

# **25x25: Constitutional Suicide**

By  
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# Policy Affects People



## **CMS Energy Lake Winds Project**

**Carey and Karen  
Shineldecker  
Ludington, MI**

**CMS received \$73 Million  
cash grant from federal  
stimulus package: 30% of  
construction cost**

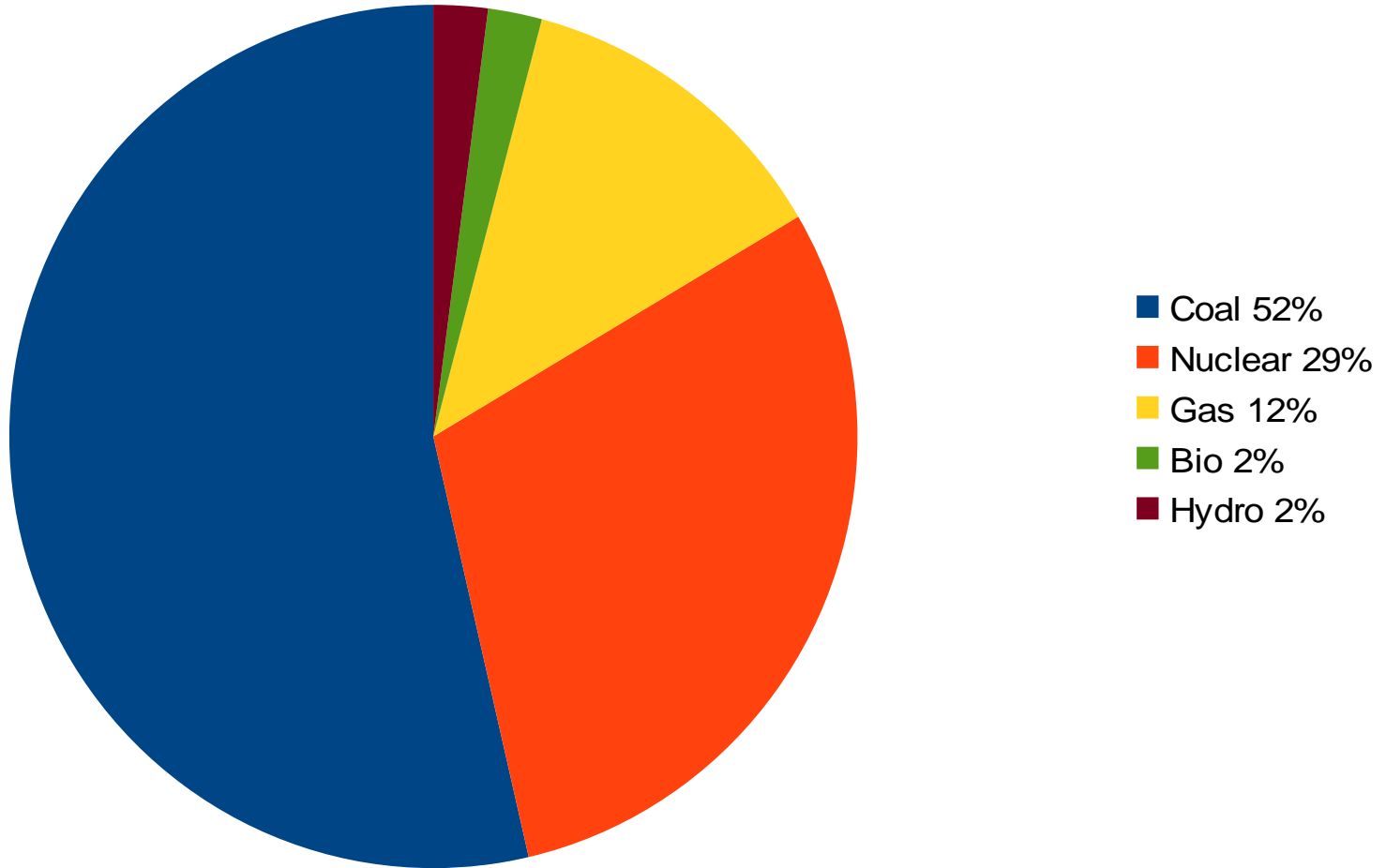


# Policy Affects People



**Exelon Wind Development  
Pigeon, MI**

# 2011 Production Data MI



# Mark Schauer's Green Bargain-25x25

Former Dem. Rep. Mark Schauer is lead pitch man for mienergymijobs.com who is backing the 25x25 proposal. This group is largely funded by out-of-state interests to the tune of nearly \$2 million:

<http://tinyurl.com/8s6ko4f>

“I have a deal for you!”



# 25x25 in a Nutshell

1. By 2025 25% of each provider's annual retail sales shall be from renewables and production of these renewables must come from within the State.
2. Must bill in the same manner and basis as electricity from other sources.
3. 1% annual rate cap.
4. Legislature to promote instate employment and equipment to produce and distribute power.
5. Severability clause if individual part is unconstitutional.
6. MI would become only state in the Union with constitutional renewables mandate.

# AWEA+ Sierra= MI Bull's-eye

AWEA-Michigan is a “Priority 1 State” for renewable push, esp. 25x25

Sierra Club: “If successful the [Michigan] 25x25 initiative will send an Important signal to the nation that public desire to move toward Green energy remains strong.”

“I have a deal for you!”



# Remember:

**Despite renewable energy proponents happy talk, this is essentially a wind mandate.**

**Our existing PA295, which mandates 10% renewables by 2015, has been almost exclusively a wind endeavor, despite intentions of bill's authors.**





# What's the Big Deal?-2007 Subsidies

## Some Annual *Federal* Subsidies

of Electrical Energy Sources: per MWH

2007 US Energy Information Administration Subsidy Report: **April 2008**



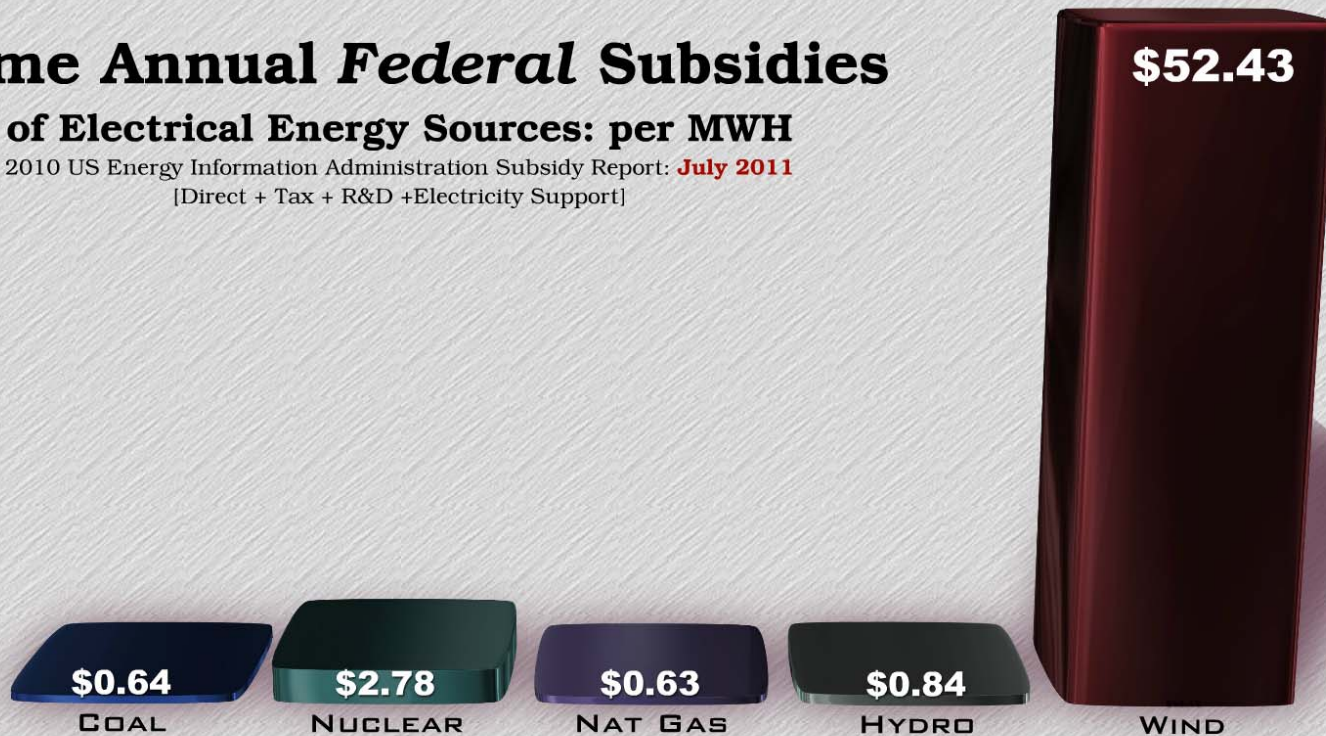
# Any better in 2010?

*How has this changed three years later?*

## Some Annual *Federal* Subsidies

of Electrical Energy Sources: per MWH

2010 US Energy Information Administration Subsidy Report: **July 2011**  
[Direct + Tax + R&D + Electricity Support]



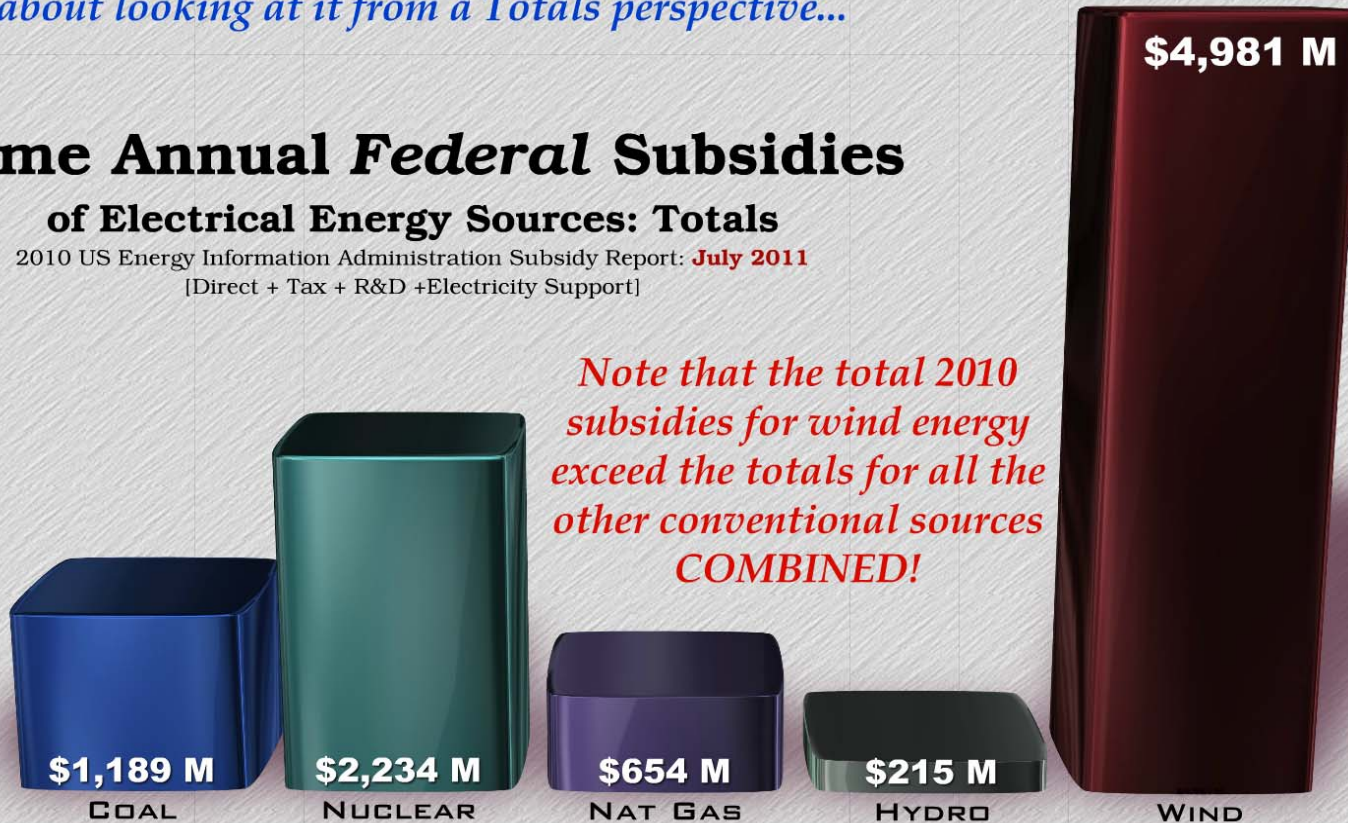
# Total Subsidies

*How about looking at it from a Totals perspective...*

## Some Annual *Federal* Subsidies

### of Electrical Energy Sources: Totals

2010 US Energy Information Administration Subsidy Report: **July 2011**  
[Direct + Tax + R&D +Electricity Support]



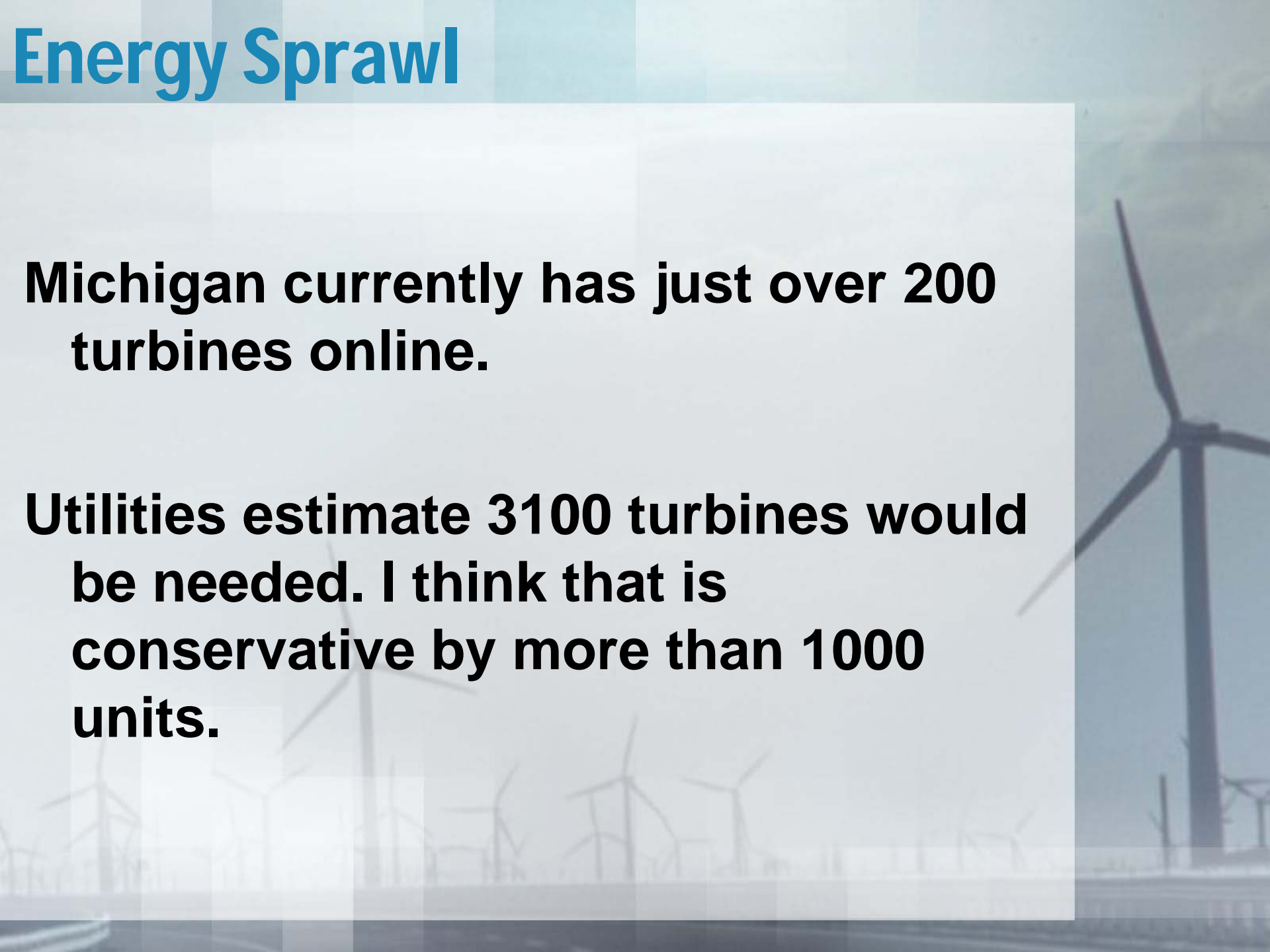
# LCOE: Wind

- In MI, with a 25% CF, the levelized cost of wind energy due to WINDS'S CAPITAL COSTS ALONE is at least 12 cents per kWh at a modest 10% cost of capital.
- The industry claims 1 cent/kWh for O&M, though newer reports are suggesting it is 2 cents/kWh
- We include nothing for transmission.
- Total cost of wind is at least 13 cent/kWh.
- The benefit for that cost AT MOST is 2.5 cents/kWh for coal and 3.3 cents/kWh for gas because wind energy can only reduce fossil fuel consumption. It does not replace fossil plants.
- Bottom line? 13 cents/kWh to save at most 3.3 cents/kWh in gas. WHO PAYS THE DIFFERENCE?

# Energy Sprawl

**Michigan currently has just over 200 turbines online.**

**Utilities estimate 3100 turbines would be needed. I think that is conservative by more than 1000 units.**



# 36 Square miles of this...



**45 V-100 turbines at 25% Capacity Factor. 25% CF is as reported by EIA.GOV for first 6 months of this year.**

# ...could be equaled by one of these:



#### **TM2500 Mobile Gas Turbine Generator**

- Output: 21.8 MW @ 50 Hz; 22.8 MW @ 60 Hz (ISO)
- Dual Frequency – 50/60 Hz quick conversion (no reduction gear)
- Heat Rate: 9800 Btu/kW-hr @ 50 Hz; 9500 Btu/kW-hr @ 60 Hz (ISO)
- Voltage: 11.0kV (50Hz); 13.8 kV (60Hz)
- Liquid or natural gas fuel capability
- Brush Air-cooled 2-pole generator with brushless excitation
- Multiple units started/controlled through a single desktop PC
- Low emissions with demineralized water injection 25 ppm (gas); 42 ppm (liquid)
- Woodward Micronet® control system
- Inlet air heating/cooling provisions
- Electro-hydraulic starting system
- Single unit footprint ~110' x 70'
- Sound level at 3 ft. 90 dBA

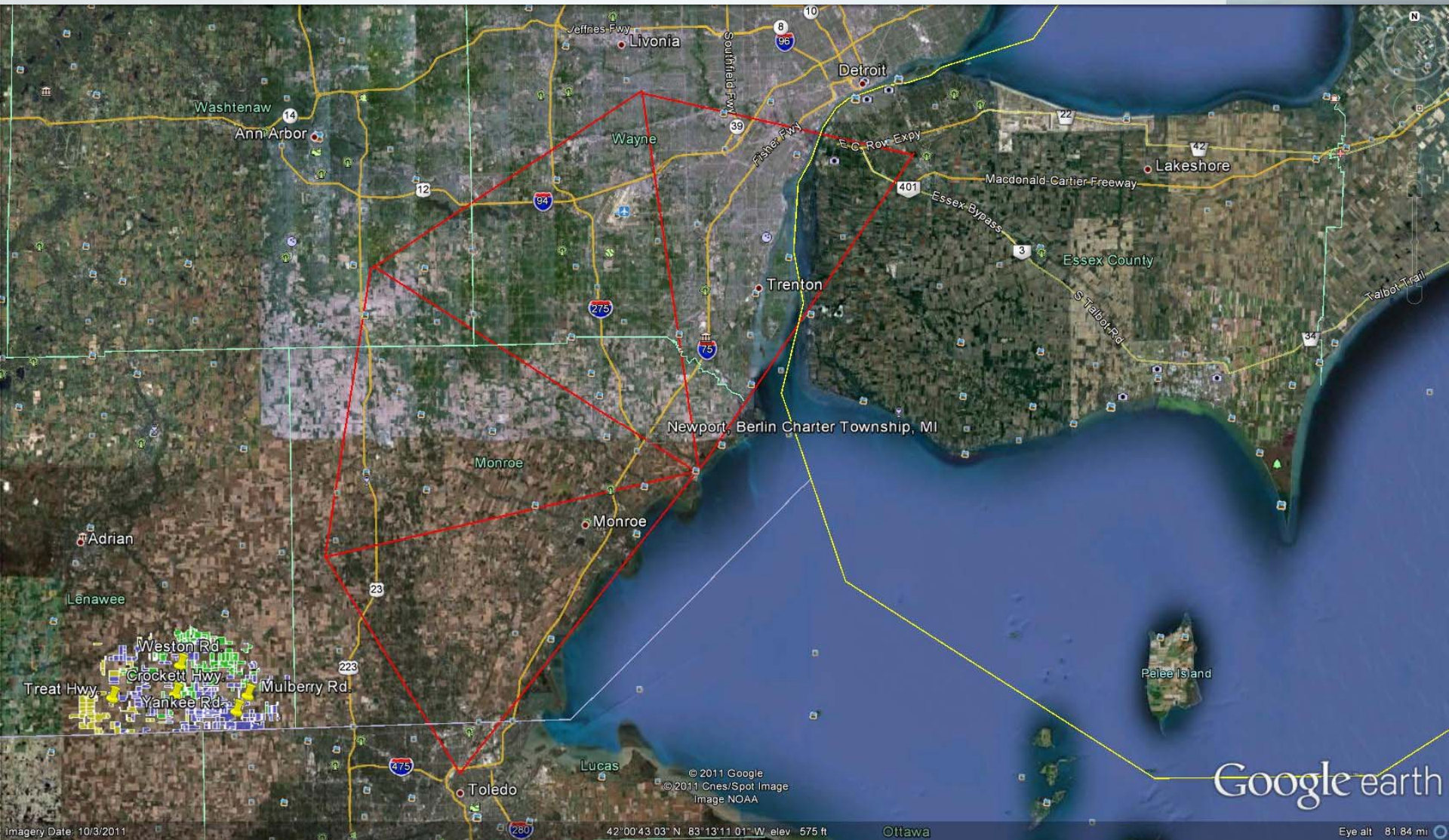
# What about energy density?



- Fermi II Reactor- ~1100 Mw-1 square mile



# 1100 Mw Wind at 3.6 Mw/sq mile w/30%CF



# Utility Rates and Impacts

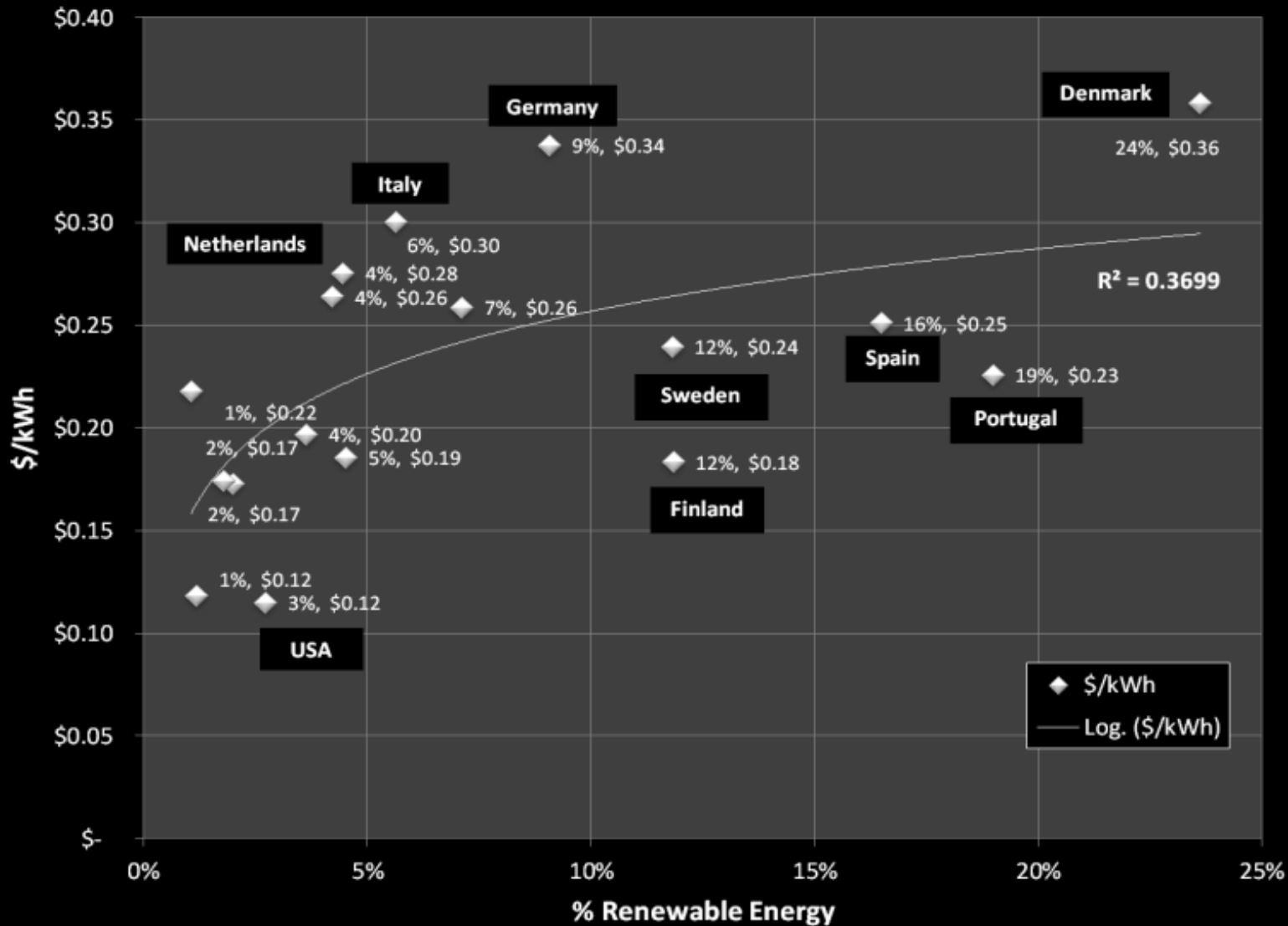
- Michigan currently pays highest rates in region

Census Division and State	Residential		Commercial		Industrial	
	May 2012	May 2011	May 2012	May 2011	May 2012	May 2011
East North Central	12.50	12.08	9.69	9.59	6.58	6.47
Illinois	12.72	12.40	8.55	8.84	6.18	6.40
Indiana	10.71	10.53	9.11	8.72	6.39	6.16
Michigan	14.39	13.21	11.31	10.59	7.83	7.43
Ohio	11.76	11.59	9.42	9.59	6.11	5.92
Wisconsin	13.45	13.15	10.55	10.40	7.08	7.22

- Amendment proposes 1% rate cap-likely illegal
- DTE Estimates 4-5% Annual rate increases on top of existing renewable surcharge
- We have highest rates in region with less than 1/2% wind penetration thus far

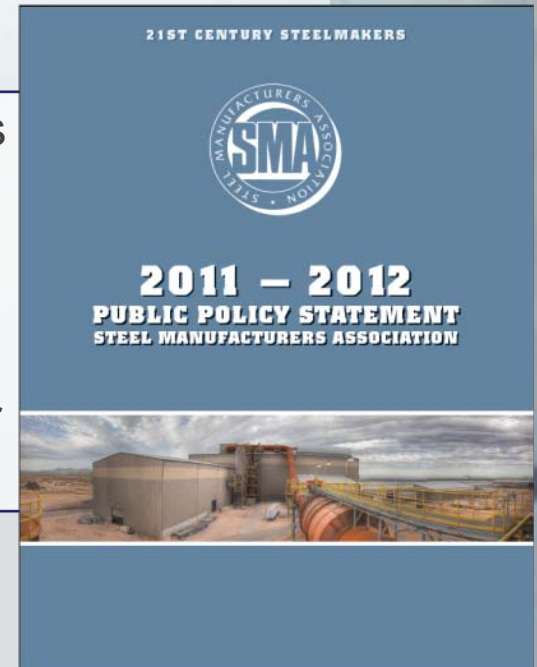
# European Experience

## Electricity Rate vs. Renewable Energy



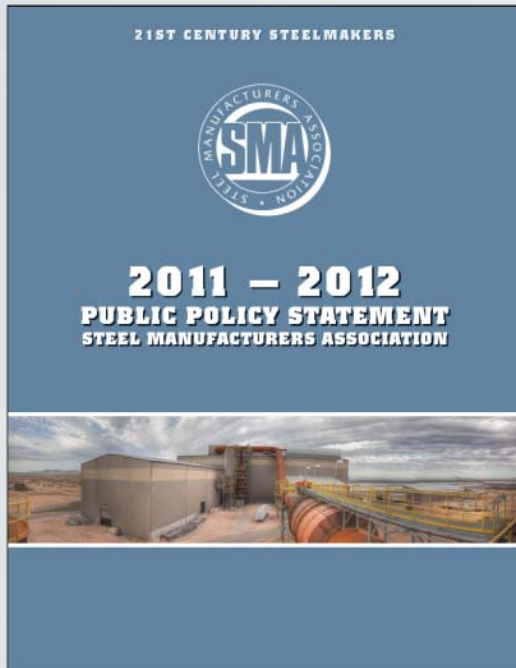
# Impacts on heavy industry

EAF-based steel production is an energy intensive process that requires reliable and economically competitive energy supplies. The US steel industry spends over \$18 billion annually for electricity, and energy constitutes up to 15 percent of the cost of steelmaking. At the same time, this process is exceptionally energy efficient compared to other steel-making methods employed world-wide.



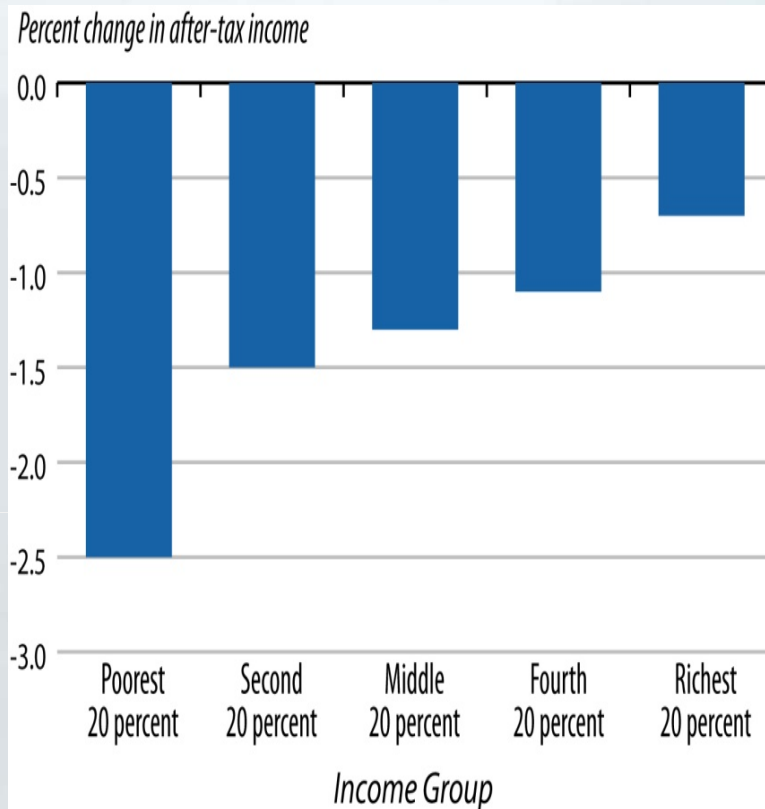
- Every 10% increase in electric rates adds \$1.8 billion in costs to our steel industry alone.
- The money spent on energy inputs drives up cost of all products that depend on steel
- Every dollar spent on energy is no longer on the table for wages and benefits

# Big Steel vs. Big Wind



“The problem, of course, is that the availability of wind is highly variable and that availability generally does not coincide well with the peak demands of electric systems. Consequently, of the roughly 37,000 MWs of wind generation installed in the US today, NERC considers less than 15% of that available to serve peak needs. This means that much of that wind capacity must be backed by other resources, and that utility consumers will be charged for both the wind power subsidies and the cost of conventional generating capacity.”

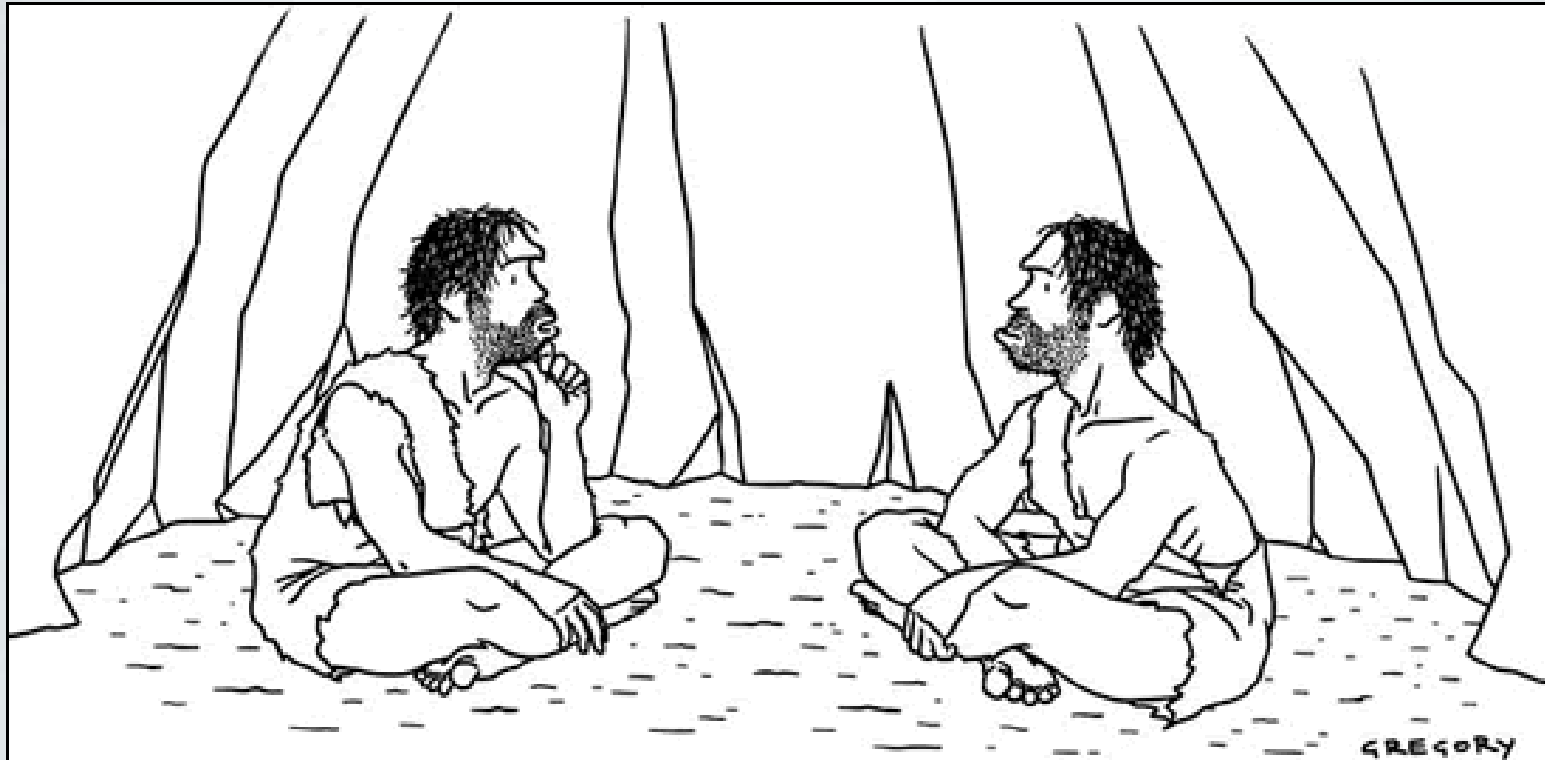
# Cost impacts on poor



**FIGURE 1:  
Without Assistance, Low-Income Households Would Bear  
Disproportionate Costs  
from Climate Legislation**

Source: Congressional Budget Office

# What of the CO<sub>2</sub>?



*“Something’s just not right—our air is clean, our water is pure, we all get plenty of exercise, everything we eat is organic and free-range, and yet nobody lives past thirty.”*

# Well...

**Wind has never been proven to reduce CO<sub>2</sub>.**

**One study showed INCREASE in pollutants with higher wind penetrations**

**Wind can never replace baseload fossil plants. In MI where wind has a measured 25 capacity factor% (EIA.GOV) wind is tied to fossil at a 1:3 ratio (absent curtailment or storage).**

**Ergo, wind energy is more accurately described as fossil-wind.**

**Finally, if one had \$1 billion to spend on CO<sub>2</sub> reduction, we could achieve perhaps 9X the CO<sub>2</sub> reductions by replacing coal with gas rather than adding wind to conventional production**



# What about “external” cost of fossil?



Only 2% of Liberians have access to power. They heat and cook with wood and dung. Those with power are paying 54 cents a kwh, the world's highest rate. A new fossil plant could produce it for less than 10 cents. Yet the Sierra Club thinks we should ban fossil fuel. You see, this boy could get asthma....energy poverty has grave consequences.



# Unintended Consequences

- **With a 25% wind penetration, due to low CF, during windy moments 100% of power in state would be from wind.**
- **All conventional plants would need to shut down and then spring back to life a few minutes or a few hours later which is unfeasible.**
- **Coal and nuke cannot cycle quickly and cannot go to zero easily.**
- **OCGT is only answer which would require tremendous plant build out, stranded assets and an energy future tied to one commodity price: natural gas**

# Constitutional Risks



**Current PA295 is a 10% renewable requirement. It is causing utilities to build more production capacity while demand has plummeted. But at least legislature could intervene if necessary.**

**But with constitutional amendment we would need to wait years to change regulatory regime.**

**Using the constitution to regulate energy policy is just stupid.**

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The IICC is a bi-partisan renewable energy citizen's watchdog group.

We are totally independent and receive no outside funding from any special interest, industry or utility groups.

We depend on donations to cover expenses.

No one receives any salary at IICC

If you would like to book Kevon Martis to speak on 25x25 or wind energy zoning, email him at address above.

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