



T O R C H
RENEWABLE ENERGY, LLC

Attachment
"E"

February 8, 2013

Larry and JoAnne Revocable Trust
6120 W. Warbonnet Rd.
Willcox, AZ 85643-3641

Dear Mr. and Mrs. Todd,

We are writing to send notification of our intention to build the Red Horse Wind 2 Farm adjacent to your property in Willcox, Arizona. Cochise County requires notification to all landowners within a 1-mile radius of a proposed wind energy development.

The Red Horse Wind 2 Project will include the construction and operation of a wind energy generation facility with a 50.4 MW nameplate capacity on Arizona State Trust Lands and Private Lands. The intent is to place one wind turbine on your property, and up to 27 wind turbines on Arizona State Trust Land dispersed throughout an estimated 3,850 acres of land. Each turbine will be 426 feet tall. If a wind turbine is not placed on your land, then up to 28 turbines will be placed on State Land. A proposed conceptual plan is attached to this letter of intent.

The Construction Phase will include: existing road repair and new gravel road construction; trenching for underground collection and fiber-optic lines to the 34.5 kV substation; excavation for turbine foundations; installation of up to 28 wind turbines on Arizona State Land and private land; an operating and maintenance facility; construction of a 34.5 kV substation; construction of 2-34.5 kV overhead transmission lines that will run from the 34.5 kV substation to the existing Winchester Substation. Construction is expected to begin in December 2013.

The Operations Phase will include: generation of renewable wind energy, including on-site operation and periodic maintenance and repairs of the entire generating facility components, underground conduits, and overhead transmission facilities over and across the lands defined in the attachment. There will be 2 people operating the O&M facility at any given point in time.

1331 LAMAR, SUITE 1450
HOUSTON, TX 77010-3039

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If you have any questions please feel free to contact me at 713.753.1287. We look forward to discussing this project with you further while we are in town the week of February 11th.

Sincerely,

A handwritten signature in blue ink, appearing to read "Glenn Holliday", written over a horizontal line.

Glenn Holliday

SS

February 19, 2013

Dale & Louise Henderson
6396 N. Shilling Ranch Rd.
Willcox, AZ 85643
Parcel # 209-69-002

Dear Mr. and Mrs. Henderson,

We are writing to send notification of our intention to build the Red Horse Wind 2 Farm adjacent to your property in Willcox, Arizona. Cochise County requires notification to all landowners within a 1-mile radius of a proposed wind energy development.

The Red Horse Wind 2 Project will include the construction and operation of a wind energy generation facility with a 50.4 MW nameplate capacity on Arizona State Trust Lands and Private Lands. The intent is to place one wind turbine on your property, and up to 27 wind turbines on Arizona State Trust Land dispersed throughout an estimated 3,850 acres of land. Each turbine will be 426 feet tall. If a wind turbine is not placed on your land, then up to 28 turbines will be placed on State Land. A proposed conceptual plan is attached to this letter of intent.

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If you have any questions please feel free to contact Glenn Holliday
at 713.753.1287.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Rocky Ray', written over a horizontal line.

Mr. Rocky Ray



T O R C H
RENEWABLE ENERGY, LLC

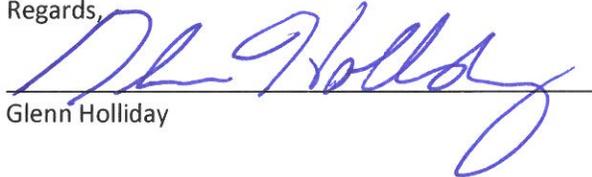
In addition, the Todd's have indicated that they are supportive of this project. TRE is in currently in negotiations with Todd's to come to a final agreement. Once this agreement is reached a copy of the agreement will be provided.

Two letters describing the project and the intent to proceed have been sent. The letters were sent to the Larry and JoAnne Revocable Trust and Dale & Louise Henderson. Copies of these letters are included in Exhibit F. There has been no response from the land owners.

Lastly, a contractor has not yet been selected. Once a contractor is selected proof of a commercial contractor licensed in the State of Arizona will be supplied.

As we have mentioned, we are on a tight development schedule and hope that the contents of this application are sufficient to be on the meeting agenda for April 10th, 2013. If there is any further information you need to assist with the processing of this application please let us know. A \$300.00 application fee is attached.

Regards,


Glenn Holliday

2/21/2013
Date

1331 LAMAR, SUITE 1450
HOUSTON, TX 77010-3039

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Special Use: Docket SU-13-04 (Red Horse 2; Torch Renewable Energy)

YES, I SUPPORT THIS REQUEST
Please state your reasons:

COCHISE COUNTY

MAR 20 2013

PLANNING

NO, I DO NOT SUPPORT THIS REQUEST:
Please state your reasons:

The members of the family of the Wagonnet Ranch LLC wanted to be known some concerns about the proposed wind farm project submitted by the Red Horse 2 LLC. We do not wish to be in the way of progress but as trustees of the state land we wish to be good stewards of this land. Our state land lease is a great part of our ranching operation so our concerns is short and long term effects this project will have on the land. Also the scenic beauty of the Allan Flat will never be the same once these are put into place. We are a generation of working ranchers and we want to be able to continue this in the years to come.

PRINT NAME(S):

Larrie Todd, Lori Todd, + Larry Todd

SIGNATURE(S):

Larrie Todd
Lori Todd *Larry Todd*

YOUR TAX PARCEL NUMBER: 20969001 (the eight-digit identification number found on the tax statement from the Assessor's Office)

Your comments will be made available to the Planning Commission. Upon submission this form or any other correspondence becomes part of the public record and is available for review by the applicant or other members of the public. **Written comments must be received by our Department no later than 4 PM on Friday, March 29, 2013 if you wish the Commission to consider them before the meeting. We cannot make exceptions to this deadline; however, if you miss the written comment deadline you may still make a statement at the public hearing listed above. NOTE: Please do not ask the Commissioners to accept written comments or petitions at the meeting, as they do not have sufficient time to read materials at that time. Your cooperation is greatly appreciated.**

RETURN TO: Michael Turisk, Planning Manager
Cochise County Planning Department
1415 Melody Lane, Building E
Bisbee, AZ 85603

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City of Willcox
101 S. Railroad Ave
Willcox, AZ 85643
520-384-4271

Date: March 13, 2013

Project: 51 MW Wind Energy Power Plant Project

Property Location: Nine sections of land located 13 miles west of Willcox

To: Cochise County Planning and Zoning Commission,

Based on the information contained in the Cochise County Development Review Transmittal letter/Special Use Permit the City of Willcox recommends the Approval of this Special Use Permit for the construction of the 51 MW Wind Energy Power Plant Project located approximately twenty-one (21) miles West of Willcox AZ. This project will not only bring jobs for this project at the time of construction and during operational time, but will have further economic development possibilities in the near future.

Robert Irvin 3/26/13
Robert Irvin Date
City of Willcox
Major

March 20th, 2013

Cochise County Planning & Zoning
1415 Melody Lane
Building G
Bisbee, Arizona 85603

Ron Brooks
Benson City Councilman
647 S. Huachuca Street
Benson, Arizona 85602

Re: Torch Energy Wind & Solar Farm

Sirs;

I am writing to you in support of the proposed Solar / Wind Farm to be located between the City of Benson, Arizona and Wilcox, Arizona north of Interstate I-10. I have spoken with both Glenn Holliday – Land Management and Rocky Ray – Advisors with Torch Energy and have looked over their proposed plan to install 50 Megawatts of Wind Energy in that area.

I have been involved with Sales and Purchases of Electrical Energy for over 20 years in the Western United States, and I believe they have a very viable plan. Looking from the estetics side of things, the location is optimal for the type of electrical energy they plan to produce (Wind Energy) and is located far from any rural areas.

With New Mexico gearing up in a very heavy way for Wind and Solar generation, I believe as a State and County we should be capitalizing on our natural renewable resources going into this Century and work with these companies to bring clean renewable energy to our County.

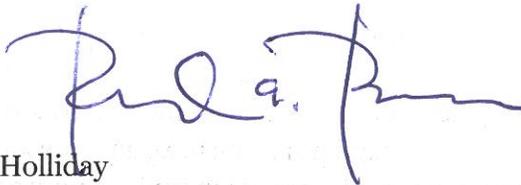
The initial stage would bring much needed good paying construction and technical jobs to the County and in the long term, technical jobs that we desperately need.

Most of my constituents agree, renewable is a great label for our County to have along with the much needed jobs.

I therefore endorse and submit to Cochise County Planning & Zoning we approve such a venture in our County and welcome their project.

Going forward we should welcome Wind & Solar projects throughout the County for increased revenues and jobs.

Ron Brooks



Cc: Mr. Glenn Holliday
Torch Energy
1331 Lamar, Suite 1450
Houston, Texas 77010-3039

COCHISE COUNTY
MAR 25 2013
PLANNING

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Willcox Chamber
of Commerce & Agriculture

1500 N. Circle I Road
Willcox, AZ 85643

Cochise County Planning and Zoning
1415 Melody Lane, Building E
Bisbee, Arizona 85603
tel: 520.432.9240
fax: 520.432.9278

Re: Torch Renewable Energy Red Horse Wind

Dear Cochise County P & Z;

The Willcox Regional Economic Development Alliance supports the Red Horse Wind 2 Wind Farm development proposed by Torch Renewable Energy LLC. This project will provide much needed economic development in the greater Willcox area. Torch Renewable Energy has already determined that its product will be sold to a market. The Red Horse Wind 2 Wind Farm development will be done in a way that is environmentally sound.

This wind farm has quite an economic impact not only for the immediate area but the State of Arizona as a whole. This project will create up to fifty direct jobs and many more indirect jobs during the construction phase. The completion of the project will then create four permanent jobs. An agreement with private land owners can generate revenue for them adding to the total economic impact on the greater Willcox area. Torch Renewable Energy has indicated that the majority of the wind farm is on Arizona State Land. The Arizona State Land Department shows that this is State Trust Land. The energy lease of the land will provide income to the beneficiaries which are schools, adding to the economy by supporting education in the State of Arizona. The Red Horse project will upon completion provide clean renewable electricity to Tucson Electric Power and help maintain energy costs for residents.

As mentioned before the Willcox Regional Economic Development Alliance supports Torch Renewable Energy's Red Horse Wind 2 Wind Farm project. Thank you for your consideration of this project that will benefit the area.

Sincerely,

Roland Knox, President

COCHISE COUNTY

MAR 22 2013

PLANNING

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Willcox Regional Economic Development Alliance

March 14, 2013

Michael Turisk, Planning Manager
Cochise County Community Development
1415 Melody Lane, Building E
Bisbee, Arizona 85603

Dear Michael,

On behalf of the Willcox Regional Economic Development Alliance (WREDA), I would like to offer support to the Torch Renewable Energy for the Red Horse Wind 2 Wind Farm. WREDA believes that a large scale project of this nature will help our local economy and region in many ways by providing short-term jobs, bring money and services to our community, and offer long-term renewable energy to Arizona. WREDA is excited to provide support to Torch in any way that we can to help the project go as smoothly as possible.

Please do not hesitate to call me if there is anything that I can do for you.

Thank you.

Telly Stanger
Chariman, WREDA

COCHISE COUNTY
MAR 22 2013
PLANNING

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Southeast Arizona Economic Development Group
168 East 4th Street
Benson, AZ 85602
www.saedg.org

03-26-13

Cochise County Planning & Zoning
1415 Melody Lane, Bldg. E
Bisbee, AZ 85603

Re: Torch Renewable Energy Red Horse Project

Dear Cochise County P & Z;

Southeast Arizona Economic Development Group would like to offer our support for the Red Horse Wind 2 Development proposed by Torch Renewable Energy LLC. This project will provide much needed economic development and employment to Northern Cochise County. Torch Energy has already determined that the energy produced by this project will be sold.

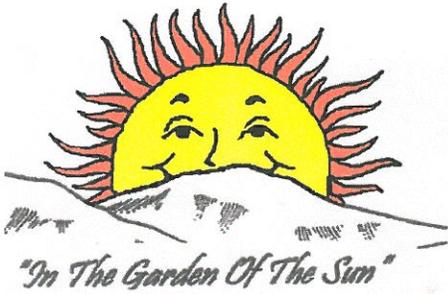
The economic impact of this project and to the region as a whole will be immediate and long term. The project will create approximately 50 direct jobs and many other indirect jobs during construction. With the completion of the project an additional four permanent jobs will be created. The private land owners along with the State of Arizona will benefit by the additional revenues from the land leases. The Red Horse project will when completed provide clean renewable electricity to Tucson Electric Power and help maintain energy cost for residents.

We once again want to offer support for the Red Horse Wind 2 Project. We ask that you support this opportunity to produce clean renewable energy in Cochise County. This development will benefit all of Cochise County

Sincerely,



George Scott
Executive Director.



Bowie Chamber of Commerce

PO Box 287

Bowie, AZ 85605-0287

Phone: (520) 253-0930 Fax: (520) 847-2603

E-mail: b2caz@vtc.net Website: www.bowiechamber.com

Board of Directors

*Nancy-Jean Welker, President Bruce Austin, Vice-President
Jennie Redman, Secretary Dan O'Neal, Treasurer Dave Terry, Member*

Your Gateway to the Hot Well/Dunes Recreation Area, Ft. Bowie National Historic Site and Chiricahua National Monument

Cochise County Planning & Zoning
1415 Melody Lane, Building E
Bisbee, AZ 85603

Re: Torch Renewable Energy, Red Horse Project

Dear Commissioners -

The Bowie Chamber of Commerce supports the Red Horse Wind 2 Development Project proposed by Torch Renewable Energy, LLC. This project will provide some much needed economic development and employment in Northern Cochise County. The public wants renewable energy. We must start building viable projects like this one. We must show that our county welcomes this industry.

We ask that you support the Red Horse Wind 2 Development Project as it will produce clean renewable energy while helping to maintain energy costs, create jobs during and after construction and bring additional revenue from the land leases.

Sincerely,

Nancy-Jean Welker

Bruce Austin

Dave & Terry (By J.T.)

Jennie Redman

Dan O'Neal

4-9-13

Cochise County Planning and Zoning Commissioners

Jim Lynch

Jim Martzke

Gary Brauchla

Carmen Miller

Commissioners,

As a 16-year resident of Cochise County, I am writing in regard to the request by Torch Renewable Energy for a Special Use Permit for its proposed Red Horse wind project. While the document prepared by Michael Turisk of the Cochise County Planning and Zoning Department (Docket SU-13-04) is generally thorough, I wish to express several concerns not addressed in that document.

(Note: Page numbers referred to below are according to the hand-written page numbering in the lower right-hand corner of each page of the following document:

http://www.cochise.az.gov/uploadedFiles/Planning_and_Zoning/041013%20PNZ%20Packet.pdf)

- 1) Among Cochise County's foremost assets are its scenic beauty, open spaces and natural habitat. These constitute a major reason why people visit the county and move here. Outdoor recreation and education are also significant reasons why people visit the county and spend money here. Hunters, bird watchers and other outdoor enthusiasts frequent the area of the proposed wind farm. Notably, approximately 1500 annual visitors to the Nature Conservancy's Muleshoe Preserve pass adjacent to the proposed wind farm site. Long-term land use planning should carefully consider negative impacts to these traditional land uses and resulting income streams for the County. It is troubling that in the rush to permit this project, the Special Use Permit request packet does not appear to address this issue. Will any effort be made to contact these visitors for the purpose of determining the degree to which the proposed wind farm will negatively impact their use of this area?

- 2) Despite Glenn Holliday's assertions of Todd family support for the project (P. 58), Larrie Todd, Lori Todd and Larry Todd of the War Bonnett Ranch oppose the proposed wind farm (P. 59). This apparent discrepancy should be clarified.

- 3) On October 17, 2012, AzGFD responded to the proponent's request for meteorological towers (P. 43). The towers were apparently not erected until December. It is difficult to understand how meaningful wind data can be obtained prior to the proponent's proposed 4th quarter 2013 construction schedule. According to "Arizona Wind Energy Assessment, Cochise County, Developable Windy Land and Economic Benefits", two years of wind data are required to evaluate a site. Hard data is required to make economically sound decisions about this project. The lack of such data suggests that this project may be financially risky.
- 4) The proponent's assertion that "...we are on a tight development schedule..." is dubious. It is standard operating procedure for companies proposing infrastructure projects to create a sense of urgency and momentum for the proposed project. Such tactics do not warrant moving quickly in considering this Special Use Permit request. If the site is well-located for a wind farm, other companies will be eager to take advantage of it, should Torch decide to pull out. The Todd family has ranched at this site for generations. This history alone warrants taking time to carefully consider all factors involved in issuing a Special Use Permit.
- 5) Item 6 (P. 11) claims "...at least four permanent jobs." Exhibit A (P. 15) states "...up to 4 long-term jobs..." If jobs are perceived as a significant benefit of the proposed project, this discrepancy should be resolved. In either case however, the number of permanent jobs are obviously minimal.
- 6) Wind farms typically provide electrical generation for times of peak power loads. In the desert southwest, primary peak loads occur during summer months due to increased air-conditioning use. It is unclear whether the proposed Red Horse project can effectively meet this demand. Lack of clarity regarding this issue is highlighted by the fact that the proponent has not yet recorded on-site wind data for the summer months. Proposing a wind farm before gathering onsite data appears to be premature and should be investigated as part of the permitting procedure.
- 7) Issues 2, 3 and 5 above suggest that some undisclosed factor is driving the push to begin this project before adequate data have been collected. Perhaps subsidies from somewhere?
- 8) The benefit to Cochise County, aside from tax revenue and several permanent jobs is unclear. The Special Use permit process should

include an analysis of how these anticipated economic benefits from the wind farm will be offset by deleterious impacts to outdoor recreation and the economic benefits it provides to the county.

Sincerely,
David Omick
6146 N. Canyon Rd.
Benson, AZ 85602
520-212-4628

Turisk, Mike

From: Dist1a
Sent: Monday, April 08, 2013 7:28 AM
To: nmeader@cox.net; Turisk, Mike
Subject: RE: Comments on Proposed Red Horse Wind Farm

Mr. Meader -

Thank you for your input.

Jim Lynch
Chair, Cochise County Planning Commission

From: Norm Meader [nmeader@cox.net]
Sent: Sunday, April 07, 2013 6:34 PM
To: Dist1a; Turisk, Mike
Subject: Comments on Proposed Red Horse Wind Farm

Dear Michael and Mr. Lynch,

This coming Wednesday, April 10, the Cochise County Planning Commission will hold a public hearing (Docket SU-13-04) on a wind farm proposed by Red Horse and Torch Renewable Energy in the Allen Flat area east of Cascabel. This is approximately 15 miles west/northwest of Willcox. This wind farm would be on primarily Arizona State Trust Land that is grazed by the Warbonnet Ranch. The notice is as follows:

PUBLIC HEARING -- Docket SU-13-04 (Red Horse 2, LLC; Torch Renewable Energy, LLC): A request for Special Use authorization for a 51-megawatt wind energy power plant west of Willcox. The proposed project would include up to 28 turbines each up to approximately 487-ft. in height. The subject properties are zoned RU-4 and includes nine Sections of AZ State Trust Land and a small portion of private land.

Several of us in Cascabel have exchanged information and concerns about the project, which I have summarized in the attached pdf file. I would like to submit this as a comment on the project. While we have some serious concerns about the project, we feel that we should defer to the Todd family, which manages the Warbonnet Ranch, about it. They will be the affected the most by the project, and we do not know what their feelings may be. If a turbine is sited on their land, they could receive some lease money for it, which may benefit them. The Antelope Ranch may also be affected somewhat.

Other than the environmental impacts of the project, of particular concern for the Commission would be the impacts on any residential areas such as the ranch headquarters. Wind turbine noise and shadow flicker from the turning blades can significant disturb those living nearby and can reduce the quality of life. Below are comments from an article that summarizes some of these impacts and makes recommendations for set-back distances, that is, how far wind turbines should be kept from living quarters.

If you could forward these comments to the appropriate people, I would appreciate it. I believe these comments are thoughtful and informative and, I hope, helpful. If you have questions or I can provide additional information, please let me know.

Thank you for considering this.

Sincerely
Norm "Mick" Meader
Cascabel landowner/part-time resident
(520) 323-0092
nmeader@cox.net

Excerpts from *Wind Turbine Syndrome: Noise, Shadow Flicker, and Health*
by Dr. Nina Pierpont, available at <http://highlandmts.org/wp-content/uploads/2010/01/wind-turbine-syndrome-noise->

In a 2005 survey of 200 adult residents within 3/4 mile of the French St. Crepin Windfarm, 83% responded. Of these, 27% considered the noise to be intolerable at night, 58% considered the noise to be disturbing, and 10% considered the noise to be disturbing by day. This is only a 6 turbine, 9 MW installation.

The audible noise produced by wind turbines has a thumping, pulsing character, especially at night, when it is louder. The noise is louder at night because of the contrast between the still, cool air at ground level and the steady stream of wind at the level of the turbine hubs, known as a "stable atmosphere" in which there is little vertical movement of air. This nighttime noise travels long distances. It has been documented to be disturbing to residents 1.2 miles away from wind turbines in regular rolling terrain, and 1.5 miles away in Appalachian valleys.

The wind turbine noise at levels permitted by the Ellenburg, Clinton, and Altona Wind Energy Facilities Ordinances are in the range of decibel levels which disturb sleep, even if permitted noise levels are not surpassed. Higher levels of noise disturb sleep and produce a host of effects on health, well-being, and productivity.

The Academy of Medicine of France has recommended a 1.5 km (0.96 mile) setback because of noise and health issues; ours should be at least this.

In Lincoln Township, WI, two years after installation of 22 industrial wind turbines, 33% of residents 800 ft to 1/4 mile from the turbines found shadows from the blades to be a problem, 40% 1/4 to 1/2 mile away, 18% 1/2 to 1 mile away, and 3% 1 to 2 miles away.

The only realistic form of mitigation is setback, which is inadequate under Ellenburg municipal law. From the Lincoln Township data, setback of at least one mile is needed.

Subject: Fwd: Planning and Zoning Meeting Today
From: Anna Lands (healing@rnsmtc.com)
To: arbor_solutions@yahoo.com;
Date: Wednesday, April 10, 2013 10:28 AM

Since the e-mail via the county office is not functioning, we are using your personal e-mail. Thank you.
from Norm 'Mick' Meader regarding the proposed Torch Energy- Red Horse project at Warbonnet.
3-10-13

1. Ranch house impacts. Other than the visual impact of the wind farm on visitors to the Mule Shoe Ranch, of greatest concern is how close the northernmost wind turbines in the farm would be to the Warbonnet Ranch headquarters. If wind turbines were that close to my dwelling in Cascabel, they would destroy what I have there. They do not affect just the view but the peace and tranquility surrounding them.

Noise is one issue, but shadow flicker is the other big one. The shadows and flicker from wind turbines extend the farthest with the lowest sun angles. Thus they will carry farther in the winter and in the early morning and late afternoon. They could easily reach the Todd ranch house. The two northernmost turbines (11 and 19) are NOT situated directly south of the ranch but to the east and west, which makes it far more likely that the shadows and flicker will reach the house during the low morning and afternoon sun angles. This is an important geometrical consideration that has not been considered. Torch Energy is looking almost solely at the most convenient layout for the turbines.

2. Data acquisition. A second point of considerable concern is that Torch appears to be moving ahead with building this farm without collecting adequate wind data to determine how much power output they can expect at what time of the year and day. This is essential to fully determine the project's economic potential and thus its income. Northern Arizona's Institute of Sustainability, which is the authority on wind generation in the state, states that two year's of data is needed to characterize the wind potential of a site. Torch appears to be proceeding based merely on modeling by the National Renewable Energy Laboratory, not on actual measurements. This should be of concern to the county.

3. Review of wind data. I have further reviewed wind energy potential maps for the area available from Northern Arizona University at <http://nau.edu/CEFNS/Centers-Institutes/Sustainable-Energy-Solutions/Energy/Wind-Resource-Maps/> These show that overall for the year, the wind rating for the Warbonnet Ranch falls in the "fair" category. It rates 3 on a scale from 1 (poor) to 7 (superb). During the winter months (December through March) the Warbonnet Ranch area achieves a rating of 4 (good). In the summer, however, from June to September the ranch area has essentially no wind energy potential whatsoever. It is also poor in the fall, although better in the spring. Power from the farm will contribute essentially nothing to meeting the summer peak load for Tucson Electric Power Company.

Perhaps these summary points will be of help to you.

Mick

**Comments on the Red Horse Wind Farm Proposal:
Where will wind farm planned for Muleshoe/WarBonnet fit into this?**

Compiled by Norm "Mick" Meader of Cascabel, April 6, 2013

The following are comments on the Red Horse/Torch Renewable Energy Wind Farm proposal for northwestern Cochise County taken from an online conversation between mostly residents of Cascabel. Bob Rogers, who manages the Mule Shoe Ranch for the Nature Conservancy, also contributed important observations.

We feel that the opinions and feelings of the Warbonnet Ranch and the Todd family about the project should take precedence and that our comments should not override them, even though we have numerous concerns. Ranching is very difficult at the moment, and this project could possibly provide the Warbonnet Ranch and the Todds with some lease income, which may be important to them. While not wishing to interfere in their affairs, the following may still be helpful to Cochise County officials.

These comments are arranged with the most recent comments first, which may be somewhat confusing. It may be best to begin at the end to understand how our thoughts evolved on the issue.

On 4/5/2013 8:27 AM, Bob Rogers wrote: [Last comment first]

Hi All,

They [Red Horse] are currently collecting wind data up there [Allen Flat west of Willcox and nearby area] and have been for the last several weeks. There were two towers, one about ½ mile or more east of the road and another further back closer to the mountains. They are very tall but still hard to see, a red-and-white pole with wind cups on top. I have seen several survey trucks, TEP trucks, and others riding around on ATV's with GPS units between the pass on 3 Links road and Allen Flat both on the Warbonnet and the Antelope Ranches. Red Horse told me that one tower would be located on private land and 20 on State lands south of there. According to some Game and Fish (G&F) people I've talked to, they still have a lot of data to gather before the state could sign off.

David Omick [david@omick.com] Friday, April 05, 2013 8:35 AM

I agree this is highly speculative. Red Horse's argument of relying on upslope winds to power afternoon peak loads during the hot season is weak. I seriously doubt that on-site wind testing will support it. As you note, this is a marginal area for wind power, and there are probably other angles (financial incentives? Renewable Energy Portfolio requirements?) that make it even remotely feasible.

It will be important to communicate with the Todds both to understand how they see the proposal and to be sure they have the fullest possible picture of what's at stake.

Thanks,
David

Norm [mailto:nmeader@cox.net] Friday, April 05, 2013 8:10 AM

More good input. Thanks, David. Bob Rogers noted that only afternoon upslope winds make this site at all feasible. It would be interesting to know how Red Horse evaluated that. They had to see TEP as a marketing target and were looking for any possible site close to TEP's lines to take advantage of. I can see how this area might fall out of wind potential maps as something to consider. At the same time, this is a marginal area overall. Redhorse still needs to collect on-the-ground wind data to know whether to go ahead, so this farm may still be pretty speculative.

Below are some other thoughts that I shared with just a few people.

I have looked at the Warbonnet Ranch in Habimap, which lets me see land ownership and grazing leases, and there's room for just one or two turbines on deeded land. Any turbines on deeded land would be within one-half mile of the house. The deeded land is 360 acres. From the topography, it looks like most of the wind farm would be south and southeast of the deeded land where the surface is not broken by deep drainages.

The Warbonnet Ranch is a lovely place in the deep quiet and open space of Allen Flat. I am deeply concerned about the impact on the quiet and peaceful life that I can see the Todds living. They may not be fully aware of the impacts on the quality of life that they have. In the Midwest, wind farm companies are extremely aggressive, and landowners have little recourse against them. That's my cousin's experience, anyway.

Mick

On 4/4/2013 8:38 PM, David Omick wrote:

All,

Just thought I'd add to Mick's email regarding some of the technical aspects of the Red Horse proposal. I think it's important to understand how little energy would be gained by sacrificing the wildlife habitat and aesthetic beauty of the War Bonnet Ranch to a wind farm. On an annual basis, Red Horse will produce significantly less than 1% of TEP's energy sales. Nameplate power ratings of wind farms are almost meaningless, and Red Horse is no exception. Its 51-megawatt nameplate rating assumes that all the turbines are operating at full output. As Mick noted, if they do so 33% of the time on an annual basis, that's doing well for a wind farm. The Allen Flats area is far from an optimal wind generation site and will be unlikely to come close to that. Furthermore, when seasonal peak electric demand is highest (summer), Red Horse power generation will be lowest since summer is the least windy season.

That Red Horse has even been proposed is a testament to our lack of anything approaching a coherent energy policy. It's well known in energy circles that the least expensive route to lowering greenhouse gas emissions and creating a sustainable energy future isn't through new generation, but through investments in energy efficiency. Perhaps this suggests an avenue for approaching TEP: That it's a poor choice to sacrifice yet another of Arizona's wild and open

spaces to industrialization when the same money invested in energy efficiency would deliver more bang for the buck with none of the downsides.

David

On 4/3/2013 12:41 PM, Bob Rogers wrote:

I think the proximity to the substation, the elevation of that grassland, and that it is state land, all factor into their decision to try it there. G&F is concerned about the Pronghorn. They are currently studying the impacts of a wind farm in N. Arizona on Pronghorn and are hoping to have more information from that to apply there on Allen Flat. Ralph is right, and it is not a big grassland, and the proposed turbines are going onto the best part of it. I think the focus on birds and bats was because of the available data on species known to be impacted some of which are listed. The Lesser Long Nosed bat and the raptors may end of having more leverage than the pronghorn. I think if you are a pronghorn in Arizona, especially S. Arizona, you might as well be on the list, given the condition of grasslands statewide and the predicted [future] climate [change]. Hate to see one of the last herds in the watershed disappear, and I know G&F feels the same way.

Norm [mailto:nmeader@cox.net] Wednesday, April 03, 2013 11:52 AM

Bob,

Thanks so much for this. I am impressed with Arizona Game and Fish's thorough discussion of wildlife and bird impacts. They are far more concerned with bats and birds, raptors in particular, than ungulates such as pronghorn and deer, which is of interest in light of Ralph's concerns.

Thanks also for this additional explanation of why Red Horse thinks this site is positive. That helps explain why they are looking at it. I'm wondering what kind of studies they did to determine this and, like Lynn, how common this wind pattern is in other areas.

Mick

On Wed, 3 Apr 2013, Bob Rogers wrote:

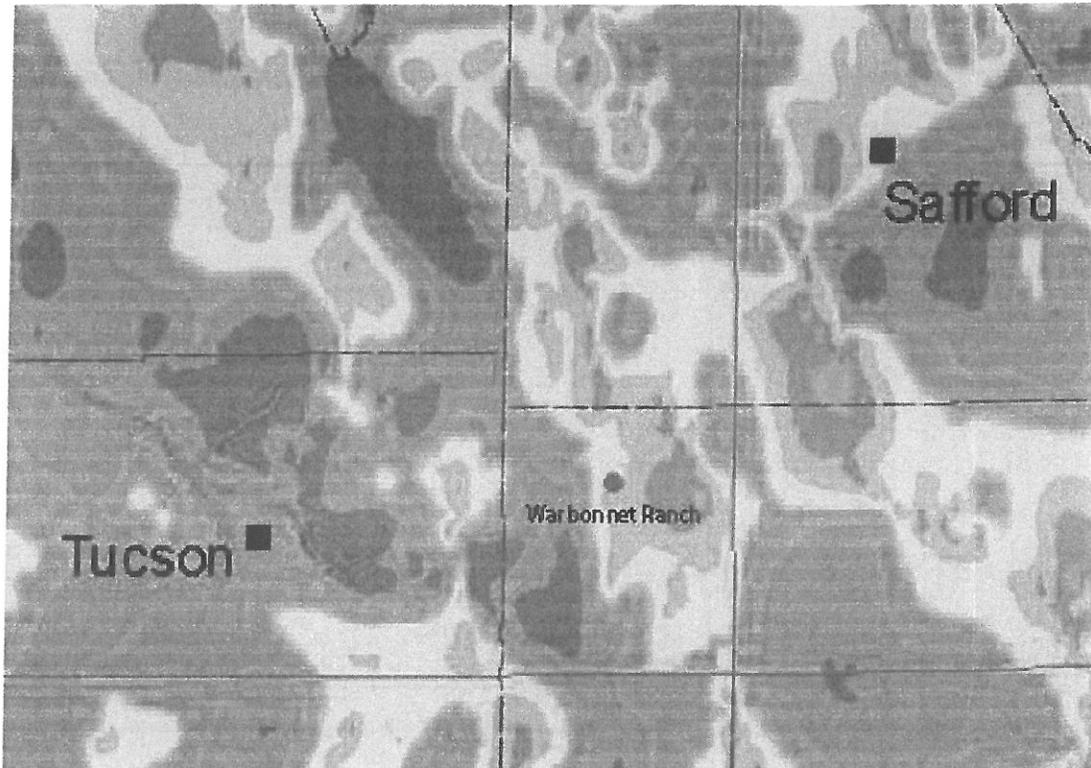
Hi All,

The guy from Red Horse explained to me that they get a steady wind in the late afternoon from the air exchange upslope from the valley floor, which happens to coincide with peak use in Tucson; otherwise it would not be an appropriate site. Despite what Red Horse has claimed as a timeline, they are still a long way from having the information they need for G&F to sign off. I've attached the G&F letter if you have not seen it.

Norm nmeader@cox.net Wed, 03 Apr 2013 09:29:03 -0700

Sue and Woody,

You are quite right about this. This is a lower-quality wind-generation area. The area of the Warbonnet Ranch has a somewhat higher potential, although it is not really that good. I'm including a portion of the National Renewable Energy Laboratory's wind-potential map for Arizona that shows the approximate location of the ranch. The brown areas are higher potential and correlate with higher topography. The brown area to the east and north of the Warbonnet is the Winchester/Galiuro Mountains. The green area is the San Pedro Valley.



Part of what has to be driving this is the easy access to TEP's transmission system. The location of the Winchester substation makes for an easy-on for power. Also, wind turbine design is improving so that reasonable power can be derived from lower-potential areas.

Mick

On 4/3/2013 8:36 AM, snewsy@rnsmtc.com wrote:

Following on Woody's comments, I too wonder about the level/amount of wind out here – I've been told that there isn't enough to warrant putting up some kind of small turbine on my windmill tower.

Sue

LM H Wednesday, April 03, 2013 8:02 AM

Hello amigos,

...Two years ago as I topped out one afternoon at Tres Amigos and looked down at this patria chica, I had a searing vision of windmills across all of it, for a brief moment of horror and then it was gone. I remember mentioning that experience at the time to someone who told me that luckily for us and the valley itself there was no supply of wind of a "quality" that would attract this latest of extractive industries. I couldn't have guessed the sending out of the article from *Forbes* would grow like this, LOL, and I can't say this displeases me.

Until this irrigation cycle ends, and the cows come home,
Woody

ralphwaldt@gmail.com Wed, 3 Apr 2013 07:31:22 -0700

Mick, Woody, all,

Sincere thanks for bringing this to our attention. There was a time in the past when I thought that wind turbines were a great, clean energy generation alternative. I did some research on wind turbines last year and was quite taken aback by what I learned. There is a long list of serious problems attendant to this form of energy generation. I have since taken a very different viewpoint regarding this issue.

The area that is being proposed for this wind farm is a big, wild, sprawling expanse of country, in a word, beautiful. It would be a shame to see such tremendously huge wind turbines erected there. Aside from the obvious aesthetic impacts, the turbines are hell on bird life and on many other animals as well. Because these large turbines are relatively new on the national energy scene, there is not a lot known about their impacts on wildlife. Having lived with pronghorns most of my life, I do know that they are a pretty sensitive species whose requirements for open space and lack of disturbance are substantial. I believe if the turbines go up in that valley, it could very well be the end of that population of antelope.

There are areas in the Great Plains where I have seen wind farms go up. The towers that I have seen are mere 200 footers, and I can tell you, they are gigantic, looming structures that blot the view for miles and miles. I shudder to think about near-500-foot monstrosities. A solar array would be so, so much better for the wildlife, the aesthetics, and local residents.

I also sympathize with the economic dilemma that so many agronomic people find themselves in these days. The existence of farming and especially ranching in the American West is one the most important reasons that our nation still has so much open land, such big, wide, beautiful vistas, and such a relatively rich and varied array of wildlife. Yes, the Todds are good folks. They know how to manage land carefully and conscientiously. A drive through their ranch reveals a landscape that has clearly been cared for with intelligence and restraint. I'd feel uncomfortable raising a loud voice against them.

Sincerely,

Ralph

On Tue, Apr 2, 2013 at 5:36 PM, Norm Meader <nmeader@cox.net> wrote:

To CCA members and friends,

Anna just found the notice about building the wind farm in the Cochise County Planning Commission Agenda for April 10. The description of the project is as follows. This is going to benefit the Todds very little, it looks like, because most of the farm will be on State Trust Land. It won't be on the ranch. This is new information.

PUBLIC HEARING -- Docket SU-13-04 (Red Horse 2, LLC; Torch Renewable Energy, LLC): A request for Special Use authorization for a 51-megawatt wind energy power plant west of Willcox. The proposed project would include up to 28 turbines each up to approximately 487-ft. in height. The subject properties are zoned RU-4 and includes nine Sections of AZ State Trust Land and a small portion of private land.

Mick

(This conversation was started by Woody's sharing of the following article.)

Environmental Groups Strongly Endorse "None Of The Above" Energy Plans

<http://www.forbes.com/sites/larrybell/2013/03/12/environmental-groups-strongly-endorse-none-of-the-above-energy-plans/>

Meader, Norman M - (nmeader) Tuesday, April 02, 2013 9:13 AM

Elna and all,

A really good comparison for a wind farm that would match the Warbonnet's is the Macho Spring wind farm in southwestern New Mexico between Deming and Hatch. I am attaching a Google Earth kmz file so that you can take a look. This is a 50-megawatt (MW) wind farm that TEP buys all the power from.

This farm has 28 or 29 wind turbines in it, which works out to be about 1.75 megawatts per turbine. The turbines are in rows, with turbine spacing in each row being about 0.25 miles. The spacing between rows is about 0.75 miles. So we're looking at about 4 or 5 turbines/square mile. Thus for the Warbonnet wind farm, you will need perhaps 6-7 square miles of land.

To calculate how much power it requires to run a city, we're looking at 7 or 8 MW of installed capacity/square mile. To run the Phoenix metropolitan area requires about 14,000 MW of power at peak load. That's 2,000 square miles (45 x 45 miles) of space required at full power output.

However, the killer here is the capacity factor of wind – how much power you get on average for the capacity that you have installed. A good wind capacity factor is 33% (this is a year-round average - it will be just a little more than 10% in the summer), which will give you 2.3 MW/square mile of output on average, or in the summer, 0.7 MW/square mile. This begins to hurt. You're now looking at many, many 1,000's of square miles of land to run Phoenix, and then you still have a very unreliable power source that has to be backed up with just as much natural gas generation so that the lights are on for everyone around the clock.

Mick

On Tue, Apr 2, 2013 at 8:07 AM, <REvans9173@aol.com> wrote:

Hi Mick,

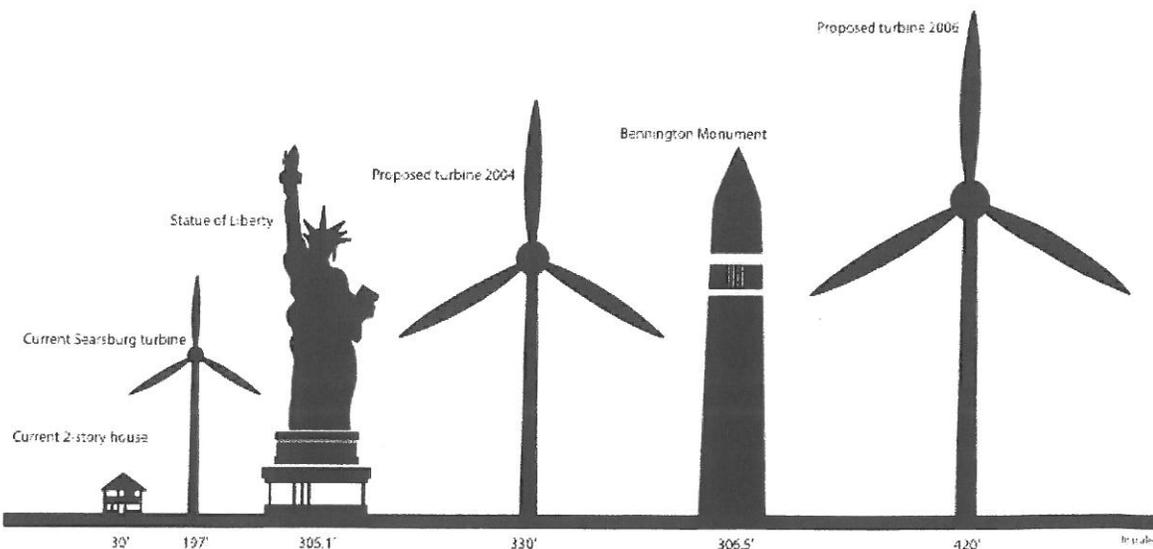
What you show raises some interesting questions, For example, how many of those big ones would be necessary to run a large city, let's say New York? I am not being facetious; this is a legitimate question. Knowing this number and the minimum distance between such turbines will give us an idea of how much land area will be required in order for wind power to provide a significant portion of the power that we use in this country.

Thanks for providing this interesting comparison.

Bob

In a message dated 4/2/2013 2:06:37 A.M., nmeader@email.arizona.edu writes:

Barbara and all - Here is a comparison of heights for wind turbines. The height depends on the power output. A 2-megawatt turbine will run 400'+ high (the large one below). If the turbines are lower capacity than this, they will be shorter – Mick



Meader, Norman M - (nmeader) Monday, April 01, 2013 9:16 PM

Wind turbine [capacity] will run 1.5-2.5 megawatts/turbine. 2.0 MW is a good number. So I'm fudging a little on the 28 wind turbines. 25 is not bad. The height of the turbines is from those used in Iowa adjacent to my cousin's FORMER house in the country (more below).

In Iowa, farmers get \$8,000/year/wind turbine in leasing their land (I believe that's what my cousin told me). If you have 25 turbines on land that you own, you can see what that brings in. If you're a struggling rancher or farmer, it's hard to turn that down.

If the voltage on the transmission lines from the turbines to TEP's 345-kV lines is the same as that for the line along the Cascabel Road, that will be 115-kV volts. I'm thinking it would make sense for the line to be 345-kV to match TEP's voltage so that they don't have to add transformers at the Winchester substation.

Besides the sound of the turbines, the other impact (other than roads and transmission lines) is what's called "shadow flicker." Between the noise and shadow flicker, that's what drove my cousin off his land. He had bought an idyllic place in the Iowa countryside only to have wind turbines go up all around him, five of them within a half-mile or so of his house. He said it was like living in a strobe light - those turning blades breaking up the light and pulsing his house. No peace. And then there was the noise. When the blades are really whirling, it wasn't so bad, but when they go slow with little wind, it's grind, grind, grind. There went that peaceful place in the country. He complained so much that he forced the wind turbine company to buy him out.

The site that the wind turbine company is looking at on the Warbonnet Ranch shouldn't be anything special, although it may be better than other places. It's unlikely to match the high-quality wind-generation area of New Mexico. And no, you won't get maximum output from the turbines when demand is high. Just the opposite. The wind dies in the West during the summer months – June, July and August is the lowest output. For 50 MW of installed capacity, TEP should get about 5 MW during the summer on average. The high generation time is February–April. That's the time of best wind in the West. TEP might get up to 20+ MW of power on average then. If TEP buys the power, they can count it toward meeting their renewable portfolio standard. That's about all it's good for. Not a real winner, but they're complying with the law.

More than you wanted to know! I hadn't heard of any community event on April 10.
Mick

Barbara Clark [clayworks@rnsmtc.com] Monday, April 01, 2013 6:22 PM

Mick, could you please send me what you are referencing re: quantity and size of turbines?

I haven't heard details; last week I heard from Bob Rogers that the Todds were going to decide if they wanted to go into this ops and some of that might be based on how much State Trust Land was going to receive \$\$ and how much the deeded land might benefit. True statement on your part regarding how they can afford to keep the lifestyle going during drought and reduced

income from grazing (which in my opinion might be permanent). Todds are good people and managers.

I understand that TEP wants all of the ~51 MW the ops is projected to produce (initial studies/tests underway), and it will be transported on 315 kV lines (like what we have going down Cascabel Rd) over to the Winchester substation. I have not heard exactly where it is planned to be built. Something about the wind consistently blows there when the demand in Tucson is high.

The main impact I can think of is on the introduced Antelope herd. Noise from the turbines. Plus the dang access roads.

Maybe Antelope Foundation should be contacted. Bob does not think that TNC will take position on this.

Dobsons are good neighbors of the Todds and are also opposed to the SunZia proposed lines.

Bob thought that maybe there was a community info event on April 10th? Where and exactly when I have not heard. Have you?

Thanks, ~B

Meader, Norman M [mailto:nmeader@email.arizona.edu] Monday, April 01, 2013 5:32 PM

Bob,

"As I see it, we are going to continue on our present course until the climate blows up and our present way of life becomes no longer possible." I think you're right. With all of our political conundrums and conflicts, we seem headed that way.

Those 28 400-foot-tall wind turbines on the WarBonnet Ranch are worrisome. But then, leasing the land for them could bring the WarBonnetts more than \$100,000/year. [*This number assumed that all turbines would be placed on private land. We have since learned that only one turbine would be on private land.*] Big money. It saves the ranch. And they can still run cows. Hard for us to tell them "no."

Mick

REvans9173@aol.com [REvans9173@aol.com] Monday, April 01, 2013 5:04 PM

All of this just goes to show that you can't get there from here. There is no way. The only way out of this dilemma is fusion power. We need to stop spending money on and cluttering the countryside with solar panels and wind turbines and do what the sun does - fuse hydrogen to release massive amounts of energy. That way we could get rid of the power grid by giving each community its own fusion power generator. The only problem with this idea is that the fossil fuel companies are not going to hold still for the government spending money on anything that

has a chance of limiting their profits. Wind and solar power are no real threat to the fossil fuel industry because that industry knows that there is not enough real estate available in the country to hold the solar panels and wind turbines needed to satisfy our appetite for energy.

As I see it, we are going to continue on our present course until the climate blows up and our present way of life becomes no longer possible. I probably won't be around long enough to see that happen, though a part of me wants to know how it will come about.

Have a nice day.

Bob

In a message dated 4/1/2013 5:44:47 P.M. nmeader@email.arizona.edu writes:

Thanks for this, Woody, and the thoughts, Elna. What do we do with all of those (us?) enviros, wanting to have their cake and eat it, too? But the environmental impacts of renewable energy can be big. Who really wants to see our vast western plains filled with wind turbines, roads connecting them, and the transmission lines to go with them? Something about that wide-open, untouched space fills our souls, renews them, gives us hope in a mad world filled with crazy people. That's a terrible loss.

Elna Otter [elna.otter@gmail.com] Monday, April 01, 2013 9:48 AM

Interesting reading of *Forbes'* take on those nasty enviros! And this valley strongly endorses the –“none of the above” plans for a transmission-line-kind of energy plan, too.... It seemed to my untrained eye that calling for a transparent process as well as one that considered all of the options (including none of the above) might be considered reasonable.... But I ramble. It is good to see the other side of the coin, so thank you for wading through *Forbes* and other things on our behalf. Elna

On Mon, Apr 1, 2013 at 7:01 AM, LM H <paniolowoodly@hotmail.com> wrote:

Environmental Groups Strongly Endorse “None Of The Above” Energy Plans

<http://www.forbes.com/sites/larrybell/2013/03/12/environmental-groups-strongly-endorse-none-of-the-above-energy-plans/>