



**TOWN OF KINGSTON**  
*Office of the Sewer Commission/Wastewater Department*  
26 Evergreen Street  
Kingston, MA 02364

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Elaine A. Fiore  
Peter C. Cobb  
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Minutes  
Sewer Commission at Green Energy Committee  
September 24, 2009

The Sewer Commission met with the Green Energy Committee at 7:00 PM to discuss the proposed siting of a wind turbine at the WWTF and Transfer Station area. Members attending were Elaine Fiore, Peter Cobb and Thomas Taylor. Also attending were Don Freeman of CDM and Ken Vandal, Wastewater Superintendent. The Green Energy Committee and numerous other individuals from various departments were in attendance as well. This is a general summary of the discussion and is not meant to be all inclusive of the comments that were made during the meeting. Please refer to the Green Energy Committee Minutes for this date for further information.

Mr. Bott began the discussion by stating that he had been chosen as the contact person for this project. He reviewed that Weston and Sampson (W & S) had been involved with several similar projects in Harwich, Mashpee, Chatham and Falmouth, among a few. He introduced Hank Ouimet and Stephen Wiehe as engineers on this project.

Mr. Ouimet stated that Mr. Wiehe would be the day to day manager of the project in Kingston and that he is also the manager of the Falmouth project. Weston and Sampson has been chosen for the Kingston project but they are not under contract at this time. Mr. Ouimet stated that siting is fundamental to the project. Weston and Sampson wanted to meet with the stakeholders early to get their input and hear their concerns. Siting is the single biggest challenge for many reasons. Weston and Sampson wants to select a site and move forward with the selection and permitting of a turbine.

Mr. Wiehe said the Kingston project started with the design of the MET tower and that he and Weston and Sampson are familiar with the process. This meeting is an initial opportunity for input from the stakeholders.

Mr. Ouimet continued that there are several key issues.

- Find vendors that are willing to sell to the Town given the fall zone, ice throw, etcetera.
- Most vendors prefer to sell in bulk rather than sell a single turbine.
- Permitting on the Local, State and Federal levels.
- Vendors have their own requirements for siting. W & S will provide the site selection to vendors to determine which vendors will be willing to sell to the Town.



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On the Local level, siting of the turbine must meet the By-law. On the State level, Mass. Highway may have issues with the permitting due to the proximity of the highway. On the Federal level, the FAA must give approval. The Green Energy Committee (GEC) said the FAA has approved up to a height of 400 feet and this is documented in the last Feasibility Study. Mr. Ouimet added that if the site should change that the FAA approval would need to be done again.

Mr. Spires of the GEC commented that the slip lane is proposed and will only be done if the 40R development is funded. Mr. Ouimet added that if it is proposed then it is not being built but should be considered.

Paul Basler, Highway, Parks & Trees Superintendent asked if DEP had been consulted. DEP has control over the site and they will need to give approval. Mr. Ouimet said he did not believe DEP gets involved with siting conditions unless it's on a capped landfill. There is a 40 acres site to work with. Mr. Cobb mentioned that part of the Transfer Station land is approved as a disposal site. Mr. Freeman added that it has been reviewed but it is not currently permitted. An Environmental Impact Report would need to be approved and it would have to be permitted.

Mr. Basler mentioned that there could be legal issues with the site. On October 7, 2009 there was a modification of the DEP permit for a compactor at the Transfer Station that had been approved and permitted. A legal case was brought up by abutters. They might be opposed to anything else proposed for this site.

Mr. Cobb asked if the Transfer Station would have to be shut down for a staging area. He was told that it might need to be shut down but that W & S does not know what the impact to the Transfer Station operations would be. Mr. Cobb asked if this would add cost to the project. He continued that the Falmouth site has a minimum lay down area of 200 feet by 400 feet and this is considered by the contractor to be a very tight site. Mr. Basler added that DEP might need to give approval. Mr. Ouimet agreed that this might be so if the Town is operating under a Transfer Station Permit. Mr. Spires said he had been told it might be possible to erect the turbine over an extended long weekend. Mr. Beaton added that it takes 3 days to put it up but that the parts would be on site much longer. O'Donnell has offered the use of their site. Mr. Cobb commented that if it can be relocated the costs would need to be compared. Mr. Beaton said if it costs \$20 million to relocate it then it wouldn't be built there and if the cost is too high for the proposed site it won't go up. This is why a site review is needed. Mr. Wyatt said the time frame is needed. Unless the compactors have to be moved, the cost of moving the roll offs should be cheap. Mr. Ouimet said that site preparation for the staging area would have to be done.



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Ms. Fiore said the X on the picture is a starting point, not the final location. W & S will be looking at the entire area for the best location. Mr. Ouimet agreed and said the By-laws and the manufacturers siting criteria will determine the location. Ms. Fiore added that she understood that the original location was chosen because a large user had to be on the site. Ms. duBois said that it will still have to be plugged into the Transfer Station or the WWTF. Mr. Ouimet asked if the Wind Overlay District mirrored the 40 acre site. He was told that it did. W & S will start with the 40 acres and then eliminate it down to the best area(s).

Mr. Ouimet asked if anyone knew what Mass. Highway's position was regarding the turbine. We need to consider the slip ramp because it could become a fatal flaw for the turbine project if the ramp is built.

Ms. Fiore mentioned that the Sewer Commission had been told that a contractor will build a turbine anywhere if it can be permitted. Mr. Ouiment said that was not true.

Ms. Fiore reviewed that the closest structure in Falmouth was 600 feet away and that the closest structure to Hull II is 1200 feet away. The proposed Kingston location is 40 feet away from the road to the Transfer Station. Does W & S have a comfort zone? Mr. Ouimet said he did not know but that W & S want to be associated with reputable projects. The chances of it falling over are slim but W & S do not want to ignore it. Ms. Fiore said there are no statistics to say what affects a turbine like this will be on someone working within 100 feet of it. Not for Massachusetts was a reply.

Mr. Cobb mentioned that Orleans had spent \$800,000 in Grant money on studies only to end up having the Water Department reject putting it in their resource area. The discussion was directed back to Kingston.

Dennis Randall said the concern is maximum compliance with the By-law and safety. It can't be within 100 feet of a public or private road. The road to the site is highly traveled. Safety is paramount. What is the long term impact of flicker on the staff at the Transfer Station? We need to look for maximum compliance with the By-law. Mr. Spires replied that a study was done and is in the Feasibility Study. Mr. Beaton commented that this turbine would have slow moving blades. Flicker should not be a problem with a turbine this size. Mr. Randall said the public/private way should be looked at. It is a highly traveled area and we need a high degree of public confidence. The chance of collapse is very small but we need to plan for a worst case scenario. Mr. Spires said that tonight was planned to get input from stakeholders and to address concerns. The GEC will get W & S input. Ms. Fiore asked if Town Counsel had weighed in on the public/private way. Mr. Bott clarified what is a way and stated that this road is a driveway. Mr. Beaton said the GEC had an opinion from Counsel and that the GEC will get a copy of the opinion to the Sewer Commission.



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Mr. Wyatt said it was important to keep the people that work there in mind. He had asked a friend for technical advice about perceived and actual danger. It is more likely to be injured or killed in a car than it is from a wind turbine.

W & S are very familiar with the aspects of this type of project and have the resources to determine what the best product for Kingston will be.

Sandra MacFarlane asked if she could get information on what the vibration will be on the base of the structure and whether vibration from the base structure would have any affects on the sewer lines. The WWTF is one of the most expensive structures in Town. We don't want it shut down or damaged. A shut down would affect many residents. Mr. Freeman stated that at this location the sewer pipes would have to be moved. CDM would need to know how far down the base structure would be. Mr. Ouimet asked the GEC if the cost of relocating the sewer pipes had been included in the proforma. Mr. Beaton said it had not been included. If it is too costly then they might not construct the turbine. Mr. Freeman reviewed the location of the 2 sewer mains on the safety zone diagram the GEC had provided. The turbine is located such that it would require the sewer lines to be moved. Mr. Ouimet said W & S would take a look at the Transfer Station, the sewer lines and the landfill to determine if there are fatal flaws with this project. Mr. Spires felt it would cost \$3 million more to move it to the landfill. Mr. Freeman added that the sewer lines could be moved and it would not prohibit the project. Ms. Fiore said the least of the Sewer Commission concerns was the relocation of the pipes.

Mr. Ouimet said a financial analysis is more important than capital costs. If it isn't financial feasible then it doesn't work.

Ms. Fiore asked what was meant by plug in. Mr. Beaton said it means it must interconnect with a municipal building. There are permits and costs associated with it. Mr. Ouimet said this would be a behind the meter project. Before the Green Communities Act was passed the power had to be used where it was made. The GCA said that if you made power behind the meter but use a lot of power somewhere else that you can apply it to the other place. The project has to interconnect to a 3-phase structure, which is what the WWTF is. They will need to run conduits in order to make the connection. It will require a transformer. Mr. Cobb asked how the Town takes care of the debt service. Mr. Ouimet said the project would be a grid connected turbine/generator. If the grid goes down then the turbine/generator shuts down. Net Metering rules still are not fully adopted. The process was suspended until Dec. 1, 2009. We still do not know what the value of the energy you displace will be.



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Mr. Basler stated that there was nothing on the plan to show where any sheds will be located. Once the slip ramp and WWTF expansion are built, the Transfer Station is limited by space. I do not want to see anything but the Transfer Station or WWTF on this site. We want to save as much space as possible for future expansion over the next 20 years. I would like to see this located on the landfill. Ms. Fiore agreed with Mr. Basler. Mr. Basler continued that he had seen a report that said he had no objections to the site. This is not true. Once the slip ramp goes in the site is land locked. If the turbine is in this location you use up viable space for the WWTF and Transfer Station. What is the best case for the base of the turbine? The Falmouth base is 50 feet by 50 feet. Mr. Basler said that will be 2500 sq.ft. that we can't get back or use 20 years down the road. Mr. Spires said that the concern is how much space will the roads take up. What are the chances the Transfer Station and WWTF will outgrow the circle? Ms. MacFarlane said the GEC was talking about a 12 foot diameter base, but how close can a compactor be placed to the tower? Mr. Ouiment said that was not a black and white answer. Just how many turbines have these types of operations directly under them is unknown. We can't answer that objectively. Mr. Basler asked who will determine what the no touch zone below the turbine will be. Mr. Ouiment said W & S would not determine that. Mr. Spires said they will look at how the turbine will work into the Transfer Station and WWTF activities allowing for continued current activities and allowing space to grow. If it is decided that it is OK to have activities below it except in icing conditions then maybe canopies need to be set up where the activities occur. If it is too costly then maybe it won't be done. We need to get these questions answered. Mr. Randal stated that we have to look at the maximum use of the 40 acre site and determine the maximum potential use of it. If ball fields are built, then there will need to be parking for them. Mr. Basler said he was on the Ballfield Committee and they determined it was feasible to put ball fields on the landfill. The Committee is no longer active. Mr. Spires said they need to anticipate future use and current uses and determine if this is feasible.

Ron Gleason said he appreciated the hard work the GEC has done and doesn't want it to be for nothing. He was glad that all of these people were able to get together tonight to air their concerns and get answers from the engineers. If this location is not the best and it has to be moved to the landfill then move it there and move forward.

Roger Alcott of W & S said that the Transfer Station has changed over time. How it will change over time is difficult to determine. They had 4 acres next to the current site to expand. With the 40 R project this has been reduced to 3 acres. He will look into answering questions regarding the Transfer Station use.



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Mr. Spires said he was glad to get everyone together to discuss this project and glad to see all of the consulting engineering firms involved. The GEC and W & S know who to contact for information.

Daniel Sheehan said he was a resident and that he went through the feasibility study. The numbers taken on the landfill site look pretty good. The Study was done quite well but it made a point that the site is rough, has high wind sheer and high turbulence. I think the wind speeds are a bit short, with high wind sheer, extreme turbulence and wind speeds below what will give you the rated output of the turbine. Mr. Spires said the hub height being considered for this project is above the height of the MET tower. It is good to consider what the increased height will mean. W & S and Tom Bott asked if Mr. Sheehan could provide copies of his evaluation of the Feasibility Report and Mr. Sheehan said he would do so.

Mr. Bott asked everyone to put their comments in writing and email them to him at [tbott@kingstonmass.org](mailto:tbott@kingstonmass.org).

Mr. Ouimnet will provide the W & S estimated deliverables and distribute them when available.

The meeting was adjourned at 8:30 PM.

Suzanne Richards  
Administrative Assistant