

Economic Development Case Studies

Pennsylvania

Governor Announces New Gamesa Manufacturing Facilities – March 2005

<http://www.ahs.dep.state.pa.us/newsreleases/default.asp?ID=3842&varQueryType=Detail>

Governor Inaugurates New Gamesa Manufacturing Plant – June 2006

<http://www.ahs.dep.state.pa.us/newsreleases/default.asp?ID=3978>

Colorado

From Snack Bars to Rebar: How Project Development Boosted Local Businesses Up and Down the Wind Energy “Supply Chain” in Lamar, Colorado

<http://www.state.co.us/oemc/events/cwade/2004/presentations/cox.pdf>

FOR IMMEDIATE RELEASE:

March 7, 2005

**GOVERNOR RENDELL ANNOUNCES BUCKS COUNTY AS
SITE OF GAMESA'S THREE NEW MANUFACTURING FACILITIES**
*High-Tech Plants to Create More Than 300 Manufacturing Jobs, Return a Former U.S. Steel
Industrial Site to Productive Use*

FALLS TOWNSHIP — Governor Edward G. Rendell today announced the Spanish wind-energy company Gamesa Corp. is expanding operations in Pennsylvania by investing another \$34 million to open three new modern manufacturing centers on 20-plus acres of U.S. Steel's former Fairless Hills industrial site. The company previously had invested \$50 million in Pennsylvania, including funding for another manufacturing facility, its first in North America.

The three new advanced technology plants in Bucks County will create more than 300 new jobs in the production of wind mill blades and towers and the assembly of nacelles, which house the wind turbines.

"Once again, Pennsylvania continues to attract manufacturing jobs and solid private sector investment," Governor Rendell said. "This is positive news for the whole region, and it will help to continue Pennsylvania's strong leadership in alternative energy.

"Clean energy production is vital to Pennsylvania's growing economy," Governor Rendell said. "Gamesa's commitment to Pennsylvania reinforces our reputation as a national leader in the development and deployment of clean, advanced energy. This new manufacturing sector opens the door to even more job opportunities and greater investments as the market for clean energy continues to grow."

The new operations build on Gamesa's strong presence in Pennsylvania, where the company has invested \$50 million to locate its North American headquarters in Philadelphia and construct and operate a separate manufacturing facility in Ebensburg, Cambria County. Thirty people work at the Philadelphia office; another 234 workers are employed at the Ebensburg plant, located about 20 miles north of Johnstown.

The Department of Community and Economic Development, along with the Bucks County Economic Development Corp., offered Gamesa a financial package totaling approximately \$10 million in grants, loans and tax credits for the three manufacturing centers. The company received \$9.31 million in state incentives for its Cambria County facility.

Work on the financial package was spearheaded by the Governor's Action Team, economic development professionals who report directly to Governor Rendell. The state completed 205 GAT projects statewide last year, resulting in commitments to create nearly 19,800 jobs and retain nearly 40,000 positions. The state provided more than \$418 million in assistance for these projects, which leveraged more than \$1.9 billion in additional investment. More than 72 percent of the projects completed by the Governor's Action Team in 2005 involved manufacturers.

Gamesa, the second largest wind energy company in the world headquartered in Victoria, Spain, also will realize significant benefits by locating on land that formerly housed a steel mill. U.S. Steel's 1,289-acre industrial park is classified as a Keystone Opportunity

Improvement Zone, which encourages brownfield redevelopment by offering businesses tax-free status through 2018.

"Pennsylvania's manufacturing sector is growing, and advanced energy technology companies like Gamesa are leading the way," Governor Rendell said.

"Not only are we focused on job creation, making sure our businesses remain competitive in world markets, but we also are supporting the development of alternative energy sources while helping to return abandoned industrial sites to productive use. That is the aggressive type of action we are taking to support our workers, businesses and communities in Pennsylvania," Governor Rendell said.

"We are creating cleaner sources of energy that improve quality of life and make us less reliant on foreign fuel, improving the environment and enhancing security at home," the Governor said.

Gamesa's blade manufacturing plant at Fairless Hills will produce parts for the Gamesa G8X-2.0 MW multi-megawatt wind turbines, which incorporate the latest technological advances, such as the use of carbon fiber. The \$12 million plant, which will have an annual production capacity of 300 megawatts, will begin production in the middle of the year.

The new \$7 million plant for the manufacture of towers for the Gamesa G8X-2.0 MW wind turbine platform will have an annual production capacity of 300 megawatts. This project will become fully operational in the first half of 2006.

The \$15 million plant responsible for the assembly of the nacelles for the Gamesa G80-2.0 MW, Gamesa G83-2.0 MW, Gamesa G87-2.0 MW and Gamesa G90-2.0 MW wind turbines will have an annual production capacity of 1,000 megawatts, enough to power more than 300,000 homes. This project will become operational before summer. These jobs are very technical and require highly trained workers, enhancing Pennsylvania's ability to compete in a high-tech marketplace.

"It is an ambitious industrial plan that will reinforce our long-term commitment to the wind energy market of the United States, which is one of the priority markets for Gamesa," said company President Alfonso Basagoiti, who noted that Gamesa has signed contracts for more than 669 megawatts of wind production during 2004 and 2005.

Pennsylvania remains a leader in wind production east of the Mississippi, providing enough clean energy to power some 70,000 homes.

The Department of Environmental Protection has been spearheading Governor Rendell's efforts to build a clean energy future. The Governor shared the details of this work during a speech in December before the National Press Club in Washington, D.C., where he called for a massive national commitment to alternative energy modeled after Pennsylvania's actions.

Pennsylvania is leading the nation in an effort to modernize energy infrastructure to provide affordable, reliable, cleaner fuel. The Pennsylvania "Energy Deployment for a Growing Economy" initiative, or EDGE, provides regulatory and financial incentives to shut down older, dirtier, inefficient power plants and re-power with advanced coal gasification technology that produces synthetic gas for manufacturing feedstock, synthetic natural gas to heat homes, transportation fuels or electricity.

The nation's very first coal gasification-liquefaction plant is being built in Schuylkill County. Construction of Waste Management and Processors Inc.'s waste-coal-to-diesel plant will create as many as 1,000 jobs; operating the plant will produce another 600 permanent, high-paying positions. The plant will clean up tens of millions of tons of waste coal while giving the state and consumers clean diesel at a fraction of the market price.

The Governor also launched the East Coast's first commercially viable biofuels storage and blending system in Middletown, Dauphin County. The plant will replace 3.2 million gallons of foreign oil with domestically produced biodiesel and will keep about \$6 million worth of energy dollars in the commonwealth by reducing the state's need to purchase imported fuels.

Pennsylvania recently was recognized for its national energy leadership in working to put landfill gas to work for the economy. Granger Energy's Lanchester Landfill project, which received a \$235,000 state grant, supplies treated gas to several companies to use in place of natural gas in boilers and processes, displacing their reliance on natural gas. Putting this resource to use to power the economy offers a clean, cheap energy supply that businesses can use to keep jobs in Pennsylvania.

Pennsylvania is home to one of the nation's most progressive alternative energy portfolio standards, ensuring that 18 percent of all energy generated comes from clean, efficient sources by the year 2020. Benefits include \$10 billion in increased output for Pennsylvania, \$3 billion in additional earnings and between 3,500 and 4,000 new jobs for residents over the next 20 years.

Brought back to life by Governor Rendell after years of inactivity, the Pennsylvania Energy Development Authority has awarded \$15 million in grants and loans for 41 clean energy projects that will leverage another \$200 million in private investment. The projects will create 1,558 permanent and construction jobs. In addition, the research projects, if successful, could net as many as 327 full-time jobs.

The Pennsylvania Energy Harvest Grant Program funds projects that build markets for advanced and renewable energy technologies that use biomass, wind, solar, small-scale hydroelectric, landfill methane, energy efficiency, coal-bed methane and waste coal. Launched by Governor Rendell in the very first months of his administration, Energy Harvest has awarded \$15.9 million and leveraged another \$43.7 million in private funds since its inception in May 2003.

For more information on Governor Rendell's energy initiatives, visit DEP's Web site at www.depweb.state.pa.us, Keyword: "Energy." For more information on the Governor's Action Team, visit www.newPA.com or call 1-866-GONEWPA (1-866-466-3972).

FOR IMMEDIATE RELEASE:

June 12, 2006

**GOVERNOR RENDELL INAUGURATES GAMESA'S
CAMBRIA COUNTY MANUFACTURING FACILITY**

EBENSBURG — Governor Edward G. Rendell today cut the ribbon to mark the official opening of Gamesa Corp.'s manufacturing facility for wind turbine generator blades – its first in North America – at the South Park Industrial Complex in Cambria County. More than 230 people will work at the new plant.

The Spanish wind-energy company is investing \$84 million to locate its U.S. headquarters and four manufacturing facilities in Pennsylvania. Aside from the Ebensburg plant, three new advanced technology plants are planned for Bucks County, where as many as 300 workers will produce windmill blades and towers and assemble nacelles, which house the wind turbines.

"Alternative energy development is helping to power Pennsylvania's economy," Governor Rendell said. "We are attracting private investments and creating manufacturing jobs that will keep our commonwealth growing, improve our environment and enhance our already strong national leadership in building a clean energy future."

Wind energy is a key part of Governor Rendell's strategy to build a diversified energy base that ensures greater security for Pennsylvania, creates jobs and improves the environment.

Pennsylvania remains a leader in wind production east of the Mississippi, with 153 megawatts that provide enough clean energy to power 70,000 homes. The growth potential is significant. There are more than 5,000 megawatts of untapped wind power in the state, with the potential to generate 45 billion kilowatt-hours annually, or enough to power more than 5 million homes.

Gamesa President Alfonso Basagoiti noted the relevance of this important industrial project in the United States, "which reinforces the long-term commitment of the company with the U.S. wind power market and which is strengthened by a solid base of a significant order book in the wind turbine sales."

Gamesa, one of the main wind energy companies in the world headquartered in Victoria, Spain, is the only vertically integrated wind-energy company in the world, meaning it manufactures the parts for wind-energy units and then develops the wind farms itself.

Governor Rendell's innovative policies and strategic investments in cutting-edge projects have positioned Pennsylvania at the forefront of alternative energy development.

Pennsylvania's Alternative Energy Portfolio Standard, one of the most progressive in the nation, ensures that 18 percent of all retail energy generated by 2020 comes from clean, efficient and advanced resources, creating jobs and cleaning up the environment.

Over the next decade, Pennsylvania will replace 900 million gallons of transportation fuel with locally produced alternative resources such as ethanol and biodiesel, or with fuels derived from coal liquefaction. The 900 million gallons represents the estimated amount of fuels that will be imported from the Persian Gulf to Pennsylvania 10 years from now. The Governor is investing \$30 million over the next five years to build re-fueling and production infrastructure to support wide distribution of the alternative fuels.

Pennsylvania very well could be the nation's leading producer of biodiesel within the year, going from virtually nil a year ago to a projected 40 million gallons of annual production. The state already is home to the East Coast's first state-of-the-art biofuels injection facility. The plant will replace 3.2 million gallons of foreign oil with domestically produced biodiesel and keep at home \$6 million worth of energy dollars by reducing the state's need to purchase imported fuels.

The nation's first coal gasification-liquefaction plant is being built in northeastern Pennsylvania. The facility will use waste coal to produce 40 million gallons of clean-burning diesel fuel each year. What the Governor is doing to support the project is unprecedented, creating a fuel consortium with private industry to purchase nearly all of the offtake. Pennsylvania will lock in its supply for some 10 years at prices well below current market values and ensure a long-term, viable market for the plant.

Pennsylvanians now spend some \$30 billion per year on imported energy fuels. Instead of spending overseas, Governor Rendell is investing at home and putting Pennsylvanians to work.

Brought back to life after years of inactivity, the Pennsylvania Energy Development Authority has awarded \$15 million in grants and loans for 41 clean energy projects that will leverage \$200 million in private investment. The projects will create 1,558 permanent and construction jobs.

The Pennsylvania Energy Harvest Grant Program has awarded \$15.9 million and leveraged another \$43.7 million in private funds since its inception in May 2003 for projects using sources such as wind, solar, biomass, waste coal and recycled energy.

"Advanced energy technology is about achieving both environmental protection and economic development – at the same time," Governor Rendell said.

A testament to the effectiveness of the Governor's economic development policies is the recent report from the Corporation for Enterprise Development showing that Pennsylvania jumped from 46th in 2004 in short-term job growth to 15th last year. The state economy has added more than 122,000 jobs since Governor Rendell took office in 2003.

Site Selection magazine ranks Pennsylvania among the top 10 states with the most new and expanded corporate facilities, outperforming the entire Northeast -- the first time since at least 1999 that our commonwealth ranked first in the region. Pennsylvania went from seventh in 2004 to sixth last year in the number of manufacturing facility projects underway, according to the magazine.

Site Selection magazine also ranked Pennsylvania fourth nationally in the number of new manufacturing facilities in 2005. Since 2002, the number of new manufacturing projects in the state has nearly tripled to 76 projects in 2005.

This optimism about Pennsylvania's economy is supported by the Pennsylvania Chamber of Business and Industry, whose 2005 economic survey revealed that about 80 percent of its members expect to increase their investments in Pennsylvania in the next 12 months.

For more information on Governor Rendell's energy initiatives, visit DEP's Web site at www.depweb.state.pa.us, Keyword: "Energy."

From Snack Bars to Rebar: How Project Development Boosted Local Businesses Up and Down the Wind Energy 'Supply Chain' in Lamar, Colorado

**Craig Cox
March 2004**

Conducted on behalf of Bob Lawrence & Associates
for U.S. DOE under Grant Number SF22339

Background: Xcel Energy Rejects Windfarm Proposal

- 1999-2000: Xcel Energy issues RFP for new power generation. Xcel rejects 162MW Enron Wind proposal
 - Xcel opts for all-natural gas portfolio.
- 2001: Advocates take case to Colorado Public Utilities Commission



Lead plaintiffs: *Colorado
Renewable Energy Society
and Land and Water Fund
of the Rockies**



*The Land and Water Fund is now "Value in Resource Advocates"

February 2001: PUC Orders Xcel to Negotiate Wind Acquisition

"We find that adding Enron's Lamar wind energy bid to [Xcel's] preferred resource plan is in the public interest and comports with the IRP rules, [and will] likely lower the cost of electricity for Colorado's ratepayers. ...After a careful analysis of the economics of the wind bid, we find that it is justified on purely economic grounds, without weighing other benefits of wind generation that could be considered under the IRP rules."

(Colorado PUC, Decision No. 001-295, page 34.)

Important Results from Colorado PUC's 2001 Decision

- New wind generation on Xcel's system is predicted to cost less than new gas-fired generation, assuming that gas costs are more than \$3.50 per million cubic feet (mcf)
- New wind power receives a fair capacity value, based on Xcel's method and data
- Ancillary services to back up new wind power are not a major cost.

From NREI/CP-500-30551, "Colorado Public Utility Commissions Xcel Wind Decision

The PUC was Right: Xcel Energy Says Wind Energy Will Save Consumers \$4.6 Million

- The new wind farm that Xcel Energy is building near Lamar will save consumers \$4.6 million in their power bills.

– From Xcel Energy testimony by Ronald Darnell to FERC,
16 June 2003

October 2003: Project Sold by GE Wind Energy to PPM Energy and Shell for \$211 Million... Largest-Ever Capital Investment in Prowers County



Economy of Lamar and Prowers County Colorado, Before Windfarm

- Primarily agricultural
 - Alfalfa, corn for grain, corn for silage, grain sorghum
 - Farm economy has been depressed
- Population and jobs have fallen since 2000
 - Retail sales down
 - Sharp drop in oil and gas production



Construction of Windfarm Starts in mid-2003



Herling Construction

- Built 25 miles of roads
- Excavated the project's 108 foundations

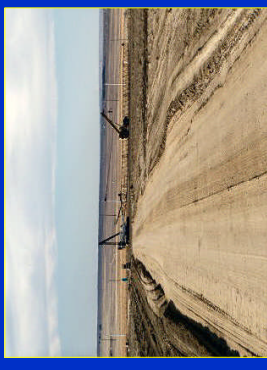
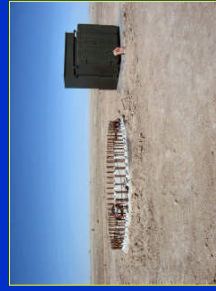


Photo Courtesy John Stupp, Prowers County Commission

Mortenson

- Poured concrete into the bases: 35,000 yards @ 300 yards per turbine
- Had 87 people pouring concrete, with "a couple" of locals staying on
- Gate City Steel did the rebar: 45,000 pounds of rebar in each foundation
 - 12-14 people did rebar
- Bottom line: 1.25 million pounds of concrete and rebar in each foundation



Christensen

- Installed the backbone of the system: 20 miles of underground cable
- Laid the cable to 105 turbines: 590 V converted to 34kV, then stepped up to 230 kV
- Built the substation
- Had 46 employees at height of construction



Photo Courtesy
S. Christensen
Colorado State
and Environment

Wilson Construction

- 44 miles of 230 kV poles and transmission lines strung to new Xcel Energy substation
- 50+ miles of direct buried cable laid from the turbines to the substation
- 25 people employed during construction; IBEW 12



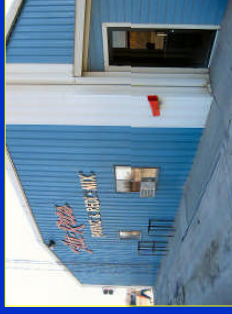
Ridge Crane of Fort Collins

Kevin MacDougal of Fort Collins-based company said that the project helped its business "a lot" and provided three months of work for two cranes. Ridge Crane is now expanding its operations.



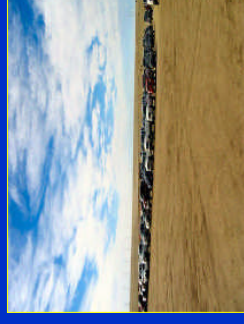
All-Rite Paving & Redi-Mix

"Project has been a lifesaver"

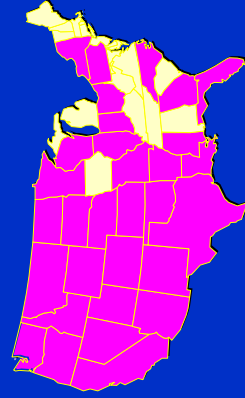


The Lamar (pop. 8,800) All-Rite did more business than the company's Pueblo (pop. 141,472) facility, because of project construction. It laid concrete for 32 miles of poles and for the new substation.

At Height of Construction, Subcontractors at Colorado Green Employed Nearly 400 Workers...



...from Around the Country



....And Their Presence Had a Tremendous Impact on Lamar's Economy



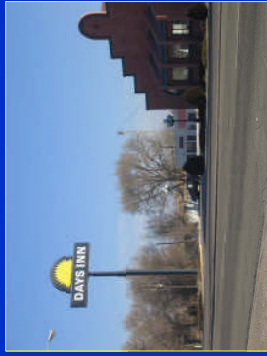
Local Rental Housing Units Booked Solid



"My rental units have been booked solid because of the windfarm construction."

— Brad Semmens,
owner of Country Acres
Motel and RV Park

High Occupancy at Local Motels



"Occupancy would normally run at about 20 percent in mid-December, but it hovers from 50% to completely full on some nights."

— *Manager James Emrie*

Quote from article by Steve Raabe in Denver Post, 14 December 2003

Texaco Food Mart



The project was a "shot in the arm...it got so busy in the early morning that I had to bring in more help...I had 60 customers in a half-hour: that's one every 30 seconds!"

— *Doug Johnson, Owner*

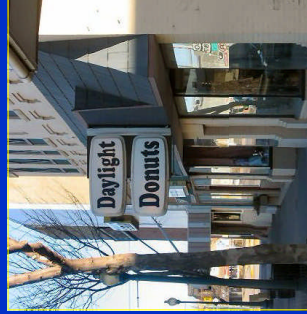
Hay Stack Restaurant



"We've seen a lot of workers coming in...the project has helped increase our business at least 30 percent."

— *Jamie, Manager of Hay Stack Restaurant*

Daylight Donuts



"We've had an increase in business, and the windfarm guys come in almost every morning."

— *Clerk at Daylight Donuts*

DeLoach's Water Conditioning



The project was a "shot in the arm...the workers drank lots and lots of water."

— *Jim DeLoach, Owner*

Wallace Gas & Oil

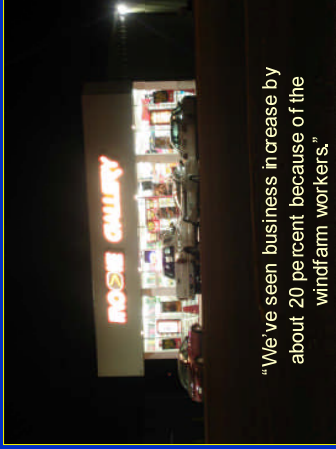


• Project has been a "Godsend...it's helped us to keep our heads above water."

— Company has delivered 110-115K gallons to the project, representing about \$250K more than it would otherwise have taken in.

Brett Burton of Wallace Gas & Oil

Movie Gallery



"We've seen business increase by about 20 percent because of the windfarm workers."

Workforce Colorado [State Job Service Agency]



"Because of the drought, the economy has been really bad, and the windfarm has been a real blessing... we would love to see them come back and do more!"

— Linda Mulbery, Workforce Colorado

Interest in Business Relocation Soars



"Because of the windfarm, business relocation inquiries have begun increasing from small manufacturers and oil-field services firms."

— Jan Anderson, Executive Director, Southeast Colorado Enterprise Development, Inc.



Best Made Mattress Company of Denver

"The new windfarm project has made us take a second look at relocating [our] mattress plant to Lamar."

— Thomas Jay Wacker, Business Manager, Best Made Mattress Company, Denver [from Lamar Daily News of 22 January 2004]



Thomas Jay Wacker, Business Manager, Best Made Mattress Company, Denver [from Lamar Daily News of 22 January 2004]

Windfarm Instills "New Spirit of Community in Lamar"



"The windfarm has instilled a new spirit of community in Lamar...it's intangible but very real."

— Chris Rundell, local rancher

Tremendous Local Support

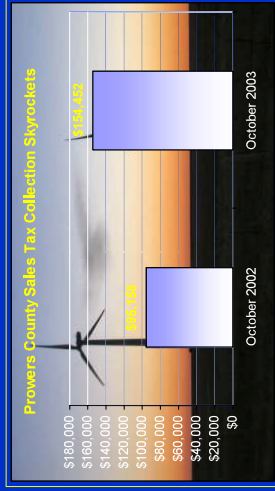


Site Services for a Typical 100MW Windfarm

	Man-hours
Turbine & Tower Installation Svcs.	121,080
Concrete Construction Services	72,000
Equipment Transportation Services	42,650
Project Management Services	36,775
Engineering & Surveying Services	25,300
Vendor Field Services	20,535
Road Building Services	18,940
Underground Cable Installation Svc.	17,250
General Labor Services	15,000
Local Material Delivery Services	12,500
Electrical Installation Services	8,770
Concrete Services	6,800
Equipment Repair & Fueling Svc.	6,000
Inspection & Testing Services	5,900
Food Preparation & Delivery Svcs.	3,500
Housing & Lodging Services	3,000
Real Estate & Legal Services	2,800
Communication System Services	1,120
Total	419,020

The total site services required for construction of a typical 100MW windfarm is about **419,020 man-hours** —equivalent to approximately **53,377 days of work at the site.**

Construction Boosted County Sales Tax Revenues



Landowner Payments Boost Entire Region

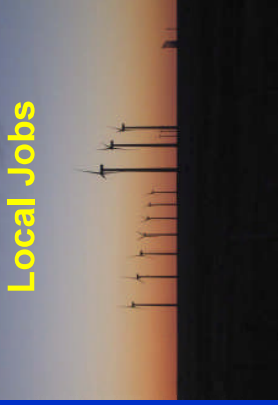
Property owners will receive royalty payments based on the amount of power generated

- Typical payments characterized as between \$3,000 and \$6,000 for each of the project's 108 turbines.

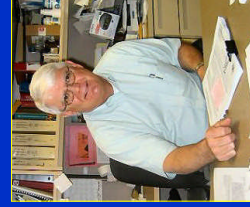


Property owners Kenneth and Michael Erickson. Photo from Poudre Channel

Colorado Green Has Brought 15-20 Full-time Permanent "Well Paying" Local Jobs



Prowers County Assessor Andy Wyatt Outlines Some of the Windfarm's Benefits...



Project Has Increased Prowers County's Tax Base by 29%...



....Providing \$917,000 Annually for Re-2 School District General Fund...

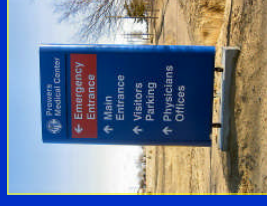


Photo from Lamar Daily News by Verina McDowell

...\$203,000 Annually to the School District's Bond Fund...



...\$189,000 Each Year to the Prowers Medical Center...



And New County Revenues of About \$764,000 Annually



Summary of Wind's Benefit to Prowers County

- \$764,000/year: new county revenues
- \$917,000/year: School General Fund
- \$203,000/year: School Bond Fund
- \$189,000/year: Prowers Medical Center
- 29% Increase in County Tax Base
- Tremendous Support from Community

Windfarm a "Blessing" to the Entire Area



"It's the greatest thing that has happened to this area, and it's a blessing to Prowers County and Southeast Colorado."

— Leroy Mauch, Prowers County Commissioner

Support From Neighboring Baca County

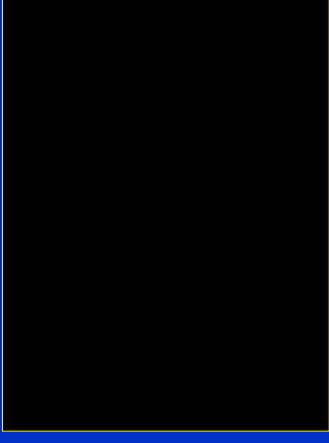


Springfield, county seat of Baca County, Colorado

"A windfarm in Baca County would provide real benefits to us, too, tax-wise, employment-wise and energy-wise. I hope to see new wind energy development in our county very soon."

—*Baca County*
Commissioner *Ray Miller*

Capture the Benefits of Wind in Your Community



Video clip courtesy GE Wind

Community Wind: Lamar Light & Power, ARPA and Springfield



These Community Projects (five 1.5MW turbines) were made possible by Colorado Green

Thank You!

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