

March 6, 2009

Gary Smith, Manager
Public Wholesale Water Supply District #11
P.O. Box 308
Girard, Kansas 66743

Re: Potential USDA loan to assist in installing wind-powered generator

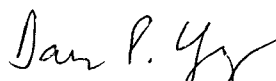
Dear Mr. Smith,

The Kansas Geological Survey (KGS) has received your February 10, 2009 letter requesting us to review the above referenced project. The project consists of installing a wind-powered generator to provide supplemental power for use in your water treatment plant in the NW corner of Sec. 12, T. 28 S., R. 24 E. in northeastern Crawford County, Kansas.

A review of regional geologic information and project information provided by you indicates that there are no unduly adverse geologic conditions that should affect this project. Site-specific conditions should be considered prior to construction.

This letter is an assessment based on information about the regional geologic conditions available via the KGS and cannot be used in substitute of a detailed site characterization. Other geologic conditions, not discussed herein, or for which the KGS has no knowledge, may affect the viability of the project. It is the responsibility of the applicant to provide any necessary characterization, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,


David P. Young,
Hydrologist

cc: Dan Suchy, KGS Data Resources Library

**Public Wholesale Water
Supply District # 11**

**P.O. Box 308
Girard, KS 66743**

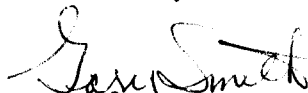
February 10, 2009

Dr. Lee Allison, Dir.
KS Geological Survey
1930 Constant Ave.
Lawrence, KS 66047

Dear Dr. Allison,

This is to advise you that we are in the process of developing plans to install a wind generator to provide supplemental electrical power for use in our water treatment plant in the Northeastern part of Crawford County, KS. The U. S. Department of Agriculture may be involved in a loan to assist in installing a wind-powered generator. The purpose of this project is to reduce the monthly cash outlay for electrical power that we should be able to generate a large portion ourselves to hold down the cost of treating and delivering water to the thirteen public entities we provide with treated water.

Sincerely,



Gary Smith

Manager for PWWSD # 11

Enclosures:

1. A site map where a wind powered generator will be installed
2. Description of the project

Location of site:
 2 miles west of U. S. 69 Hwy
 5 miles north of Arma, Ks
 Crawford County, KS

Wind Generator Site on 2 acre Meadow land

E 700th Ave

County Road

elec. pole

Fiber optic line

* Rural water Dist. Pipe Line

County Road - N 200th St.

Sec 12

Bone Creek Lake

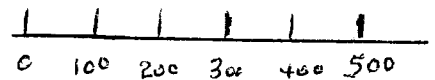
N

**2 miles west of U. S. 69 Hwy
5 miles north of Arma, Ks
Crawford County, KS**

**Wind
Generator
Site on 2 acre
Meadow land**

Bone Creek Lake 
Bone Creek Dam 
Water treatment plant 

Scale



Feet
1 inch = 290 feet

Feb 11, 2009
S.B.

**Public Wholesale Water
Supply District # 11**

**P.O. Box 308
Girard, KS 66743**

February 10, 2009

PROPOSED PROJECT: Wind Powered Generator

Description of Project:

The proposed site is located at the corner of the intersection of 200th St. and E – 700 Ave. in the N. W. corner of Section 12, Crawford County, KS. The field where the Wind Powered Generation is to be installed contains about 2 acres of native grass meadow with some trees in an old fencerow. Most of the trees are native elm. The size of the trees is as follows: five are between 6 to 12 inches in diameter, one is 12-15 inches, and one is 15 to 18 inches. The old fencerow contains some brush growing among the trees. This area will need to be cleared to allow room for the generator to be installed.

The generator the board hopes to purchase will have a tower 85 foot tall with the generating unit on top of the tower. Blades will be 34.5 feet in length. The concrete base will cover an area of about 30 feet in diameter. The unit will be connected to the Heartland Electric Coop power line for electrical power to operate the system. The electricity generated by the unit will be connected to a new power line (either below the earth's surface or on a new power line constructed above ground) from the generating unit to the Public Wholesale Water Supply District water treatment plant approximately 1800 feet from the tower. This line will be installed by PWWSO # 11 board and be owned by them. It can be installed completely on land they own and will not disturb any other overhead or underground systems. The new line will be located next to the existing utilities on the east side of 200th St. These utilities are an overhead electrical power line, an underground water line, and an underground fiber optics line. It would also cross a buried phone line.

Power generated by the PWWSO # 11 wind powered generator will be hooked to the main electric line going to the water treatment plant. This will be between Heartland's electric meter and the plant. When the wind-powered generator is operating it will replace electric power from Heartland Electric Coop. When the PWWSO # 11 generator is producing power not

needed at the water treatment plant (generally night time), the power will be fed into the Heartland Electric Coop's distribution system through an electric meter. The PWWSD # 11 board will receive imbursement for this power based on a formula the State of Kansas has set for system of 200 kW and smaller. The price may vary from month to month based on the cost of electricity purchased by Heartland Electric Coop from their supplier.

No commercial sized wind powered generators have been installed in the southeastern part of Kansas to our knowledge. At present the closest wind farm is south of Beaumont, KS, some 100 miles to the west of the PWWSD's planned location. The PWWSD #11 board feels it will be profitable to install a wind-powered generator for a couple reasons. First, they are convinced that the cost of the generator can be recovered in about ten years. After the cost of installing the wind-powered generator is recovered, they will be able to hold down future increases in the cost of treated water. The thirteen entities (cities and rural water districts) will benefit by not having their cost of purchasing water increase from PWWSD # 11 due to higher electrical costs. These estimates are based on the present cost of electricity. Government agencies are predicting increases of up to 40 percent for electrical power in the next ten years. The board believes investing in this wind-powered generator is not a high-risk venture. A second reason is that numerous towns, school and businesses could likely reduce their future electrical cost if they find that wind-powered electrical power is feasible in southeastern Kansas. This installation should provide a good answer to that question.