

PickensPlan

T. Boone Pickens Media Coverage 06.15.10

Total of 28 Placements

- Print: 5
- Blog/Online: 3
- Broadcast: 20

Coverage Summary:

Forbes.com featured a piece highlighting Pickens push for natural gas as the best immediately available economic and environmental solution for U.S. energy needs. The article also features his comments on the BP spill and natural gas.

The Hill piece recognizes that Sen. John Kerry has been working to thaw once-icy relationships with Sen. Joe Lieberman and Pickens to advance the passing of climate change legislation. The article discusses Pickens past relationship with Kerry.

Today, Pickens released the monthly oil numbers. Pickens warns the Gulf oil spill and U.S. reaction could exacerbate the problem of our nation's dependence on foreign oil.

Highlighted Placements (Full Articles Below)

- **Technical Picture Looks Pretty For Natural Gas** – *Forbes.com* – 6/14/10
- **Sen. Kerry Mends Relationships With Pickens, Lieberman** – *The Hill* – 6/15/10
- **Cost of Foreign Oil Dependency, Already Crippling U.S. Economy, Has Increased \$50 Billion Year-Over-Year** – Press Release – 6/15/10

Print Placements (Full Articles Below)

- **Boone Pickens Predicts \$400 Oil** – *Gerson Lehrman Group* – 6/14/10
- **For Now, Deepwater Drilling In Energy Plan** – *DallasNews.com* – 6/15/10

Blog/Online Placements (Full Articles Below)

- **What Are 3rd and 4th Generation Biofuels And When Are They Coming?** – *Autoblog* – 6/14/10
- **Is It Time To Get On Board The Natural Gas ETF? (UNG, FCG, UNL)** – *ETF Daily News* – 6/14/10
- **Investing In CleanTech** – *Wall Street Pit* – 6/15/10

HIGHLIGHTED COVERAGE

Technical Picture Looks Pretty For Natural Gas – *Forbes* – 6/14/10

By Sy Harding

United States Natural Gas Fund, symbol UNG, is an exchange traded fund designed to track the performance of natural gas. It utilizes NYMEX-traded futures contracts on natural gas to do so.

UNG was as high as \$63 at the height of its popularity in August of 2008. It then plunged 89% over the next 18 months to a low of \$7 by late April.

It has now triggered a buy signal on our intermediate-term technical indicators, and has broken out above the resistance at its 20-week m.a. for the first time since it topped out in 2008.

On the fundamentals, natural gas futures have turned up apparently on forecasts of a hot summer, which is expected to increase demand for natural gas.

I believe there's more to it than that. The disastrous BP oil spill has raised awareness of the risk of offshore drilling, and is likely to create renewed interest in abundant and clean-burning natural gas as an alternative for many uses.

Oil tycoon T. Boone Pickens has argued for years that natural gas is the best immediately available economic and environmental solution for U.S. energy needs, a bridge over oil and coal to the future when alternative solar, wind, and nuclear power will be ready to take over more of the load.

[Click here to watch T. Boone Pickens discuss the BP spill and natural gas.](#)

We also like UNG because it often moves independent of the stock market, a plus in these uncertain times for stocks. We have an upside target of 16, and suggest a trailing mental protective stop at \$6.50.

In the interest of full disclosure, UNG was a buy recommendation for our newsletter portfolio on June 6, so we, our subscribers, and our associates have positions from somewhat lower prices.

Sen. Kerry Mends Relationships With Pickens, Lieberman – *The Hill* – 6/15/10

By Alexander Bolton

Sen. John Kerry (D-Mass.) has worked to thaw once-icy relationships to advance his dream of passing climate change legislation.

Perhaps the most important relationship in need of mending was with his partner in the climate change battle, Sen. Joe Lieberman (I-Conn.).

But Lieberman wasn't the only crucial ally Kerry worked to win over. He also buried an old grudge earlier this year with T. Boone Pickens, the billionaire oil tycoon who funded an attack campaign against Kerry's presidential bid in 2004.

Kerry and Lieberman had a frosty relationship after the 2006 campaign season, when the former was one of only a few senators who went so far as to campaign in Connecticut for Ned Lamont, who was running against Lieberman in the general election. The others were Sen. Chris Dodd (D-Conn.) and the late Sen. Edward Kennedy (D-Mass.).

Kerry challenged Lieberman over his support for the war in Iraq and attended an October campaign rally for Lamont, who defeated Lieberman in the Democratic primary.

“It was a rough spot in a long relationship,” said Lieberman, who ran against Lamont as an Independent after the primary.

Kerry’s support for Lamont was painful because Kerry and Lieberman have known each other since their college days at Yale. And Kerry helped recruit Lieberman to run for the Senate in 1987.

After Lieberman won reelection, Kerry sat down with him to repair the bruised relationship.

“I went to see him, I talked to him,” Kerry said. “I value his friendship.”

Kerry said he explained that he felt a responsibility to campaign for the Democratic nominee because he considered himself a standard-bearer for the party. Two years earlier, Kerry won the Democratic nomination for president, and he was eyeing another White House run in 2008.

In February, Kerry invited Pickens to his office to ask him to review his proposal to cap carbon emissions.

Pickens, who funded the Swift Boat Veterans for Truth campaign that essentially sank Kerry’s presidential hopes, was initially skeptical of Kerry’s cap-and-trade plan.

Pickens eventually came to see the Kerry-Lieberman climate proposal as a promising vehicle to advance his plan to boost domestic natural gas demand.

“I didn’t know [Kerry] that well until these discussions,” said Sen. Lindsey Graham (R-S.C.), who participated in climate talks with Kerry. “I’ve been very impressed with how committed he is to solving this problem.

“He sat down with Boone Pickens in my presence and they buried the hatchet and John couldn’t have been nicer,” Graham added.

Graham also said he saw no lingering hint of tension in Kerry’s relationship with Lieberman.

“When it comes to Sen. Lieberman, they’ve really formed a good working relationship,” Graham said. “I know they had their differences, but I must say that both of them have pursued this with a passion and a willingness to compromise.”

Throughout the 2004 presidential campaign, Kerry was criticized for not enacting a signature piece of legislation in the Senate. Six years later, Kerry is a major player in what would be the most significant revamping of the nation’s energy laws in decades.

Kerry’s personable approach to putting together a coalition to pass climate change legislation cuts against his reputation as one of the Senate’s more aloof members.

“It’s just a misunderstanding,” said David DiMartino, a former aide who served Kerry over five years. “He approaches things with a level of seriousness that people mistake for aloofness.

“Kerry worked 25 years in the shadow of Ted Kennedy, who was a perennial Senate backslapper,” DiMartino added. “Kerry was always taken as someone a little detached. The reality is he spends a lot of time on his relationships. He’s loyal to the people he works with.”

Kerry will be tested this Thursday when Senate Democrats meet to discuss how to proceed on comprehensive energy reform legislation.

Senate Majority Leader Harry Reid (D-Nev.) may bring an energy bill to the floor that will not include the Kerry-Lieberman proposal to cap carbon emissions. Kerry must convince his colleagues to include the controversial proposal in the bill before it reaches the floor, giving it a better chance of passage.

Current and former Kerry aides say the lawmaker has a history of reaching out to former adversaries to win their support for important battles.

Twenty years ago, Kerry had to ease a tense relationship with Sen. John McCain (R-Ariz.) to win his support for the work of the Senate Select Committee on POW/MIA Affairs, which Kerry chaired.

McCain, a former prisoner of war and a staunch supporter of the American mission in Vietnam, disapproved of Kerry's participation in anti-war demonstrations after returning home from combat.

McCain eventually came to work with Kerry on the panel after Kerry met with him to discuss their disagreements over the divisive war.

"They had met to talk about their differences on the Vietnam War before they joined the POW/MIA committee," said Larry Carpman, who served as Kerry's spokesman at the time. "They realized they had different points of view but they brought gravitas to the issue.

"They knew that both working on the issue would put it in more accurate perspective for the American people," Carpman added.

Kerry also won over the Republican vice chairman of the special committee, then-Sen. Bob Smith (R-N.H.), one of the chamber's most conservative members.

Kerry and Smith often clashed on the panel, but emerged from the process as friends. Smith endorsed Kerry's presidential bid in 2004.

Chris Greeley, a former aide and longtime friend of Kerry's, said, "Those who know him and those who experienced that graciousness [and] civility — they know that getting the job done is bigger than any personal grudge."

Cost of Foreign Oil Dependency, Already Crippling U.S. Economy, Has Increased \$50 Billion Year-Over-Year – Press Release – 6/15/10

Oilman T. Boone Pickens warns Gulf oil spill and U.S. reaction could exacerbate problem

DALLAS-- The latest figures from the U.S. Department of Energy's Energy Information Administration (EIA) show that the U.S. imported 61 percent of its oil, or 374 million barrels in May 2010, sending approximately \$27.5 billion, or \$617,234 per minute, to foreign countries, U.S. energy expert T. Boone Pickens said in his latest monthly update on foreign oil imports.

"Through the first five months of 2010, the U.S. spent more than \$50 billion more on foreign oil than we spent over the same period in 2009"

. "Through the first five months of 2010, the U.S. spent more than \$50 billion more on foreign oil than we spent over the same period in 2009," said Pickens. "We're importing more than 13 million barrels of oil per day, far ahead of the world's next largest importer, China, at five million per day, and they have spent more than \$200 billion in recent months securing all the oil they can get their hands on globally.

"In the wake of the tragic Gulf Coast oil spill, we need to recognize that any U.S. reserves lost will invariably increase our foreign oil dependency, further jeopardizing our national and economic security.

“We have a resource in this country, natural gas, that we can use immediately to replace oil for transportation. On an energy equivalency basis, we have twice as much domestic natural gas as Saudi Arabia has oil. It’s clean, domestic and it’s an ideal transportation fuel. We need to put it to work...and now, with a particular focus on heavy duty fleet vehicles.”

Currently, there is bipartisan legislation in both the House and Senate that would advance the use of natural gas. H.R. 1835 and S. 1408 (The NAT GAS Act) and The American Power Act all contain language that would replace foreign oil/diesel/gasoline with cleaner, abundant domestic natural gas in America’s heavy duty fleets.

About the Pickens Plan

Unveiled on July 8, 2008 by T. Boone Pickens, the Pickens Plan is a detailed solution for ending the United States’ growing dependence on foreign oil. That year, when oil prices reached \$140/barrel, America was spending about \$700 billion for foreign oil, equaling the greatest transfer of wealth in history. That figure has decreased some while oil prices have retreated, but the U.S. is still dependent on foreign nations for nearly 70 percent of its oil, representing a continuing national security and national economic threat. The plan calls for expanding the use of domestic renewable resources, such as wind and solar, in power generation and using our abundant supplies of natural gas as a transportation fuel alternative to OPEC oil.

More than 1.6 million people have joined the Pickens Army through the website www.pickensplan.com, which has had over 20 million hits. For more information on the Pickens Plan please visit our website www.pickensplan.com.

PRINT COVERAGE

Boone Pickens Predicts \$400 Oil – Gerson Lehrman Group – 6/14/10

Analysis by: GLG Expert Contributor

Summary

Boone Pickens predicts that the US energy policy will drive the price of oil to \$400 per barrel in less than 10 years. But, the US energy policy has historically had little influence on the world price of oil. Pickens advocates natural gas as an alternative to OPEC oil. This would benefit Clean Energy Fuels Corp., a company of which he owns almost 30%. Nevertheless, natural gas is a cost effective alternative for long haul transportation. Moreover, the US energy policy needs an overhaul.

Analysis

On June 4, 2010, Boone Pickens appeared on the CNBC program, Mad Money w/ Jim Cramer, and declared that the current US energy policy will drive the price of oil to \$400 per barrel in less than ten years. I disagree with Pickens' statement because the US energy policy has not influenced the world price of oil since the first oil embargo in 1973. However, the US energy policy does impact our energy independence, which is associated with national security.

Pickens is promoting that the US energy policy should be revised to revolve around the increased consumption of natural gas, or 'anything other than OPEC oil'. He has a vested interest to increase natural gas usage, not only for BP Capital, his investment fund, but also for Clean Energy Fuels Corp., a company of which he owns nearly 30%.

Liquefied natural gas (LNG) is the most viable clean energy alternative for long haul transportation and large concentrated diesel users, such as ports or railways, because it has high

energy density, and is lower cost per BTU than crude oil. Increasing LNG consumption for long haul transportation would require a capital investment to convert existing truck fleets from diesel to LNG. Truck and engine manufacturers, such as Paccar Inc., Navistar International Corporation, and Cummins Inc., could be some of the beneficiaries from this conversion.

Pickens supports passage of the Natural Gas Act of 2010 in Congress. This Act provides tax incentives for natural gas vehicles and fueling stations. While this could be a good start, the current US energy policy favors ethanol as the chosen alternative fuel. So, there are at least three conflicting energy policies that the Obama administration would also need to reconcile.

First, the Renewable Fuel Standard (RFS) is ethanol centric. The Greenhouse Gas (GHG) reduction required by the RFS will increase sugar cane ethanol imports from Brazil until cellulosic ethanol products become economical and available. Instead, the RFS should only require a GHG reduction, and should be technology and product neutral.

Second, increasing the percentage of ethanol required in transportation fuels will decrease Corporate Average Fuel Economy (CAFE) because ethanol has a lower energy density than fossil fuels. So, to comply with CAFE, automobile manufacturers will have to sell more high-MPG vehicles, such as hybrids or diesels, which are less profitable than gasoline powered vehicles because they cost more to produce, and have historically required consumer incentives to sell.

Finally, the US government needs to fund infrastructure spending across the entire alternative fuels supply chain, including pipelines, railways, distribution terminals, and retail outlets. Currently, the only infrastructure improvements being funded by the US government are new E85 stations, which could stretch the already taxed ethanol distribution network to the breaking point. As Pickens points out, many of the major oil companies are investing in US natural gas production, which should increase the supply of natural gas in the US. According to Pickens, this supply increase will lead to increased availability at the retail level. However, the major oil companies no longer control the fuels distribution system, or own many of their branded service stations. Most of these systems are in the control of Master Limited Partnership (MLP) companies, which are more concerned with paying out a dividend than reinvesting. Matters of fact, most of these companies require firm take or pay contracts before they will invest!

Increasing the supply of LNG in the US fuels market could be a game changer that increases energy independence, decreases transportation costs, and reduces many criteria pollutants, including nitrogen oxides, particulates, and greenhouse gases. Like Pickens, I advocate that Congress start by passing the Natural Gas Act of 2010, and then continue by reconciling the conflicting energy regulations that are a legacy from the 1980's, when the US was actually projecting to run out of natural gas.

For Now, Deepwater Drilling In Energy Plan – *DallasNews.com* – 6/15/10

WASHINGTON – It may be decades before the oil industry can restore confidence in its ability to handle deepwater drilling. By then, we may have breakthroughs in biofuels or batteries that give us an alternative.

Meanwhile, however, oil remains the fuel for a billion vehicles across the world.

Jeff Morris, CEO of Dallas-based refiner Alon Energy USA, expects U.S. consumers will move toward higher-mileage cars, hybrids and the like as a result of the BP oil well blowout.

"We know that there is going to be a decline in the use of gasoline in the country, in the U.S., at least," he said. "This potentially could accelerate that."

The oil industry, he said, will have to do a much better job anticipating and preparing for accidents.

"Clearly, we're going to have to slow down until we convince ourselves we can do it better," Morris said.

China, India and other developing nations will have to think about whether they want to build their auto fleets around gasoline, diesel or some other fuels.

But we will all still have to work out how to live with our dependence on oil for several more years. And deepwater drilling looks like it will be part of the picture.

That's a problem getting too little attention from the Obama administration, argues energy fellow Amy Jaffe of the James A. Baker III Institute for Public Policy at Rice University.

Jaffe worries that the oil spill and the administration's six-month moratorium on deepwater drilling in the Gulf of Mexico are making it harder to decide how we live with oil in the short term.

"Deepwater oil production was the key element of domestic policy to stave off the natural decline in U.S. domestic production," Jaffe wrote recently. "In order to avoid an increase in foreign imports, other strategies will be needed and not policies designed to kick in 30 to 50 years from now."

If there's any good news in this, it is that U.S. demand for gasoline seems to have peaked. The U.S. vehicle fleet is getting more fuel efficient. Corn-based ethanol blended into gasoline means there's less demand for oil.

Ethanol alternatives

Jaffe and Morris don't think much of the policy emphasis on ethanol. Jaffe is convinced that natural gas found in vast deposits such as the Barnett Shale will make it easier to transition to plug-in hybrids as gas accounts for more electricity production.

Morris, whose firm markets under the Fina brand, has argued for years that cleaner-burning blends of diesel can reduce oil demand. Forty percent of new car sales in Europe are diesel-powered.

Dallas oilman T. Boone Pickens has promoted a shift from diesel-powered large trucks to compressed natural gas.

Lowering demand

A Baker Institute study says the government's 35 miles-per-gallon fuel efficiency standard will lower oil demand by 2.3 million barrels a day over the next decade. Pushing that up to 50 mpg would raise the savings to 7 million barrels a day.

U.S. oil demand was 18.9 million barrels a day in April. Sixty-one percent of that was imported.

The U.S. Energy Information Administration expects oil imports will fall to 40 percent of U.S. demand over the next 25 years as biofuels and greater efficiency play a larger role.

That's still a lot of oil.

BLOG/ONLINE COVERAGE

What Are 3rd and 4th Generation Biofuels And When Are They Coming? – *Autoblog* – 6/14/10

by Nik Bristow

Back in the early days of mass-produced biofuels, corn-based ethanol and soy-based biodiesel were all the rage. But criticism about food vs. fuel and scalability abounded and, by 2008, cellulosic ethanol became known as a so-called second-generation-biofuel and, maybe, the answer to our oil-addicted prayers. Blame Congress, blame the economy, heck, blame T. Boone Pickens if you want to, but the fact of the matter is that in the two years since cellulosic ethanol's big appearance, large-scale production of cellulosic ethanol has yet to reach levels that resemble anything close to significant. Still, first and second-gen biofuels account for 99% of today's global biofuel production.

So, while the Gulf of Mexico starts to resemble the bruised arm of a heroin addict, let's skip ahead to future biofuel technologies that, if they work, really could signal the beginning of the end of oil. Namely, 3rd and 4th generation biofuels.

What are 3rd and 4th generation biofuels? According to a new 150-page report available for the low-low price of \$1,495 from GreenTech Media Research, 3rd-generation biofuel is basically advanced algae-based biodiesel while 4th-generation biofuels are created using petroleum-like hydroprocessing or advanced biochemistry. One such technology is the "solar-to-fuel" method (pictured above) developed by Joule Biotechnology which sounds pretty cool. In their model, sunlight, waste CO₂ and engineered microorganisms combine in a "solar converter" to create fuel.

The summary of the report goes on to conclude that, by 2022, biofuels will account for almost eight percent of global oil volumes used for transportation. That may not sound like a lot, but it does represent a multi-hundred-billion-dollar market. Bring it on.

Is It Time To Get On Board The Natural Gas ETF? (UNG, FCG, UNL) – *ETF Daily News* – 6/14/10

The United States Natural Gas ETF (NYSE:UNG) a favorite commodity play among investors has recently been in the spotlight as the ETF has seen strong upward momentum. The ETF closed up 4.65% on Monday to finish at \$8.55. As Christopher Lynn From Traders Huddle Reports, “The United States Natural Gas Fund (NYSE:UNG) is probing the \$8.50 area, which was the high volume breakout highs earlier this month. The (NYSE:UNG) was able to hold above the \$8 area last week, setting what traders consider to be a higher low, which is now being used as a pivot point for the push to re-test resistance. The United States Natural Gas Fund (NYSE:UNG) has been the favorite short for multiple traders during the last year, where every single rally was shorted, as the (NYSE:UNG) continuously made lower lows stuck in contango with the ETF selling the front month at a loss as it rolled over to buy contracts on the next month.”

It what has been the ultimate reversal for the ETF, more bullish sentiment continues to take place as Sy Harding from Forbes reports, “We also like (NYSE:UNG) because it often moves independent of the stock market, a plus in these uncertain times for stocks. We have an upside target of \$16, and suggest a trailing mental protective stop at \$6.50. It has now triggered a buy signal on our intermediate-term technical indicators, and has broken out above the resistance at its 20-week m.a. for the first time since it topped out in 2008”

Harding goes on to say, “On the fundamentals, natural gas futures have turned up apparently on forecasts of a hot summer, which is expected to increase demand for natural gas. I believe there’s more to it than that. The disastrous BP oil spill has raised awareness of the risk of offshore drilling, and is likely to create renewed interest in abundant and clean-burning natural gas as an alternative for many uses. Oil tycoon T. Boone Pickens has argued for years that natural gas is the best immediately available economic and environmental solution for U.S. energy needs, a bridge over oil and coal to the future when alternative solar, wind, and nuclear power will be ready to take over more of the load.”

It what has everything going for it Don Dion Reports From The Street Reports, “In addition to the improvement in natural gas prices and the value of assets in the sector, the political climate may also improve. Natural gas has a number of features that make it favorable as a political issue. For environmentalists, it emits less carbon than oil and coal, and after the BP disaster, it’s a plus that gas is mainly obtained via land drilling. There’s some concern about potential ground water contamination from the fracking techniques used in shale gas drilling, but oil and coal extraction are not without their own problems.”

“Also working in favor of natural gas is the fact that, at least for now, natural gas is cheaper than oil. The ratio of oil to natural gas prices was about 11 in 2008 before the financial crisis, but climbed to 24 last year as oil prices rallied and gas prices tumbled, before working its way down from that extreme. With oil prices down in the past month and natural gas prices up, the ratio has moved to 15.5, still on the high side,” Dion Reports.

ETFs offer an easy way to play Natural Gas and there are many options available besides the most popular US Natural Gas ETF (NYSE:UNG). We have listed some other options for investors to look at and compare to one another below. Note that we have listed some industry related ETFs as well as direct Natural Gas exposure plays excluding any leveraged ETFs. You can also visit our U.S. Natural Gas ETF (NYSE:UNG) category for more insight.

United States Natural Gas Fund (NYSE:UNG)

The United States Natural Gas Fund, LP (NYSE:UNG) is a new way for investors and hedgers to manage their exposure to energy. The United States Natural Gas Fund LP (NYSE: UNG) is an exchange traded security that is designed to track in percentage terms the movements of natural gas prices. UNG issues units that may be purchased and sold on the NYSE Arca. The investment objective of UNG is for the changes in percentage terms of the units’ net asset value to reflect the changes in percentage terms of the price of natural gas delivered at the Henry Hub, Louisiana, as measured by the changes in the price of the futures contract on natural gas traded on the New York Mercantile Exchange that is the near month contract to expire, except when the near month contract is within two weeks of expiration, in which case it will be measured by the futures contract that is the next month contract to expire, less UNG’s expenses.

United States 12 Month Natural Gas (NYSE:UNL)

The investment seeks to reflect the changes, net of expenses, of the spot price of natural gas delivered at the Henry Hub, Louisiana, as measured by the changes in the average of the prices of 12 futures contracts on natural gas traded on the NYMEX. The fund will consist of the near month contract to expire and the contracts for the following eleven months, for a total of 12 consecutive months contracts, except when the near month contract is within two weeks of expiration, in which case it will be measured by the futures contract that is the next month contract to expire and the contracts for the following eleven consecutive months.

iPath DJ-UBS Natural Gas TR Sub-Idx ETN (NYSE:GAZ)

The investment seeks results that correspond generally to the price and yield performance, before fees and expenses, of the Dow Jones-UBS Natural Gas Total Return Sub-Index. The note is designed to reflect the performance of natural gas. The index is composed of the Henry Hub Natural Gas futures contract traded on the New York Mercantile Exchange.

First Trust ISE-Revere Natural Gas Idx (NYSE:FCG)

The investment seeks to replicate, net of expenses, the ISE-REVERE Natural Gas index. The fund invests at least 90% of assets in common stocks that comprise the index. The index is an equal-weighted index that consists of exchange-listed companies that derive a substantial portion of their revenue from the exploration and production of natural gas. The fund is nondiversified.

iShares Dow Jones US Oil Equipment Index (NYSE:IEZ)

The investment seeks results that correspond generally to the price and yield performance of the Dow Jones U.S. Select Oil Equipment & Services index. The fund generally invests at least 90% of assets in securities of the Underlying index and depositary receipts representing securities of the Underlying index. It may invest the remainder of assets in securities not included in the Underlying index but which BGFA believes will help the fund track Underlying index, and in futures contracts, options on futures contracts, options and swaps as well as cash and cash equivalents, including shares of money market funds advised by BGFA. It is nondiversified.

Jefferies | TR/J CRB Wildcatters Exploration & Production Equity ETF (NYSE:WCAT)

The investment seeks investment results that replicate as closely as possible, before fees and expenses, the price and yield performance of the Thomson Reuters/Jefferies CRB Wildcatters Energy E&P Equity index. The fund normally invests at least 80% of total assets in the equity securities that comprise the underlying index and depositary receipts based on the securities in index. The index is designed to track the overall performance of a universe of listed U.S. and Canadian small and mid-capitalization companies engaged in the exploration and production of oil and natural gas. The fund is nondiversified.

Investing In CleanTech – *Wall Street Pit* – 6/15/10

By Duncan Davidson

Ever since the ClimateGate scandal broke, I have been asked “how do we play this?” With the chaotic failure of Copenhagen, this is a more pressing question, as bets are being shuffled in cleantech with the new change of assumptions. At a high level the primary investment implications are to move out of sectors that require government subsidies or carbon taxes, and into sectors with economic competitiveness. This is not to say we won’t see attempts to pass cap & trade or carbon taxes, but they seem likely to give way to a different spin on cleantech, that of saving imported oil or saving green jobs not saving the planet.

Also, the exuberance for CleanTech investing has abated even as touters try to obscure this. Check out this chart, and note how it says cleantech investing has “surged” even as the chart shows a 50% drop this year. The WSJ ran a post-Copenhagen piece about cleantech firms having to “reset” their strategies. They also agree with my thesis posted Dec7 of a change in the rationale to “economic development or reducing dependence on Mideast oil, [rather] than at threats posed by global warming.”

Yet this tone of caution does not mean there aren't good areas for investment in CleanTech. It also doesn't mean that CleanTech is going away. Unlike last time around, in the '80s, which was driven by big corporate projects, this time around it is being driven (in part) by the venture capital community. The diversity and energy of venture investors is impressive. As a consequence, even though the Dollar volume of CleanTech is still down from the peak in 2008, the number of CleanTech deals is now back to high levels. See chart from GreenBeat:

With this in mind, we need to start where green technologies are or will soon be price competitive. Casey Research has a really useful newsletter on point, and here is one of their charts:

Let's walk through major CleanTech sectors with this chart in mind.

Carbon Trading

This one is easy: stay away, stay far away. This will be the first casualty of the failure at Copenhagen. Even as the masses assembled, Denmark was marked with a huge scandal over fraud in carbon markets. The Danish scams were in the Billions of Kroner. Australia's Cap & Trade bill failed on the eve of the confab. Now, after the confab, the scams are being found more broadly, across Europe. Organized crime may have skimmed an astounding 5B Euros (\$7.4B).

This chart from the WSJ shows how carbon allowances have plunged post Copenhagen. To make carbon-free technologies like solar competitive, these allowances need to be above E60/tonne. It has fallen in half from a recent high of E25 to below E12.50. Quite a drag, says the Silicon Valley cleantech press.

Since Copenhagen, it has gotten worse. In March 2010, the Chicago Climate Exchange has been going through record lows of 10c per tonne. Two carbon exchanges in Europe had to suspend trading when a new scandal emerged: some certificates of emission reduction had been illegally reused.

Geothermal

The authors of the Casey Energy Report make a great case for geothermal. Right now geothermal is used near hotspots of surface geothermal activity. The core insight is that future technology can turn almost any area into a geothermal hotspot, providing a 24/7 energy source which has very low incremental costs once set up. No need to worry over the sun shining or the wind blowing. There is a public play here, recommended by David Fessler:

This is an area with plenty of potential, particularly in the western United States. When it comes to profitable, large-scale geothermal and recovered power producers, Ormat Technologies (NYSE: ORA) is pretty much the “Lone Ranger,” but many smaller operations will likely fire up geothermal plants in 2010.

The biggest setback to geothermal was a Swiss project which triggered an earthquake. There is the well-funded (pun intended) AltaRock project just north of SF, near the San Andreas fault. Local geologists seem a bit sanguine about this. Hmmm. Does deep drilling and pushing pressurized water down cause earthquakes? Why no earthquakes then in oil country, where they drill deeper and also push pressurized water and Co2 down to break rock (a process called fracking)? Because the very structures which trap pools of oil also bury geothermal effects, and make make geothermal diseconomical; it works best where the geothermal activity is near the surface – and those are usually areas of tectonic activity. Earthquake zones.

Deep geothermal promises unlimited energy anywhere. The industry believes of course that the micro-earthquakes from geothermal deep wells are not a worry. The implication is that instead of going for the low-hanging fruit of surface geothermal, we should drill geothermal outside of the tectonic areas, and trade-off the higher cost for safer unlimited power.

Maybe they are right, but the early projects are stumbling. Those in SF need not worry – after the Basel project was suspended, AltaRock abandoned The Geysers area and instead focused on deep drilling and fracking. Unfortunately, they only got down 4400 feet (of 12,000) before the holes they were drilling collapsed, due to a tricky type of rock layer. Another deep drilling company, Geodynamics of Australia, has been delayed in its Cooper Basin project due to human error, not nature. And so it goes across the board.

One way to play geothermal (besides Ormat, mentioned above) is to invest in rollup plays, such as Ram Power (TSX: RPG) and Magma Energy (TSX: MXY). The rollup of smaller geo players

makes financing easier, since the larger company can pursue multiple projects, and like an oil wildcatter, still win even if some fail. Also, larger firms find it easier to get contracts with utilities. Ram has a project in Nicaragua broken into phases, where if the first works, the second will be easier to finance. The remaining small microcap players are relying on DoE grants to get started.

On the private side, a company to watch is Vulcan Power, which just raised \$108M to develop 300 MW in Nevada, and send it over the DSierra's into California. Vulcan has the coveted power purchase agreements (PPAs) from SoCal Edison (LA), PG&E (SF) and a Nevada utility. A broader set of eight geothermal investment candidates is discussed here.

Wind

Wind can augment base power and average down electricity costs. A recent study in Europe showed a €3-23 drop per megawatt-hour due to using wind instead of going out into the spot market for swing power. At low demand times, coal could be kept off; and a peak times gas need not be turned on. The marginal cost of wind is low, making it a promising base energy source. The problems come in getting the turbines financed and connected to the grid.

T. Boone Pickens made a play for wind in Texas, then very visibly backed out of it. Wind would work well offshore of New England, but has been blocked by the Kennedy's, among others, for ruining their views. (After Teddy's death, it got approved, but still faces additional obstacles to getting built.) Theoretically, a spine of wind down the Great Plains would make sense, given the wind there. Windmills could become a cash crop.

Part of what deterred T. Boone as well, besides not being able to shake down governments for subsidies nor investors for funding, was the need to connect the windmills to the grid. In vast areas where wind would work, the grid is inadequate, non-existent, or caught in political wrangling. Hard to make wind a cash crop if the grid won't connect to it! Watch for approvals of new powerlines to renewable areas to inform as to where to focus investments, such as just happened in SoCal.

A microcosm of the wind market is the Bonneville Power Authority, which runs hydro on the mighty Columbia River and wind in the breezy Columbia Gorge. The actual output in practice is

far less than expected. This calls into question the cost estimates of wind. The BPA has found that at peak wind, they would overwhelm the transmission lines, and have to cut off turbines; and further have had to dump water over the dam without getting power from it due to the way nature works (the water flows even as the wind blows).

If you want to play this, David Fessler has a wind recommendation:

Wind installations will continue during 2010, but well off the record pace of 2008. Nearly 300,000 megawatts of wind farms are waiting for grid enhancements and upgrades. Vestas (Nasdaq: VVDRY.PK) is the world's largest wind turbine manufacturer, with over 39,000 turbines installed around the world.

Back to the theory of a spine of wind down the Great Plains. Yogi Berra once quipped:

In theory, theory and practice are the same. In practice, they are not.

In theory, wind power makes sense. In practice, it doesn't. Before investing in wind, read the ghosts of wind farms past. Wind lasts until subsidies are pulled, and then rusts away. Many of the turbines in the three primary wind spots in California are broken or turned off. The blades may slowly turn, giving the illusion of operation, but for many of the windmills, no power comes out. Farms in Hawaii from the first wave of subsidized wind are rusting away, unused and unusable. Now wind farms in Europe from the second wave are at grave risk:

European wind developers are fleeing the EU's expiring wind subsidies, shuttering factories, laying off workers, and leaving billions of Euros of sovereign debt and a continent-wide financial crisis in their wake.

While the recent problems of Greece and the other PIIGS may have out a damper on Euro wind subsidies, China is still going gangbusters. Last year wind increased 30%, but with the Euro troubles this will slow dramatically in 2010. China was about 1/3 the increase last year, and that should continue until their bubble bursts – which may already be happening. China has begun tightening their over-heated growth, which should also lower the growth in wind.

Another red flag was raised in Minnesota recently, where their wind turbines froze. This problem may not be fixable, turning another expensive (\$3.3B) wind farm into a rusting eyesore and monument to the failure of central planning & subsidies. No nuclear, coal or gas plant gets turned off like this. Those plants work at 85% or higher of stated capacity, whereas wind stumbles in at 33% when new, and lower and lower as they age and break.

The wind area is littered with puff pieces, such as this one from a normally decent CleanTech blog site, or the WSJ puff piece and chart that start this post. These sorts of analyses should be looked at skeptically by an investor. They extrapolate from the recent past to paint a picture of a green future without looking inside the trends and what had been driving them. Extrapolating growth in 2009 with heavy green subsidies as part of global stimulus is risky as this subsidies are drying up, especially in Europe and now China.

Still not seeing which way the wind is blowing? Here is a list of ways to invest in wind.

Solar

The solar sector is 3x more expensive other mainline energy sources, making it a bad bet for base energy production. Potentially solar can run down a cost curve, but it is having a terrible time getting out of the starting gate. I have an indirect interest in BrightSource, a solar-thermal engineering firm. Solar-thermal uses mirrors in the desert to drive a heat pump to spin a turbine. The team behind BrightSource was the pioneering team in the '80s behind solar-thermal in that wave of energy consciousness, and near the end had 90% market share. Yet steadily the subsidies were pulled as oil continued to get cheaper and cheaper, and the lights were turned out on their first company. Their new company hit a serious bump in the road this summer, when their plans to build a huge plant in the Mojave Desert were stymied by the local eco crowd (NIMBY!) as well by Senator Diane Feinstein (DiFi).

The WSJ reported that DiFi is pushing for a huge National Monument to cover much of the Mojave. (See map.) She must have thought the timing right, given the positive reception to the recent PBS series *The National Parks: America's Best Idea*, by Ken Burns. She would protect over a million acres. California has required utilities to invest in solar, and they would need 128,000 acres for that; but almost a million acres of projects have been proposed (which is down from an initial 2.5 million acres). Projects are being cancelled; the NYT says DiFi's move has

further scuttled 13 big solar plants and wind farms planned for the region. The bill does try to speed up approval, but the local NIMBY crowd will still have to be dealt with. The WSJ dryly notes that:

The Mojave is particularly attractive because it not only offers nearly uninterrupted days of bright sunshine in a sparsely populated area, but lies near a major electric-transmission corridor from California to Nevada.

I suppose there is always Arizona next door, but this puts a huge damper on utility-scale solar.

Another obstacle is the race to get the facilities started before the end of 2010 in order to qualify for Stimulus money worth 30% of the cost. Despite a lot of attention on this issue and an increase in personnel to handle permits, the process seems excessively slow and burdensome, if not a bit random at times, and solar projects to build an astounding 11 gigawatts of electricity are at risk of missing the deadline.

Possibly the solution lies in photovoltaic cells (PVs). The SciAm article *A Solar Grand Plan* (you can download it [here](#)) paints a compelling picture of mass PV farms across the Desert Southwest, joining that theoretical spine of wind down the Plains. It is difficult to see how it is more than science fiction, unfortunately. It requires some engineering breakthroughs, such as mass storage of energy in caves/mines using compressed air, and superconducting DC lines that stretch from the Desert Southwest to populated centers across the country. More daunting is the need for 30,000 sq miles (20 million acres) to be covered with PV cells along with concrete, power lines, roads, and the support for a massive construction project. To give that perspective, that is the size of land between SF and LA, from the ocean to the mountains. Hard to see how that swathe can be available somewhere, and more than that can be built upon. That is a lot of Mojave Deserts, and we just lost that one. We might be able to find some of that area available in Arizona, but the system needs water to construct and water to maintain (PVs get dusty).

Still, it appears that distributed PV cells (small panels on homes and businesses) have a market, because the savings at the retail end of the utility price curve are enough at the margin to cover the 3x higher cost. Currently the Chinese are dumping PVs into the US, reusing excess semiconductor capacity. This is depressing domestic production but incenting domestic uses.

A lot of money has been put behind thin-film PVs, which should be markedly cheaper than silicon PVs. A number of thin-film ventures are coming online in 2010. (Disclosure: I have an indirect interest in Miasole, one of the thin-film ventures). Perhaps the cheap Chinese PVs will make a market for thin-film to fill.

Thin film is also a candidate for large utility-scale solar fields. Chevron has just launched Project Brightfield to test PVs from 19 companies at an old refinery near Bakersfield, CA. Six winners were thin-film (including Miasole). Typical of the time scale of utility-scale projects, Chevron expects to test for three years, at which time it *might* pick a winner. This combination of long sales cycles and winner-take-all makes these projects more akin to pharma than IT investing.

Caution is warranted in solar, as the initial exuberance has fallen to hard economic and logistical realities. The whole sector has performed poorly, even with the rise of the Hope Rally off the Mar 2009 bottom. This may lead to consolidation and shakeout, per David Fessler's comments on this sector:

This is one sector that should continue to see consolidation in 2010. With an excess of silicon wafer capacity and new low-cost thin-film designs just now coming into production, expect the transition from silicon-based panels to thin film to continue in 2010. And despite the negative press, one of the ultimate winners in this space will be First Solar (Nasdaq: FSLR).

Here is a bit more on First Solar, from Toby Shute, who posts on solar regularly in SeekingAlpha:

The thin-film kingpin came back the next day with guidance for 2010, plus news of a major capacity expansion. The forecast was notable in that it went beyond the usual sales and margin figures, and it included free cash flow guidance. Free cash flow is a rare commodity in this capital-consuming industry. With such a robust financial profile, it's no surprise that First Solar is comfortable expanding its current capacity by nearly 50%

In a coming shakeout, seizing share by expanding capacity can make sense, yet the story above about the loss of most of the Mojave for utility-scale solar puts a huge risk into First Solar. GreenBeat has this story:

It turns out First Solar has dropped four large-scale solar plant projects in California alone, according to a report from investment firm Wedbush Securities. In each of these cases, the company's plans were denied by the Bureau of Land Management. At the same time, it was revealed that one of its 150-megawatt projects slated for 2,100 acres in Colorado has now also been cancelled.

The central message behind First Solar's recent success was that utility-scale solar plants would soon be a reality. [Now] it looks like First Solar is having more trouble than it bargained for, boding even more poorly for others striving toward the same goals. In short, utility-scale solar could still be a ways away.

Solyndra, a thin-film maker competing with First Solar, is poised to go IPO. An analysis of their filing, however, shows they are way behind First Solar in their PV cell costs: they sell for \$3.42/watt but cost \$6.29/watt to make. Ouch. Apparently their PVs are easier to install, and that saves their buyers as much as \$2-4/watt, dropping the effective cost to \$2.79-4.79. But this doesn't appear competitive:

Compare this to First Solar (FSLR). First Solar's average manufacturing cost per watt declined by \$0.23 per watt, or 21.3%, from \$1.08 in the three months ended September 27, 2008 to \$0.85 in the three months ended September 26, 2009.

Or compare it to a silicon solar vendor like Trony Solar (TRO). Trony Solar's average manufacturing cost was \$1.15 per watt for the fiscal year ending June 30 this year, the company said in its SEC filing. From June to September, the company lowered the cost to \$1.09 per watt.

Solyndra must also compete head-on with the plunging price of flat plate panels from BP Solar (BP), Suntech (STP), Mitsubishi, etc. while lowering their cost almost an order of magnitude from about \$6 per Watt to under \$1 per Watt.

While First Solar still looks relatively attractive, whether they are a buy on an absolute basis is unclear at best. First, the collapse of utility-scale projects must be taken into account. Second,

they seem poorly positioned to go into residential; Solyndra targets rooftops with a unique cylindrical design. Third, as a stock, First Solar is hurting as solar subsidies subside. Key point:

Solar power relies almost completely on subsidies, and those are being slashed in Germany, where First Solar made 65% of its sales last year.

The stock is down 40% and is likely to continue dropping. Its core business is suffering due to cheap solar panels coming in from China and the difficulties of transitioning to a systems provider for solar farms. The WSJ thinks the stock could drop another third.

More generally, the PV side of solar seems to be destined to high capital costs for PV fabs, like chip plants, and commoditized pricing, as has afflicted the DRAM market, or the PC market. If you decide to invest in PVs, educate yourself on the DRAM story, and look for PV makers who have a way to differentiate in marketing, services or some other element of value. Here are one commentator's nine suggestions to save solar from the DRAM fate.

Hydro

The original green technology is having a rebirth: hydroelectric. The greens have been on a mission to tear down the big dams and free the wild rivers, and now an environmentally-friendly solution is being scaled up: run-of-the-river hydro. Instead of damming the river, run-of-the-river creates a "penstock" water run downhill into a small hydro generator, and then back into the river. No fish are interfered with, and white-water rafting continues apace.

This projects are smaller scale and need proper siting, and unlike dams they do not store water; but unlike wind they can run continuously and provide a cheap base power load. While smaller than big dams, the premier US run-of-the-river project generates 2,6230 MW, which can support 2.4M homes.

Natural Gas

Nat gas seems to be the transitional fuel from oil to renewables like geothermal. We have had recent large discoveries, and gas has become cheaper than oil. In the longer run, nat gas may become the foundation of the so-called hydrogen economy, where it can be used to fill up hydrogen fuel cells (the CH₄ in gas is converted to H). This is several years away from commercial development.

The breakthrough which has led to cheaper gas is fracking, a technique combining horizontal drilling and pressurized water to break up shale. Here is a simplified depiction:

Fracking has led to some huge natural gas finds in the US, enough to potentially power the US for the next century. Besides the obvious places in TX, AK and LA, the Bakken formation in the Dakotas (also called Gammon) has huge potential, and the Marcellus formation under WV and PA is a super-giant, and appears to have the second largest reserves globally. You can read more in this downloadable PDF.

There are many ways to play gas. Some ideas include ETFs like FCG or DIG. (Please note that I am not endorsing these, just passing them on.)

There is a lot of backroom political wrangling over nat gas. Some fracking gas companies have been caught dumping the waste water rather than cleaning it up. The externalities of mining/drilling need to be baked into the cost, and the sites cleaned up, not dumped on the innocent downstream. This sort of cheating has caused a reaction, to regulate fracking or even stop the drilling.

Nat gas has a number of wonderful properties, including easy distribution and relatively clean burning (especially when compared with coal or oil). It solves a huge problem in rotating the fleet from gasoline to electric vehicles:

- it can power large trucks in a much cleaner fashion than diesel, and trucks have the wrong weight ratio to be electrified
- It can (potentially) power electric cars by being converted to hydrogen and filling a fuel cell, extending the range and removing the need for a gasoline engine range extender

It would be a supreme irony if we finally found the transitional fuel to move off imported oil just as political winds shifted against it, continuing our dependence as we chase unproven renewable methods of energy production.

Before you go into this area, be sure to keep an eye on influence peddlers in Washington. Or hire your own!

Nuclear

Quick comment on nukes: there are a bunch of future models being designed. The most interesting uses Thorium as a fuel. A long-term play is to look into Thorium. Thorium makes a better fuel than uranium: much safer, more abundant, less waste, and no proliferation potential. India and China in particular are all over it. The US considered and rejected Thorium reactors in the '60s precisely because it had so little waste; they wanted to use the uranium waste (plutonium) for bombs.

Another play is to invest in compact nukes – small self-contained reactors that can power a large factory or a city. We have run nuclear-powered subs and carriers for 50 years, safely; so why not use those design ideas commercially? Small modular reactors (SMRs) are being built. The Energy Secretary, Stephen Chu, recently sang the praises of SMRs. One way to play, suggested by the prior link, is to check out McDermott Intl (NYSE: MDR).

It turns out there are also five fission and three fusion start-ups, including for fission Hyperion, NuScale and TerraPower, plus for fusion General Fusion, Tri Alpha and Helion. Also, some of the large nuke builders like GE, Toshiba, Hitachi and Areva are looking at this. The reactors are small, some small enough to fit on a kitchen table. They are self-contained and can be thought of as nuclear batteries. They can be built in a factory, shipped to a site, and plunked in the ground. When they run low, they get pulled and replaced, and processed back at the factory.

Sounds pretty compelling. What's the catch? Bob Metcalfe, the inventor of Ethernet and a prominent venture capitalist, touted this idea in the WSJ, but said he wasn't investing himself. As he puts it:

As venture capitalists, we at Polaris might have invested in one or two of these fission-energy start-ups. Alas, we had to pass. The problem with their business plans weren't their designs, but the high costs and astronomical risks of designing nuclear reactors for certification in Washington.

The start-ups estimate that it will cost each of them roughly \$100 million and five years to get their small reactor designs certified by the Nuclear Regulatory Commission. About \$50 million of each \$100 million would go to the commission itself.

The problem with nukes is political, and reflects a common pattern when a new technology comes in: we first treat the new as different, and only later learn it really wasn't that different. Yet the damage is done and hard to unwind.

My favorite example of this is the Fairness Doctrine in broadcasting. Under the First Amendment, no one would think of restricting the number of newspapers or limiting their editorial control. Yet when radio and later TV came in, this is precisely what happened. The rationale was that spectrum was limited, and so would be the voices; but ask yourself, are there more newspapers in your town, or radio & TV outlets?

We lucked out in the US with the Internet, and I give Al Gore credit not for inventing it but for keeping the government's hooks away from it.

We got very unlucky in the US over nukes. First, the Atomic Energy Commission was heavy-handed and excessively subsidized the industry, so a reaction was predictable. Second, a silly Hollywood movie, *The China Syndrome*, came out almost simultaneously with an incident at Three Mile Island. Fear trumpeted logic. No nukes in the US since then. Nukes are not really that much more difficult to manage than other toxic chemical plants, yet are seen as much riskier, and are buried in regulations, approval and litigation.

The good news is even with the noose around their neck, nukes appear to be able to compete economically as base energy sources. SciAm has a good online site to learn more about nukes.

Also, one of these mini-nuke deals, TerraPower, is backed by Bill Gates and seems the closest to commercial production. You can watch a talk on it or download the presentation.

While pushing for nukes may be good energy policy, it seems a tricky area for investors, too subject to the whims and fancies of craven politicians and emotive pressure from relatively uneducated voters. Maybe Metcalfe's "nuclear batteries" will be approved and then worth investing in. I would wait for that.

If you feel compelled to find a play, those new nukes that are added to existing facilities, as extra reactors, are much more likely to be approved and operational in an investment time frame than new sitings.

Electric Vehicles

A lot of action here, although little yet public. The nano-scale Lithium battery maker A123 went public this Fall, and is worth watching. Tesla Motors should go out in 2010 (disclosure: I have an indirect interest in Tesla). It should get a good reception, given it is the first one out. Fisker with its Karma plug-in should follow.

This may be a market where it is better to catch the early IPOs than wait. A lot of electrics will be coming out in the period from 2010-2012, including the Chevy Volt. The current hybrids are expected to give way to plug-in electrics of various designs. The primary battle is between all electrics like the Tesla and electrics with range-extendors (motors or fuel cells) like the Volt or the Karma. Toyota has a huge lead with the Prius, and recently announced a plug-in lithium-ion car with a motor range extender. Consequently the competition should get pretty fierce.

An interesting longer-term play is to invest in Lithium. All the future batteries are using lithium-ion technology. It is also stressed by laptop/netbook and mobile-phone demand. The coming tablet computers will further increase demand for lithium. The focus of lithium investing right now is Bolivia, the Saudi Arab of Li. As the electric car industry picks up scale, a number of other materials will also be affected, such as aluminum for lighter cars; a good list is here.

Besides investing directly in lithium, one could invest in lithium battery companies such as A123. A contrarian perspective on lithium calculates that the lithium future has been fully baked into the valuation of A123 (AONE) and competitors, and that traditional lead-acid batteries are undervalued. Also, recent reports suggest a car battery glut is coming as early as 2012, but likely by 2014-17. Perhaps, but never under-estimate the value of a good old fashioned bubble, in this case an electric car bubble, which has not yet warmed up. Forbes predicts over-investment in batteries due to government subsidy and the expectations of an artificially-created market. The gap in their chart is largely due to the mix of electric cars: will they be all-electric like the Tesla, or largely only partially-electric like the Karma or Volt? Right now, who knows?

Again, my suggestion is play the early IPOs in this space, if you can, but be ready to flip out of them quickly. Consider the trajectory of A123: steadily down since IPO (see chart). The problem is that the premium for electrics is well more than the extra cost of gas: a new Nissan Leaf at \$25K is \$15K more than the comparable Versa at \$10K. That pays for a lot of gas, specifically 5k gallons at \$3/per, or 150K Versa miles.

As a personal note, four of the five cars in my family (including kids who have flown the coop) are hybrids. I think they drive better – a smoother and quieter ride. While the GW alarmism will abate, and carbon-trading flop, the transition to electric vehicles will continue. Yet it may be more prudent to invest in companies making current cars more efficient (such as Woodward Governor, Timken or Magna Intl) and wait for the electric future to manifest.

Efficiency

Another whole category is energy management, ranging from the Smart Grid for utilities, to energy metering for businesses and homes, and down to systems to lower energy usage in devices. Again, few companies yet public, but a plethora being invested in via venture capital and the Dept of Energy. This is a space to watch.

Other pundits are weighing in on the implications of Copenhagen for investors. Greentech Media agrees that the focus should shift away from grandiose climate legislation towards subsidies for 'green jobs' and especially to energy efficiency. The investment plays here may stretch outside of VC into PE and public companies:

Many VCs will look for IT-based ways to try to play the wave: Home energy monitoring, LED-based lighting, etc. are already popular sectors and will become more so. But I think VCs will be left out of most of the emerging wave of energy efficiency adoption, because it will be mostly service-based, and tapping into the biggest pools of incentives will require working with utilities and governments. Non-VC investors may be the most critical source of capital for energy efficiency. And I also expect a fair amount of mid-market private equity activity in the sector as well.

A word of caution on investing in areas with “green jobs”. Much of the green jobs push will be for core manufacturing, often combined with temporary construction jobs (building solar plants, putting solar cells on buildings, etc.) Examples that would drive green jobs are PV cells and batteries for electric cars. Yet, we already have a glut in PV cells and a possible glut in Lithium-Ion batteries that may disappoint investments in core manufacturing. The rush to produce capacity, which until last year was funded with cheap capital, has gotten way ahead of demand for the end-use products built on top, such as electric cars or utility-scale solar.

One final note of caution that applies even to energy efficiency deals: avoid investing in areas with heavy government subsidy, whether from the Stimulus bill or from Dept of Energy programs. In particular, Smart Grid ventures may be over-invested in. If you feel compelled to play the Smart Grid, two big payers are Cisco Systems (CSCO) and Honeywell (HON). A recent and fairly comprehensive overview of the area found some niches of promise and others seeming too early. Smart meters has gotten a lot of focus, and now some backlash. Home management networks has also gotten a lot of interest, but little consumer pick-up.

In areas without heavy government subsidy, energy efficiency deals will be more attractive since the ROI from saving cost is the gift that keeps on giving.

BROADCAST COVERAGE

1. Closing Bell

CNBC, National | DMA: 0

06/14/2010, 03:00 PM - 04:00 PM

[EC] 00:01:33No! Tell us how you really feel, Scott. Well. It's the truth. I mean, I just --I find this whole thing a bit outrageous. Judges can't, the executive branch employees can't own shares in which they make decisions on. I don't know, financial journalists can't own shares of things because of potential conflict of interest, y for some reason lawmakers can. I mean, ben nelson, the senator from Nebraska, is able to argue for an exemption for derivatives legislation yet he holds \$6 million worth of stock in Berkshire Hathaway. Anybody telling me that that's okay? Look, it's the appearance of rofnlt it's the appearance. It's beyond the appearance, maria. It's corrupt to be quite blunt about it and they should not be allowed to own any of this stuff. Great irony of Ron Paul buying gold based on the notion that the U.S. i s going back to the gold standard that. Has to be one of the single dumbest trades in history. Gold may go up for another reason but we're never going back to the goal standard. It's wildly deflationary and not able to do in an economy this side. April 2008, Nancy Pelosi and her husband had a \$50,000 to \$100,000 investment in **BoonePickens** Clean **Fuel** Corporations and considering climate change. Al Gore, the largest single shareholder in the Chicago Climate Exchange when cap and trade is being considered by congressional democrats as a way to solve the perceived problem with global warming. True on both sides. Shouldn't be allowed to own anything. Should be the same as anybody they criticize for conflict of interest. How do you get trust back into this market? I mean this, obviously is not going to, you know, encourage trust, and you've got one disappointment after the next which only hurts investors feeling confident....
00:09:25

Keywords:Closing Bell Exchange; Moody's; Greece; S&P ECB; The Washington Paul; Nebraska Sen. Ben Belson; Derivatives legislation; Berkshire Hathaway; The Gold Standard; Nancy Pelosi; **BoonePickens'** Clean **Fuels** Corporation; Climate change; Al Gore; Chicago Climate Exchange; Cap and trade; Global warming; United Healthcare; Department of the Treasury; Financial regulation reform; Federal Reserve

Visuals:Euro/US Dollar charts; Barclays Capital trader on the NYSE floor; Crude **oil** chart; Copper chart; **Naturalgas** chart; Republican Rep. Ron Paul; Arkansas Democratic Sen. Blanche Lincoln

Speakers:Bob Pisani, CNBC Business News; Sharon Epperson, CNBC Business News; Scott Wapner, CNBC Business News; Ron Insana, CNBC Contributor

Audience: 355,033 **Spot Cost:** \$2,925

2. Street Signs

CNBC, National | DMA: 0

06/14/2010, 02:00 PM - 03:00 PM

[EC] 00:33:16 You know, Jim, you're mentioning just tankers and shipping around **oil**. Just made me think of the segment we had earlier in our show. When you just think about, you can't go cold turkey on **oil** drilling. No. You just can't. 170,000 Filling stations around the country. Okay? And to retrofit them to even **naturalgas** where you'd need more, because **naturalgas** cars don't go as far hypothetically, although it feels like we've got a **gas** station every block, \$12 trillion. We're not getting away from crude any time soon. I know the president is fixated on battery technology. I come back and say, when you plug in your car, you plug it into a coal-based system. I really think that in the end, coal is worse than **oil** for the environment. The president doesn't seem to understand that you're not plugging it into **windmills**. I'm not being facetious. The president is, I think, correctly focused

on anti-fossil **fuels**. But we need something in between when we're all anti-fossil and more fossil. That's why I've been focused on **naturalgas**. I think you're absolutely right. Retrofitting would be horrible. The Journal has a really critical article today about Clean **Energy**. If the bill goes through and **BoonePickens** is right, that article is going to be dead wrong. If **BoonePickens** is wrong, then Clean **Energy** is too high a play. But Clean **Energy** is the only company at's really building up **naturalgas**. Filling stations, may I point out that Exxon is not buying XTO in order to put in filling stations. They point-blank said that in congressional testimony. Yes, I do believe it's going to take a long time and that **naturalgas** is the bridge **fuel**, but it's not overnight. It's just politically, how does the president get around this? Because he has to at some point just come out directly and say, look, as awful as this is, the record, we're going to put in more restrictions, et cetera, et cetera, but we're going to continue to take the risk that something catastrophic can happen at these depths. America, we're going to have to take that risk. Let's put in relief wells when we drill the first wells. I reiterate something I said on Friday. This continues to be the greatest find in the northern hemisphere in that it has not --The spillage has not decreased one bit in terms of pressure.... 00:40:35

Keywords:Jim Cramer; Caddy Shack; Wall Street movie; Rodney Dangerfield; Back to School; Sam Kennison; Sandisk; Apple; Arm Holdings; Cerrus Logic; Flash; Herb Jorhanson; Nordic American Tank; Frontline; The President; The Journal; **BoonePickens**; Exxon; XTO; Joe Kern; Halliburton; Today Show; Jersey Shore;

Visuals:Stop Trading with Jim Cramer backdrop; Karate Kid clips; Caddy Shack clips; Arm Holdings stock; Sandisk stock; Nordic AmTanker stock; Frontline Ltd stock; Natural Gas; BP spill video; BP stock; Mad Money programming note; Larry Nichols, Co-Founder and Executive Chairman, Devon Energy logo;

Audience: 332,349 **Spot Cost:** \$2,713

3. Varney & Company

Fox Business Network, National | DMA: 0

06/14/2010, 10:00 AM - 11:00 AM

[CC] 00:35:11 (speakers is Rep Brian Bilbray)...I think that when we talk about clean technology and the so-called alternative **fuels**, you know, we get stuck in, you know, in things like ethanol while other technologies are being blocked by government regulation. You are not a fan of ethanol although you do think this is an opportunity to push forward with alternative **energy**. Out of crisis comes opportunity I guess is how the saying goes. Which technology should we be pushing if it's not ethanol? I think we should be looking at all of them. I think we should be allowing home dispensing of **naturalgas** for our cars. In 90 I drove a **naturalgas** car. I think Boone **Pickens** has articulated that we have hundreds of years of capacity there. But technology is one compatible with our existing petroleum system. My scientists in San Diego developed new strains of it but had to leave the state because the government regulations and restrictions stopped production within the decade. I was talking this weekend with members of the congress about the fact that even using their area to be able to produce so-called green **fuels** just because the government doesn't know how to be a partner on this, they always seem to --I think the biggest thing of so called alternative **fuels** is what can we do to change our regulations to make it viable? Rather than always writing a blank check thinking that the problem is always there's not enough money. What we've got to do is our regulations be smarter not just bigger and more intrusive. Republican Congressman Brian Bilbray of California pushing for alternative **energy**. Nicole, that stock is really getting hammered now, BP?...00:37:04

Audience: N/A **Spot Cost:** N/A

4. Your World With Neil Cavuto

Fox News Channel, National | DMA: 0

06/14/2010, 04:00 PM - 05:00 PM

[CC] 00:12:16 We believe it's this unprecedented for the president of the United States to dictate, whether you buy this as reasonable or not, the mechanics of a company and how it does business. We've got **oil tycoon T. BoonePickens** and Roger Wicker of Alabama, Don Segalman....00:13:30

[CC] 00:58:47 Tomorrow night special coverage of the big address to the nation from the president at 8:00 P.M. We'll continue through 10:00 P.M. , Getting global reaction, future market reaction, because it's that important and what he is approaching to do in corporate governance is something unprecedented. Whether you agree or disagree, like or hate. The guests will include among so many others **T. BoonePickens**, the **oil** giant, republican senator Mississippi Roger Wicker, former democratic governor of Alabama Dan Seigelman..00:59:55

Audience: 1,990,497 **Spot Cost:** \$18,113

5. MSNBC News Live

MSNBC, National | DMA: 0

06/14/2010, 02:00 PM - 03:00 PM

[CC] 00:06:35 Michael, good to see you on this Monday. You had a column in the Philadelphia Enquirer over the weekend for the president, what do you think he needs to do? My speech was unsolicited. The president has a habit of often signing autographs by saying dream big I'm dreaming a big dream, I would love to see the president tomorrow night deliver a speech in which he calls for a Manhattan Project for energy independence. In other words the same type of initiative that fdr needed to build a bomb to bring a closure to World War II, the same speech that jfk delivered about putting a man on the moon. If the '70s and '80s were not a catalyst, then this ought to be the catalyst. Let's try and finally wean ourselves from all this Arab oil dependency, I think that's what we have got to do. You suggest naming a task force, the president would name a task force in the speech you imagined. Steve Jobs, **T. BoonePickens** and others. The president said if he brought this issue up of really going after the oil industry, if he brought this up to Congress before this oil disaster that he would have been met with a lot of skepticism and it would not have carried any weight or water. I think that's probably true and now he's got the momentum on his side because I think the climate in the country is unlike anything we have seen before, people finally now realizing we can go on like this forever. I think that tomorrow night, there are two different messages, first there's got to be a message for those suffering on the front lines of the Gulf, that the president is there for them. He's going to do what it takes to make sure the Gulf is going to get cleaned up when all this is done. The long-term play is certainly what matters and that's what those folks in the Gulf were worried about....00:08:45

Audience: 333,565 **Spot Cost:** \$2,881

6. Stand UP

Potus (Sirius XM), National | DMA: 0

06/14/2010, 03:00 PM - 04:00 PM

00:16:00 (guest is Josh Fox , filmmaker of Gasland)...let's just be clear here with what we're talking about ... there's natural gas underground and we are moving towards that ... and **TBoonePickens talks about that** 00:17:59

00:22:00 **naturalgas** -- **TBoonePickens** is out there saying natural gas is the solution to what happened in the Gulf. **naturalgas** is the solution for America it's better for the environment, it is clean burning green **fuel** and that's just not telling the whole truth at all ... The whole truth here is that natural gas is a fossil **fuel** It's incredibly dirty when it is extracted from the ground ... and that is actually no better than coal when used for electricity generation 00:23:59

Audience: N/A **Spot Cost:** N/A

7. Monsters And Money In The Morning

WBBM-TV (CBS) CH 2, Chicago | DMA: 3

06/14/2010, 05:00 AM - 06:00 AM

[EC] 00:53:12 We're joined by a Michael Bruhn of Sierra Club who does get back to the Gulf and joins the talk about the damage that was done down there. And had a firsthand look and all of it. How bad is it? Will first thing you for having me on the show. Is really bad down there. It's worse than I expected. You see these images on television or in your computer screen. You cannot really anticipate what the visceral experience is like. Now we saw all these brown pelicans this coated and smothered in oil. And dolphins coming up to an oily sheen and water. It is really heartbreaking. Was not on the slow reaction by everybody. But not an over 50 days. President Obama will meet with the BP chairman now. Basically I don't know what they're gonna talk about. What statement did you make out there when you visited. Will to things. Obviously we need to cap the gutter. But we need to make sure the recovery effort that we're making on both the environmental and communities hold. I spoke to dozens of workers who are thrown out of work. The seafood operators who did not want sophisticated cannot be sure that is safe. There's coastal tourism operators were losing reservations every day. Commercial fishermen and brought the region and only out of work but did not know if or when the appeal to get back to work. Now the thing we need to see from both on president obama and from other policymakers is a clear plan to get America off oil. The search chance to actually address some of the underlying problems of America's oil addiction. In the hope that we can recommit ourselves to a broader sense of solutions ... is a plan to break America's addiction to oil. It is not easy. Not all. It can be done. There are practical market ready solutions every major industrial use of oil on the market today. It we need is a lot more political will to actually implement the solutions rather than just talk about them year after year So you must be supporting the **Pickens Plan** to use our natural gas reserves and clean energy technology to wean ourselves off from this domestic dependence ? We support alot of the Pickens Plan, not all of it But to give one example . We use more oil and commercial heavy-duty trucks the we get off of America's shores. Not just down the Gulf. But off Alaska and California. It removed from using oil from more heavy-duty vehicles. And to a combination of electricity and natural gas. Would save more oil than we get from all American shores... 00:58:05

Keywords:TZ; Sierra Club; BP; Brown Pelicans; Dolphins; President Obama; Tourism; Commercial Fishermen; **Pickens Plan**; **NaturalGas**; Coast Guard; Booms;

Visuals:Aerial view of oil slick; Workers cleaning up beach;

Speakers:Michael Brune, Executive Director of the Sierra Club;

Audience: 21,390 **Spot Cost:** \$83

8. NBC 5 Today

KXAS-TV (NBC) CH 5, Dallas/Fort Worth | DMA: 5

06/15/2010, 06:00 AM - 07:00 AM

[CC] 00:51:56 . Coming up, why **T. BoonePickens** is telling investigators to leave BP alone.00:52:03

[CC] 00:57:48 **T . BoonePickens** is urging investigators to leave BP alone while they work to investigate the spill. Meanwhile, BP executives testify on capitol hill about the oil spill.00:58:01

Audience: 122,652 **Spot Cost:** \$1,076

9. Fox 26 Morning News

KRIV-TV (FOX) CH 26, Houston | DMA: 10

06/15/2010, 07:00 AM - 08:00 AM

[CC] 00:05:19 **T . BoonePickens** is urging investigators to leave BP alone. He said he didn't know if BP was negligent or not but didn't like having a investigation going on while officials try to fix the problem. He said he thinks there will be plenty of time to investigate it.00:05:33

Audience: 56,845 Spot Cost: \$531

10. KTRH Morning News

KTRH-AM (ABC) Freq. 740, Houston | DMA: 10

06/15/2010, 05:00 AM - 06:00 AM

00:46:00 Oilman **TBoonePickens** is urging investigators to leave BP alone while the oil company works to stop the spewing oil ... 00:47:59

Audience: 23,775 Spot Cost: \$189

11. The Paul W. Smith Show

WJR-AM (ABC) Freq. 760, Detroit | DMA: 11

06/15/2010, 05:30 AM - 06:00 AM

00:22:00 Billionaire oilman **TBoonePickens** is urging investigators to leave BP alone for now while the oil company works to stop the spewing oil ... "I don't know if BP was negligient...we have plenty of time to investiagte it." **.T Boone Pickens** has always made sense. 00:23:59

Audience: 16,950 Spot Cost: \$166

12. Fox 7 News In The Morning

KTBC-TV (FOX) CH 7, Austin | DMA: 48

06/15/2010, 06:00 AM - 07:00 AM

[CC] 00:35:19 Billionaire oilman **T. BoonePickens** is urging investigators to leave B-P alone for now and let it work to stop the oil spill. Fox's Doug Luzader has the says he's not sure was negligent or not but says he doesn't like having an investigation while officials try to fix the problem. **Pickens** says there's plenty of time to investigate afterward.00:36:59

Audience: 15,840 **Spot Cost:** \$128

13. KVUE 24 News Daybreak

KVUE-TV (ABC) CH 24, Austin | DMA: 48

06/15/2010, 05:00 AM - 06:00 AM

[CC] 00:52:31 And what does **oil**-man **T-Boone-Pickens** have to say about the Gulf **oil** spill? We'll tell you why he's telling everyone to leave B-P alone.00:52:36

[CC] 00:56:29 Billionaire **oil**-Man **T. BoonePickens** gives his opinion on the **oil** spill --telling investigators to leave B-P Alone. He says he doesn't know if the company was at fault, but doesn't like having an investigation while officials try to fix the problem --adding there's "plenty of time to investigate it."00:58:14

Audience: 6,889 **Spot Cost:** \$29

14. Newschannel 6 This Morning

WDSU-TV (NBC) CH 6, New Orleans | DMA: 51

06/15/2010, 06:00 AM - 07:00 AM

[CC] 00:06:54 One of the big guns of the **oil** industry has a message for the federal government: leave B-P alone. Billionaire **oil**man**T. BoonePickens** says it's fruitless to investigate the company while B-P Is still working to stop the leak. He's concerned the probes may take the focus off of the ongoing challenge.00:08:37

Audience: 35,994 **Spot Cost:** \$164

15. Newschannel 6 Early This Morning

WDSU-TV (NBC) CH 6, New Orleans | DMA: 51

06/15/2010, 05:00 AM - 06:00 AM

[CC] 00:01:08 One of the big guns of the **oil** industry has a message for the federal government: leave B-P alone. Billionaire **oil**mant. **BoonePickens** says it's fruitless to investigate the company while B-P Is still working to stop the leak. He's concerned the probes may take the focus off of the ongoing challenge.00:02:54

Audience: 20,838 **Spot Cost:** \$50

16. Newschannel 6 At Ten

WDSU-TV (NBC) CH 6, New Orleans | DMA: 51

06/14/2010, 10:00 PM - 10:35 PM

[CC] 00:07:06 One of the big guns of the **oil** industry has a message for the federal government: leave B-P alone. For now, at least. Billionaire **oilman T. Boone Pickens** said today it's fruitless to investigate the company while B-P is still working to stop the leak. He's concerned the probes may take the focus off of the ongoing challenge.00:08:30

Audience: 46,288 Spot Cost: \$284

17. KSLA News 12 This Morning

KSLA-TV (CBS) CH 12, Shreveport | DMA: 82

06/15/2010, 05:30 AM - 06:00 AM

[CC] 00:04:10 You know everyone has an opinion on what to do with B-P, even other **oil** men. Billionaire **T Boone Pickens** thinks investigators should leave B-P well enough alone so they can focus on plugging the leak. **Pickens** says he knows B-P dropped the ball on safety at the Deepwater Horizon **oil** platform. But, he believes that the investigation after the fact is too much of a distraction while B-P figures out a way to stop **oil** from leaking out.00:06:00

Audience: 20,618 Spot Cost: \$46

18. Newschannel 10 Morning News

KFDA-TV (CBS) CH 10, Amarillo | DMA: 131

06/15/2010, 06:00 AM - 07:00 AM

[CC] 00:29:49 **T. Boone Pickens** says lay off B-P until they clean up the **oil** spill.00:31:19

[CC] 00:35:03 **Boone Pickens** is urging investigators to leave B-P alone for now while the **oil** company works to stop the spewing **oil**. **Pickens** says he doesn't know if B-P was negligent in the case but said he doesn't like having an investigation while officials try to fix the problem.00:36:19

Audience: 8,964 Spot Cost: \$60

19. KAUZ Channel 6 News Morning Express

KAUZ-TV (CBS) CH 6, Wichita Falls/Lawton(OK), TX | DMA: 149

06/15/2010, 06:30 AM - 07:00 AM

[CC] 00:19:08 **Oilman T. Boone Pickens** continues to speak his mind on the **oil** spill investigation, more on what he's saying .00:19:16

[CC] 00:21:01 Billionaire **oilman T. Boone Pickens** is urging investigators to leave B-P alone for now while the **oil** company works to stop the spewing **oil**. **Pickens** says he doesn't know if B-P was negligent in the case but said he doesn't like having an investigation while officials try to fix the problem.00:22:40

Audience: 1,729 **Spot Cost:** \$20

20. CBS 7 Morning News

KOSA-TV (CBS) CH 7, Odessa/Midland | DMA: 155

06/15/2010, 05:30 AM - 06:00 AM

[CC] 00:14:32 Meanwhile, T. **BoonePickens** is urging investigators to leave B-P alone for now while the **oil** company works to stop the spewing **oil**. He says he doesn't know if BP is responsible, but he doesn't like the investigation happening when the problem is still present. **Pickens** says we have plenty of time to investigate it after the leak is fixed.00:16:13

Audience: 3,725 **Spot Cost:** \$20

