
CAPITAL MARKETS COMMENTARY

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The fact that the United States possesses major obstacles to its continued leadership of the world, from an economic perspective, is well known.

What is seldom discussed, however, are the potential solutions to these problems.

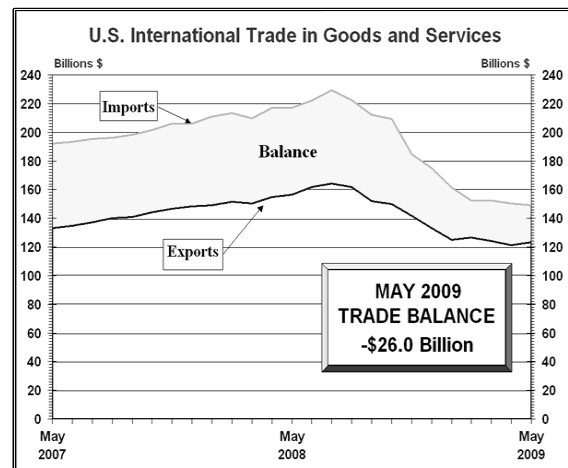
In this issue, I'll address one solution – accepting personal responsibility for achieving savings in energy. Future issues will address other solutions.

ECONOMIC DIFFICULTIES AHEAD: SUGGESTIONS FOR A PERSONAL RESPONSE

I've often commented on three of the major fundamental and long-term economic problems America faces:

1. The federal debt – exceeding \$11.6 trillion at present (\$40,000 for every man, woman, and child in the United States officially). Unofficially, due to unfunded federal pensions and unfunded entitlements, the *real* federal debt exceeds \$50 trillion. Unlike the case after World War II, when the publicly held U.S. debt obligations were nearly all held by U.S. citizens (who benefitted from interest payments paid thereon), it is now estimated that 44% of the federal debt held by the public is owned by foreigners.

2. The U.S. trade deficit – while it has shrunk over the past several months, the May 2009 monthly deficit still stood at \$26 billion (the smallest monthly deficit in nearly ten years!). For goods, the deficit was \$37.3 billion in May, and for services, the surplus was \$11.4 billion in May 2009.



3. Personal spending (and the lack of personal savings) – The personal savings rate – income that is not utilized to purchase goods and services – has increased again to over six percent, but not to the level

seen during times of prior economic disruptions, nor even the “normal rate” seen in prior decades. After World War II, for many years the personal saving rate hovered at about seven or eight percent. It would spike into the teens during times of economic turmoil, but then settle at seven or eight percent when things returned to normal. During the early 1990s, the personal saving rate began to drop. For the past ten years, it’s mostly been two percent. Or one percent. Or close to zero. While many commentators state that Americans’ spending habits have permanently changed, I believe the adoption of this view is premature. As the economy begins to recover in 2010 and beyond, it is likely that America’s personal savings rate will again fall, back to the low single digit percentage rate seen for much of the past 15 years.

WHAT CAN BE DONE?

We often look to Washington, D.C., to solve these problems. Yet the policies which created these major economic problems were formulated over several past Administrations, by leaders in both the Legislative and Executive branches of government and by members of both parties.

Difficult choices lay ahead. The most difficult ones, such as reduction of spending within many governmental programs, or increasing the age for receipt of Social Security retirement benefits, or increasing the Medicare tax rate on earned income, are seemingly always put off for another day. The ability of Washington’s politicians to deal with the nation’s long-term economic problems is hampered not only by a lack of statesmanship, but also by the huge influence of money in the form of contributions to re-election campaigns. Politicians are highly unlikely to face the major problems of our country until our financing of political campaigns is reformed so as to remove the undue influence of special interests.

WHAT CAN AN INDIVIDUAL CITIZEN DO?

Even if Congress is not yet willing to deal with the long-term economic threats to our nation in prompt fashion, there are steps that each of us can do, individually, to make a difference. Over the next several months, I would like to share with you ideas which you can utilize, as well as chronicle how specific actions of a personal nature have contributed to solving some of our nation’s long-term economic problems.

In this issue of *Capital Markets Commentary*, we’ll explore energy savings ideas. In future editions, we’ll explore other economic problems, how they may impact you, and action steps you can undertake personally. I also urge you to write or e-mail me, and let me know about other ideas for addressing the long-term economic problems of our country – especially those ideas which individuals can personally implement. Please write to: Ron A. Rhoades, Director of Research, Joseph Capital Management, LLC, 2450 N. Citrus Hills Blvd., Hernando, FL 34442-5348, or e-mail to rrhoades@josephcapital.com.

THE U.S. TRADE DEFICIT AND OIL PRODUCTS IMPORTS

Let's think about the impacts of the consumption of oil-based products.

First off, oil products consumption “fuels” (pun intended) our nation's trade deficit. From 1995 to 2008, the trade deficit resulting from oil imports alone increased from \$34 billion annually to \$386 billion annually. For all of 2008, crude oil, fuel oil, natural gas, and other petroleum products imports were \$452 billion; in the same year our nation's trade deficit was nearly \$700 billion.

Second, oil products consumption contributes to consumer spending (but not of U.S. products), and less savings by consumers or spending on U.S. goods and services.

Third, the consumption of foreign oil leads to foreign policy challenges, as we seek to preserve our sources of imported oil. As already seen, skewed foreign policies to preserve our influence in the Middle East threaten America's moral leadership on the world stage.

The problem is likely to get greater in future years. As the global economy expands, so does utilization of fossil fuels. Yet it is not that easy to “turn on the spigot” – even if OPEC wants to. It takes time to ramp up production capacity and set oil tankers in motion. Even then, oil pumping capacity is likely to be quickly reached as the global economy expands, and new drilling projects and pipelines will be needed; however, these often take 5-10 years from the start of a project to the production of crude oil. We are very likely to be in a situation of greater demand for a finite supply of oil, resulting in *huge price increases* for electricity, gasoline, and oil-based products.

What about the environmental impact? Consider these projections.

- World population is expected to increase by 40% over the next 50 years.
- Due to the rise in population, coupled with economic development in emerging markets (China, India, etc.), world energy use is expected to double by 2050.
- Over the next ten years, U.S. domestic energy consumption is expected to continue to outpace U.S. energy supplies, leading to more imports of oil and natural gas.
- Limiting carbon emissions aims to keep global mean temperature from rising more than 3.6 degrees F (2 degrees C) over what it was before the Industrial Revolution. (Some scientists believe no further temperature rise can be tolerated, without significant disruptions, including rising sea levels affecting coastal areas worldwide.) Yet, global mean temperature has already risen 1.4 degrees F (0.8 C) since 1850. An 80% drop in global emissions, from 1990 levels, is currently the target for the U.S. by 2050. Yet, *even with the rapid deployment of new energy technologies*, many experts see global carbon emissions exceeding present levels – significantly – by 2050.

WHAT YOU CAN DO TO AID THE U.S. ECONOMY: SAVE ENERGY

The dismal economic and environmental future may appear “hopeless,” but a concerted effort can make a difference. Most importantly for each one of us now, what is needed is time for new technologies to be developed and deployed. In essence, cutting our consumption of oil is every individual’s responsibility. Here are some suggested actions you can take in the months ahead.

START TODAY: SAVE GAS WHILE DRIVING

By changing your driving habits, you can improve fuel economy up to 37 percent right away (depending on how you drive). Combine several tips with routine maintenance and you will save real dollars, not just pennies.

**SET A GOAL –
SAVE 10%
ON FUEL**

◆ *Stop driving like a maniac – avoid aggressive driving.* Don't mash the gas when you start up. Take the long view of the road and brake easy. This tip alone can save you unbelievable amounts of gas. If you slowed your 0-to-60-mph acceleration time down from your current 10 seconds to a more normal city pace of 15 seconds, you'll feel the savings immediately.

◆ *Slow down and always obey the speed limits.* Remember a thing called the speed limit? While each vehicle reaches its optimal fuel economy at a different speed (or range of speeds), gas mileage usually decreases rapidly at speeds above 60 mph. Don't waste a lot of gas for the chance to get there a little earlier. Factor in safety concerns and speeding tickets, and going fast is a costly proposition.



◆ *Use cruise control on longer stretches.* Using cruise control is a bit of gas-saving advice frequently on tips lists. It smoothes out the driver's accelerator input by preventing nervous "surging." It also makes the driver take the long view of the road rather than reacting to every change in the traffic around them.

◆ *Check your tire pressure.* No matter how many times drivers hear about the importance of tire pressure, most of them don't do anything about it. They probably don't like squatting beside their car in a busy gas station with fumes swirling around them. But is it important? The answer is yes, for a number of reasons. Properly inflated tires are less likely to fail at high speeds. They wear more evenly and, yes, they deliver better gas mileage.

SEPTEMBER 2009: TAKE A HOME ENERGY AUDIT

Many electric companies offer a “home energy audit” – either a physical inspection of your home, or in the form of an “online audit” you can do yourself. For example, for our clients in various areas of Florida and North Carolina, Progress Energy offers its customers the option

of a free walk-through of your home to come up with recommendations on energy efficiency, an “Online Home Energy Check,” and a “Phone Assisted Energy Check.” Call your power company to see what programs they may offer, as an initial step in saving home energy costs.

OCTOBER 2009: IMPLEMENT SOME INEXPENSIVE WAYS TO CUT HOME ENERGY USE

While some cuts to home energy use may require substantial expenditures (see discussion in other action steps), others involve minimal expenditures or a simple change of habits. Ideas include:

◆ *Install low-flow showerheads and faucet aerators to reduce hot water use.* You can purchase some quality, low-flow showerheads for around \$10 to \$20 a piece and achieve water savings of 25%–60% compared to normal showerheads and fixtures. The aerator — the screw-on tip of the faucet—ultimately determines the maximum flow rate of a faucet. Typically, new kitchen faucets come equipped with aerators that restrict flow rates to 2.2 gpm (gallons per minute), while new bathroom faucets have ones that restrict flow rates from 1.5 to 0.5 gpm. Aerators are inexpensive to replace and they can be one of the most cost-effective water conservation measures. For maximum water efficiency, purchase aerators that have flow rates of no more than 1.0 gpm. Some aerators even come with shut-off valves that allow you to stop the flow of water without affecting the temperature. When replacing an aerator, bring the one you're replacing to the store to ensure a proper fit.

◆ *Lower the temperature on your electric water heater* to 120 (F) degrees.

◆ *Switch to compact fluorescent bulbs.* An ENERGY STAR qualified compact fluorescent light bulb (CFL) will save about \$30 over its lifetime and pay for itself in about 6 months; it uses 75 percent less energy and lasts about 10 times longer than an incandescent bulb. Dispose of these bulbs carefully – look to your local landfill for recycling instructions. Another alternative is LED lighting. LED light fixtures will last 10 times longer than CFLs and do not require mercury in the manufacturing process. However, LED lights are expensive; even in commercial settings, the pay-back period is often 4-5 years.

◆ *Starting TODAY - Adopt good “energy efficiency” habits.*

- Turn off all small electrical equipment, such as radios, VCRs, or TVs when not in use. If you are going to be away for an extended period of time, consider unplugging these devices is possible to further reduce energy consumption.
- Turn off the lights when leaving an empty room.
- If you have a fireplace, close the damper when not in use.
- Only run the dishwashing and laundry machines when you have a full load.



- Only use hot water cycles in your laundry machine when absolutely necessary. By washing clothes in cold water cycles, you will cut the energy usage for each load of laundry in half – and you won't lose anything: cold water helps to better retain colors while cleaning clothes (it is the motion of the wash cycle and the detergent you utilize rather than the temperature of the water itself which cleans clothes).
- Line dry garments whenever possible. If you do utilize the dryer, don't "over-dry" items and ensure to dry heavier items (such as towels) separate from lighter items (such as delicates).
- Clean the lint filter in your dryer after every load to improve air circulation, and periodically inspect your dryer vent to ensure it is not blocked or leaking air around the seams. This will save energy as well as prevent a fire hazard.

NOVEMBER 2009: CONSIDER (MORE EXPENSIVE) HOME UPGRADES.

The tips above did not involve substantial expenditures. There are many ways of saving home energy costs that require a more substantial commitment of money and/or time, but the expected time to recoup the expenditure, through lower energy costs, can often be just a few years or less.

◆ *Install an automatic setback thermostat* that adjusts room temperature according to your daily schedule. If you have a heat pump, be certain to use a special thermostat designed specifically for heat pumps. If you reside in a warm climate, a setback thermostat can also be used as a set-forward thermostat for an air conditioning system; it can allow the house to heat up when it is unoccupied and return it to comfortable temperatures before you return from daytime activities. Most programmable thermostats range in price from \$30 to \$100, except for occupancy and light sensing thermostats, which cost around \$200. Expect a return on your investment in equal energy savings within one to four years, depending upon the climate where you live and the amount and duration of your setbacks.



◆ *Install do-it-yourself weather stripping and caulking to seal air leaks.* Seal all perimeter wall penetrations and ceiling and floor penetrations to stop all air movement between heated and unheated spaces. Generally speaking, older homes have more trouble with air leaks than newer homes, but it's always a good idea to check out the situation. The costs of this process vary, depending upon your "do-it-yourself" ability and/or the use of contractors. The payback period varies as well – from less than one year in many instances, to several years in others.

◆ *Use motion sensors or timers for outdoor lighting.* You'll still have security and save energy. By installing an inexpensive motion sensor, a business can save about \$130 per year on every 300-watt double-fixture floodlight on the property. Smaller savings result for home

systems which use lower-wattage bulbs. There have been a number of studies demonstrating that security lights integrated with a motion sensor actually deter crime better than flood lights that are left on all night.

◆ *Add water heater tank and hot water pipe insulation* especially if in an unheated space. But - don't cover the thermostat or, for natural gas models, the air inlets. If your hot water storage system is more than a few years old, chances are it may not be insulated sufficiently. The easiest way to tell is to feel the sides of the tank. Is it warm? Yes? You'll probably benefit from a water heater blanket. The insulating jacket can reduce heat loss by an appreciable 25–40%, which represents a saving of up to around 9% on your annual water heating costs. Before you zap out and buy a blanket, check your system's manual first as some manufacturers will specifically state that one shouldn't be used. Electric heater blankets only cost \$10-\$15, but be careful in installing them. For non-electric water heaters, consider using a professional. The payback in energy savings can occur very quickly – often within a few months.

DECEMBER 2009: BUY YOURSELF A “HOLIDAY PRESENT:” SAVE FUTURE ENERGY COSTS – AND STIMULATE THE ECONOMY

◆ *Consider replacing an older hot water heater.* This one is a bit tricky, in terms of what type of new system is to replace the existing hot water system.



Solar water heating systems usually cost more to purchase and install than conventional storage water heating systems; however, a solar water heater can often save money in the long run, particularly in larger families where hot water usage is high. Maintenance costs may be higher, however.

Another option to consider is demand (tankless or instantaneous) water heaters, which provide hot water only as it is needed. Demand water heaters don't produce the standby energy losses associated with storage water heaters, which can save you money – especially if your hot water usage is low or the distance from your existing hot water heater to your shower, for example, is long. For homes that use 41 gallons or less of hot water daily, demand water heaters can be 24%–34% more energy efficient than conventional storage tank water heaters. They can be 8%–14% more energy efficient for homes that use a lot of hot water—around 86 gallons per day.

◆ *Consider replacing your older model refrigerator,* especially if the model year was before 1993. Older models can often use over 3 times the energy of newer models (translating into a \$100 a year energy costs savings), while models manufactured from 1993 through 2000 often use over 2 times the energy of newer models (yielding about \$50 a year energy cost savings).

◆ *When replacing appliances and electronics, look for Energy Star®-labeled products.* They may cost more, but over the life of the appliance may save much more than the additional out-of-pocket costs.



A STUDY IN ENERGY EFFICIENCY AT HOME:

JOHN AND MARLENE MORAN PLAN FOR A LOW-ENERGY USE RETIREMENT.

When building their “retirement home,” John and Marlene Moran of Inverness, Florida, decided to incorporate many energy efficiency designs and products. Their building contractor assisted with the process by recommending different solutions, whether it was design changes and/or equipment installations, and their home was completed in 2008.

We asked John and Marlene to share their experiences with us. “We wanted to incorporate as many of these energy efficient concepts in the beginning, rather than afterwards, to reduce our total long term expenses,” stated John. “We are not ‘tree huggers,’ but we do like to take care of our environment because it is the right thing to do. If we were truly environmentalist, then we might not have purchased the energy consuming products we own.”

**“We do like to take
care of our
environment
because it is the
right thing to do.”**

The energy efficient choices they made and a summary of the costs incurred, along with some lessons learned, are summarized below. As John stated: “We considered the pros and cons of each idea, and weighed the potential energy cost savings against installation costs and potential long-term maintenance costs.”

(1) PASSIVE HOUSE DESIGNS

The Morans’ retirement home is one story, with the front door facing due east and the back of the home and swimming pool/cage is facing due west. Two bedrooms are on the north end of the home; the master bedroom and the garage both face south. John noted, “We sought to reduce the number of windows and doors facing to the south in order to lessen heat from the sun. The south facing walls are mainly the garage, master bath, and a hobby room window. No cost was involved – just a repositioning of the home on the property. However, they did install a window shade in the hobby room window to cut down on heat, when needed.

Marlene also noted that they designed the home with larger overhangs to block the late afternoon sun. There were many ways they explored to do this, including umbrellas, inside window shades, awnings, extending a roof, and more. Stated Marlene, “We made a decision to extend the Lanai roof away from the west facing wall by 4 feet, to reduce the effects of the afternoon sun. This also expanded the size of the Lanai.” At a cost of \$8,300, due to the larger roof and increased lanai floor space, this was an expensive undertaking. But the result was achieved – keeping the kitchen and living room shaded in the late afternoon as well as a larger portion of the lanai.

The Morans also decided to use existing trees and shrubbery for shade. “We did not do very much of this to reduce energy efficiency, but rather removed some trees around the home to improve safety. The landscaping utilized, including native flora, was designed to achieve water savings as well.

(2) AIR CONDITIONER AND HEAT PUMP SELECTION

The Morans chose to have two air conditioners / heat pumps installed. One system was set up exclusively for the two “spare” bedrooms and is only used infrequently. The main system is a large, very energy efficient system. The decision on the specific choice and size of each system was made after they reviewed much literature on design, energy efficiency, and reliability. In addition, ceiling fans were installed in all main rooms, not because they cool the air but rather because they make people feel cooler and therefore reduces the need to lower the thermostat. The cost of the systems was \$7,500, a bit more than usually seen for a house of this kind if only one air conditioner / heat pump had been installed, which was not as energy efficient.

(3) BETTER INSULATION

If there was an aspect which the Morans put a lot of thought into, it was how to best achieve insulation in their home - including reducing energy loss through the attic, windows, doors, and outside walls. The Morans determined that most of the outside summer heat or winter cold would come through the attic, windows, and doors; the smallest heat loss was anticipated through the house walls. For the windows and doors, they were concerned not only with the glass itself, but also with the loss of heat or cooling through gaps around the outsides of the windows and doors.



To better insulate their home, the Morans turned to three main products. First was “Icyenne Attic Insulation” – a water-based foam product that is sprayed on the underside of the roof in order to keep heat from entering the house through the ceiling. It keeps the heat/cold from penetrating into the attic. In addition, the attic is “sealed” and is not ventilated. In the use of this technique, the manufacturer guarantees the attic temperature will not be more than ten degrees higher than the house temperature. (The Morans have monitored the actual temperatures with an indoor/outdoor thermometer, and the actual difference has been less than three degrees.) John challenges our readers: “Go into your attic and see if your attic temperature is even close to three degrees than your current house temperature.”

In addition, all glass windows and doors installed were low e / argon gas filled products to reduce hot or cold air from entering the home. For the outside walls, which were formed of cement block, insulation was increased to one-inch thick hi-R insulation.

The total cost of the added insulation and better windows was \$17,795, with the most expensive portion of that for the Icyenne insulation. But the Morans note that it works very, very well.

(4) Embracing the Future: PV Solar Electric System

The Morans did not just stop with passive designs, more energy efficient heating/cooling systems, and improved insulation. In somewhat of a rarity for this area, they decided to install eighteen photovoltaic (PV) panels to convert sunlight into DC electricity, which is then converted to AC electricity.

The Morans noted that the total installed system is capable of creating 3.78 kilowatts per hour (Kwh) of DC electricity. The solar industry uses 5 hours per day times the total system Kwhs as a “rule of thumb” to determine the system daily capacity. In the Morans’ case, they are capable of generating 18.9 Kwh per day of DC electricity. The system has an estimated life of 25 years.

The total amount of electricity generated will vary by season - depending on the cloudiness. The bonus is the fact that they get to sell any excess electricity back to the power company, offsetting some of the charges they get for power consumption. In the summer and winter, their air conditioner / heat pump is operating and using more energy, therefore, less is available for sale.

While John noted that their PV system was a very expensive system, at a total cost of \$40,635, he also noted that both the Federal and State Governments offer rebates to help offset the high costs. Starting in 2009, the Federal Government offers a 30% tax credit and Florida offers a rebate of \$4 per Killowatt. The Florida rebate totaled over \$15,000, given that their system was 3,780 kws. (The Florida rebate might be phased out as the State of Florida currently has a backlog of rebates already owed for installed systems.) So the actual cost of their system, after receiving the Florida rebate back and the federal income tax credit, was far less.

(5) SOLAR HOT WATER HEATER

Unlike solar PV, solar hot water heaters are generally 75% - 85% effective; that is, they produce hot water without using very much energy. The Morans installed a solar hot water heater. John described it as follows: “There is a small pump that will push water to the roof panels when the hot water heater needs to be filled up. The only time the electric heaters are used is when the water heater needs additional water or the temperature in the water heater

drops below a set temperature. This can happen when it is a very cloudy day or you use a lot of water when the sun is not shining. The water heater has extra insulation and is guaranteed to keep the water temperature basically the same within a 72 hour timeframe. Hence, most of our water heating costs are free.”

While the total cost of this system was \$6,000, they expect a rapid payback given the generally high costs of heating water.

In addition, the Morans attached a re-circulating pump to their hot water tank, in order to reduce the time to obtain hot water for usage and reducing wasted water usage. It now only takes a couple of seconds to get hot water rather than waiting several seconds, and this saves water usage. While the pump reduces the water temperature in the hot water tank, they have not found this to be an issue during the day (with the solar hot water heating installation). But at night, the water temperature was lukewarm, as the re-circulating pump was taking hot water out and pushing it through the pipes in the house, causing the water to cool off a bit. John noted that this resulted in cooler water being put back into the hot water tank and their electricity usage was about 7 Kwh per day higher than it should have been. The solution was a timer that turns on the re-circulating pump several times a day for five minutes at a time, saving energy on pumping while providing most of the desired benefits.

(6) SOLAR HEATING FOR THE SWIMMING POOL

John explained, “I am a Florida born native and do not like to swim in ‘cold water,’ so we decided that if we are going to have a swimming pool, then we probably need a pool heater for about 7 - 8 months of the year. We investigated electric and propane pool heaters but the cost to heat the pool was approximately \$2,000 using electricity and about \$6,000 using propane. In addition, there were potential issues with reliability of the equipment. So we decided to go with a solar heating system.”

The “rule of thumb” is the square feet of the solar panels needs to be at least the same as the surface area of your pool. The panels worked well, but John noted that they had a minor issue with the pool pump. “The one installed was a very inefficient but very reliable electrical motor. We replaced the pump about 7 months ago and saved approximately 6 Kwh per day. The new pump technology is a variable speed motor with a permanent magnet - technology came from the hybrid car development programs.” Total cost of the solar heating installation for the pool was \$5,597

(7) ENERGY STAR APPLIANCES.

Of course, the Morans sought out Energy Star Appliances, looking for ones which used less energy while still being reliable.



THE MORANS' ELECTRICITY USAGE RESULTS

The table below summarizes the monthly electricity use of the Morans for the first seven months of 2009. Over the entire period, the photovoltaic solar power system generated 31% of their total power usage.

Period	Electricity bought from SECO – this is the total Kwh actually paid for (electricity bill)	Solar electricity Generated from the solar panel (Kwh)	Electricity generated from the solar panels sold back to SECO for a electricity bill credit (Kwh)	Net electricity used: the sum of the electricity consumption plus the solar generated electricity minus any solar generated electricity sold back to the power company	% of total electricity generated from solar power
JAN	1,456 Kwh	356 Kwh	(91) Kwh	1,721 Kwh	20.7%
FEB	1,135 Kwh	482 Kwh	(215) Kwh	1,401 Kwh	34.4%
MAR	698 Kwh	549 Kwh	(168) Kwh	1,078 Kwh	50.9%
APR	1,016 Kwh	536 Kwh	(115) Kwh	1,437 Kwh	37.3%
MAY	767 Kwh	459 Kwh	(100) Kwh	1,126 Kwh	40.8%
JUNE	1,419 Kwh	452 Kwh	(30) Kwh	1,841 Kwh	24.6%
JULY	1,463 Kwh	411 Kwh	(18) Kwh	1,856 Kwh	22.1%

John and Marlene noted that the total they spent on energy efficiency improvements is quite large, and that the real savings are hard to calculate. For example, they are averaging generating about 31% of our total energy usage with the photovoltaic system and the monthly savings is only about \$50/month from that system alone. But how do you calculate what the electric bill would be if they did not use any energy efficient products - would the usage be doubled? If so, then the electric costs would be over 60% higher. And how do you factor into the calculations the future electricity cost increases (likely to result due to exchanges of carbon credits)?

In conclusion, the Morans are very happy with the energy efficient choices they made, especially when they tell others their June electricity bill was only \$160, while many of their neighbors (living in smaller homes) had monthly electric bills over twice that amount. “Try to calculate that satisfaction!”

Marlene stated, “We continue to believe the energy efficient decisions we made were the right ones. Even though we made a few ‘learning curve’ mistakes, we are most pleased with the outcome.” We at Joseph Capital Management, LLC are very pleased that the Morans made such a commitment to a low-energy future, through both conservation measures (insulation, etc.), smart design choices, and the use of solar PV technology. With their actions, and the efforts of many others, we can all reduce our reliance on imports of foreign oil and our tremendous U.S. trade deficit.

SUMMARY: ENERGY TAX CREDITS AND DEDUCTIONS FOR HOME IMPROVEMENTS

When planning home improvements, don't forget to consider the impact of possible tax credits and deductions. Here are just a few of the most important facts considering these credits and deductions:

- Tax credits are available at 30% of the cost, up to \$1,500, in 2009 & 2010 (for existing homes only) for:
 - Windows and Doors
 - Insulation
 - Roofs (Metal and Asphalt)
 - HVAC
 - Water Heaters (non-solar)
 - Biomass Stoves
- Tax credits are available at 30% of the cost, with no upper limit through 2016 (for existing homes & new construction) for:
 - Geothermal Heat Pumps
 - Solar Panels
 - Solar Water Heaters
 - Small Wind Energy Systems
 - Fuel Cells

ENERGY PROVISIONS OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

Residential Energy Property Credit: The ARRA of 2009 increases the energy tax credit for homeowners who make energy efficient improvements to their existing homes. The new law increases the credit rate to 30 percent of the cost of all qualifying improvements and raises the maximum credit limit to \$1,500 for improvements placed in service in 2009 and 2010. The credit applies to improvements such as adding insulation, energy efficient exterior windows, and energy-efficient heating and air conditioning systems. A similar credit was available in 2007, but was not available in 2008. Homeowners should be aware that the standards in the new law are higher than the standards for the credit that was available in 2007 for products that qualify as “energy efficient” for purposes of this tax credit.

Residential Energy Efficient Property Credit: This nonrefundable energy tax credit will help individual taxpayers pay for qualified residential alternative energy equipment, such as solar hot water heaters, geothermal heat pumps and wind turbines. The ARRA of 2009 removes some of the previously imposed maximum amounts and allows for a credit equal to 30 percent of the cost of qualified property.

For more about the energy tax credits and deductions, visit:

http://www.energystar.gov/index.cfm?c=tax_credits.tx_index

If you have any questions about the tax credits and how they may affect a project you are considering, please call or e-mail us, and we'll seek to get an answer to you.

**A FEW ADDITIONAL RESOURCES AVAILABLE ONLINE,
HOME IMPROVEMENTS TO SAVE ENERGY:**

Bob Vila's "20 Energy-Saving Ideas for 2009":

http://www.bobvila.com/HowTo_Library/20_Energy_Saving_Ideas_for_2009-Green_Building-A3776.html

Yes! Magazine – "How to Get Carbon-Free in 10 Years":

<http://www.yesmagazine.org/issues/climate-solutions/how-to-get-carbon-free-in-10-years/#yr2>

U.S. Environmental Protection Agency – Energy Star. Lots of

information on ENERGY STAR products can be found at <http://www.energystar.gov/>



**RETURN ON INVESTMENT ESTIMATES FOR
HOUSEHOLD ENERGY EFFICIENCY IMPROVEMENTS**

MONTHS	MODIFICATION	FIRST YEAR RETURN ON INVESTMENT	KWH SAVINGS PER UNIT	ASSUMED COST PER KWH	ANNUAL SAVINGS	COST PER UNIT
3	High Efficiency showerhead	400%	400	\$0.08	\$32	\$8
13	Fireplace pillow (stops air leakage up chimney)	91%	400	\$0.08	\$32	\$35
14	Bathroom faucet aerator	84%	21	\$0.08	\$1.68	\$2
23	Kitchen faucet aerator	51%	32	\$0.08	\$2.56	\$5
23	Compact fluorescent bulb (CFB)	53%	60	\$0.08	\$4.80	\$9
25	Wrap 15' hot and cold water heater pipes	48%	60	\$0.08	\$4.80	\$10
38	Replace incandescent porch light fixture with CFB	32%	160	\$0.08	\$12.80	\$40
43	Attic insulation (average)	28%	2	\$0.08	\$0.16	\$0.57
44	Duct insulation and sealing	27%	12	\$0.08	\$0.96	\$3.50

Source: Portland General Electric. Actual savings will vary.

Excerpts from the New York Times, August 8, 2009:

The New York Times

Climate Change Seen as Threat to U.S. Security

By JOHN M. BRODER

Published: August 8, 2009

WASHINGTON — The changing global climate will pose profound strategic challenges to the United States in coming decades, raising the prospect of military intervention to deal with the effects of violent storms, drought, mass migration and pandemics, military and intelligence analysts say. Such climate-induced crises could topple governments, feed terrorist movements or destabilize entire regions, say the analysts, experts at the Pentagon and intelligence agencies ...

But a growing number of policy makers say that the world's rising temperatures, surging seas and melting glaciers are a direct threat to the national interest. If the United States does not lead the world in reducing fossil-fuel consumption and thus emissions of global warming gases, proponents of this view say, a series of global environmental, social, political and possibly military crises loom that the nation will urgently have to address

Excerpts from The Wall Street Journal

THE WALL STREET JOURNAL

Before Adding, Try Reducing

By SARI KRIEGER

Published: June 15, 2009

The U.S. government offers a lot of subsidies to expand renewable energy. Should it be doing more to subsidize conservation?

Advocates of conservation, including businesses that help homeowners and companies save energy, think there should be more subsidies and tax incentives for basics like insulation and window shading, and for newer, more costly products like light-emitting-diode lamps and building-automation systems. LEDs cost more but use less energy than incandescent bulbs. The new automation systems help buildings waste less energy on cooling, heating and lighting.

Projects that improve efficiency pay for themselves quickly, the advocates say, and help people and businesses save money. Renewables, meanwhile, cost more money to achieve the same reductions in carbon-dioxide emissions.

A study by New York-based management consulting firm McKinsey & Co. earlier this year compared the cost of eliminating one ton of CO₂ emissions using different means: Wind power cost about \$38 per ton of CO₂ saved; solar cost about \$30. But replacing incandescent lights in a home with light-emitting diodes saved about \$159 per ton of CO₂, and using energy-efficient appliances saved about \$108 per ton.

Some say it makes more sense to retrofit buildings for energy efficiency before adding renewable technologies like solar and geothermal power, because buildings account for about half of the CO₂ emissions in the U.S. Efficiency improvements, these sources add, are often an easy, cheap fix in the struggle to reduce CO₂ emissions

HOW WE ADD VALUE. Joseph Capital Management, LLC discerns investment and portfolio management strategies that stand the test of time. The many ways we benefit our clients include:



- We structure investment portfolios to take advantage of the equity, small-cap, and value premia. Our research has revealed a substantial probability that the small-cap and value premia can be utilized to increase the long-term expected returns of the stock portion of a client's portfolio, thereby permitting a more conservative overall allocation (less stock asset classes, greater fixed income), which in turn will usually lead (over longer time periods) to less volatility (as measured by standard deviation) in the client's overall portfolio.
- We seek out (through a comprehensive due diligence process), and provide clients with access to, those investment products which best provide exposures to these risk premia.
- We seek to substantially reduce of "total fees and costs" relative to the receipt of financial planning and investment advice, and investment products – relative to the products often sold by those product salespeople who are in arms-length (non-fiduciary) relationships with customers.
- We seek to substantially reduce of various forms of investment risk for which there is inadequate compensation over time, including but not limited to: (1) specific company risk (and, in the context of bond investing, default risk); (2) manager risk; and (3) specific industry/sector risk.
- Nearly all of our clients share a common enemy - the insidious march of inflation. Defeating this opponent is one of the critical goals of our portfolio management strategies.
- We seek to take advantage of opportunities presented by tax law, to save income taxes (and other forms of taxes) over the long term for our clients.
- We ensure that each client's investment portfolio is well-designed as we seek a higher probability of success and attainment for the client of his or her unique lifetime financial objectives.
- We counsel each client in order to adhere to the discipline required, for long-term equity investment success – this is an especially powerful way to add value given that most individual investors react emotionally, and wrongly, to short-term stock market "ups" and "downs." We counsel our clients to "buy low" and "sell high" (through a disciplined approach to portfolio rebalancing). Not surprisingly, most individual investors who are not aided by our firm or those few other investment advisors who follow our investment philosophy, do precisely the opposite, and cause themselves long-term harm through underperformance.
- We seek to ensure that our client's other planning needs are addressed, working in conjunction with other professional advisors and applying our own team's expert professional knowledge across multiple disciplines.
- We are there to act as trusted professional advisors. We don't sell any products. We don't receive fees from anyone except our clients. We offer our counsel, our experience, and our expertise, and for that we are reasonably compensated. What is the value of having that rare team of professional advisors in whom you can place your complete trust and confidence?
- Lastly, *we care*. For our select clients, we seek to have long-term relationships, in order that we may partner together in this journey called life, seeking to accomplish each clients' lifetime financial goals along the way.

- Thank you for the continued opportunity to serve. Ron