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## **You Can Save The World**

(And Your Pocketbook!)

**An easy and painless 5-step guide to save money, improve national Security, lower inflation, increase the value of the dollar, and even help save the polar bears!**

Dear Friends,

I have been working on a number of publications for your perusal, but I have dropped all of those other projects to rush out this “call to action.” For the first time in my career I am receiving more calls and emails about oil prices than I am the latest investment fad. Therefore I think this is an opportune moment when more ears may be open to new ideas. People are both keenly interested in saving money and saving the environment. And energy savings can be realized in surprising ways that are much easier than most of you think.

I will start out by saying this: ***our fates are in our own hands***. The problems we face now are *not* the faults of greedy oil companies, coal power companies, auto companies, or even our government. We all want somebody else to do something to fix the problem, but have been reluctant to make any real changes ourselves. So rip the “save the rainforests” bumper sticker from your *neighbor’s* SUV and give them a copy of this guide! We can all use extra money at all times – but especially now.

So, without further adieu, here are the four easiest ways I believe we can save money while saving our planet (while improving our national energy security, lowering oil prices, lowering inflation, increasing the value of the dollar).

**If you follow the suggestions in this article then I believe  
I shall have succeeded more as your friend and  
investment advisor than by outperforming the stock  
market every year!**

## **Easy Step #1: Compact fluorescent lamps/bulbs (CFLs) - Replace your regular light bulbs!**

**SAVINGS: Estimated at over \$800 and 4.2 TONS of CO2 emissions per year per family.**

### **How long does it take you to change a light bulb?**

#### **Facts:**

**Save Money:** \$5,200 and nearly 26.3 hours over the average lifespan of CFLs in *low cost* power states<sup>1</sup>; in higher cost states (like CA) the savings will be far greater. Because energy prices are rapidly increasing I believe the actual savings for typical California household **may approach or exceed \$10,000.**

- **Save the Environment:** The table below summarizes the pollutants (including the primary greenhouse gas CO2 and mercury) saved by households using CFL fixtures. The Hinkle Foundation estimates 20 bulbs for the average apartment and 50 bulbs for the average single family home.

**Carbon Dioxide and Other Pollutant Reduction by CFLs**  
23W CFL v. 100W Incandescent  
(over 7.3 year life of CFL)

Pollutant	Impact	Per Bulb	Per 20 bulbs	Per 50 bulbs	Derived From:
Sulphur Dioxide	Main cause of acid rain	3.42 lbs	68.5 lbs	171.2 lbs	<a href="http://science.howstuffworks.com/question481.htm">http://science.howstuffworks.com/question481.htm</a>
Nitrogen Oxides	Cause smog and acid rain	3.5 lbs	69.9 lbs	174.7 lbs	<a href="http://science.howstuffworks.com/question481.htm">http://science.howstuffworks.com/question481.htm</a>
Carbon Dioxide	Green house causes global warming	.6 tons	12.7 tons	31.7 tons	<a href="http://science.howstuffworks.com/question481.htm">http://science.howstuffworks.com/question481.htm</a>
Mercury	Causes brain damage	11.1 mg	221 mg	555 mg	<a href="http://www.energystar.gov/cflsandmercury">http://www.energystar.gov/cflsandmercury</a>

Source: <http://www.thehcf.org/cflprimer.html>

- **CFLs reduce** demand for oil and other fossil fuels, which can help bring prices down.

#### **Myths and Misunderstandings:**

- **CFLs flicker and produce a bluer light: FALSE.** Modern CFLs do not flicker and produce light that is usually very similar to incandescent bulbs; often they often produce a spectrum closer to natural sunlight. Older bulbs did flicker and give off a more blue-hued light.
- **CFLs contain mercury: True.** However by using CFLs we can actually lower the net amount of mercury released into the environment. One CFL prevents over 210 lbs of coal being burned for electricity and coal-fired power plants are the chief source of mercury pollution in the USA (they release 43 **tons** of mercury into the atmosphere each year). CFLs can easily be recycled or safely disposed and the amount of mercury in them is about the size of the ball of a ball point pen (many times less than your mercury thermometers at home)!
- **CFLs do not work on dimmers: False.** Recently CFLs have become available that also work on dimmers!

**In sum: CFLs are the #1 easiest and most cost-effect way for Americans to save time, money, the environment, and lower our dependence on fossil fuels.**

<sup>1</sup> The Hinkle Foundation estimates for an average single family home in a *low cost* power state. Time savings are for decreased maintenance and include the time spent to convert from incandescent to CFLs. 7.5 year average lifespan for CFLs assumed and 50 bulbs per house. The Hinkle Foundation calculated the average apartment, in a low cost power state, will save \$1,400 and 10.5 hours (20 bulbs per apartment).

Sources: CFLfacts.com, Greenpeace, and Hinkle Charitable Foundation (<http://www.thehcf.org/cflprimer.html>)

## **Easy Step #2: Make your next vehicle a car!**

**SAVINGS: Estimated about \$10,000 and over 7 tons of CO2 per year per vehicle!**

***Is driving an SUV Safer than driving a car? Does it protect your children better?***

### **Facts:**

- **Switching from an SUV to a smaller automobile saves money and the environment:** a more fuel efficient car can save substantial money on gas, repairs, depreciation, and insurance while minimizing environmental impact and lowering our demand for fossil fuels (see the statistics and calculations from Edmunds.com in the appendix).

### **Myths and Misunderstandings:**

- **SUVs are safer than smaller cars: Probably False.** SUVs on average, may actually be *less* safe for both occupants *and* for drivers of other vehicles (Source: Transportation Research Board 82<sup>nd</sup> Annual Meeting). SUV's generally do far worse in accident avoidance tests, which means drivers are more likely to *have* accidents if they drive an SUV. SUVs also tend to be more prone to deadly roll-over accidents.
- **SUV's protect children better in crashes: Probably False.** Research suggests that children have *greater* incidences of serious injuries in SUV accidents than in cars. Source: The Children's Hospital of Philadelphia as reported in *Pediatrics* - [http://www.consumeraffairs.com/news04/2006/01/suv\\_safety.html](http://www.consumeraffairs.com/news04/2006/01/suv_safety.html)
- **SUV's are safer in snow than small cars: Generally not.** An SUV's 4WD may make it easier to move forward in snow but many SUVs substantially underperform cars in snow handling and accident avoidance<sup>2</sup>.
- **I need an SUV because...:** I have heard many different versions of this theme in my financial planning sessions. Generally it is "because I go camping" once or twice per year or a person may need an SUV to haul a boat that is used a few times per year. **Solution:** rent an SUV or truck when you need one or ask to borrow a friend's SUV once or twice per year. Savings on fuel, depreciation, insurance, and maintenance for the 99% of the time a car will fulfill your needs will more than pay for a very nice rental.

**In Sum: The savings you can achieve by driving a more modest car over an SUV can total MILLIONS of dollars – enough to potentially fund your entire retirement by itself. Consider the environmental benefits a nice "side effect"!**

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<sup>2</sup> Most SUVs are built on a pick-up chassis and therefore are very light in the rear. This often makes SUVs very difficult to control and more prone to spin-outs under slippery conditions. None of my family in Maine drives SUVs!

### Easy Step #3: Change your driving habits:

**SAVINGS: Estimated \$500 or more and 1,000+ pounds of greenhouse gasses per vehicle per year.**

*Going a little easier on the “gas” pedal and brakes can make a big difference!*

#### **Facts:**

- **Save from 10% to 30%+ on fuel expenditures:** though statistics vary considerably it appears a few minor driving changes can save a lot of fuel while having very little impact on your commute time.
- **Maintain your vehicle:** Simply by assuring tires are properly inflated saves up to 3% on fuel economy and can make your tires last longer. All CA service stations must provide free air (though some must be reminded of this). Costco will top off your tires with nitrogen for free if you ask!
- **Drive at or close to the speed limit:** Avoiding going 10-15 miles over the speed limit can save up to 20% of your fuel costs by itself and may save you a ticket, increased insurance rates, higher maintenance costs, or even a fatal crash. Overcoming air resistance is *the* primary use of fuel at highway speeds and air resistance increases exponentially (not linearly) with your speed. By traveling at the speed limit you will only add about 4 minutes to a typical 30 minute highway commute.<sup>3</sup>
- **Drive “with the flow”:** Weaving in and out of traffic showed an **up to 43%** loss of fuel efficiency in a Motorweek study. The time saved by waving through traffic is really quite minimal and significantly increases wear on the vehicle and increase your chance of accidents and tickets (and therefore increases your net vehicle costs).
- **Accelerate smoothly from stops** and drive “ahead of yourself” to prevent accelerating into stop lights. Try to drive smoothly and hit your breaks and accelerator as little as possible. These steps saved about 20% in Motorweek’s tests and driving in this manner should increase your commute by less than 2 minutes.

**In Sum: By increasing your commute time by less than five minutes you can save on fuel and vehicle wear. Side effects may include less road rage, fewer accidents, fatter wallets, lower blood pressure, and arriving at work more refreshed!**

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<sup>3</sup> Suggestion: Leave 5 minutes earlier and bring a book on CD or conduct business on your hands-free mobile phone therefore there is no “wasted” time. I use my time in the car to catch up on financial news and to learn Chinese.

### **Easy Step #4: Stop drinking bottled water!**

**Estimated savings of over \$500 per family per year. Drink *better* water and cut fossil fuel use!**

***"There was actually no difference between the New York City tap water and the bottled waters that we evaluated"***

-Microbiologist Aaron Margolin discussing water microbe content on ABC's 20/20

#### **Facts:**

- **Bottled water is not more safe, pure, or healthy** than unfiltered tap water
- **Blind taste tests** have shown people prefer the taste of *unfiltered downtown New York City tap water* just as much as bottled water!
- **Over 18 million barrels of oil** are used *just to make the bottles* for water in the USA each year – enough to fuel 1 million automobiles! This *does not include* energy used in production or shipping!
- **A large percent of bottled waters supplies are sourced from public water systems** (including the top brands Dasani and Aquafina). Why pay for some company to repackage and sell you what is coming from your tap?<sup>4</sup>
- **Americans will spend over \$16 billion** on bottled water this year. More money than on iPods, movie tickets, milk, or juice!

#### **20/20's Water Blind Taste Test Results<sup>5</sup>**

1. American Fare (K-Mart)
2. Aquafina
3. New York City tap water and Iceland Spring (tie)
4. Poland Spring
5. Evian

***"Americans are spending billions on a drink that is virtually free"***

-ABC's 20/20 "Is bottled water better than tap?"

**In Sum: Stick with tap water or buy a home filter and save a lot of money while protecting our environment!**

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<sup>4</sup> Water from more exotic sources are generally less pure, use more resources to get to the end consumer, and are consistently rated as being the worst-tasting waters in blind taste tests

Sources: ABC News "20/20" (<http://abcnews.go.com/2020/Health/story?id=728070&page=1>)

<http://www.thegreenguide.com/doc/121/bottle>

<http://www.fastcompany.com/magazine/117/features-message-in-a-bottle.html>

<http://www.earth-policy.org/Updates/2006/Update51.htm>

<sup>5</sup> of five bottled waters and New York City tap water from a school drinking fountain

### **Easy Step #5: Use LOW Octane (Regular) Gas!**

**Save up to a few hundred dollars a year while treating your car – and the environment – better**

***"Using a higher-octane gasoline than your owner's manual recommends offers absolutely no benefit. It won't make your car perform better, go faster, get better mileage or run cleaner."***

-Federal Trade Commission Consumer Notice.

### **Facts**

- If your car is designed for 87 “regular” octane fuel then:
  - **Using higher octane “premium” fuel may harm both your engine and the environment** since more unburned gas may reach the exhaust system.
  - **Using “regular” fuel will give you the same or better performance** than “premium” fuels
  - **Using regular fuel generally will provide the same or better fuel economy** than higher octane fuels.
- If your car states it requires “premium only” you may not *really* need it!
  - **Some automakers use the same engines** in their lower and higher end vehicles but change the luxury vehicles stickers to say “premium only” (Consumer Reports)
  - **Even if your car is built for high octane** it generally does not void the warranty or cause mechanical problems to use regular fuel (but there may be a slight performance loss). "You don't have to feel that a mechanical problem or anything else will happen using regular gas, even in the highest-performance, regular-production, Porsches," Jakob Neusser, Porsche Director of Powertrain Development.

**"There is no gain [from using “premium” fuel]. You're wasting money,"**

-Jim Blenkarn, Powertrains Director at Nissan USA (as reported in USAToday).

**In Sum: If your car doesn't require premium fuel don't needlessly burn your money – use regular!**

Sources: ([http://www.usatoday.com/money/autos/2003-07-30-premiumgas\\_x.htm](http://www.usatoday.com/money/autos/2003-07-30-premiumgas_x.htm),  
<http://blogs.consumerreports.org/cars/2008/02/premium-gas.html>, <http://www.slate.com/id/2182076/>)

## Recap and Final Comments

**“Osama bin Laden hates my car!”**

-Bumper sticker on Former CIA Director James Woolsey’s Toyota Prius<sup>6</sup>

**We can lower gas/oil prices:** Lowering demand for oil products should help lower the price (basic price and demand economics).

**We can strengthen the dollar:** Decreasing the amount of oil we must import should lower the trade deficit. Our trade deficit is widely believed to be a primary factor in the weakening dollar.

**We can lower inflation:** By lowering the price of oil and strengthening the dollar we can help lower inflation. And lowering inflation can give the Federal Reserve more room to cut interest rates which can help our economy avoid a serious recession.

**We can increase the security of the USA and the world:** Much of our imported oil comes from Middle East countries that are hostile to the US and the West, including Iran. **“We are funding both sides of this long war,”** James Woolsey, former CIA Director (The Boulder Daily Camera, Tuesday, April 11, 2006). We are also funding Iran’s nuclear program and Hugo Chavez’s regime in Venezuela by buying their oil while leaving our economy dependent on those same regimes. If we can eliminate our demand for foreign oil then a significant reason for the US keeping troops in Iraq could virtually disappear.

***Closing Quote: “Who is Funding Terrorism? As you fill your car turn your rearview mirror a bit so you can look at yourself!”***

-Former CIA Director, James Woolsey<sup>5</sup>

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<sup>6</sup> <http://www.cleantechblog.com/2006/04/batteries-not-bullets.html>

## APPENDICES

### Cadillac Escalade AWD True Cost to Own over 5 years: \$111,493 (\$1.50 per mile)

	Year 1	Year 2	Year 3	Year 4	Year 5	5-yr Total
<a href="#">Depreciation</a>	\$19,454	\$7,353	\$6,469	\$5,735	\$5,143	\$44,154
<a href="#">Financing</a>	\$5,365	\$4,345	\$3,240	\$2,042	\$744	\$15,736
<a href="#">Insurance</a>	\$2,873	\$2,974	\$3,078	\$3,185	\$3,233	\$15,343
<a href="#">Taxes &amp; Fees</a>	\$6,244	\$394	\$346	\$304	\$267	\$7,555
<a href="#">Fuel</a>	\$3,849	\$3,964	\$4,083	\$4,205	\$4,331	\$20,432
<a href="#">Maintenance</a>	\$492	\$1,039	\$1,262	\$2,420	\$1,015	\$6,228
<a href="#">Repairs</a>	\$0	\$0	\$0	\$808	\$1,237	\$2,045
<b>Yearly Totals</b>	<b>\$38,277</b>	<b>\$20,069</b>	<b>\$18,478</b>	<b>\$18,699</b>	<b>\$15,970</b>	<b>\$111,493</b>

### Mazda 3 Series 5 speed manual True Cost to Own \$37,478 (50 cents per mile)

	Year 1	Year 2	Year 3	Year 4	Year 5	5-yr Total
<a href="#">Depreciation</a>	\$2,504	\$1,648	\$1,450	\$1,286	\$1,154	\$8,042
<a href="#">Financing</a>	\$1,073	\$869	\$648	\$408	\$149	\$3,147
<a href="#">Insurance</a>	\$1,773	\$1,835	\$1,899	\$1,966	\$1,995	\$9,468
<a href="#">Taxes &amp; Fees</a>	\$1,251	\$109	\$98	\$89	\$81	\$1,628
<a href="#">Fuel</a>	\$2,063	\$2,125	\$2,189	\$2,255	\$2,323	\$10,955
<a href="#">Maintenance</a>	\$236	\$476	\$349	\$847	\$1,472	\$3,380
<a href="#">Repairs</a>	\$0	\$0	\$125	\$298	\$435	\$858
<b>Yearly Totals</b>	<b>\$8,900</b>	<b>\$7,062</b>	<b>\$6,758</b>	<b>\$7,149</b>	<b>\$7,609</b>	<b>\$37,478</b>

**Subaru Forrester AWD Automatic True Cost to Own \$47,905 (64 cents per mile)**

	Year 1	Year 2	Year 3	Year 4	Year 5	5-yr Total
<a href="#">Depreciation</a>	\$5,664	\$2,123	\$1,868	\$1,656	\$1,486	\$12,797
<a href="#">Financing</a>	\$1,642	\$1,330	\$992	\$625	\$228	\$4,817
<a href="#">Insurance</a>	\$1,665	\$1,723	\$1,784	\$1,846	\$1,873	\$8,891
<a href="#">Taxes &amp; Fees</a>	\$1,893	\$139	\$126	\$113	\$103	\$2,374
<a href="#">Fuel</a>	\$2,515	\$2,590	\$2,668	\$2,748	\$2,830	\$13,351
<a href="#">Maintenance</a>	\$420	\$960	\$536	\$2,003	\$811	\$4,730
<a href="#">Repairs</a>	\$0	\$0	\$137	\$327	\$481	\$945
<b>Yearly Totals</b>	<b>\$13,799</b>	<b>\$8,865</b>	<b>\$8,111</b>	<b>\$9,318</b>	<b>\$7,812</b>	<b>\$47,905</b>

**Toyota Prius True Cost to Own \$41,049 (55 cents per mile)**

	Year 1	Year 2	Year 3	Year 4	Year 5	5-yr Total
<a href="#">Depreciation</a>	\$3,052	\$2,467	\$2,171	\$1,925	\$1,727	\$11,342
<a href="#">Financing</a>	\$1,574	\$1,275	\$951	\$599	\$218	\$4,617
<a href="#">Insurance</a>	\$1,990	\$2,060	\$2,132	\$2,206	\$2,239	\$10,627
<a href="#">Taxes &amp; Fees</a>	\$1,817	\$150	\$134	\$120	\$108	\$2,329
<a href="#">Fuel</a>	\$1,291	\$1,330	\$1,370	\$1,411	\$1,453	\$6,855
<a href="#">Maintenance</a>	\$441	\$713	\$612	\$1,034	\$1,706	\$4,506
<a href="#">Repairs</a>	\$0	\$0	\$111	\$269	\$393	\$773
<b>Yearly Totals</b>	<b>\$10,165</b>	<b>\$7,995</b>	<b>\$7,481</b>	<b>\$7,564</b>	<b>\$7,844</b>	<b>\$41,049</b>

**Annual Vehicle CO2 emissions:**

**Escalade: 15.7 tons CO2**

**Forrester: 10.0 tons CO2**

**Mazda 3: 8.8 tons CO2**

**Prius: 4.8 tons CO2**

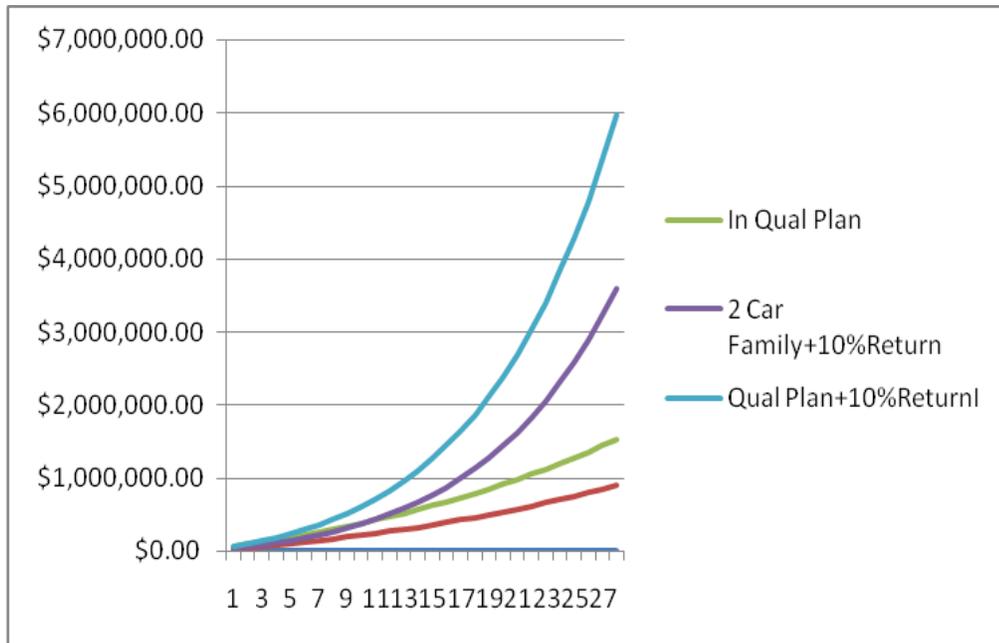
Source of all "True Cost to Own Data": Edmunds.com (<http://www.edmunds.com/apps/cto/CTOIntroController>)

Source of emissions and oil use data: Fueleconomy.gov

# THE SAVINGS ARE REAL

**What would you do with an extra \$6 million?**

## Savings Estimates for a 2 SUV San Diego Family making all recommendations



Assumptions: 10% return on investment, 4% annual energy/transportation cost inflation, 2 Ford Explorer V8 SUVs switched to 2 Honda Civics with new equivalent cars every 5 years, stopped drinking bottled water, changed to compact fluorescent lights, and modestly adjusted driving behavior<sup>7</sup>.

<sup>7</sup> Switching from 2 Honda CRV compact 4x4s to 2 Honda civics changed the after investment returns to between \$1.7M and \$2.8M. Changing **one** Explorer to a Civic resulted in an after investment return of between \$2.0M and \$3.4M. Changing 2 Mercedes M Class to 2 Honda Civics yielded a return of between \$9.5 million and \$15.8 million. **Doing nothing except changing to compact fluorescent lights yielded between \$171,000 and \$285,000.** All calculations are over 30 years and are estimates for illustrative purposes only. Qualified money investments assume net taxes (federal and state) saved at 40% rate. Investment returns do not account for taxes or fees and actual results may vary.

### **Other Edmunds Total Cost of Ownership Figures<sup>8</sup>**

- BMW 7 series 6.0 L - \$160,618
- Jeep Grand Cherokee SRT - \$85,679
- Toyota Yaris 2Door 5sp - \$36,465 (49 cents per mile)
- Toyota Camry V6 - \$50,909
- Toyota Camry 4 cyl - \$45,645
- Toyota Corolla CE Auto - \$39,365 (52 cents per mile)
- Dodge Ram 2500 Quad Cab Auto - \$70,817
- Mercedes M-Class 8 cyl - \$142,035 (\$1.89 per mile)
- Mercedes S-Class - \$272,312 (\$3.63 per mile)
- Honda Civic DX 4 door 5 sp- \$36,889 (49 cents per mile, 50 cents for auto)
- Mini Cooper base 6sp - \$40,478
- Land Rover Range Rover - \$118,805
- Ford Expedition Eddie Bauer - \$73,082
- Honda Fit - \$36,082 (48 cents per mile)

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<sup>8</sup> new vehicles, San Diego resident, 5 year time span (Source: Edmunds.com)