

Evergreen Biofuels Inc

Evergreen Biofuels USA

Biomass Fuel Pellet From Ag Residues
The Missouri Co-operative

Prof. Mark Drisdelle
PRESIDENT & CEO



EVERGREEN MISSION STATEMENT

Produce & Supply Utilities with Carbon Negative Fuel Pellets Produced from Dedicated Energy Crops Like Forestry, Agriculture and Other Fibers Which are then Co Fired with Coal to Reduce Emissions of Green House Gases

Evergreen Biofuels USA

Design Engineers & Operates Pellet Plants on Behalf of Cooperatives

- Show Me Energy Cooperative is a farmer/producer/supplier cooperative organized to produce alternative fuels from renewable biomass inputs.
- Missouri new-generation cooperatives allow the co-op to share the investment and dividends among a number of entities, in addition, farmer/producer investors are eligible for State of Missouri tax credits.

Four Hundred Farm Businesses Make Up The Cooperative (2007)

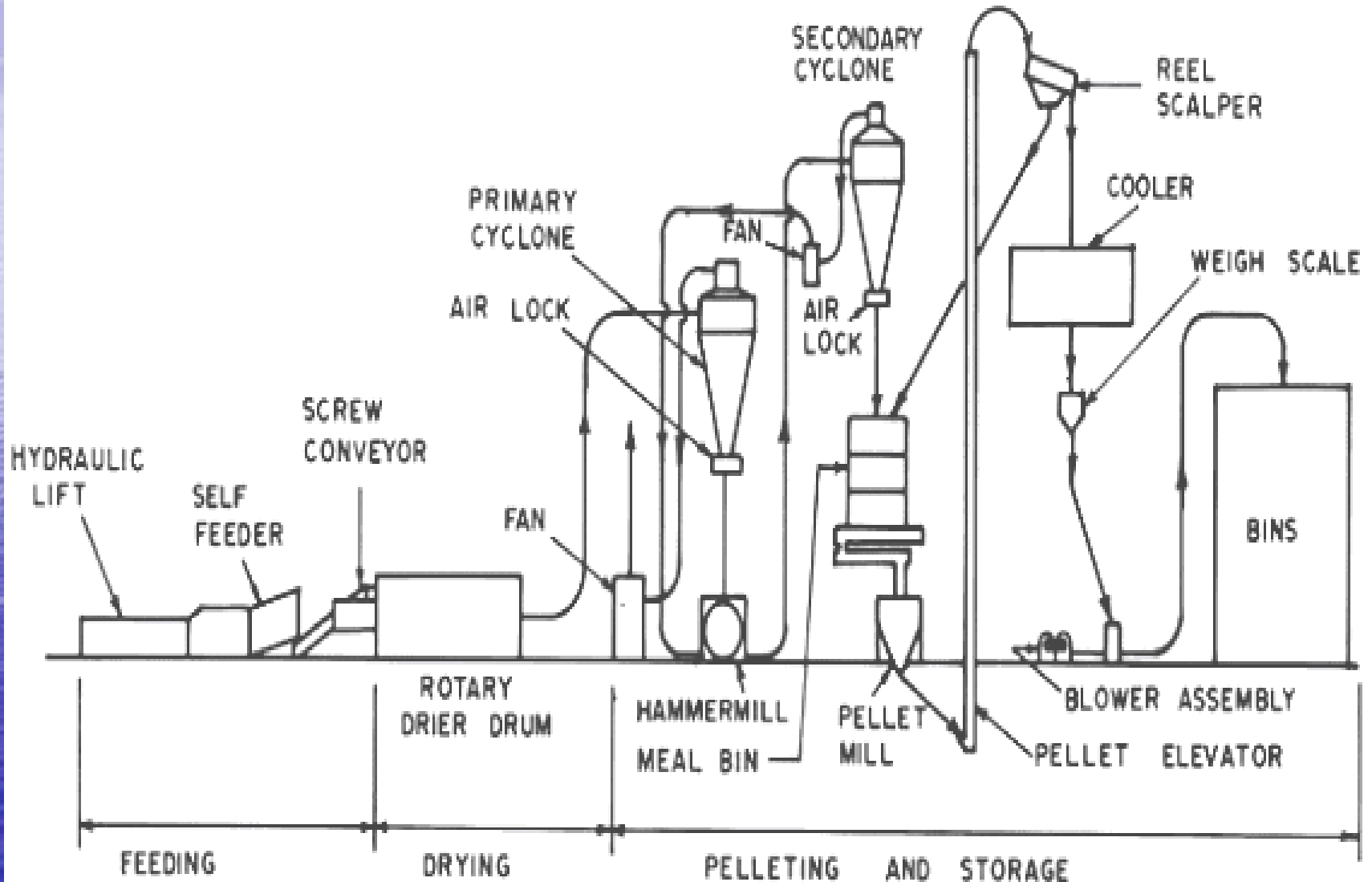
Show Me Energy Cooperative



Missouri Pellet Plant Jan 08
100,000 tons/year 300,000 Barrels of
oil energy equivalent @ a cost of 7
million dollars



Pellet Plant Flow Process



Vision Statement

- Show Me Energy Cooperative has as its guiding vision a commitment to establish an innovative, profitable, leading model for production of biomass based fuels which may be replicated across the country by small producer owned cooperatives that will provide a positive economic impact on the regions where they are located

Show Me Energy Cooperative is a non-profit, producer owned, cooperative founded to support the development of renewable biomass energy sources in West Central Missouri

- A) establishment of suitable conditions in the field of energy development which incorporate the efforts, products, and goals of local agricultural biomass producers
- B) provide additional revenue streams for farmers and producers for their products by utilization in biomass energy production

The Model

- C) support and reinforce local economy and community through employment and development of renewable, sustainable, technologies
- D) keep its member-owners informed about their co-op business, economic, political, charitable, and social environments
- E) help to improve the quality of life, both now and in the foreseeable future, in the areas where Show Me Energy Cooperative has a business, purchasing, or distributing presence

Formulation of Pellets

- The principal ingredients in the fuel pellets are renewable biomass inputs from local area farmers/producers and suppliers such as out of condition hay, seed hulls, corn stover, and other products previously considered unusable or waste products from various industries.



MARKETS

- Evergreen markets the pellets in bulk to coal fired utilities to replace between 5-15% of total coal
- CHP (Combined Heat and Power plants)
- Commercial space heating

February 4th 2008; Wall Street Shows Skepticism Over Coal

- **Banks Push Utilities To Plan for Impact Of Emissions Caps**

Wall Street and Warming

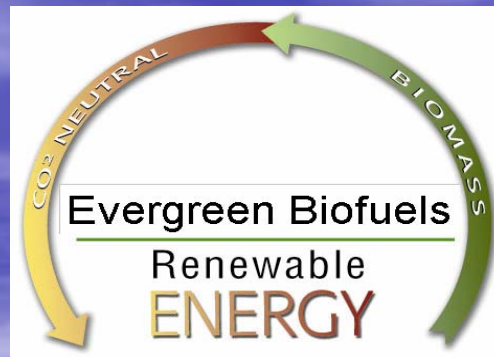
Three big banks will ask companies seeking financing for new U.S. coal-fired power plants to:

- Look at energy-efficiency options.
- Look at renewable-energy options.
- Assess whether the plant design and nearby geology would allow emissions to be captured and stored underground.
- Use conservative assumptions about how many emission "allowances" the plant would get from the government under a greenhouse-gas cap.
- Ensure the plant will be allowed to charge electricity rates high enough to cover the cost of buying emission allowances.

A Carbon Constrained WORLD A CARBON CONSTRAINED ECONOMY

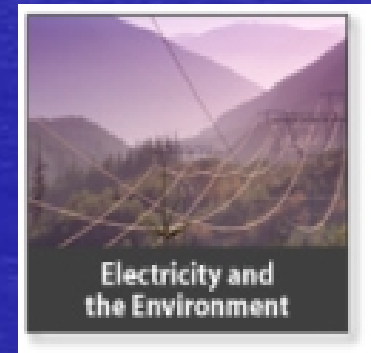
It's time for a change





CO-FIRING BIOMASS WITH COAL

"THE 5-15% SOLUTION TO CLIMATE CHANGE"



Biofuel energy is not only ethanol and biodiesel

A 100 BILLION TON MARKET

- The Problem
- The Opportunity
- The Solution
- Market Size

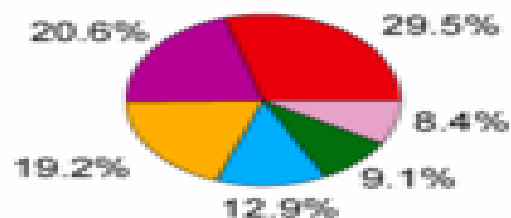
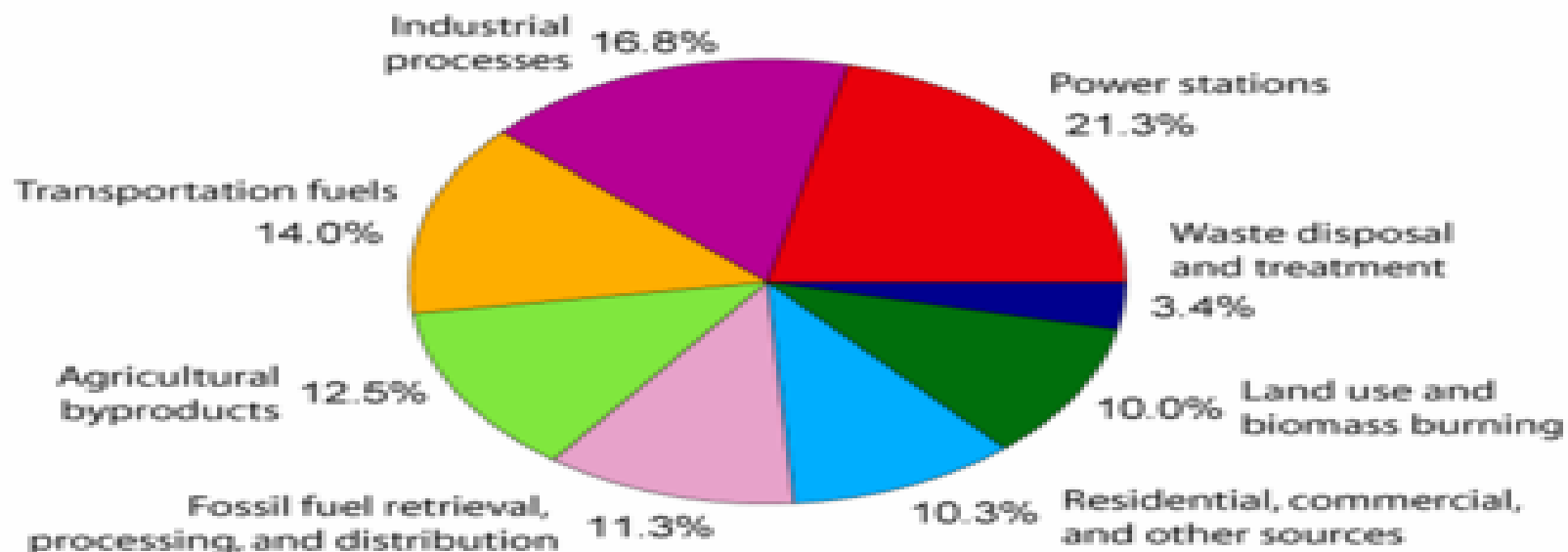


Energy crop pellets: A Blue Ocean emerging market!

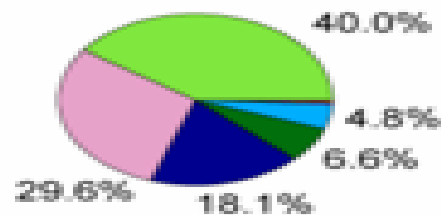
CO-FIRING BENEFITS

- Co-firing involves substituting biomass for a portion of coal in an existing power plant furnace.
- It is the most economic near-term option for introducing new biomass power generation and reducing GHG's
- Co-firing is far less expensive than building a new biomass power plant
- No major modifications to existing plants are required
- Biomass reduces sulfur dioxide (SO₂), nitrogen oxides (NOx), and other air emissions.
- Little or no loss in efficiency from adding biomass

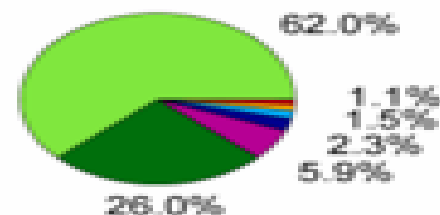
Annual Greenhouse Gas Emissions by Sector



Carbon Dioxide
(72% of total)



Methane
(18% of total)



Nitrous Oxide
(9% of total)

Capturing carbon

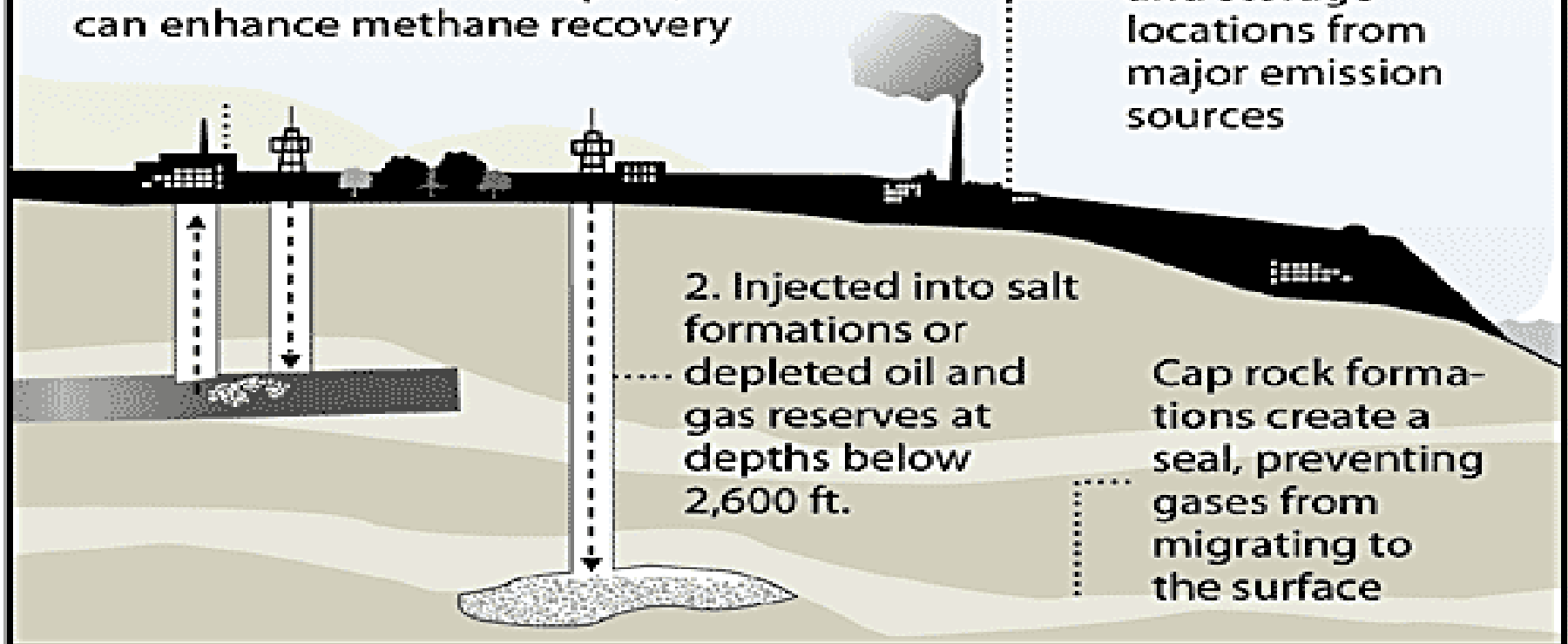
A new report recommends that the US move quickly to find cost-effective ways to capture and bury billions of tons of CO₂ to curb greenhouse-gas emissions. Here are two possible land-based solutions:

1. Carbon dioxide can be absorbed in coal beds, allowing storage to be effective at shallower depths; also can enhance methane recovery

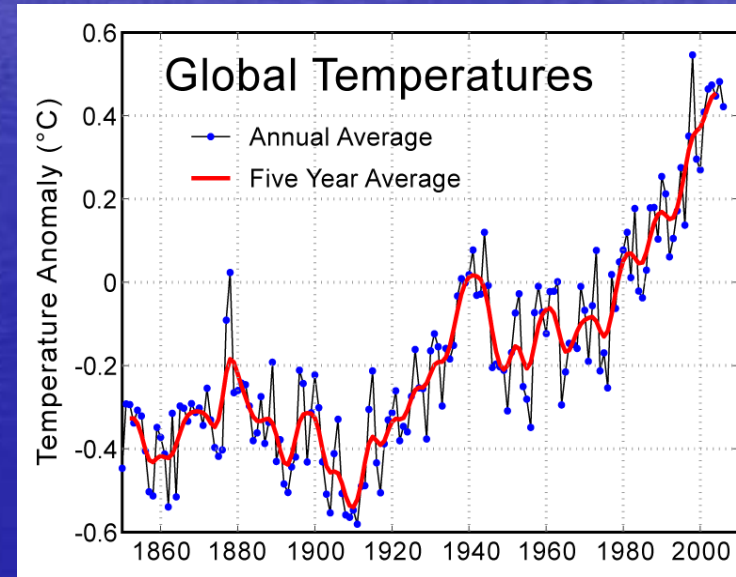
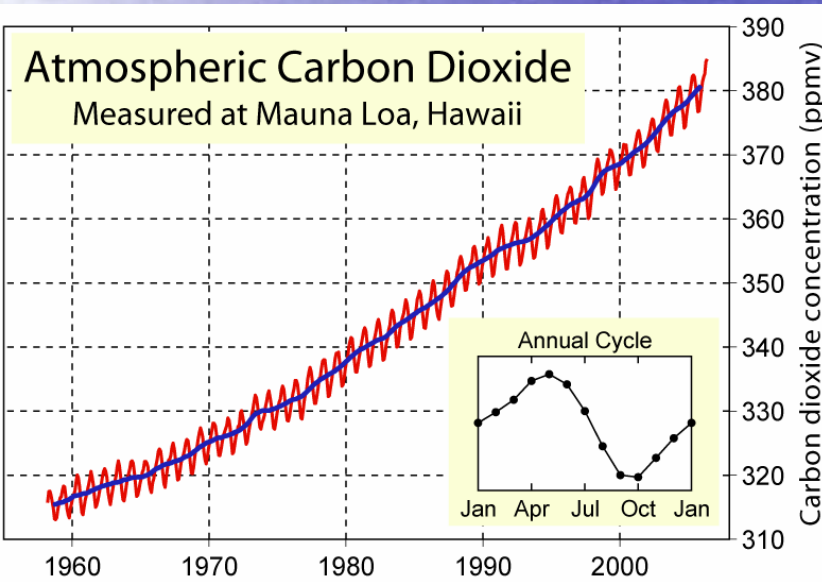
Captured and transported to carbon capture and storage locations from major emission sources

2. Injected into salt formations or depleted oil and gas reserves at depths below 2,600 ft.

Cap rock formations create a seal, preventing gases from migrating to the surface



Increasing Concentrations A Global Problem



We observe close correlation between rise in CO₂ and Climate Change

RUNAWAY CLIMATE CHANGE

Arctic thaw releases greenhouse gas

As the Earth warms, greenhouse gases, once captive in the long-frozen soil, are bubbling into the atmosphere in much larger amounts than previously anticipated.

Norway

33.80°-

35.60°

European

North Russia

34.88°F-

37.04°

Kazakhstan

32.36°

33.08°

China

32.18°-

32.54°

East

Siberia

32.05°

Northwest

Siberia

32.54°-

33.26°

Permafrost temperatures

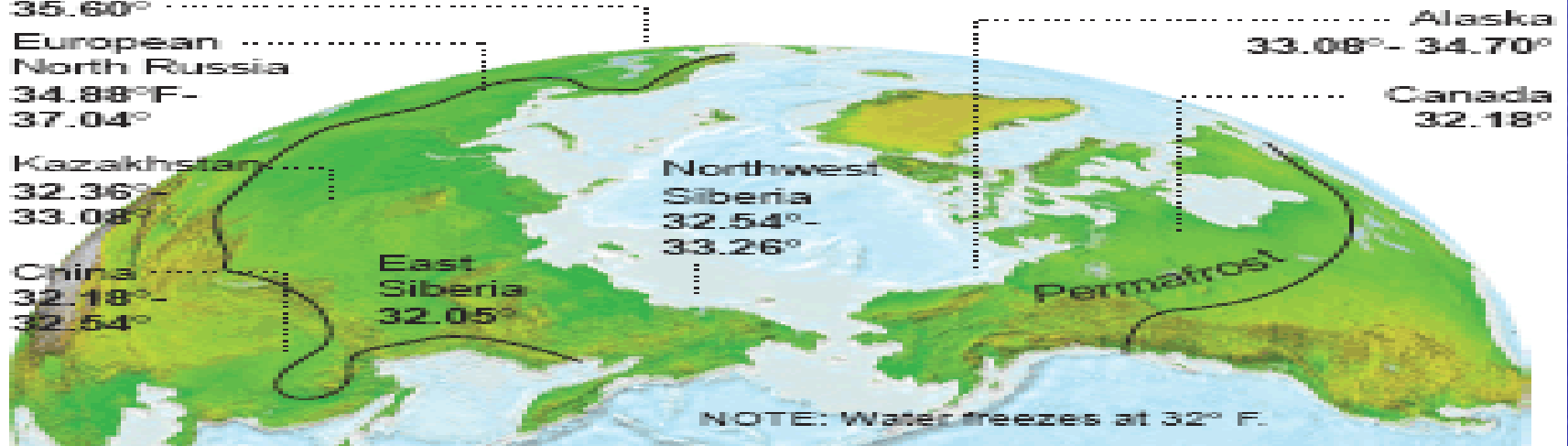
In Fahrenheit reported over recent decades.

Alaska

33.08°- 34.70°

Canada

32.18°



SOURCES: Nature; National Oceanic & Atmospheric Administration

AP

Cap & Trade or CO₂ Taxes Is Unavoidable In North America Creating a Massive Market Opportunity

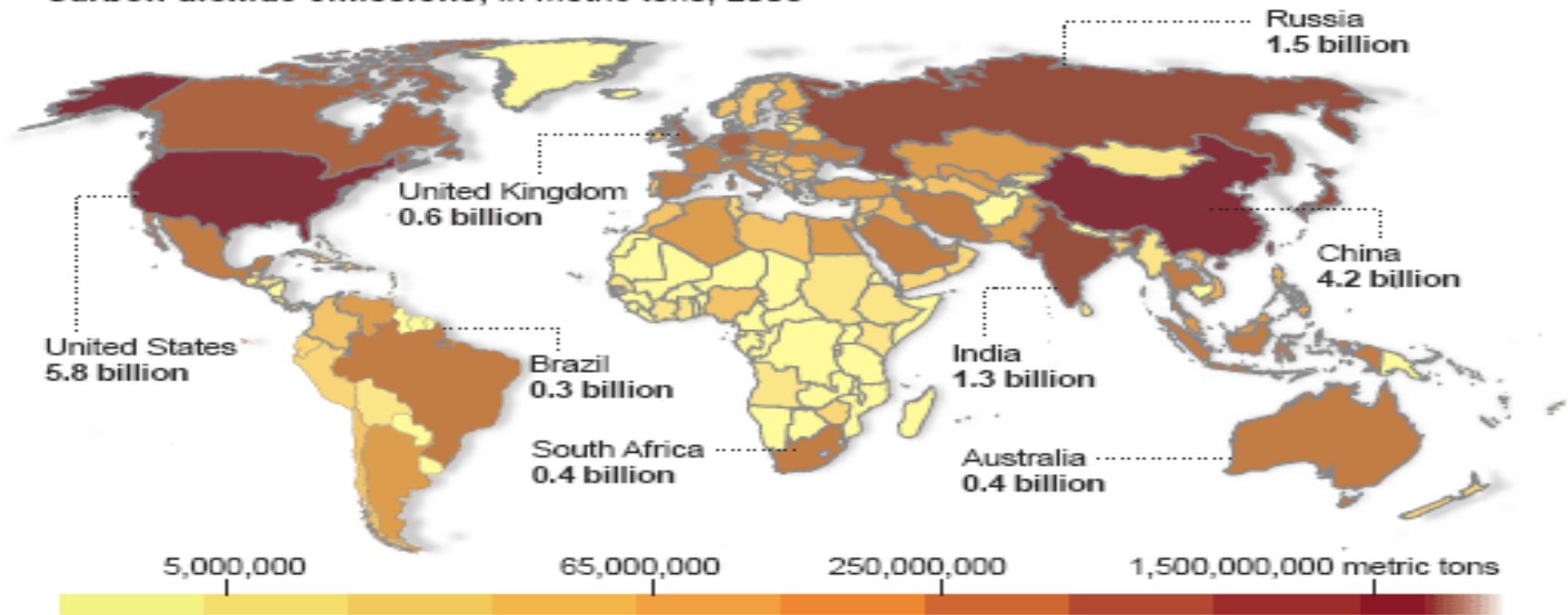
CLIMATE CHANGE GASES

Greenhouse Effect Gases (GEG)

United States leads in production of greenhouse gases

Industrialized nations are the principal contributors of atmospheric carbon dioxide, a major greenhouse gas.

Carbon dioxide emissions, in metric tons, 2003



THE OPPORTUNITY

Coal Is Not Going Away!

A coal-fired world

The world has been on a tear building coal-fired power plants in the past five years, creating an added 1 billion tons of carbon dioxide per year. In the next five years, even after Kyoto limitations kick in, more coal-fired power is expected to come online, adding 1.2 billion tons of CO₂ per year. China is set to slow its buildup. The United States and, to a lesser extent, nations that face Kyoto limits on greenhouse gases, plan to accelerate their buildup dramatically.

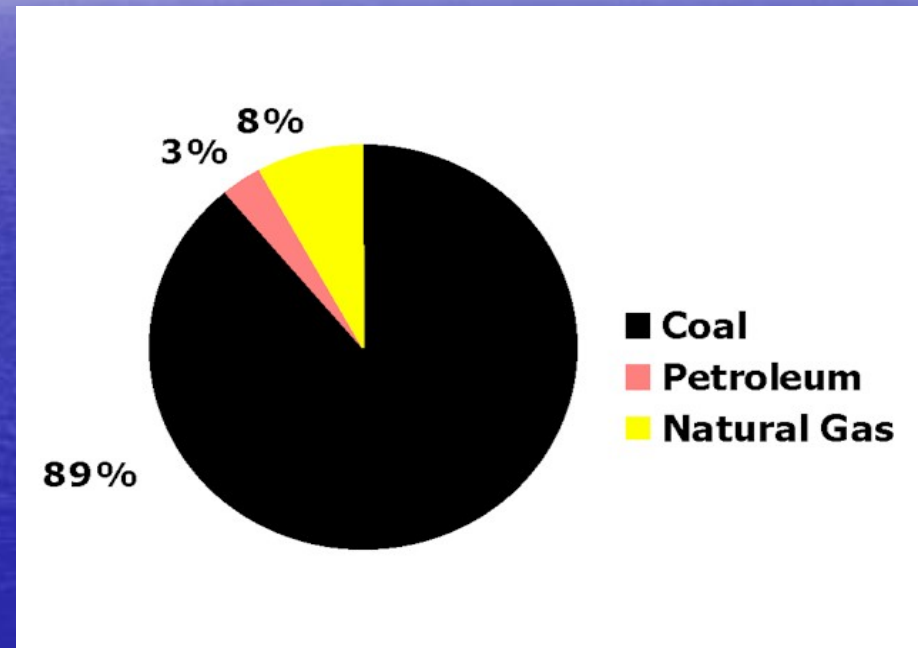
	2002-06		2007-11		
	New electric capacity from coal-fired plants, in gigawatts	Tons of CO ₂ produced annually	Expected new capacity from coal-fired plants, in gigawatts	Tons of CO ₂ produced annually	Percent change
China	112,613	739,867,410	55,490	364,569,300	-50.7%
India	12,138	79,747,974	36,477	239,651,591	200.5
US	2,660	17,472,915	37,723	247,840,110	1,318.4
EU Countries	2,508	16,477,823	12,856	84,463,920	412.6
Other Kyoto Nations	19,824	130,244,337	33,455	219,796,722	68.8
Non-Kyoto Nations	8,977	58,976,919	2,045	13,435,650	-77.2

*Clean Coal Power is an Urgent Necessity
Without an Immediate Technology Solution*

CARBON CONSTRAINED FUTURE

CO₂ Emissions per fossil fuel source

- 51% of Electricity in the USA generated from coal use
- Coal accounts for over 89 % of green house gas emissions



15% replacement of coal by biomass produces a reduction of 23% in CO₂ and 12.5% in NO_x emissions DOE

BIOMASS CO-FIRING IN THE EU

- 22.1% of electrical power by 2010 in the EU will be generated from renewable energy sources.
- Biomass will play a significant role
- It should represent between 5 to 25% of all coal burned
- The EPRI is anticipating same for the US.

Biomass pellets use in EU grow at 60% CAGR

Coal Replacement Market

- World coal consumption is about 5,800 million metric tons annually (representing a biomass market of 100B\$)
- 75% is used in the generation of electricity.
- Coal-fired power plants produce approximately 1/4 to 1/3 of the 25 billion tons of the anthropogenic (man-made) CO₂ that is released annually into the atmosphere.
- Coal usage increased by 25% over the last three years according to BP Statistical Energy Review.
- It accounts for approximately 50% of all the energy used in the US; and is expected to grow further to 53% by 2030



*"The principal greenhouse gas is carbon dioxide (CO₂)
and the principal source of carbon dioxide is the burning of coal"*

The Economist

Farmland in North America and Potential for Bioenergy Production

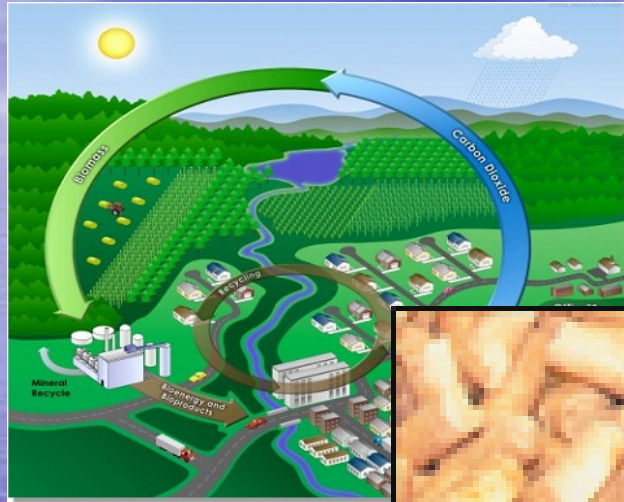
Land use	Millions of Hectares	Area for biofuel production* (million ha)	perennial grass production** (million tonnes)	Millions Barrels of Oil Equivalent (MBOE)/day
Canada	68	13.6	80.2	.69
U.S.A.	377	75.4	610.7	5.23

* *Estimated 20% land converted to bioenergy grasses*

** *Assumed bioenergy hay yields of 5.9 tonne/ha in Canada and 8.1 t/ha in the US and 18.5GJ/tonne of hay*

Total NA production potential of grass of 5.92 MBOE is equal to 7.2% of world oil supply of 82 million barrels of oil/day

ENGINEERED BIOMASS FUELS



*Our products are highly differentiated
by the patented additives
and the positive energy payback*

Products on the market presently

Bulk Pellets



Super Sac



Pallet



Bagged Pellets

