ZONING BOARD OF APPEALS

238 Main Street, Cold Spring, New York 10516

MEETING AGENDA
April 8, 2013
7:30 p.m.

1.) Approval Of March 11, 2013 Minutes

PUBLIC HEARING

2.) Gleick, James **Appeal # 883** **TM# 82.-1-42.1**
200 Long and Winding Rd.

Applicant would like to install a Residential Wind Turbine that will be 152 feet in height. According to the Code of The Town of Philipstown, no structures shall exceed 40 feet in height, therefore the applicant is requesting a 112 foot height variance.

3.) NEW/ OLD BUSINESS

*** ITEMS MAY NO BE TAKEN IN ORDER AS LISTED**

received
4/2/13

ZBA ACTIVE APPEALS

#883 Gleick, James Public Hearing

ZONING BOARD OF APPEALS

MARCH 11, 2013

MINUTES

The Zoning Board of Appeals for the Town of Philipstown held a work session on Monday, March11,2013 at the Philipstown Town Hall, 238 Main Street, Cold Spring, New York. The work session was opened by Vincent Cestone, Chairman, at 7:30 p.m.

PRESENT:	Vincent Cestone	- Chairman
	Robert Dee	- Member
	Bill Flaherty	- Member
	Lenny Lim	- Member
	Paula Clair	- Member
	Dominic Cordisco	- ZBA Council
	Tina Andress- Landolfi	- Secretary

ABSENT: None

PLEGE OF ALLEGIANCE WAS SAID.

Vincent Cestone- The first item on the agenda is approval of minutes for February 11. Are there any corrections or changes?

Paula Clair- I found one typo, just one letter. It was grant, and the g was left off of it. I will show you later.

Tina Andress Landolfi- Ok

Vincent Cestone- I make a motion to accept the minutes as amended.

William Flaherty- I will second.

Vincent Cestone- All those in favor?

ALL BOARD MEMBERS WERE IN FAVOR

MINUTES WERE APPROVED

Vincent Cestone- Continuation of the Public Hearing for James Gleick. Applicant, first off thank you for this, it was very helpful. I did see the balloon, but I did not see you. I drove up and down the road.If you could for the record go over this for us please.

Connor Kays- Hi everyone, Connor Kays again (inaudible applicant standing to far away)

Tina Andress Landolfi- Vinny I am sorry, but can the applicant move up, because my recorder is up here and I have never used this one before. I don't want to take any chances.

Vincent Cestone- Just move right up here. That is perfect.

Tina Andress- Landolfi- Thank you.

Connor Kays- We took photos at the base tower, and then the balloon test itself. I went through the tree code, and determined how many trees and square feet we would be working on. Safety measures and sound. we sorta covered last time, but re-submitted. You will see the first set of pictures around the tower base, this will give you an idea of the surrounding area. You have pictures of the _____ locations and the center pad. You can see the west and the north pad. My guess is the top one is the pad, and the very first one is the center of the tower. Not much to look at. You will see photos of the ballon test. There is a typo on the photos. They were taken at 100 feet and 300 feet, the label says yards.

Vincent Cestone- Feet?

Connor Kays- Feet not yards, it is correct on the opening page, and not correct on the photo labels. You can see the balloon, probably the best one is the North view at 100 feet. It is a four foot balloon, so it is roughly a quarter of the width of what the actual turbine will be from the hub all the way back to the tail. You can see 300 feet out if you really look in between the trees, you can barley make it out.

Robert Dee- From the ground up you are taking these pictures?

Connor Kays- Yes, from the ground up.Go the east view (inaudible) On the south view you can see it from 100 feet and the sun and trees obstruct you from 300 feet.

Robert Dee- What was the height of the ballon?

Connor Kays- The height of the balloon should have been at 152 feet, the very peek of the top blade pointing straight up. West view you cant see much at all, you can in the 300 view. You can make t out right there.They took some from the bottom of the driveway, about 1700 feet away, and you cant see it at all. That gives you an idea of the closest home outside the property. Then there is an arial shot, this was taken with pictometry, it is a program we use quite a bit. It sends planes at a low altitude all over the country, and they do fly byes. It is more accurate than Google Maps, and it lets you snap very accurate measurements. We have checked this on roofs, and different things we have done, and this thing is pretty close. The

biggest thing to note here is that the closest home is 1700 plus feet away. We pulled up the code for tree removal, and we are looking at about half an acre, and under two acres there is nothing preventing the homeowner from removing those trees, so we should have no issue there. Anti climb submission, we are going to install a fence 10 feet high it is going to be 4 feet away from the base pad. You can see the bottom diagram there. The base pad is three by three. The triangular tower system will sit inside that area, and a 4 feet perimeter around that will have a ten foot fence.

Paula Clair- With a ten foot fence, can a kid climb it?

Connor Kays- A kid can climb almost anything. In our mind it is a fence, and it will be 10 feet high, so that would be quite a climb for a small child, to get up that high.

Dominic Cordisco- In terms, if I may hop in, we talked about removing some of the runs, so that it would make it more difficult, even if they did get over the fence.

Connor Kays- Yes, we remove them up to ten feet. That is standard.

(Inaudible)

Lenny Lim- Does the fence need a variance, because it is over six feet?

Dominic Cordisco- I am trying to recall it.

Vincent Cestone- The max is six feet.

Dominic Cordisco- I understand that, but it has to do with

Lenny Lim- It has to have a separate variance

Paula Clair- It is a protective fence

Lenny Lim- It is still over six feet.

Dominic Cordisco- Let me check, because I believe it is related to setbacks.

Robert Dee- The higher the better.

Doug Passeri- The post are 4x4x10 foot tall.The fence is actually 8x8x6 feet tall.It is 8 feet long and only 6 feet high.

Vincent Cestone- Then you are on the code.

Robert Dee- I would rather it be 10 feet myself, but that is no problem.

Paula Clair- Yes, me too.

Connor Kays- I missed that measurement on the left there, so we will have a six foot fence with 10 foot post in the corners.The last thing was noise data that we did. I will go over a little bit. This takes you through the _____ rated sound level, and that is what most turbines are tested by.We are at 52 decibels there. There should be a table that runs through wind speeds, and you will see there the background pressure levels, and the turbine. YOu will see standard wind speed here is about five meters per second.If I can find the full report, it can tell us what the average wind speed is.Do you have that handy Doug? Typically we see wind speeds around 5 meters per second, that works out to about 20 to 30 miles per hr. Those are fairly high winds still, but that is the turbines max operating speed.You will see even at up to 12 meters per second, we are adding 60 decibels, which at the closest house being 1700 feet, should be in audible.

Robert Dee- What happens to this when the winds become 30-40 miles per hour? Does it give you more electricity or does it blow the propeller off?

Connor Kays- That is a great question. At a certain point it maxes out around 17,000 watts around 30 mph winds. Once it gets to around 55 mph winds the tail feathers. The tail will move to about 90 degrees, and becomes perpendicular to the blades, and that will spin the turbine out of direct wind, and that is what the turbine uses to protect the blades. It does not have brakes or cut out speeds like commercial turbines and many residential turbines have. This one will start to ____ in the 40 mph range

and upwards of 60 you will see it right at 90 degrees. It will still be producing, and you will see it spinning, but the blades will e out of direct wind. That is how the blades protect themselves. That is a big perk to the Bergy. We don't have brake pads or electronic braking.

Vincent Cestone- You don't actually feather the blades?

Connor Kays- The blades themselves do not feather, it is a solid structure, and the entire hub will move out of direct wind. The last thing was safety. We talked about the fence. All of the electrical will meet the 2011 electric code as well as National Grid Code. Self conduit, and lock disconnect, all of that is part of this code. It will have a third party inspection, and NYCERDA will most likely inspect the system as well. Everything will be up to code (inaudible) The runs removed, so we should be well covered there. That about covers the additional materials.

Lenny Lim- I don't understand the acoustic test data. What you are saying is the nearest house would barley hear this?

Connor Kays- Yep, This one was done at a 46 meter slant distance which is about 175 feet slant distance, so that is from me to the top of the turbine, so if you bring that down that will be the hypotenuse, you are actually closer to the turbine than the 175 feet lets say. Those are the audible levels there, so we are talking you are over ten times that to the nearest home. In a straight , and sound does not really work that way, you divide that by ten you would get the decibel level at that distance. (inaudible) even at 13 meter per second winds, which your talking 60 mph type winds, you would be looking at 6.3 decibels added from the turbine at a total of 101. At that speed if you were 100 feet away you will here it, but at 10 times that distance you will not. Any more questions you guys?

Vincent Cestone- Any more questions from the board?

Robert Dee- I was away, but did anyone go see the balloon test?

Lenny Lim- I got there a little late, and it was gone, and the road was closed by the time I got there. Im sorry. You did not leave it up long did you?

Connor Kays- How long did you leave it up Doug?

Doug Passeri- We did it the first day when we took the pictures, but last Sunday when I got down there, I was texting back and forth to just make sure everybody was going to come, but it did not seem anyone was going to, and I did not send the balloon up in the air.

Lenny Lim- Is that why nobody opened the gate, because when I got there the gate was closed.

Doug Passeri- When you drive up to it it opens.

Lenny Lim- At first I went up the wrong street.

Doug Passeri- I waited at the driveway just to be fair and give everyone time to get there from about 12 to 1:15.

Vincent Cestone- Anything after more than two members has to be advertised because it is considered a meeting. We make a point of not coming with three or more.

Robert Dee- Could it be seen from the road? Vinny did you see it?

Vincent Cestone- Yes. I went on Thursday in the lovely weather we had. Any more questions from the board? Any comments from the audience? Anything else to add? I make a motion to close the Public Hearing, do I have second?

William Flaherty - I will second.

Vincent Cestone- All those in favor?

ALL MEMBERS WERE IN FAVOR EXCEPT PAULA CLAIR

Vincent Cestone- Oh You have something?

Paula Clair- Are we going to have a chance to comment on this project before we vote?

Vincent Cestone- Like we normally do, if you want to have a discussion, because I was thinking we would have a discussion.

Paula Clair- I would like to.

Vincent Cestone- When we close the Public Hearing, unless we ask you a question you cant add anything. Do you feel comfortable with that?

Connor Kays- Yes, I think you guys have all the information that you need. I cant imagine there is much else there. Hopefully when you drove by the location you see the location is fairly remote, and is not too much of an eye sore for anyone in the area.

Vincent Cestone- Ok there is a motion and a second to close the Public Hearing. All those in favor?

ALL MEMBERS WERE IN FAVOR

Vincent Cestone- All were in favor, unanimous. Do we want to have a discussion now? Do you think we should have a closed session with our attorney to discuss it?

Dominic Cordisco- If you want to, if you have legal questions for your attorney you are free to go into closed session.

Vincent Cestone- I have a couple of questions, unrelated from a legal stand point. Not about this, it is procedural stuff.

Dominic Cordisco- Procedural stuff would be a basis to go into closed session.

Vincent Cestone- Ok, then I make a motion to go into closed session.

Robert Dee- Second.

Vincent Cestone- All those in favor?

ALL WERE IN FAVOR

Vincent Cestone- We are going to go downstairs to discuss this, you can all stay here, then we are going to come back.

MEMBERS LEFT AND WENT TO CLOSED SESSION

Vincent Cestone- I make a motion to come out of closed session, do I have a second?

William Flaherty- I will second.

Vincent Cestone- All those in favor?

ALL MEMBERS WERE IN FAVOR

Vincent Cestone- We have a couple of questions we would like to ask you. One thing that I did after our last meeting, and previous to this, is I went out to a couple of wind energy sites, and if they had a lower facility they had a more efficient generator on the back of the windmill that compensated for the less wind and less clean wind. Is this something that you can do?

Connor Kays- No, Bergy does not have any. The Bergy is the Bergy, it is about as efficient as they can get. I am not sure, do you have any idea what type of turbine you were looking at?

Vincent Cestone- It escapes me, but it was more than one turbine site.

Connor Kays- The only ones that I know of that have anything like that are redrivens, and they are all white.

Vincent Cestone- It was white.

Connor Kays- No tail?

Vincent Cestone- I don't think so.

Connor Kays- Ok, so that is a redriven, and they have modifications for that, and that company is out of business for the lack of production those turbines had. The modification they made was in renegade to the fact that

those turbines were so poorly performing, and it did not fix anything. We have an upwards of ten customers across the state that are looking for maintenance on them or to have them taken down. That company has gone belly up in a bad way.

Vincent Cestone- The company has not gone belly up, because they were still marketing, so maybe it is not that one.

Connor Kays- If it was not out, then they definitely were no Redriven, Bergy does not have any type of modifications for that. The alternator and the inverter itself are as efficient as they feel they can get it, so they can get mass production in any type of weather.

Vincent Cestone- Was there another question?

(inaudible)

Robert Dee- My question is, that 9D is a scenic highway, and there a lot of restrictions there, like sign height and this and that. There is a guy who wants to put a Dunkin Donuts, and they have been driving him crazy for two years for something like that. I am not sure with the scenic highway, so I would like to check with them, and get some opinion from them, and do a presentation to them.

Connor Kays- We are certainly willing to do that.

Robert Dee- Yea, give them your presentation (inaudible) it is designated as a scenic highway.

Vincent Cestone- As you may have noticed, there are gas stations on 9D that have no canopies. Every gas station has a canopy, they don't have them because they are designated scenic highways. You will also notice that the ones outside of Cold Spring have low size or monument type signs all because of the scenic highway stuff, and that is a concern. We could approve this, then you get sued, then you cant do it anyways, that is our concern. I don't even know who to contact on something like that, because this is the first time something like this has come up.

Robert Dee- It is the Scenic Highway, I don't know what group, but you know who I am talking about?

Lenny Lim- Who designated it? Did the state designate it?

(inaudible)

Connor Kays- Will they have jurisdiction out there?

Dominic Cordisco- Would that be something the Conservation Board would also weigh in on perhaps?

Vincent Cestone- Good question. I would guess they have something.

Lenny LIm- Was this a federal designated Scenic Highway, or a state?

Vincent Cestone- That is state. That is a New York State designation.

Robert Dee- Contact the state and find out.

Vincent Cestone- It may be nothing, or it could be a big deal.Any other questions we have from the board? We are not going to deliberate and vote on this tonight, we have 62 days to vote on this. At the next meeting my goal is to vote on this, so that it can be closed one way or the other.

Robert Dee- Do you know that if this were to be granted, if they still have to go to the Planning Board on this?

Connor Kays- Yes we are aware.

Vincent Cestone- When you build a tower in Philipstown, you have to put a bond through the town, so if the tower is abandoned the town can go in and tear it down.

Connor Kays- Phew, ok. I am familiar with them, depending how they have this one set up.

Vincent Cestone- I know it is not cheap, it is thousands and thousands of dollars.

Connor Kays- Do you know if it is a one time fee, or if it is carried out.

Vincent Cestone- I am sure the Building Department can tell you, because I really don't know.

Connor Kays- Ok. We will look into that.

Vincent Cestone- With cell towers it is 40 to 50 thousand.

Dominic Cordisco- It would likely be a condition with the Planning Board approval. It is more of a site plan issue than a Zoning.

Vincent Cestone- Right, we would not do that. The Planning would.

Dominic Cordisco- This is a learning, this is a first.

Connor Kays- I have dealt with bonding before, if it is structured ok, then it wont be a problem. I have run into some, that you are talking (inaudible)

Vincent Cestone- I am just telling you that, because I did not know if you knew.

Connor Kays- Sure. We will check into that, and we will check with the state on the highway.

Vincent Cestone- When we meet, and the next meeting will be April 8th, which is the second Monday in April. Hopefully we will put this puppy to bed, and you can proceed.

Connor Kays- Thanks Guys

Vincent Cestone- Any old or new business? I make a motion to adjourn.

Robert Dee- Second.

Vincent Cestone- All those in favor?

ALL MEMBERS WERE IN FAVOR.

MEETING CLOSED.

NOTE: These minutes were prepared for the Zoning Board of Appeals and are subject to review, comment, emendation, and approval thereupon.

DATE APPROVED:_____

Respectfully Yours,
Tina Andress- Landolfi, ZBA Secretary

Zoning Board of Appeals –Philipstown April 8, 2013

Questions From March 2013 ZBA Gleick Small Wind Public Hearing

1. Feasibility Study – Wind v. Solar
2. Visual Impact – Tower
3. Section 5 of Variance Application "Self-Created Hardship"
4. NYSREDA Guidelines

1.) Feasibility Study – Wind v. Solar

The choice to use wind power as the renewable resource instead of solar for this specific green project is due partly because of location - high elevation providing good wind speeds, and the return on the initial investment.

Option 1 shows a solar proposal with a $63,000 investment and a 15 year payback at 6.5% ROI
Option 2 shows a small wind proposal with a $79,000 investment and a 7 year payback with an internal rate of return of 13.9%. (see attached)
Therefore with a payback that is greater than 50%, and a location providing wind speeds that will generate enough energy to offset the annual energy used makes it a realistic choice to go with windpower.

2.) Visual Impact – Tower

Currently there are several cell/transmission towers in Philipstown exceeding the 40ft height limit and with larger foot prints. The visual impact factor undoubtedly exists to which there is individual variability. Any commercial size tower has a substantially greater foot print and visual impact in comparison to a residential small wind turbine. On 301 in Philipstown, approximately, 4.5miles east of Rt. 9 is the town line. At 2.3 miles east of Rt. 9 intersection stands a transmission tower that is at least 200 feet in height. (see picture 1)

Sample Small Wind Visuals A.) 1x power ½ mile distance B.) 5x power ½ mile distance
C.) 1x power 1 ½ mile distance D.) 5x power 1½ mile distance. (see picture 2)

3.) Section 5 of Variance Application "Self-Created Hardship"

When defining "self-created hardship"- The choice to use a renewable energy was to offset inflation, and the annual energy purchased from the grid. In this specific case the annual energy used is 19,000kW. The small wind turbine will generate an annual energy output (AEO) of 12,500kW, a 66% decrease is power purchased from the utility.

4.) NYSREDA Guidelines

A summary of the current New York State Research and Development Authority guidelines for the On-Site Wind Incentive Program (PON 2439) provides NYS Eligible Installers a comprehensive and complete guide for residential small wind installation. Hudson Valley Wind Energy has never been denied a building Permit for a small wind project. The States requirements for funding are researched thourorly and adapted to make it possible for installers, NY residents, and NY municipalities to participate in helping New York meet its energy goals: reducing energy consumption, promoting the use of renewable energy sources, and protecting the environment.

Alternative Power Solutions of NY, LLC

BUDGETARY PROPOSAL

Date: 3/21/2013

To:

Reference No. : NY13-0031-1

We are pleased to outline for your consideration our scope of work relative to the above referenced project. Our proposal is based on your requests.

Base Bid
Amount.....$63,000.00 (Sixty Three Thousand Dollars and .00/1.00 cents.)
NYSERDA Grant.....$10,500.00
Initial Cost.....$52,500.00

We propose to provide a **10,600 Watt Grid Tied PV** system complete with all material, engineering/submittals, software, programming, installation/wiring, system commissioning, start-up, checkout, owner training, and Five-year full warranty.

Work includes the following:

- (40) SolarWorld 265 Watt Mono Panels
- (1) Fronius IG Plus V 10.0-1 UNI Inverter (10,000 watt Inverter)
- (1) Fronius Web Monitoring System
- (1) SolarWorld Sunfix Roof Racking System
- (1) Cumulative Production Meter
- Wire, Conduit, String Combiner, System Disconnect, and Misc. Electric Boxes as needed to complete installation.

Work excludes the following:

1. N/A

Applicable Incentives:

1. *Estimated Federal Tax Credit.....$15,750.00
2. *Estimated NYS Tax Credit.....$5,000.00

Final System Cost: **$31,750.00**

*Tax Credits filed for with yearly taxes. Talk with your tax professional for more information.

Sincerely,
ALTERNATIVE POWER SOLUTIONS OF NY, LLC

Michael E. Rudy
Sales & Design Team

Acceptance of Proposal The above prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified in this proposal. Payment will be as defined in construction contract.

Signature:_____

Date:_____

Alternative Power Solutions of NY, LLC.
6780 Northern Blvd.
Northwood Business Center, Suite 101
East Syracuse, NY 13057
Phone: 315.314.6930 Fax: 315.314.6929 Web: www.APSofNY.com

SOLAR PV Cash Flow, 2013 New York (NYSERDA)

Prepared for: **Customer Name**
Date: **3/21/2013**

Cash Purchase, Home or Business

System Size :

Assumptions (Inputs)

Total Installed Cost ($):	$63,000
Allocation to Business (%):	100
Annual Energy Output (kWh):	11,842
Electricity Cost ($/kWh):	$0.1450
Electricity Inflation Rate (%):	3.5
Loan Downpayment (%):	100
Down Payment ($):	$63,000
Amount of Loan ($):	$0
Interest Rate (%):	0
Loan Term (Years):	0
Month Installed:	0
Net Federal Tax Rate (%):	35
Net State Tax Rate (%):	8
O & M Cost ($/kWh):	$0.005
O & M Inflation Rate (%):	5
NYSERDA Rebate:	$10,500
Type(Fixed, 1-axis, 2-axis)::	Fixed
Federal Tax Credit (%):	30
State Tax Credit (%):	$5,000

Results

Ave. Yearly Savings on Bill

Year 1 ($):	$1,717
Year 10 ($):	$2,422
Year 20 ($):	$3,417
Year 30 ($):	$4,820

Internal Rate of Return

Years 1 - 30:	6.5%

Annual Cash Flow Model

Year	Net Energy	O&M Costs	Net Deprec.	Net Loan Payments	Annual Cash Flow	Total Cash Flow
0					($31,750)	($31,750)
1	$1,717	$0	$0	$0	$1,717	($30,033)
2	$1,777	$0	$0	$0	$1,777	($28,256)
3	$1,839	$0	$0	$0	$1,839	($26,416)
4	$1,904	$0	$0	$0	$1,904	($24,513)
5	$1,970	$0	$0	$0	$1,970	($22,542)
6	$2,039	($76)	$0	$0	$1,964	($20,578)
7	$2,111	($79)	$0	$0	$2,031	($18,547)
8	$2,185	($83)	$0	$0	$2,101	($16,446)
9	$2,261	($87)	$0	$0	$2,174	($14,272)
10	$2,340	($92)	$0	$0	$2,248	($12,024)
11	$2,422	($96)	$0	$0	$2,326	($9,698)
12	$2,507	($101)	$0	$0	$2,406	($7,292)
13	$2,595	($106)	$0	$0	$2,488	($4,804)
14	$2,685	($112)	$0	$0	$2,574	($2,230)
15	$2,779	($117)	$0	$0	$2,662	$432
16	$2,877	($123)	$0	$0	$2,754	$3,186
17	$2,977	($129)	$0	$0	$2,848	$6,034
18	$3,082	($136)	$0	$0	$2,946	$8,980
19	$3,189	($142)	$0	$0	$3,047	$12,027
20	$3,301	($150)	$0	$0	$3,151	$15,178
21	$3,417	($157)	$0	$0	$3,260	$18,438
22	$3,536	($165)	$0	$0	$3,371	$21,809
23	$3,660	($173)	$0	$0	$3,487	$25,296
24	$3,788	($182)	$0	$0	$3,606	$28,902
25	$3,921	($191)	$0	$0	$3,730	$32,632
26	$4,058	($201)	$0	$0	$3,857	$36,489
27	$4,200	($211)	$0	$0	$3,989	$40,478
28	$4,347	($221)	$0	$0	$4,126	$44,604
29	$4,499	($232)	$0	$0	$4,267	$48,871
30	$4,657	($244)	$0	$0	$4,413	$53,284

Conservative assumption of no scrap value after 30 years.

Hudson Valley Wind Energy, Llc.

Douglas Passeri
President / Director of Operations
Wind ♦ Sales ♦ Service ♦ Installations
(518)-398-5060
Gallatin, New York 12567

Mr. and Mrs. James and Cynthia Gleick
300 Long and Winding Road
Garrison, New York 10524
845.424.3909

PROPOSAL

Date: 09.13.2012

Proposal: NYHVWE013

We are pleased to outline for your consideration our scope or work relative to the above referenced project. Our proposal is based on your request.
Note: Equipment will be installed after full cure time on foundation.

		Subtotal	Total
1	Bergey Excel-S 10kw Wind Turbine	***$31,700.00***	***$31,700.00***
1	140' Guyed Lattice Tower	***$20,385.00***	***$20,385.00***
1	140' Tower Wiring Kit	***$1,850.00***	***$1,850.00***
1	Electrical, Installation, Disconnects & Labor	***4,860.00***	***4,860.00***
1	Excavation, Trenching, Concrete, Rebar & Labor	***$6,365.00***	***$6,365.00***
1	Installation, Assembly & Turbine Erection	***$7,370.00***	***$7,370.00***
1	Overhead, Fuel, Insurance & Vehicles	***$6,470.00***	***$6,470.00***
			$79,000.00

Installation Includes: 10 year Factory Warranty

roject Cost is Subject to an Additional Excavation Fee for Rock & Tree(s) Removal

Sales Tax	Exempt Capital Improvement
Deposit Due	**$4,000.00**
Upon NYSERDA Approval	***$31,600.00***
Upon Major Components Delivery	***$21,867.30***
Upon Completion	**21,532,70**

Sincerely,

Hudson Valley Wind Energy, Llc.

NYSERDA Incentive for Qty. 1 Bergey Excel-S 140' Tower	$33,642.00
65% of Incentive Upon NYSERDA Approval	$21,867.30
35% of Incentive Upon Interconnection	$11,774.70
* Post Project Federal Tax Grant of 30%	$23,700.00
Total Incentives & Credits	**$55,342.00**

Douglas Passeri
President

Acceptance of Proposal The above prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified in this proposal, Payment Schedule will be made as specified above.

Signature:_____

Date:_____

*** Post Installtion Federal Tax Credit Done by Customer - Tax Form 5695**

*** Incentive amounts are subject to a +/- 10% dependent on NYSERDA's Final Interpretation of Obstruction Report**

BWC 10 kW Cash Flow, 2012 New York (NYSERDA)

Prepared for: **Gleick, James**
Date: **3/21/2013**

Cash Purchase, Home or Business

Assumptions (Inputs)

Total Installed Cost ($):	$79,000
Allocation to Business (%):	100
Annual Energy Output (kWh):	9,612
Electricity Cost ($/kWh):	$0.1600
Electricity Inflation Rate (%):	5
Loan Downpayment (%):	100
Down Payment ($):	$79,000
Amount of Loan ($):	$0
Interest Rate (%):	0
Loan Term (Years):	0
Month Installed:	1
Net Federal Tax Rate (%):	35
Net State Tax Rate (%):	8
O & M Cost ($/kWh):	$0.005
O & M Inflation Rate (%):	3
NYSERDA /USDA Rebate(s):	$33,642
Tower Height (ft)::	140
Federal Tax Credit (%):	30

Results

Loan Payments

Monthly Payment ($):	#NUM!
Value of Interest Deduction ($):	#NUM!
Net Monthly Payment ($):	#NUM!

Ave. Monthly Savings on Bill

Year 1 ($):	$128
Year 10 ($):	$209
Year 20 ($):	$340
Year 30 ($):	$554

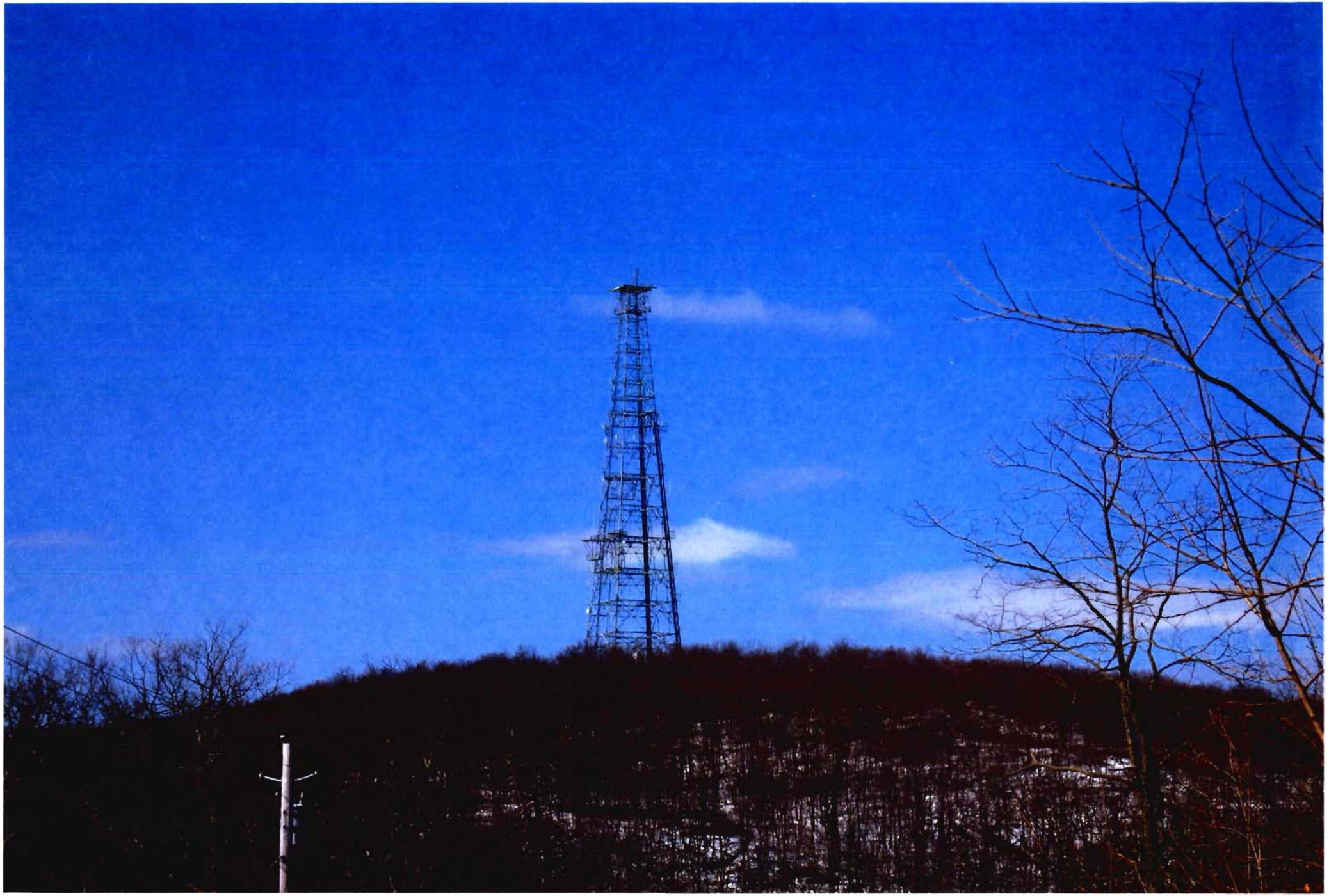
Internal Rate of Retrurn

Years 1 - 30:	13.9%

Annual Cash Flow Model

Year	Net Energy	O&M Costs	Net Deprec.	Net Loan Payments	Annual Cash Flow	Total Cash Flow
0					($21,658)	($21,658)
1	$1,410	$0	$5,458	$0	$6,868	($14,790)
2	$1,615	$0	$849	$0	$2,464	($12,327)
3	$1,696	$0	$509	$0	$2,205	($10,122)
4	$1,780	$0	$306	$0	$2,087	($8,035)
5	$1,869	$0	$306	$0	$2,176	($5,859)
6	$1,963	($56)	$153	$0	$2,060	($3,799)
7	$2,061	($57)	$0	$0	$2,004	($1,795)
8	$2,164	($59)	$0	$0	$2,105	$310
9	$2,272	($61)	$0	$0	$2,211	$2,521
10	$2,386	($63)	$0	$0	$2,323	$4,844
11	$2,505	($65)	$0	$0	$2,441	$7,285
12	$2,630	($67)	$0	$0	$2,564	$9,848
13	$2,762	($69)	$0	$0	$2,693	$12,542
14	$2,900	($71)	$0	$0	$2,829	$15,371
15	$3,045	($73)	$0	$0	$2,972	$18,343
16	$3,197	($75)	$0	$0	$3,122	$21,466
17	$3,357	($77)	$0	$0	$3,280	$24,746
18	$3,525	($79)	$0	$0	$3,446	$28,191
19	$3,701	($82)	$0	$0	$3,619	$31,811
20	$3,886	($84)	$0	$0	$3,802	$35,613
21	$4,081	($87)	$0	$0	$3,994	$39,606
22	$4,285	($89)	$0	$0	$4,195	$43,802
23	$4,499	($92)	$0	$0	$4,407	$48,208
24	$4,724	($95)	$0	$0	$4,629	$52,837
25	$4,960	($98)	$0	$0	$4,862	$57,699
26	$5,208	($101)	$0	$0	$5,107	$62,807
27	$5,468	($104)	$0	$0	$5,365	$68,171
28	$5,742	($107)	$0	$0	$5,635	$73,806
29	$6,029	($110)	$0	$0	$5,919	$79,725
30	$6,330	($113)	$0	$0	$6,217	$85,942

Conservative assumption of no scrap value after 30 years.



Picture 1

A

B

D

C

Picture 2

On-Site Wind Turbine Incentive Program
Program Opportunity Notice (PON) 2439
$13,800,000 Available

Applications accepted from January 1, 2012 through December 31, 2015 by 5:00 PM Eastern Time

NYSERDA announces the availability of approximately $13.8 million in incentives to encourage the installation of end-use wind energy systems for residential, commercial, institutional or government use. The incentives, of up to $400,000 per site/customer, will be paid to Eligible Installers who install new approved grid-connected wind energy systems using qualified equipment, in accordance with the eligibility requirements described below. The maximum equipment size shall be 2 MW (2,000 kW) per site/customer. NYSERDA's incentive shall not exceed 50% of the total installed cost of the system. The program will continue through December 31, 2015 or until funds are fully committed, whichever comes first.

Incentives are intended to benefit both the installer for business development, and the wind energy system owner, where generated power offsets the customer's utility power purchases. Eligible Installers must pass incentives, in their entirety, through directly to their customers. Incentives will be based on the predicted annual output of the wind energy system, on the proposed tower, at the proposed site, as determined by a NYSERDA-approved wind resource assessment tool. Visit http://www.nyserda.ny.gov/Renewables/Small-Wind/NYSERDAs-Program.aspx for more details. System designs and annual energy estimates will be reviewed prior to the approval of incentive applications, and systems may be inspected during and following installations. Incentives will not be approved for wind energy systems that are already completely or partially installed prior to approval.

Installers must be approved by NYSERDA before they may submit an application on behalf of a customer. Installer eligibility will be determined for specific equipment and based on professional experience, company history, and installer credentialing. A list of Eligible Installers is posted on http://nyserda.ny.gov/Contractors/Find-a-Contractor/Wind-Installers.aspx. All Eligible Installers receive a letter from NYSERDA that attests to their eligibility to participate in this program.

Individuals or organizations interested in purchasing a wind energy system should first visit http://www.nyserda.ny.gov/Renewables/Small-Wind/NYSERDAs-Program.aspx to see the wind energy potential at their site. Generally, NYSERDA does not recommend wind energy systems for sites where the "Wind Energy Potential," as shown on the Customer Report, is "Very Poor."

The application forms for this program are available directly from NYSERDA at http://nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-2439-On-Site-Wind-Turbine-Incentive-Program.aspx, by contacting NYSERDA at 1-866-NYSERDA, or atinfo@nyserda.ny.gov. Completed application forms for incentives for specific installations by Eligible Installers will be processed and approved, until funds are fully committed, under the conditions outlined below. Completed application forms for eligibility as an installer will not be accepted after September 30, 2015. Applications for the qualification of wind turbines will be accepted at any time throughout the duration of this program.

Application Submission: Completed application forms must be clearly labeled, contain all required information, have original signatures, and be mailed to:

New York State Energy Research and Development Authority
PON 2439 Wind
17 Columbia Circle
Albany, NY 12203-6399

Envelopes must be addressed as indicated above or processing may be delayed.

Installers may direct any questions to 1-866-NYSERDA, 518-862-1090 or smallwind@nyserda.ny.gov. Please indicate that you are calling in reference to PON 2439.

*Late, incomplete, or unsigned applications will be returned. Faxed applications will not be accepted. Applications to become an Eligible Installer or to have a wind turbine listed for eligibility may be e-mailed. Applications will not be accepted at any other NYSERDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSERDA's website at http://www.nyserda.ny.gov/.

I. INTRODUCTION

Wind energy contributes to the public benefit by enhancing the reliability of the grid, reducing peak demand, increasing in-state electricity generation, increasing the diversity of the state's energy supply portfolio, and making the electric supply market more competitive by promoting consumer choice. An on-site wind energy system is connected on the customer's side of the electric meter and electricity generated by the system offsets the customer's electricity purchases.

This program provides incentives to Eligible Installers who install approved, grid-connected, on-site wind energy systems. Incentives must be passed on in their entirety to the customer. The program will accept applications for eligibility from installers who would like to participate in the program until September 30, 2015, and will accept applications continuously from wind turbine manufacturers who would like to have their wind turbines listed as eligible to receive funding. Once eligible, installers may reserve incentives for approved wind energy systems, for specific customers, until December 31, 2015 or for as long as funds are available.

To be eligible to install wind energy systems under this program, installers must demonstrate that they have adequate training **and** experience installing wind energy systems, including wind turbines and towers, and must be authorized by the wind turbine manufacturer or distributor to be an installer of the Eligible Wind Turbine.

NYSERDA provides complementary programs that encourage companies, organizations, and individuals to enter or improve their position in the sustainable marketplace. Visit the Funding Opportunities page on NYSERDA's web-site (http://nyserda.ny.gov) or call 866-NYSERDA for more information. NYSERDA has developed installer training programs to educate and expand New York's wind installer community. Training opportunities will be posted at: http://nyserda.ny.gov/Program-Areas/Energy-Education-and-Workforce-Development/Workforce-Development-and-Training-Programs.aspx.

Individuals, companies, or organizations interested in purchasing a wind turbine should first visit http://www.nyserda.ny.gov/Renewables/Small-Wind/NYSERDAs-Program.aspx to see the wind energy potential at the site. If the Wind Energy Potential is Very Poor, a wind energy system is not recommended for this location.

II. FUNDING, ELIGIBLE CUSTOMERS, INCENTIVES, LIMITATIONS

A. Program Funding

In an Order issued on April 2, 2010, the NYS Public Service Commission authorized and provided funding for the continuation of the Renewable Portfolio Standard (RPS) Program's Customer-Sited Tier (CST), including the "small wind" program, through 2015. The Order required NYSERDA to develop, in consultation with Department of Public Service (DPS) Staff, a revised CST Operating Plan reflecting various program provisions as described by the Commission. The CST Plan was approved by DPS on June 30, 2010. This program has been structured to conform to the Order, as well as to the CST Plan.

Approximately $13.8 million is available for incentives to install approved wind energy turbines for Eligible Customers as defined below. Funding is allocated on a calendar year basis and is expected to be available through December 31, 2015 or until funds are fully committed, whichever comes first.

In accordance with an Order issued on September 19, 2011, the NYS Public Service Commission required NYSERDA to establish an appropriate mechanism to ensure that the smallest-sized wind turbines continue to have funding opportunities. For purposes of this set-aside, a small wind turbine shall be defined as a wind turbine

with a rotor swept area of 200 meters squared or less. In accordance with the Order, the program's annual budget will include funds specifically dedicated (set-aside) for small wind turbines.

The annual budgets allocated to the program including the small wind turbine set-aside are as follows:

Year	Budget*	Small Wind Turbine Set-Aside*	General Fund*
2012	$2.9	$1.0	$1.9
2013	$3.1	$1.2	$1.9
2014	$3.8	$1.6	$2.2
2015	$4.0	$1.8	$2.2
Total	$13.8	$5.6	$8.2

* Dollars are in millions

During the first nine months of each year, the Set-Aside will be available exclusively for small wind turbines. If the Set-Aside is exhausted and there is uncommitted funding remaining in the General Fund pool, a small wind turbine project may use funds from the General Fund. Wind turbines not designated as small wind turbines may use funds only from the General Fund. During the last quarter of each calendar year, any Set-Aside funds not already committed will be rolled into the General Fund and therefore available for any size on-site wind turbine application. When there is insufficient funding available to support an application, it and subsequent applications for which funds are insufficient will be placed in a queue until funding becomes available. In general, this will be first-come, first-served with queue position determined based on the date that complete materials were received by NYSERDA.

B. Eligible Customers

Financial incentives for the installation of wind energy systems are available for all sectors, including, but not limited to, residential, commercial, industrial, agricultural, institutional, educational, not-for-profit, and government-owned facilities. Projects that are funded or partially funded by other NYSERDA programs are not eligible for funding under this PON. To be eligible, the installation site owner (customer) must be an electricity distribution customer of: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, National Grid, Orange and Rockland Utilities, Inc. or Rochester Gas and Electric Corporation, who pays the Renewable Portfolio Standard surcharge. This charge typically appears as an itemized charge on the electric utility bill, with a reference to RPS or SBC/RPS.

Wind energy systems owned by third-parties may be eligible for funding under this program, provided that the site host (customer) pays the RPS surcharge, and that any contractual relationship involving the customer, system owner, or the installer provides that the entire incentive payment is being passed on to the customer, and that the program requirements required of Eligible Installers are provided to the customer by an Eligible Installer company.

C. Incentive Levels

The NYSERDA incentive will be based on the expected annual energy output (AEO) of the proposed wind energy system, at the proposed location. The AEO must be calculated by a NYSERDA-approved wind resource assessment tool. Visit http://www.nyserda.ny.gov/Renewables/Small-Wind/NYSERDAs-Program.aspx for more details. It will also be necessary to complete a Wind Site Assessment, as further explained in Section IV. A.

If the AEO is 10,000 kWh or less, the NYSERDA incentive is $3.50 per kWh.

Example: *If the AEO of the wind energy system is 7,400 kWh, the NYSERDA incentive is $25,900. [7,400 kWh x $3.50/kWh]*

If the AEO is greater than 10,000 kWh and less than or equal to (≤) 125,000 kWh, the NYSERDA incentive is $35,000 plus $1.00 per kWh for every kWh greater than 10,000 kWh.

Example: *If the AEO of the wind energy system is 32,500 kWh, the NYSERDA incentive is $57,500. [$35,000 + (22,500 kWh x $1.00/kWh)]*

If the AEO is greater than 125,000 kWh, the NYSERDA incentive is $150,000 plus $.30 per kWh for every kWh greater than 125,000 kWh.

Example: *If the AEO of the wind energy system is 200,000 kWh, the NYSERDA incentive is $172,500.*

[$150,000 + (75,000 kWh x $.30/kWh)]

Visit http://www.nyserda.ny.gov/Renewables/Small-Wind/NYSERDAs-Program.aspx for more details on the NYSERDA-approved wind resource assessment tool. This assessment tool may not be appropriate for building-mounted wind turbines, short towers (typically less than 60 feet tall), tall towers (typically, greater than 140 feet tall), wind turbines to be installed in an urban environment, or wind turbines with a nameplate rating equal to or greater than 100 kW. For these systems, additional site assessment procedures will be required in order to validate the wind resource available to the wind turbine and the estimate AEO. The information provided by the installer will be reviewed on a case-by-case basis.

D. Limitations.

The maximum incentive available is $400,000 per site/customer. The maximum total equipment size is 2 MW (2,000 kW) per site/customer. The NYSERDA incentive will not exceed 50% of the total installed cost of the wind energy system.

The purpose of NYSERDA's On-Site Wind Turbine Incentive Program is to support the installation of customer generation that will produce electricity primarily for use by that customer. Consistent with this purpose, this program limits the size (kW) of the electric generation system that can be installed. Systems shall be sized such that the expected annual energy produced (kWh/year) by the system will not exceed 110% of the customer's annual electric energy usage, including eligible remote meters. For sites that do not have 12 months of electric consumption or that are increasing their electric use, an estimated energy use analysis may be used to predict that usage.

If multiple wind turbines are installed at a site, the NYSERDA incentive is based on the AEO of all wind turbines combined and is not based on the AEO of each individual wind turbine. For example: If two wind turbines are installed and the AEO for each wind turbine is 10,000 kWh, the NYSERDA incentive will be $45,000 ($35,000 + $10,000) and not $70,000 ($35,000 + $35,000).

Applications will be accepted for review in accordance with the following limitations:

- Eligible Installation companies are limited to a maximum of ten open projects at any one time under this and previous programs. A project is considered open from the time of the application for an incentive is submitted until the final invoice is approved by NYSERDA.
- Eligible Installation Companies may submit an additional ten applications, only if these applications are also seeking funding through a competitive federal grant (e.g. USDA- REAP grant) as part of their overall financial structure and are less than 100 kW each. The Installer must submit proof, within two weeks after the federal program's application due date, that the application was actually submitted for federal funding. After this date, NYSERDA will not accept additional applications until the total number of an installation company's open projects are below ten.
- The first application submitted by a new Installer must be approved by NYSERDA before any additional applications may be submitted.

Incentives are only available for the installation of new equipment and wind energy systems that have not been installed (partially or completely) prior to NYSERDA approval of an incentive application submitted in accordance with the terms and conditions of this PON. Incentives are only available to Eligible Installers and incentives must be passed on in their entirety to customers. Incentives will not be provided directly to customers who purchase and install their own wind energy systems.

Changes in Incentive Level - Although incentives are expected to stay at these levels, incentives may be changed at any given time during the program, for any reason. Eligible Installers will be notified of any program changes via e-mail and the changes will also be posted on NYSERDA's web site. Applications that are complete when received by NYSERDA will not be subject to subsequent changes in incentive levels.

E. Incentive Payment Schedule

Incentives will be paid to Eligible Installers in two increments and will be tied to specific installation milestones. The first incentive payment, which is 65% of the total incentive amount approved by NYSERDA, will be paid upon demonstration that all wind energy system components have been delivered to the customer's site. Attachment D must be completed and submitted, along with all supporting documentation, to be approved by NYSERDA. The second incentive payment, which is the remaining 35% of the total incentive amount approved by NYSERDA, will be paid upon demonstration that the wind energy system has been connected to the utility grid, inspected by all authorities having jurisdiction, and/or inspected by NYSERDA or its representatives and Attachment E has been completed, submitted and approved by NYSERDA. Documentation for all applicable utility, state, city, town, and other inspections and approvals must be attached to Attachment E.

F. Application Approval Timing

Complete, accurate, and legible incentive applications will help facilitate a quick review. NYSERDA will not consider or process applications that are not complete. Applications that are not complete and signed by the Eligible Installer when submitted will be rejected and returned.

Incentive Application Form Part 1 (Attachment A) will be reviewed and installers will be notified within 30 days of NYSERDA's receipt of the completed application. Applications for proposed installations that (1) do not meet the requirements of PON 2439, (2) have installation and interconnection schedules in the customer purchase agreement that are not reasonable, and/or (3) indicate that the proposed wind energy system has been installed (partially or completely) before NYSERDA approval, will be rejected and returned.

Incentive Application Form Part 2 (Attachment B) will be reviewed and, for situations where the Town or other permit-granting body has completed the requirements of the State Environmental Quality Review Act (SEQR) (http://www.dec.ny.gov/regs/4490.html), installers will be notified within 30 days of receipt of the application. If no zoning, land-use or other approval-granting body has jurisdiction, at least an additional 30 days will be necessary.

Upon NYSERDA's approval, the installer will receive an approval letter with a Purchase Order attached. The date on the Purchase Order shall serve as the starting date of the project. It is NYSERDA's goal to see wind energy systems installed in a timely manner; in general, all the wind energy system components should be delivered to the customer's site within 120 days of this starting date. If this is not possible, NYSERDA must be contacted to establish a reasonable schedule. Otherwise, the reservation will become void 120 days after the starting date. When all deliverables have been met, incentives for approved wind energy systems will be paid under the terms of NYSERDA's prompt payment policy.
(http://nyserda.ny.gov/~/media/Files/FO/Standard%20Forms%20and%20Agreements/exhibitd.ashx?sc_database=web)

III. WIND ENERGY SYSTEM AND SITE REQUIREMENTS

A. Wind Energy Systems and Components

Systems must be for grid-connected, on-site applications to be eligible for an incentive. On-site wind energy systems are those connected on the customer's side of the electric meter; the electricity generated by the wind energy system must offset the customer's utility electricity purchases. All components of wind energy systems installed under this program must be new equipment. **Incentives are only available for wind energy systems that have not been installed (partially or completely) prior to NYSERDA approval of an incentive application submitted in accordance with the terms and conditions of this PON.** Construction or partial construction of the foundation is considered partial installation of the wind energy system and should not occur prior to NYSERDA's approval of an incentive application.

Wind Turbines - Only wind turbines that have been pre-approved by NYSERDA are eligible for funding under this program. A list of Eligible Wind Turbines is available at http://www.nyserda.ny.gov/Renewables/Small-Wind/Eligible-Wind-Turbines.aspx.

Towers - Wind turbines must be mounted on an appropriate tower and the towers must be designed to accommodate the proposed wind turbine. It is recommended that towers be at least 60 feet in height; however, the bottom of the rotor must be at least 30 feet above any obstacle, in any direction, within 500' of the turbine. NYSERDA reserves the right to consider installations on a case-by-case basis.

Building-Mounted Turbines - Wind turbines may be mounted on a pre-existing structure such as a building or another type of structure. For turbines mounted on a pre-existing structure, a structural analysis must be provided demonstrating sufficient structural integrity. NYSERDA reserves the right to approve applications on a case-by-case basis.

Inverters and Interconnection - Inverters and interconnection devices must be listed on the New York State Department of Public Service's list of Certified Interconnection Equipment (http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/dcf68efca391ad6085257687006f396b/$FILE/SIRDevices.pdf) or the interconnection must be in agreement with the most current version of the Public Service Commission's Standardized Interconnection Requirements. All wind energy systems must have an appropriate interconnection agreement with the utility and the wind energy system must be installed in compliance with that agreement.

Other Electrical Components - All other electrical components of the wind energy systems such as charge controllers, batteries, wiring, and metering equipment must be certified as meeting the requirements of any relevant national and state codes and standards.

Monitoring Equipment - Each wind energy system must include, at a minimum, a cyclometer register kilowatt-hour meter (or a meter that can be read numerically by a customer or an "easy read meter") to read total energy output. The energy metering data must be automatically stored independently of the inverter display. In lieu of a meter, a data acquisition system (DAS) capable of transmitting and storing data off-site may be used. The meter must have an accuracy of within ±5% and include a certificate of compliance from the manufacturer. Energy production (including the date of the meter reading) must be collected by the installer or customer at least once per month and the installer must submit this data to NYSERDA twice per year for two years following interconnection of the wind energy system. A DAS does not alleviate the installer's responsibility to submit timely data to NYSERDA. At NYSERDA's cost, NYSERDA may require that additional monitoring equipment be installed.

B. Siting Considerations

Under the provisions of the State Environmental Quality Review Act (SEQR), NYSERDA must determine if the funding of any action may have a significant impact on the environment. All wind installations must meet the requirements of the local zoning ordinances.

In addition, the following general criteria will apply:

- The minimum work zone distance between the tower base, and a property line or power line is the height of the wind energy system, above ground level, including the blades, plus 10%. (i.e., 1.1 times the total height of the wind energy system)
  - Customers may apply for an exemption with written permission from the neighbor and an indication from the neighbor that the use of land in the vicinity is consistent with the proposed wind energy system. There is no exemption for power lines.
- The minimum setback distance between the tower base and any human-occupied building is five times the rotor diameter.
  - Customers may apply in writing for an exemption from this minimum distance requirement for buildings they own; however, the customer must demonstrate that the possible problems of locating the wind energy system less than the required distance from the building have been addressed.
- For building-mounted applications, if the local municipality has an ordinance that stipulates the criteria for building-mounted wind turbines, then building-mounted wind turbines may be eligible for funding under this program, provided all other program requirements are met. If the local municipality does not have an ordinance that stipulates the criteria for building-mounted wind turbines, then a building-mounted wind turbine is not eligible for funding under this program.
- If multiple turbines are proposed for a site, there must be a distance of at least ten times the rotor diameter between the tower bases.
- The bottom of the rotor must be at least 30 feet above any obstacle, in any direction, within 500' of the turbine.

IV. REQUIRED DOCUMENTATION FOR CUSTOMER INCENTIVE APPLICATIONS

There are two parts to the incentive application: Attachment A, 'Installation Information', and Attachment B, "Permitting and SEQR Information." Installers may submit Attachment A prior to obtaining permits for the wind energy system as it is possible that the review of Attachment A could result in recommendations to make changes to the wind energy system location or tower height. Both Attachments A and B include lists of supporting documentation that must be provided. Only after Attachments A and B and all supporting documents are provided will NYSERDA reserve funding for the application.

A. Attachment A – Installation Information

Attachment A describes the site and the wind energy system that will be erected. Installers must supply all of the information requested in Attachment A, "Installation Information." Applications that do not include all of the information requested will be returned.

Wind Site Assessment - A wind site assessment provides customers with site-specific information and will be the basis for determining the NYSERDA incentive. At a minimum, this assessment shall include the following; however, applications for turbines with a nameplate rating of greater than 100 kW will require a more detailed analysis:

- An evaluation of the wind resource at the potential location of the wind turbine(s) at hub height. This information will be generated by the NYSERDA-approved wind resource assessment tool. *

- Eight photographs taken from the proposed wind energy system location looking in the following directions: N, NE, E, SE, S, SW, W, NW.

- Site contour map.

- Demonstrated historic annual site electric use (kWh). For sites that do not have 12 months of electric consumption or that are increasing their electric use, an energy-use analysis may be used to predict that usage. Copy of a utility bill(s) showing proof of payment by customer into Renewable Portfolio Standard (RPS) (or letter from utility if not indicated on electric bill) and annual kWh usage. Attachment J – Electric Utility Information must also be completed.

- Details about the proposed turbine, including manufacturer and model, rotor diameter, tower height, and tower type.

- A description of potential obstructions that may affect the proposed turbine's AEO. Additional turbulence losses may be applied when the turbine site does not meet this recommendation. When the obstacles are trees, their mature height must be used to determine minimum turbine height.

- Aerial photos or images of the potential wind site.

- Elevation of the site (feet about sea level).

- A plot plan, on 8-1/2" x 11" paper, (multiple plans may be submitted, if scaling is an issue.) which includes the following:

    - o Property lines and physical dimensions of the property
    - o Location, dimensions, and types of existing major structures on the property
    - o Location of the proposed wind system tower(s)
    - o The right-of-way of any public road that is contiguous with the property;
    - o Location of any overhead utility lines;
    - o Location of utility meter; and
    - o Electrical interconnection location.

- Estimated AEO of the proposed turbine.*

    Only a NYSERDA-approval wind resource assessment tool may be used to determine average annual wind speed and estimated AEO. NYSERDA reserves the right to use its own estimate for the purpose of determining the NYSERDA incentive.

    * Visit http://nyserda.ny.gov/en/Page-Sections/Renewables/Small-Wind/On-Site-Wind-Turbine-Incentive-Program.aspx for more details on the NYSERDA-approved wind resource assessment tool. This assessment tool may not be appropriate for building-mounted turbines, short towers (typically less than 60 feet tall), tall towers (typically, greater than 140 feet tall), turbines to be installed in an urban environment, or turbines with a nameplate rating equal to or greater than 100 kW. For these systems, additional site assessment procedures will be required in order to validate the wind resource available to the turbine and the estimate AEO. The information provided by the installer will be reviewed on a case-by-case basis.

Wind Site Assessment for wind turbines with a nameplate rating equal to or greater than 100 kW shall also include a review of the following:

- Accessibility of site and availability of work area
- Ease of interconnection to existing electrical infrastructural (on-site and utility)
- Economic analysis

- Shadow flicker and sound issues
- Any additional reviews required by any Authority Having Jurisdiction (AHJ).

One-Line Diagram - A legible diagram using unique line characteristics and standard symbols to clearly describe the wind energy system as it will be installed. The One-Line Diagram must show all major system components from the wind turbine to the utility meter. Each conductor's size and type is to be shown, as well as the relevant conduit characteristics (i.e. size and type, and length, if greater than 20'). The make, model, and voltage and amperage ratings of all overcurrent devices, switches, inverters, batteries and other relevant equipment are to be shown, as applicable. The Diagram should also make clear whether the system will be connected via a line-side tap or if it will be back-fed through a circuit breaker in the main service panel.

System designs must be in accordance with applicable local, State, and national codes and regulations, including Article 694, Small Wind Electric Systems, of the National Electrical Code.

Installation Drawings - Provide copies of any tower foundation blueprints or drawings, tower blueprint or drawing, and any other documentation required by the AHJ.

B. Attachment B - State Environmental Quality Review

Attachment B, Permitting and SEQR Information, provides a list of the steps and supporting documents that are necessary for approval of NYSERDA funding. It is the Eligible Installer's responsibility to insure that all necessary permits, approvals, certificates, etc. from any applicable AHJ are obtained for all installed systems.

The Eligible Installer is responsible for ensuring that each project complies with the requirements of the State Environmental Quality Review Act (SEQR). Under the provisions of SEQR, NYSERDA must determine if the funding of any action may have a significant impact on the environment, regardless of any other authority's determination. SEQR review should begin with an application to the Town board, zoning, land-use or other local approval-granting body. A SEQR negative declaration or other determination by a local authority will be considered by NYSERDA in its determination. NYSERDA does not consider the installation of a wind turbine to be a Type II Action.

For incentive applications where the combined total name plate rating of the wind turbines is equal to or greater than 100 kW, the application must include the Full Environmental Assessment Form with the Visual EAF. During NYSERDA's review, particular attention will be paid to questions A-11, A-14, A-18, B-9, B-10, C-11 and C-17.

Eligible Installers are encouraged to review the SEQR requirements early in the developmental stage, before entering a contract with a customer that reflects NYSERDA participation. Please contact NYSERDA if you have any questions regarding these requirements. For a more comprehensive description of the SEQR process visit http://www.dec.ny.gov/permits/357.html. NYSERDA will not commit to providing incentives on any project until a determination has been made under SEQR.

V. INSTALLER ELIGIBILITY

To apply for status as an Eligible Installer, an individual must complete and submit Attachment F - Installer Eligibility Application Form along with the required supporting documentation. An applicant's eligibility will be determined and maintained for specific wind turbines depending on the types of wind energy systems the applicant has experience installing. Attachment K - Manufacturer Authorization Letter must also be completed; this letter stipulates that the installer is authorized to install the specified wind turbine and that the manufacturer will honor the NYSERDA required warranty, as stated in Attachment C - Addendum to Customer Purchase Agreement, in the event of a default by the installer.

Determinations of eligibility will be based on factors such as acceptance of all program terms and conditions, training, extent and type of installation experience, customer references, and proof that an applicant may purchase at least one of NYSERDA's Eligible Wind Turbines. Site assessment skills, wind resource and energy estimation skills, and professionalism will also be evaluated. Past performance under NYSERDA programs is a critical criterion for determining eligibility and the conditions of eligibility under this solicitation. To become eligible, applicants will be required to sign and comply with the Standard Terms and Conditions (Attachment G). If the Eligible Installer, Installation Company employees, or subcontractors do not meet all program terms and conditions or program requirements, the Eligible Installer will be subject to termination or suspension actions as described in Section 3(b) of Attachment G, Compliance with program terms and conditions.

Installers must meet all insurance requirements (both commercial general liability and commercial automobile liability insurance) as specified under Section 10 of Standard Terms and Conditions (Attachment G). Each insurance certificate must name NYSERDA and the State of New York as additional insureds. Proof of insurance must be provided to NYSERDA and submitted with the signed copy of the Standard Terms and Conditions.

To maintain eligibility under this program, all installers must meet the following conditions every calendar year:

- Their insurance is current
- They can show proof that they have had a significant role in a wind turbine installation, attended at least one in-depth wind installation training course, or attended an in-depth wind site assessor course. (NABCEP Certified Small Wind Installers are exempt from this initiative.)
- There have been no substantial changes that could affect their program eligibility.

In addition, installers approved under PON 2097 must submit the following to maintain their eligibility:

- An e-mail to the NYSERDA project manager stating that they agree to be bound by the terms and conditions of PON 2439's Attachment G - Eligible Installer Agreement
- Attachment K from at least one manufacturer of a wind turbine eligible for funding under PON 2439 stating the installer is eligible to install the specified wind turbine and that the manufacturer will honor the NYSERDA warranty in the event of a default by the installer.

Once notified of eligibility in writing by NYSERDA, an Eligible Installer may then submit applications for incentives for specific customers, under the terms and conditions described in PON 2439. Review of Eligible Installer Applications may take up to 30 days. Since the incentives offered under this program will close on December 31, 2015, until further notice installer eligibility applications will only be accepted until September 30, 2015.

NYSERDA's Rights and Limitations - NYSERDA may deny or revoke eligibility for any reason, including, but not limited to: inadequate training, inadequate experience, poor references, failure to act professionally, fairly, and in good faith with NYSERDA or customers, providing false information to NYSERDA or customers, poor performance in previous NYSERDA programs, and committing actions that would be subject to disciplinary actions under Section 3(b) of Attachment G, Compliance with program terms and conditions.

Neither NYSERDA nor the State of New York endorses any Eligible Installer, Installation Company, or Eligible Wind Turbine. In addition, NYSERDA and the State of New York does not guarantee, warrant, or in any way represent or assume liability for any work proposed or carried out by an Eligible Installer or Installation Company. NYSERDA is not responsible for assuring that the design, engineering, or construction of the project or installation of any wind energy system is proper or complies with any particular laws, regulations, codes, licensing, certification and permit requirements, or industry standards. NYSERDA does not make any representations of any kind regarding the results to be achieved by the wind energy systems or the adequacy or safety of such measures.

A list of Eligible Installers is posted on http://nyserda.ny.gov/Contractors/Find-a-Contractor/Wind-Installers.aspx.

VI. ELIGIBLE WIND TURBINES

Only commercially available wind turbines with a proven record for power performance, reliability, safety, and acoustics will be considered for funding. To gain eligibility for a wind turbine to receive funding under this program, a manufacturer or dealer must complete and submit Attachment H, Eligible Wind Turbine Application Form, with all of the information requested.

NYSERDA requires that manufacturers or dealers of wind turbine provide one of the following:

1. Evidence that an international organization, accredited to ISO/IEC Guide 65 or EN45011, has certified that the wind turbine meets the appropriate sections of IEC 61400 for acoustics, durability, safety, and performance standards (For small wind turbines, this includes IEC 61400-2, IEC 61400-11, and IEC 61400-12).
2. Evidence that a recognized Accredited Certification Organization, such as the Small Wind Certification Council or Intertek, has certified that the wind turbine meets the requirements of the AWEA Small Wind Turbine Performance and Safety Standard, AWEA 9.1 – 2009.
3. If the wind turbine is too large to be compliant with AWEA 9.1 - 2009, then the procedures outlined in Attachment I must be followed.

In addition, the manufacturer or dealer must submit the technical specifications on the wind turbine, inverter, and tower, as well as the power curve in graphic and table form, from IEC 61400-12-1.

NYSERDA reserves the right to deny eligibility of any wind turbine for any reason including but not limited to: poor performance, concerns about wind turbine's design, concerns about the quality of data presented, or lack of manufacturer support for maintenance and warranties. Review of Wind Turbine Applications may take up to 60 days. Wind turbines eligible for funding under PON 2097 will remain eligible under PON 2439.

Wind turbines listed as approved at the completion of PON 2097 are eligible for this program. After September 30, 2012, any wind turbine to which the AWEA Small Wind Turbine Performance and Safety Standard applies, must be certified to that standard or to IEC 61400-2, IEC 61400-11, and IEC 61400-12-1, by a recognized Accredited Certification Organization to be eligible for funding under NYSERDA On-Site Wind Turbine Incentive Program.

NYSERDA is a member of the Interstate Turbine Advisory Council (ITAC), established under the Clean Energy States Alliance. One of ITAC's goals is to establish a collaborative group of public clean energy programs to evaluate and identify small and mid-sized wind turbines that fit the performance and durability expectations of incentive providers. Once ITAC publishes its unified list of wind turbines, NYSERDA expects to adopt that list for all wind turbine sizes included in the list, as they pertain to PON 2439. NYSERDA reserves the right to impose additional restrictions or relax ITAC's requirements dependent on program needs.

Details on Eligible Wind Turbines may be found at: http://www.nyserda.ny.gov/Renewables/Small-Wind/Eligible-Wind-Turbines.aspx.

VII. GENERAL CONDITIONS

Proprietary Information - Careful consideration should be given before confidential information is submitted to NYSERDA as part of your proposal. Review should include whether it is critical for evaluating a proposal, and whether general, non-confidential information, may be adequate for review purposes.

The NYS Freedom of Information Law, Public Officers law, Article 6, provides for public access to information NYSERDA possesses. Public Officers Law, Section 87(2)(d) provides for exceptions to disclosure for records or portions thereof that "are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise." Information submitted to NYSERDA that the proposer wishes to have treated as proprietary, and confidential trade secret information, should be identified and labeled "Confidential" or "Proprietary" on each page at the time of disclosure. This information should include a written request to except it from disclosure, including a written statement of the reasons why the information should be excepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 http://www.nyserda.ny.gov/About/New-York-State-Regulations.aspx. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

Omnibus Procurement Act of 1992 - It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements.

Information on the availability of New York subcontractors and suppliers is available from:

Empire State Development
Division For Small Business
30 South Pearl Street
Albany, NY 12245

A directory of certified minority- and women-owned business enterprises is available from:

Empire State Development
Minority and Women's Business Development Division
30 South Pearl Street
Albany, NY 12245

Tax Law Section 5-a - NYSERDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSERDA having a value in excess of $100,000, to certify to the Department of Taxation and Finance (the "Department") whether the contractor, its affiliates, its subcontractors and the affiliates of its subcontractors have registered with the Department to collect New York State and local sales and compensating use taxes. The Department has created a form to allow a prospective contractor to readily make such certification. *See,* ST-220-TD (available at http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf). Prior to contracting with NYSERDA, the prospective contractor must also certify to NYSERDA whether it has filed such certification with the Department. The Department has created a second form that must be completed by a perspective contractor prior to contacting and filed with NYSERDA. *See,* ST-220-CA (available at http://www.tax.ny.gov/pdf/current_forms/st/st220ca_fill_in.pdf). The Department has developed guidance for contractors which is available at http://www.tax.ny.gov/pdf/publications/sales/pub223.pdf.

Contract Award - NYSERDA anticipates having multiple Eligible Installers under this solicitation. It may award a contract based on initial applications without discussion, or following limited discussion or negotiations. Each application should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support applications. NYSERDA will use the Terms and Conditions (Attachment G) to contract with successful applications.

Limitation - This solicitation does not commit NYSERDA to award a contract, pay any costs incurred in preparing a proposal, or to procure or contract for services or supplies. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest.

Disclosure Requirement - The proposer shall disclose any indictment for any alleged felony, or any conviction for a felony within the past five years, under the laws of the United States or any state or territory of the United States, and shall describe circumstances for each. When a proposer is an association, partnership, corporation, or other organization, this disclosure requirement includes the organization and its officers, partners, and directors or members of any similarly governing body. If an indictment or conviction should come to the attention of NYSERDA after the award of a contract, NYSERDA may exercise its stop-work right pending further investigation, or terminate the agreement; the contractor may be subject to penalties for violation of any law which may apply in the particular circumstances. Proposers must also disclose if they have ever been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.

VIII. ATTACHMENTS

Attachment A - Customer Incentive Application Form
Attachment B - Permitting and SEQR Information
Attachment C - Addendum to the Customer Purchase Agreement - Standard Terms and Conditions
Attachment D - Initial Incentive Payment Form (65% of Approved Incentive)
Attachment E - Final Incentive Payment Form (35% of Approved Incentive)
Attachment F – Installer Eligibility Application Form
Attachment G - Eligible Installer Agreement - Standard Terms and Conditions
Attachment H - Eligible Wind Turbine Application Form
Attachment I - Eligibility Requirements for Midsize Turbines
Attachment J – Electric Utility Information
Attachment K – Manufacturer Authorization Letter