

“An Energy Plan for a Plan”

Too many people are falling into the trap of trying to select a 'best choice' for our energy problems. What everyone should be aware of are these facts;

1. No ONE solution will fix the immediate problems, near-term problems, and strategic problems.
2. Our energy problem is FAR bigger and FAR more dangerous than most people realize.
3. It's going to take a massive effort on many different fronts to get to a safe place regarding energy independence.
4. Congress and the President must act together (probably the toughest part of the challenge.)

Consider that we have a dependency on foreign oil that is draining our nations' wealth and creating a clear and present danger to our freedom. What are our choices and considerations? Here's a few at the very highest level:

Electric Vehicles - Thomas Edison once said "America's future will depend on the electrification of vehicles." It's time that we focus more and more of our own human energy into that goal. We might want to consider a private award system for developing better batteries, but let's not stop there. Use government grants for individuals and business who will be early adopters of EV technology. It's a small price to pay compared to what we're paying now.

Think in this century, not the last one - In the long term, we have to rethink the way we are doing things today. Diesel powered cars are now 50% of the cars sold in Europe.

There are none in the US until 2009, due to the protectionist EPA regulations on diesel vehicles. These vehicles emit cleaner exhaust than the ambient air in Los Angeles. We have gone too far in our environmental zeal and the law of unintended consequences has taken over. We need to standardize our EPA and DOT regulations with Europe, where they have more than 35 models that get in excess of 50 mpg. In America we have only one, the Toyota Prius.

And why do we penalize diesel automobile owners with higher taxes on diesel fuel? It's because the tax structure was devised when only trucks used diesel, and since trucks cause the highest road wear, they pay a higher tax. But the world has changed, and we should encourage private cars running on diesel. Lower the tax on diesel and find another way to tax the trucks if you have to.

Fusion power - Long thought of as science fiction, other governments like Japan are now putting billions of dollars into fusion research for small, cost effective fusion reactors. Our own National Science Foundation has stopped funding for most of these projects in favor of 'clean coal' research. Both are needed. Find the money and do it.

Hydrogen - Hydrogen is a 'here and now' solution for part of our needs. It can be burned in an internal combustion engine or be part of a flex-fuel system such as that used by the new BMW hydrogen cars and coming Fords. We need to abandon the plans to put a few hundred large permanent H2 refueling stations and instead put a few thousand cheaper, portable stations to service the small number of vehicles now hitting the roads. That will encourage production of more vehicles, when they know there are places to get fueled up.

Solar and wind - Great alternatives but getting them in place in any meaningful quantities will take about ten years and cost billions of dollars. This needs to be done, but it needs a lot of government support in addition to private industry investment. This will not happen without a better business case and improved technology and also some subsidies.

Bio-fuels - Ethanol and bio-diesel are still in their first stages of development for mass consumption. State, Federal and local agencies need to purchase contracts for bio-fuels to assist ethanol producers in getting funding for construction. Ethanol is a 'bridge fuel', available until something better comes along, and that should be quickly. Future biofuels feedstocks need to be developed in the laboratories and universities. We need a 'Frankenplant' that has been genetically designed to have a high sugar content, require no fertilizer.

Nuclear - This is the safest, cleanest and most environmentally safe form of energy available. France gets 80% of its power needs from nuclear plants. In America our newest nuclear plant is about 30 years old. Nuclear power is now what it was originally promised to be; safe, clean and efficient. As we electrify our transportation, this is where we need to get our electricity from.

Conservation - This is really the only thing that Americans can do in the short term to have any impact, albeit small, but it is a temporary action at best. Our economy runs on energy, and our personal lives (and jobs) depend on transportation. \$4 per gallon gasoline has done more to encourage conservation than anything else could do, but once you are already conserving, how much more can you tighten the belt? It would show our commitment, but have little real effect.

Drill for Oil - MUST be part of the solution in the near term. Resumption of drilling (just on the wells that were stopped at the start of the off-shore ban) could be completed by drilling a bit further and they would start to provide additional supply in 18 months. Other new drilling would take from one to five years for full production. We must realize that new oil drilling techniques are safe and environmentally secure. Drill off-shore and drill in Anwar, and hold the oil companies accountable for environmental safety. Huge quantities of oil have leaked from underground oil fields in the sea since long before man.

This causes environmental damage just like the tanker leaks. (And by the way, Exxon should be forced to pay the settlement just to show the rest of the world that unsafe practices and policies regarding environmental safety have their cost.)

Clean Coal - Meets a very real need. Coal gasification can and should be part of the total solution.

Strategic Oil Reserves – The fact that I have to pay \$4 a gallon at the pump is not a National Crisis. In Europe they are paying \$8 a gallon and that's not a National Crisis either. A National Crisis is when the countries that hate us (like Iran and Libya and Venezuela) decide that their people can have a little more discomfort and lost revenue and they decide to stop shipping us oil. Our strategic oil reserves can supply the national needs for a matter of weeks, or they can supply our Defense Department for several months. Without oil we can't scramble jets for defense, or deploy ships to protect our coast, or fuel military vehicles if attacked. So our Strategic Oil Reserves should be 'For Defense Use Only' and the politicians should admit that our national security is more important than bringing the price of gas down at the pump by a few cents. Put a lock on SOR and don't use it as a political bargaining chip.

City planning - Back in the 1950's the big concern was 'Urban Sprawl'. So city planners got together and decided that we could 'zone' our way out of this problem. City planners now give us parts of the land where we can have housing, but NOT shopping and NOT businesses. And they said that we could have shopping and entertainment areas but NOT housing and NOT offices in the same area. And now we are forced to live in one part of town and commute to another part of town to work and another part of town to shop and we wonder why Americans drive so much. We have to think in this new century, already almost a decade old, and build mini-cities instead of suburbs, where people can live and work and shop all week and keep their cars for weekend pleasure trips to visit Grandma.

Let's have some places where people can take an elevator from home to work, or to shop, and not an SUV. Let companies have company housing available, like they did a century ago, and people will use it.

Rapid Transit and Light Rail - There are MILLIONS of people who would like to take a clean, cheap way to work. Isn't it a shame that they can't get that because the train or bus does not stop at either their home or their place of work? Why not? (See Urban Sprawl above.) We need to lay out light rail not to stop

where there is currently a high density, because those places are established and the density will never really increase. We need to plan stops where there is NO one, and let the area build up a greater density of workplaces and housing. It worked when the trains first went west, and whistle stops for water became towns. It can work now.

Many have suggested that we need an effort comparable to the Manhattan Project to solve the energy crisis before it becomes critical. Others have used a comparison to the Apollo project to land a man safely on the Moon and bring him home safely. And by the way, that Lunar Rover more than 30 years ago was an electric vehicle, and it arrived in a lander that was powered by fuel cells.

All we need is the will.