>). Investors who missed out on the rush into corn-based ethanol companies should watch this space carefully. History could repeat itself.

### **Prospects for a Law This Congress are 50/50**

The differences between the Senate and the Bush Administration on boosting CAFE standards by 40 percent by 2020 and raising ethanol auto fuel consumption from 5 billion to 36

billion gallons by 2022 are bridgeable. The problem for analysts handicapping the prospects for a bill is that Congress may load up the bill it sends to Bush with items that he cannot abide.

Five deal busters come to mind:

- ◆ A greenhouse gas emission reduction mandate that is more aggressive than the Administration can tolerate
- ◆ A requirement that electric utilities produce 15 percent of their energy from renewable sources by 2020
- ◆ A tax on “Big Oil” to fund renewable energy sources that is “too big”
- ◆ A provision allowing U.S. courts to hear price fixing cases against OPEC countries
- ◆ A provision making retail gasoline price gouging a federal crime

### **Bush Says “Come to Coal Country”**

One “sweetener” that congressional Democrats might offer is to give the Administration what it wants on developing a “coal-to-liquid fuels” industry. Nazi Germany and South Africa both have proven coal can be turned into liquid fuel. This is a mature technology that may be competitive when the long-term price of oil exceeds \$40 a barrel. The opportunity for true energy independence seems to suggest itself since the U.S. is the Saudi Arabia of coal, with proven reserves measured in hundreds of years.

However, Democrats believe that coal has a disfiguring environmental defect; burning it to produce vehicle fuel would cause a large spike in carbon dioxide emissions, contributing to global warming, unless this carbon dioxide is captured and stored. No one has tried to do sequester carbon dioxide underground in large quantities yet, but the cost could be high, driving prices up to an equivalent of \$66 per gallon of oil – or higher. Speculators might consider adding to their positions in major coal companies like **Peabody, Arch, Consol** and **Massey** since few are expecting congressional Democrats will give in, despite pressure inside their caucuses from representatives from coal-rich states, including Senators Obama (D-IL), Byrd (D-WV), Rockefeller (D-WV), Baucus (D-MT) and Tester (D-MT) and Energy Subcommittee Chairman, Congressman Rick Boucher (D-VA).

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