



Repowering America

*An introduction to our clean energy future
and what we can learn from the European experience*

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Born and raised in Turtle River, MN



DENMARK

Land Area:
43,098 sq km

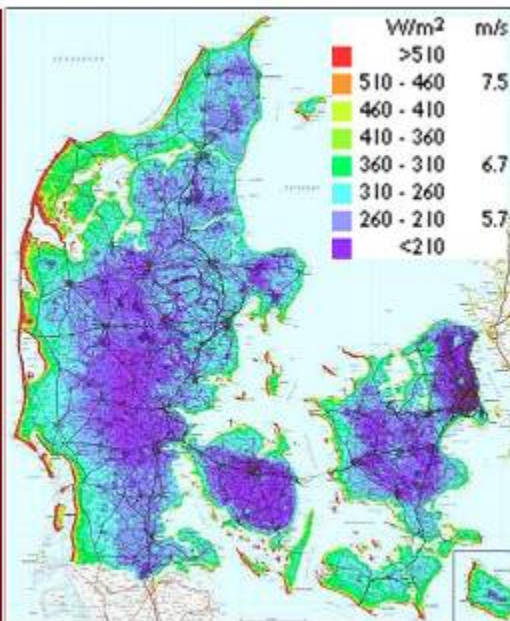
Population:
5,416,000

Wind Potential:
12,000 MW

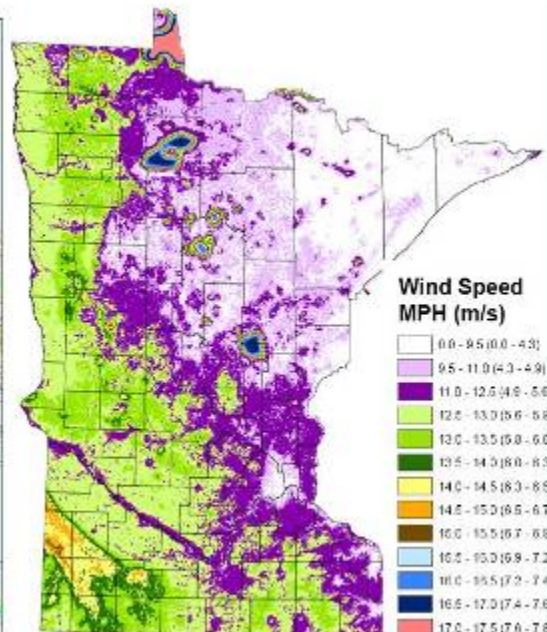
Installed Wind
Capacity:
3,136 MW

Electricity from
Wind:
20%

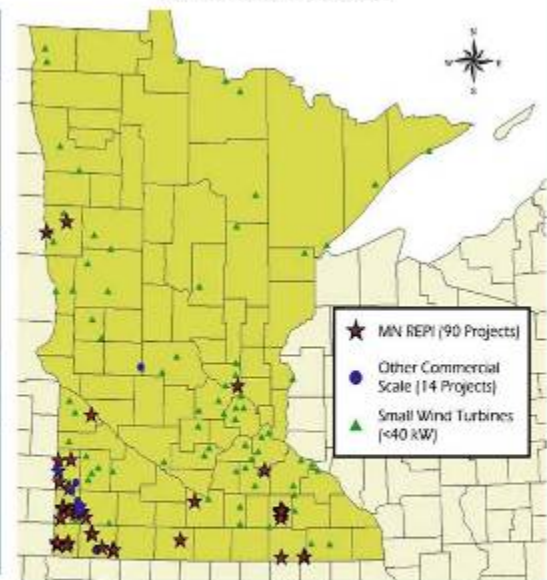
Wind Energy
Goal:
50% by 2025



www.windpower.org (2003)



www.state.mn.us (2006)



MINNESOTA

Land Area:
225,171 sq km

Population:
5,167,101

Wind Potential:
75,000 MW

Installed Wind
Capacity:
895 MW

Electricity from
Wind:
>1%

Wind Energy
Goal:
25% by 2025




AL WARMING: THE EVIDENCE

Climate scientists say, because of human activity, the globe is warming. On the heels of Friday's comprehensive report on global warming, we look at the data, past and present, and the effects.

TRANSFERABILITY OF RENEWABLE ENERGY POLICY ACROSS BORDERS

A case study of Wind Energy Policy in Denmark and Minnesota

Sustainable Energy Planning and Management
Aalborg University
8th Semester June 2007

ANNA CARLSON  **HELLE MADSEN**

on renewable energy

Bush's blatant abuse of climate scientists

Without back: Wind changes course many

The Benidji Pioneer

Focus on global warming

Political climate is changing on global warming

A welcome recasting on renewable energy



“Looking at the Danish landscape, you could easily imagine that wind mills grew up by themselves from seeds, like trees and flowers. They do however need to be planted”

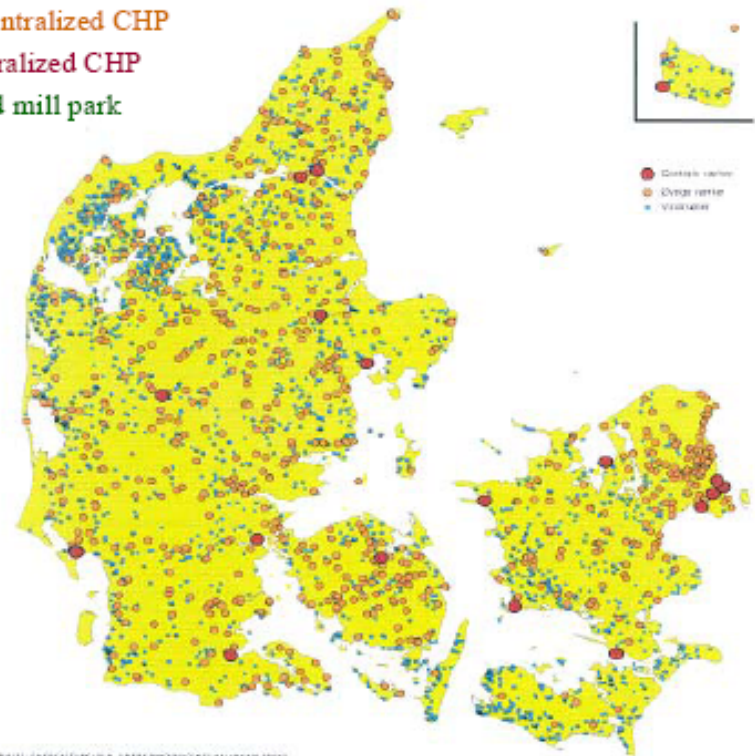
 *Peter Helby (1996)*

Centralized production in the mid 80's



Decentralized production of today

- Decentralized CHP
- Centralized CHP
- Wind mill park



MAP: SPACESHIFT - SPACESHIFT CONSULTING
LINDVANGSBOENHAFN, BOKF & KATTEBO, STRØMSE 2004

“GREEN DREAM TEAM”

Dr. Steven Chu
Energy Secretary

Carol Browner
Energy Coordinator



Lisa Jackson
Head of EPA

Nancy Sutley
Chairwoman of CEQ

"The President-elect's decision...to integrate policy on the intersection of energy, environment and climate change is both visionary and overdue,"

~Reid Detchon

Energy Future Coalition

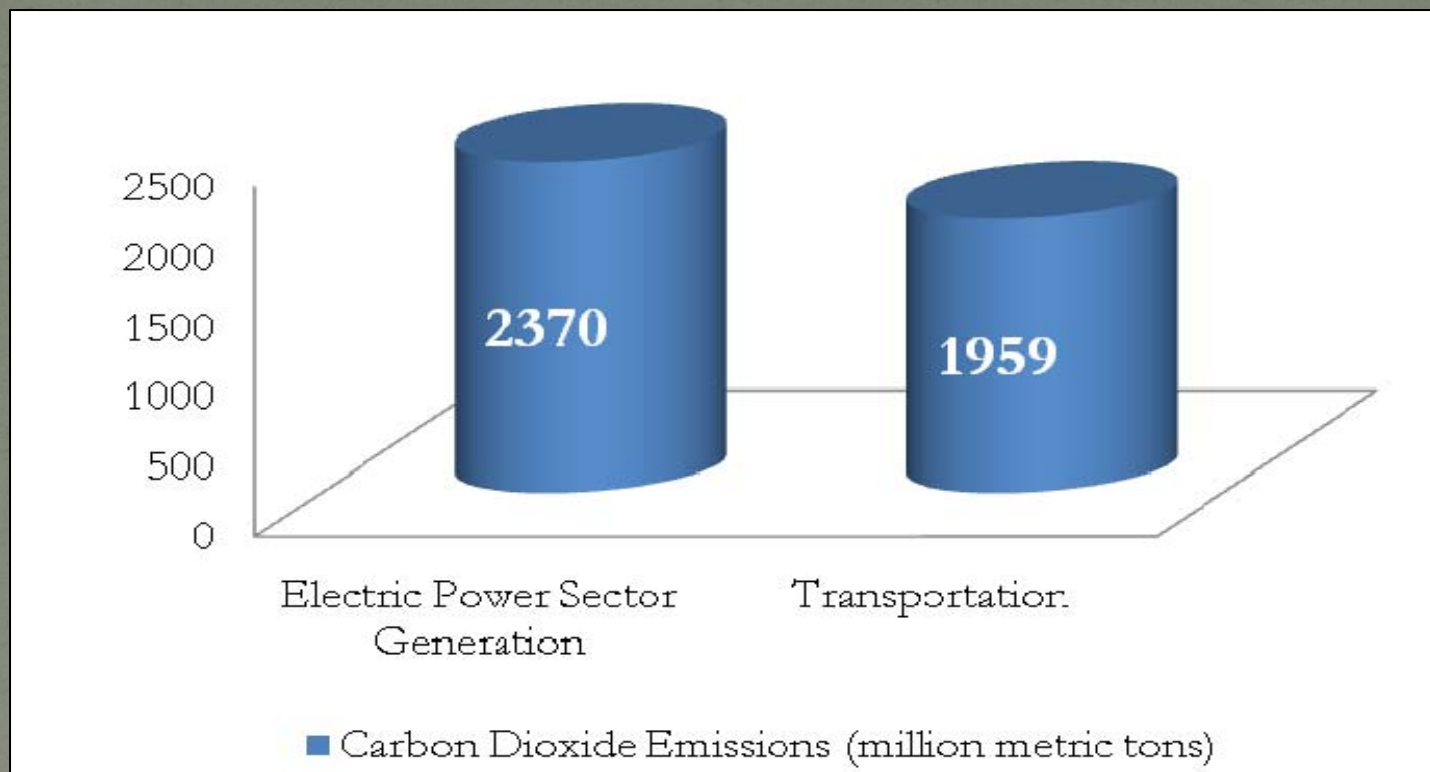
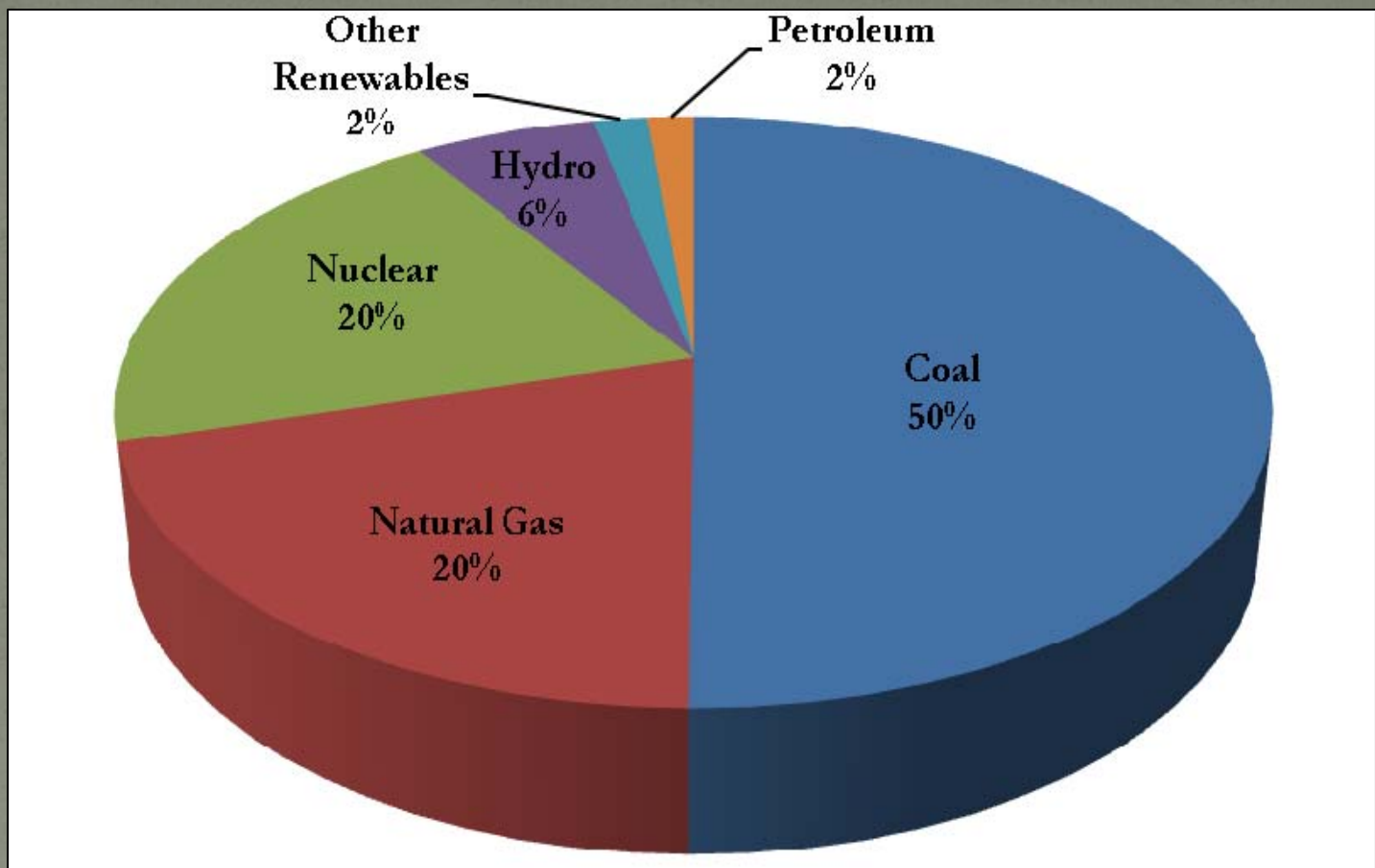


Figure 1. United States Carbon Dioxide Emissions by Energy Consumption in 2007 (EIA, 2007)



**Figure 2. U.S. Electricity Net Generation from Major Sources in 2005
(EIA, 2007)**

"New Energy for America"

The Obama/Biden Energy Plan

- 10% Renewable Energy by 2012
- 25% Renewable Energy by 2025
- 80% reduction in CO₂ emissions by 2050
- Strategically invest **\$150 Billion** over the next 10 years to catalyze private efforts to build a clean energy future



Minnesota

1,299 MW of Wind

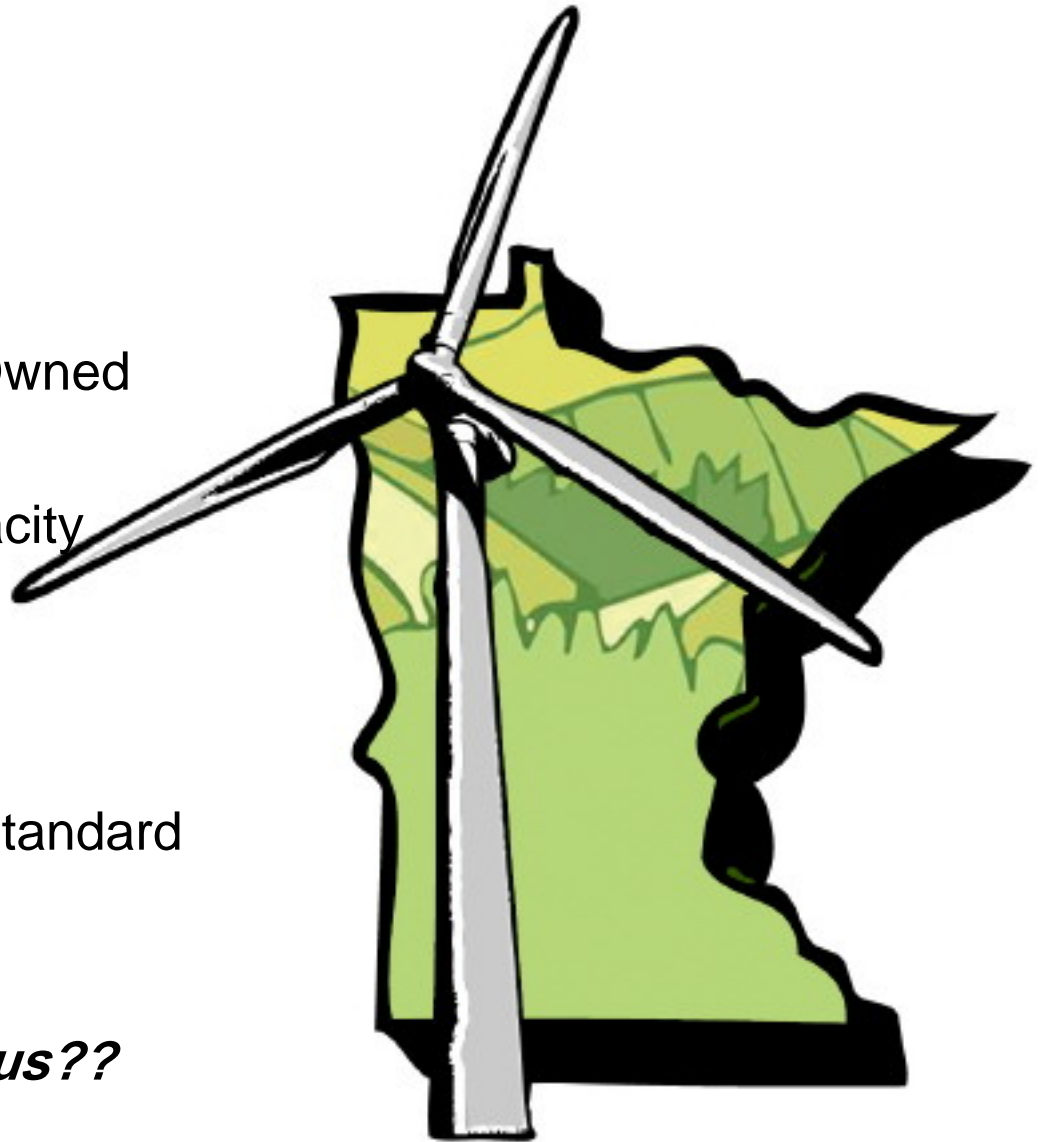
320 MW is Community Owned

75,000 MW Potential Capacity

2% of our Potential

25% by 2025 Renewable Standard

What does this mean for us??



Wind, wind and more wind....

Corporate

Community





CONCLUSIONS

- ❖ Need for clean, renewable, domestic energy supply
- ❖ Consider sustainability from all elements
- ❖ Realize legislative power and use it to promote the type of growth we want
- ❖ Power to the People!