

Emerging Biomass Issues and Value-Added Facilities



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Bioeconomy Pop Quiz

1

Which of the following is a biofuel?

- | | |
|-----------------|-----------------|
| l. Ethanol | t. Corn Stalks |
| o. Biodiesel | h. Solid Waste |
| t. Wood Pellets | i. Sawdust |
| s. Cow Poop | n. Butcher Guts |
| o. Firewood | g. Black Liquor |
| f. Wood Chips | s. Tree Bark |



Bioeconomy Pop Quiz

2

What can be used to make ethanol?

t. Wood

r. Corn

e. Wheat

e. Sugar Cane

s. Jim Beam

Should we?



Bioeconomy Pop Quiz

3

‘Bioeconomy’ means what?

- c. Wind Generators
- h. Solar Panels
- a. Ethanol
- n. Wood Energy
- g. Methane Digesters
- e. Algae Farms
- s. Something to argue about



Bioeconomy Pop Quiz

4

Which technology is least efficient?

w. Coal Electricity
h. Corn Ethanol
o. Wood Ethanol

k. Government
n. Cell Phones
o. District Energy
w. Gas from Oil
s. CHP Utilities



Bioeconomy Pop Quiz

5

Which fossil fuel is in shortest supply?

e. Gas

n. Dirty Coal

e. Clean Coal

r. Chinese Coal

g. Petroleum

y. Petrified Wood



Bioeconomy Pop Quiz

6

What are the odds cars will be fueled with gasoline in 25 years?

Y. High

æ. Low

Q. In Between

z. Who cares?



Bioeconomy Pop Quiz

7

What makes something 'green'?

- f. Reading in the back of the car
- r. Forgetting about leftovers
- o. Salespeople selling stuff
- g. Political correctness police
- s. The Sierra Club



Bioeconomy Pop Quiz

8

Who uses more energy?

- a. University of Michigan
- b. University of Wisconsin
- c. Republic of Mali
- d. Children aged 4 to 10



Bioeconomy Pop Quiz

9

Which building material is the most environmentally friendly?

s. Concrete

m. Legos

a. Steel

r. Wood

t. Whatever LEEDs says



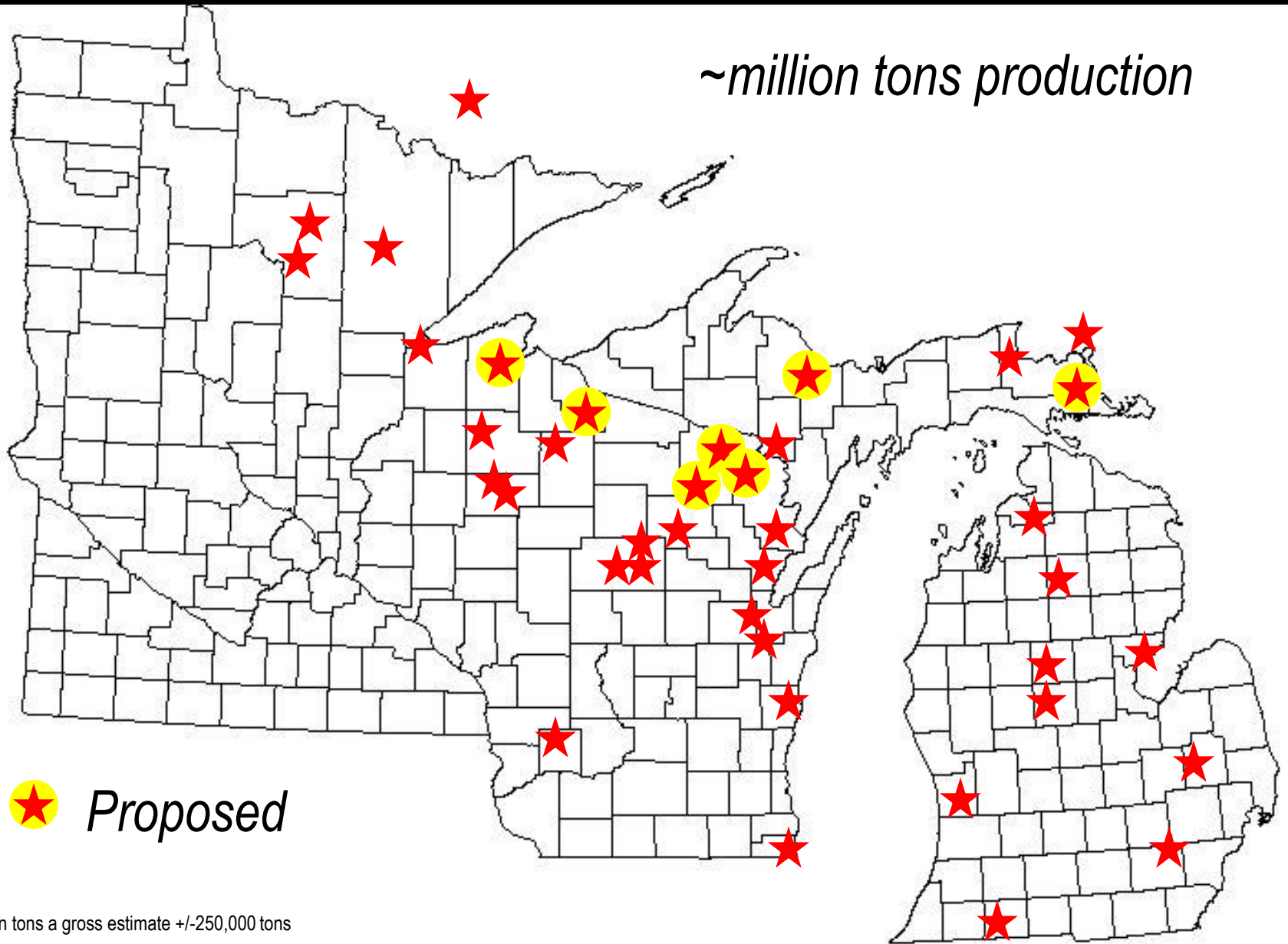
Bioeconomy Pop Quiz

10

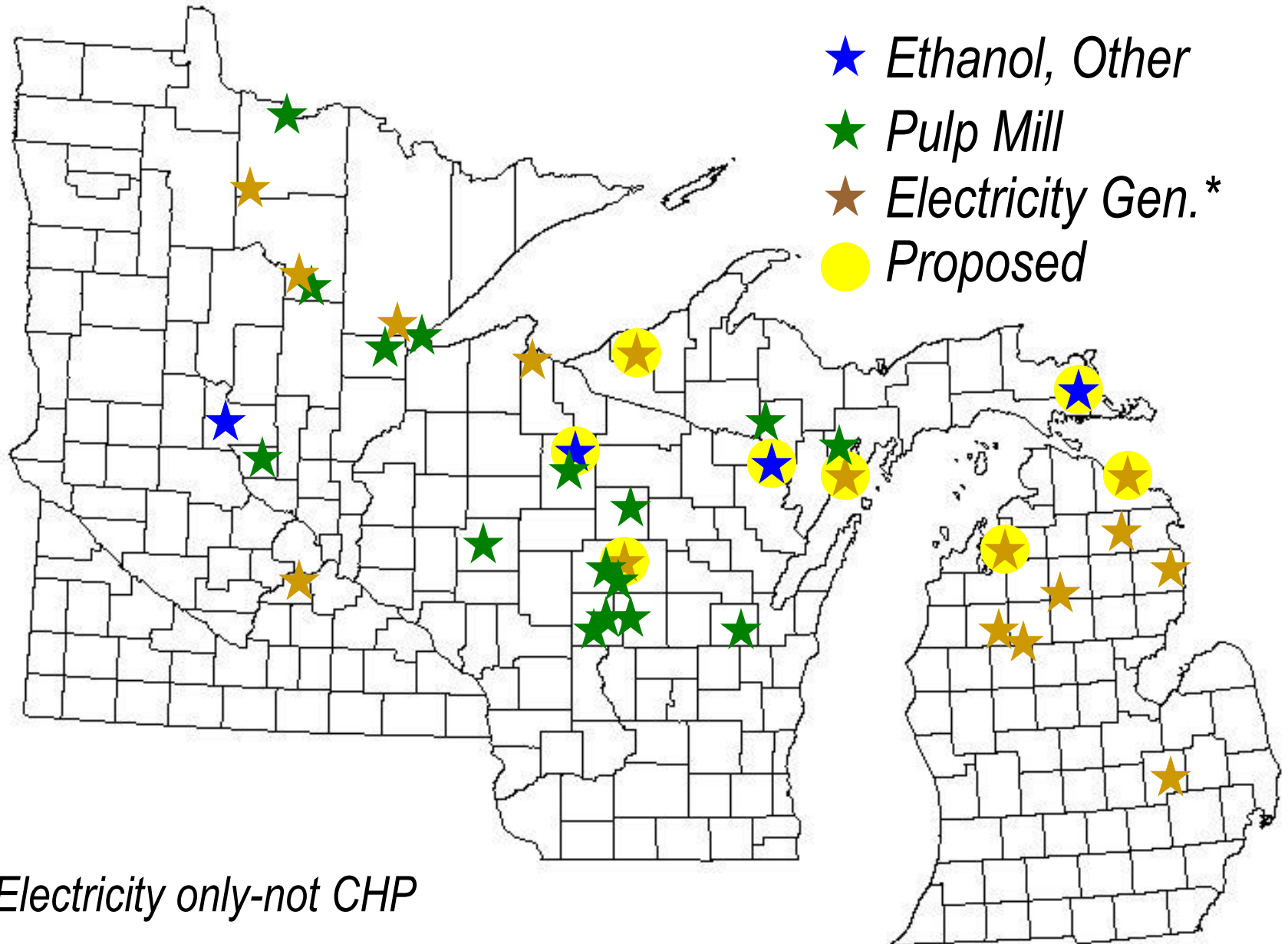
Which group is likely to contribute most to solving energy issues?

- y. U.S. Congress
- o. Al Gore
- u. Research Guys
- m. Big Oil
- e. Venture Capitalists

Wood Energy Facilities - Pellets

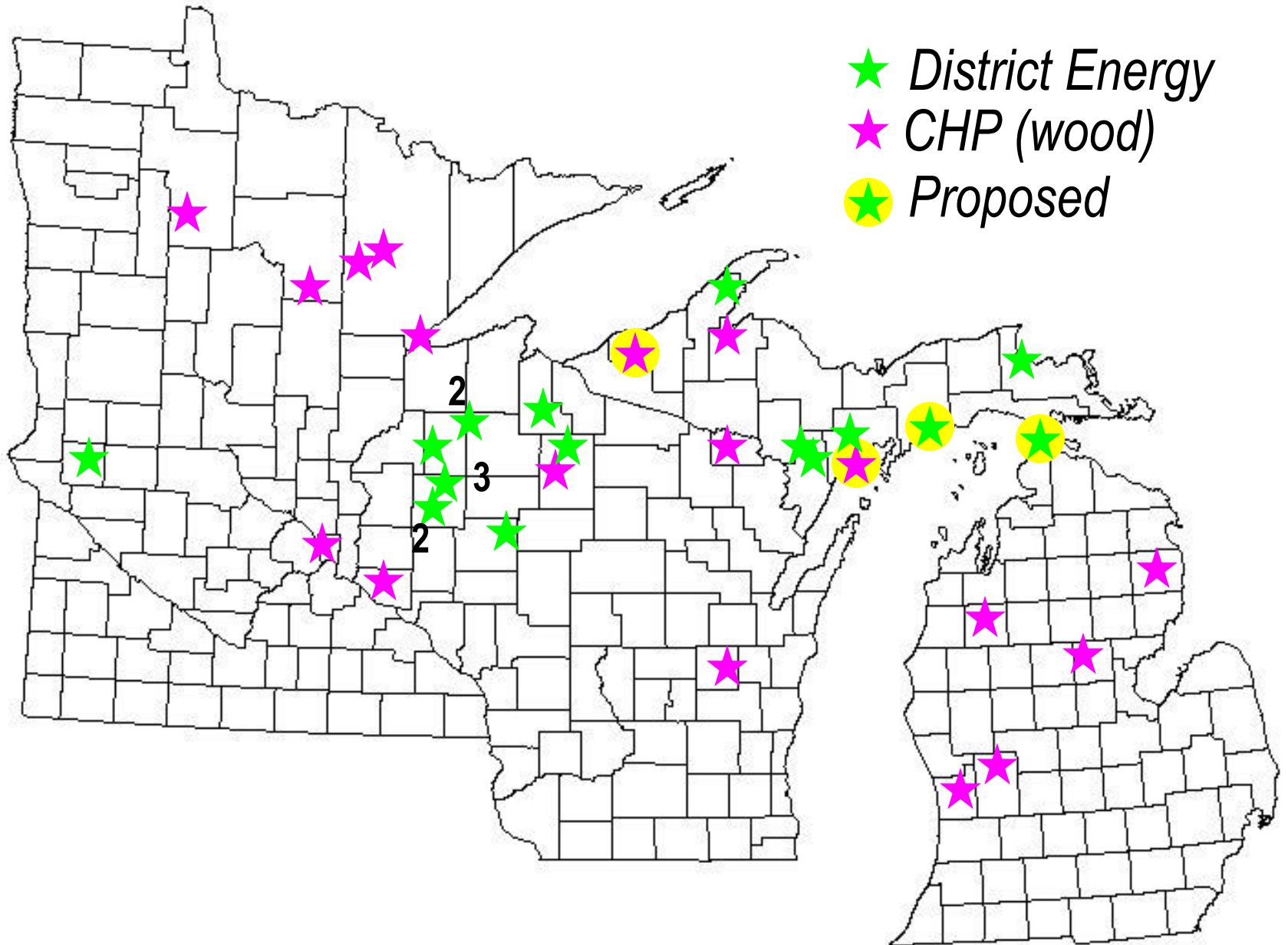


Facilities - Pulp/Utility/Ethanol

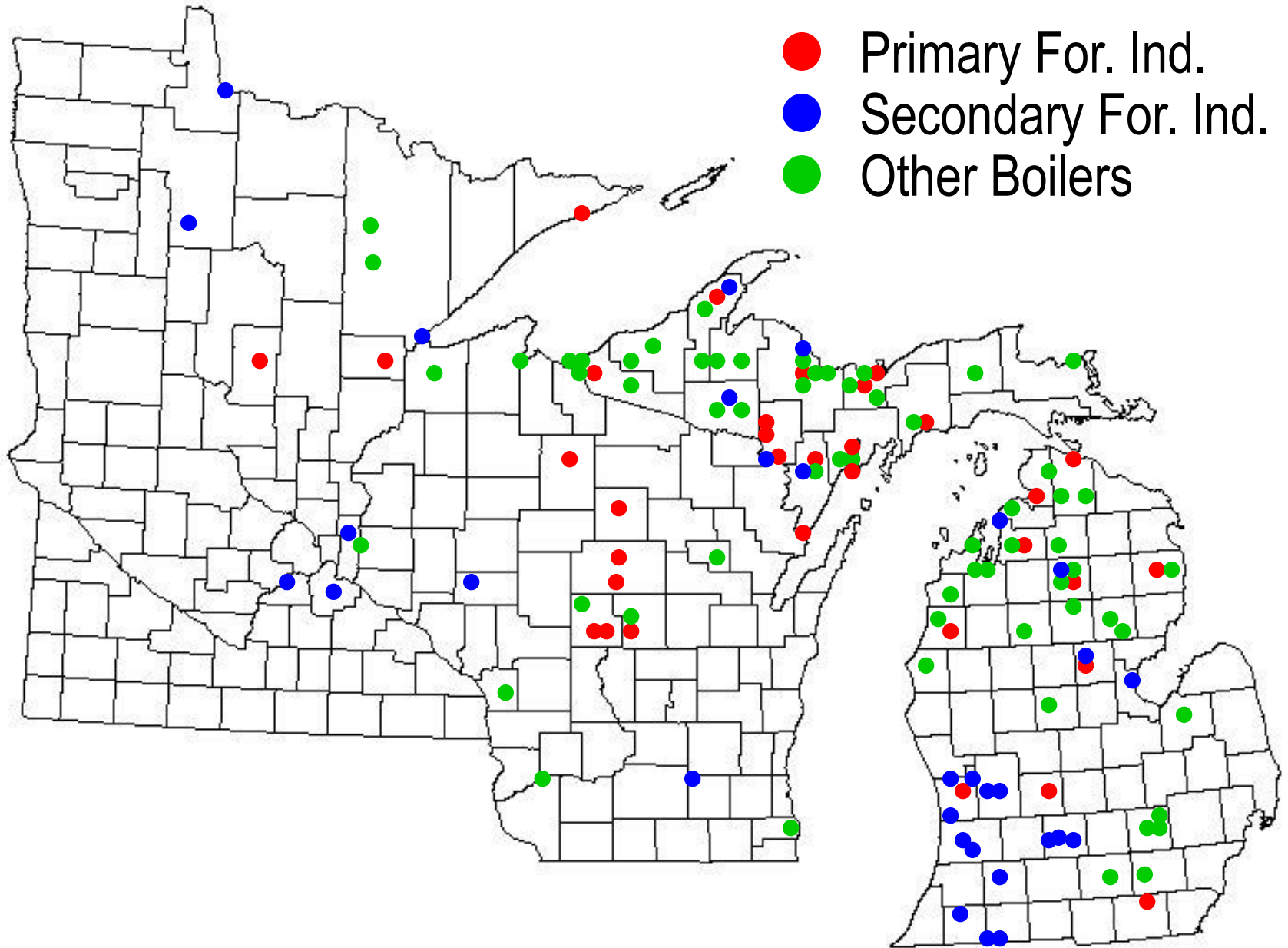


*Electricity only-not CHP

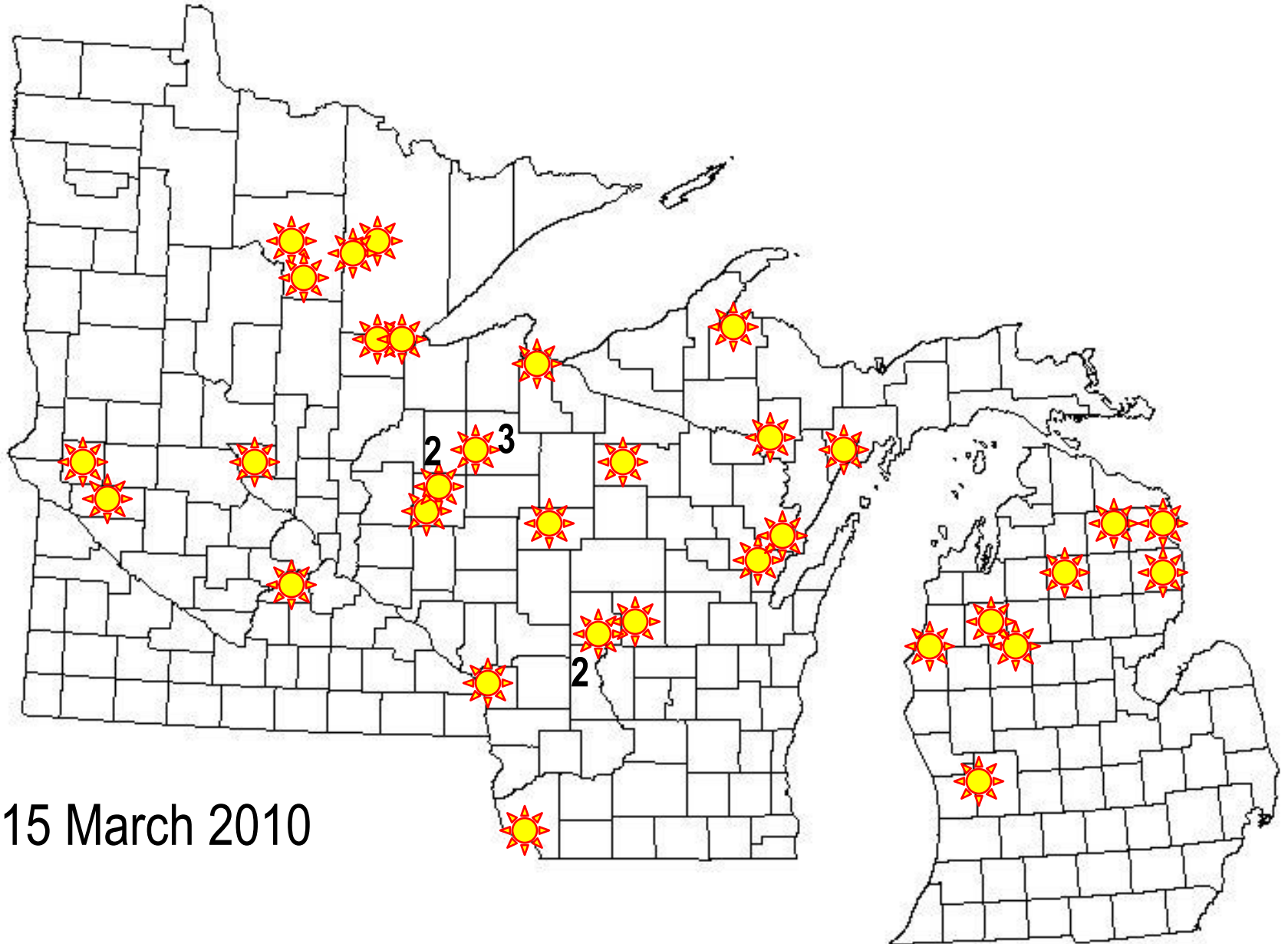
Wood Energy Facilities - CHP & DE



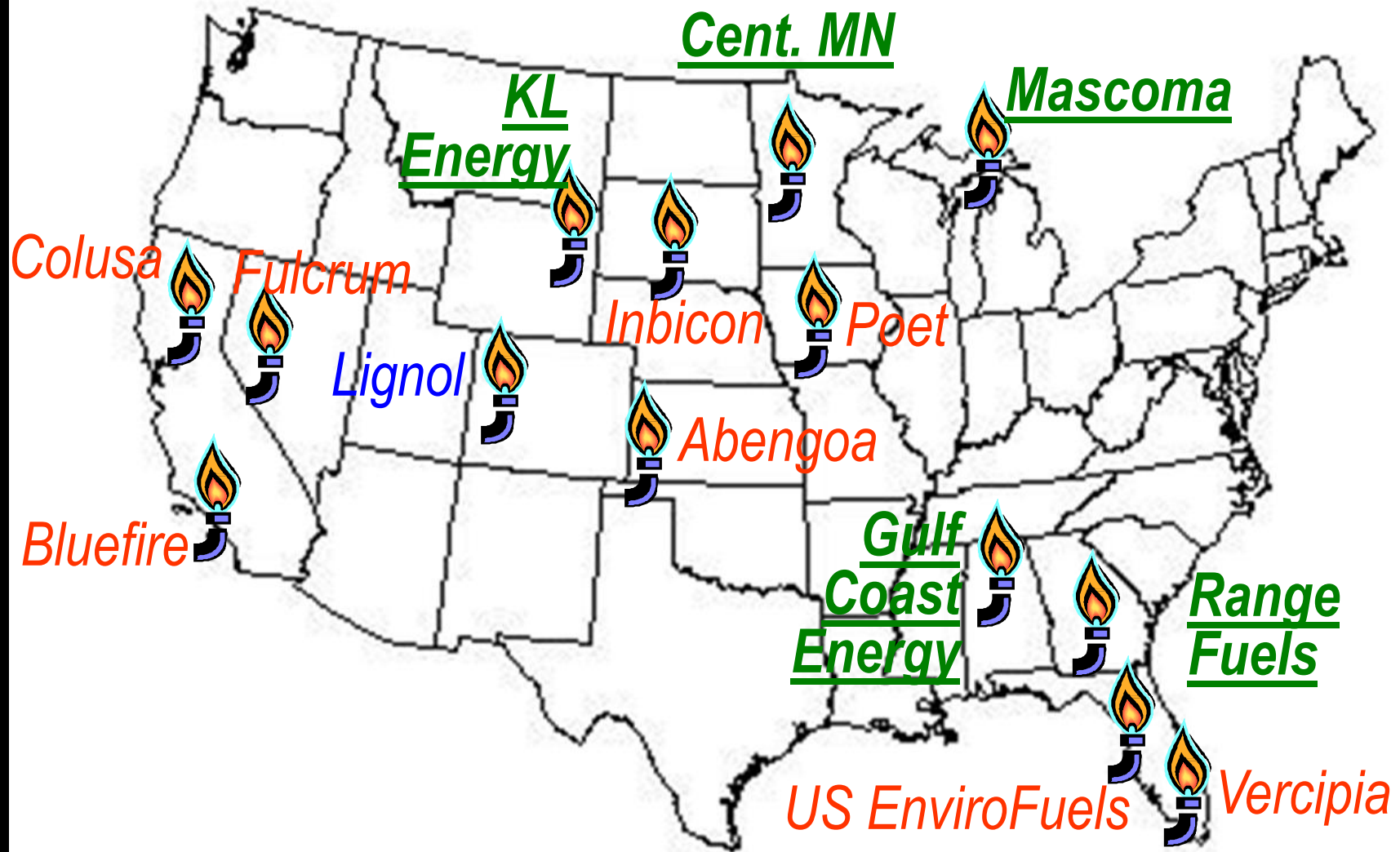
Wood-fired Boilers



BCAP Approved Facilities



Commercial Cellulosic Ethanol Projects



10 Woody Biomass Myths Heard Along the Road to Disaster





1. wood energy will
Solve Our Energy
Needs

2. Killing Trees Causes Climate Change





3. Ethanol Takes More
Energy to Make Than You
Get

4. The Biomass Industry Will Devastate Our Forests



5. Wood Energy
Doesn't Create Many
Jobs



6. Energy Plantations Will
Displace Land Needed for
Food and Forests



Not !

7. Biomass Plantations

Will Exhaust
Soil Nutrients



8. Wood Energy Makes Air Pollution





9. Energy Will Consume Sawlogs and Pulpwood

10. There Isn't Enough Wood in The Forest for Wood Energy



The Best Way to Predict
the Future is to Invent
It

