

TOWN OF ATLANTIC BEACH
March 2, 2010

APPROVED

Planning Board Minutes

Members Present

Larry Burke
John Hopkins
Steve Joyner
Ray Langley, Chairman
Norman Livengood
Scott Rice, MD

Staff Present

Nina Erwin, Secretary
Jessica Fiester, Planning Director

Others Present

Christopher Broughton,
CB Energy Solutions
Trish Ide, Councilman
Mike Shutak, Reporter

Members Absent

John Rivers (excused)

CALL TO ORDER

Chairman Ray Langley called the meeting to order at 6:00 pm.

MOTION TO EXCUSE ABSENT MEMBER

Chairman Langley called for a motion to excuse John Rivers from tonight's meeting. **Scott Rice made the motion. Steve Joyner seconded the motion. The motion passed unanimously.**

APPROVAL OF February 2, 2010 MINUTES

Chairman Langley called for a motion to accept as written, the minutes of February 2, 2010. **Larry Burke made the motion to accept as written. Scott Rice seconded the motion. The motion passed unanimously.**

PRESENTATION ON WIND ENERGY BY CB ENERGY SOLUTIONS

Christopher Broughton, sole owner and operator of CB Energy Solutions.

Mr. Broughton's office is in Pamlico County. CB Energy Solutions specializes in solar, wind, and thermal energy solutions for residential. The company installs multiple style wind turbines (horizontal and vertical).

The vertical axis wind turbines are easier to pitch to small properties less than ½ acre. These turbines are 46 inches tall and will mount from a pole, or a dock. They are kept away from the residence as much as possible. That way, the turbine will not effect the view of the home. For someone who has a dock, the unit can be set on the pilings and the PVC conduit is run to the home and will not effect the home in any way. For someone without a dock, the unit would go through the roof of the building to be mounted.

CB Energy Solutions is proposing to use the vertical axis turbines on docks, decks, and roofs on homes in the Atlantic Beach area. The turbines are image pleasing and can be ordered with an image package. The cost of the image package can be included in the purchase of the turbine.

There are going to be times when people will want to completely remove themselves from the electrical utilities, and the cost effective way will be a horizontal turbine. The company will not consider a person's property site for a horizontal turbine unless the property owner has at least an acre of land. Two-hundred fifty feet of setback away from the structure, aside from any other homes and trees is needed. There are not many people who want to see the horizontal turbines. The goal is to get away from horizontal turbines and move forward with vertical axis turbines.

Chairman Langley stated that this is not an action agenda situation tonight. It is simply a presentation. We will not be bringing any votes to it.

Mr. Broughton said that the vertical axis turbines shown on the handout will be the turbines installed and not the horizontal turbines. The overall height of the vertical axis turbine is 46 inches.

Mr. Broughton stated that the unit generates three legs of DC and it goes into a 3600 amp inverter. The inverter will correct it and will turn it into the AC where it will go into a 30 amp double-pole disconnect. That disconnect feeds directly into the panel. It will not go into the meter because we don't want to effect the utility in any way other than to lessen their requirement of the local utility. In the daytime or in the evening when you get the most winds, it will slow the meter down. On a summer home, it's basically going to stop the meter. It will turn the meter backwards and that is where the homeowner will get the positive aspect. They will generate a local credit with the local utility company. Very few places pay cents to the kilowatt hour, but what they will do is let you acquire a credit. For the typical summer home owner, that credit will be used for the July 4 holiday, Labor Day, Memorial Day, and weekends during the summer. That is when the homeowners will actually start earning off of the credit they have built.

These typical systems will pay for themselves in five to six years with the tax incentives, State incentives, and the NC Green Power of Kilowatt Production incentive. Mr. Broughton stated as long as the turbine is not viewed as an eyesore or as a problematic mechanical device, there are high hopes for installing them rapidly.

John Hopkins asked how far away would you be able to hear the turbine. Mr. Broughton said the actual DV rate was taken at 20 feet and it was 49 decibels. More information on this is available from the CB Energy website.

Mr. Broughton stated that a child might want to touch the turbine, so there will be a height requirement so the turbine cannot be touched. It will be up at least 5 feet from the walking structure. It can pose an issue for someone with brittle fingers, or for a child.

Larry Burke asked that during the week, if it's a vacation home and there is very little or no power usage, does the meter turn backwards. Mr. Broughton said it will depending on the actual size of it. These systems are going to range from \$15,000 to \$27,000. A \$27,000 system on a home with a \$350 electric bill will pay for itself in 7 ½ years. On the 8th year, the homeowner will be making money back in his/her pocket that will not be paid out.

Scott Rice asked how long do the systems last. Mr. Broughton said the actual assembled unit is set with 5-year warranties. The actual components that they are constructed out of have 20-year

warranties. The assembled unit has a 5-year functionality operation status. If any of the internal components fail due to an actual component failure, nine times out of ten, the whole unit will be replaced.

John Hopkins asked if the outside current goes off, does the unit still provide some current. Mr. Broughton said it is an option. Just because there is an alternative energy solution it does not mean that in the event your local utility goes out and you lose power, you'll have power from that energy source. There are battery banks involved with doing that. It is an actual storage system. A storage system (small to large) can be installed. In typical areas where people have hurricanes, we put in a substantial battery bank for people who want to be able to work off of that generated electricity instead of wasting it. You can get to a cap and your local utility will give you a credit. Most of the time, you will get a 6-month credit and that's where your cap is going to be. In 2011 all the federal incentives, and kilowatt hours will change. Just because homeowners have a wind turbine in their yard or a solar panel on their roof doesn't mean that system is going to run the house when the power goes out from the utility company.

Planner Fiester asked what the Division of Coastal Management (DCM) says about putting the units on docks. Mr. Broughton said he did not think DCM would have any concern because the pilings are set and set to spec and we are not going to be effecting them in any way, based on actual force given up to 28 mile-an-hour winds. After 28 mile-an-hour, it's going to be a different engineering spec.

Planner Fiester asked that from an inspections point, what kind of training does an electrical or mechanical inspector need to have to properly inspect the units. Mr. Broughton said that our electrical inspector should have already been through the testing process. His certifications would make him qualified to inspect a unit.

Mr. Broughton said that an Electrical permit would be needed for an installation on a dock. To have a unit installed in a house would require a Building permit of some sort and an Electrical permit as well.

Planner Fiester inquired as to the safety of birds and the vertical axis turbine. Mr. Broughton said that the turbine is a solid structure. Birds will not be able to fly through the unit.

Larry Burke asked if the unit could be placed higher than 5 feet. Mr. Broughton said yes it can be done; however, they are trying to stop it from being an eyesore to the neighbors as much as possible. The higher up it goes, the more you are going to be putting force and strain on the piling. We will try and convince people to keep the units around 5 feet or less on the pilings.

Planner Fiester asked what other towns have done concerning their ordinances and the height of the vertical axis turbine. Mr. Broughton said that he has not run into a community that told him he couldn't use the vertical axis turbine.

Planner Fiester asked the board members if this is something they think the Council would like us to amend in the ordinance. Also, the board should make a recommendation that Mr. Broughton give a presentation to the Council so they can direct us to change the ordinance. Planner Fiester asked

audience member Councilman Trish Ide if she thought a presentation to the Council would be beneficial. Councilman Trish Ide said the Council would rely on the Planning Board's recommendation.

Chairman Langley stated it may be advisable to see if the Council would like to go through the presentation and then if they so desire, could direct us to look into some ordinance amendments to address the issue.

Mr. Broughton asked if there are any restrictions to pull a permit just to put an electrical device on a dock. Planner Fiester stated that would be in Donna Turner's and Joey Starling's department. Anything that gets built onto a dock requires a CAMA General permit. Planner Fiester will call CAMA tomorrow and find out why they do not regulate it. Once the CAMA General permit is issued, Donna and Joey handle the mechanical and electrical. Planner Fiester said the Town has an Inspections Department which is separate from the Planning Board.

Planner Fiester stated it would be beneficial for Joey Starling to attend the next Planning Board meeting and give his thoughts on the energy issue before we make a recommendation to Council.

Chairman Langley said we will have to be very careful as to how we go about this. Mr. Broughton has one design, and another company has something totally different. We do not want to open up the door to just anything to come in. It bears some thought so we don't rush into this. The board members agreed that they need to hear from the electrical inspector at the next meeting along with Mr. Broughton.

STORMWATER AMENDMENTS TO UDO

Planner Fiester stated the amendments were discussed during the last board meeting with exception of the last 2 amendments. **(Please refer to your stormwater amendment handout.)** The following changes were made:

- All new construction will have a stormwater management plan.
- Two inches of water will be retained on-site.
- Renovations over 50% require that 2 inches of water be retained on the property.
- Commercial District decreasing impervious surface coverage from 85% to 75%.
- Additions over 100 square feet require utilizing a method listed in the State's Best Management Practices manual (BMP).
- Under \$10,000 cost, Zoning Administrator can approve method of required water retention on property.
- Over \$10,000 cost, an engineer is required to seal the method chosen, proving that it is making up the difference in what is being added.

Planner Fiester said these are significant changes. All of the stormwater controls are being thrust upon new construction at this point and time. People renovating, repairing and things of that nature are not sharing any of the responsibility for controlling stormwater. These amendments will change that. Over time it can make a huge impact and that is what we need.

Chairman Langley called for discussion.

John Hopkins asked if someone replaced their 1-lane driveway with a 2-lane driveway, would the over 100 square feet still count. Planner Fiester said yes it would because it does not have to be a shed. It can be any 100 square feet. When you get to 101, the difference will have to be made up.

Planner Fiester stated the biggest reason for eliminating the percentage thresholds is that anybody who is trying to stay under that 25% is cutting every corner possible, and asking for every credit. If the lot is big enough to stay at 25%, normally they are really at 30% and asking for credit of 1:1 on a pervious driveway. It would be best to take care of the 2 inches of water retention when building a new house. This would help produce nicer looking yards.

John Hopkins asked about text amendment #5. Planner Fiester said you cannot go over 40% or 75% respectively. If you are existing at 39% and trying to do something to get to 41%, the answer is no. There are different areas in town that are over that. One hundred square feet can be added as long as it doesn't push you over 40% or 75%. For example, if someone built a house 2 years ago that was at a certain percentage and was engineered for that percentage, and they come back and want to bring it up to 40%, they are not required to take care of the stormwater. This amendment will fix that.

Chairman Langley called for a motion to approve or deny the text amendments as written to Section 2.26 of the UDO. **Norman Livengood made the motion to approve the text amendments as written to Section 2.26 of the UDO. Scott Rice seconded the motion. The motion passed unanimously.**

Planner Fiester stated she strongly feels this shows the town of Atlantic Beach that our Planning Board means business when it comes to stormwater.

ADJOURNMENT

Chairman Langley called for a motion to adjourn. **Scott Rice made the motion to adjourn. Steve Joyner seconded the motion. The motion passed unanimously.** The meeting adjourned at 7:09 pm.

Respectfully Submitted,

Nina M. Erwin

Approved,

Ray Langley, Chairman