

Campuses Beyond Coal: Leading the Way Toward a Clean Energy Future

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UCEAO/OIS "Materials and Energy: The Building
Blocks for Ohio's Economic Future"

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Hyatt Regency, Columbus, OH



ING COAL
=
0 deaths
year

UNC COAL PLANT
LARGEST
POLLUTER in
ORANGE COUNTY

COAL →
☠️ mercury
arsenic, lead
POLLUTION

JNC'S
MIT S 55
WORTH
CO₂





HOMEBREW FEST
PRESENTED BY
OU BREW CREW &
ALCHE

SAT. OCT 3
2-6 PM
McCracken Field

Come and enjoy
home brewed beer

Music, Displays,
& home brews

GOALS =
Dirty Business





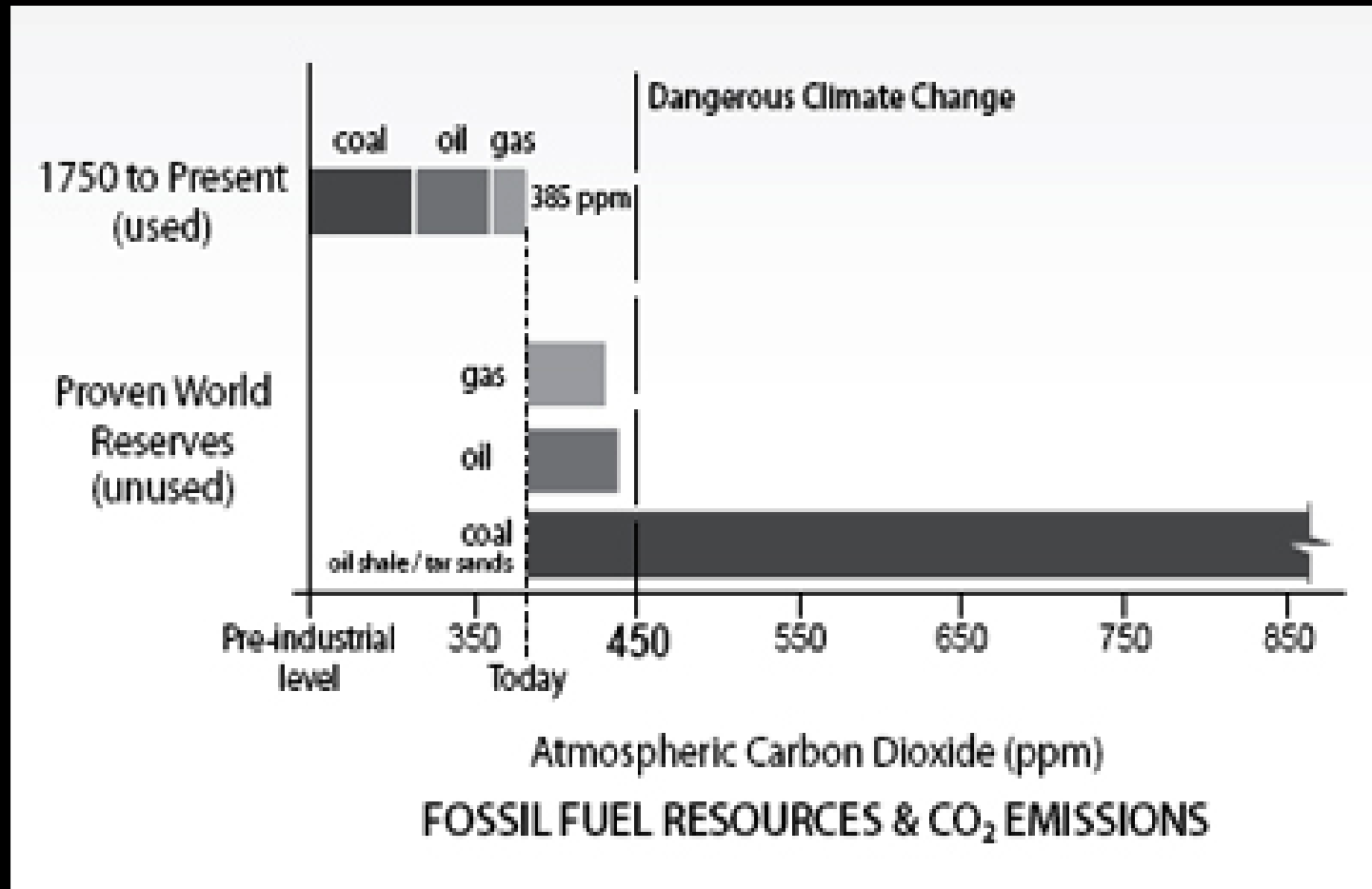
Sierra Club's Beyond Coal Campaign:

Ending coal's contribution to global warming by the year 2030.

Three overall goals:

- End the rush to build new coal plants;
- Transition the existing fleet of coal plants to clean energy; and
- End egregious coal mining practices and keep American coal out of international markets.

Coal: Pre-sequestered carbon



The Problem

- Over 60 universities in 19 states that still heat and/or power campus buildings with on-site coal plants
- Legitimate financial and technical barriers to moving beyond coal
- Entrenched political opposition to moving beyond coal

The financial case



After we close the coal industry's loopholes, burning coal on campuses won't be cheaper than other options.

Coal industry loopholes

- Coal ash regulation – expected April 2010
- GHG tailoring rule – expected May 2010
- PM 2.5 increment rule – expected June 2010
- Ozone NAAQS reconsideration – expected Sept. 2010
- Clean Water Act 316(b) regulation – to begin consideration in Sept. 2010



Moving Beyond Coal: Ball State

- Currently operates 4 coal boilers dating back to 1940s
- Within two years will shut down 2 of them, replaced by geothermal
- Within 7 years will shut down remaining 2
- \$5 million extra capital cost for geothermal
– minus \$2 million/year in fuel savings

Moving Beyond Coal: UW-Madison

- Result of Sierra Club lawsuit earlier this decade
- UW-Madison strongly resisted moving beyond coal
- We won – UW was violating the Clean Air Act. Rather than install scrubbers, we worked with them to transition off coal
- Everyone wins

Moving Beyond Coal: Cornell

- Long history of efficiency planning – especially lake water cooling system installed four years ago
- Committed in January to converting from coal to 100% natural gas

Are solutions impact-free? Of course not

- Biomass



- Natural Gas



- Geothermal



Impacts: Biomass

- Scale
- Sourcing
- Air emissions
- Ash
- Difficult to calculate carbon offsets
- Potential as economic driver for harmful industries or practices

Natural Gas

- Carbon emissions
- Extraction (especially 'fracking')
- Non-renewable
- Some NO_x
- Pipelines

Geothermal

- Parasitic energy load
- Some concern with metal/mineral contamination from open-loop
- Some concern with seismic impact
- Some aesthetic impact





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