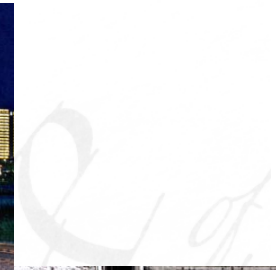
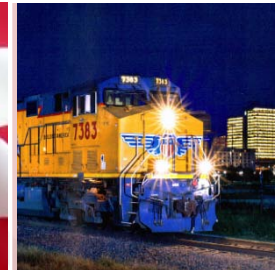
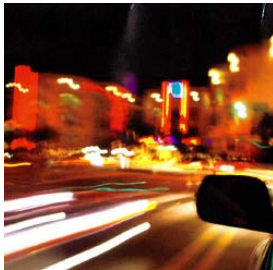


# Coal,



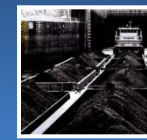
## America's Treasure of Energy

### Our Key to Economic Prosperity and A Strong America –

### **By Building Things Again!**

Presented by Richard F. (Dick) Storm, PE  
CEO/Senior Consultant  
Storm Technologies, Inc.  
Albemarle, NC 28001

# America Needs More Clean Coal



## Why America Needs More Clean Coal Plants to Produce Low Cost Reliable Electricity:

- To Keep America Strong!
- National Security
- Economic Prosperity/Economic Responsibility
- Preserve Our Life Styles and Standard of Living
- "Jobs"

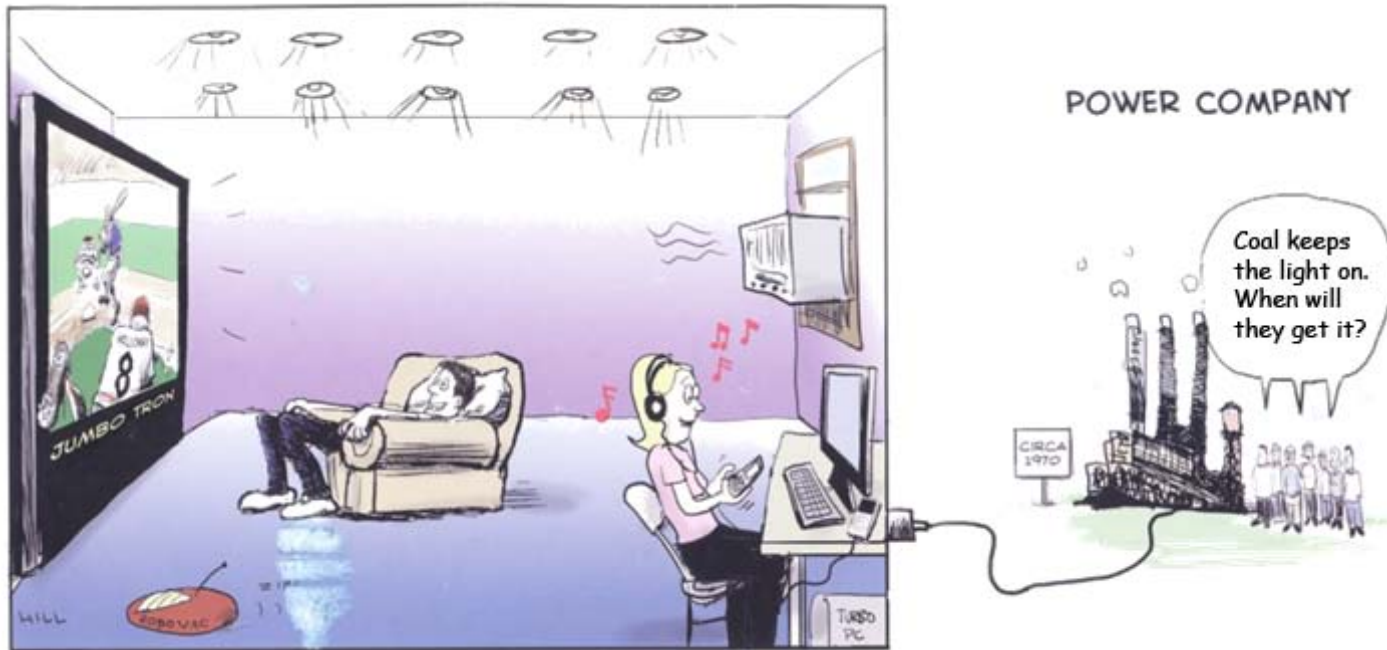


# Political Correctness Is....



## Against any Coal Plants – One young university student referred to coal as the “New Tobacco.”

Electric Power demand is growing at 1-2% per year. America still depends on 35+ year-old, average age, power plants for 50% of its power. (Duke’s coal fleet is average age 47 years old.)



**Old plant,  
Aging  
workforce,  
New  
Environmental  
Reg's, What  
do we do  
now?**

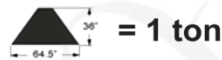
# 334 Million BTU's /Year /Person



**\*14 tons @ 12,000 Btu/lb**  
**16 tons @ 10,450 Btu/lb**

- There are over 300 million residents in the United States
- In 2007, the U.S. consumed 101.605 quadrillion Btus
- This is an average use of 334.4 MMBtu/yr per person
- The equivalent of this amount of energy from each resource is shown

Each US resident uses an equivalent of 14 tons of coal\*



**14 tons total (28,000 pounds)**

Each US resident uses an equivalent of 64.5 barrels of gasoline



**42 gallons**  
**2,709 gallons total**

Each US resident uses an equivalent of 58 barrels of diesel fuel



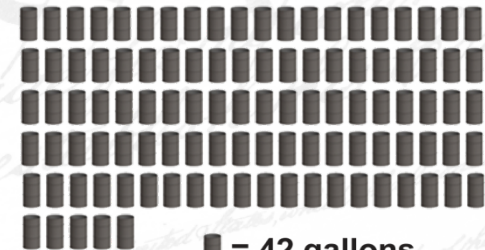
**42 gallons**  
**2,436 gallons total**

Each US resident uses an equivalent of 52 barrels of #6 oil



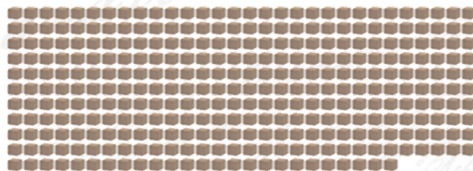
**42 gallons**  
**2,184 gallons total**

Each US resident uses an equivalent of 105 barrels of ethanol



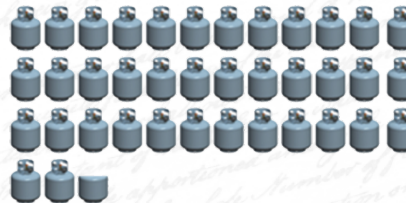
**42 gallons**  
**4,410 gallons total**

Each US resident uses an equivalent of 325,000 cubic feet of natural gas



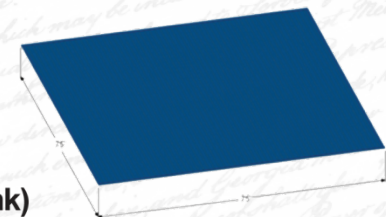
**1000 ft<sup>3</sup>**  
**325,000 ft<sup>3</sup> total**

Each US resident uses an equivalent of 778 pounds of propane

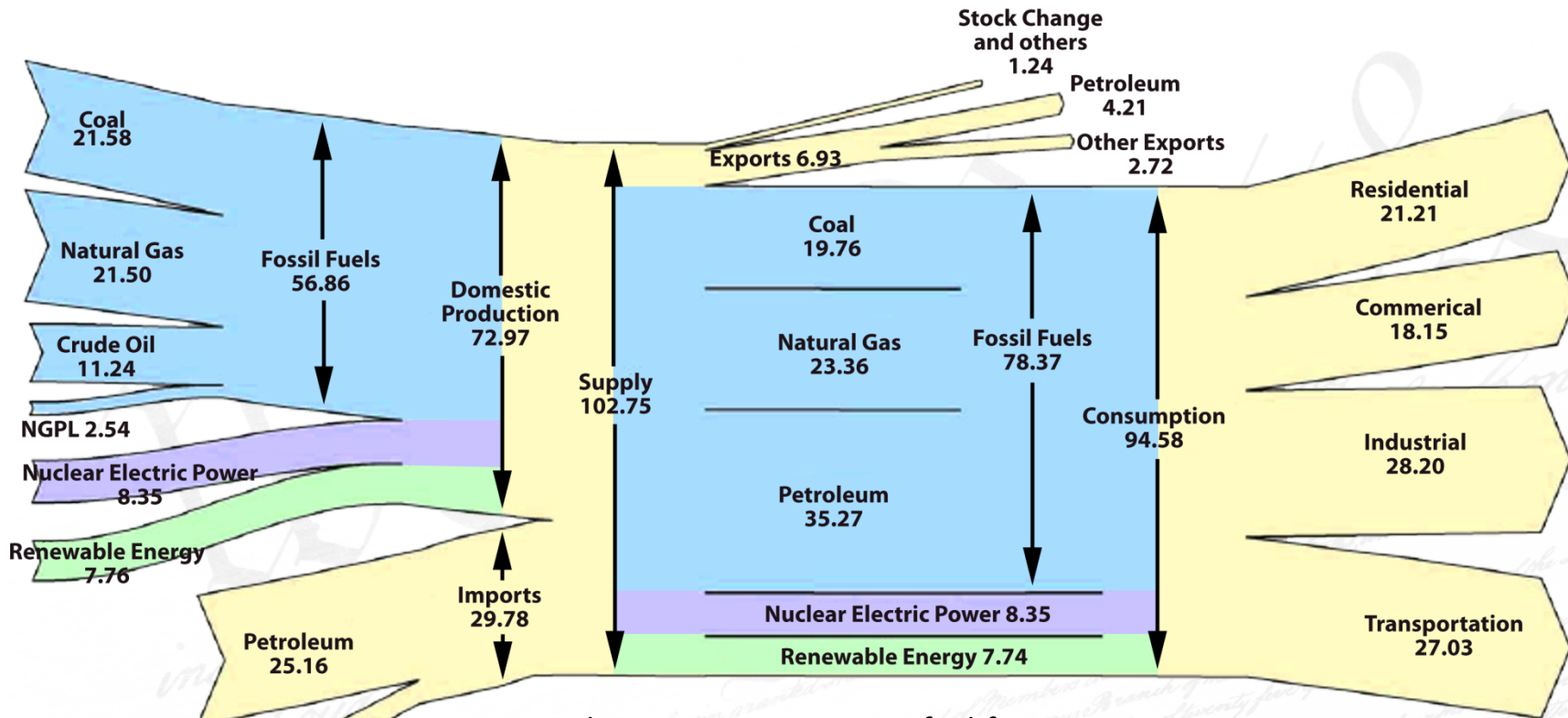


**20 pounds (standard grill tank)**  
**778 pounds total**

Each US resident uses an equivalent of a 75'x75' solar panel



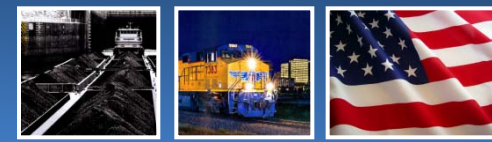
# Energy Flow to Power America



Coal remains an important fuel for America at about 21% of our total energy. Coal is needed for national security and continued economic prosperity.

Source: Energy Information Administration, 2009

# Coal – Important in the 20<sup>th</sup> Century



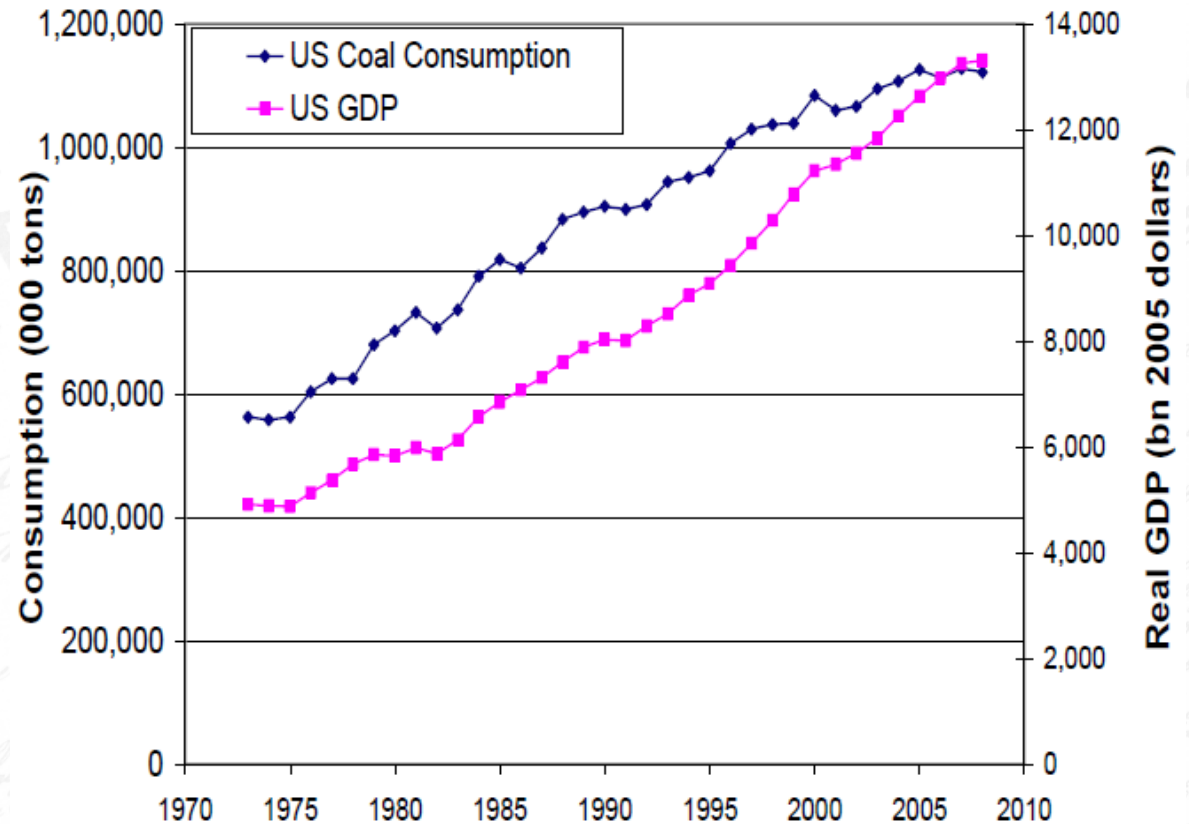
## Coal Use Linked to Economic Growth

Coal-fired generation and GDP have grown at nearly the exact same pace over the last 30 years.



## Also Important in the 21<sup>st</sup> !

US Coal Consumption and US Real GDP (1973-2008)

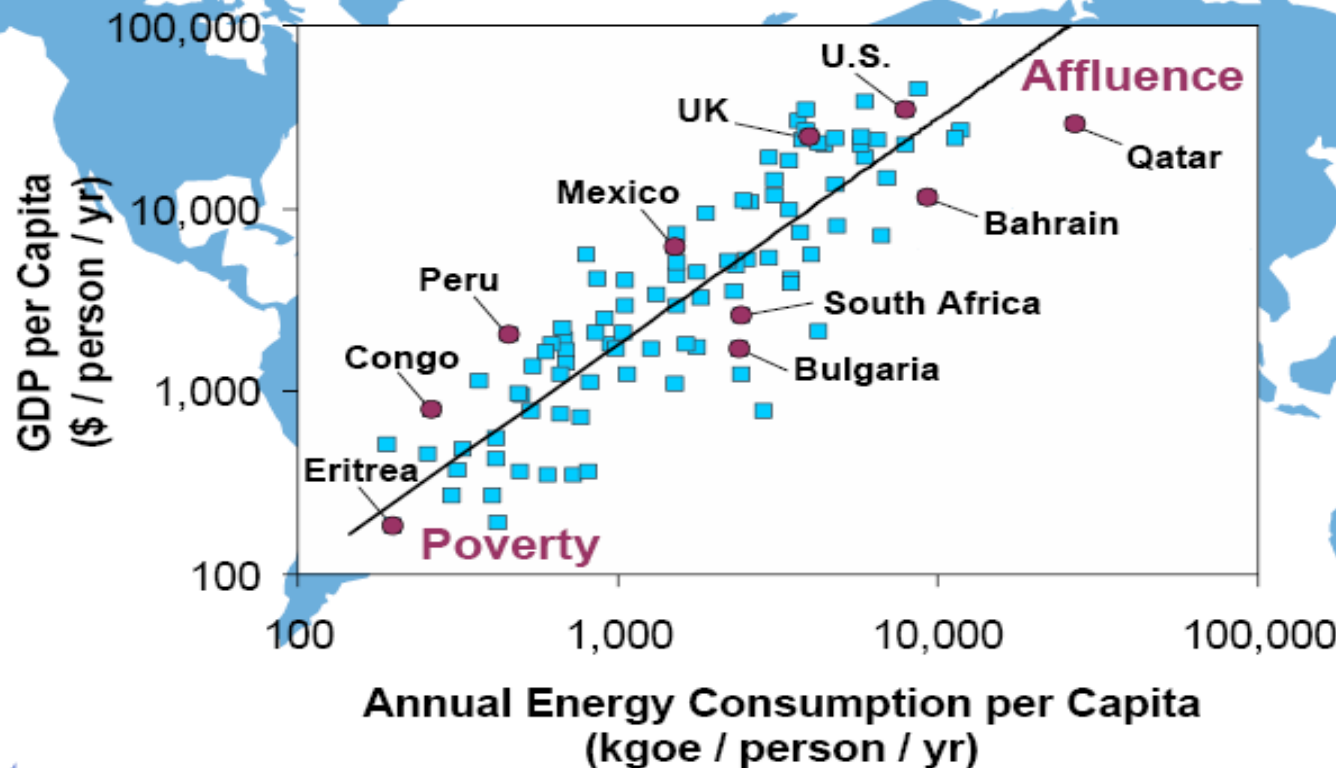


U.S. Energy Information Administration, MER Sept, 2009 & US Bureau of Economic Activity.

# Energy and Economic Prosperity



## Energy = Quality of Life *Poverty Reduces Global Security*



World Resources Institute Database, accessed June 1, 2005  
[http://earthtrends.wri.org/searchable\\_db/](http://earthtrends.wri.org/searchable_db/)

Carl O. Bauer, EPSCor, June 15, 2006

# Quality of Life Improvement



What is the answer to improve the quality of life for 7 billion souls on the planet?

Answer:

- Coal
- Oil (from America!)
- Natural Gas
- Nuclear
- Renewables (where practical)





# How Do We Do It?

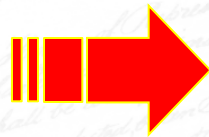


## Answer: Apply the Five Es!

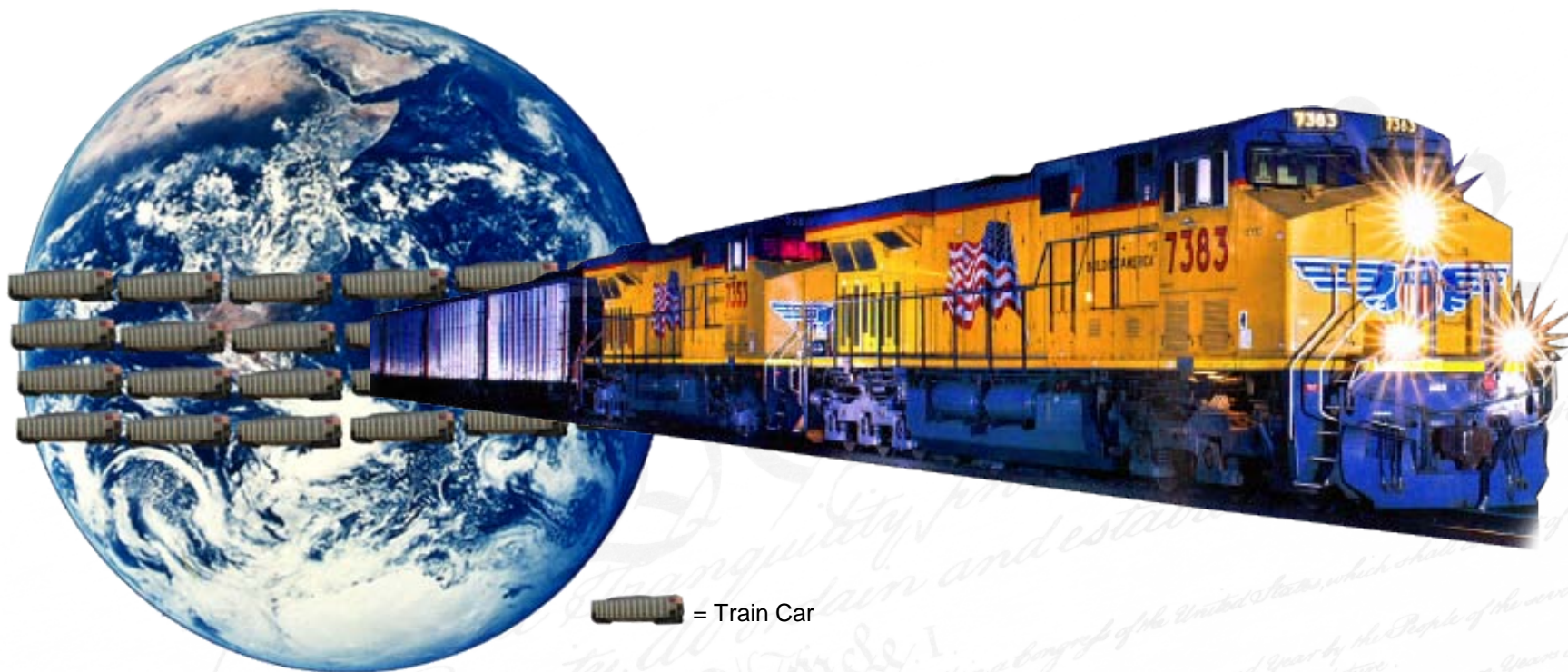
- Education
- Energy Production and Respect
- Environmental Protection (reasonable – it is unreasonable to do nothing)
- Economic prosperity will result from a proactive plan
- Entertainment industries helped to create a mindset of political correctness. It must be used to reverse the damage.

Example: Al Gore movie “An Inconvenient Truth”

Don't expect the TRUE facts from these agencies



# How Much Coal is Burned in the World?



100 ton rail cars 55 feet long = 10,000,000 rail cars.

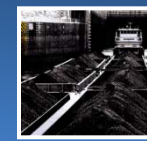
If hooked end to end in one train, these would 104,166 miles long or roughly circle the earth more than 4 times at the equator.

**Note: This is the equivalent coal utilized in the USA only – China will use 4 times more than the USA in the next two decades.**

**China – 4.65 billion tons in 2030  
(Projected by EIA)**

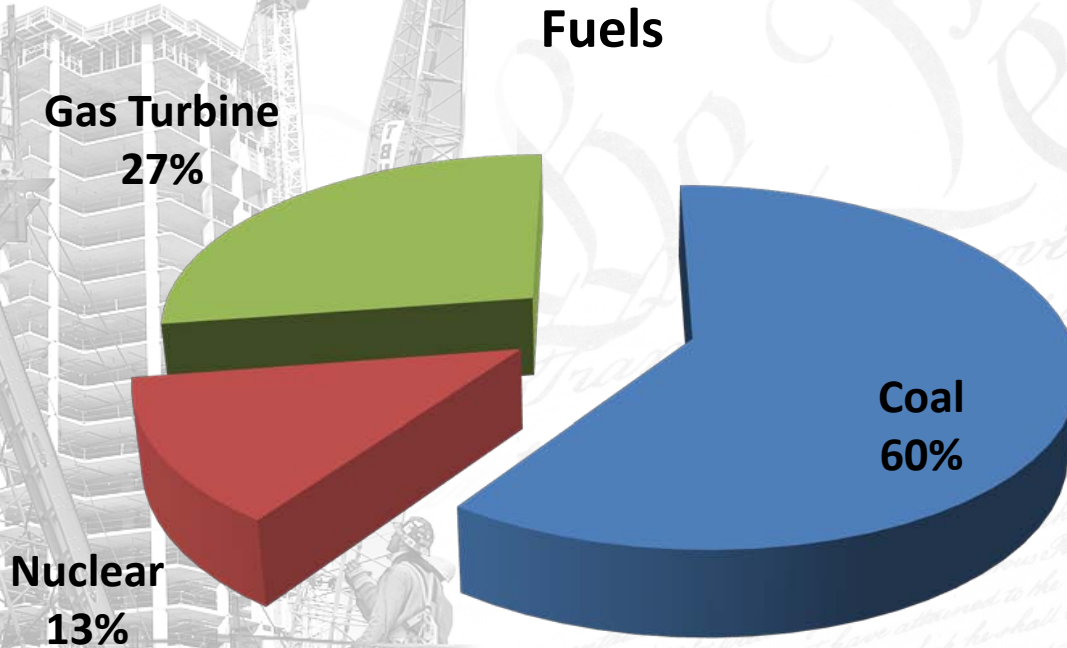
USA – 1.114 billion tons in 2006 (EIA Report)  
USA – 1.784 billion tons in 2030 (Projected by EIA)

# Coal to Generate More Electricity



## Electric Generating Capacity, 2020 (1000 MW)

Source: Mcilvaine Company



Coal fuels the industrialized world to power manufacturing to “build things” and create wealth.



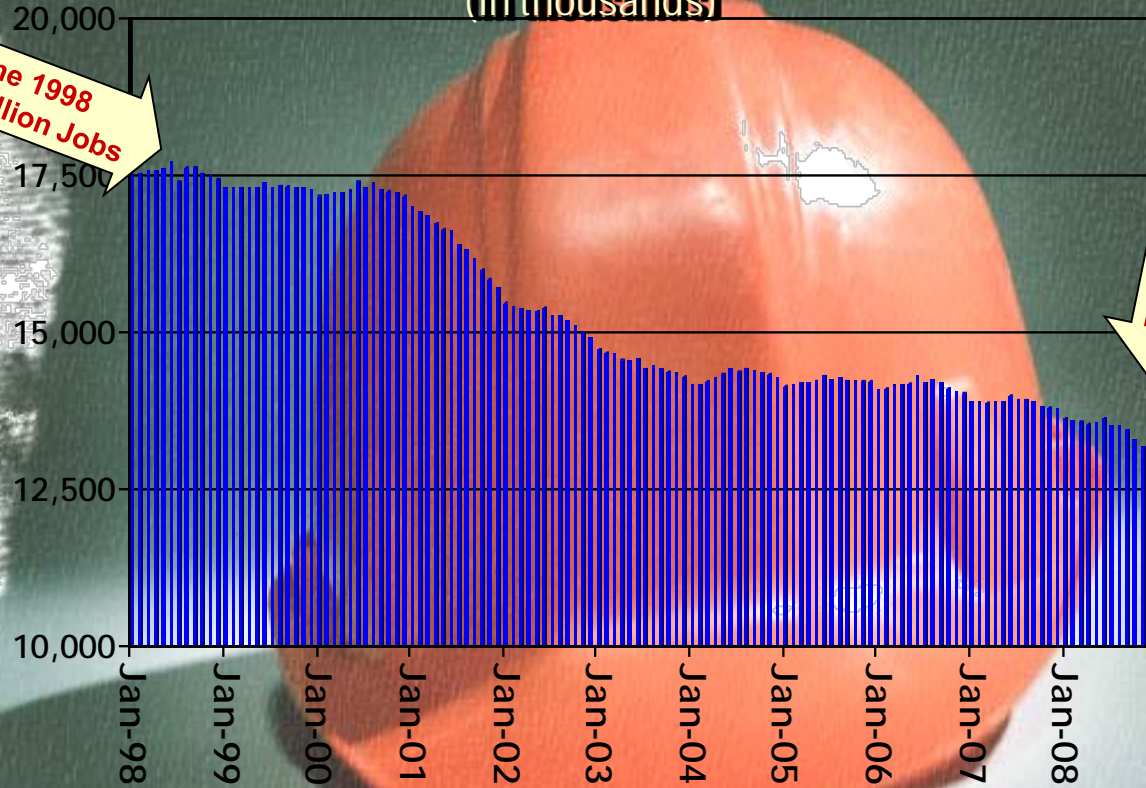
That is how the USA obtained our wealth and strength in the 20<sup>th</sup> century – and how Asia is gaining theirs in the 21<sup>st</sup> century.

# U.S. Manufacturing Jobs



## U.S. Manufacturing Jobs

(in thousands)

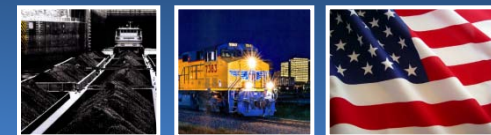


December 2008  
13 Million Jobs

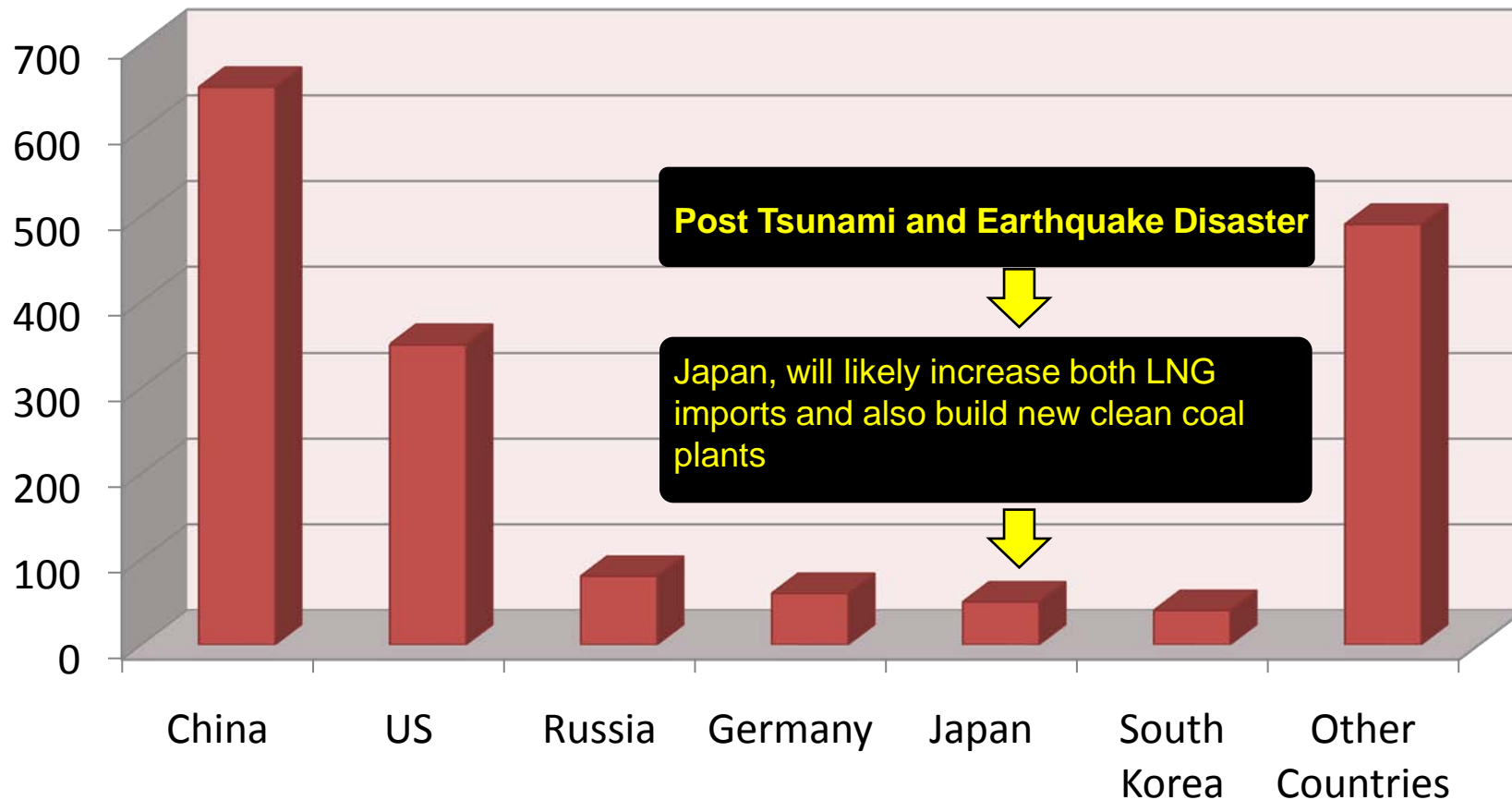
According to WSJ  
11.5 million in 2010  
all manufacturing  
and about 22.5 million  
in government –  
which manufactures  
nothing!

Over 4.7 million manufacturing jobs have been lost  
since manufacturing peaked in 1998

# Coal Generating

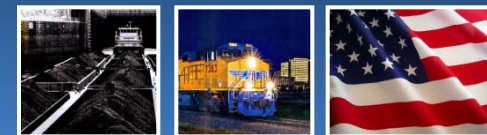


## Coal Generating Capacity by Country, 2011 (1000 MW)

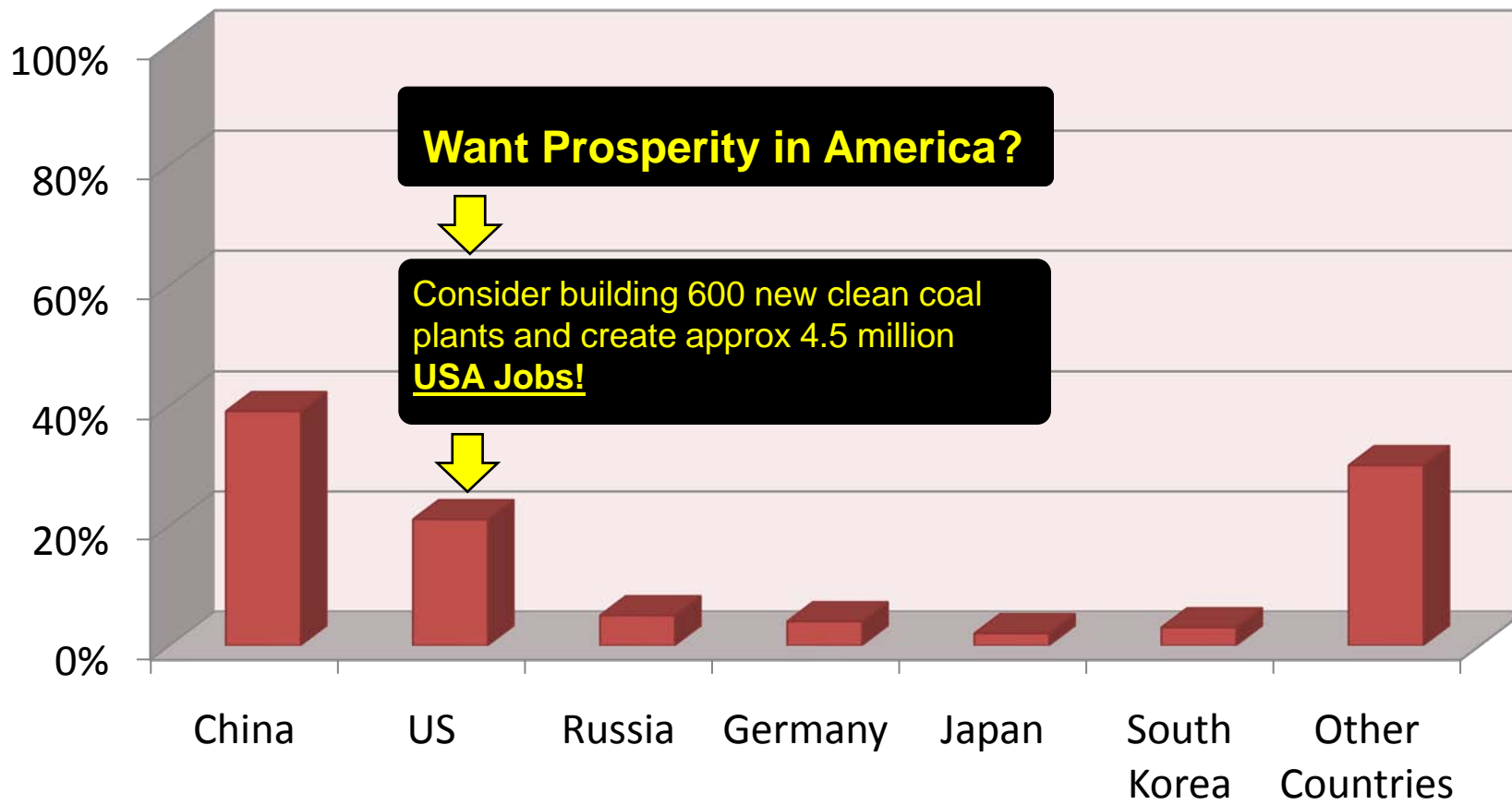


Source: Mcilvaine Company

# Coal Generating



## Coal Generating Capacity by Country, 2011 (% of World)

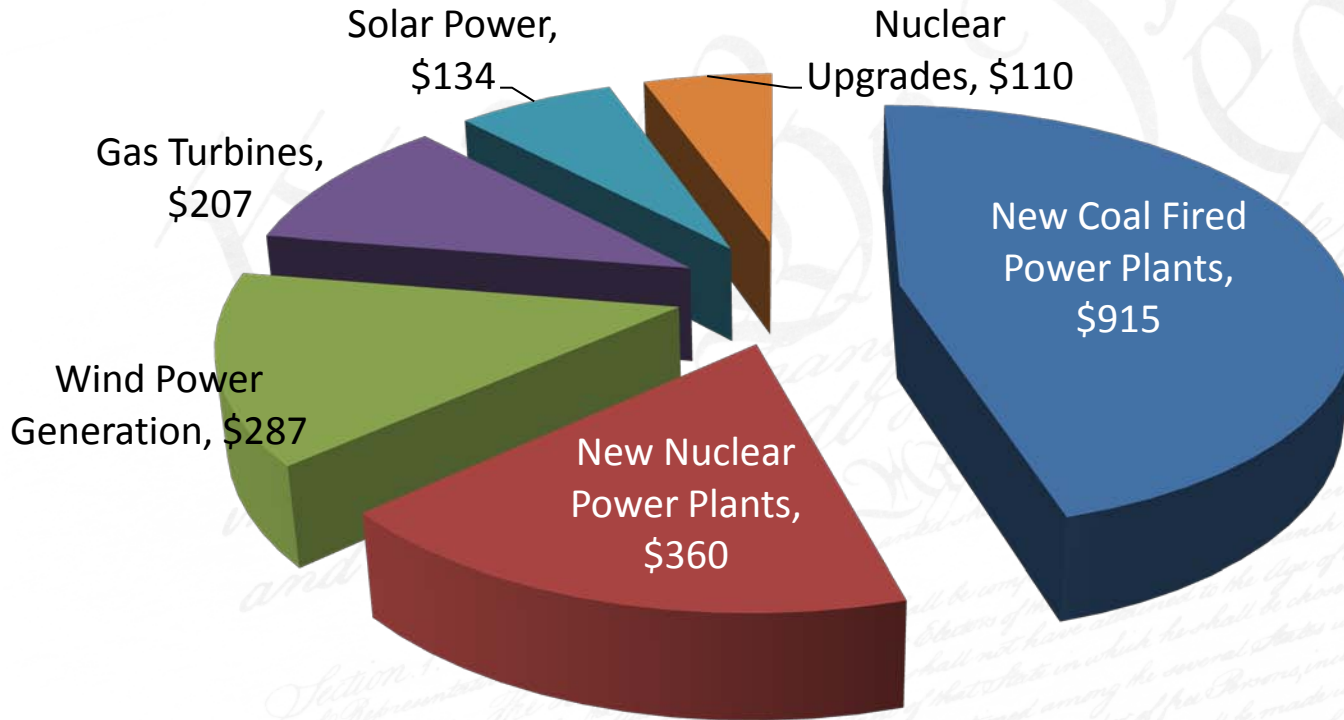


Source: Mcilvaine Company

# Capital Investment



## Capital Investment 2011 through 2015 (Billion \$)



**Now Imagine if all of this was USA Designed and Manufactured!**

Source: Mcilvaine Company

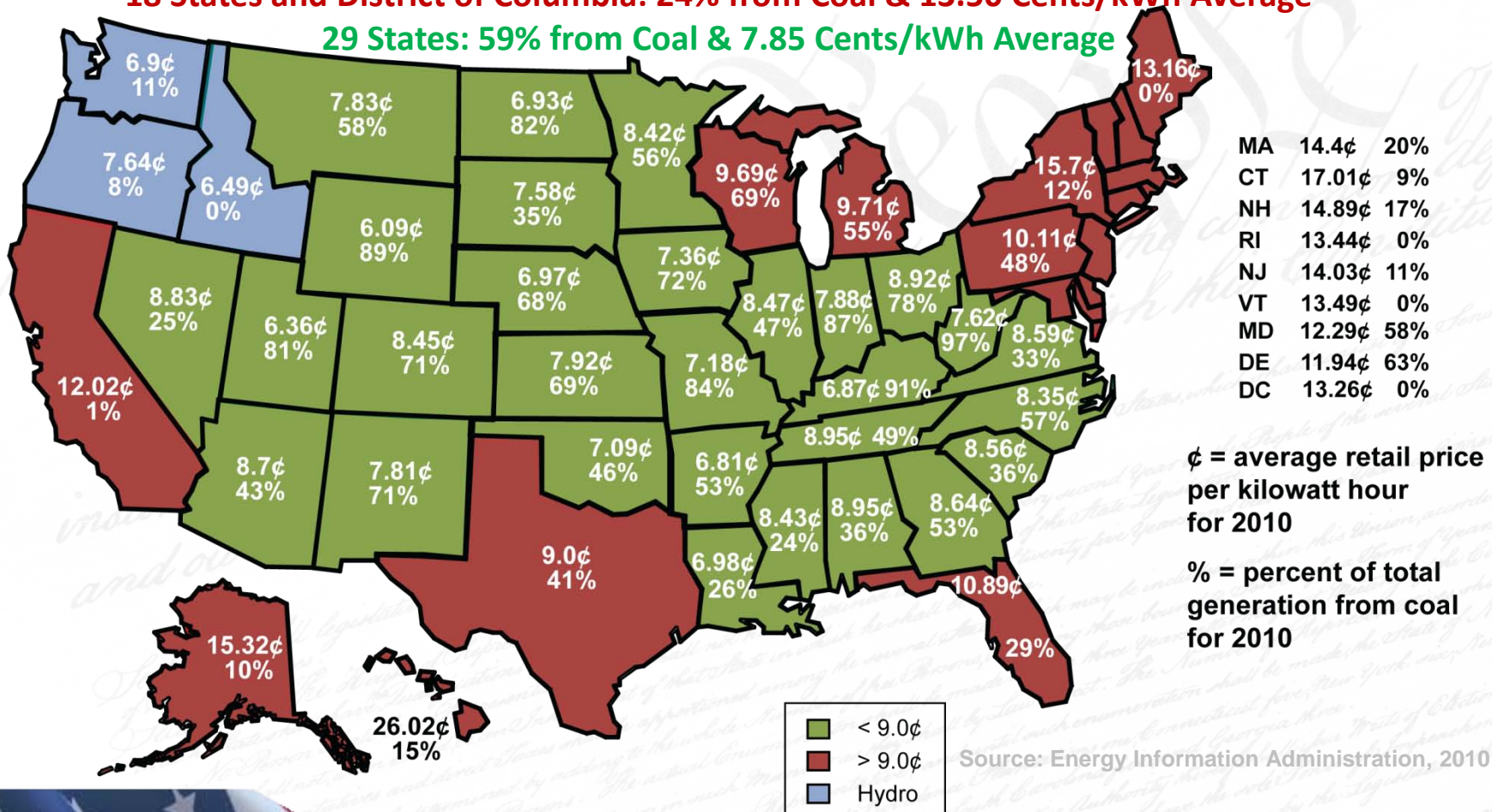
# States Rely on Coal



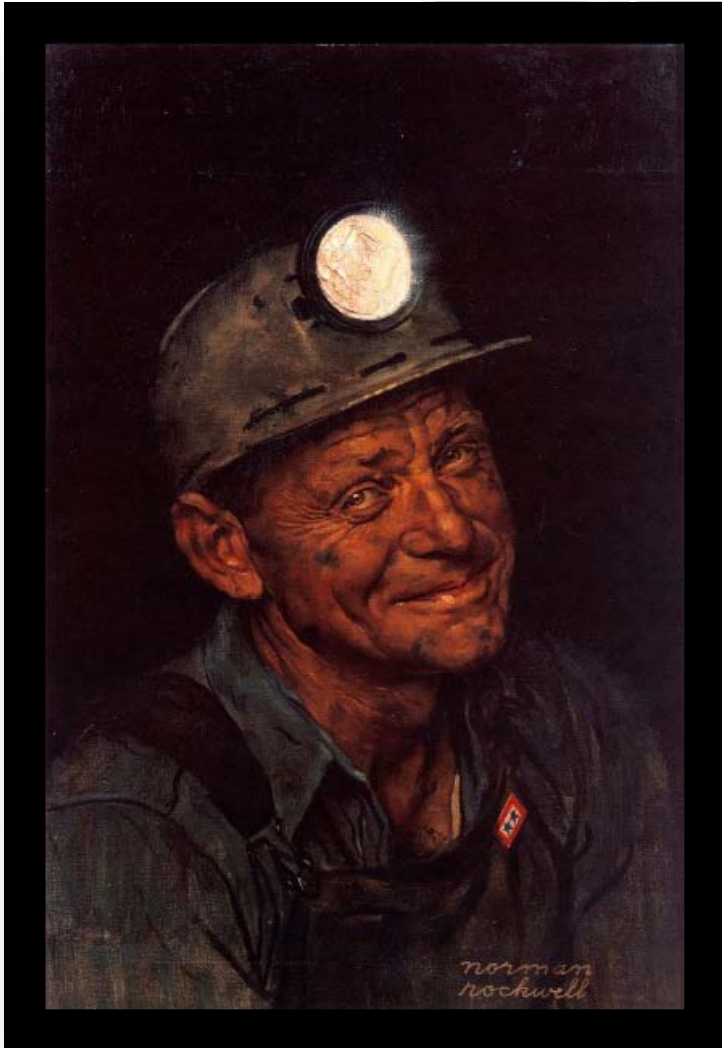
## States that Rely on Coal Have Low-Cost Electricity

18 States and District of Columbia: 24% from Coal & 13.50 Cents/kWh Average

29 States: 59% from Coal & 7.85 Cents/kWh Average

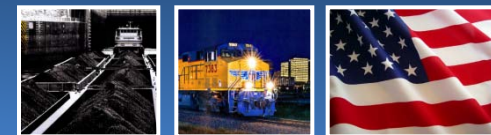




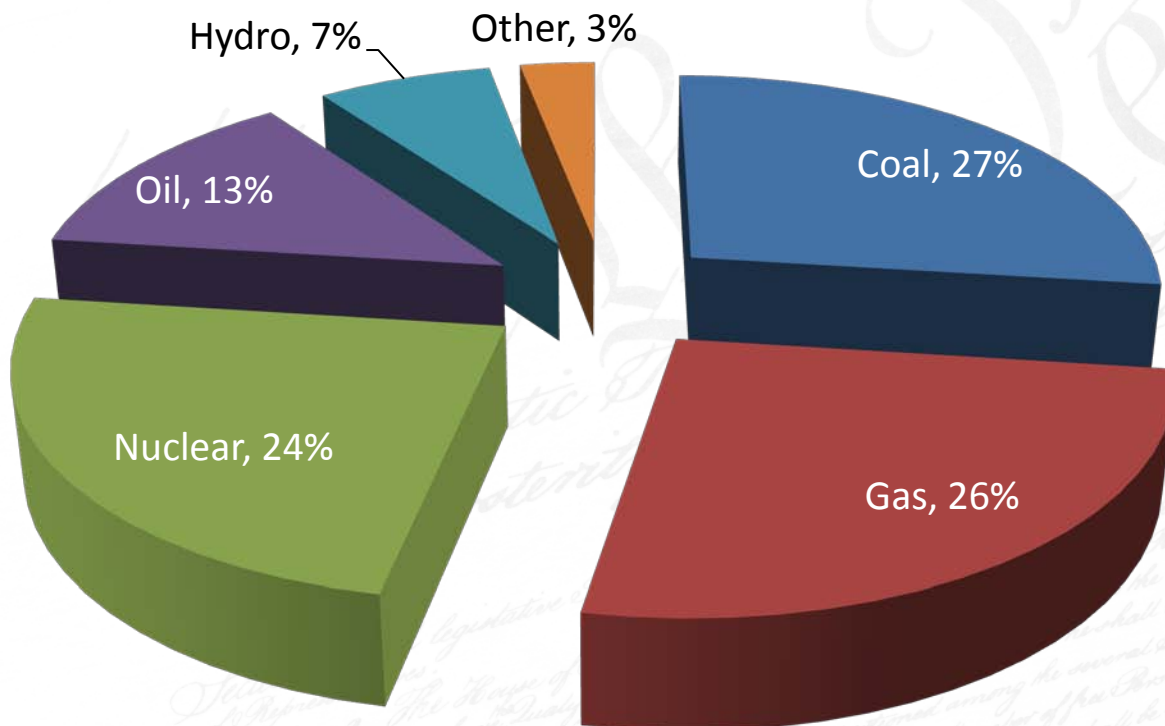


**Who Has Better Wisdom to  
Form America Energy  
Policy for the Future?**

**535 Elected Officials and  
40,000+ Bureaucrats or  
A Coal Miner with  
Common Sense?**



## Sources of Electricity in Japan

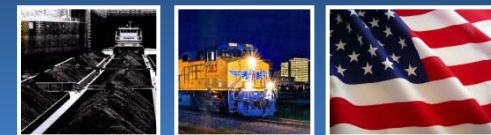


Expect natural gas (LNG imports) and coal (imported) to increase after the earthquake and tsunami disaster.



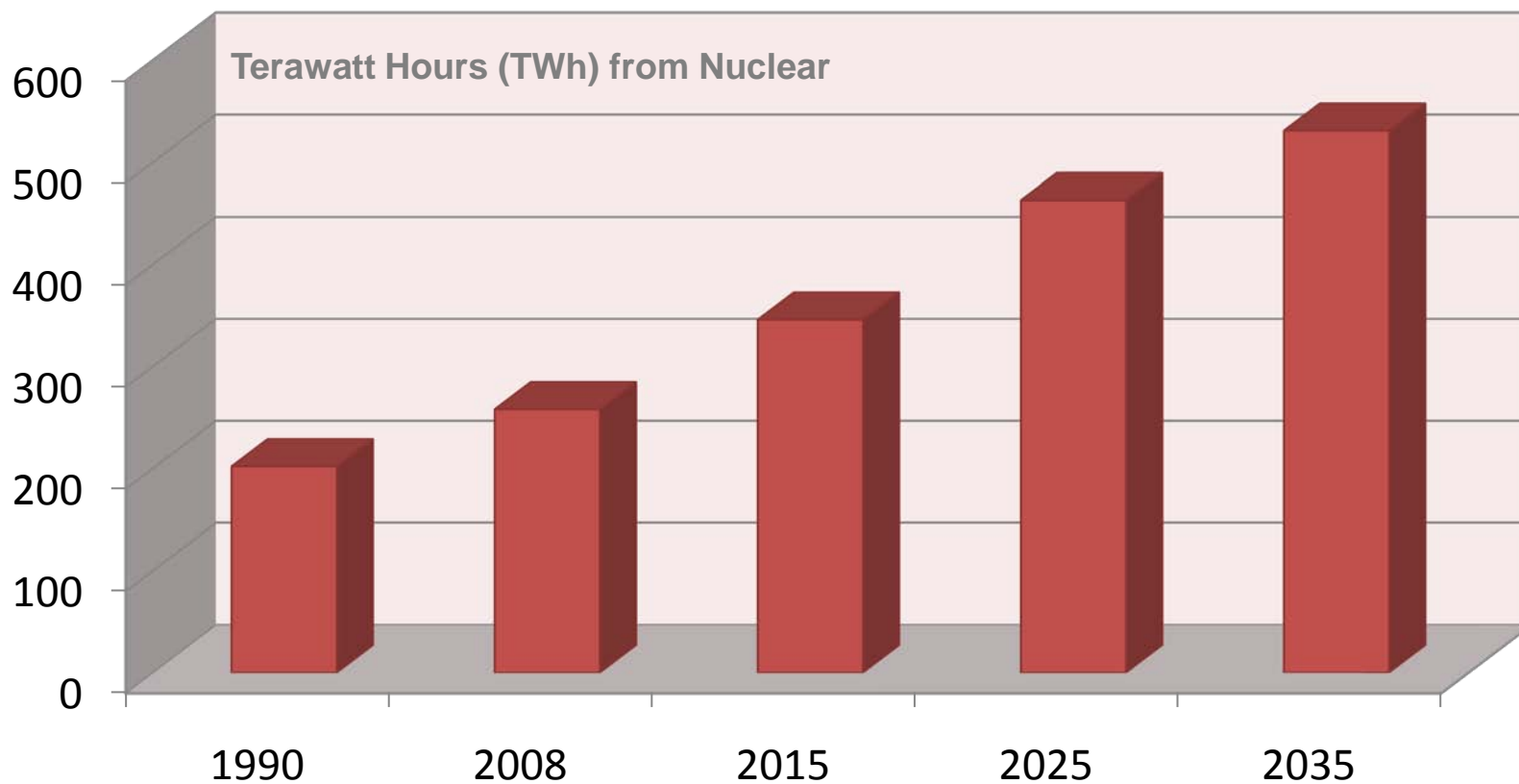
Source: Energy-Facts.org

# Nuclear Power Projection



## Projected Generation From Nuclear Power in Japan (IEA, 2010)

(Note: These were before the earthquake and tsunami disaster)



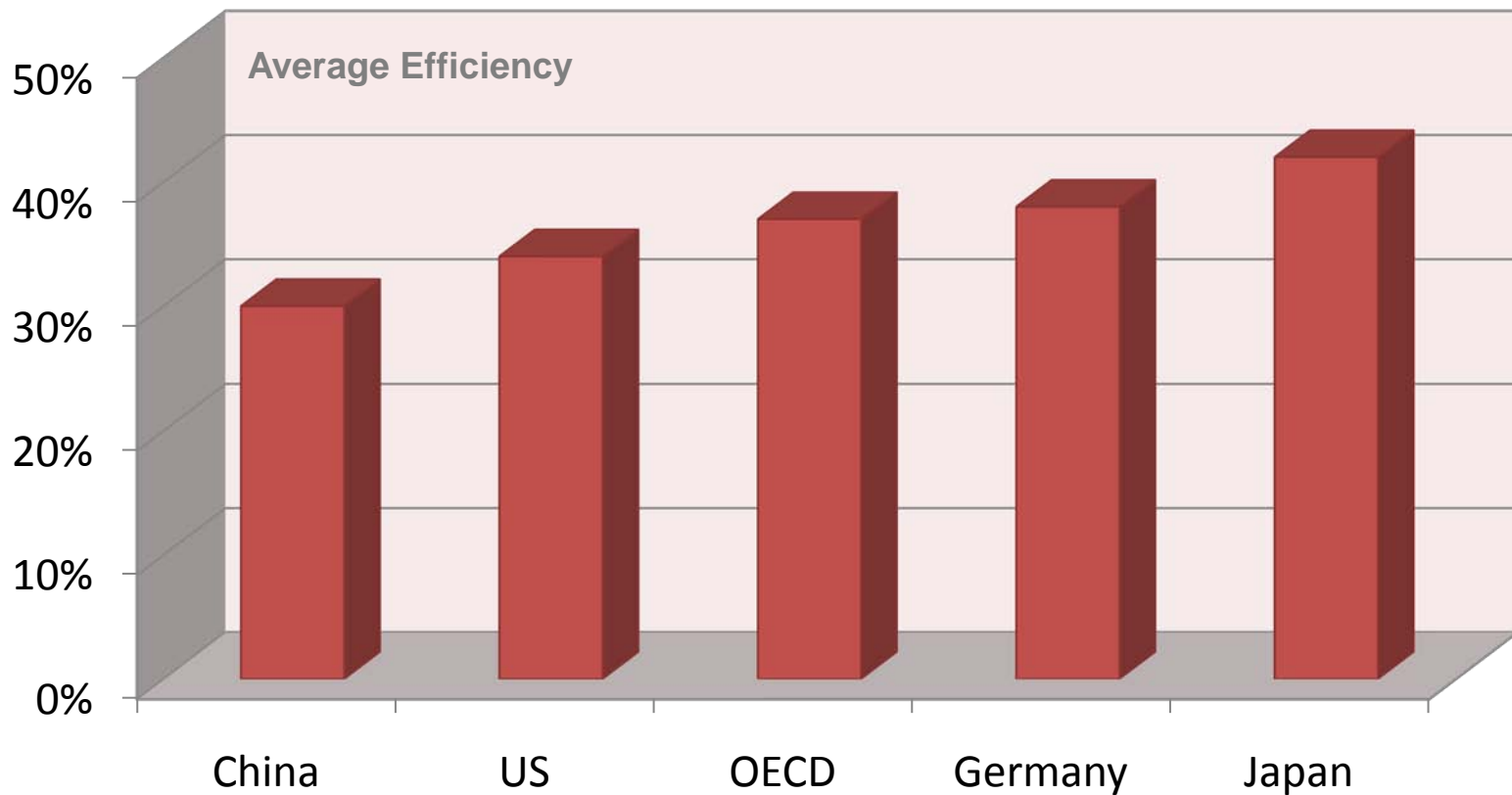
Source: Energy-Facts.org

# Efficient Fleet of Coal Plants



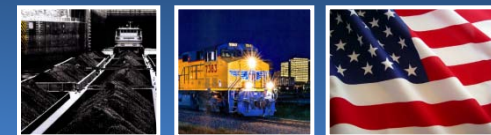
## Japan has the World's Most Efficient Fleet of Coal Plants

**America could learn some lessons from Japan**  
**Multiple fuels are helpful for security!**



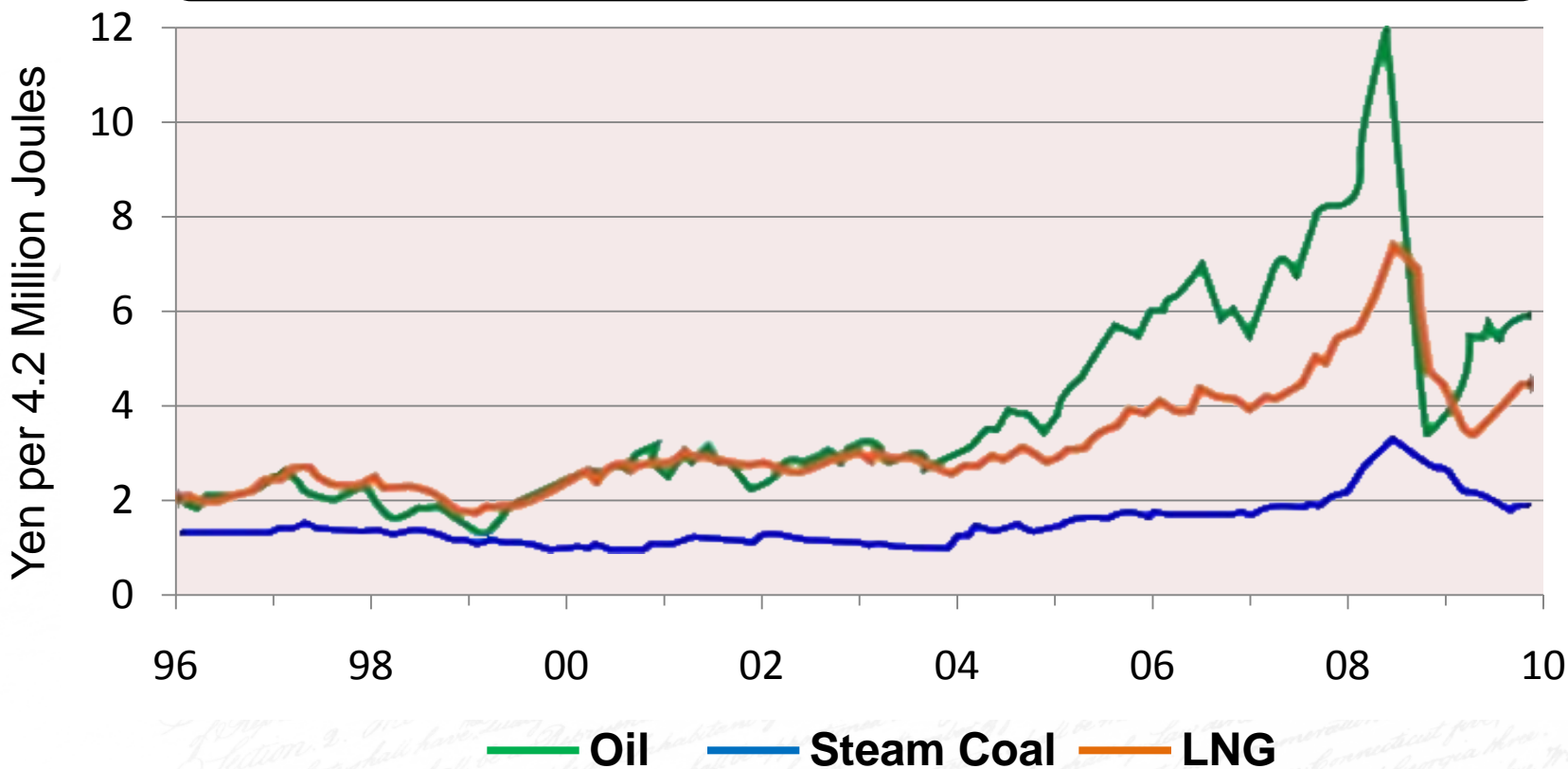
Source: Energy-Facts.org

# Fuel Prices in Japan



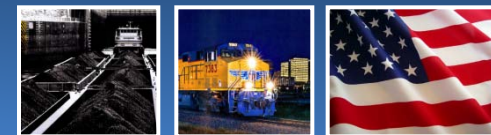
## Low and Stable Prices

**Whether in Japan – or Any Other Developed Country  
Reasonable Cost Energy is a Pre-Requisite for Manufacturing!**



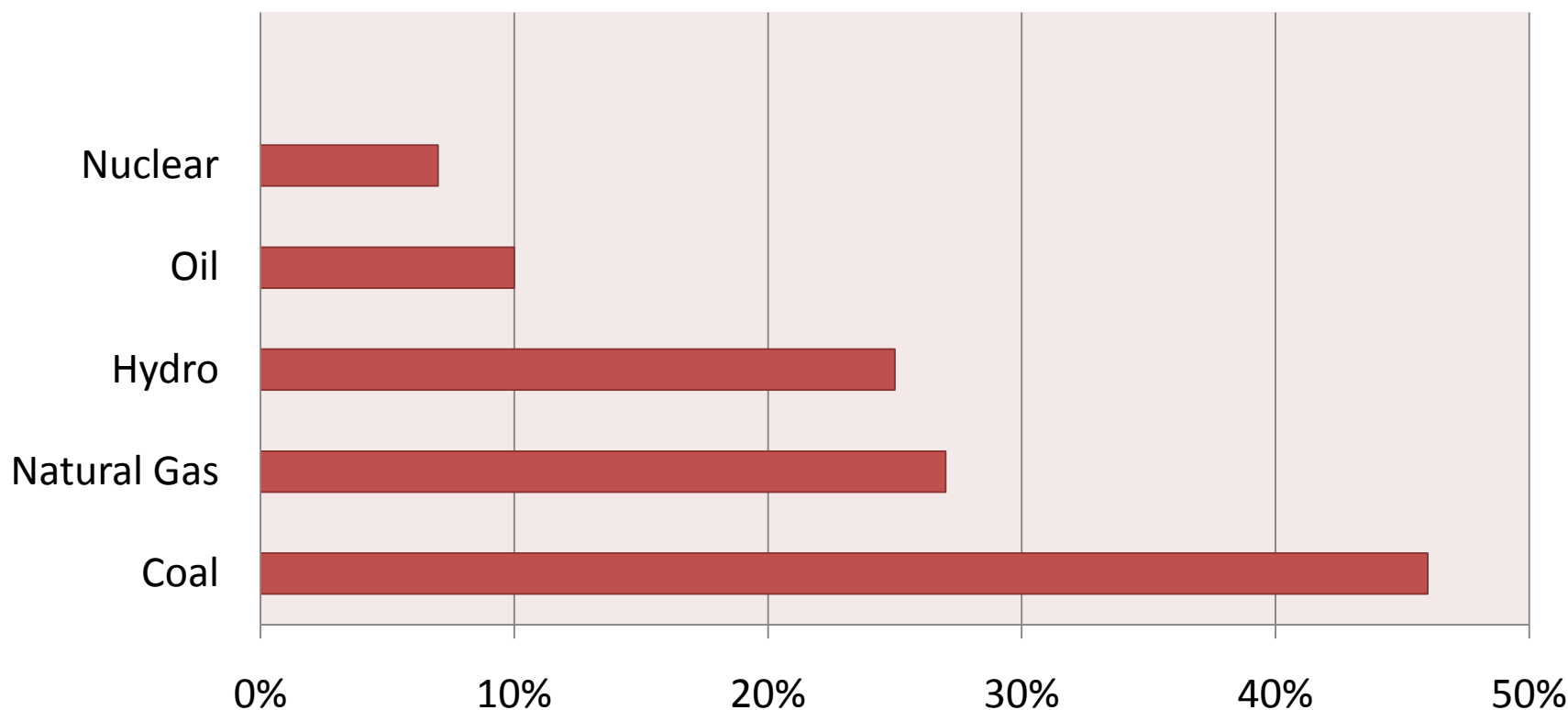
Source: Energy-Facts.org

# Energy Dominated by Coal



## Coal: The World's Fastest – Growing Fuel for the Past Decade

**Coal Keeps Manufacturing Competitive, Keeps the Lights On and Should be Properly Respected for What It Does!**



Source: BP Statistical Review of World Energy, June 2010

# Clean Green Coal



## COAL WITH CARBON CAPTURE AND STORAGE: ONE LOW-COST, LOW-CARBON OPTION

15%-50%  
Below Wind



25%-45% Below  
Natural Gas



15% Below  
Nuclear



Coal with CCS is projected to be less expensive than alternative, including natural gas with CCS, wind and nuclear.



Source: CoaCanDoThat.com

COAL, AMERICA'S TREASURE OF ENERGY

# What Coal Did Today



## In Just 24 Hours

Provided over 40% of the power for 300 billion emails, 110 million "tweets" and the activation of 300,000 Androids

Fueled about 60% of China's industrial sector

Enhanced energy security for dozens of nations across the globe

Produced 23 TWh of electricity – more than gas, wind, hydro and solar combined

Generated power equivalent to 1,340 nuclear power plants

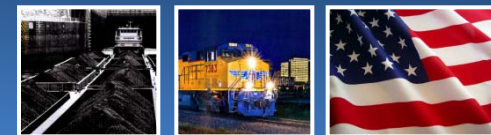
Provided more than half the electricity for 3 billion people – 10 times the population of the US

Enabled the production of 2.4 million metric tons of steel

Source: Energy-Facts.org



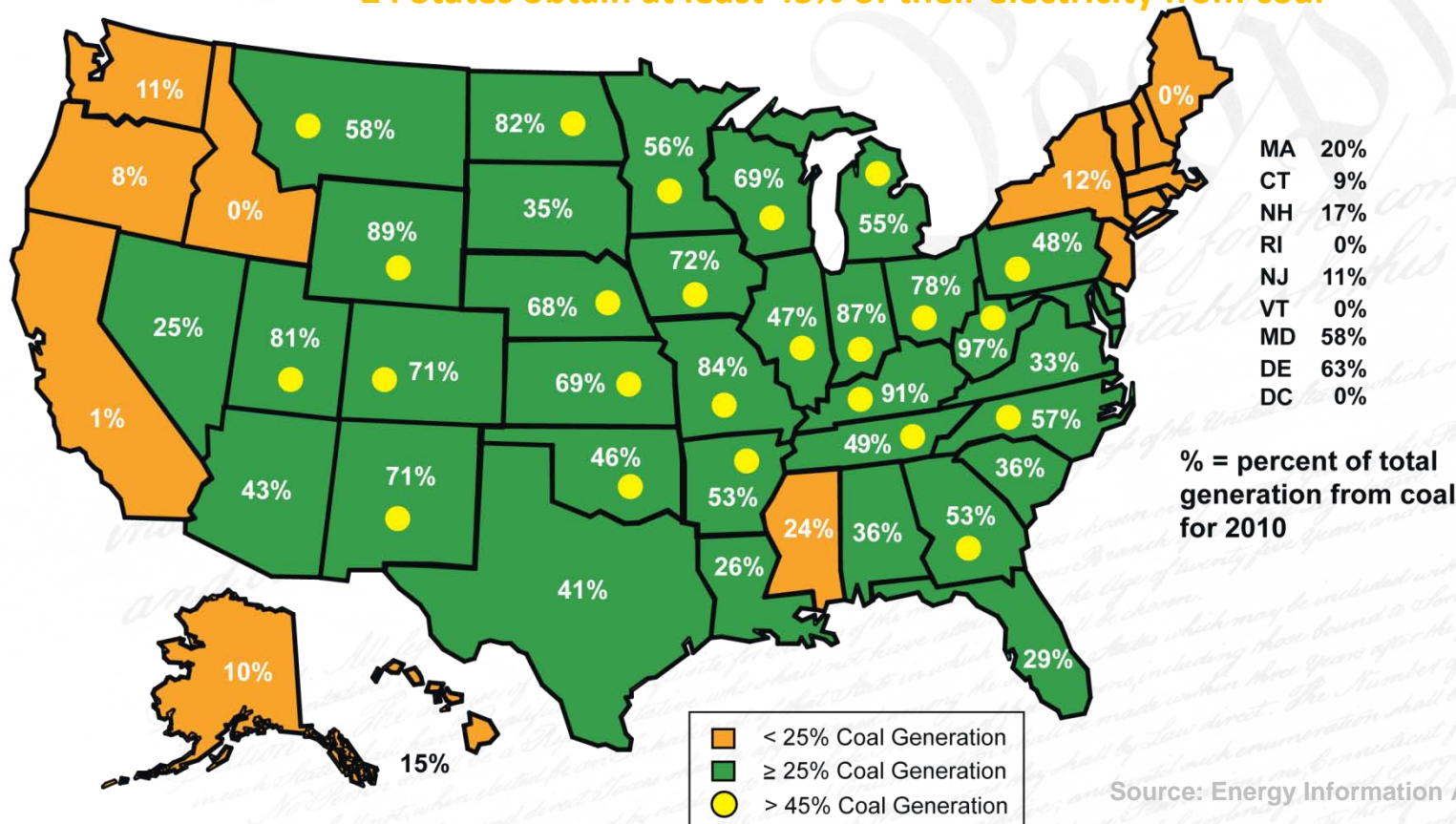
# Coal and Electricity in the US



## States that Rely on Coal Have Low-Cost Electricity

35 States obtain at least 25% of their electricity from coal

24 States obtain at least 45% of their electricity from coal



Source: Energy Information Administration, 2010

# In One Day, American Coal Produces...



- **More electricity than natural gas, nuclear, oil, wind and solar combined.**
- **Enough power to supply Alabama for three weeks, Kansas for 50 days and Connecticut for two months.**
- **45% of the electricity to operate over 200 million computers and 100 million microwave ovens.**
- **More kilowatt hours than the United Kingdom uses in almost six days.**
- **Almost half the power to support 15,000 airports processing over 800 million passengers per year.**

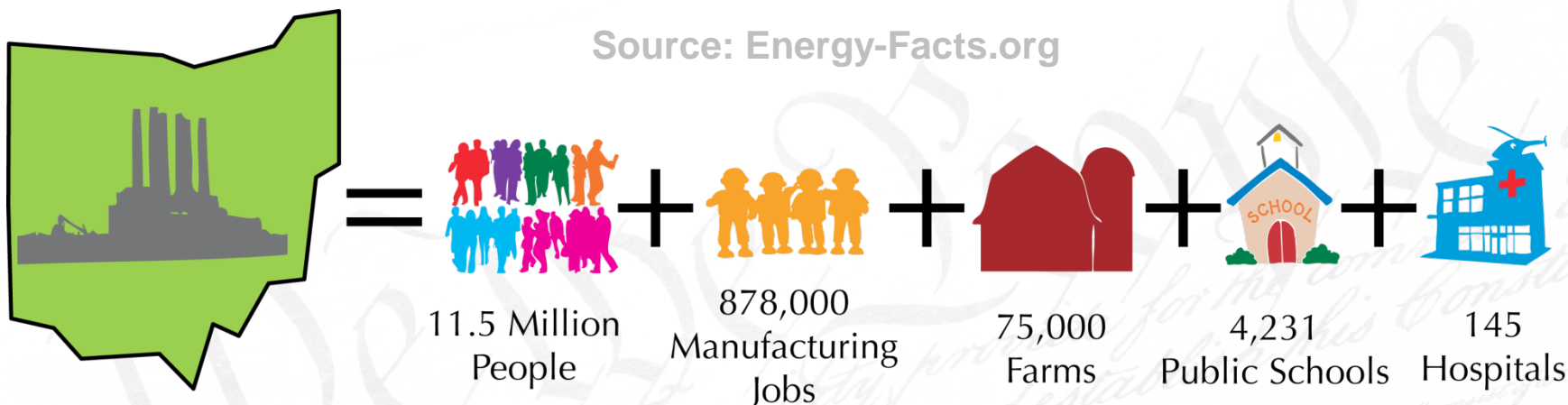


# One Day of Coal in the Heartland



## Ohio as an Example

Source: Energy-Facts.org



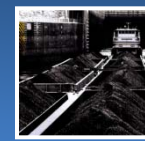
Coal Provides 78%  
of the Electricity for:


### Coal Produces 78% of Electricity in Ohio

"Electricity ushered in a transformation of American society at the end of the 19th century. Suddenly, the backbreaking work that consumed dawn to dusk for most Americans was alleviated by electric motors, dynamos and generators. Electric household appliances made it possible to heat homes, cook food, store meat and perishable items and wash clothes without the drudgery and fear of disease that had haunted previous generations."

Columbus, Ohio Department of Public Utilities, (2010)

# Coal's Potential to Restore Economic Strength to the USA

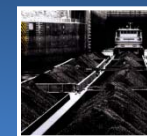


- 
- A photograph showing several pieces of dark, irregularly shaped coal rocks scattered on a light-colored, sandy surface. The rocks vary in size and shape, some appearing more angular than others.
- America's most abundant energy resource is coal.
  - Reduce oil imports by using our nation's coal reserves.
  - Technology exists today that can transform coal into clean, affordable transportation fuels, provide industrial fuels, and supplement energy for armed forces.
  - Using today's technologies create jobs across America.
  - More energy resides in American coal than oil of the Persian Gulf.
  - Our coal reserves can supply more than 3 times the amount of fuel contained in Saudi Arabia's proven oil reserves.

Source: National Mining Association (NMA) President and CEO Hal Quinn statement in response to President Obama's address on strengthening US independence from foreign oil.



# Coal, Natural Gas, and Nuclear

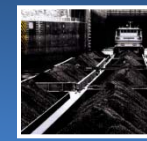


## The American Energy Solution: Multiple Fuels + Respect for All!

**Coal + Natural Gas + Nuclear = Approx. 55% of America's Total Energy**

- States like W. Va. can benefit from coal and natural gas.
- Coal increasingly sharing more market space with natural gas.
- Both can be use for long-term economic development.
- Typically, where's natural gas, you've got coal also.





- **Washington Watch**
  - Senate Proposals Gathering Strength to Block EPA's Greenhouse Gas Regulations - But Due to Misguided Public and Political Correctness Have Failed So Far.
  - EPA To Slam Oklahoma With 15% Higher Electricity Costs
- **Newsworthy**
  - President Overlooks Coal's Potential to Strengthen U.S. Energy Independence
  - Declining Rare Earth Exports from China Require New Mining Developments in the U.S. and Mongolia
  - NMA Concerned EPA's Utility Rule Will Cost Consumers, Threaten Jobs and Strain Electricity Reliability
  - NMA and Other Industry Groups Want Congress, NOT EPA, To Be In Charge of Regulating Green House Gas
- **Smart Science**
  - Rare Earth Metals
  - Possible Key to Renewable Energy Future



# EPA's Regulatory Train Wreck

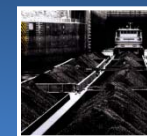


- EPA is in the process of enacting a series of back-door regulatory mandates – without any Congressional approval – that threaten millions of American jobs and increases the cost of every households electricity-rates.
  - EPA's New Maximum Achievable Control Technology (MACT) Rule  
Negative Economic Impact: Loss of 30-70 Giga Watts\* of Electric power and higher electricity prices.
  - EPA's New Greenhouse Gas Rule (GHG)  
Negative Economic Impact: Increase U.S. Energy Costs/Reduce Household income - average income dropping by more than \$1,200 annually by 2030.
  - EPA's New Transport Rule  
Negative Economic Impact: Estimated Cost: \$130 Billion by 2015\*.
  - EPA's New Ozone Rule  
Negative Economic Impact: Estimated number of U.S. jobs lost: 7.3 million\*.
  - EPA's New Coal Combustion Rule  
Negative Economic Impact: As many of 350 coal-based facilities shuttered\*.

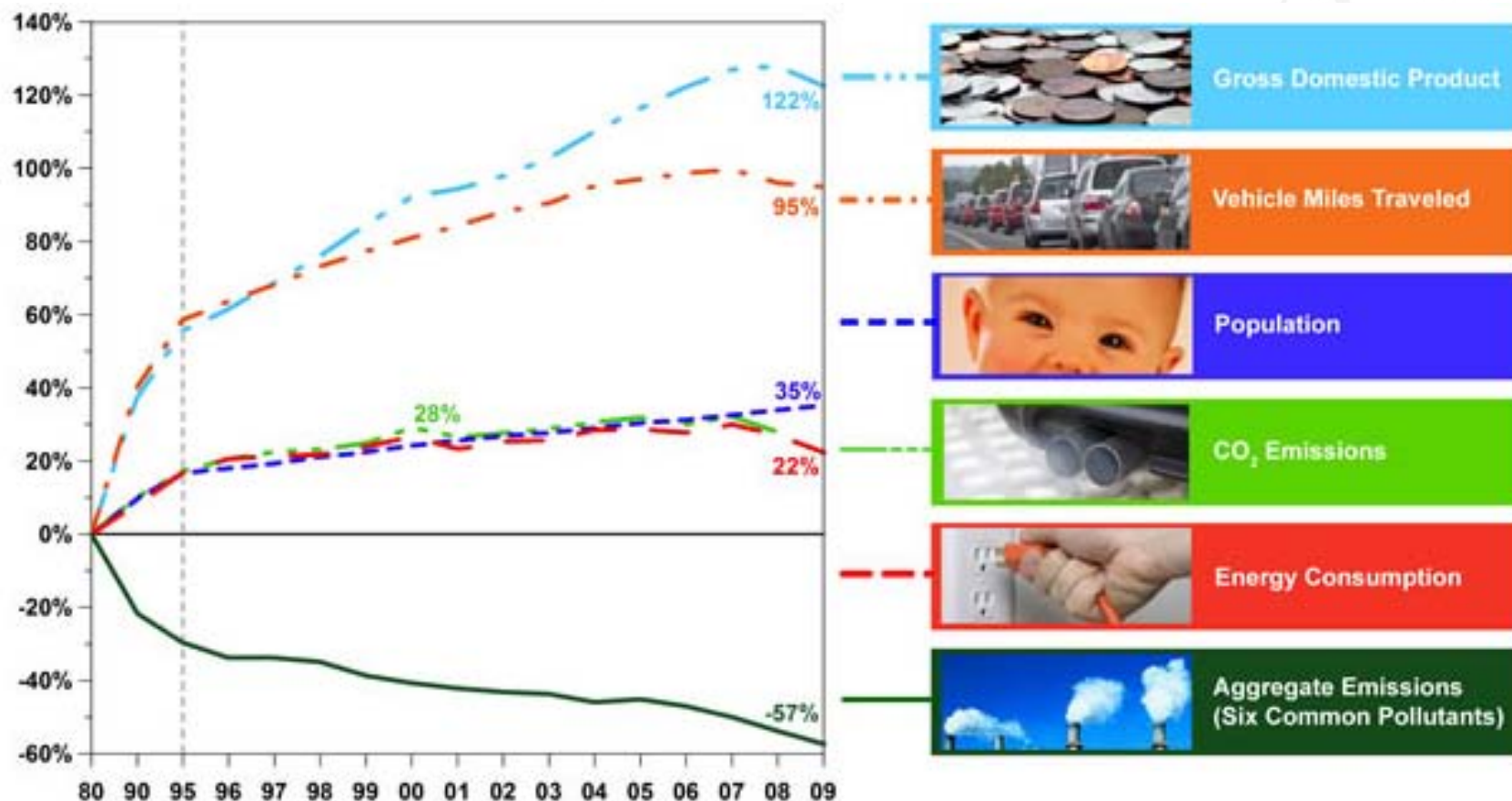
**We All Want Clean Air! Let's Not Kill American Manufacturing Just Because of Political Correctness!**



# What Has Been the Progress of America in Reducing Major Pollutants since 1980?



## Comparison of Growth Areas and Emissions, 1980-2009



Source: EPA.gov





- Three steps we can take that will move the economy forward without increasing the federal budget deficit.

- ***Replace foreign sources of energy with domestically produced energy.***

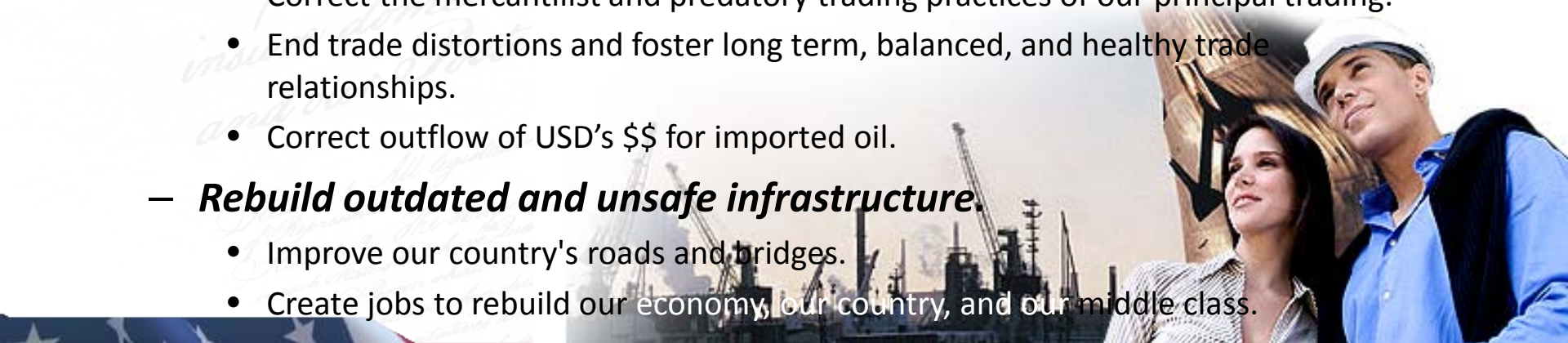
- Encourage drilling for oil where practical and natural gas, foster the construction of dozens of new nuclear power plants, and help develop multiple forms of renewable energy like wind, solar and biomass.
- Powering the economy with domestic oil and natural gas will create million jobs
- Be mindful – that over 90% of America's energy comes from traditional sources: coal, oil, gas and nuclear.

- ***Balance our trade deficit.***

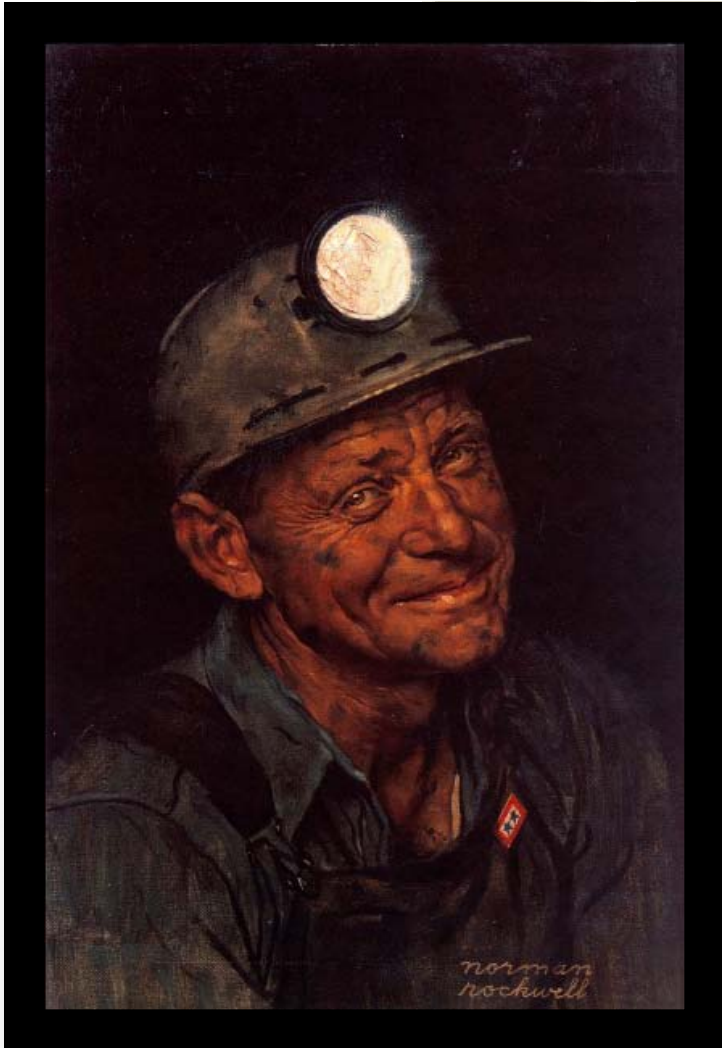
- Correct the mercantilist and predatory trading practices of our principal trading.
- End trade distortions and foster long term, balanced, and healthy trade relationships.
- Correct outflow of USD's \$\$ for imported oil.

- ***Rebuild outdated and unsafe infrastructure.***

- Improve our country's roads and bridges.
- Create jobs to rebuild our economy, our country, and our middle class.



# America's National TREASURE!



**Coal Built America to be the most powerful Nation in the world in the 20<sup>th</sup> Century. Needed in 20<sup>th</sup> Century and needed in the Present!**

Painted for the War Manpower Commission, this image was published as a recreational poster for coal miners. The caption read, *"Mine America's Coal. We'll make it hot for the enemy! See your United States Employment Services."*

The badge on the man's overalls indicates that he is a father of two sons in the military. America's industrial and economic strength was fueled during the 20th Century by coal and it is still needed in the 21st!

Remember the proud, productive and patriotic coal miners whose hard work enabled the good lives we enjoy today!

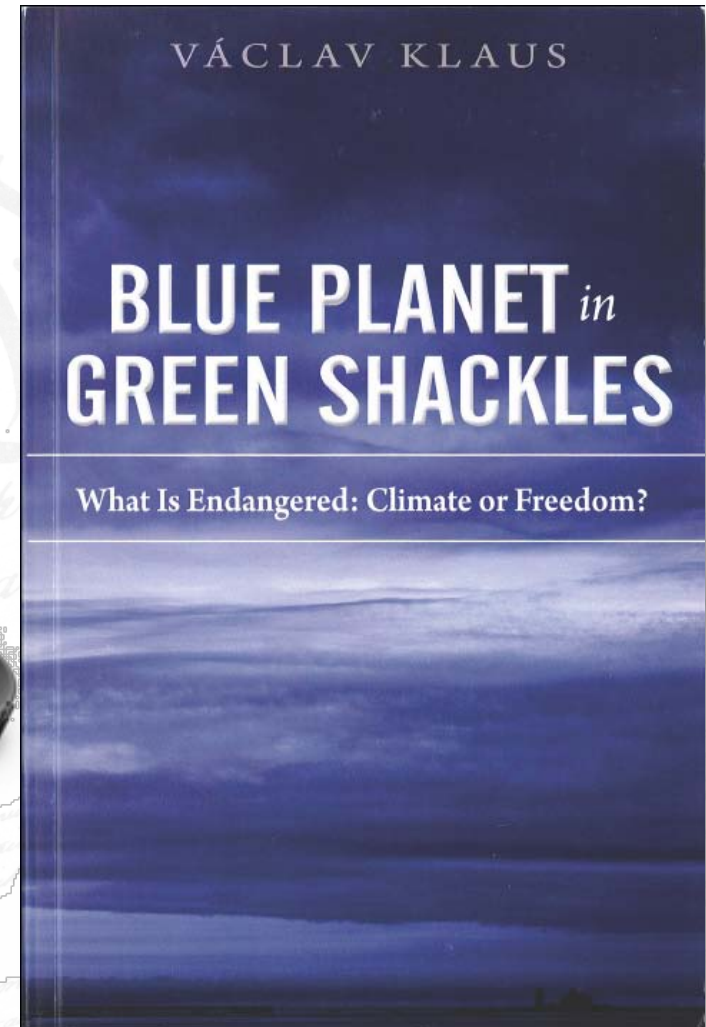
# Blue Planet in Green Shackles



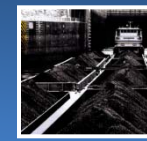
The President of  
the Czech Republic  
compares

“**Green’s**” to  
“**Communist’s**”

Watch out for  
**GREEN** Political  
Correctness. It  
Can Create  
Harm to America!

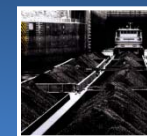


# Anti-American Protest



"Green" - the same color used by communists, Hezbollah and anti-American Middle Easterners.  
Be wary of green!

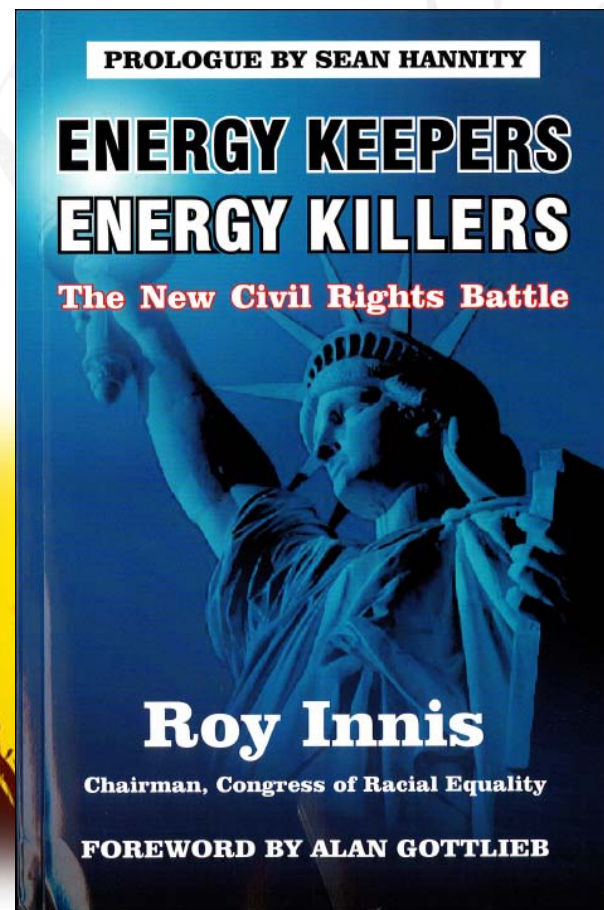
# Help the Poor In America!

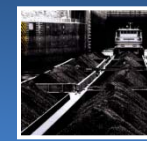


**Provide Reasonable Cost Electricity and Good Paying Manufacturing Jobs!**

High energy cost will not only damage America economically, but also hurts the poor even worse.

...besides unemployment due to the De-Industrialization of America.





## Check the FACTS: It is A MYTH that Renewables Can Replace Fossil Fuels

- Biomass
- Geothermal
- Hydro
- Solar
- Wind
- Ethanol



# How to End the Recession: Build Things In America!



## How to End the Recession: The Way I See It

An open letter to President Obama, Congressmen Lerry Hiram and Senators Hay Hagen and Richard Dur  
 In my opinion, the Obama Administration and Congress are harming businesses and industry in America. Much of what the Obama Administration and Congress are doing is to take money away from the private sector and to spend it on things that will do little to help the economy and industry in America. I offer these comments to the Obama Administration and Congress to help them see the harm to America that is being done.

1. Higher taxes for productive citizens. The greatest harm to industry through taxes on the tax on income, production, and consumption. "Socialism" is a word that seems to be getting used a lot to all out against businesses and industry. The Obama Administration and Congress are doing this to all out against businesses and industry. The Obama Administration and Congress are doing this to all out against businesses and industry. The Obama Administration and Congress are doing this to all out against businesses and industry.

Our country like many large countries, would be able to produce about 40% of the oil that we use in this country and a profitable because of energy policies, or which we already are doing. The "Obama" policies are not of natural resources as the carbon tax and other taxes like below. The Obama Administration and Congress are doing this to all out against businesses and industry. The Obama Administration and Congress are doing this to all out against businesses and industry. The Obama Administration and Congress are doing this to all out against businesses and industry.

Here are six Recommendations for Congress to do to help the economy from imposing a carbon tax. Stop the Obama from imposing a carbon tax. Stop the Obama from imposing a carbon tax. Stop the Obama from imposing a carbon tax. Stop the Obama from imposing a carbon tax. Stop the Obama from imposing a carbon tax. Stop the Obama from imposing a carbon tax.

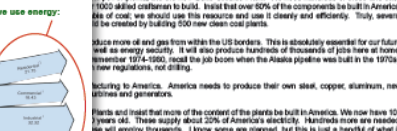
2. Abolish "new source review" for coal fueled power plants. Abolish "new source review" for coal fueled power plants. Abolish "new source review" for coal fueled power plants. Abolish "new source review" for coal fueled power plants. Abolish "new source review" for coal fueled power plants. Abolish "new source review" for coal fueled power plants.

3. Lift Federal restrictions and aggressively promote production of domestic American energy from all traditional fuels: coal, oil, natural gas and nuclear. Lift Federal restrictions and aggressively promote production of domestic American energy from all traditional fuels: coal, oil, natural gas and nuclear. Lift Federal restrictions and aggressively promote production of domestic American energy from all traditional fuels: coal, oil, natural gas and nuclear. Lift Federal restrictions and aggressively promote production of domestic American energy from all traditional fuels: coal, oil, natural gas and nuclear.

## IF THE POWER THAT BE UNDERSTOOD THE POWER WE HAVE...

By Dick Stone

**America Doesn't Run on Batteries and America will not run on windmills and solar any time soon!**  
 Why responsible use of all domestic energy sources is important.  
 Do you like your quality of life? Have you ever thought about the relationship of energy and your quality of life?  
 When you get in your car to drive to the store or to the beach or turn down the thermostat on your air conditioner in your home, or if you are in a car, do you wonder if the gas that is being burned in your car is of the quality of the American gas you are getting?  
 America is 95% powered by energy that creates power through heat engines. I don't care an engineer and the conversion of energy into electrical energy is what is done in every day to power our standard of living. I don't know how you feel but the American standard of living and what we are getting is the same as before in the US. We get each form of energy and put it to use. Just to put the size manageable quantities for you to imagine, the US is estimated to have a power use per year of about 10,000 gigawatts of energy and about 75,000 Btu of energy per year.



There is how America gets and uses our energy. Note that coal, oil, natural gas and nuclear are 95% of what we use now.  
 The 95% that is green power and most of it is hydro power plants. An example of "old" hydro is the Hoover and Progress Energy dams on the Tule River.  
 How much do we need all sources of energy?  
 America uses about 100 Btu per gallon of gas. We know that is a big number, but it takes a big number to do the things we do. One Btu is enough heat to raise one pound of water one degree Fahrenheit. So, heating of a car radiator about one pound per second (20 degrees) will require 100 Btu. A lot of energy is used in the US. The US uses about 100 Btu per gallon of gas. We know that is a big number, but it takes a big number to do the things we do. One Btu is enough heat to raise one pound of water one degree Fahrenheit. So, heating of a car radiator about one pound per second (20 degrees) will require 100 Btu. A lot of energy is used in the US. The US uses about 100 Btu per gallon of gas.

**Seven Myths of Green Energy**

- Widespread use of compact fluorescent lamps will have a dramatic impact on America's electricity demand.
- Wind will replace coal.
- Solar will replace coal.
- Biomass will replace coal.
- Electric cars will be charged by wind or solar.
- America's military might will be powered by green power.
- America can stay strong and create more jobs on higher cost green power electricity.

Knowledge is power  
 Energy policies must be beneficial  
 Storm Tech  
 Contract for new EMS base

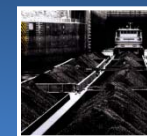
## 7 Recommendations for each of you, School Teachers, Congress and Patriotic Americans:

1. Stop the war on carbon - is a war on our way of life! Stop the EPA!
2. Abolish "new source review" for coal fueled power plants. (EPA again)
3. Lift Federal restrictions and aggressively promote production of domestic American energy from all traditional fuels: coal, oil, natural gas and nuclear.
4. Lift Restrictions to build new power plants in America that use America's National Treasure of Coal.
5. Stop the Red Tape and Drilling Moratorium(s): Drill for oil and gas within our borders and off the continental shelf, including off the coast of North Carolina and Virginia
6. Abolish political correctness on Energy.
7. Promote true education of the Real Facts of where our economic prosperity comes from – It comes from Building Things in America!

News/Talk Radio  
**1010WSPC**  
 www.1010wspc.com

Energy Fact Minutes  
**SOUND BITE**  
 News/Talk Radio  
**1010WSPC**  
 www.1010wspc.com

# Reasonable Cost Energy Can Create Economic Prosperity



## Here is An Example of How Reasonable Cost Energy Can Create Economic Prosperity:

Take the Nucor Mill located near Hertford, NC

### FACTS:

- Total Employees: 435
- Production: 1.3 million tons/year of steel
- Average Team Member Total Compensation:
  - About \$75,000/year
- Community Benefits?
  - Approx: \$32.6 million payroll to be spent locally for homes, building, materials, groceries, automobiles, entertainment and recreation



Source: Nucor Steel



# References



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- BP Statistical Review of World Energy - [www.bp.com](http://www.bp.com)
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- Nucor Corporation - [www.nucor.com](http://www.nucor.com) - Mr. Dan DiMicco
- Stanly News and Press - [www.thesnaponline.com](http://www.thesnaponline.com)
- 1010 WSPC - [www.1010wspc.com](http://www.1010wspc.com)
- American Coal Council - [www.clean-coal.info](http://www.clean-coal.info)
- Nuclear Energy Institute - [www.nei.org](http://www.nei.org)
- Storm Technologies, Inc. - [www.stormeng.com](http://www.stormeng.com)





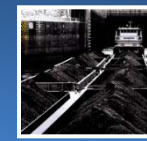
## It is a Fact!

The number of people who understand the true energy situation are grossly out numbered by those that do not and are “politically correct green lovers.”

Also – the news media, entertainment, and most educators are wrongly informed and politically correct against Carbon!

**Estimate: Practical energy professionals are out numbered 10,000 to 1.**

Thank You



**Now – It is your turn: Please!**

*Please go forth and spread the truth on energy and why we need coal to be part of America's solution to restore our economic strength.*

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COAL, AMERICA'S TREASURE OF ENERGY