

# Energy Justice Network



*...helping communities protect themselves from polluting energy and waste technologies*

**ENERGYJUSTICE.net**

# Linguistic Detoxification

- Trash incineration →
  - Resource Recovery
  - Trash-to-Steam
  - Waste-to-Energy
  - Energy from Waste
  - Conversion Technologies
  - Pyrolysis, Gasification, Plasma Arc...
- Biomass
- Toxic Sewage Sludge → Biosolids
- Zero Waste to Landfill



The logo for the Ad Council, featuring the word "Ad" in a large, bold, serif font above the word "Council" in a smaller, bold, sans-serif font. The text is white and set against a black background.

**Ad**  
**Council**

**Occupy Earth Day:  
An Expose of the Corporate Propaganda  
Systems that Undermine Systemic Change  
Activism**

**[www.corporations.org/occupyearthday.html](http://www.corporations.org/occupyearthday.html)**

# Portfolio Standards

- Renewable / Alternative Energy Portfolio Standards:
  - Trash incineration
  - Tire incineration
  - Biomass incineration
  - Landfill gas burning
  - Pumped storage hydro
  - Fuel cells
  - Waste coal
  - Coal gasification
  - Coal mine methane
  - Nuclear power
- Renewable Fuel Standard
- MSW Portfolio Standard

# False Solutions

- **Policies**

- Cap-and-trade
- Offsets
- Carbon Tax

- **Technologies**

- Nuclear
- “Clean” coal
- Natural gas
- Biomass / Waste Incineration
  - Including landfill gas, biochar...
- Biofuels
  - Including biodiesel, ethanol, cellulosic ethanol, algae...
- Hydroelectric
- Hydrogen
- Open-loop geothermal

# Climate Policies

**WORST:** Cap and trade with giveaways

**AWFUL:** Cap and trade with auction

**BAD:** Cap and trade with dividend ("cap and dividend")

**BETTER:** Carbon tax and rebate ("tax and dividend")

**BEST:** Mandated shift to clean solutions



# Cap and Trade

- **Caps get set too high**
- **Privatizes the atmosphere, granting “rights to pollute”**
- **Highly subject to fraud and abuse**
- **Racism and classism: Trading allows reductions in one community at the expense of continued or increased pollution in others**
- **Offsets create huge loopholes for polluters to avoid reductions**
- **Benefits Wall Street trading firms and Dirty Energy industries who gets to continue business as usual**

# Cap and Trade

**“The European Emissions Trading Scheme has done nothing to curb emissions . . . is a highly regressive tax falling mostly on poor people . . . Enhances the market power of generators. Have policy goals been achieved? Prices up, emissions up, profits up . . . so, not really.”**

*Peter Atherton, Citigroup Global Markets, January 2007*

**“All generation-based utilities – winners. Coal and nuclear-based generators – biggest winners. Hedge funds and energy traders – even bigger winners. Losers . . . herm . . . Consumers!”**

*Ibid.*

# Cap and Trade

“Coal plants receive more allowances than eco-friendlier” fuels.

Deutsche Bank Research, 6 March 2007

The EU ETS “has **not** encouraged meaningful investment in carbon-reducing technologies.”

Tony Ward, Ernst & Young

“By 2015, the UK’s electricity system will look **remarkably similar** regardless of assumptions on how the EU ETS plays out.”

IPA consultants

“What, exactly, are we trading in?”

Environmental Data Services Report, 2005

# Cap and Trade

Through 2012, CDM [offset] credits “will easily exceed the shortage of carbon emissions permits within Europe, making it cheap for European firms to avoid cutting their own emissions at all.”

*Energy consultants Wood MacKenzie*

*25 September 2007*

**“Our people are sick and dying from the refineries. Trading schemes knowingly concentrate pollution, exacerbating existing ‘hot spots’ in our communities of color. You can’t buy us off with promises of parks and asthma education programs, and then somehow think we’ll be OK with subjecting our children to increased cancer risk.”**

*Dr. Henry Clark,  
West County Toxics Coalition*



# Offsets

**Carbon offsets can't be either measured or enforced**

“Offsets are an imaginary commodity created by deducting what you hope happens from what you guess would have happened.”

Dan Welch, *Ethical Corporation*

# Carbon Taxes – Not Good Enough

- Doesn't guarantee any specific reductions in a relevant time frame
- Punishes just *part* of what falls on the dirty energy side of the energy spectrum – putting false solutions at a competitive advantage:
  - nuclear power, “clean” coal, natural gas, incineration of trash, trees, toxic landfill gases and other “biomass”
  - emissions are falsely assumed to be lower than coal, or even zero
- No guarantee that a carbon tax will move us to clean solutions rather than differently dirty false solutions

# Climate Policies

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# Climate Solutions

- 1) An Energy Efficiency Portfolio Standard that reduces energy demand by 75% in 30 years, across all three energy sectors: transportation, heating and electricity.
- 2) A Clean Energy Portfolio Standard that meets the demands of the other 25% with wind, solar and ocean power (and perhaps some small-scale micro hydro or closed-loop geothermal) within the same time frame.
- 3) Shift the \$74 billion in annual dirty energy subsidies plus at least half of the military budget (a major oil and gas subsidy) to clean solutions, making the above shift possible.
- 4) Set a national “zero waste” policy, starting with a national 75% waste reduction, recycling and composting goal. Minimizing waste can reduce 37% of U.S. GHG emissions
- 5) Adopt a climate-friendly sustainable agriculture program, focusing on making all food organic, localizing food production systems and getting people to eat lower on the food chain. This can reduce over 20% of GHG emissions.

And, finally:

- 0) Public campaign financing: As long as our politicians can legally be bribed by corporate interests, no real solutions will be “politically realistic.” Clean energy needs clean elections!

# Worse than Coal...

## Nuclear:

- single plant can make large areas uninhabitable
- so expensive, it sucks up all the funding for real solutions

## Natural Gas:

- greenhouse gas emissions worse due to methane leakage

## Landfill Gas to Energy:

- greenhouse gas emissions worse due to methane leakage
- mercury exposure worse due to methylmercury

## Trash Incineration:

- greenhouse gas emissions 2.5 times worse than coal
- all emissions worse than coal

## Biomass Incineration:

- greenhouse gas emissions 50% worse than coal

# “Transition” Fuels

- **No time / need to wait**
- **Must invest directly in real solutions**
- **Investment dead end**
- **Creates barrier to transition**

**[www.energyjustice.net/solutions/transition.html](http://www.energyjustice.net/solutions/transition.html)**

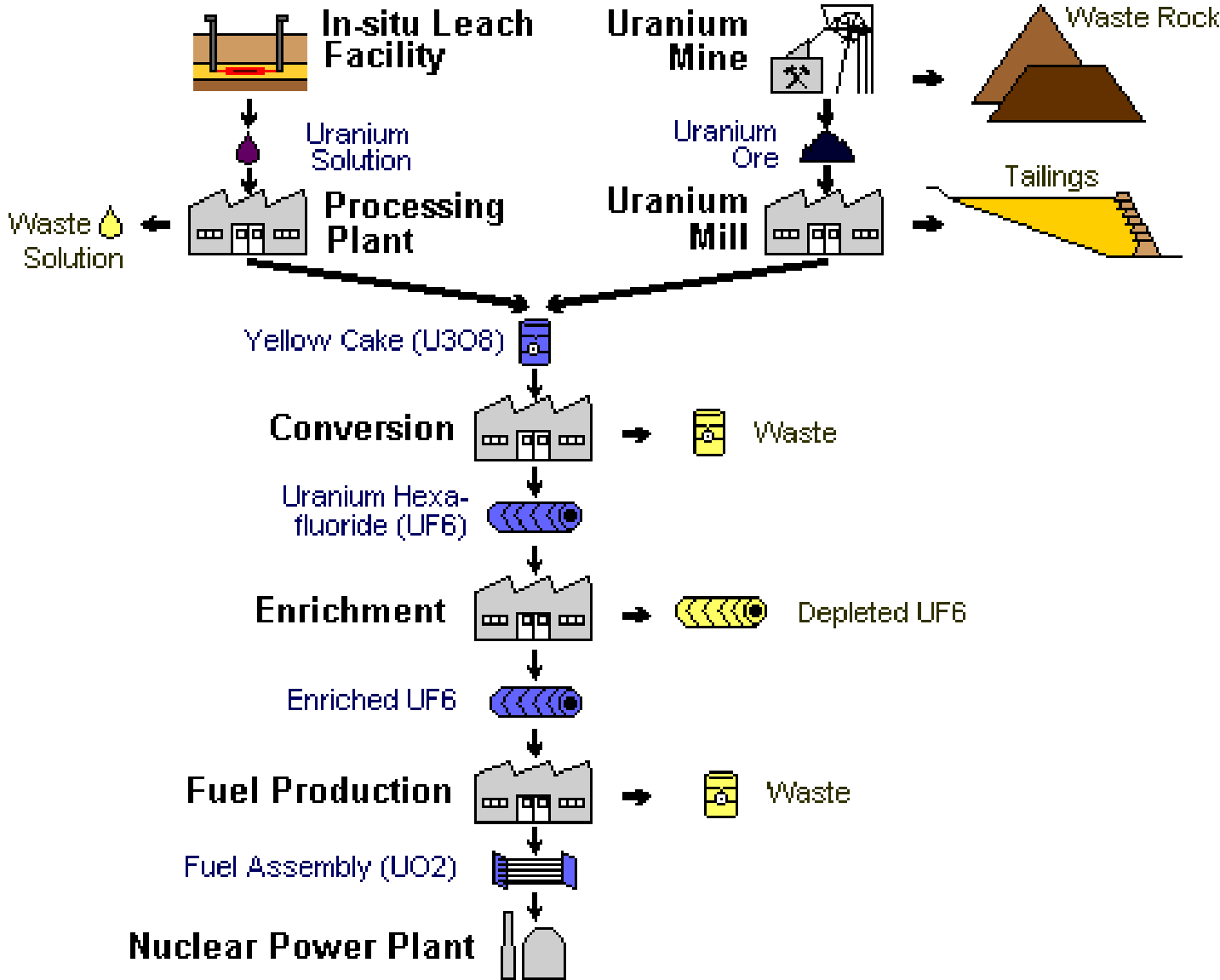
# Nuclear Power

- Most Racist
- Most Expensive
- Most Dangerous
- Uranium = foreign source of energy
- Global warming pollution
- Reactors release nuclear pollution
- Accidents / Terrorism Risk
- Waste Containment is Impossible
- Not Enough Uranium for Nuke Revival



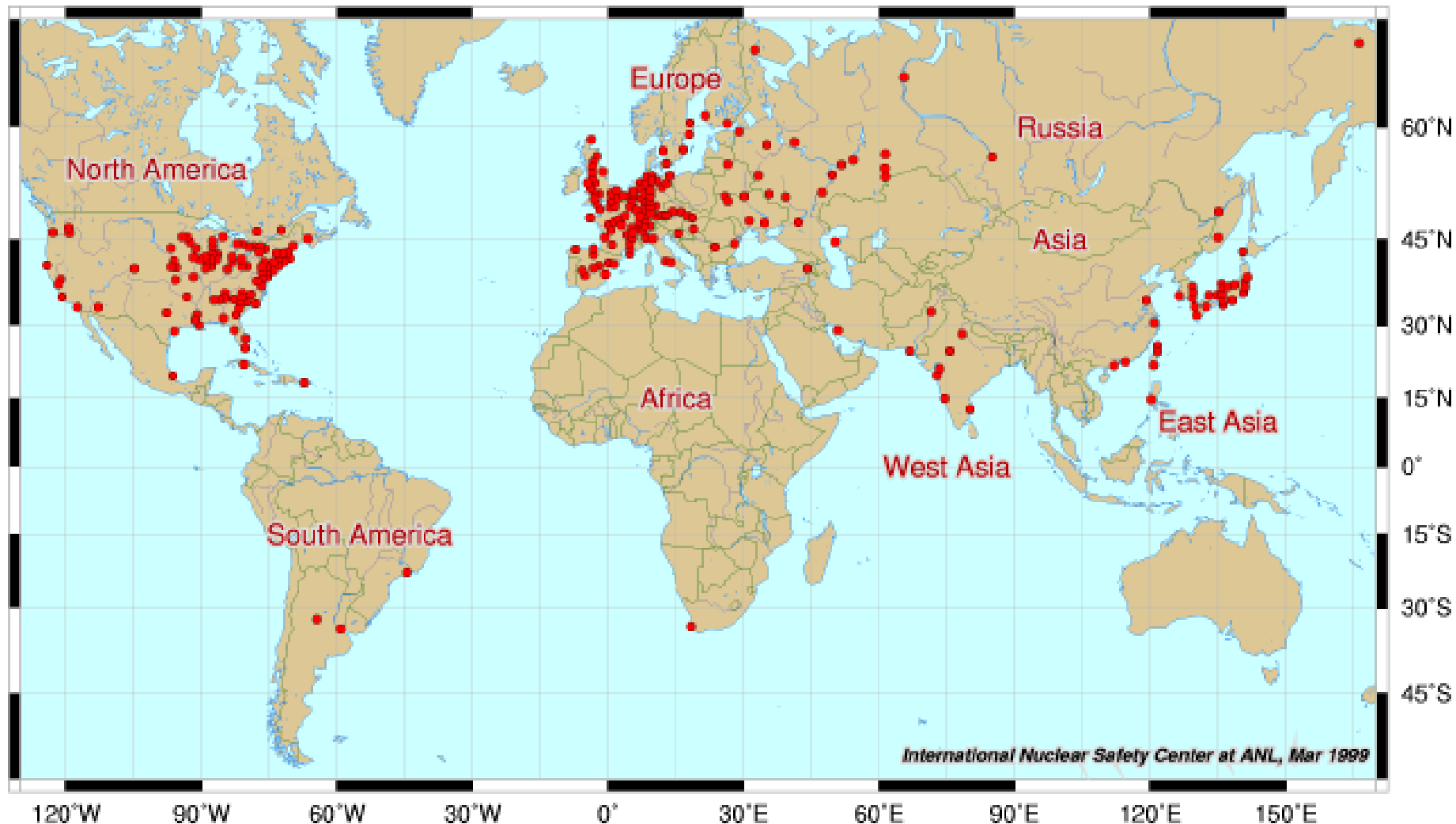
Mining → Milling → Conversion → Enrichment  
→ War  
→ Fuel Fabrication → Reactor → Waste Disposal

# Nuclear Fuel Production Chain



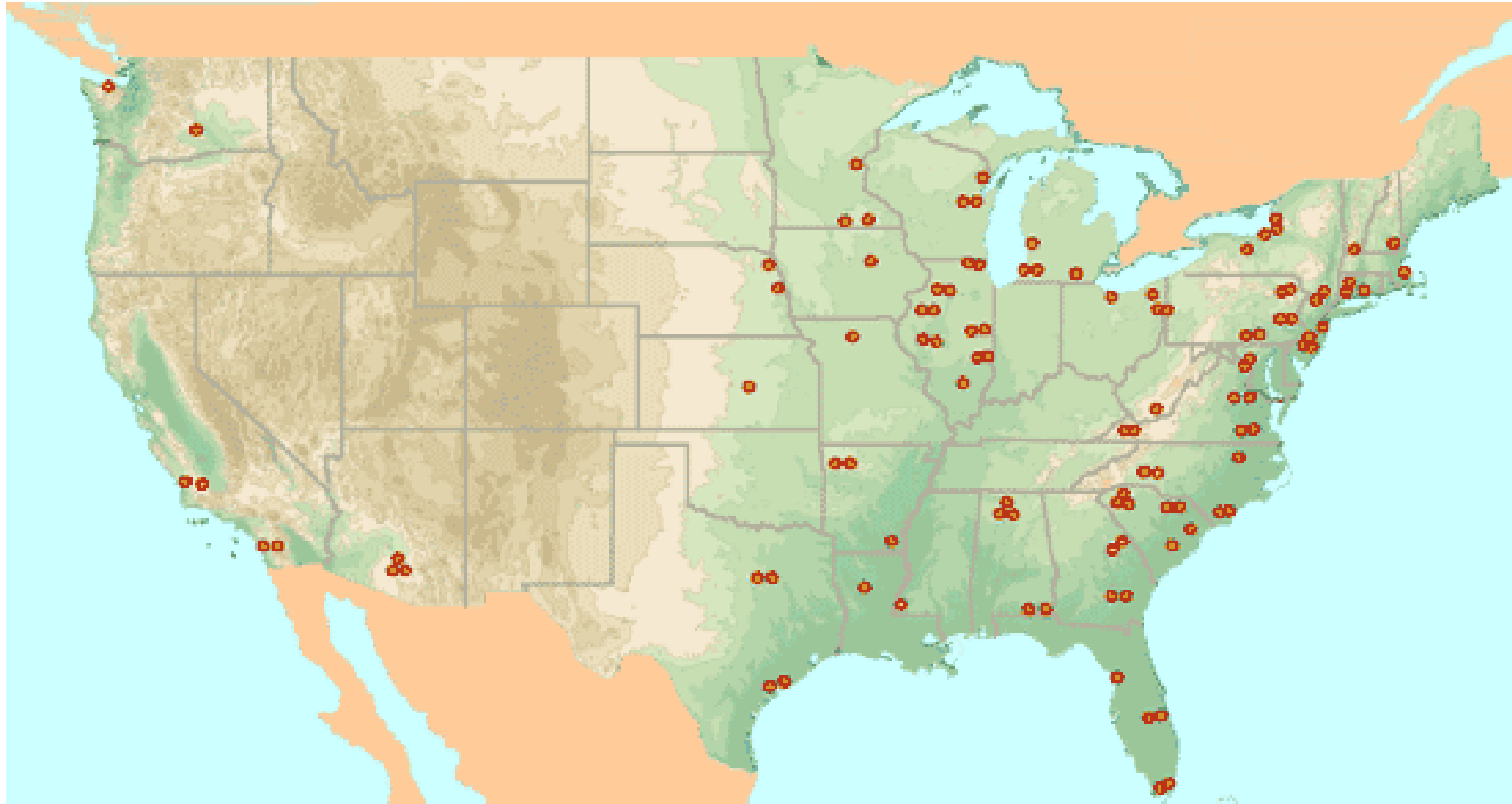
# Nuclear Power

## Existing Reactors – World Map



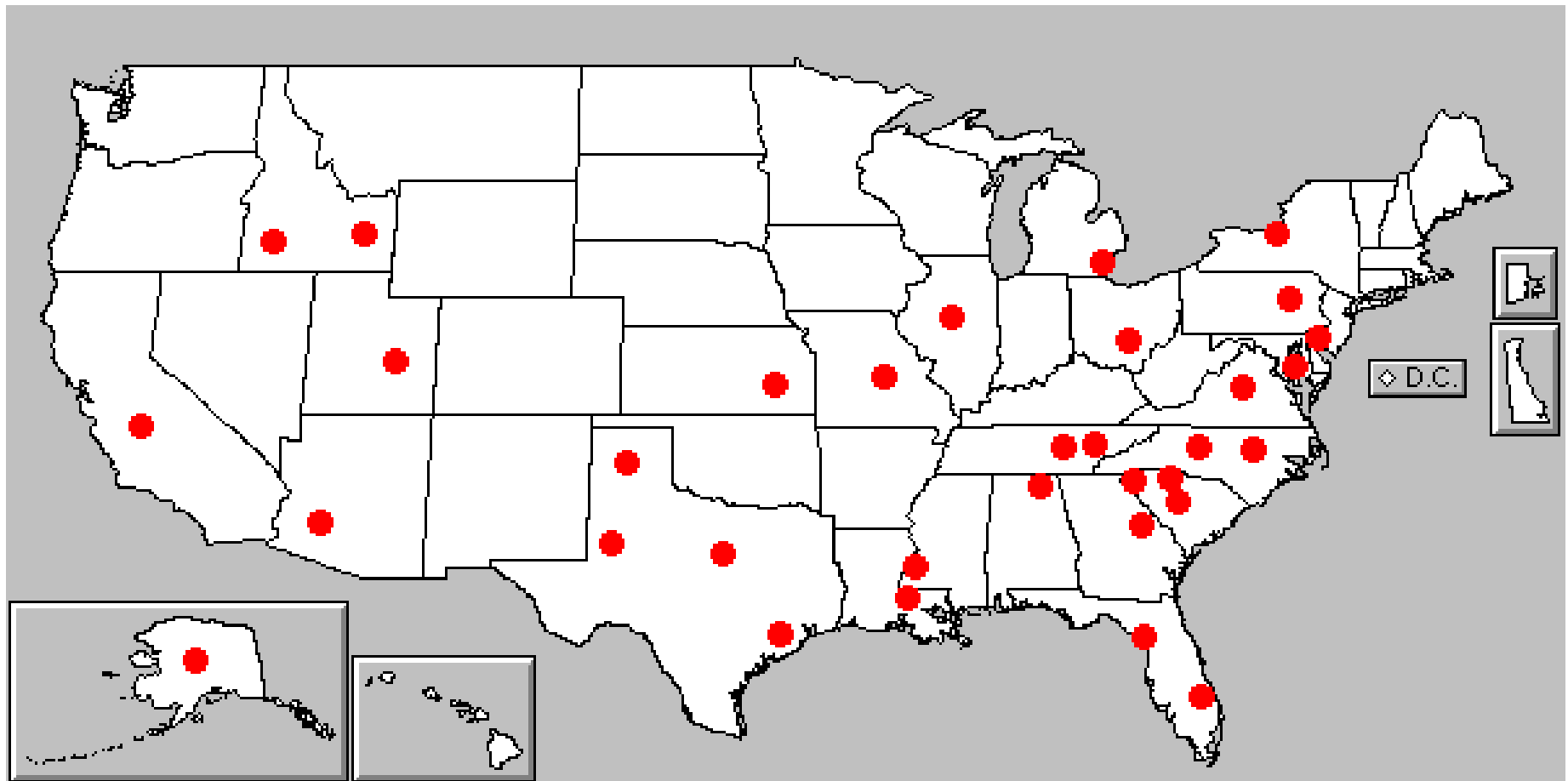
# Nuclear Power

## Existing Reactors – U.S. Map



# Nuclear Power

## Proposed New Reactors



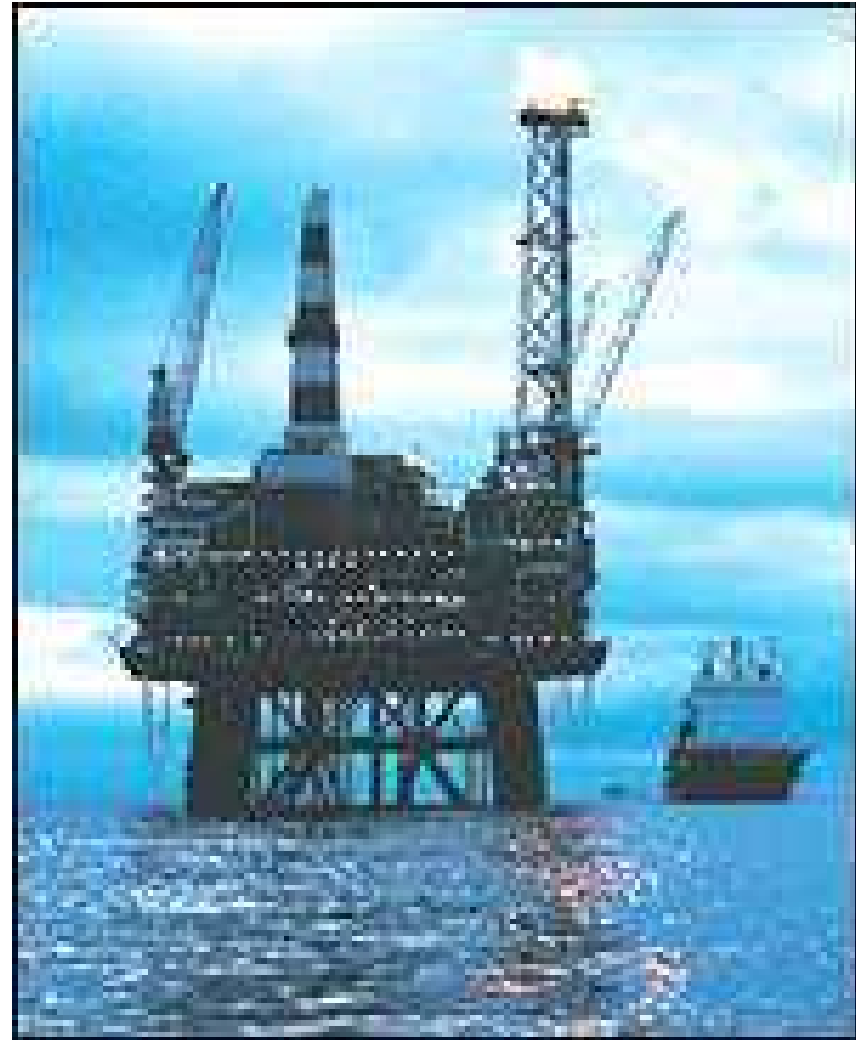


# No Such Thing as Clean Coal!

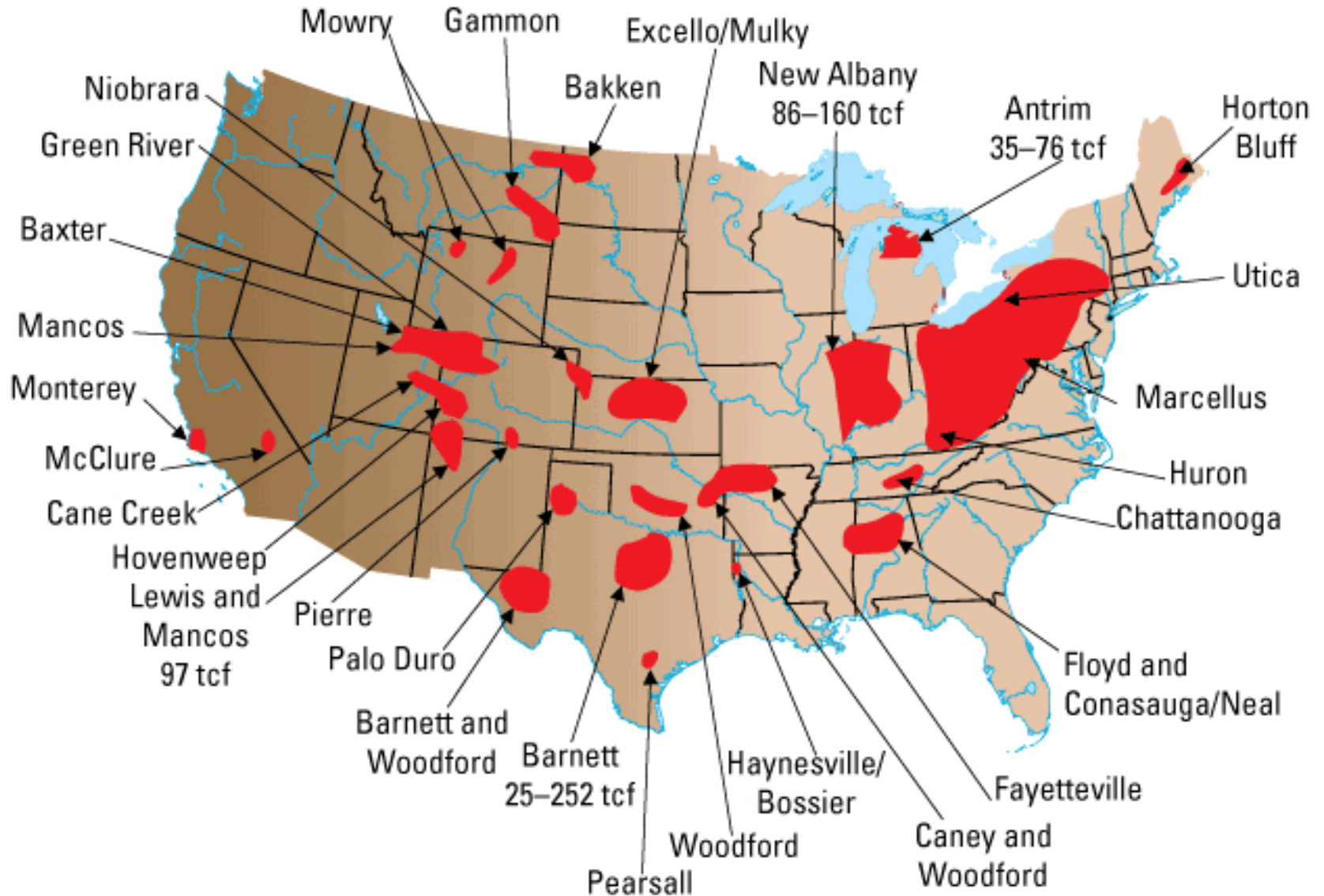
- Relies on the same damaging mining practices
- Still releases wide range of pollutants, though some may be transferred into the ash or may be released in different amounts
  - Fluidized Bed Combustors are WORSE for global warming and cancer-causing PAH pollution than normal burners
- Wider range of fuels can be burned, leading to use of more contaminated fuels (waste coal, trash, tires...)
- Use of fancier pollution controls is leading to increased use of high-sulfur coals
- Solid wastes (ash/slag) still produced
- More expensive: investment dollars should go to clean energy!
- Carbon sequestration is a dangerous pipe dream

# Natural Gas

- Conventional drilling still harms the Gulf of Mexico, Canadian communities
- Fracking of shale gas destroys drinking water resources and poisons communities
- Leaks in pipelines and extraction cause natural gas to be dirtier for global warming than coal!



# Natural Gas – Shale Gas



# Biomass / Incineration



# Biomass / Incineration

## Includes...

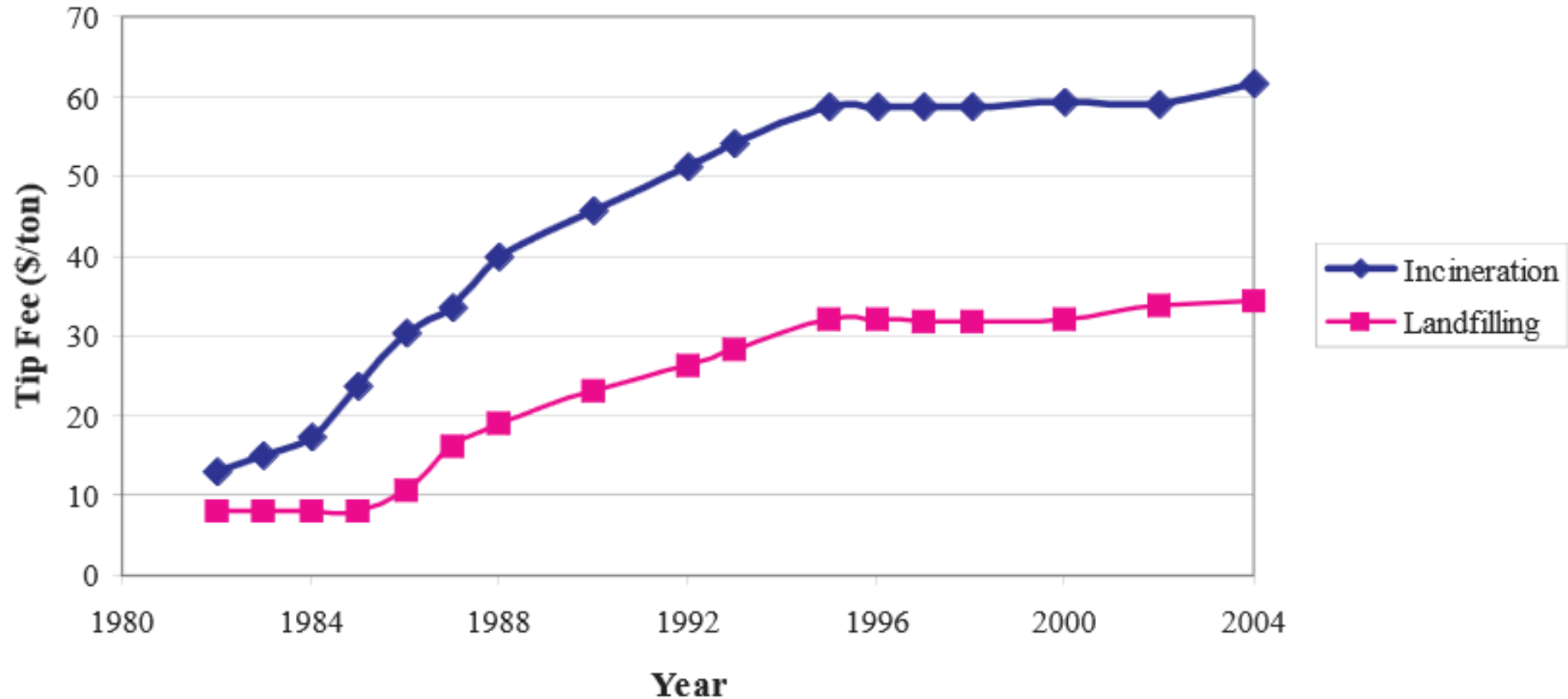
- Municipal Solid Waste (Trash)
- Tires
- Sewage Sludge
- Construction / Demolition (C&D) Wood Waste
- Animal Factory Wastes
- Paper & Lumber Mill Wood Wastes
- Agricultural Crop Residue
- Energy Crops
- Forest Cutting
- "Urban" Wood Waste (tree trimmings)
- Landfill Gas
- Digester Gas

# Biomass / Incineration

- 50%+ worse than coal in global warming pollution
- Emits toxic dioxins, mercury, arsenic, PAHs, etc.
- One of the most polluting energy technologies per unit of energy produced (little energy is produced)
- Competes with source reduction, composting and recycling
- Destroys recyclable resources, forests, farm lands...
- Biotechnology
- Most expensive form of energy
- “Green” biomass (energy crops) are foot in the door for more toxic waste streams

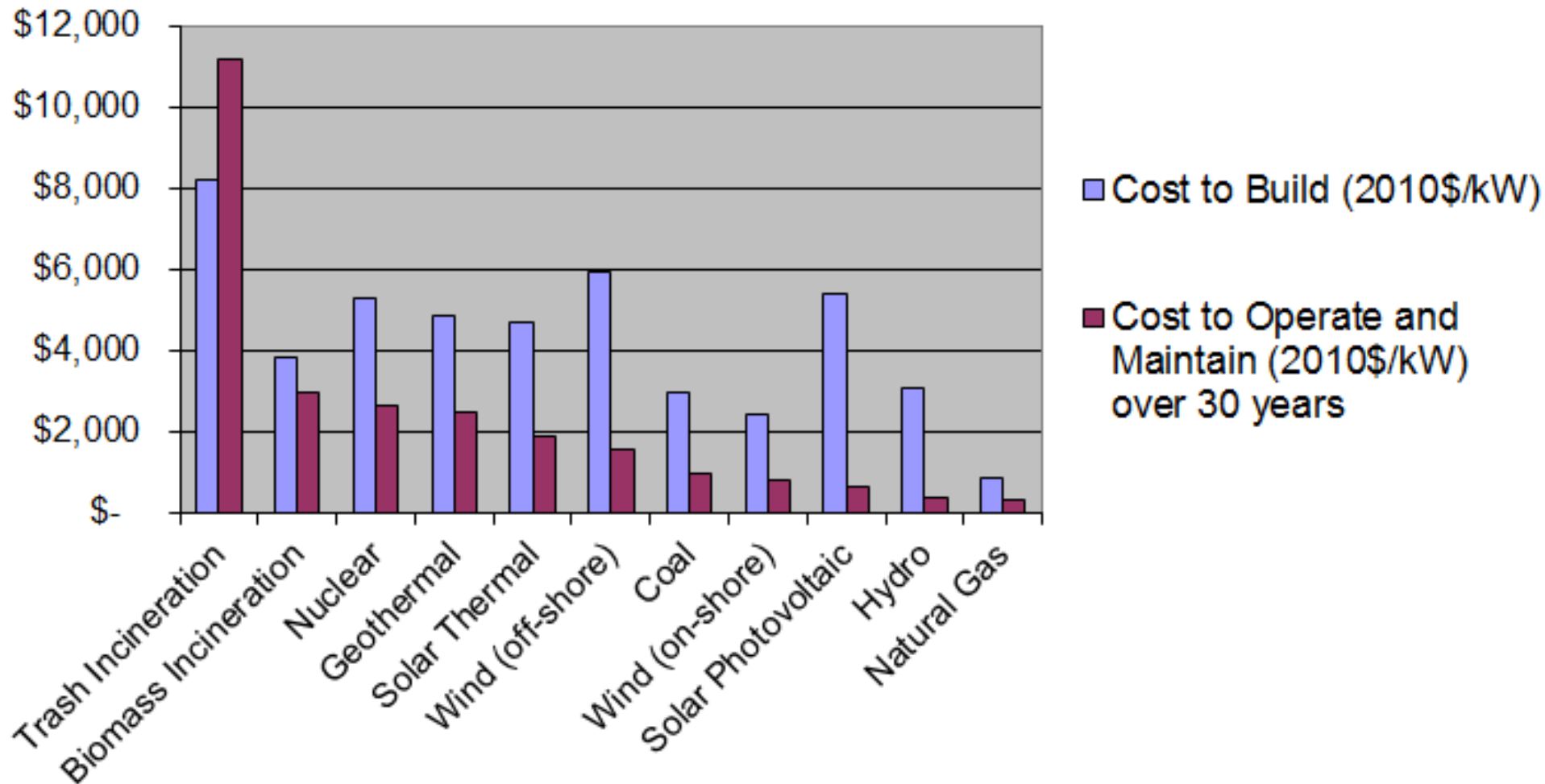
# Most Expensive Way to Manage Waste

Figure 3. Landfill and Incinerator Tip Fees



Source: National Solid Waste Management Association 2005 Tip Fee Survey, p4..  
[www.environmentalistseveryday.org/docs/Tipping-Fee-Bulletin-2005.pdf](http://www.environmentalistseveryday.org/docs/Tipping-Fee-Bulletin-2005.pdf)

# Most Expensive Way to Make Energy



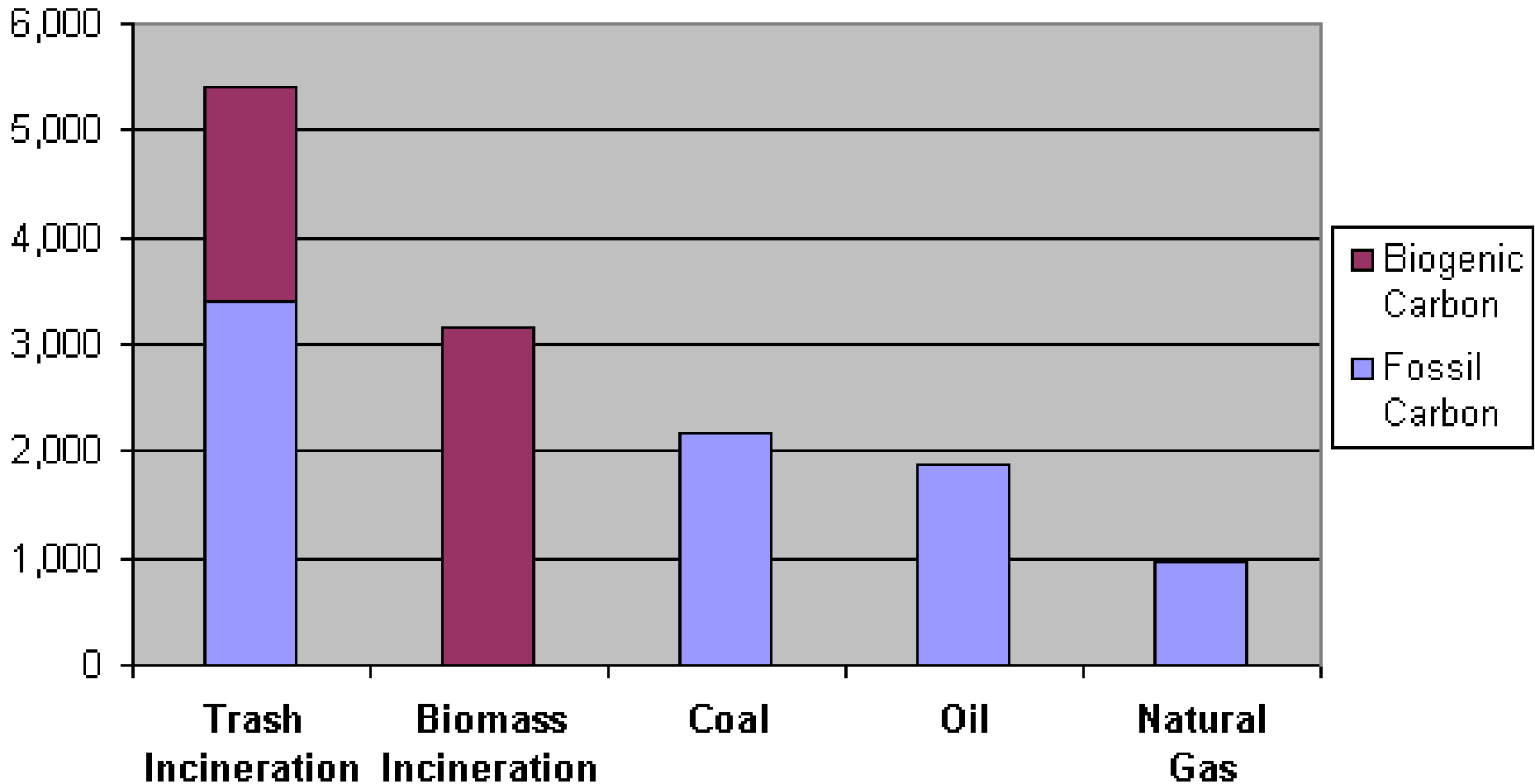
Source: U.S. Energy Information Administration, "Updated Capital Cost Estimates for Electricity Generating Plants," November 2010, p.7, Table 1. [www.eia.gov/oiaf/beck\\_plantcosts/](http://www.eia.gov/oiaf/beck_plantcosts/)



# Global Warming Pollution

## Smokestack CO2 Emissions from U.S. Power Plants

in pounds of CO2 per unit of energy produced (lbs/MWh)



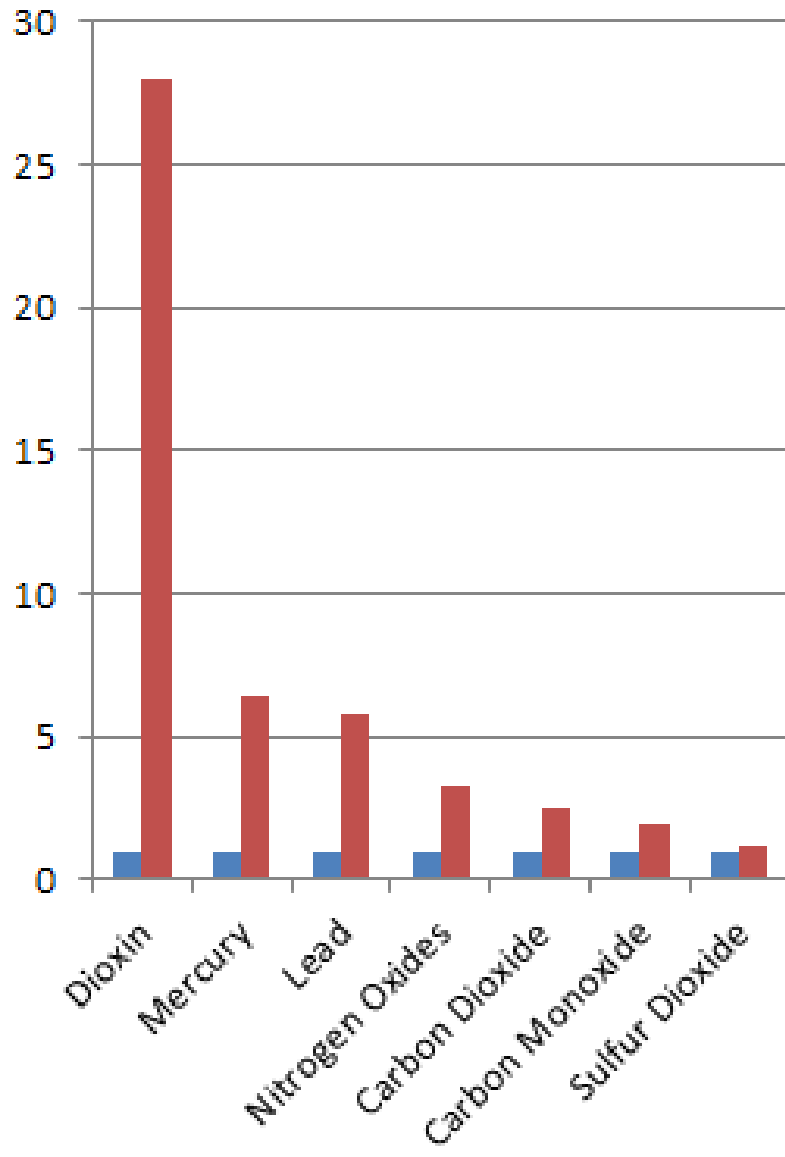
Source: U.S. EPA eGRID 2012 Database

# Incineration Worse than Coal

## Toxic Air Emissions are...

- **Dioxins / furans** (28 times as much)
- **Mercury** (6-14 times as much)
- **Lead** (6 times as much)
- **Nitrogen Oxides (NO<sub>x</sub>)** (3.2 times as much)
- **Carbon Monoxide (CO)** (1.9 times as much)
- **Sulfur Dioxide (SO<sub>2</sub>)** (20% worse)
- **Carbon Dioxide (CO<sub>2</sub>)** (2.5 times as much)

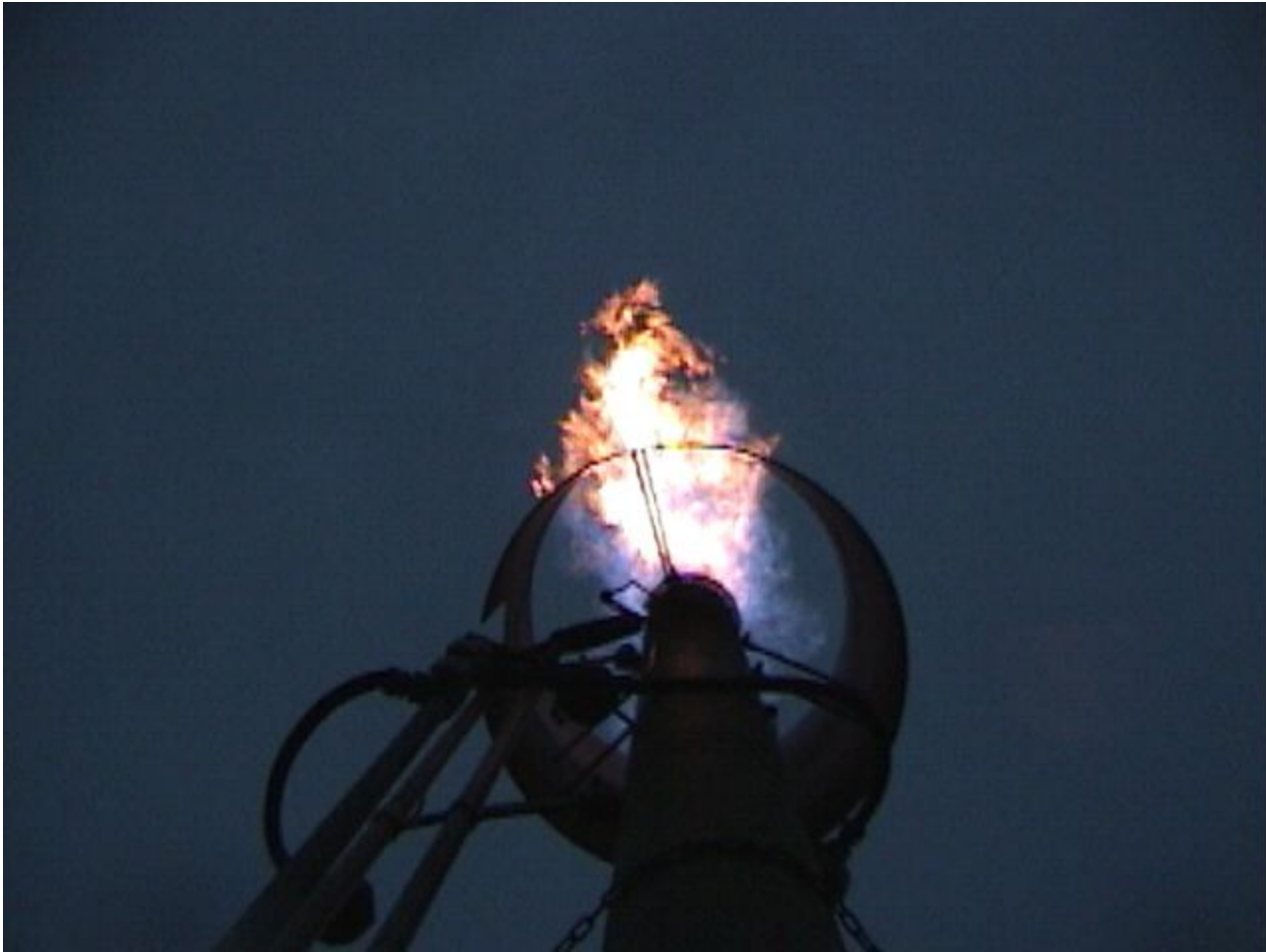
# Incineration Worse than Coal



**Ratios of pollution levels emitted per unit of energy produced by U.S. coal power plants and trash incinerators**

■ Coal  
■ Trash Incineration

# Landfill Gas



[www.energyjustice.net/lfg/](http://www.energyjustice.net/lfg/)

# Landfill Gas

- Full of toxins, including mercury
- Most gas is never captured, poisons community
- Burning for energy is worse for global warming than flaring
- Credits for burning landfill gas encourages continued dumping of organics in landfills (which should be composted)



# Ethanol

- Biotech corn / herbicides
- Water use
- Imported natural gas-based fertilizer
- Polluting refineries
- Waste products used as animal feed, attracting factory farms
- More money for fewer miles/gallon
- Uses about as much energy as it produces
- Competes with food for land



# Hydroelectric





# Hydroelectric

- 7% of electricity
- Mostly used in Pacific Northwest
- Huge new dams proposed in Manitoba
- Displacement of native people
- Methane emissions
- Mercury releases
- Not much potential





# Energy Justice Network



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