



"We do not inherit the earth from our ancestors, we borrow it from our children."

We are the stewards of this land.
Are we protecting it and keeping it healthy for our Children?



Enbridge's Oil Pipeline Breach Near Kalamazoo, MI

OUR LEGACY?



Clean, Pure Michigan

Is our Energy Production Polluting our Land, Or MAKING IT CLEANER?



300 MPGe over last 6,000 Miles
Built in a Barn by Michigan Public School Graduate

Efficiency by DESIGN

WE MUST DESIGN CLEANNESS INTO ENERGY PRODUCTION.



GOOD NEWS!

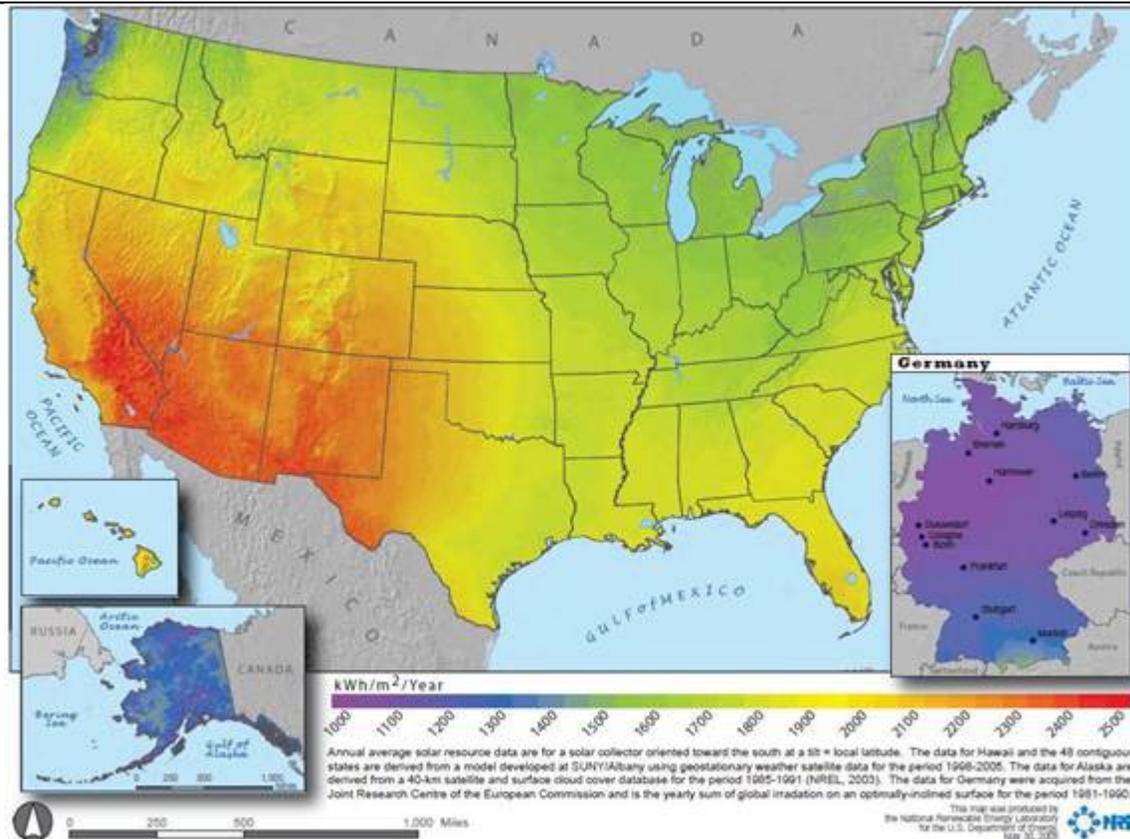
In 2012, Wind Power in Michigan is less expensive to install than Coal!

BAD NEWS!

641 Wind Turbines = 978 MW

1 Nuclear Plant = 1,000 MW

1 Coal Plant = 1,000 MW



Germany Gets about as Much Sun at ALASKA
 Yet, is producing 40% of its Electricity with SOLAR!

Why? Feed-In Tariffs, Guaranteed Grid Access



ENERGY STORAGE MYTHS

High Level Nuclear Dry Cask Storage at Big Rock Point,
Traverse City, Michigan.

Safe storage for 10,000 YEARS+ !?
Who says we can't store energy over night?



Photo courtesy of AES Storage

A123 GRID STORAGE SYSTEM.
Up to 4 MWh Capacity Per Trailer



The Ultimate GRID STORAGE SYSTEM
Battery Electric Cars with Grid Access

We're Building them TODAY!

In Summary,

I recommend that we phase out Coal, Nuclear and Natural Gas as existing plants reach the end of their lives, and that we replace them with clean, and less costly renewable sources like wind and solar. We also must focus on reducing consumption by improving efficiency's of our cars and buildings.

1. In 2012, Wind Power in Michigan is less expensive to install than Coal today!
2. Use Germany's success with Solar as a template to grow our Solar Industry
 - a. Legislate Feed-In Tariffs with 20 year contracts
 - b. Guaranteed grid access
 - c. Streamline paper work for Solar Installations
3. Develop a standard to allow Electric Vehicles to function as Grid Storage Systems
4. Encourage Michigan Battery Producers to support Grid Storage Applications.
5. Heighten Focus on Legislation to set higher standards for Efficiency's in Buildings and Cars
6. Continue to make legislation that sets extremely high standards for clean environment

To solve our problems we must all be involved and active in doing the work that needs to be done to prepare for a healthy future.

The role of our policy makers is to set high standards for what is best for the entire community in the long run. We must not seek to just please our immediate constituency.

Thank You, Kraig Schultz, www.SchultzEngineering.US, 616-540-7027