

State of Rhode Island
County of Washington

In Hopkinton on the twenty-ninth day of January 2018 A.D. a workshop was held in the Town Hall Meeting Room, 1 Town House Road, Hopkinton, RI 02833 beginning at 6:30 p.m. to discuss and consider the following: Proposed Wind Energy Conversion Systems (WECS) Ordinance submitted by the Hopkinton Conservation Commission.

PRESENT: Frank Landolfi, Thomas Buck, Barbara Capalbo, Sylvia Thompson, David Husband; Town Solicitor Kevin McAllister; Town Manager William McGarry; Town Clerk Elizabeth J. Cook-Martin.

Also present: Conservation Commission Members: Harvey Buford, John Pennypacker, Deborah O'Leary, Lydia Lanphear, Gary Marsh, Hannah Morini.
Land Trust Members: Marilyn Grant, Cynthia G. Johnson, Sarah Windsor and Mary Gibbons.

DISCUSSIONS ON THE PROPOSED WIND ENERGY CONVERSATION SYSTEMS (WECS) ORDINANCE:

Council President Landolfi asked Mr. Buford if he wanted to preface the workshop. Mr. Buford indicated that John Pennypacker had a presentation and some visuals which may be helpful. Mr. Pennypacker started by indicating that the Governor was pushing for green energy and that she wanted to quadruple the current energy generation that we have now and it was going to come via solar and via wind. Councilor Husband asked Mr. Pennypacker where this information was coming from and he stated various sources including the energy.ri.gov website. It was stated that the Governor wants 1000 watts of electricity generated in the State of Rhode Island. We currently generate around 230 watts. Most of it is from on-shore wind and Portsmouth and Coventry produce a lot of it. There is a little bit from the off-shore wind farm on Block Island. On the website, keeprhodeislandbeautiful.com, they show that Rhode Island has high CO2 emissions and they point out that even though Massachusetts has a GEP that is 6 or 7 times higher than Rhode Island's we still put out more carbon dioxide. He indicates that this is what the activist group says but the Federal Energy Administration's report conflicts with these numbers. Councilor Buck asked how many windmills were in Coventry and Portsmouth and how many were offshore.

Mr. Pennypacker indicated that there are 10 windmills in Coventry and West Greenwich, 1 or 2 in Portsmouth, 3 in Providence and there are 5 offshore. Councilor Thompson asked if they were all around the same size and Mr. Pennypacker indicated that the offshore windmills were larger, being 600 feet. The ones that are onshore are 400 feet high. Thereafter, Mr. Pennypacker discussed the State's Clean Energy Portfolio which indicates that there are 30 megawatts of offshore wind generated by the Block Island wind farm, 11 megawatts of hydro-electricity, 100 megawatts of onshore wind and 50 megawatts of solar. He believes the solar amount will be increasing with all the projects being approved. The Governor's goal of 1000 watts of electricity being generated by Green Energy is by the year of 2020. This is something that is happening quickly. Mr. Pennypacker showed a picture of the Block Island wind farm, the first offshore wind farm in the United States, which generates 39 watts of power and according to the Block Island Chamber of Commerce, has boost their tourism. The Block Island Ferry charges \$30.00 per person for a tour of the wind farm. There is a two-year study going on which looks at the effects of wind energy on tourism. Councilor Capalbo asked if they were doing a study on the fish around where the windmills are located and it was believed that there was a two-year study being done. National Grid data shows that the cost of electricity is increasing and by diversifying our energy resources in the state we can reduce customer exposure to increasing electricity costs and also increase the region's energy security. The State is seeing that energy costs are rising and they don't foresee it coming down so they are looking for ways to help bring it down. Mr. Pennypacker indicated that a single 1.5 megawatt wind turbine offsets the carbon emissions from approximately 180 cars and since cars are the number one source of carbon dioxide in the State of Rhode Island, he speculated that this might be the reason that the State wanted to shift things in this direction. The groups behind this are the Office of Energy Resources and Division of Public Utilities and Carriers, which has a new logo on their website which includes wind power in it. Mr. Pennypacker believed that diverse energy will benefit Hopkinton because it will bring a lower energy cost and we won't have to move power. A video on the Portsmouth wind turbine was shown and Mr. Pennypacker explained that a single wind turbine like theirs generates 1.5 megawatts of electricity,

occupies about 2 metered square feet compared to a dozen acres of solar panels to generate the same electricity. The State has siting guidelines that they are recommending; however, he stated that if we were to adopt wind turbines he would recommend that we follow the State's guidelines or even go a little tougher to assure nothing would get crushed if something were to fall. Mr. Pennypacker suggested we compare how much square footage a solar field would take to generate electricity. There is a 20 acre site on a landfill in East Providence, which is the largest solar field in the State. Twenty (20) acres of solar panels, if you were to put it in Richmond, would go from Job Lot to UBS and one wind turbine would take 2 or so acres. If you moved it over to Crandall Field, the solar panels would take up the whole area. That land is covered up and you can't do anything with it if there are solar panels covering it. He believes wind turbines preserve open space. Councilor Husband asked if a wind turbine would produce the same amount of kilowatts as 20 acres of solar panels and Mr. Pennypacker indicated that the solar panels would produce approximately what 1.5 wind turbines would. He believes solar makes great sense when you use it to cover a parking lot or a landfill, but when you cover a field; it's not a good idea. He believes that wind turbines would preserve the Town's character; would preserve the land; preserve the landscape; won't require any fences; and, wouldn't cover up any grazing fields. Mr. Buford indicated that the shape of the property effects how much energy output is generated. Mr. Pennypacker thereafter spoke about siting and flicker. He indicated that you only see flicker when the sun passes through the blades and then into your window. If there is no building then there is no flicker. The draft ordinance that they are proposing says they would only allow for 30 hours of flicker per year. A wind turbine generates revenue of about \$5,000 a month and to the landowner about \$60,000 a year. Councilor Buck asked what the tangible tax would be to the Town. Mr. Pennypacker indicated that the State has that mandated by megawatt. Councilor Capalbo indicated that it was \$5.00 per kilowatt. Councilor Husband asked how many kilowatts a wind turbine produced and it was suggested 1,500 or four of them would pay \$7,500. Green Development will strike deals to pay more, like \$10,000 rather than \$7,500. They are paying 40% more or approximately \$10,000 a year to the Town for tangible property tax. Councilor Capalbo indicated that there would be more tax on the

land because it will become commercial acreage and assessed at \$45,000 per acre. Councilor Buck asked what is the benefit to the Town as a whole. He understood that the property owner will benefit, but what about the neighbors and the other people in the Town who have to look at the turbine. Councilor Buck indicated that he was not going to vote on an ordinance that benefited one person when the Council had every resident in Town to think about. Councilor Thompson indicated that she didn't think there was enough information. She said there were two sides and she had documents that refuted some of what Mr. Pennypacker was suggesting. She would like to see this discussion at a Council meeting just to decide if they should have a non-binding referendum question to the voters and let the voters decide. She does not feel these wind turbines should be in Town. How would they transport them on small roads? She does not believe the land can be used around the turbines. She has read that for every 100 turbines one blade will break off due to snow, ice or ice storms which happen occasionally. She likes solar because that can be hidden and when they are done trees can grow again. Council President Landolfi reiterated that they were not taking any votes this evening this was just a learning experience; and, Councilor Capalbo agreed and indicated that she would like Mr. Pennypacker to continue. Mr. Pennypacker showed photographs taken in Coventry. He indicated that the turbines make some noise but are quieter than his neighbors' air-conditioner. At about 100 feet from the tree line you couldn't really see that much. They are easy to see down a street line. Councilor Thompson asked whether anyone remembered the two turbines that were proposed in Westerly which were turned down because there was too much opposition. Mr. Buford indicated they were looking to expand the ordinance to allow wind turbines at certain farms with a 50 acre radius. He believed the Town could benefit by putting wind turbines at the landfill and that may be enough to justify this. If the Land Trust was to purchase Brushy Brook with the money it made from the wind turbines that would be another way for the Town to directly benefit. Mr. Buford indicated that in the process of doing a review, their intention is that there be a development plan review by the Planning Board with a paid consultant, paid by the applicant, to advise the Planning Board. Mr. Buford indicated that he had a lot of information on bird kills; however, he believes this isn't a big problem. Domestic cats kill more than 10,000 times more

than wind turbines kill. Mr. Buford feels that 10 turbines would probably generate enough electricity to power the Town and he believes there is support for wind turbines in the Town, including environmentalists, farmers, the Conservation Commission, Land Trust and Planning Board (at least the concept of wind turbines), which is what they are asking the Town Council to do too. Mr. Buford indicated that their ordinance proposes 50 acres which gives the Town a lot of extra protection. He indicated there are 101 properties with that much land. Thirty-seven of those are on preserve land, such as Arcadia, Land Trust, Nature Conservative and such, so that brings them to 54 properties that would qualify. They have tried to put all kinds of restraints on this ordinance, one of which is large farms. To qualify under this ordinance, a farm would need 50 acres of land or more and have filed a 1040S form for the last two years. They put a sunset clause in this ordinance so only farmers who have filed Form 1040S for the last two years would qualify. A future Town Council could easily extend the ordinance but they don't have to. He believes there 10 large farms that would qualify for wind turbines. If a farm had only 90 acres of land they would only qualify for one wind turbine. They came up with a theoretical possibility of 21 wind turbines that could be put up; however, there are many other constraints that exist, such as: National Grid has a limited capacity with interconnection fees that are very large; and, the developer has very specific provisions and is not going to want to put up a turbine where they will not catch the wind. They went with greater setbacks of 1.5 from the property line; 2 from any occupied building; the spacing between the wind turbines are two and a half times or 1,000 feet, whichever is greater. There will be a shadow flicker diagram generated for each individual site. There is great technology today that will be able to control this. Councilor Buck questioned Mr. Buford on the 50 acre conservation easement area. Mr. Buford indicated that this ordinance would require that a farmer could farm the 50 acres where he had a wind turbine, but no house or structure could be built in that 50 acre area. Mr. Buford indicated that their best guess is that there are six wind turbines on farms that could result from this ordinance. The only place that the Town has the capability of putting up a turbine would be the landfill. Councilor Thompson indicated that she didn't believe they were going to allow wind turbines there because they didn't want them to dig. They were in

favor of solar. Mr. Buford indicated that the best spot would be Brushy Brook because it is about 350 acres with the possibility of 5 turbines. Councilor Buck indicated that the ordinance read “must preserve land number” and then below it reads property of the Land Trust, which is preserved land. Mr. Buford indicated that right now the Land Trust has zero potential for wind turbines on properties it presently owns. This section is talking about future property the Land Trust may purchase. He believes the money that goes to the owner will go a long way towards maintaining farms and open space. It gives the Land Trust a potential way to achieve funds and complete large purchases. He couldn’t nail Green Energy down on this because this is the kind of thing that you have to negotiate with the Town Council, but they have 97 projects and he believes in Coventry they created a scholarship program to supplement the Town. What they were hoping to get is support and an enforcement of the concept of wind as being appropriate for the Town. Mr. Buford would like to see this be a more polished ordinance and he wished for the Council to support the passage of this ordinance or refer it to referendum. Councilor Capalbo indicated that she had some notes on how to improve the ordinance. Overall, she likes windmills. She believes they are gorgeous, elegant and sophisticated; however, the other issue is that there are a lot of people in Hopkinton who do not like to look at them and that’s an aesthetic, it has nothing to do with the economy, clean energy or money. She is interested in working on this wind ordinance because she would like to see it tightened and really cleaned. Councilor Capalbo went on to say that Councilor Thompson had indicated putting this to a referendum, but she felt this was something that the Town Council should decide because it was a zoning issue. Councilor Husband thanked Mr. Buford and Mr. Pennypacker for the work they have done on this ordinance but indicated that he had a lot of questions. He indicated that he did not like the idea of being able to see the turbine from miles away. He indicated he didn’t like the comparison of turbines to telephone poles because everybody used the electricity provided by the telephone poles but only a few select people would benefit from the turbines and the Town would only benefit a little bit in taxes. His concern was that once up, the owner wouldn’t be able to split his property and sell a portion and there will be a decrease in property values surrounding the turbine. He also believed that the Town may not be able

to control the location of the turbines. Where they had mentioned Brushy Brook, if you put a turbine there, now other people with property can say that is not a farm so I should be able to put a turbine on my property even though I am not a farm; this would be looking for trouble and will end up in the courts. Councilor Husband also indicated that he believed there was a conflict of interest issue. The Conservation Commission supported this ordinance and Mr. Marsh is on the Conservation Commission and he owns the one dairy farm in the Town where he wants to put up a turbine. Lastly, he indicated that there has to be a definition of exactly what a farm is. A gravel bank owner may say that they harvest gravel and therefore are a farm. Council President Landolfi stated that Schedule F on their tax returns specifically stated this. Mr. Pennypacker indicated that the State has done research and believes these wind turbines will have no impact on property values and if it does it would be fewer than 5% depreciation. The existing Farm Viability Ordinance allows for one acre of solar panels for farms of certain sizes. So, however the Town addresses the problem there, that same thing would apply. The Reynolds farm put in one acre of solar panels so that is probably going to limit his ability to sell the property. There will be a point where he no longer qualifies as a farm. Councilor Husband indicated this was a concern for the landowner who all at once will realize that he cannot do anything with his property. Council President Landolfi indicated that he was interested in looking at this ordinance mainly as a favor to Mr. Marsh for his dairy farm. His thought was to help out the large farms, including Mr. Marsh's. He stated that on the surface he is interested in obtaining more specific facts. Councilor Thompson asked Councilor Husband if he was for or against windmills. Councilor Husband indicated that if these questions could be answered and people understood that he does not want these all over Town, he could be for it; however, he is not crazy about them because he knows how far you can see them. It does not add to the ambiance of the Town. Councilor Husband indicated that he did not mind Mr. Marsh having one turbine on his farm to preserve the rural character of the farm because that is what the farm was all about, but he is concerned about how many other people are going to want to do the same thing. Councilor Buck asked what the life of a windmill was and it was suggested 25 years (same as solar). Councilor Capalbo indicated that it was guaranteed or warrantied for 10 years.

Councilor Buck asked Town Solicitor McAllister, how the legalities hold up regarding the sunset clause where the Town might want to open up the sunset clause again after it had been closed? What if someone had 200 acres of farm, forest and open space, is this ordinance prejudiced against those people? Town Solicitor McAllister stated that the sunset clause would depend on how that clause was worded. It is not a one-size fits all. They could word this to put an exemption clause in for the Town. The second question regarding a large landowner who is not a farm and why couldn't they put up a turbine too, and would that trigger some kind of a discriminatory claim; he believes that is a valid concern and it would depend on how this clause is written. There would have to be a valid reason why this would be for large farms only and that would have to be articulated in the ordinance. He could not think of a valid reason for this. He also stated that people will compare it more to cell towers than to telephone poles, because cell towers can go really high. The federal law pre-empts local zoning from restricting so that when we have height restrictions in our zoning ordinances they don't apply to federally sanctioned cell phone towers; but he is not aware that there is any federal or state preemption yet for wind turbines. So that raises another question on zoning where you have to restrict or define a number of large structures like that which are not preemptive. How do we do that in the ordinance and maintain height restrictions? These are some concerns that need to be studied a lot more to make sure this makes sense. Councilor Buck indicated that these were his concerns: the legalities; possibly not being able to restrict this to a certain number; a certain demographic than we assumed and then it opens it up and we have one on every 50 acres of land. Mr. Buford indicated that if this was opened up to everyone who owned 50 acres of land it would still be a fairly low number. Councilor Buck questioned how many farms were actually in Town and Mr. Buford believed there were ten (10) 50-acre of larger farms. Councilor Thompson believed there were 54 people in Town who have 50 acres or more. Councilor Husband indicated that if the ordinance was not just for farms there would be many more. Mr. Buford indicated that if they reviewed all of the rules that they have come up with already, between the shadow flicker and setbacks needed, there is a lot of things that bring those numbers down fast. They could do a study of how many properties would qualify but he believes this will be a

modest number. Councilor Capalbo questioned what if someone purchased the Brushy Brook property and decided to put two windmills on it and thereafter built houses on the rest of the property, because you can choose to put houses right around the wind turbines. A developer could choose to have a turbine and houses because you can get around the flicker issue. She thinks this would be hard to prevent and with the ordinance trying to prevent so many things that there does not seem to be anything reasonable about it. Mr. Buford indicated that it takes 50 acres for one turbine and he believed those acres would not be able to be counted towards the build-out and this should be written in to the ordinance. Councilor Buck was concerned about the number of windmills that may appear. Mr. Pennypacker indicated that these were the same concerns as are seen in the solar ordinance. He questioned if a farmer could use one acre of his land to put up solar panels, why couldn't anybody who had land use an acre of their property to put up solar panels? Councilor Buck indicated that the person could still put solar on their house just not on the acre so they were not being totally restricted from having solar. Councilor Buck was concerned about the legality of this ordinance. Councilor Capalbo said that there were small residential windmills allowed in the ordinance and Councilor Buck indicated that he was definitely against that. Councilor Capalbo indicated that there were several things in the ordinance that they would have to change like house-mounted windmills which she didn't agree with. Mr. Pennypacker said that he only brings this up because what if there is a farmer with 50 acres who wants to put a windmill up and there is a farmer with 15 acres that wants to put in an acre of solar panels, currently that is limited to farming... (Council President Landolfi interjected, "or a zone change") ...so whatever we are using to defend spots of one-acre solar around town, we could use that same tactic, though he did not know what that tactic was. Councilor Buck indicated that his point was that people were not restricted from having solar, just net-metering. If they wanted to have solar for their house they can put up all the solar panels they wanted using their roof. Councilor Thompson indicated that she didn't feel there was a problem limiting this ordinance to 50-acre farms. Mr. Marsh, who has a dairy farm, spoke and indicated that farms are very important. Many times the last thing a farmer plants is houses but that was not his intent. Right now there are currently 48,000 dairy farmers in the United

States; however, they only need 24,000. Seven dairy farms a day in this country go out of business. He hopes to be one of the 24,000 dairy farmers that are left. If they fail, Hopkinton loses. If they fail their property will be used to build houses and he has 250 acres of land. He believes his family suffers because they subsidize the tax base for the Town of Hopkinton. He believes he has found something that can help them get through the next 10 years so they can remain one of the operating 24,000 dairy farms. Councilor Thompson indicated that is why they adopted the solar ordinance but Mr. Marsh indicated that he wanted turbines because he would make more money. Mr. Marsh indicated that his plan was to build a new barn and he cannot do this without turbines. He needs a cash cow for the next ten years in order to keep his farm operating. Councilor Husband indicated that they knew he was stuck between a rock and a hard place and they would like to help him out but at the same time once there is one up everybody is going to want one. Councilor Buck indicated that a resident had spoken to him last summer and indicated that he believed they needed something in Town like a Stop & Shop, bank or laundromat. Councilor Buck asked why they moved to Hopkinton and they said that they liked the rural character, commenting on the irony. Councilor Thompson asked Mr. Marsh how much money a turbine would generate and he indicated that one turbine would generate \$60,000 a year and two turbines would be \$120,000. That's what the landowner would make before taxes. Mr. Marsh indicated that the farm is his family's lifestyle. It has been in existence since 1889 and there been six generations on the farm. They compete against the factory farms whose feed is cheaper, whose cows give more milk, and they have more technology. He hopes with the windmills he can buy into that technology. He hopes to become more competitive but he needs a good cash flow coming in. Council President Landolfi indicated that Mr. Marsh has 250 acres of land so why would he only want two windmills on his property. Hannah Morini answered his question by indicating that you could not put windmills close to each other because they steal wind from each other and create turbulent air, so depending on the direction of the wind they need to be either three roto diameters apart or five roto diameters apart. The diameter is the actual sweep of the blades. An example is a lot of times when you drive through Providence on a windy day two of the turbines will be spinning but one of them

will not be and that is because there is wind loss to the turbine that is down wind. You want the turbines to be farther apart from each other. Councilor Thompson asked how far apart should these be? Ms. Morini indicated that if the wind is coming from the west then in the direction of the wind you would stack them five roto-diameters apart from each other. In the case of the turbines in Coventry, that would be 82 meters times 5 for the meters and then you multiply that by 3.28 to get to the feet and that is how far apart they would be required to be in the same direction of the wind. If you were going to put them perpendicular to the wind then it would be 82 times 3 times 3.28 so they would be 3 roto-diameters apart or 1,300 feet. Councilor Thompson indicated that she could see a civil action being brought against the Town in the future if someone has a turbine and their neighbor wants to put one up but can't put it where they want because it is within 1,300 of the other one. Mr. Buford indicated that the turbine had to be so many feet away from the property line so this should not be an issue. Councilor Thompson asked if it was possible to go to the Conservation Commission meeting with the notes that she has and talk to them about this at their meeting. Mr. Buford indicated yes, he would like to understand the questions and think them through. The draft ordinance created a lot of criteria and they would like to fine-tune this. It was determined that the Council did not have the newest version of the ordinance and it would be provided to them.

THE WORKSHOP WAS CLOSED AT 8:10 P.M.

Elizabeth J. Cook-Martin

Town Clerk

Marita D. Breault

Deputy Town Clerk