

Home and Farm Turbines



How to choose an installer

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How to choose an installer

- What to look for in an installer
- What questions should I ask?
- What makes a good installer/ turbine owner relationship?
- Typical contract stipulations

What to look for in an installer



Basic Qualifications:

- Training: look for installers that have successfully completed 1 or more training workshops!
- Years in business: the more the better, especially if at the same location.
- Portfolio: a successful dealer/ installer will be happy to show you his work.
- References: happy customers are always a good sign...especially in the wind industry!

What to look for in an installer



More Qualifications:

- Patience and personality:
A good installer should be willing and able to help you understand all aspects of your small wind system.
- You should feel comfortable asking them questions. They've been through this before, you probably have not!

(Yes, there are stupid questions! I don't mind!)

What to look for in an installer



Bonus Qualifications:

- Does the installer own a wind system?

Although this is not a necessary qualification, installers who own small wind systems typically bring a unique perspective to the table and a better understanding of your side of the system installation and operation experience.

What to look for in an installer



*And coming soon....
Yet another qualification*

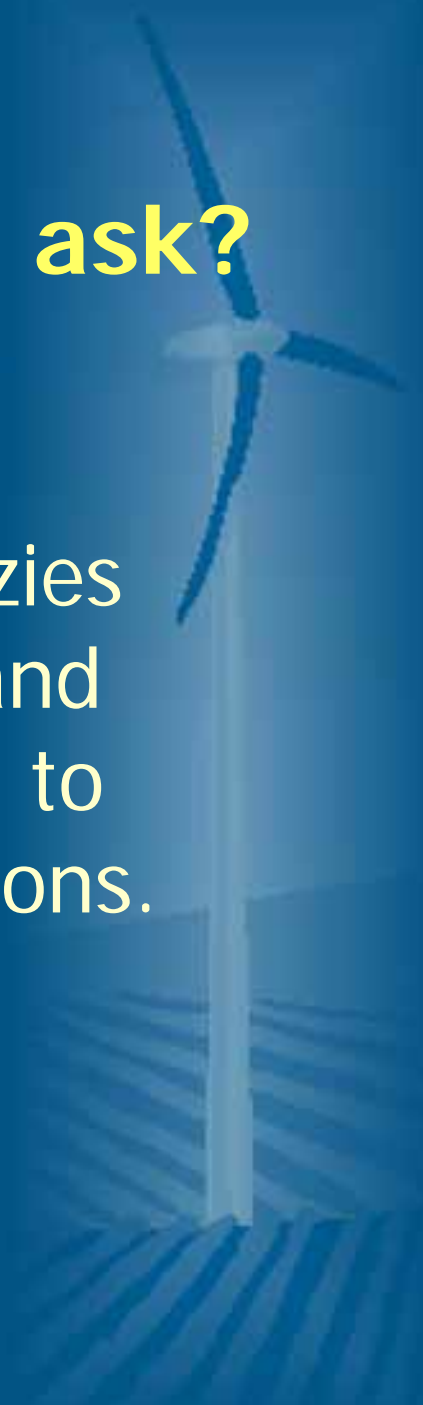
- Nabcep Certification for small wind installers.
- For more information:

www.nabcep.org

What questions should I ask?



Now that you have the warm fuzzies about the installer's experience and personality, it's time to get down to business and ask the hard questions.




What questions should I ask?

- Is the installer properly insured?
- Do they offer a service contract?
- Will they do all the work or can you assist and reduce the cost? *(Some installers really love this question!)*
- What is the lead time from contract to completion?

What questions should I ask?



- What's the warranty on this stuff?
 - Who pays for freight and labor on repairs covered under warranty?
 - Will they work with the manufacturer on warranty issues or are you on your own?
 - Why am I wiring this money to the Cayman Islands?
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What makes a good installer/ turbine owner relationship?

- Beer
- Trust (but verify!) Did you actually call the installer's references??
- Educate yourself to better understand the installation process so you can communicate with your installer and reduce misunderstandings.
But you knew that already...that's why you're here, isn't it?!
- Did I mention beer?

What makes a good installer/ turbine owner relationship?



Roy's opinion #1,436 (Rev. 1.34)

My definition of a successful installer is:

- One who is well trained, experienced and able to work with the customer through the entire installation process in an honest and direct manner.
- One who keeps the customer's best interests in mind when discussing what works and what does not.

Typical contract stipulations



- Scope of the work
 1. Itemized system components and description
 2. Itemized system costs such as equipment, freight, materials and supplies, cost of sub contractors, labor, permitting and sales tax
 3. Incentives (if applicable) which may reduce the final cost of the installation

Typical contract stipulations

- Scope of the work- continued
- 4. Plot plan and/ or description of the various system components and their location in relation to dwelling, property lines, roads, power lines, etc.
- 5. One line electrical drawing

Typical contract stipulations



- Scope of the work- continued
- 6. Estimate of annual power production- typically given as a range. Example: 10,500 to 12, 610 kilowatt hours annually
- 7. Economic analysis- can be a simple payback calculation such as: Cost of the installation divided by the value of the annual KWH produced (at customer retail rate) to arrive at a rough payback period.

Typical contract stipulations

■ Scope of the work- continued

8. **Warranty-** description of the manufacturer's and installer's warranty. 5 year equipment warranties are becoming common in the industry

9. **Inspection and maintenance**

It's man made and it has moving parts...it will need maintenance and repair at some point. Periodic inspection and/ or service is the key to keeping your warranty in effect and protecting your investment!

Typical contract stipulations

- Time of completion- details the milestones of the project:
 1. Permitting and environmental review
 2. Foundation and wire runs
 3. Turbine, tower, inverter and balance of system installation
 4. Utility inspection and interconnection

Typical contract stipulations

- Contract Price

1. Total cost of the project after incentives and credits for "sweat equity"
2. Payment schedule

Typical contract stipulations

- General Provisions- the lawyer speak found in all work contracts:
 1. All work to be to code and completed in a workmanlike manner
 2. All permits to be obtained, all licenses and insurance to be in order
 3. Change orders to be in writing
 4. Provisions for cleanup
 5. Etc., etc.

Typical contract stipulations

- Additional terms

Assorted provisions which the customer and/ or installer want included in the contract.

One example is a provision that specifies where heavy construction equipment can or can not be driven on the property.

Something to Consider



- Give the new guy a chance....
- One lucky customer gets to be the first...mine was 10 years ago...thank you George! Still running fine by the way...
- Remember, if no one gives new installers a chance, we'll have no new installers!

Where utility power really comes from



Another boring day in my office

