

Steve Macken - National Wind Power

Brian Killkelley - GreenMountain.com

Green Mountain Wind Farm; Meeting Renewable Energy Demand in a Competitive Electric Environment

Steve Macken



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October 18-19, 2000

South Dakota Wind Energy Conference - Brookings, South Dakota



National Wind Power

National Wind Power

- 140MW UK wind capacity (40%)
- 40MW in US last 18 months
- JDA with Orion Energy in US



Green Mountain Energy

- Mission: change the way power is made
- Most trusted and best known environmental energy brand
- Awareness levels of 55% in PA and 24% in CA

Energy Blends ...

Pennsylvania



- 1% new (landfill gas, wind)
- 99% natural gas and/or large hydro



- 5% new (landfill gas, wind)
- 45% small hydro, biomass, wind
- 50% natural gas and/or large hydro



- 5% new (landfill gas, wind)
- 95% small hydro, biomass, wind

Switching Activity

California

- started April, 1998
- 100% of customers eligible to switch
- 223,000 customers have switched (2%)
- 75% of switchers are served with a green energy product

Pennsylvania

- started January, 1999
- 100% of customers eligible to switch
- 535,000 customers have switched (10%)
- 15% of switchers are served with a green energy product

Pennsylvania's Ranking Within the U.S.

Power plant emissions (tons CO₂/year)

1. Texas
2. Indiana
3. Ohio
- 4. Pennsylvania**
5. Florida

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Retail electric energy consumption (MWh/yr)

1. Texas
2. California
3. Florida
4. Ohio
5. New York

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7. Pennsylvania
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Average Retail Electric Rate (cents/kWh)

1. New Hampshire
2. New York
3. Connecticut
4. New Jersey
5. Rhode Island

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11. Pennsylvania

Mix of Resources in Pennsylvania vs. the U.S.

	PA(%)	US(%)
Coal	57.6	56.5
Nuclear	39.2	21.9
Gas	0.4	8.5
Oil	1.8	2.2
Hydro/other	0.9	10.9

Why Wind in Pennsylvania?

- Preferred by retail market
- More cost effective than solar
- Acceptable wind resource in state
- Strong local support
- Fulfilling promise to customers

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Use of Wind Turbines in Advertising Products



Development Program

- | | |
|-------------|---|
| Fall '98 | • Selection criteria determined |
| Winter '99 | • Contracted Disgen to prospect for candidate sites |
| Summer '99 | • 20+ sites identified
• Focus on Somerset County
• Agreement with National Wind Power to construct, own and operate 10MW wind farm |
| Fall '99 | • Construction contract awarded - Nordex N60 1.3MW turbines selected |
| Winter '99 | • Ground breaking ceremony - construction starts |
| Spring 2000 | • Completion! |

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Media Focus on Wind Project

FOR IMMEDIATE RELEASE

**GreenMountain.COM to develop
PENNSYLVANIA's first WIND
Farm**

**Retail Energy Provider Strikes
Deal to Build the Largest Wind
Farm in East**

**GREENMOUNTAIN.COM,
NATIONAL WIND POWER AND
NORDEX
HOST UP CLOSE PREVIEW
OF MASSIVE WIND TURBINES**

**FOR ACCREDITED JOURNALISTS
Date: 9th November 1999
FOR IMMEDIATE RELEASE**

**Subject: Green Mountain Wind Farm
Wind Dig Shindigs attracted over
1,500 people to events in
Pennsylvania**

**GREENMOUNTAIN.COM,
NATIONAL WIND POWER
AND NORDEX
"Wind Turbine Tour" to bring giant
turbines From the Port of
Philadelphia to Garret, PA.**

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Public Events Focus on Wind Project



Congratulations!
It's octuplets.

Join us as we celebrate the birth of Pennsylvania's largest wind farm. It would never have happened without you. These eight, 26-story high wind turbines are spinning because you and other Pennsylvanians chose Green Mountain Energy™. It's a small, yet exciting first step toward changing the way power is made. And it's just the beginning.

So come to our Green Mountain Wind farm dedication party! There'll be music, snacks, kid's games, wind power informational tours--and of course the gentle swoosh of wind turbine blades. It'll blow you away.

When: Saturday, May 20, 2000.

Where: Carleth, PA.

Time: 12:00 noon to 4 p.m.

RSVP: choosewisely@greenmountain.com or call 1-800-286-5856.

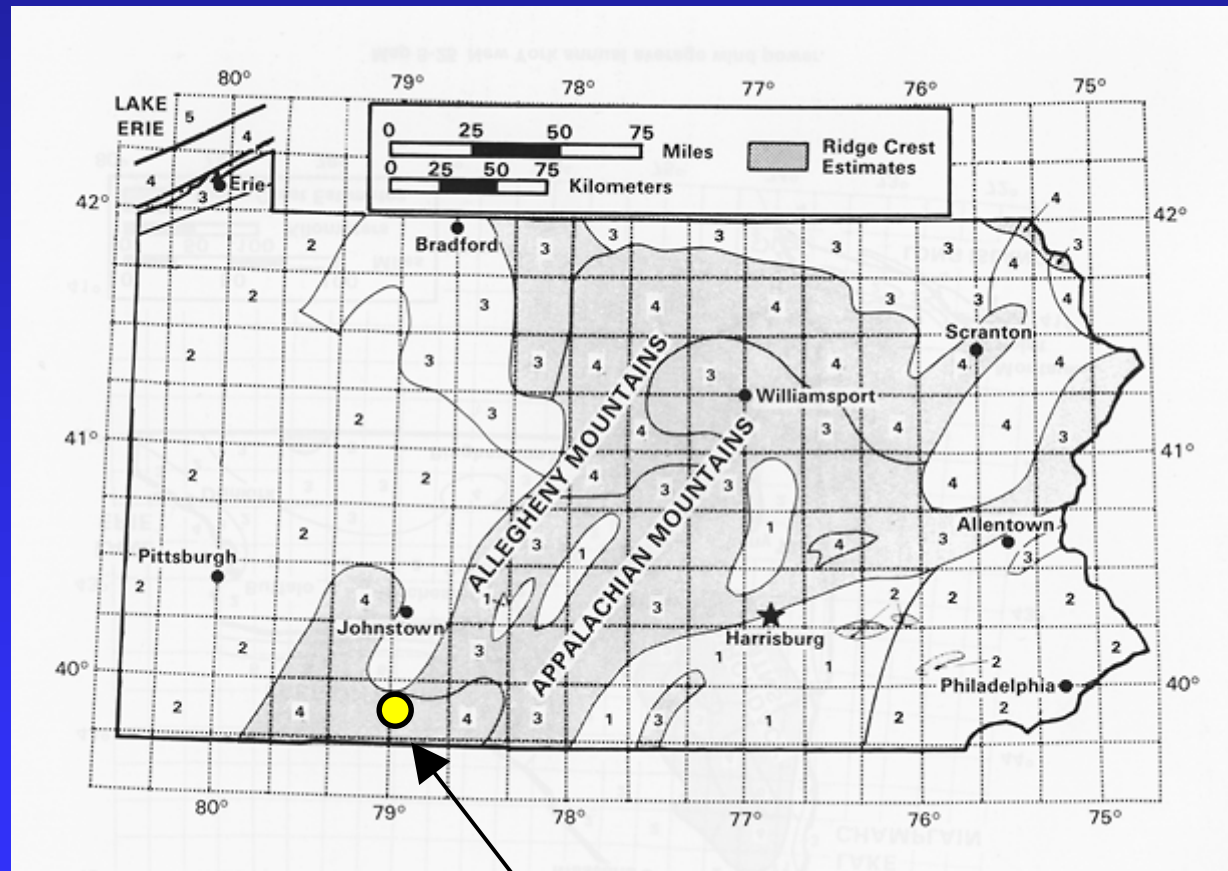
(Please let us know how many of your friends or family will be attending. We've got a limit of four per family, but we may be able to make exceptions if space permits.)

How to Get There: We've chartered two buses that will leave from The Palace Inn in Monroeville at 10:30 a.m. and return by 6:00 p.m. Space is limited, so reserve your spot early!

Don't forget to bring your jackets, blankets and outdoor shoes. See you there!



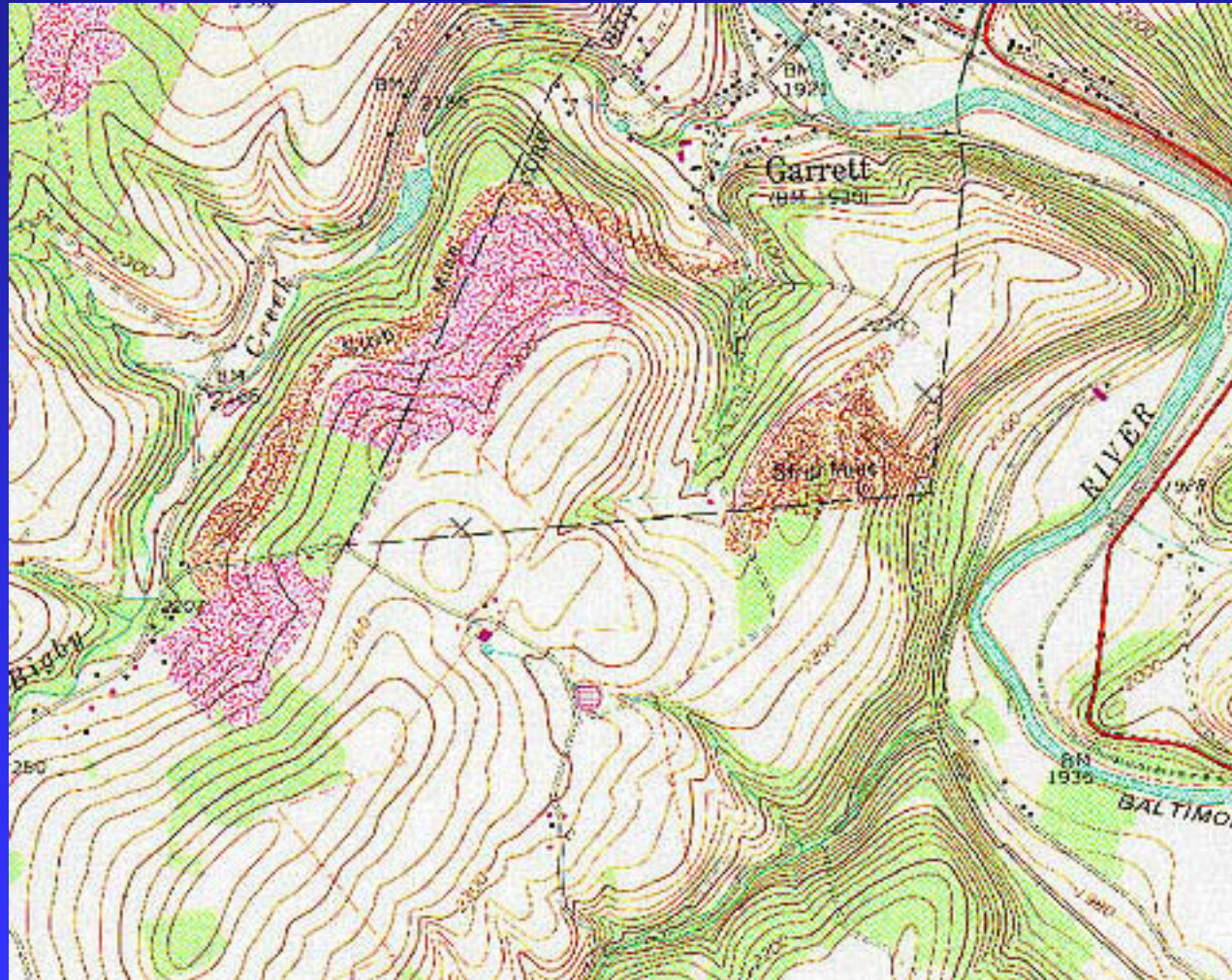
Site Location



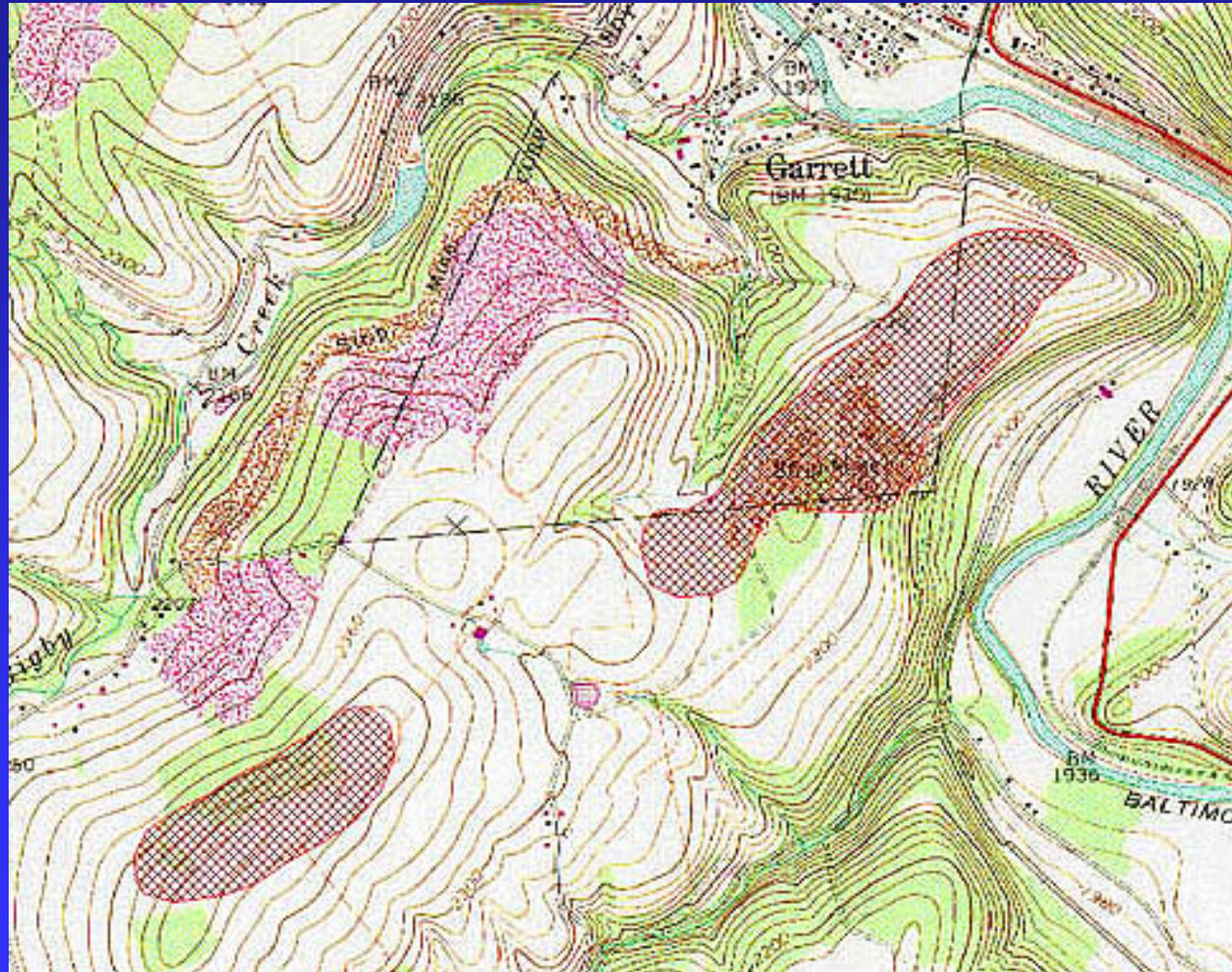
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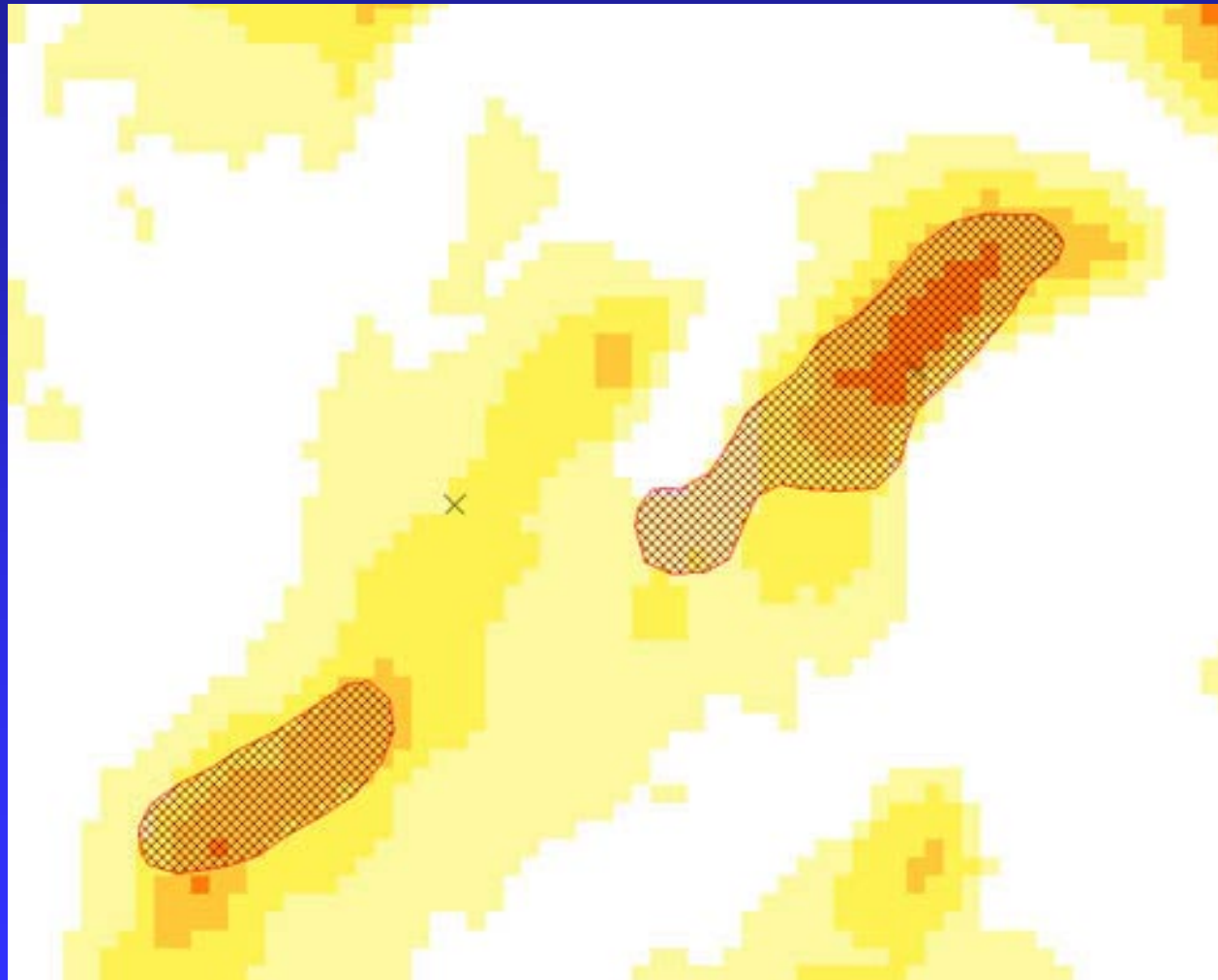
Site Map



Fill Areas



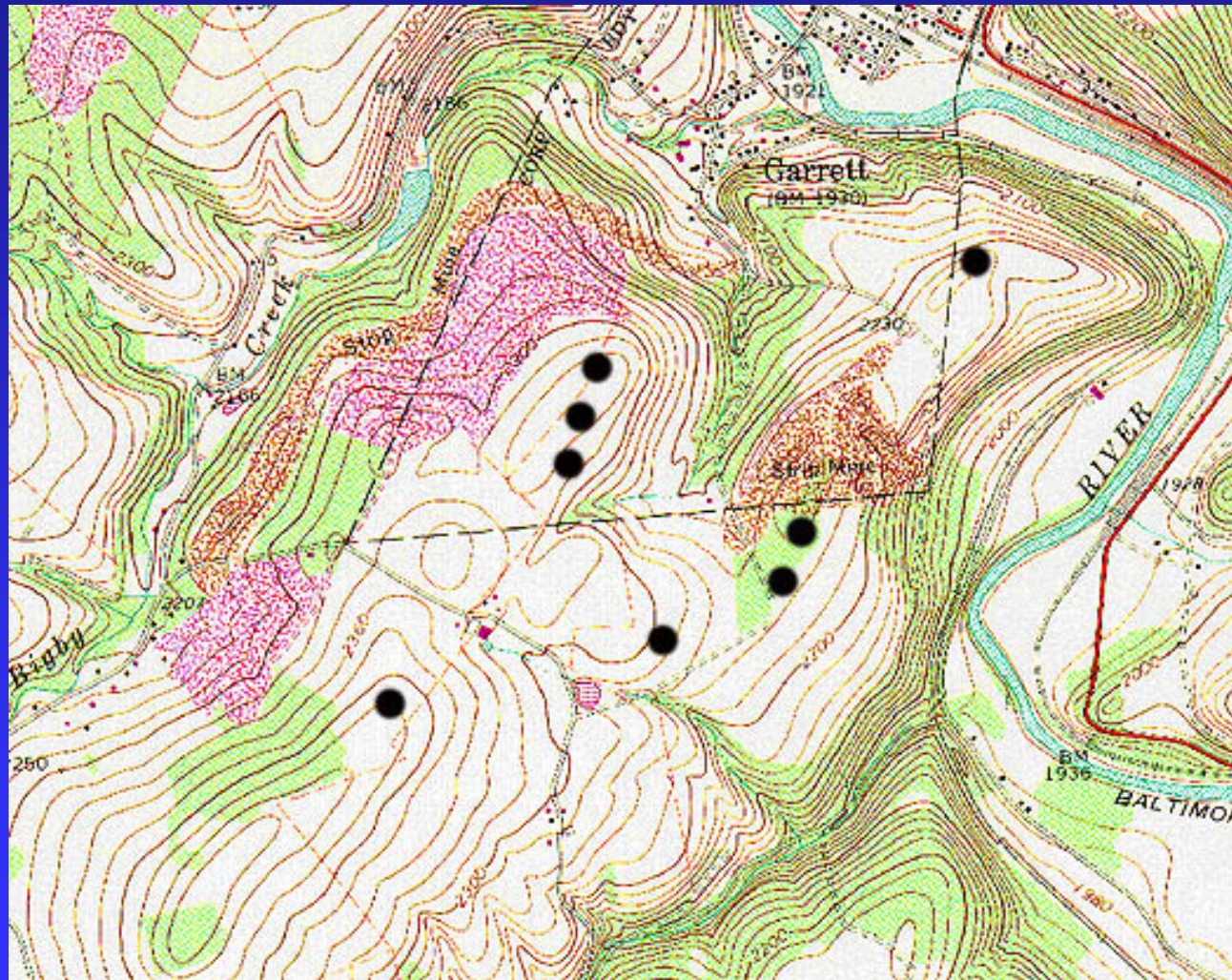
Fill vs. Energy



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Site Plan



Media Attention

Building permits granted for construction of local 'wind farm'

Part one in a series.
By Scott Shumaker
Staff Writer

SUMMIT TOWNSHIP--A public meeting will be held at 7 p.m. Tuesday, June 29, at the Summit Township building for local residents to find out more about a proposed "wind farm," to be built in the township in the near future.

The proposal, given to township supervisors from Disgen, Inc., (Distributed Generation Systems) located out of Evergreen, Colo., involves the installation of 10 to 15 large, three-bladed wind turbines on farm properties owned by Robert Decker and Donald Decker, along Route 219 between Garrett and Meyersdale.

The wind farm



By the end of 1999, wind turbines like these could be common sights for residents of Summit Township. A "wind farm" in this area has been proposed.

Randy Musser of Musser Engineering in Central City presented the proposal to the township supervisors.

of the land. Each turbine rests on a foundation approximately 40 feet square. The excavation holes are eight to 10 feet deep and are concrete reinforced.

Since the past the center pole foot diameter nearly all the tion is below Farming w around the t in a few feet tubes, the p All wiring a cation lin underground maintenance along the remain in construction. An eval

High winds stop construction at windmill farm

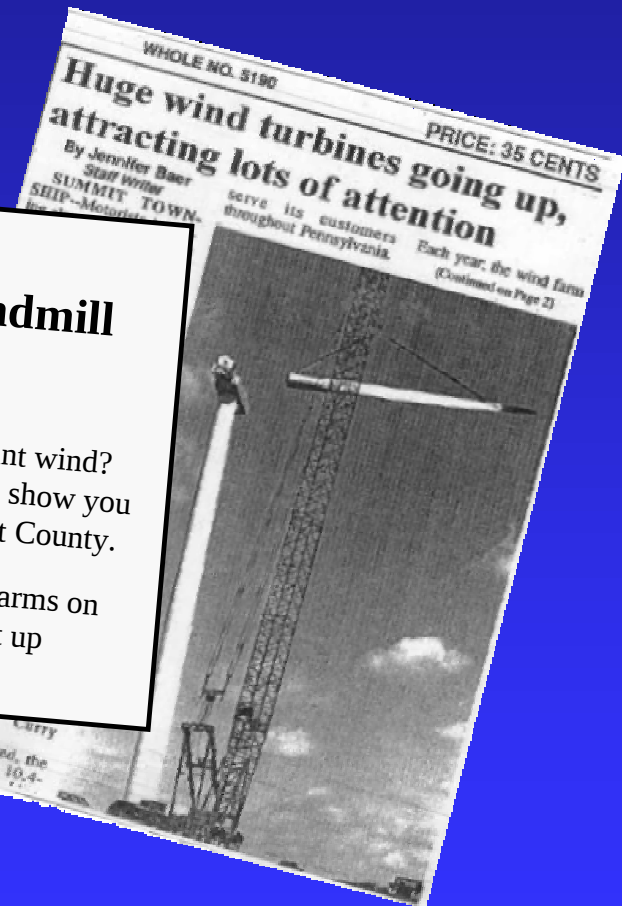
GARRETT, Pa. (AP) - You want wind? Robert and Donald Decker will show you wind on their farms in Somerset County.

It was so windy on the Decker farms on Thursday, workers could not put up windmills.

Couple preparing windmill farm bl

GARRETT, Pa. (AP) - Irene Decker expects some windmill-wonder in Somerset County, and she doesn't want to be caught unprepared.

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Transportation



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Construction



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Completion



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Project Complete:
May 1st 2000

Summary

- 'Built to order' from customer demand
- Environmental and local acceptability
- Fast-track development and construction