



NC State Observation of Wind (NC SOW)

Application Form

The North Carolina Solar Center's State Observation of Wind program is made possible through the U.S. Department of Energy's "Wind Powering America" initiative. To participate in the program, please follow the instructions below. Completion of the application does not guarantee the loan of an anemometer.

Please be advised that the towers available through this loan program have a height of 66ft, 100ft, or 164ft. Which tower is loaned to an applicant will be determined by NC Solar Center Staff and the availability of the tower.

- A. Evaluation Criteria: Applications will be evaluated using the following criteria.
 - a. Wind resource potential at the proposed site.
 - b. Landowner interest in a wind energy development project.
 - c. Proximity to other wind energy data collection stations.
 - d. Geographic dispersion throughout coastal North Carolina.
 - e. Community outreach.
- B. Instructions:
 - a. Read the North Carolina Coast Anemometer Loan Program Description
 - b. Complete the form. (Attach additional pages as necessary. Be sure applicant's name is on all pages.)
 - c. Attach topographic map per Section F.
 - d. Sign Application (Section I) and mail it to
North Carolina Solar Center
NC State University
Attn: NC SOW
Campus Box 7401
Raleigh, NC 27695-7401
- C. Landowner/Applicant's Contact Information

Last Name

First Name

Address

City

State

Zip-Code

Home Phone Number

Work Phone Number

Cell Phone Number (if applicable)

E-Mail Address (please print)

D. Intentions:

- a. Describe the purpose and goal of the project for which the anemometer is being requested (e.g. on-site energy use, small scale wind system, renewable energy demonstration, energy export—large commercial scale wind system, agricultural irrigation, etc.) If you are considering a large or commercial-scale wind farm, please provide a business plan for the proposed project. (Attach additional sheets as necessary.)

E. Community Outreach

- a. Describe plans for community involvement, educational programs, or other partnerships that the landowner/applicant will conduct relevant to wind energy that involves the anemometer and resulting meteorological data. (Attach additional sheets as necessary.)

F. Load:

- a. Describe the electric load to be served by wind turbines (if installed). Please describe the load both qualitatively (e.g. residences, educational institution, business/industry, water plant, wind farm) and, if possible quantitatively (i.e. number of kilowatt-hours per day). Do you anticipate connecting the turbines to the electric grid? (Attach additional sheets as necessary).

G. Proposed Site:

- a. Obtain a topographic map of the property where you would like to install an anemometer. Topographic maps can be viewed and the relevant portion accessed and printed at no cost on-line. Some free sites include Google Earth (<http://earth.google.com>) and Terraserver (<http://terraserver-usa.com>).
- b. It is recommended that a scale of approximately 1:24,000 be used when printing maps from the internet.**
 - i. On a topographic map, or photocopy of the relevant portion of a 'topo' map, write the landowner applicant's name and phone number, and make the following notations:
 1. Place a bold "X" at the proposed location for the tower. (Note: To assemble and raise tower, the site must have an area free of trees, shrubs and other structures by at least 160 feet long and 120 feet wide. When installed, the tower will be in the center of an 'X' formed by two lines 120 feet long.)
 2. Draw approximate boundary of the landowner's property.

3. Write the distance, in feet, from the proposed site to the nearest man-made structure.
 4. Label the location of any electric power lines, and buried utilities.
 5. Label any areas on the owner's property that are excluded from consideration.
 6. If proposed site is not within a city or town, state the nearest community _____, approximate distance in miles _____ and which direction the site is from that community (e.g. North, Southwest, West Northwest, etc.)_____.
 7. If your map is obtained from an internet site, and it provides site coordinate data, please record the coordinates, and letters 'I-NET' in the upper right margin of the map. If a geographic positioning system (GPS) instrument is available, please record the coordinates of the proposed tower in the upper right margin of the map and the letters 'GPS'.
- ii. Will grazing animals be present during the time the tower will be in place? (Note: If grazing animals may be present, it is essential that the tower and all 4 anchors be enclosed in an animal proof fence.)
1. Choose ONE:

YES NO
- iii. In the following table, provide a description of the site proposed for the anemometer tower, describing features within 500 feet, including 1) land contours, 2) structures, and 3) trees that a person standing on the proposed site would see when facing to the north, east, south and west. Note changes in land elevation, height of and distance to structures and trees.

Looking North
Land Contours

Structures

Trees

Looking East

Land Contours

Structures

Trees

Looking South

Land Contours

Structures

Trees

Looking West

Land Contours

Structures

Trees

Applicants without a topographical map and description of the proposed site will NOT be accepted.

- iv. Ask local government officials about potential legal obstacles to installing a wind system. For example, some jurisdictions restrict the height of structures permitted in residentially zoned areas, although variances may be obtainable. Your city, county and regional planning commission may have this information. Ask if they will require a conditional use permit for the 66, 100, or 164 foot tower used with the anemometer.
1. Is a permit required to erect the tower on your property?
 - a. Choose ONE:

YES NO

- v. The type of tower anchor used at the site depends on the soil and subsurface conditions at the site. In each of the two rows below, please circle the description that best describes the soil and subsurface conditions at the proposed site.
1. What is the depth down to bedrock?

Over 5 feet Less than 3 Feet Bare Rock Unknown

2. What is the soil/subsurface?

Fine Texture Sandy Solid Rock Soil/gravel Mix Loose Gravel

- vi. Tall towers located next to public or military airports might require that the FAA be notified.
1. Name of nearest airport: _____
 2. Approximate distance to airport _____
 - a. In which direction? _____
- vii. How far is your nearest neighbor to the site?
Approximate: _____ft. or _____miles.

viii. How far are you from electrical transmission/distribution lines? Who is your current power supplier?

Approximate: _____ ft. or _____ miles.

Electric Power Company: _____

H. Information Sharing Disclosure

a. All data gathered will be in the public domain. Data, including exact location, elevation and panoramic photos to be taken at the site, may be made available via the North Carolina Solar Center's Web site and other means of distribution. It will also be provided to the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) for general distribution including via NREL's Web site.

I. Installation and Maintenance: Installation will be performed under the guidance of North Carolina Solar Center employees. The landowner/applicant is responsible for monthly inspections of the tower, cable tension and fencing, if applicable. Exchange of the data plugs must also be done on a monthly basis. Do you anticipate delegating the responsibility for monitoring the equipment and replacing the data plugs to the landowner or someone else?

Choose ONE: Landowner Other Person*

***If designated contact person is someone other than the landowner/Applicant, complete the following:**

Last Name		First Name	
Address			
City	State	Zip-Code	
Home Phone Number	Work Phone Number	Cell Phone Number (if applicable)	
E-Mail Address (please print)			

Terms of Agreement

- I have read the North Carolina Coastal Anemometer Loan Program Description and this application.
- I affirm that I am the owner of the property where the anemometer tower is proposed by this application.
- I understand that the anemometer and 66-167 foot tower is to be operational for at least 12 months and if mutually agreed to possibly be on my property for as long as 24 months.
- I understand that if my application for the use of the 66 or 100 foot tower and anemometer is approved, I will need to provide two able-bodied persons to assist when raising the tower and again when lowering the tower after the data collection period.
- I also understand that if this application results in the loan of an anemometer it will be subject to the terms of an equipment loan agreement.

Landowner/Applicant's Signature

Date

Mail this application, topographic map and any additional pages to:

North Carolina Solar Center
NC State University
Attn: NC SOW
Campus Box 7401
Raleigh, NC 27695-7401

If you have any questions contact the NC Solar Center at 1.919.515.5666