

MICHIGAN'S COAL RUSH

UPDATE OCTOBER 29 2008



Eight Coal Plant Proposals

- Northern Michigan University, Marquette
- Wolverine Power Cooperative, Rogers City
- Holland Board of Public Works, Holland
- Consumers Energy, Essexville
- Mid-Michigan Energy, Midland
- Lansing Board of Water and Light, Lansing
- M & M Energy, Alma
- Tondu Corporation, Filer Township



Existing Coal Plant Impacts in Michigan

- Annual Emissions:

- 300,000 tons of SO₂
- 125,000 tons of NO_x
- 32% of Michigan's total Greenhouse Gas emissions
- nearly 2,000 pounds of mercury
- elevated fine particulate matter (PM 2.5 and PM 10)

- Health Impacts:

- 981 deaths
- 1,700 heart attacks
- 115 lung cancer deaths
- 25,000 asthma attacks
- 1,000 hospital admits
- 700 cases bronchitis
- 1,500 emergency room visits
- lost work & school days



Additional Pollution Proposed in Permit Applications

Proposed Annual Emissions compiled from air permit to install applications or draft permits, all based on 100% coal. CO2 estimate sources noted.

	Wolverine Power Cooperative, Inc.	Holland Board of Public Works	Consumers Energy	Mid-Michigan Energy	Northern Michigan University	TOTAL PROPOSED
Capacity	600 MW	78 MW	930 MW	750 MW	10 MW	2,368 MW
Sulfur Dioxide (SO2)	1,344 tons	478 tons	2,154 tons	2,675 tons	125 tons	6,776 tons
Nitrogen Oxides (NOx)	2,647 tons	342 tons	1,820 tons	1,486 tons	90 tons	6,385 tons
Mercury (Hg)	47 pounds	8.4 pounds	64 pounds	108 pounds	5 pounds	232.4 pounds
Particulate matter (total)	725 tons	57 tons	911 tons	743 tons	27 tons	2,463 tons
Carbon Dioxide (CO2)	3,500,000 tons (Environmental Law and Policy Center)	499,200 to 624,000 tons (Architecture 2030 formula)	4,210,701 tons (Sierra Club)	4,875,000 tons (Sierra Club)	64,000 to 80,000 tons (Architecture 2030 formula)	13,148,901 to 13,289,701 tons



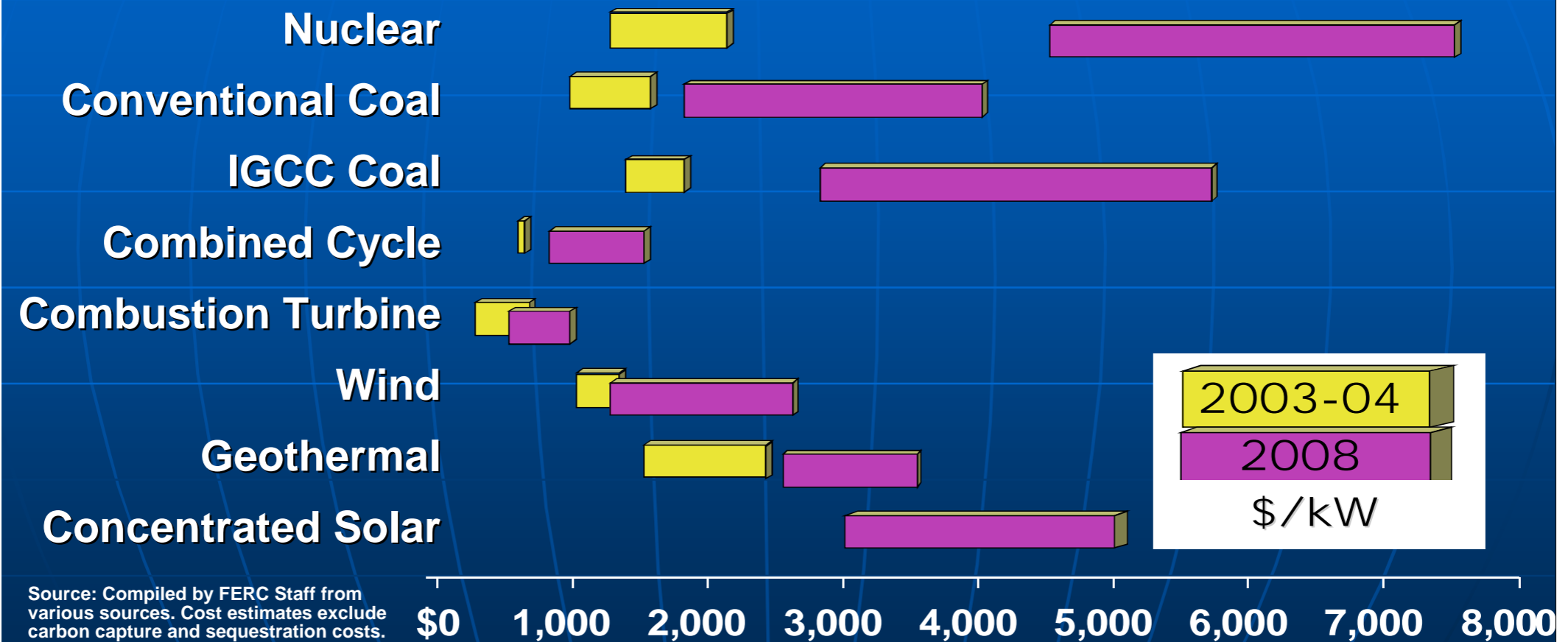
Coal Plants: A Risky Business

Michigan can't afford to take this risk

- 72 Coal Plant Projects canceled nationwide
- JP Morgan, Morgan Stanley and Citibank established “Carbon Principles” recognizing the risks of investing in coal
- Coal plants take dollars from renewables and efficiency
- Coal and nuclear will cost customers much more than renewables and efficiency



Estimated Cost of New Generation



“Increasing Costs in Electric Markets,” presentation to Federal Energy Regulatory Commission (FERC)
June 19, 2008



Michigan Proposed Coal Plant Air Permit Status

- 1 permit issued and under appeal
- 1 out for public comment
- 3 applications awaiting public comment periods
- 3 not yet submitted



Wolverine Power Cooperative, Inc.

Clean Energy Venture

Hearings 10/29 & 10/30 in Rogers City
Public Comment will be re-noticed by DEQ

- Wholesale electric provider to 4 customer owned cooperatives
- 600 MW
- Circulating Fluidized Bed
- Coal, petroleum coke, <20 % biomass (permit #s based on 100% coal)
- Estimated cost: \$1.2 to 2 Billion



Proposed location near Rogers City in limestone quarry near Lake Huron

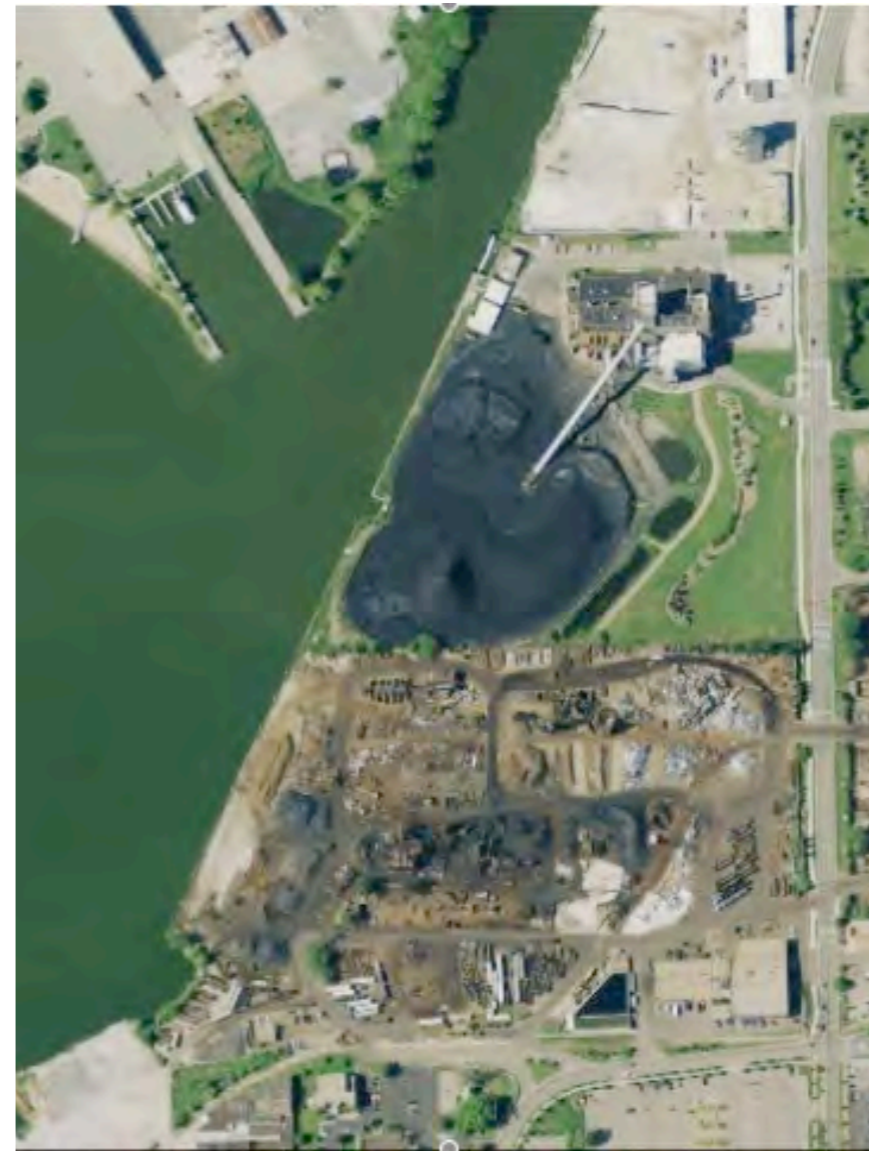


Holland Board of Public Works

James DeYoung Power Plant

Expected public notice period mid-November

- Public municipal utility
- 78 MW replacing 11 MW boiler (50 MW existing capacity will continue)
- Circulating Fluidized Bed
- Coal, petroleum coke, biomass
- Estimated costs \$250 million
- Seeking DOE grant for Carbon Capture and Storage pilot



Current and proposed location on Lake Macatawa



Consumers Energy Karn/Weadock Plant

Pending Air Quality Permit to Install
Expected public notice period early 2009



- Regulated Private Utility
- 930 MW
- Advanced Supercritical Pulverized Coal (ASCPC)
- Estimated cost \$2.3 billion

Existing Karn/Weadock Plant and proposed site at mouth of the Saginaw River



Mid-Michigan Energy, LLC LS Power Development, LLC

Pending Air Quality Permit to Install
Expected Public Notice Early 2009

- Private Merchant Power
- 750 MW
- supercritical or ultrasupercritical pulverized coal



Proposed site on Tittabawassee River, Midland



Lansing Board of Water and Light

No air permit submitted yet



Erickson Station,
Delta Township,
site of proposed new plant



Eckert Station, Lansing

- Public municipal utility
- 350 MW replacing part of Eckert Station
- Circulating Fluidized bed
- Coal and <30% biomass
- Estimated cost \$1 billion

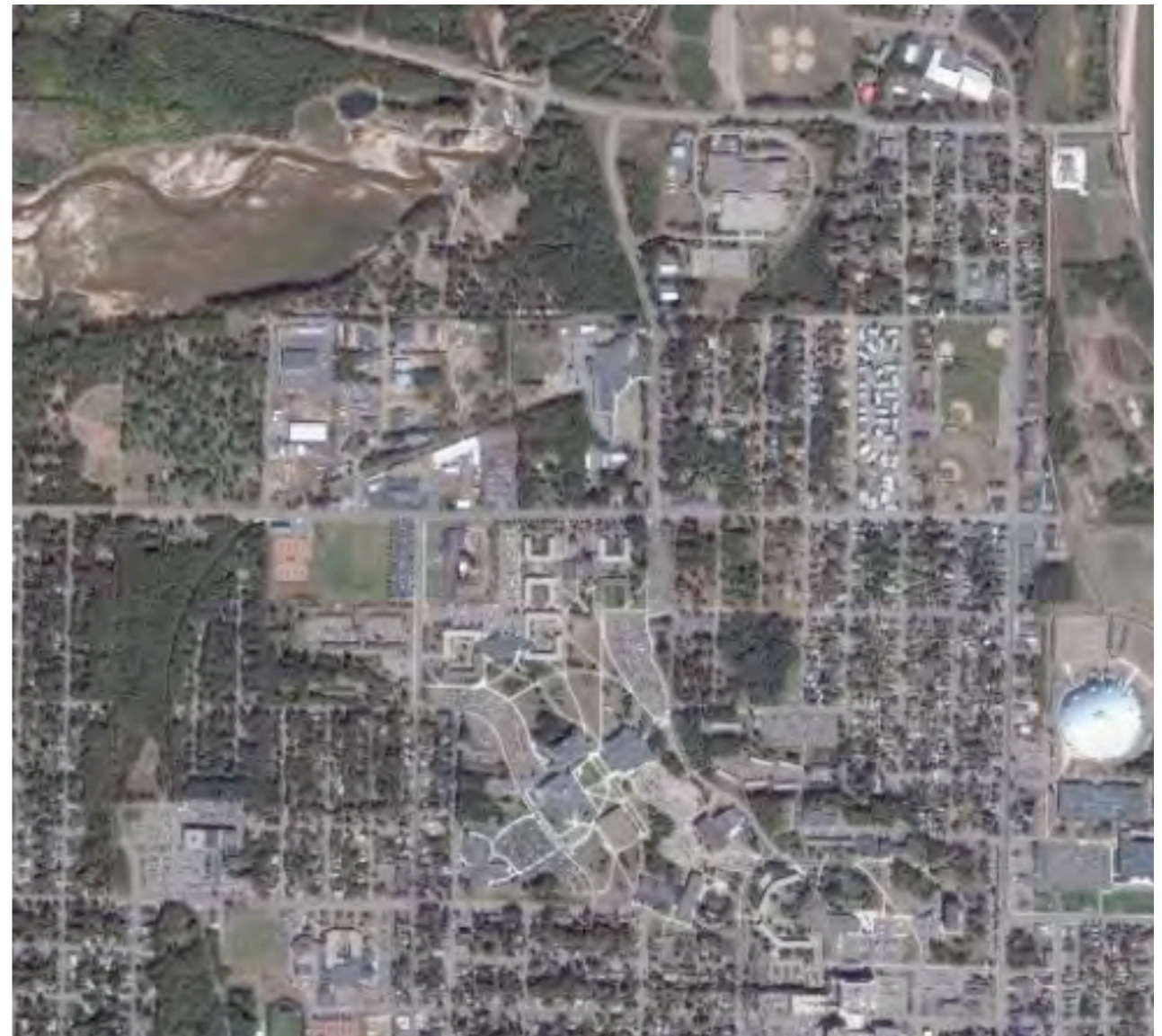


Northern Michigan University Ripley Heating Plan

Permit issued by DEQ

Appealed by Sierra Club to US EPA Environmental Appeals Board

- Public University
- 10 MW
- Coal, wood
- \$55,000,000
Legislative
appropriation
sought



Northern Michigan University campus in Marquette, where two other coal plants are in operation



Other Michigan Coal Plant Proposals:

- **M & M Energy Park, Alma**

<http://www.mandmenergy.com>

- **Tondu TES Filer City Station, Filer Township**

www.record-eagle.com/local/local_story_301090015.html





A Greener Energy Future for Michigan



Control Global Warming Emissions & Air Pollution

- Governor Granholm must act to require regulation of CO₂ and other greenhouse gas emissions before any new coal plants are approved
- Michigan DEQ must deny proposed air quality permits because of excessive pollution, threats to public health and natural resources



Choose Green Energy Jobs for Michigan, not dirty coal

- **Blue Green Alliance (2007): 34,777 MI Jobs** (wind and solar components, biomass and geothermal)
- **American Council for an Energy-Efficient Economy (12/2007): 3,900 to 10,000 MI jobs** (energy efficiency)
- **Center for American Progress (9/2008): 61,394 MI jobs** (includes transit, building retrofit, smart grid, wind power, solar power and advanced biofuels)



Additional Clean Energy Now contacts

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