

## Enhancing Public Perception of Coal

Coal is good for America! If not us, then who will educate the Public?

By: Richard F. (Dick) Storm, PE  
CEO, Storm Technologies, Inc.

### 1. Introduction and Background

There is one natural resource that is vitally important for America's national security, energy security, economic prosperity and powering our high standard of living. Coal is America's national treasure and those of us here in this room, know and understand this.

The interrelationships of reasonable cost and abundant energy are understood by nearly all of the technically educated people of the world. In fact, the developing countries of the world are using ever increasing quantities of coal to increase their standards of living through electrification, fueled by coal. The third world countries "get it" on the interrelationships of energy, economic prosperity and advancement of human kind. While America has invented Clean Coal Combustion and designed, built and operated the cleanest, most efficient methods to burn coal there are uninformed or misinformed citizens within America, probably well more than half of our total population that when asked to describe coal will reply with phrases or words such as: dirty, filthy, destroying the planet, causing global warming, old fashioned fuel of the past, and even worse. Bashing coal has become fashionable and mainstream by entertainment celebrities that have near zero technical competence, or training of any kind in environmental science, energy or economics.

The demonizing of coal by popular demagogues has spread misunderstandings, myths, exaggerations and untruthful information worldwide about the manmade global warming hoax, climate changing effects from the combustion of carbon and harmful effects of other products of combustion of coal. "Green leftists" worldwide have repeated their arguments with such passion and believability that they have influenced most of the political leaders of America and the world. Much of the propaganda that "Green leftists" promote is funded by tax payers and grants from left leaning foundations. The resulting junk science is then used to influence more people, organizations politicians and governments. Worse yet, the demonization of coal has permeated all levels of society including the United Nations, organized churches, entertainment, TV news, newspapers, many foundations, public education and our universities.

The majority of the Democrat Party in America has chosen to fight coal at all costs and it has even spread to many leaders of the Republican Party. Anti coal activists have participated in civil disobedience in disrupting America's businesses unrelated to power generation, such as banking. Further civil disobedience has been urged by a Nobel

Prize winning demagogue. The same one that showed the world how biased and left leaning the Nobel committee has become. Even as some politicians say they are for coal, on the other hand they promote accepting donations from groups opposed to coal that engage in legal actions to stop coal plants. They also appoint judges with leftward ideology. By this combined approach of using 501C3 tax exempt organizations and the judiciary they can successfully talk out of both sides of their mouth. The American public has been misinformed and gullible due to the widespread and biased proliferation of myths, lies, exaggerations and amplified junk science.

Our industry has acted responsibly and has been making coal ever cleaner since 1970. As fast as technical advances in stack clean-up have become economically feasible, they have been installed. We have corrected particulates, sulfur, NO<sub>x</sub> and we have solutions now being implemented for heavy metals. Clearly, the “Anti-Coal” eco-zealots have been successful in classifying carbon dioxide as a satanic gas as Dr. Patrick Michaels referred to the demonizing of CO<sub>2</sub> in one of his books. The purpose of my talk is not to argue with the Anti-American eco-zealot ideologues that are both within the borders of our country as well as those aligned outside our borders. Those ideologies outside our borders and including most of the members of the United Nations have taken positions to exert pressure on the USA to weaken America. Some are outright enemies, others will simply profit by increasing their world strength and their Treasuries by a weaker America. Truly, I see this as a worldwide green ideological movement against coal. It is my intent to review the perception of coal. The last 50 years have included some decades of good perceptions of coal. I think it is instructive to review the history of perceptions of coal, from when it was good.

## 2. Perceptions of Coal by the Public

So to be fair and complete, I think we have to review how we have progressed in perceptions of coal by the public, over my lifetime. Truly, I knew electricity was primarily generated from coal fueled power plants when I was a 16 year old and in 1959 coal was truly king. That was 49 years ago, but I remember it clearly. Coal was respected then and so were the electric utility companies. Now few teenagers understand where electricity comes from worse yet neither do many of their teachers or parents. Therefore, we have lost a “generation of opportunity” to tell the story of why coal is good for America.

My presentation is in Five Parts:

1. Good perceptions, 1950-1970, what we did right
2. The “War on Coal” How environmental activists morphed into ideologues and then eco-zealots.
3. How can we improve our message?
4. What has Storm done to do our part?
5. What can we do together to spread the good word that America needs coal, and Americans should understand the reasons why coal is good for America?

Slide 1 – Title Slide

**Enhancing Public Perception of Coal**

Coal is Good for America:  
If not us, then who will tell the public?

Presented by Richard F. Storm  
Storm Technologies, Inc.

American Coal Council Presentation  
October 2008

**ACC**  
American Coal Council

2008 Coal Market Strategies Conference, Oct. 6-8th

3. Good Perceptions, 1950-1970

Slide 2 – Introduction of Storm Technologies, Inc. our business is providing consulting, testing and manufacturing components for large steam generators for improving performance, reliability, efficiency and emissions of large electric utility steam generators. Improving heat rates (a measure of overall efficiency) through combustion optimization is our specialty

**FYI, Storm Technologies, Inc. Business is Improving Overall Coal Plant Performance**

High furnace exit gas temperatures contribute to overheated metals, slagging, excessive sootblower operation, production of popcorn ash, fouling of SCR's and APH's

High furnace exit gas temperatures contribute to high de-superheating spray water flows that are significant steam turbine cycle heat-rate penalties.

Coal pulverizer spillage from pulverizer throats that are too large

Flyash Carbon losses

Bottom ash carbon content

High primary airflows contribute to unnecessarily high dry gas losses. Also poor fuel distribution and poor coal fineness.


Non optimum primary airflow measurement and control; Excessive NO<sub>x</sub> levels

Year	Heat Rate (Btu/kWh)	Notes
1960	~10,000	Baseline
1965	~9,500	20% Heat Rate Improvement
1970	~9,000	40% Heat Rate Improvement
1975	~8,500	60% Heat Rate Improvement
1980	~8,000	80% Heat Rate Improvement
1985	~7,500	100% Heat Rate Improvement
1990	~7,000	120% Heat Rate Improvement
1995	~6,500	140% Heat Rate Improvement
2000	~6,000	160% Heat Rate Improvement
2005	~5,500	180% Heat Rate Improvement

Opportunity for improvement by Performance Oriented Maintenance of Boiler Combustion Variables

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Slide 3 – The “Happy Days” of coal being perceived as good for America




### The “Happy Days” of Coal 1950's-1970's

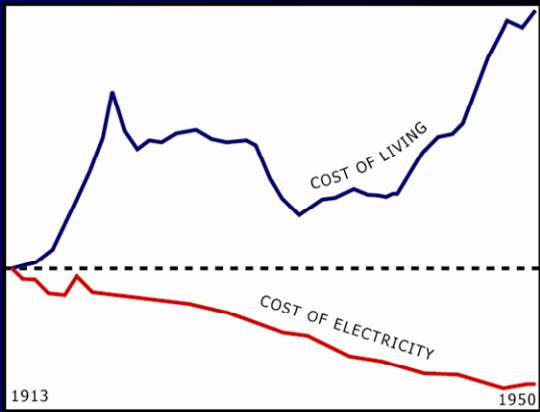
- Cost of Energy was declining
- Manufacturing was expanding
- “Living Better Electrically” was the common theme for utility companies
- The Public better understood where/how electricity was produced
- “Reddy Kilowatt” as a symbol of Living Better Electrically was known by almost everyone

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Slide 4 – Increased use of coal reduced the cost of electricity and sharply increased economic prosperity of America, during 1913-1950. Coal power 1950-2008 still provides some of the best economic prosperity where coal is the predominant fuel. The lowest cost power production has attracted industry in most of the industrialized and/or the developing countries of the world.



Coal energy was once accepted as the driver of economic prosperity. It still is, but coal does not command the respect that it did forty or fifty years ago.



1913 1950

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Slide 5 – Business publications promoted coal and electricity as the life blood of America. Then, Fortune 500 companies such as Combustion-Engineering, Babcock & Wilcox, Allis-Chalmers and Westinghouse were world leaders in advancing humankind worldwide

**Electricity and Economic Prosperity**  
were once widely understood

**STORM**

**Electricity... LIFELOOD OF AMERICA**

**ELECTRICITY... COLOSSVS AMERICANVS**

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4. The War on Coal – How it Came to Be

Slide 6 – 1970, Within 3 years of the beginning of the “War on Coal”

**1970 the beginning of the “War on Coal”**

**STORM**

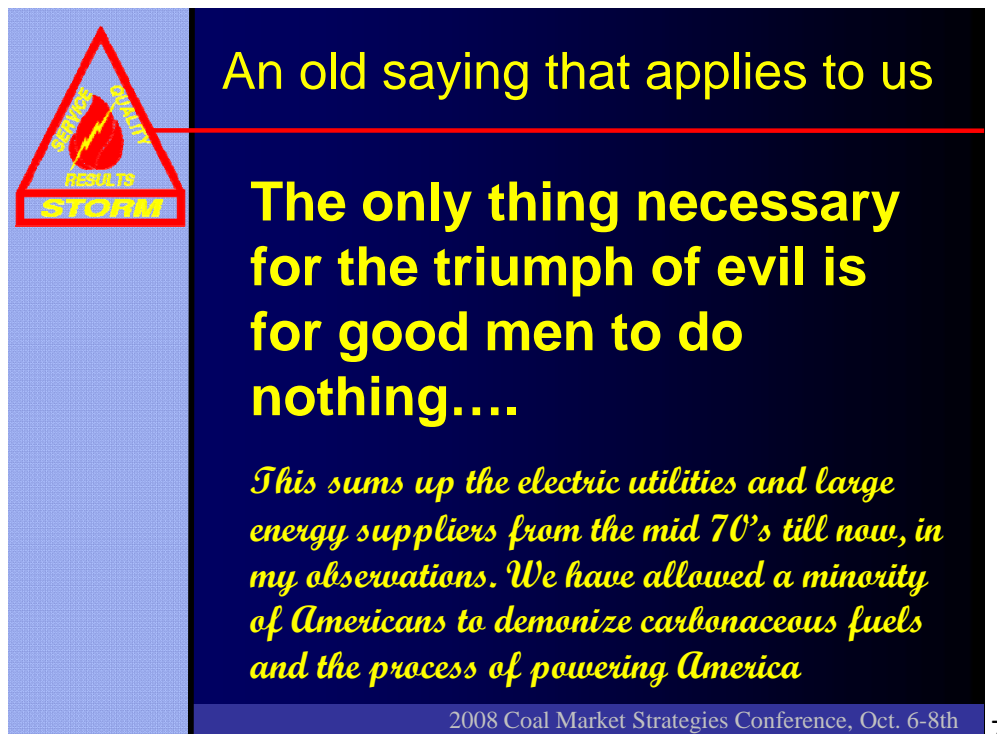
- EPA
- Environmental Extremists Become better known, better funded and more bold
- About 1975 Electric Utilities begin scaling back Public Service Ad’s and public education programs on energy
- Environmental activist groups begin to allign with leftist political groups

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The electric utilities of 1973-1979 had at least five problems in escalated costs. 1) the second Arab Oil Embargo 1973-1974; 2) environmental retrofit costs; 3) fuel cost escalated; 4) cost overruns of new generation construction, particularly nuclear plants and then 5) Three Mile Island's accident which caused a sharp drop in stock prices of utilities that were building nuclear plants. As a result of these cost pressures, tree trimming, painting and public education programs were drastically cut. I remember well, because I was employed by Carolina Power and Light at that time and that was an official top management order, to cut costs immediately. Maintenance cuts were eventually restored but the PR campaigns and public education programs were never restored. Programs to educate the public on "living better electrically" went silent at most utilities. Nearly all investor owned electric utilities had a stellar record in public education before the time period 1973-1979.

Slide 7 – The demagoguery begins and our industry begins to go silent because up to about the mid 70's the benefits, advantages and good publicity for "Why coal is good for America" was done primarily by the electric utilities in a nationwide campaign of continuously repeating the mantra – "Living Better Electrically"

About this time, the second Arab Oil Embargo was experienced, followed by Three Mile Island's nuclear plant accident, and the electric utility public education efforts went silent, not to be replaced. The old saying is appropriate here: "The only thing necessary for the triumph of evil is for good men to do nothing." That is what we did.



**An old saying that applies to us**

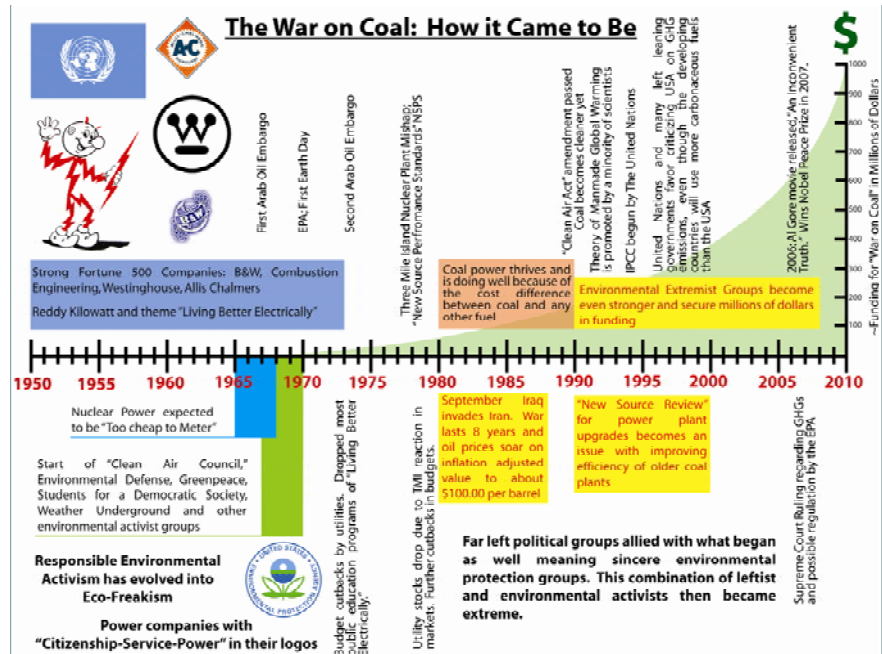
**The only thing necessary for the triumph of evil is for good men to do nothing....**

*This sums up the electric utilities and large energy suppliers from the mid 70's till now, in my observations. We have allowed a minority of Americans to demonize carbonaceous fuels and the process of powering America*

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Slide 8 – A time line of the "War on Coal" and how it came to be: The perception of coal is good for America and the world, 1950-1970. Then in the mid seventies the extremist groups gained strength and good understanding of what coal was doing for America changed to an outright

war on coal, 1970-2008 funding of the detractors and enemies of coal has increased from well intended principles funded by small donations to mega millions to be used for political power and the literal deindustrialization and weakening of America. The green background shows the magnitude of the groups opposed to coal increasing from nearly insignificant in the late 60's to hundreds of millions of available funds in 2008



8

Slide 9 - Organizations that have "bought in" on leftists anti-coal beliefs. Most of these organizations began as well intentioned organizations to promote conservation and to genuinely protect the environment. Some are clearly (to us) anti-coal, anti anything and if allowed to keep their momentum, will definitely weaken America.

In my opinion, the actions and efforts of these organizations work against the best interests of America and America's future. Organizations that were once well intentioned to help nature have evolved into forces to weaken America's economic strength, our national security and the future prosperity for our grandchildren.




## Some Organizations that have “bought in” on leftist anti-coal beliefs

- Clean Air Council
- American Lung Association
- Sierra Club
- Environmental Defense Fund
- The Pew Charitable Trusts
- National Council of Churches
- The We Campaign
- StopGlobalWarming.org
- Wyoming Outdoor Council
- Louisiana Environmental Action Network
- Citizens Coal Council
- Great Basin Mine Watch
- Sustainable Obtainable Solutions
- Apollo Alliance
- The Union Sportsmen’s Alliance
- Committees for Awarding “Oscars, Emmy and Nobel Prizes/Awards
- League of Conservation Voters
- League of Women Voters
- Turner Foundation
- National Resources Defense Council
- Heinz Foundation
- Alliance for Climate Protection
- Greenpeace
- Blue Breen Alliance (United Steelworkers and the Sierra Club)
- Powder River Basin Resource Council
- Environmental Law Center at Vermont Law School
- United Nations
- Theodore Roosevelt Conservation Partnership
- Open Society Institute (George Soros)




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Slide 10 – A well spread myth:



## Popular Misconception: Renewable Power CAN Power America

- 93% of America's energy is used as heat energy for prime movers such as steam turbines, jet engines, diesel locomotives, ship propulsion, buses and automobiles.
- Renewable Energy – including old hydropower dams is about 7% now and cannot replace the 93% energy forms that America Depends on now.

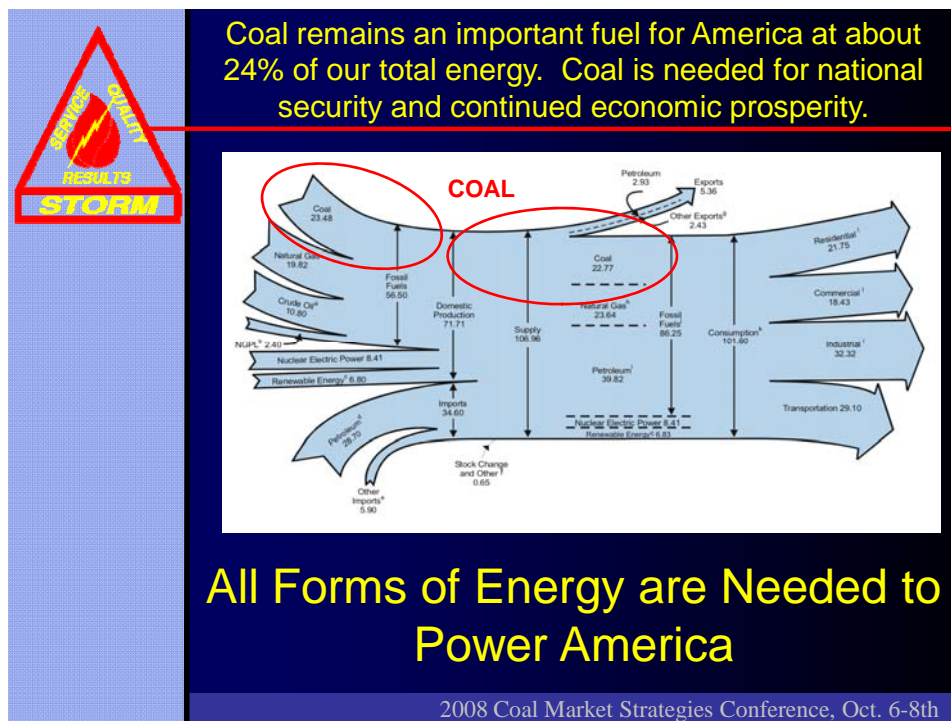
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Slide 11 – All sources of America’s energy and where it comes from, how it is used. Coal is the fuel for about 50% of our electricity, and about 23% of our nation’s total energy supply, it is vitally important to America.

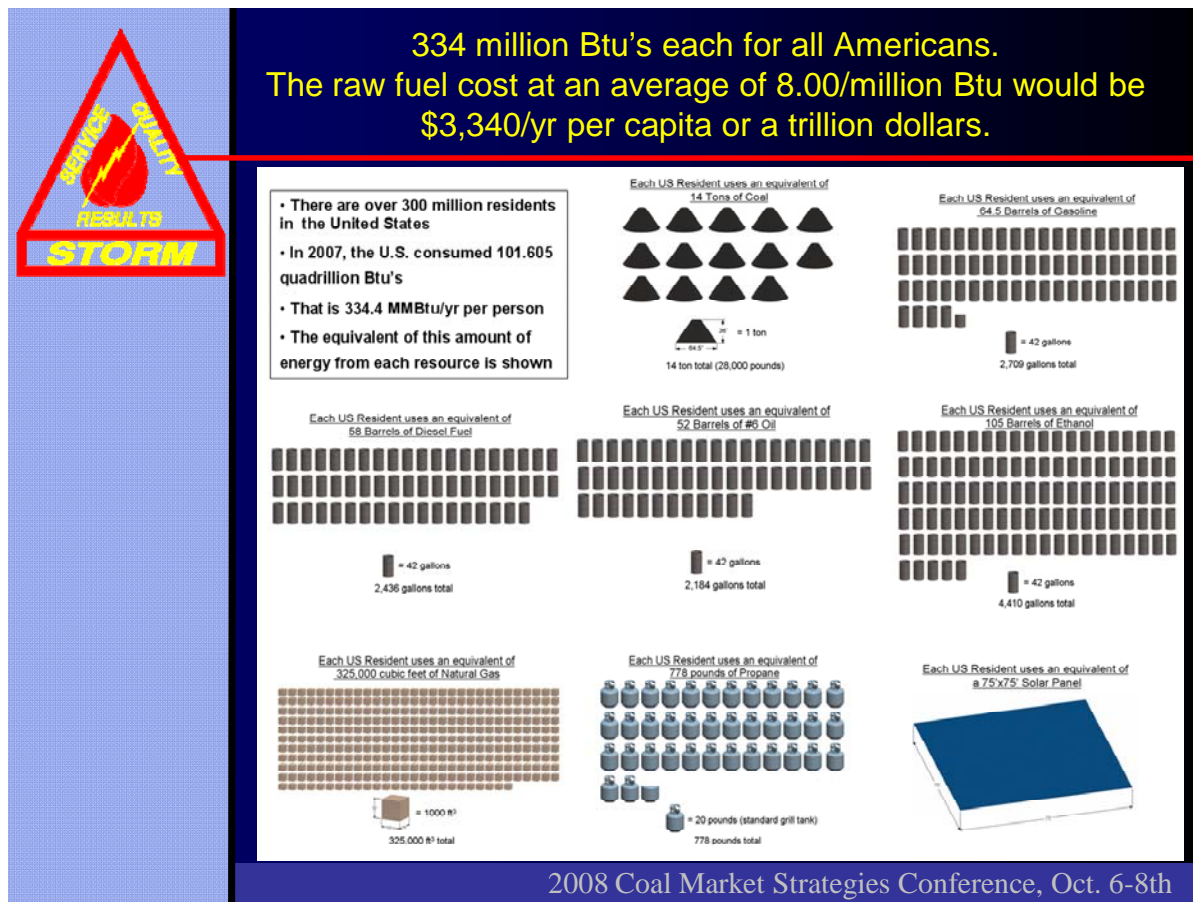
However, America needs all forms of energy, especially energy that provides fuel for heat engines which is 93% of our total energy. For example: One of our problems is Chesapeake Energy has bad mouthed coal for the increased selfish interests of their industry. Chesapeake Energy’s advertisement promotes natural gas as “up to 90% cleaner than coal.” Natural gas suppliers are only one faction that works against “clean coal.” There are also solar, wind and other alternative energy suppliers that also fight coal while encouraging government subsidies, grants and tax credits for their own selfish interests. The definition of a demagogue is ”a leader who obtains power by appealing to the emotions and prejudices of the populace.” I might add a line of my definition to amplify the dictionary definition, ”by promoting exaggerations, lies and opinions, while disregarding scientific facts.” The quote is from the American Heritage College dictionary, the additional line, is my personal opinion.

The default fuel that benefits from delayed or cancelled coal plants is natural gas. Many organizations refer to natural gas as pollution free, while at the same time calling CO<sub>2</sub> a pollutant for coal plants and inferring that natural gas does not create CO<sub>2</sub> when in fact a poorly efficient simple cycle gas turbine generator may produce up to 80% of the same weight of carbon dioxide as a highly efficient ultra super critical coal plant using PRB fuel. The coal/natural gas comparisons of CO<sub>2</sub> production per megawatt is shown later on Slide 28



Slide 12 – 93% of our nation’s energy is used as “heat” most for heat engines. Just to put that in perspective, America uses about 101.6 quadrillion Btu’s of heat energy per year. If this is divided into the average consumption of each American that would be equivalent to 334 million Btu’s per person, per year. Herein lies the key, I think to dispelling the myth that renewable can power America, 334 million Btu’s per person is equivalent to 14 tons of coal at 12,000 Btu’s/# or 16 tons of coal at 10,450 Btu’s/#. Solar & wind cannot power jet airplanes, trucks, trains or power steel mills. Heat engines do the heavy lifting of America’s economic prosperity.

America needs over 100 quadrillion Btu’s of heat energy and only about 7% of our total energy is provided by renewable, and nearly 27% from imported oil. When the end uses of energy are considered, it becomes apparent that coal is a vital component of the total energy mix to power America for decades to come. Conservation and renewable power should be used by all of us, but the practical approach to powering America’s economic engines are with more total domestic production of energy – all forms, and including clean coal.



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12

Slide 13 – Manufacturing in America depends on low cost electricity. Those states that have been forced into ever increasing quota’s of renewable power are having to raise rates significantly. Most renewable power costs about twice the cost of clean coal or nuclear generated power. It is widely believed that wind and solar can provide enough power to fuel

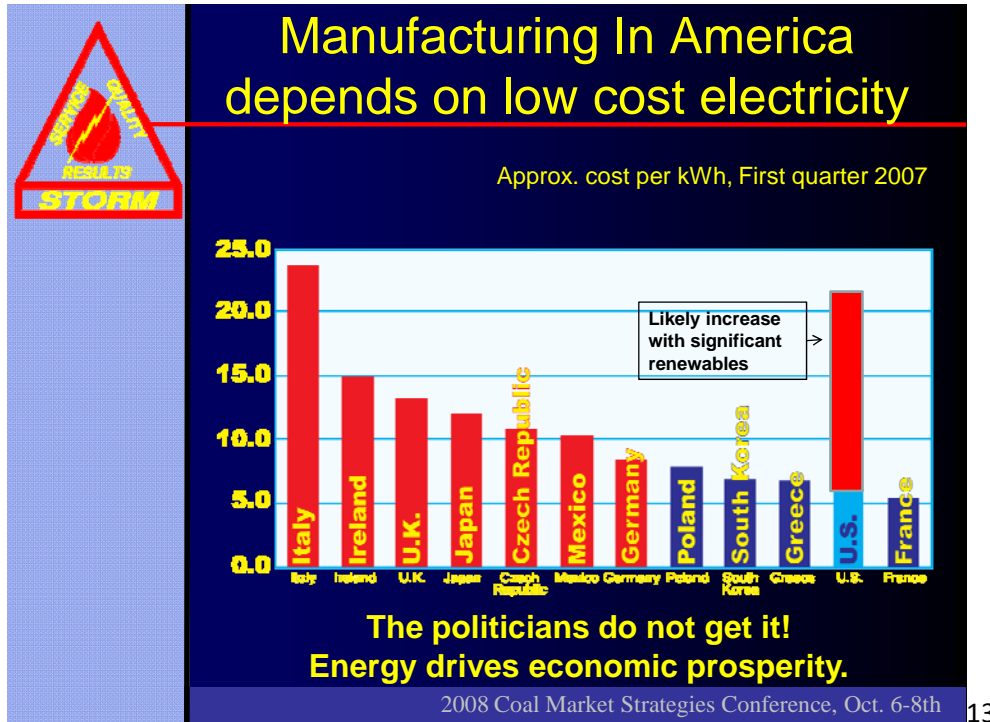
America's energy needs. In reality, while wind and solar can make a contribution they are not likely to make a significant dent in the present 93% heat energy that America uses and needs.

From an engineering point of view, most of America's 101.6 Quadrillion Btu's is being utilized in heat engines using thermodynamic cycles such as: Rankin, Brayton, Otto or Diesel.

As power costs increase, industry is placed under ever increasing competitive pressures to either move production overseas or shutdown. Where I live, in Stanly County, NC we have lost over 7,500 jobs from the closing of Alcoa's aluminum smelting operations and textile mill shutdowns. Energy wasn't the only reason for the shutdowns, but one of the reasons.

Because of ever increasing percentages of renewable power, and more use of natural gas for power generation, most utility experts expect power production costs to double in the next ten years or less.

In the past year, there have been numerous announcements of industrial cut backs, job losses and manufacturing businesses under stress because of high energy and electricity prices. America's national treasures of coal reserves are rarely mentioned by political contenders as a possible solution. If coal is mentioned, it is likely to be in a coal producing state. Politicians have pandered to voters – mouthing support for clean coal technologies – all the while knowing coal plants will be stopped in the courts by liberal judges who are supported and appointed by those politicians and by anti-coal environmental activist organizations that are endorsed by those same politicians. Even more maddening is the fact that many of these “build nothing, do nothing” for American organizations are tax exempt and are literally partially funded by hardworking Americans.



13

5. What Storm Technologies is Doing to Spread the Good Word

Slides 14 & 15 – Spreading some of America’s technology on efficient and clean coal combustion techniques to the world. Storm is involved with the Asia Pacific Partnership, sponsored by the US Dept of Energy (DOE) and the National Energy Technology Laboratory (NETL), to help India, and other Asian countries learn “How to” use coal efficiently, reliably and cleanly. Storm is applying our resources to work with the utilities of developing countries. These Asian countries “Get it” Coal is powering their economic development and advancement of their quality of life. Truly, many jobs that were based in America and were powered by reasonable cost coal generated electricity here have been moved to China, India, Korea and other Asian countries. Coal is still the predominant fuel of choice to power these developing economies. Just as coal is needed here in America, it is also needed in the rest of the world.

**Help spread the good word of how to use coal cleanly and efficiently!**



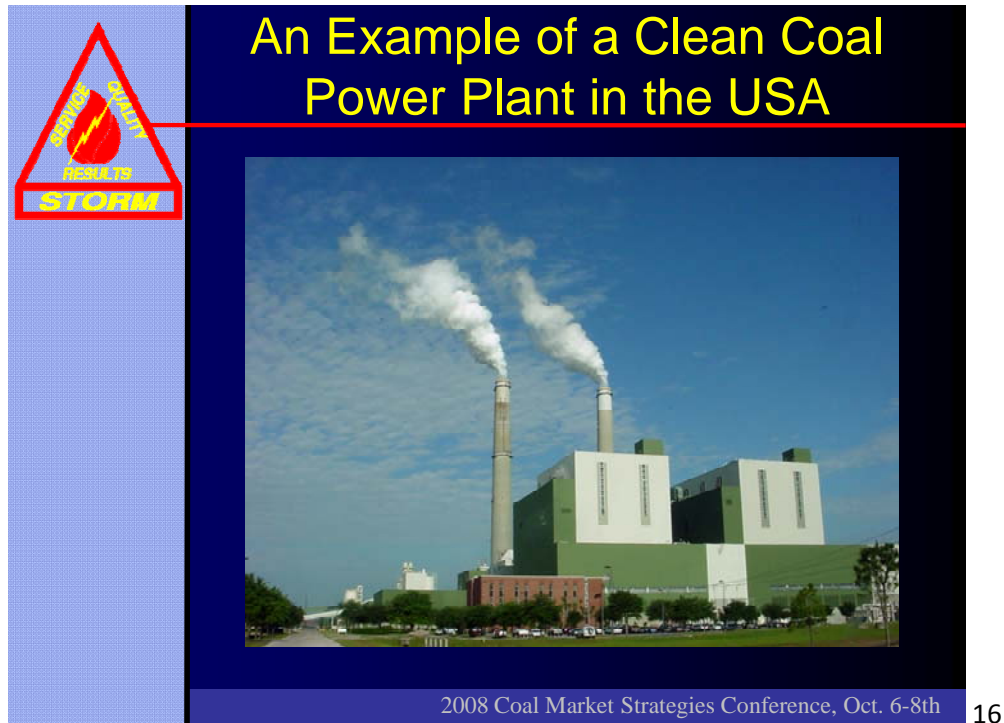
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**Storm Technologies personnel involved with Indian power production engineers to tour America and Learn America's best and clean methods of burning coal.**



15

Slide 16 – Orlando Utilities, Stanton Energy Center. An example of one of the cleanest coal plants in America. Storm along with DOE representatives led a contingent of Indian engineers to tour several US coal power plants in America. Including Nevada Power, Orlando Utilities and E. ON's Trimble County Plant in Kentucky. These plants were used as examples of how to burn coal well. The Indian engineers were also trained in actual test methods at the OUC plant.



An Example of a Clean Coal Power Plant in the USA

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Slide 17 – World leadership in good stewardship and helping the less fortunate requires a strong America.

Are those demagogues in America that wage a war on coal trying to weaken America? Have they thought of the consequences of a weakened America? Not only will high electricity cost harm America and damage my grandchildren's prosperity but it will also hurt the less fortunate of the world. Who will help lead advances in humankind and economic development in Africa, South America and Asia, if not America? Russia, Venezuela, Cuba, Iran or North Korea? I don't think so, yet, strong forces in America and mainstream misunderstanding persists on the perception of coal and what it can do for the world.

The true story of why coal is good for America and the world needs to be publicized. No country does a better job of producing electric power from clean coal than America.



**Stewardship is more than merely saying  
“NO” to Industrial Progress!**

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**If America is not Economically Strong, then  
Who will help the developing world?**



17

6. Not Only a National Treasure – but Needed in Our Energy Mix

Slide 18




**We have got a lot of “Coal Cheerleading” and inspiring of our peers to get active. We have at least twelve advantages of workable solutions on our side:**

- We are on the right side of the issue – is coal good for America
- Truth and facts
- Coal is an American Treasure that can replace much of our imported energy
- Global temperatures have been declining for seven years, increasing the possibility that the public will notice and attribute climate change to being primarily a natural phenomena
- The American Economy depends on reasonable cost Energy
- Coal Power works in the dark and when the wind not is blowing
- Transmission infrastructure is already set up for citing more coal plants, not for wind turbines or solar, even if they could supply significant power
- Coal is less cost than renewables
- Coal power and PHEV's could, in fact, reduce imported oil quantites
- American dollars and investment stay at home
- Coal is the most plausible Bulk power supply to build in say 5-10 years until nuke's can be built and started up
- If we got rid of NSR (New Source Review), then old plants could be made more efficient and even updated. With NSR “Ubrates or Upgrades” are not allowed.


All we lack is changing public opinion. (All we have to do is overcome a generation of not educating the public of why Coal is good for America)

**We are the one's that are on the right side of this issue and what is best for America.**



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18



Here is what Storm Technologies, Inc. has done and we suggest as an action plan for other ACC members

- Use your web site for public education on energy
- Present programs to civic clubs, Rotary, Lions, Optimists
- Newspaper advertisements – PSAs
- Radio PSAs – EFMs (Energy Fact Minutes)
- Visit schools and teach energy matters – particularly the Four Es – Energy – Environmental Protection – Economic Prosperity and Education in Energy Science
- Engage neighbors and friends. Help educate everyone you can

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## Examples of PSAs

Several times per year Storm Technologies, Inc. prepares and publishes full page and two page public service ads in the newspaper. These are to supplement the radio EFMs with written facts. We also take space to advertize for employees and to tell the public what we do. Several example newspaper display ads follow.

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## The Four E's: We Promote all forms of energy of which coal is a vital part

The theme is to educate the public on the need of all forms of energy that originate from America. All forms of energy are needed in our national interest and we should align our PSAs with nuclear, gas, oil and renewables. Truly, America needs all forms of energy and no one is doing a credible effort at promoting the true story of energy. Here are some examples of how Storm Technologies, Inc. has attempted to do so in our county and area.

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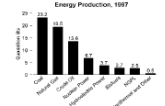


## Newsletters

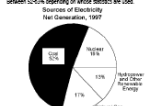
The newsletter on the left was published and distributed in Feb. 1999

**Editorial: Has Anyone Else thought about a coming Energy Crisis?**


We are actually far under the program, yet we predict the end here appears. So what do we know about the great use of energy use and consumption? Well, there are no real big plans in progress. So, we want to move on and on for these things, and that's the real. For our country the fact of the big plan is that we need to get on with it. Our country's primary energy source, oil, gas, or other, has been of increasing and lower cost. We need to get the public and energy policy makers to get on with it. Let's cover some facts that will help greatly increase electricity costs and sufficient energy supplies to the rest of the world. The US has produced over 70 quadrillion British Thermal Units of energy, and imported about 5 quadrillion BTU's. Let's call that "Coal" in 1997. Compared to that, the US has produced 10 quadrillion BTU's. The energy production of coal for energy is shown below:



The point here is that most of this country's energy production is in coal. Electricity production in the USA is largely from the production of coal. Below is a pie chart showing the sources of electricity:



Again, the point is, not just of our electricity is generated from the production of coal, our country's primary energy source is coal. Most of our electricity is generated in an unregulated society for manufacturing. Use the great United States of America, and of electricity and coal energy. The electricity production and use electricity prices for coal. However, the USA has had the lowest cost electricity in the world, and our electricity costs are to increase further. Note the graph below from "Energy Storage" report:




**Coal: Our National Treasure**

Using America's National Treasure of Coal efficiently and cheaply is important, and here we are the right thing to do.

First, let's review why we should all practice Excellence in the Construction of Coal: Thermal

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

70 States: 27% from Coal & 12.7 Cents/kWh Average  
21 States: 65% from Coal & 7.0 Cents/kWh Average




meanwhile American citizens is misquoted about the true facts of why our Nation needs more coal utilization, not just for energy but for other purposes, such as the fact-based community including most organized religions including mine, and I as a Methodist) have applied pressure to politicians, banks and regulators at all levels. Coal at this time, is a fuel for country needs to use more of - for reasons of economic emergency, including

power plants based by most are used to our Nation's economy, our national security and our high standard of living. Coal fueled power plants produce over 50% of our Nation's electricity. In states where it is used for the highest percentage fuel mix, the electricity production costs are the lowest. (None of the readers of this newsletter know these facts. In spite of the facts supporting more coal power and the building of new coal plants and refusing the main-made part of "Global Warming" nearly every non-technical group of well

A coming energy crisis was apparent to most of us – way back in 1998

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### HOW MANY HOURS OF THE DAY WOULD YOU LIKE TO DO WITHOUT ELECTRICITY?

America Runs on Energy - Send a message to your elected officials to make the choices right for America!

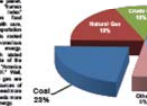
The Message is very simple: provide the full, free, and honest information on energy that will help "Electoral" or "Economic" decisions be made on the basis of the facts. Making the use of the energy pie that we can use and that we should use is the key. Click on the link for more.

### HOW WE USE ENERGY:



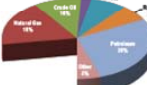
Industrial (33%)  
Residential (22%)  
Commercial (12%)  
Transportation (10%)  
Government (13%)

### WHERE AMERICA'S ENERGY COMES FROM:



Coal (23%)  
Natural Gas (22%)  
Nuclear (19%)  
Wind (1%)  
Solar (1%)  
Biomass (1%)  
Other (33%)


### WHO THINKS THAT THIS SLICE OF THE ENERGY PIE CAN BE REPLACED WITH WINDMILLS OR SOLAR? OR ANY RENEWABLE FUEL FOR THAT MATTER?




Yes (10%)  
No (10%)  
Maybe (10%)  
Don't Know (70%)

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

16 States: 27% from Coal & 12.8 Cents/kWh Average  
31 States: 68% from Coal & 7.8 Cents/kWh Average





### Some Reasons Why America Needs to Produce More of Our Own Energy

Day Think...

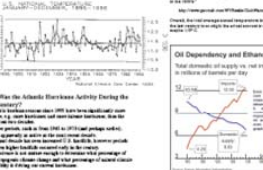
Why is it so important for America to produce more of its own energy? The answer is simple: energy is the lifeblood of our economy. Without it, our economy would collapse. We need to ensure that we have a secure and reliable energy supply for the future.

### STORM TECHNOLOGIES, INC.

Richard F. Davis, President

Why is it so important for America to produce more of its own energy? The answer is simple: energy is the lifeblood of our economy. Without it, our economy would collapse. We need to ensure that we have a secure and reliable energy supply for the future.

### Oil Dependency and Ethanol Myth



### Position Openings:

Wanted: Coalfield Electrical Engineer with 10+ years experience in electrical engineering of power plants and substations. Send resume to: [charlie.cox@stormeng.com](mailto:charlie.cox@stormeng.com)

Slide 25



[www.stormeng.com](http://www.stormeng.com)

**Service. Quality. Results.**

Storm Technologies: Specialists in Combustion and Power

SERVICES   PRODUCTS   13 ESSENTIALS   NEWS & INFO   RELATED LINKS   ABOUT US   HOME   CONTACT

**Who We Are**

Storm Technologies is a full service boiler consulting services organization which specializes in:

- ▣ Technical Direction
- ▣ General and Comprehensive Inspections
- ▣ Performance Testing Services
- ▣ Pulverizer and Burner Performance Improvements
- ▣ Replacement Parts
- ▣ Short Courses
- ▣ Boiler Optimization Programs

**Our Services**



**Combustion Optimization Programs**  
Whatever the need - Plant Efficiency & Heat Rate Improvement Programs, NO<sub>x</sub> Control, Condition Based Maintenance or Performance Preservation - STORM® can meet your needs.



**Plant Testing**  
STORM® provides all types of Comprehensive Diagnostic Testing services utilizing specialized equipment with a results oriented attitude..



**Short Courses**  
STORM® provides formal 3 day training seminars and/or in-house customized programs.

**Events & Reminders**

**08/12/2008**  
**3rd Quarter Newsletter**  
Why is coal fuel needed as a major contributor to America's energy [more..]


**05/28/2008**  
**Public Radio Service Announcements**  
Want to know more about the need for new energy production and how it [more..]

**04/22/2008**  
**2nd Quarter Newsletter**

2008 Coal Market Strategies Conference, Oct. 6-8th

25


Slide 26




**WSPC – Local radio station website linked to Storm website**

**1010 WSPC**  
Power Of The Spoken Word

HOME   STATIONS   ADVERTISE   COMMUNITY




**Rush Limbaugh**  
Noon until 3:00 pm



Weather Forecast  
Sponsored by Stanly Community College

Albemarle, NC  
Weather  
Partly Cloudy, 65°F



Who's doing amazing things in the Energy Industry worldwide and operating from Stanly County?  
**STORM TECHNOLOGIES**  
[Click here for more information!](#)

What's your Global Warming IQ?  
[Click Here to take the Global Warming Quiz for the facts!](#)

Find out about Energy, Environmental Extremism, Economic Prosperity and Education - Download this presentation from Dick Storm of Storm Technologies in PDF Format.  
[Click here](#)

Want to know more about the need for new energy production and how it affects our economy? Click on the links below (or right click and choose "save as") to hear podcasts of the Storm Technologies Energy Fact Minutes

Storm Technologies #11 - Renewable... The Letter - NEW

Storm Technologies #12 - Chemicals... NEW

Storm Technologies #13 - Silicon Tech

Storm Technologies #14 - High School Science

Storm Technologies #15 - Traditional Energy

Storm Technologies #16 - Renewable Energy

Storm Technologies #17 - Homeowner Energy

Storm Technologies #18 - Energy Costs

Storm Technologies #19 - Do Nothing Condens

Storm Technologies #20 - Coal in the 21st Century

Storm Technologies #21 - Domestic Solutions

Storm Technologies #22 - Nuclear Aircraft

Storm Technologies #23 - Education and PE

Storm Technologies #24 - Economic Prospects

Storm Technologies #25 - Unintended Consequences

Storm Technologies #26 - Thermal Energy

Storm Technologies #27 - Future Politics

Storm Technologies #28 - Clouds A No. 1000

Storm Technologies #29 - Clothes in Street's Clothing

Storm Technologies #30 - Oil Now Fashion

Storm Technologies #31 - Coal Capacity

Storm Technologies #32 - Four Steps

Storm Technologies #33 - Large Oil Companies

Storm Technologies #34 - Various Natural Gas

Storm Technologies #35 - Oil's Off our Coast

Storm Technologies #36 - Energy & Economic Prospects

Storm Technologies #37 - Liberman Water

Storm Technologies #38 - Fuel in Hybrid Cars

Storm Technologies #39 - Shale to the Future

Storm Technologies #40 - Energy Prices

Storm Technologies #41 - Power Available

Storm Technologies #42 - Power Supply

Storm Technologies #43 - South Africa's Problems

Storm Technologies #44 - National Security

Storm Technologies #45 - Global Warming & Resources

Storm Technologies #46 - Need for more Coal & Nuclear

Storm Technologies #47 - Global Energy Needs


Storm Technologies #48 - New Power Plants

Storm Technologies #49 - Domestic Energy

Storm Technologies #50 - Global Warming

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26




## What can the ACC do as a body? Some suggestions:

- Convince other energy groups to put America's interest first. We should not compete at the expense of America's national security
- Begin an active web based information campaign to spread the truth
- Form coalitions with "Friends of Coal" and "Friends of Industry"

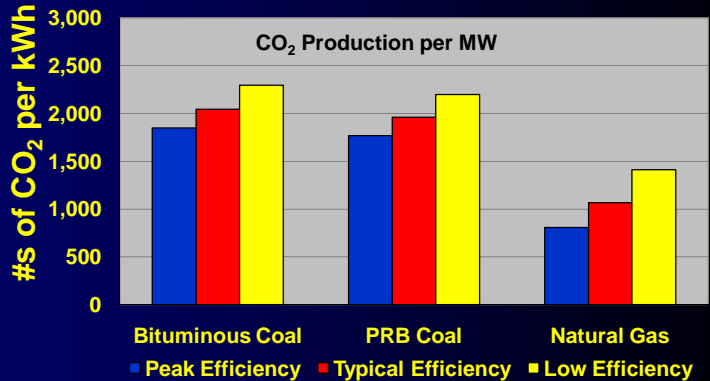
<ul style="list-style-type: none"> <li>•US Chamber of Commerce</li> <li>•American Society of Mechanical Engineers</li> <li>•National Association of Manufacturers (NAM)</li> <li>•IEEE</li> <li>•API (American Petroleum Institute)</li> <li>•The Heartland Institute</li> <li>•AGA (American Gas Association)</li> <li>•National Rifle Association</li> <li>•Competitive Enterprise Institute</li> <li>•American Enterprise Institute</li> </ul>	<ul style="list-style-type: none"> <li>•EEI</li> <li>•Radio Broadcasters Association</li> <li>•Instrument Society of America</li> <li>•Media Research Center</li> <li>•The Heritage Foundation</li> <li>•Hudson Institute</li> <li>•The Cato Institute</li> <li>•Any other organizations or foundations that are for keeping America strong</li> <li>•Twenty First Century Energy Institute</li> </ul>
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## Improve what we do now!

- Reduce Heat Rates
- Educate the politicians on the negative impact of new source review



Energy Source	Peak Efficiency	Typical Efficiency	Low Efficiency
Bituminous Coal	~1,800	~2,000	~2,300
PRB Coal	~1,700	~1,900	~2,200
Natural Gas	~800	~1,000	~1,400

By the way, natural gas can produce up to **80%** of the same GHGs/kWh as a well run efficient coal generating station without carbon sequestration.

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## Summary of What We Can Do

- Publicize, Promote, Educate the Four E's
  - Energy
  - Economic Prosperity
  - Environmental Protection (We are responsible!)
  - Education in schools of youth – and public through PSAs

**MOST IMPORTANTLY: Explain publically Why Coal is Good for America!**

Together – we can help keep America strong and less energy dependent from others for:

- National Security
- Economic Prosperity
- Our Children & Grandchildren

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***Thank You!***

**Go home and spread the good word on “Why Coal is Good for America”**

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