Local Resources can drive World Class Wind Development

John Sullivan, P.G.

Shaw Environmental, Inc.
Wind Energy
Windmill-
any of various machines for grinding, pumping, etc., driven by the force of the wind

Wind Turbine-
a mechanism powered by the wind to generate electricity.
Windmill
Wind Turbine
German Leadership

- Hydroelectric
- Solar Power
- Geothermics
- Biomass
- Coal
- Wind Power
- Renewable - 14%
Where is the Wind?
One way to tell if you have enough wind for a wind farm!!!
Wind Corridor

PTP and AWEA
Texas – supply chain leader

MARITIME OPERATIONS

TSTC West Texas

Ablene
Breckenridge
Brownwood
Sweetwater

BNSF
RAILWAY

DeWind

Tejay

COLTEK
NOW HIRING
APPLY HERE
Economic Impacts

From here, it's possible.

Rural West Texas Expansion
<table>
<thead>
<tr>
<th>Wind Companies in West Texas since 2005</th>
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<tbody>
<tr>
<td>• GE Wind</td>
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<tr>
<td>• Babcock &amp; Brown</td>
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<tr>
<td>• Nextera</td>
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<tr>
<td>• AES Wind</td>
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<tr>
<td>• AEP Wind</td>
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<td>• E.on</td>
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<tr>
<td>• DeWind</td>
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<tr>
<td>• Blattner</td>
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<tr>
<td>• RES Americas</td>
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<tr>
<td>• Windkraft Nord WKN</td>
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<td>• Altezza</td>
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<tr>
<td>• Northwind Solutions</td>
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<td>• SecondWind</td>
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<td>• Mortenson</td>
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<tr>
<td>• Third Planet Windpower</td>
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<tr>
<td>• Wind Energy Services</td>
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<tr>
<td>• Wind Energy Turbine Services</td>
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<tr>
<td>• Global Wind Services</td>
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<tr>
<td>• Upwind Solutions</td>
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<tr>
<td>• Siemens Crane Service Inc.</td>
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<tr>
<td>• Mitsubishi</td>
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<tr>
<td>• Sun Electric</td>
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<td>• Invenergy</td>
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</tbody>
</table>
Roscoe, Texas

2000 pop 1,380
If They Build It, They Will Come

- Local Restaurants
- Local Hotels
- Rental Properties
- Office Space
Local Tasks to Build a Wind Farm

- Local Transportation
- Equipment Rental
- Equipment Operators
- Dust Control
Local Tasks to Build a Wind Farm

- Concrete
Local Tasks to Build a Wind Farm

- Supplies
- Fence
- Sediment Controls
Local Electrical Grid Experts
Local Tasks to Build a Wind Farm

• Manufacturing
“Attracting Martifer would be a huge boon for a city whose recent history with manufacturing jobs has - like much of the country - been a sad one.” - AWEA
Local Tasks to Build a Wind Farm

• Operation and Maintenance
Local Tasks to Build a Wind Farm

- State of the Art Surveyors
- State of the Art Equipment
PTP Corridor Universities
Local Tasks to Build a Wind Farm

• Local Experts
• Professors
Discussion