brian@nmdgreen.com

From:	brian@nmdgreen.com
Sent:	Monday, December 07, 2009 7:08 AM
То:	'taylor@mvcommission.org'
Cc:	allen farm; John Packer
Subject:	MV Farms requesting exclusion from DCPC - intro letter and documents 1 through 10 (of 19 documents)
Attachments:	 BKN MV Farm Wind introduction Dec 5 2009.doc; BKN MV Farm Wind doc 3 Nov 10 2008 Mass DPU reply comments.doc; BKN MV Farm Wind doc 1 Dec 1 2007 Massachusetts Electric Farm Model diagram.doc; BKN MV Farm Wind doc 2 Oct 27 2008 Mass DPU petition.doc; BKN MV Farm Wind doc 6 Jan 22 2009 School cabinet farm wind overview.doc; BKN MV Farm Wind doc 4 Nov 18 2008 MDAR Comm Petersen letter wind turbine farms.pdf; BKN MV Farm Wind doc 5 Jan 20 2009 Northern Pines Farm FAA determination.pdf; BKN MV Farm Wind doc 10 Feb 12 2009 Northern Pines Farm MTC grant award.pdf; BKN MV Farm Wind doc 7 Jan 22 2009 School cabinet farm wind elec savings.doc; BKN MV Farm Wind doc 8 Feb 4 2009 certified letter to towns MVC Oleary meeting.doc; BKN MV Farm Wind doc 9 Feb 9 2009 Schools support of farm wind study.pdf

Jo-Ann,

Attached please find my letter of introduction to the request that farms be excluded from the land based restriction on height. Attached are also 10 of a total of 19 documents that we wish to forward to each Commissioner for their review before the hearing on Thursday. We humbly request time on Thursday evening to present our thoughts about exempting farms from the height restriction.

I greatly hope that all of the Commissioners can receive these documents before Thursday – if you feel the MV Ag Alliance meeting on Wednesday at noon would also benefit from any of this information please provide to them as well. I hope to be there with a poster describing our "Massachusetts Electric Farm Model".

Thank you so much for your time and attention.

Brian K. Nelson, M.S.M.E. **NELSON MECHANICAL DESIGN, INC.** PO Box 4778 35 Skiff Avenue Vineyard Haven, MA 02568 <u>www.nmdgreen.com</u> 508 696 3120 508 696 4120

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brian@nmdgreen.com

brian@nmdgreen.com
Monday, December 07, 2009 7:11 AM
'taylor@mvcommission.org'
allen farm; John Packer
MV Farms requesting exclusion from DCPC - intro letter and documents 11 through 19 (of 19 documents)
BKN MV Farm Wind doc 15 June 17 2009 Farm Bureau support of farm wind.doc; BKN MV Farm Wind doc 11 April 8 2009 MV Ag Society letter support farm wind.pdf; BKN MV Farm Wind doc 12 May 7 2009 MDAR Comm Soares Tisbury ZBA appeal.pdf; BKN MV Farm Wind doc 13 May 30 2009 MDAR Comm Soares CSA letter.doc; BKN MV Farm Wind doc 14 June 9 2009 NPF narrative of farm wind.doc; BKN MV Farm Wind doc 19 Sept 2 2009 Allen Farm USDA grant award.pdf; BKN MV Farm Wind doc 16 June 24 2009 MDAR Bob Ritchie Tisbury ZBA letter.doc; BKN MV Farm Wind doc 17 July 30 2009 Allen Farm MTC grant award.pdf; DKN MV Farm Wind doc 17 July 30 2009 Allen Farm MTC grant award.pdf;

Jo-Ann, Here are the remaining documents 10 through 19.

Thanks so much for your help.

Brian

Brian K. Nelson, M.S.M.E. **NELSON MECHANICAL DESIGN, INC.** PO Box 4778 35 Skiff Avenue Vineyard Haven, MA 02568 <u>www.nmdgreen.com</u> 508 696 3120 508 696 4120





MV Commission Oak Bluffs, MA Re: Land based wind turbine DCPC

We seek an exclusion for farms of Martha's Vineyard from the height restriction on wind turbines and MET towers proposed by the MVC in their proposed land based DCPC.

We have appended 19 documents to this letter that represent the width and breadth of the efforts of Vineyard farmers to electrify their farms with wind turbines.

Over the past several years, farmers and farm groups on Martha's Vineyard have invested a great deal of time and effort in pursuing wind power to electrify their farms, to net meter electricity to other farms on the island, and to develop ways to use this electricity to bring about a self-sufficient Vineyard.

Since December 2007, these farmers have been awarded almost \$92,000 in grant funding from the Mass. Technology Collaborative and the USDA to pursue their study of wind power on island farms.

These farmers have met with Mass. Department of Agricultural Resources Commissioners Petersen and Soares, State Senator O'Leary, State Rep Madden, MV Schools Superintendent Weiss and his cabinet of seven school principals, the Massachusetts Farm Bureau, and the Martha's Vineyard Agricultural Society to discuss their wind turbine objectives and progress.

They have presented their goals of farm based wind turbines and net metering between farms at the various Mass. Department of Public Utilities hearings on net metering and the Green Communities Act. They presented reply comments asserting the right of farms to erect wind turbines and net meter to the DPU signed by 84 island residents.

Two of these farms, the Allen Farm and the Northern Pines Farm, have secured building permits to erect MET (meteorological) towers. The Northern Pines Farm was initially denied a building permit for their MET tower by the Town of Tisbury. An appeal to the Tisbury Zoning Board of Appeals was successful, due in great part to local support from other farms on the Vineyard and the MV Agricultural Society and letters of support from the Mass. Farm Bureau and the Mass. Department of Agricultural Resources. The Allen Farm has since erected its MET tower and begun to collect wind data. The Northern Pines Farm expects to erect its MET tower within a few weeks.

Both farms have received preliminary support from the FAA for wind turbines greater than 150'. We feel strongly that the MET tower wind data will corroborate the computer

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projections of the wind regimes at each farm; that the wind will be ample for significant power generation with wind turbines.

The Mass. Technology Collaborative has informally suggested that these two farms may not need to wait for a full year's worth of MET tower data before applying for construction grants. They are encouraged by our success in securing local support, securing building permits for MET towers, and securing preliminary FAA approval for wind turbines in these locations.

The Mass. Technology Collaborative, frustrated by the large number of feasibility and construction projects that are stalled in the permitting process, has raised the bar tremendously in their wind power grant applications and funding decisions.

For feasibility study applicants, the Mass. Technology Collaborative now requires a building permit for a MET tower before funding feasibility studies. Applicants for construction and design projects applying for construction grants that have a building permit will have a much higher chance of being funded.

Certainly, a height restriction of 150' on Vineyard farms would result in a moratorium on farm based wind turbines and MET towers. If farms are not excluded from this DCPC, valuable momentum will be lost as the efforts of farmers to make the Vineyard more self sufficient and sustainable are delayed.

We support the exclusion for the West Tisbury based wind turbine and the Edgartown waste water plant turbine project – these projects have been under development for several years and should not be delayed. Likewise, we feel that farms on the Vineyard should be extend the same exclusion.

Sincerely,

Clarissa Allen Mitchell Posin Nathaniel Allen-Posin **Allen Farm**

John Packer Janet Packer David Packer Nathaniel Packer Charlotte Packer **Northern Pines Farm**

Brian K. Nelson Nelson Mechanical Design, Inc. Wind energy consultant for Allen Farm and Northern Pines Farm

P.O. BOX 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

Massachusetts Electric Farm Model

(farm to farm and school concept by Brian Nelson, John Packer, Mitch Posin, Sam Berlow, and others starting Dec 2007)



this version 12/01/08, for more info visit www.mvwind.com or www.nmdgreen.com

Martha's Vineyard Farm - School Wind Turbine Concept

Connecting Farm Based Wind Turbines with Other Farms on the Vineyard:

Several farmers and organizations that support farms on the Island are studying the concept of connecting a few Island farms with large wind turbines to other Island farms and their electrical loads – a concept that could be realized by a "MV Farm Wind Coop."

Using the net metering and power assignment features of the Green Communities Act of 2008, it is possible that all 21 farms on the Vineyard could receive all of their electricity from several wind turbines located on three Vineyard farms.

NStar is obligated to deliver this power essentially for free. The farmers seeking electricity could arrange to buy discounted power from the farm with the wind turbine in return for a commitment to buy this power for a period of years. (Actually, NStar will charge all ratepayers across Massachusetts an additional small surcharge – perhaps \$1 per year – to cover their "lost" transmission revenue.)

For example, if the retail cost of electricity from NStar was 20 cents per kWh, a farmer seeking power could instead choose to negotiate with a farmer with a wind turbine; perhaps paying 18 cent per kWh for 5 years, or getting a better discount over a longer term, such as 15 cents per kWh over 10 years, or 12 cents per kWh over 15 years.

Therefore, the farmer seeking electricity would receive a better discount for a longer commitment term. This allows farmers to plan long term by knowing their long term energy costs and it provides financial stability to the farmer with the wind turbine.

Our goal is to install four or five 900 kW wind turbines on three Island farms (Northern Pines Farm, Allen Farm, Nip and Tuck Farm) to power all of the farms on Martha's Vineyard. These farms may be organized into a "MV Farm Wind Coop."

Connecting Schools to Remote Wind Turbines:

Over the past year, Superintendent Weiss, Dr. Robert Tankard, Sam Berlow, and Brian Nelson have met several times to discuss the school version of the farm model. They realized that having remote wind turbines serving all of the Island's schools would be possible under the net metering and power assignment features of the Green Communities Act. These remote wind turbines could be owned by a single municipality (such as Tisbury at their Tisbury Septic Plant Site), a joint municipal entity (several towns pooling their resources), or by a private entity (such as a "MV Farm Wind Coop").

Below are some issues that inform the concept of using remote wind turbines to serve the Island Schools:

FAA, Lot Size, or Neighborhood Restrictions:

Individual Island schools may have difficulty installing a wind turbine large enough to serve their electrical load based on issues such as height restrictions from the FAA, lot size and setback restrictions, and neighborhood resistance to large wind turbine projects. (We note the objections of Deer Run residents to the Regional High School wind turbine).

Wind Turbine Size Needed for School Electrical Loads:

Below are listed various wind turbines and their projected outputs. The annual electrical load of the six schools is currently 3,237,205 kWh.

10 kW wind turbine	approx. 100' tall	approx. 10,000 kWh/year
(similar to unit at Regional High So	chool)	

50 kW wind turbine	approx 135' tall	approx. 100,000 kWh/year
(similar to unit proposed at MV Ar and Morning Glory Farm)	rena	
100 kW wind turbine	approx 165' tall	approx. 200,000 kWh/year
900 kW wind turbine	approx 230' tall	approx. 1,800,000 kWh/year

Feasibility Studies -MTC Reluctance

The Up-Island Renewable Energy Group recently applied to the MTC for a feasibility study grant for the West Tisbury School site (LORI round 6). Though their consultant was first rate, they did not receive the grant. The consultant's appeal to the MTC revealed that the MTC is changing their focus to larger projects, projects that combine several loads, and projects spread across the state. Therefore, an application to the MTC for a feasibility study grant for a small on-site school turbine, especially on the Vineyard, is unlikely to be sponsored.

Town Appetite for Risk Involved:

In these gloomy economic times, all towns are reluctant to undertake risky or unknown financial ventures. A wind turbine project undertaken without a feasibility study is a risky venture indeed.

Economies of Scale: Large Turbines versus Small Turbines

Larger wind turbines, such as a 900 kW wind turbine (as proposed by a "MV Farm Wind Coop") enjoy economies of scale that double their output per dollar spent over their smaller cousins (such as the 50 kW wind turbine slated for installation at Morning Glory Farm).

Municipal Model: Joint Town Ownership of Wind Turbines at a Town Owned Site:

We have met with Superintendent Weiss and the Selectmen of Tisbury about using wind turbines to power schools. The Selectmen were interested in exploring the possibilities of the municipal model – for example, the Town of Tisbury would erect wind turbines themselves and power the schools. This model would most likely involve a larger percentage of revenue from the wind turbine project going to the Town of Tisbury.

A municipal project also requires the consent of the town voters to approve of project risk and funding, something which may be hard to come by considering the current financial situation.

An Alternative Model: Island Schools Join the MV Farm Wind Coop

As an alternative to the municipal model, it would be possible to serve all of the Island's schools from the wind turbines that we plan to erect on three of the Vineyard's farms. By buying power through a "MV Farm Wind Coop", the schools would receive a significant long term discount without assuming any of the project risk.

For example, currently the schools pay an average of about 18 cents per kWh for their electricity. If they received a long term average rate of 14 cents per kWh, the annual savings would be \$127,067. A longer purchase term would result in a better discount – bringing stability to the school budgets.

<u>Using the farm based wind turbines would probably require a change in state law – an</u> issue that the Mass. Dept. of Agricultural Resources supports and Senator O'Leary and Representative Madden are investigating.

Steps Taken So Far:

Wind Feasibility Studies – Mass. Tech. Collaborative Grants

Wind turbine feasibility studies have been funded by the Mass. Technology Collaborative for the Martha's Vineyard Public Charter School (LORI grant round 5) and Northern Pines Farm (LORI grant round 6). These studies will be conducted by Nelson Mechanical Design. We are currently in the permitting stage for MET towers at both locations, and have received FAA approval for MET towers at both sites.

Mass. Dept. of Agricultural Resources: Support for Farms and Turbines

We are currently working with Commissioner Petersen and his staff at Mass. Dept of Agricultural Resources to formalize the farm/wind turbine model and to investigate the farm/school/wind turbine model.

They have written a groundbreaking letter stating that wind turbines on one farm serving another farm (via net metering and power assignment) are indeed farm structures. (This letter is appended to this presentation.)

Farm structure status for wind turbines is essential for securing permits on Martha's Vineyard as these turbines would enjoy state law protection afforded other farm structures.

They have also reviewed language that we are proposing for an amendment of state law to allow farm based wind turbines to serve schools.

Dept of Public Utilities: Hearing on Net Metering and Power Assignment Regulations

We brought several petitions from Vineyard farmers, educators, and town selectmen to the DPU hearing on Oct 30 concerning net metering and power assignment. Our comments and reply comments are in their file room area under docket 08-75. We have also set up a website (www.mvwind.com) to collect all of the documents that we have submitted.

Projections of Output: Farm Based Wind Turbines Serving Farms and Schools

Based on a rough estimate of usage, we could meet current and future electrical loads of all the Vineyard schools and farms with three or four 900 kW turbines. We expect the renovation of the Thimble Farm greenhouse complex could create a substantial load. We also expect the spread of greenhouses across the Vineyard's farms to take advantage of stable, reduced cost electricity.

We also project that schools across the Vineyard will migrate from fossil fuels to heat pump retrofit installations – shifting their costs from escalating oil and propane to stable, long term, reduced cost wind turbine produced electricity.

Potential Savings to Schools from Farm Based Wind Turbines: Some Projections

Please see the attached spreadsheet which shows potential annual savings for different kWh costs. Presumably, agreement to purchase power for a longer term would result in a lower kWh cost. As mentioned above, the longer the agreement, the greater the benefit to the school system budget, in terms of cost control, and the financial stability of the farm wind turbine project.

Senator O'Leary and Representative Madden:

As a member of the Aquinnah Wind Committee, Brian Nelson met last January with Senator O'Leary as well as Massachusetts energy officials including Commissioner Guidice, Chairman Hibbard (DPU) and Undersecretary of Energy Berwick to discuss wind projects on the Vineyard. It was evident then that there was a lot of interest and excitement from the highest levels of state government and a specific awareness that innovations would come from the Vineyard.

Senator O'Leary (through his aide Micaelah Morrill) and Representative Madden (through his aide Nell Coogan) have expressed great interest in the concept of farm based wind turbines serving other farms and schools. They are exploring local levels of interest and support – thus far, we have a lot of support from the farm community and Island residents.

Our goal with this presentation is to receive the written support from the administrators of the Island school system for further investigation and study of the concept of powering Island schools with electricity from farm based wind turbines.

Department of Energy Resources: High Level Interest and Meeting in February

Senator O'Leary is interested in setting up a meeting in late February at the highest level with the Massachusetts Department of Energy Resources to discuss the farm school wind turbine concept. We have been asked to assemble a team to bring to the meeting.

We hope to bring farmers that will have wind turbines, farmers that will use power from these turbines, and members of the school administration.

Commissioner Petersen of the Mass. Dept of Agricultural Resources has already met with Secretary Ian Bowles to discuss this concept; we wish to capitalize on that interest with an in-depth presentation.

About Sam Berlow:

Chairman of the Board of the Charter School, Sam has spearheaded the effort at the Charter School to develop a net zero school concept.

About Brian Nelson:

Brian Nelson is a green mechanical contractor/mechanical engineer and wind consultant on Martha's Vineyard. He is a principal of Nelson Mechanical Design. He has a Masters degree in mechanical engineering (though not a PE). Unlike Joe in Ohio, he is also a licensed Master plumber in Massachusetts.

Martha's Vineyard Public Schools Electric Usage for 2009

	Projected Savings from Power Purchase from Farm Based Wind Turbines - draft by Brian Nelson 1/19/09								
SCHOOL	kWh per year	cost per KwH for 2009	cost per year for 2009	cost per year for 2009 at average 16¢/kWh	cost per year for 2009 at average 15¢/kWh	cost per year for 2009 at average 14¢/kWh	cost per year for 2009 at average 13¢/kWh	cost per year for 2009 at average 12¢/kWh	cost per year for 2009 at average 11¢/kWh
M.V.R.H.S.	1,547,080	16.9¢/kWh	\$ 261,961.77						
Chilmark	22,195	14.7¢/kWh	\$ 3,271.07						
Edgartown	556,204	28.6¢/kWh	\$ 159,312.12						
Oak Bluffs	420,900	11.0¢/kWh	\$ 46,350.42						
Tisbury	261,466	14.4¢/kWh	\$ 37,753.49						
West Tisbury	429,360	16.7¢/kWh	\$ 71,626.43						
TOTAL	3,237,205	average cost 17.9¢/kWh	\$ 580,275.30	\$517,952	\$485,580	\$453,208	\$420,836	\$388,464	\$356,092
Projected Annual Savings			\$0	\$62,323	\$94,695	\$127,067	\$159,439	\$191,811	\$224,183

MARTHA'S VINEYARD PUBLIC SCHOOLS

Excellence and Equity For All Children

JAMES H. WEISS, ED.D. SUPERINTENDENT

LAURIE F. HALT, C.A.G.S. Assistant Superintendent for Curriculum and Instruction

AMELIA C. TIERNEY School Business Administrator Equal Opportunity Employer

DANIEL T. SEKLECKI DIRECTOR OF STUDENT SUPPORT SERVICES

JANET L. SYLVIA FINANCIAL ADMINISTRATIVE ASSISTANT

EDITH ROUSSEAU Administrative Assistant to the Superintendent

February 9, 2009

Office of Senator Robert O'Leary Attn: Micaelah Morrill State House Rm. 511B Boston, MA 02133

and

Office of Representative Timothy Madden Attn: Nell Coogan State House Rm. 437 Boston, MA 02133

Dear Senator O'Leary and Representative Madden:

In our capacity as educators and administrators, we represent the six schools on Martha's Vineyard, which comprise the Martha's Vineyard Public Schools (MVPS).

We are critically aware of the important issues our Island faces in terms of global warming, shrinking fossil fuel supplies, and rising energy costs, and we understand that these are mirrored across the entire country. As educators, it is our duty to educate and prepare our students with the tools needed to solve these problems; making them ready to assume roles of leadership in renewable energy and the rising "green" economy.

We know that the passage of the Green Communities Act of 2008 has created significant opportunities to support and spread the use of renewable energy in the state. Through the net metering and power assignment concepts presented in the Green Communities Act, new and innovative ways to address these pressing issues are now possible.

Senator Robert O'Leary and Representative Timothy Madden February 9, 2009 Page 2...

One of these approaches is the Massachusetts Electric Farm Model. Our understanding is that this model envisions connecting farms with wind turbines to other farms and schools through the use of power assignment and net metering. From our initial review of this model, it appears that in addition to supporting farms, supporting renewable energy projects, and supporting the farm to school food programs, this model could create a significant financial savings to the MVPS. It could also serve as a model for the state of Massachusetts and our nation.

We wish to support the continued investigation of this concept to determine in greater detail the costs and benefits of this Massachusetts Electric Farm Model and how it could help the students and schools of Martha's Vineyard.

Sincere DR. JAMES WEISS

DR. JAMES WEISS Superintendent of Schools

DIANE GANDY Chilmark School Principal

JOHN STEVENS Edgartown School Principal

LAURY BINNEY

Oak Bluffs School Principal

RICHARD SMITH Tisbury School Principal

MICHAEL HALT West Tisbury School Principal

STEPHEN NIKON Martha's Vineyard Regional High School

Nelson Mechanical Design PO Box 4778 Vineyard Haven, MA 02568

February 4, 2009

Town of Aquinnah:Board of SelectmenTown of Chilmark:Board of SelectmenTown of Edgartown:Board of SelectmenTown of Oak Bluffs:Board of SelectmenTown of Tisbury:Board of SelectmenTown of West Tisbury:Board of SelectmenMartha's Vineyard Commission

Dear Elected Officials,

We are developing a concept in which remote wind turbines located on several Vineyard farms could provide electricity to other Vineyard farms and schools. We have assembled an informal coalition of farmers, farm support groups, educators, and interested citizens to investigate this concept. Our preliminary figures show that we could completely power all of the farms and all of the schools on the Vineyard with four 900 kW wind turbines. Potential savings to the MV School District could be as large as \$200,000 per year. A diagram of this concept entitled "Massachusetts Electric Farm Model" is appended to this letter.

We have discussed the concept of using wind turbines on one farm to serve other farms with Commissioner Petersen from the Mass. Dept. of Agricultural Resources (MDAR). His letter of support for this concept is also appended to this letter. MDAR views wind turbines used primarily for the purpose of agriculture as farm structures "without regard to location of end use" of electricity and therefore able to enjoy the same protections from special permitting provided by state law that other farm structures enjoy.

We have also discussed this concept with the Mass. Dept. of Public Utilities at their public hearing on net metering and power assignment, held Oct. 30th, 2008, in Boston. Our statements and letters of support from the community that we presented at that hearing and as subsequent reply comments are collected at our website www.mvwind.com.

We have also presented the concept of using farm based wind turbines to power schools in addition to farms to the Mass. Dept. of Agricultural Resources. Their support of this expanded concept led us to contact Senator O'Leary and Representative Madden for assistance in reaching state renewable energy officials.

Senator O'Leary's office is planning a meeting to discuss the concept of farm based wind turbines serving other farms and schools in Boston on March 3rd, 2009. This meeting will be with high level staff from the Mass. Dept. of Energy Resources and Mass. Dept.

of Agricultural Resources. We imagine part of the agenda for the meeting will include a discussion of interpretation of state law to consider farm-based wind turbines as farm structures and possible development and filing of legislation to expand the use of these turbines to include powering schools.

Because the concept of using farm based wind turbines to power farms and schools depends on interpretation of state law and zoning bylaws, we feel that it is essential to have representation from the Island towns at this meeting. As the building inspectors for each town are charged with interpretation of zoning issues, we feel that perhaps they would be best suited to fulfill this role. We also understand that the Martha's Vineyard Commission will have a significant role in the review of this concept and feel that it is important that they send representatives to the meeting as well.

We respectfully request the presence of a representative from each town and the MVC at this meeting to be held in Boston on March 3rd 2009. Perhaps the MVC would see fit to send Jim Athearn and/or Andrew Woodruff as they have intimate knowledge of the farming issues that are impacted by this concept.

For more information on this concept, please visit www.mvwind.com or contact me at 508 696 3120 or briankingnelson@yahoo.com.

Thank you in advance for your time and attention to this matter.

Sincerely,

Brian K. Nelson Nelson Mechanical Design PO Box 4778 Vineyard Haven, MA 02568 www.nmdgreen.com 508 696 3120



October 27, 2008

Shaela McNulty Collins Hearing Officer Massachusetts Department of Public Utilities One South Station Boston, MA 02110

RE: Net Metering, D.P.U. 08-75 - Technical Conference (to be held on October 30, 2008)

Dear Hearing Officer Collins,

We wish to add our public comments to the record concerning net metering and the Green Communities Act of 2008.

Northern Pines Farm's goal is to demonstrate the essential link between renewable energy and sustainable agriculture through the use of a large on-site wind turbine to power farm operations. Located in Tisbury, Massachusetts on Martha's Vineyard, this 42 acre farm is one of the island's largest.

Northern Pines Farm is developing a wind turbine project to power an on-site greenhouse as well as the 40,000 square foot greenhouse located at the Thimble Farm, three miles distant. These greenhouses, unlike those heated with fossil fuels, lit with electricity produced using fossil fuels, and saddled with built-in operating costs that escalate every year, will be heated through the use of modern air to air heat pumps and will have <u>fixed</u> operating costs for the life of the wind turbine. All of the other farm structures will be heated, cooled, and lit by the electricity from the turbine.

This financial stability secured by on-site generation of electricity from a wind turbine, at a fixed and reduced cost, will demonstrate to the island community one of the foremost benefits of linking renewable energy with sustainable agriculture. Northern Pines Farm wishes to install a 900 kW wind turbine on site to power the various buildings envisioned in their master plan. Additional revenue for the farm will be provided by the sale or assignment of electricity when it is not needed on-site.

Lastly, Northern Pines Farm will investigate the ability to assign electricity to the other twenty Island farms for use in joint farm ventures. This is only possible through the power assignment section of the Green Communities Act.

This revolutionary concept has attracted the attention of the Massachusetts Department of Agricultural Resources at the highest level. They have been extremely supportive of this project and see the ability to connect farms with low cost electricity made from wind turbines will dramatically strengthen the Massachusetts farm and farmer.

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Northern Pines Farm's plan to connect, via power assignment, to the Thimble Farm, located three miles away and home to the largest (40,000 sf) greenhouse on the Vineyard, will enable this remote farm to enjoy the same reduced cost electricity from the wind turbine that Northern Pines Farm will receive.

Ultimately, by example, all twenty one Island farms can be served by the Northern Pines Farm wind turbine and the renewable/sustainable model will have reached fruition.

Community Supported Agriculture (CSA) programs connect the community and farmers on a local level that is often quite successful. Each member of the program commits to the purchase of shares of the produce or fresh meat from a farmer over the growing season. If the farmer is connected to a wind turbine, some of that electricity will be used by the farm. Excess output from the wind turbine could be assigned to members of the CSA.

In exchange, CSA members could send payment at some agreed rate to the farmer. If the farmer is going to assign excess power from the wind turbine to another user anyway, why not to the families in the CSA that are already supported by and supportive of the farm? This creates another dependable revenue stream for the farmer and lets more people participate in the "green" electricity generated by the wind turbine.

Sincerely,

Brian K. Nelson

John Packer

NELSON MECHANICAL DESIGN, INC. PO Box 4778 Vineyard Haven, MA 02568

<u>www.nmdgreen.com</u> 508 696 3120 p & f

NORTHERN PINES FARM 60 Kuffie's Point Way Vineyard Haven, MA 02568

508 693 7925

P.O. Box 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

November 10, 2008

Shaela Collins, Hearing Officer Department of Public Utilities One South Station, Third Floor Boston, MA 02110

Re: Net Metering Reply Comments / DPU 08-75

Dear Ms. Collins:

We welcome this opportunity to submit this comment in reply to the public hearing on the net metering provisions of the Green Communities Act that was held October 30th, 2008.

We represent a cross-section of the populace of Martha's Vineyard – Town Selectmen, Planning Board Members, Renewable Energy Committee Members, Educators, Engineers, Farmers, and Concerned Citizens.

We wish to present a vision statement that briefly describes how the net metering and power assignment parts of the Green Communities Act will affect Martha's Vineyard.

Schools, Farms, and Wind Turbines on Martha's Vineyard: A Vision Statement

The Green Communities Act of 2008 provides a way for wind turbines located in remote locations on the Vineyard to have their power assigned to Island schools, Island farms, and community and municipal loads. However, in order to assign this power, these wind turbines must get into a special group, "**the one percent quota**", that can enjoy net metering and power assignment.

However, in the present version of this Act, just <u>one percent</u> of NStar's total peak load for Massachusetts, roughly 50 megawatts, would be available for this quota and there are no provisions for reserving any portion of the quota for municipalities, school systems, farms, or other community organizations.

We feel that wind turbine projects that are community based should have precedence over private projects (some private developers have stated that they are ready to gobble up the entire quota with projects designed for profit).

Martha's Vineyard Schools and Farms: Powered by Wind Turbines

A wind turbine that is in this one percent quota no longer has to be on the site where the power is used. This means that locations on the island near the airport will be able to enjoy power from wind turbines without the penalty imposed by FAA height limits on wind turbine size and output (Oak Bluffs, Edgartown, West Tisbury)

Using <u>power assignment</u> and <u>net metering</u>, wind turbines in the one percent quota can be put up on the Vineyard in remote locations and their power assigned to any NStar accounts that the turbine owners specify. This means that:

- Instead of using smaller wind turbines at each school that couldn't meet the full school load, all seven schools on the Vineyard could get all of their electricity from larger remotely located wind turbines
- All twenty-one farms on the Vineyard could get all of their electricity from several remotely located wind turbines. As above, those farms closer to the airport (and FAA wind turbine height and power output restrictions) or with smaller lots could still enjoy power from the wind turbines.
- This seven school/wind turbine project would result in significant budget savings for schools.
- This twenty one farm/wind turbine project would support agriculture on the Vineyard and support the effort to connect farms and schools.

The One Percent Quota:

The wind turbine projects that qualify for the one percent quota will enjoy net metering and power assignment. The school and farm projects described above are absolutely dependent on getting into this quota. This quota is very small and there is already intense pressure from municipal groups, private developers, small stakeholders, and farmers to qualify for entrance into the quota.

We feel that existing net metering projects (built before the passage of the Green Communities Act) should be able to enjoy net metering but not be counted towards the one percent limit.

Likewise, we support an exemption for towns, schools, and other community based projects (i.e. farms and not-for-profit organizations) from this one percent limit.

Denys Wortman Tisbury Selectman 231 Hines Point Vineyard Haven, MA 02568 508 696 9920 wortman@vineyard.net

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DEVAL L. PATRICK Governor

TIMOTHY P. MURRAY Lieutenant Governor

November 18, 2008

Brian Nelson PO Box 4778 35 Skiff Avenue Vineyard Haven, MA 02568

Re: Wind Turbines, Commercial Agriculture, and M.G.L. 40A, §3

Dear Mr. Nelson:

After meeting with you on Martha's Vineyard and speaking with my staff about your wind turbine project that you have proposed, I enthusiastically extend my full support for your efforts. I also offer the Department's opinion on the applicability of Massachusetts General Law c. 40A, §3 as it relates to wind turbines used for commercial agriculture.

THE COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS Department of Agricultural Resources

251 Causeway Street, Suite 500, Boston, MA 02114 617-626-1700 fax 617-626-1850 www.Mass.gov/AGR

You have described a project involving two farms: Thimble Farm located in Oak Bluffs and Northern Pines Farm located in Tisbury. Thimble Farm has sought to erect a wind turbine but because of its proximity to an airport is unable to. Northern Pines Farm also seeks to erect a wind turbine. The two farms have begun discussing a collaborative effort in which Northern Pines erects the wind turbine to supply electricity to both farms.

The proposal seems most fitting. It consolidates the electricity generation to a single farm with a single wind turbine. It fits into the Green Communities Act because of the alternative energy production and the opportunities of such alternatives, and it fits into the Governor's and Secretary's objectives of supply energy from alternative sources.

You are also aware of the protections afforded agriculture under Massachusetts General Laws c. 40A, §3 (Section 3). In essence, Section 3 prevents a local general or zoning by-law from prohibiting, unreasonably regulating, or requiring a special permit for activities on land used for commercial agriculture. Specifically:

"No zoning ordinance or by-law shall regulate or restrict the use of materials, or methods of construction of structures regulated by the state building code, nor shall any such ordinance or by-law prohibit, unreasonably regulate, or require a special permit for the use of land for the

Massachusetts Department of Agricultural Resources

> IAN A. BOWLES Secretary

DOUGLAS W. PETERSEN Commissioner primary purpose of commercial agriculture, aquaculture, silviculture, horticulture, floriculture or viticulture, nor prohibit, unreasonably regulate or require a special permit for the use, expansion, reconstruction or construction of structures thereon for the primary purpose of commercial agriculture, aquaculture, silviculture, horticulture, floriculture or viticulture...."

Under Section 3 a wind turbine falls into the category of a structure that would receive the protections of Section 3 provided that its primary purpose is commercial agriculture. The question that arises, however, is how to determine whether the primary purpose of a wind turbine on a farm is commercial agriculture as opposed to its use for the primary purpose of being used on a farm as simply a guise for a power company.

In general our approach is to identify the energy needs of the farm. If the size of the wind turbine has a reasonable relationship with the energy needs of the farm operations, then its primary purpose is commercial agriculture. As you know, wind turbines must often be oversized for any specific use because the wind is not always blowing. To achieve the average output sought, a larger turbine is necessary as is the ability to net meter. With the Green Communities Act, such advances are close at hand.

Sizing a wind turbine requires critical planning. Such planning includes farm growth considerations in addition to the average output sought. In the case of this proposed project between Thimble Farm and Northern Pines Farm even greater planning required. Further still, this project falls outside the normal circumstance where the wind turbine is sized for only the Northern Pines Farm. To size the wind turbine for both Thimble and Northern Pines will require a wind turbine that is far bigger than that desired by Northern Pines.

This project falls into the category of erecting a wind turbine that may be outside what would be considered the normal range and is as such to have the ability to sell electricity to another farm, Thimble Farm. Is Northern Pines a farm or an electric generator? If an electric generator, would that exclude Northern Pines Farms from the protections of Section 3?

The answers are yes and no. Yes they would become an electric generator to supply electricity to Thimble Farm. No they would not lose the protections of Section 3. The wind turbine has a primary purpose of commercial agriculture. Section 3 is silent as to whether the purpose of commercial agriculture is constrained to the farm on which the turbine is located. In the same that farm stands may sell products produced on land other that which the stand is located, so too may a wind turbine sell electricity to another farm. The key is whether the end user of the electricity advances the primary purpose of agriculture.

In this instance then, my staff concludes that as long as the electricity generated on the farm by the wind turbine is used for commercial agriculture without regard to location of end use, the structure generating the electricity is an agricultural structure and enjoys the protections of Section 3.

On a final note, my staff also concludes that being able to net meter at reasonable terms between purchase and sale of electricity is critical to your proposed project. The Green Communities Act

provides a powerful vehicle in this regard. Your project provides a clear example of how important it is for agricultural entities to engage and participate in the current procedural process pertaining to net metering convened by the Department of Public Utilities (DPU) to ensure the new provisions reflect the needs of our agricultural community.

My staff and I will assist in any way that we can with your project. Please contact me, Gerry Palano, or Bob Ritchie with any questions or concerns.

Sincerely,

Douglas W. Petersen

Cc: Thimble Farm

Northern Pines Farm Ronald Rappaport, Tisbury Town Counsel Martha's Vineyard Commission Kenneth Kimmell, General Councel, EOEEA Robert Sydney, General Councel, DOER Kelli Gunagan, Asst.Attny General



Federal Aviation Administration Air Traffic Airspace Branch, ASW-520 2601 Meacham Blvd. Fort Worth, TX 76137-0520

Aeronautical Study No. 2008-WTE-4030-OE

Issued Date: 01/20/2009

Brian Nelson Brian K Nelson Mechanical Design, Inc. PO Box 4778 Vineyard Haven, MA 02568

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Met Tower Martha's Vineyard / Met Tower
Location:	Vineyard, MA
Latitude:	41-25-38.82N NAD 83
Longitude:	70-39-18.86W
Heights:	165 feet above ground level (AGL)
	255 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 01/20/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

Additional wind turbines or met towers proposed in the future may cause a cumulative effect on the national airspace system. This determination is based, in part, on the foregoing description which includes specific coordinates and heights . Any changes in coordinates will void this determination. Any future construction or alteration requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (770) 909-4329. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2008-WTE-4030-OE.

Signature Control No: 606317-107857128 Michael Blaich Specialist

(DNE-WT)

Renewable Energy Trust

February 12, 2009

Mr. John Parker Northern Pines Farm 60 Kuffies Point Way Vineyard Haven, MA 02568-6239

Re:

Notice of Financial Assistance Large Onsite Renewables Initiative – Feasibility Study and Design & Construction Grants Solicitation (No. 2008-GB01-Rd 6)

Dear Mr. Parker:

I am pleased to inform you that the Governing Board of the Massachusetts Renewable Energy Trust (the "Trust") has voted to approve your request for financial assistance from the Trust in an amount not to exceed \$39,250. This award and the release of any Grant funds are contingent on authorization, execution and delivery of the attached Award Documents **by March 12, 2009**. If the Award Documents are not executed and returned to Jeanne Napolitano, MTC's Grants and Contracts Administrator, by **March 12, 2009**, the Trust may, in the sole exercise of its discretion, rescind the Grant.

All communication and publicity regarding this Grant must be coordinated through Emily Dahl, Public Information Officer (508.870.0312 ext. 1-256). We look forward to working with you on the successful implementation of the Project. Please contact Elizabeth Kennedy or Tyler Leeds (508.870.0312, ext. 1-241 or 1-273) if you have any questions.

Very truly yours,

M.C. Wall

M. Carter Wall Executive Director Massachusetts Renewable Energy Trust

Enclosures

cc: Brian K. Nelson, Nelson Mechanical, Inc.



MARTHA'S VINEYARD AGRICULTURAL SOCIETY INCORPORATED 1859 35 PANHANDLE ROAD

POST OFFICE BOX 73 - WEST TISBURY MARTHA'S VINEYARD - MASSACHUSETTS 02575

April 8, 2009

TO WHOM IT MAY CONCERN:

The Martha's Vineyard Agricultural Society was established in 1859. It promotes the pursuit of agriculture, horticulture, land conservation, youth activities, mechanic and domestic arts and encourages the raising and improving of plant and animal stock and the sale of island-grown produce and flowers at local farmers' markets.

One of the Society's most important missions is the support of farming on Martha's Vineyard. The Society is interested in supporting concepts that promote and sustain Island farms and farmers. One of these concepts is the Massachusetts Electric Farm Model. We understand that this concept envisions connecting farms with wind turbines to other farms and possibly schools through the use of net metering and power assignment. We feel that this concept could serve to support agriculture on Martha's Vineyard and would encourage farmers to expand their operations through the use of renewable energy produced by farm-based wind turbines.

We wish to support the further investigation of the Massachusetts Electric Farm Model to determine in more detail how it could help the Island's farmers and help promote and sustain agriculture on the Vineyard

Sincerely.

Martha's Vineyard Agricultural Society



DEVAL L. PATRICK Governor

TIMOTHY P. MURRAY Lieutenant Governor THE COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS **Department of Agricultural Resources** 251 Causeway Street, Suite 500, Boston, MA 02114 617-626-1700 fax 617-626-1850 www.Mass.gov/AGR



IAN A. BOWLES Secretary

SCOTT J. SOARES Commissioner

May 7, 2009

Zoning Board of Appeals Town of Tisbury Vineyard Haven, MA 02568

Dear Board Members:

Massachusetts General Laws Chapter 40A, Section 3, accords to agricultural lands and structures very high deference in the application of local zoning law. While uses and structures not enjoying this great deference might be subject to prohibition, special permit requirements, or other local regulations, agricultural uses and structures are shielded against prohibition and special permits, and are subject only to a significantly lower level of regulation. That lower level of regulation will only withstand scrutiny as "reasonable" when there is an appropriate balance between the significant planning objective of the regulation and its impact on the agricultural use or structure.

With the above in mind, it is not the purpose or intent of zoning to prescribe with detailed precision how agricultural enterprises are to be conducted, that being a matter best left to determinations of the farmer that are consistent with normal agricultural practices. Wind energy has been a structural fixture of farms on the American landscape from our country's earliest days; and placement of wind energy structures on the agricultural resource is a function of where the wind itself is best tapped. Any regulation prescribing the placement and height of the structure that impedes the functional utility of its design is, to that extent, incompatible with the legislative deference to agriculture laid down in the statute. In the absence of specific, demonstrable, over-arching negative impacts associated with the placement, height, and operation of the wind turbine or structures necessary to the

turbine's installation, wind energy structures designed to provide energy for agricultural operations may not be subjected to such prescriptive regulation.

It is the view and opinion of the Department of Agricultural Resources that a wind energy structure providing energy for farm operations fully enjoys the protections accorded by Chapter 40A, Section 3. This is so whether the energy generated by that structure is used on the farm on which the structure located or transferred to other farms for agricultural use. Ronald Rappaport, town counsel for several Vineyard communities, has informed us that he concurs in this view and opinion.

It has come to our attention that the zoning enforcement officer for the Town of Tisbury has concluded that the 165' wind energy structure proposed for Northern Pines Farms is not an "essential farm structure," and thus does not enjoy the statutory protection. There is no support in the statute, or in the cases construing the statute, that limits the statutory protection to only those structures that are <u>essential</u>, to the exclusion of structures that a local legislative body has determined not to be essential to farming. This is not the statutory standard. Such an approach invites the kind of misguided local control of protected uses that the courts have routinely eschewed. That a structure contributes to the agricultural enterprise, whether "essential" or merely as a best practice, is a determination that the General Laws leave to the farmer. It becomes the heavy burden of the local legislative body to overcome these default protections by pointing to a significant local harm that can only be addressed by a regulation narrowly tailored to minimize that negative impact, but no further.

Please do not hesitate to contact my office if you have any questions or would like clarification related to the Department's position on this matter. I would further welcome the opportunity to speak with you in an effort to facilitate the development of this important effort.

Sincerely,

Scort 1.

Scott J. Soares, Commissioner

Cc: Brian Nelson



May 30, 2009

Commissioner Scott Soares Department of Agricultural Resources 251 Causeway Street Suite 500 Boston, Massachusetts 02114

Dear Scott,

In our discussions on how wind turbines can best benefit farmers, several important themes arise – how can the Department of Agriculture ensure that farmers with wind turbines will stay in active food production, and how to legally export the excess electricity production (via power assignment) to off-farm users to create a revenue stream for the farmer.

It seems to me that our discussions have run aground in our efforts to reconcile these two seemingly divergent concepts. One thought, ably developed by MDAR's Bob Ritchie, is to submit new language to the Legislature to amend Mass. state farm law to explicitly permit the export of farm electricity (at least to schools). But perhaps this language does not ensure that farmers would actively farm their land. On the legislative front, our meetings with Senator O'Leary make it appear that they are more interested in promoting the Green Communities Program and perhaps see the introduction of an amendment to farm law as an unnecessary distraction.

Perhaps the concept of a CSA could be expanded to serve our desire to reconcile these two themes – ensuring that farmers stay in farming and that they can successfully assign power to other electricity users and develop an additional revenue stream.

If a farmer sells produce to a member of a CSA, then this is a business agreement between the farmer and the buyer. Would it be a similar situation for the farmer to assign power credits to this same buyer - perhaps in exchange for joining the CSA for a longer term, a greater amount of assigned power?

If this assignment of power could also be determined to be an agricultural activity (power assignment to a farmer's "metered accounts of his business" (DPU draft of March 9, 2009 of 220 CMR 18.00)), then this assignment would perhaps be legal.

P.O. Box 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

The draft regulations, in their current form, have an powerful statement of the ability of the Commissioner of Agriculture to determine what is agriculture - " 'agriculture' has the same meaning as provided in M.G.L. c.128, 1A, provided that, when necessary, the Commissioner of the Department of Agricultural Resources shall determine if a business is an agricultural business."

Would this mean that you could declare that a CSA transaction of produce and electricity was indeed agricultural and therefore legal?

Perhaps with a CSA, the linkage could be made between letting farmers enjoy a new revenue stream from the sale of farm based wind turbine electricity and ensuring that they stay in farming to meet the CSA demand for their produce.

We imagine several possible financial scenarios:

A farmer could sell a CSA member \$10 worth of produce and assign the same buyer \$10 worth of electricity credits and receive \$18 from the buyer (a \$2 savings for being a CSA member)

A farmer could enter into a CSA agreement with a local supermarket and receive a commitment for farm grown produce and electricity.

A further expansion could be to look at a school spending \$100,000 on food for school lunches and \$100,000 on electricity - if the school joined the farmer's CSA, then they could pay the farmer \$180,000 (\$100,000 for the food and a discounted amount of say \$80,000 for the assigned electricity).

Apparently, the DPU and our power companies are not restricting the number of assignees of power from a wind turbine or whether they are commercial or residential customers.

Perhaps with this CSA strategy we would be able to avoid seeking a change in the state law concerning connecting farms and schools and arrive at the same or better result? These CSA commitments would certainly greatly increase the demand for locally grown produce and serve as an important new revenue stream for Massachusetts' farmers.

Thank you again for your time, support, and attention.

Sincerely,

Brian Nelson

P.O. Box 4778, Vineyard Haven, Massachusetts, 02568



June 9, 2009

Tisbury Zoning Board of Appeals 215 Spring Street PO Box 1239 Vineyard Haven, MA 02568

Re: Northern Pines Farm narrative of wind turbine farm project

Dear Tisbury Zoning Board Members,

We wish to offer this narrative to further illustrate our project and our position that Northern Pines Farm should receive a building permit for a MET Tower.

Summary

Northern Pines Farm wishes to erect a MET tower (meteorological tower) for one year to study the wind regime at the Northern Pines Farm site. The Mass. Renewable Energy Trust (formerly known as the Mass. Technology Collaborative) has funded a grant that will pay for a wind turbine feasibility study at the farm.

The wind turbine proposed for Northern Pines Farm is a fundamental component of an agricultural expansion project that will diversify the farm output – introducing cold storage for fresh meat, community greenhouses, and greenhouses for community growers. This entire expansion project is only realistic with the use of low cost electricity generated by the wind turbine – using NStar power at retail rates would make the project economically unrealistic.

By using low cost long term wind turbine generated electricity, Northern Pines Farm will by able to heat and light greenhouses year-round – effectively subsidizing their operation with reduced price electricity, making their operation more profitable and successful, and directly stimulating year-round agriculture.

Timeline

December 2007

John Packer and Brian Nelson developed the concept of using a wind turbine at Northern Pines Farm to provide power to greenhouses and cold storage at the Northern Pines Farm and possibly to other Island farms via "power assignment".

P.O. BOX 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

Re: Northern Pines Farm narrative of wind turbine farm project - June 9, 2009

November 18, 2008

We met with Commissioner Petersen of the Mass. Department of Agricultural Resources ("MDAR") to discuss the "farm structure" status of our proposed wind turbine and how it would be a fundamental component of a proposed expansion project. We received a letter of understanding from MDAR and Commissioner Petersen stating that this concept of using a wind turbine on a farm to serve that farm's loads <u>was indeed a farm use of a wind turbine</u>.

December 30, 2008

Northern Pines Farm received a FAA report from Aviation Consultants stating that a 165' MET tower (and a wind turbine) would be permissible under federal regulations at the Northern Pines Farm location.

January 5, 2009

John Packer, Brian Nelson, and Ken Barwick discuss the application process for Northern Pines Farm MET tower building permit.

February 12, 2009

Northern Pines Farm and Nelson Mechanical Design (their renewable energy consultant) received a LORI (large on-site renewables) grant from the Mass. Technology Collaborative (soon to be renamed Mass. Renewable Energy Trust) to study the feasibility of erecting a wind turbine on the Northern Pines Farm. A central component of our grant is the study of how low cost farm based wind turbine electricity would make possible the expansion of year round farming activities on the Vineyard.

March 31, 2009

Brian Nelson formally discusses the Northern Pines Farm wind turbine farm project with Tisbury Board of Selectmen.

April 9, 2009

Northern Pines Farm applies for a building permit for the MET tower to study the wind resource at the farm site.

P.O. BOX 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

Re: Northern Pines Farm narrative of wind turbine farm project - June 9, 2009

May 4, 2009

Tisbury Building Inspector Ken Barwick denies Northern Pines Farm a building permit for the MET tower. Ken denies application by creating an "essential" standard for farm structures that is not found in Mass. state law Chapter 40A section 3.

May 7, 2009

Commissioner Soares of Mass. Dept. of Agricultural Resources writes ZBA (and copies the letter to Brian Nelson) concerning Northern Pines Farm building permit application for a MET tower. He writes that nowhere in Chapter 40A, section 3 is there an "essential" standard for what a farm structure is. He states that the state vests in the farmer the determination of what farm structures to erect to best carry out the farmer's agricultural goals.

May 23, 2009

Chilmark issues building permit for precisely the same MET tower to Allen Farm.

June 11, 2009

We respectfully appear before the Tisbury Zoning Board of Appeals.

Conclusion

Northern Pines Farm holds that the MET tower is an important component of their agricultural endeavor to use a wind turbine to heat and light year round greenhouses and cold storage units.

Without the MET tower, we cannot study the wind regime. Without knowing the wind regime, we cannot continue with a wind turbine powered farm project.

We hold that nowhere in Chapter 40A, section 3, is there a standard of an "essential" farm structure. The word "essential" is not even in the statute concerning farms. If "essential" is a standard, then what makes a farm structure "essential" or "not essential"?

How could Chilmark feel that a MET tower on a farm was permitted and Tisbury feel that a MET tower on a farm was prohibited? What is the standard of "essentialness" that is being applied here to determine if a farm should be allowed to erect a MET tower as a farm structure in pursuit of an agricultural project?

P.O. BOX 4778, VINEYARD HAVEN, MASSACHUSETTS, 02568

Re: Northern Pines Farm narrative of wind turbine farm project - June 9, 2009

If Chilmark and Tisbury look at the same MET tower and see completely different structures, then is this "standard" of "essentialness" arbitrary and based on the building inspector's opinion?

We hold that there is no word "essential" and no standard of "essentialness" in Chapter 40A, section 3 precisely to avoid this situation; by leaving the farmer to decide what is the best way to conduct his farm operation according to best practices.

If this denial of a MET tower is upheld, does this mean that no farm in Tisbury can have a wind turbine? Isn't this an unfair burden on farmers in Tisbury as opposed to farmers in other island towns?

We believe that the decision by Ken Barwick to deny Northern Pines Farm a building permit for the MET tower at the farm is inconsistent with the protection of farm structures outlined in Mass. General Law c. 40A, section 3.

We respectfully request that the Tisbury Zoning Board of Appeals direct Mr. Barwick to issue Northern Pines Farm a building permit for this MET tower.

Sincerely,

John Packer Northern Pines Farm

Brian K. Nelson Nelson Mechanical Design, Inc.

P.O. Box 4778, Vineyard Haven, Massachusetts, 02568 Phone and Fax: 508 - 696 - 3120

MEMORANDUM

TO:	GERRY PALANO
FROM:	BOB RITCHIE, GENERAL COUNSEL
SUBJECT:	NORTHERN PINES FARM WIND ENERGY STRUCTURES
DATE	:06/24/09
CC:	NATHAN L'ETOILE, ASSISTANT COMMISSIONER

Gerry, you asked if I could provide you with a brief commentary on the state law applicable to alternative energy systems on agricultural resources. In particular, you brought to my attention an actual instance in which the answer to this question is relevant. In this memo I have attempted to address your question in the context of the appeal now pending before the Tisbury Zoning Board of Appeals.

An issue raised by the Tisbury Zoning Board of Appeals in connection with the appeal by Northern Pines Farm from the denial of a building permit to construct a MET tower as part of its effort to design and construct a wind energy turbine for farm use is whether the building inspector's refusal to issue a building permit is a lawful application for the Tisbury zoning by-law's height limitation. I have concluded that it is not on the following analysis of several relevant cases.

The building inspector appears to have interpreted General Laws Chapter 40A, Section 3 (often referred to as the "Dover Amendment"), as limiting the agricultural exemption to uses and structures that are "essential" to farming, leaving all other uses and structures fully subject to the provisions of the zoning by-law, including the height limitation provisions, even those uses and structures that, while "reasonable," are not indispensible or "essential" to the underlying agricultural use of the land.

I have attached to this Memo **excerpts** from three Massachusetts court decisions that touch upon this issue: <u>Town of Tisbury et. al. v. Martha's Vineyard Commission, et al.</u>, 27 Mass.App.Ct. 1204 (1989); <u>Modern Continental Construction Co., Inc. v. Building Inspector of Natick</u>, 42 Mass.App.Ct. 901 (1997); and <u>Arlene Martyin & others v. TheCorporation of the Presiding Bishop of the Church of Latter Day Saints</u>, 434 Mass. 141 (2001). I have **bolded** certain portions of the excerpted text for emphasis.

The statutory standard governing the application of Section 3 is not the "essentiality" standard which the building inspector appears to have used, but rather whether a proposed use or structure "has a <u>reasonably direct relation to farming operations</u>." In the matter at hand, it is my understanding that Northern Pines proposes to shift from energy purchased from a utility to energy produced on site by means of a wind turbine located on a structure whose height exceeds the by-law's height limitation. The energy is to be used "for the primary purpose of commercial," within the meaning of Section 3. From early days, wind energy has been a "normal and customary part" of supplying energy to farms. While in recent years farm operations have generally converted to off-site sources of energy, in this century farm energy needs have evolved as have the on-site options for site-resident energy sources. Wind energy is foremost among the means of choice, largely because of economic and environmental considerations.

As you will see in the attached excerpts, the analysis should begin with whether the use of the zoning parcel in question is "agricultural." I understand that no-one has challenged that conclusion in the matter at hand. As such, Northern Pines Farms enjoys the agricultural exemption accorded by Section 3.

The second step in the analysis is whether a proposed use or structure – i.e., the MET tower and eventually a pole mounted wind turbine – on his agriculturally zoned parcel bears a "reasonably direct relation to farming operations." It is here that the building inspector's unsupported "essentiality" standard would bar Northern Pines from the benefits of the exemption, because while the turbine might be "reasonably related" to farming operations, it is nevertheless not "essential" for the obvious reason that the farmer could purchase energy from utility vendors. Cost savings and environmental protection would not suffice to make on-site energy "essential" in the meaning attributed to the building inspector.

The analysis would require an examination of the "degree of accommodation between protected uses and matters of critical municipal concern." Citation of a zoning by-law provision alone does not establish that critical municipal concern, nor does it foreclose the Town from asserting that concern in the context of an actual proposed use or structure. The point is that the by-law provision has no <u>direct</u> applicability; but what the by-law purports to regulate must be the subject of reassessment in light of the proposed protected use. To my knowledge, no "grave municipal concern" has been independently advanced to support the building inspector's denial of the building permit.

Among the assorted "Dover uses" identified in Section 3 is the so-called "religious use" exemption which, in language somewhat parallel to the agricultural exemption we have discussed above, exempts "the use of land or structures for religious purposes." The *Martin* decision perhaps best explains why Dover Amendment uses are not required to prove that a proposed use or structure is "necessary" in order to enjoy the statutory exemption. It is simply wrong to say that a local regulation should be applied whenever the owner is unable to demonstrate that its application <u>nullifies</u> the protected use. The Court in *Martin* reiterated precedent in holding that a zoning requirement that results in something less than nullification of a proposed [exempt] use may be unreasonable within the meaning of the Dover Amendment.

I do not wish to say that the Town is barred from addressing the height and other details of the proposed energy structures, but it may do so only after a particularized assessment of the proposed use and structure, after a careful study of the degree of accommodation required for the protected use, and after citing with particularity the "matters of critical municipal concern" that support some kind of "reasonable regulation."

Excerpts of Decisions

(emphasis added)

Town of Tisbury v. Martha's Vineyard Commission (1989) HEADNOTE:

[Town Commission approved an application for a permit to erect a greenhouse with a 4,000 gallon fuel tank for the year-round growing of hydroponic fruits and vegetables. Town planning board and building inspector brought an action to set aside the Commission's decision on the ground that it conflicted with the local zoning by-law limiting fuel tanks to 500 gallons. The Superior Court, Dukes County, entered judgment for Commission and applicants, and board and inspector appealed. The Appeals Court held that the "agricultural use" exemption permitted construction of the greenhouse.]

In his memorandum of decision the judge ruled that the construction of the greenhouse and the appurtenant fuel storage facility **constituted an agricultural use**; that the Commission properly concluded that **the proposed fuel tank was reasonable for its intended farm use**; and that, in regard to this particular matter, the by-law **limiting the size of the fuel storage tanks would constitute an unreasonable regulation of agriculture** in violation of G.L. c. 40A, § 3. The judge concluded that the town was obligated to issue the permit since its only objection to the issuance rested on the fuel storage tank by-law which was not applicable to this situation. There was no error.

<u>General Laws c. 40A, § 3</u>, as amended by St.1982, c. 40, provides in pertinent part: "[N]or shall any [zoning] ordinance or by-law prohibit, unreasonably regulate or require a special permit for the use of land for the primary purpose of agriculture, horticulture, floriculture, or viticulture; nor prohibit or unreasonably regulate the expansion or reconstruction of existing structures thereon for the primary purpose of agriculture, horticulture, floriculture, or viticulture...." **This "agricultural use" exemption has been interpreted broadly by the appellate courts**. See <u>Lincoln v. Murphy</u>, 314 Mass. 16, 18-20, 49 <u>N.E.2d 453 (1943)</u>. As a result the courts have allowed many activities to be conducted on land which is being used **primarily for agricultural purposes despite conflicting provisions of local zoning by-laws**. See <u>Building Inspector of Mansfield v. Curvin</u>, 22 Mass.App.Ct. 401, 494 N.E.2d 42 (1986) (ruling that <u>c.</u> <u>40A, § 3</u>, allows the operation of a piggery otherwise prohibited by town by-law); <u>Steege v. Board of</u> <u>Appeals of Stow</u>, 26 Mass.App.Ct. 970, 527 N.E.2d 1176 (1988) (ruling that <u>c.</u> 40A, § 3, allows the operation of a stable and riding school otherwise prohibited by town by-law).

Here, the proposed greenhouse falls squarely within the protection of <u>c. 40A, § 3</u>. <u>General Laws c. 61A, §</u> <u>2</u>, as appearing in St.1975, c. 794, § 1, provides that "[I]and ... used in raising ... greenhouse products" is deemed to be in horticultural use. See also <u>Needham v. Winslow Nurseries</u>, <u>Inc.</u>, <u>330 Mass. 95, 100, 111</u> <u>N.E.2d 453 (1953)</u> (defining "greenhouse" as "a building principally constructed of glass wherein plants, flowers, and sometimes vegetables are raised for purposes of sale"). Therefore, **as a structure furthering an agricultural use, the proposed greenhouse cannot be prohibited or unreasonably regulated**.

It is undisputed that the 4,000 gallon fuel tank is an essential component of the Moskows' planned agricultural use of their property. They plan to grow fruits and vegetables on a year-round basis. Without heat from the tank in the winter months, the produce being grown within the greenhouse will perish. See <u>Jackson v. Building Inspector of Brockton, 351 Mass. 472, 476-477, 221 N.E.2d 736 (1966)</u>, where the court held that the operation of a manure and fodder drying machine, which was prohibited by a local zoning by-law, was **permitted when such machine "has reasonably direct relation to farming operations** of its owner."

Modern Continental Construction Co., Inc. v. Building Inspector of Natick (1997)

HEADNOTE:

[Landowner brought action challenging building inspector's denial of permit to renovate existing barn for slaughtering livestock raised on the premises. The Land Court ruled in favor of landowner. Building inspector appealed. The Appeals Court held that slaughterhouse for butchering animals raised on the

premises was for agriculture within meaning of statute which prohibits zoning ordinance or bylaw from prohibiting, unreasonably regulating, or requiring special permit for use, expansion, or reconstruction of existing structure for primary purpose of agriculture.]

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Various statutes defining "agriculture" (see, e.g., G.L. c. 61A, § 1; G.L. c. 111, § 1; G.L. c. 128, § 1A) as well as dictionaries (see, e.g., Webster's Third New Intl. Dictionary 44 [1993]; Black's Law Dictionary 68 [6th ed.1990]) include within their definitions the activity of preparing animals for market. We think it reasonable to regard the slaughter of animals as **a normal and customary part** of preparing them for market. It then follows from the **acceptably broad definitions of the word "agriculture"** that a **slaughterhouse used for the butchery of animals raised on the premises is primarily agricultural** in purpose.

Our conclusion does not conflict with Langevin v. Superintendent of Pub. Bldgs. of Worcester, 5 Mass.App.Ct. 892, 369 N.E.2d 739 (1977). The narrow holding of that case, that the term "processing" was broad enough to bring a slaughterhouse operation within the scope of the zoning ordinance which permitted as of right the "[m]anufacture, assembly, processing, packaging, or other industrial operations" within a particular district, does not compel the conclusion that the on-site processing or slaughtering of animals raised on the premises cannot be an agricultural activity. See Deutschmann v. Board of Appeals of Canton, 325 Mass. 297, 301, 90 N.E.2d 313 (1950). The fact that an activity, such as slaughtering, can become an industrial or business use when removed from an agricultural setting does not mean that activity cannot be primarily agricultural in purpose when it has a reasonable or necessary relation to agricultural activity being conducted on the locus. See Jackson v. Building Inspector of Brockton, 351 Mass. 472, 478, 221 N.E.2d 736 (1966). Further, the fact that slaughterhouses are regulated by the Department of Public Health, see G.L. c. 94, § 120, rather than the Department of Agriculture, see G.L. c. 128, is of no relevance to a determination of whether the slaughtering is being done for an agricultural or industrial purpose.

Martin v. Corporation of the Presiding Bishop of the Church of Latter-Day Saints (2001)

HEADNOTE:

[Neighboring landowner brought action against church to challenge decision by zoning board of appeals approving tall steeple on temple. The Superior Court Department, Middlesex County, <u>Elizabeth M. Fahey</u>, J., annulled the decision. Church's application for direct appeal was granted. The Supreme Judicial Court, <u>Marshall</u>, C.J., held that: (1) landowner had standing to challenge approval by zoning board of appeals; (2) Dover Amendment restricting zoning ordinances and by-laws concerning land or structures used for religious purposes applied to church's decision; and (3) the Amendment prohibited the restriction. Vacated and remanded.]

Beginning in May, 1996, and continuing over many months, the board held numerous public hearings on the church's application. On April 28, 1997, the board granted the requested relief. The board noted that the **Dover Amendment requires a degree of accommodation between protected uses and matters**

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of critical municipal concern. It found that there is "no grave municipal concern in controlling steeple height on churches," and that it was "hardly accommodating to a protected use to limit the Church to a 12 foot projection." FN8 The board concluded that the steeple height requested by the church was reasonable "as a Dover type regulation of height." The board also concluded that the "benefits" provided by the church outweigh the burdens that could result from the steeple height, and that the height of the steeple requested by the church was reasonable "as a special permit matter."

<u>FN8.</u> The twelve-foot steeple refers to the steeple height that would have been allowed by right under the church's initial application. See note 22, *infra*.

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The Dover Amendment precludes the adoption of zoning ordinances or bylaws restricting the use of land for religious (and other exempt) purposes, G.L. c. 40A, § 3, second par., but authorizes "reasonable regulation[]" of bulk, height, yard size, lot area, setbacks, open space, and parking requirements. See note 3, supra. The amendment "seeks to strike a balance between preventing local discrimination against [a religious] use ... and honoring legitimate municipal concerns that typically find expression in local zoning laws" (citation omitted). Trustees of Tufts College v. Medford, 415 Mass. 753, 757, 616 N.E.2d 433 (1993). Local zoning requirements are meant to be applied uniformly. Consequently, "local officials may not grant blanket exemptions from the requirements to protected uses." Campbell v. City Council of Lynn, 415 Mass. 772, 778, 616 N.E.2d 445 (1993). But they may decide that zoning requirements concerning height and dimension should not be applied to a proposed religious use where it **would unreasonably impede the protected use without appreciably advancing critical municipal goals**. See Trustees of Tufts College v. Medford, supra at 757-761, 616 N.E.2d 433.

The board made a careful examination of the case law interpreting the Dover Amendment. It concluded that the **first issue to be considered was "whether the ... structure is being used for a religious purpose."** The board found that it "is clearly part of Mormon theology to reflect, in their buildings, the belief of an ascension towards heaven." The board found that members of the church believe that steeples, by pointing toward heaven, "serve the purpose of lifting Mormons' eyes and thoughts towards heaven." It concluded that **the steeple served a religious purpose, and that application of the Belmont bylaw regulating the height of uninhabited projections would be an unreasonable regulation of a religious use**.

Rejecting that analysis, the judge found that, "[w]hile a steeple may have inspirational value and may embody the Mormon value of ascendency towards heaven, that is not a matter of religious doctrine and is not in any way related to the religious use of the [t]emple." She then determined that, because "neither the presence nor the height of the steeple atop the [t]emple represents **a necessary element** of the Mormon religion," it does not "aid in the Mormons' system of faith" so as to be entitled to be analyzed pursuant to the Dover Amendment. In the alternative, the judge concluded that, even if the Dover Amendment were applicable, the church "failed to carry its burden of proof" that limiting the height of the proposed steeple to eleven feet, two inches, is "unreasonable." She reached this conclusion because the church had not shown that "limiting the spire [height] would prevent or significantly impede the religious use" of the temple. **The judge erred** on both grounds. [5] [6] First, in deciding that the Dover Amendment was not applicable, the judge erroneously framed the question as "whether the construction of the spire atop the already existing [t]emple FN18 constitutes the 'use of land or structures for religious purposes' so as to trigger a Dover Amendment analysis." The statute directs the inquiry to the use of "land" or a "structure," not the use of an element or part of a structure. See G.L. c. 40A, § 3, second par. ("No zoning ordinance or by-law shall ... prohibit, regulate or restrict the use of land or structures for religious purposes"). See Worcester County Christian Communications, Inc. v. Board of Appeals of Spencer, 22 Mass. App.Ct. 83, 87, 491 N.E.2d 634 (1986) ("focus must be placed on the use of the structure"). To view each element, each section of a "structure," as requiring an independent "religious" use leads to impossible results: Is a church kitchen or a church parking lot a "religious" use? We have not formulated the test so narrowly. In Trustees of Tufts College v. Medford, 415 Mass. 753, 754-755, 616 N.E.2d 433 (1993), for example, we considered the applicability of the Dover Amendment to several construction projects proposed by an educational institution, including a multi-level parking garage. Id. We recognized that the proposed parking garage was for an educational purpose, because it "will be located in the core ... area of Tufts' campus." Id. at 755, 616 N.E.2d 433. While the judge's inquiry may have focused on the steeple because the temple complied in all other respects with Belmont's zoning bylaws, the question under the statute is whether the structure as a whole is to be used for religious purposes.FN19 It clearly is, and just as clearly the Dover Amendment applies.

FN18. Because the proposed temple complied in all other respect with Belmont's bylaws, in June, 1998, the church obtained a building permit and began construction of the temple, including an approximately eleven foot base for the proposed steeple. Construction of the temple was complete by the time of trial.

FN19. Despite the fact that the size of the temple itself was not before her, the judge found that, although the church claimed that the temple could not accommodate its intended religious uses if it were any smaller, the portion of the interior temple space "devoted to the temple's purpose ... is a relatively small percentage." She went on to note that "[r]ooms such as the audio-visual room, lunch room, dining room, storage, custodian/clothing drop, general office, showers, mechanical areas, multi-use, waiting and study rooms, arrival center, cold and dry storage rooms and locker rooms are purely for the convenience of [t]emple visitors [rather than] the practice of the Mormon religion...." This is the sort of particularized inquiry into the use of discrete sections of a structure serving a protected religious use that is inappropriate.

[7] The judge also used an erroneous legal test to determine whether a "structure" serves a religious purpose, thereby entering an area of inquiry that the First Amendment to the United States Constitution prohibits. She correctly noted that " '[r]eligious purpose' means something in aid of a system of faith and worship," citing Needham Pastoral Counseling Ctr., Inc. v. Board of Appeals of Needham, 29 Mass.App.Ct. 31, 33, 557 N.E.2d 43 (1990). She then **impermissibly concluded that a steeple is not "a necessary element of the Mormon religion."**

It is not for judges to determine whether the inclusion of a particular architectural feature is "necessary" for a particular religion. A rose window at Notre Dame Cathedral, a balcony at St. Peters Basilica--are judges to decide whether these architectural elements are "necessary" to the faith served by those buildings? The judge found, as she was compelled to do in the face of overwhelming and uncontradicted testimony, that temples "are the places where Mormons conduct their sacred ceremonies." No further inquiry as to the applicability of the Dover Amendment was warranted. See Parish of the Advent v. Protestant Episcopal Diocese of Mass., 426 Mass. 268, 284-285, 688 N.E.2d 923 (1997) (civil tribunals must avoid resolving matters of purely ecclesiastical nature). See also Employment Div., Dep't of Human Resources of Or. v. Smith, 494 U.S. 872, 887, 110 S.Ct. 1595, 108 L.Ed.2d 876 (1990), and cases cited ("[r]epeatedly and in many different contexts, we have warned that courts must

not presume to determine the place of a particular belief in a religion or the plausibility of a religious claim").

В

[8] As an alternative ground for denying relief, the judge determined that, even if the Dover Amendment applied, the church failed to prove that application of the Belmont bylaw to its temple was unreasonable. We described in Trustees of Tufts College v. Medford, 415 Mass. 753, 616 N.E.2d 433 (1993), and Campbell v. City Council of Lynn, 415 Mass. 772, 616 N.E.2d 445 (1993), the standards by which to analyze application of the Dover Amendment to exempt institutions. While the reasonableness of a local zoning requirement will depend on the particular facts of each case, we said that a judge should consider whether the requirement sought to be applied takes into account "the special characteristics of [the exempt] use," adding that a zoning requirement that results "in something less than nullification of a proposed [exempt] use may be unreasonable within the meaning of the Dover Amendment." Trustees of Tufts College v. Medford, supra at 758-759 & n. 6, 616 N.E.2d 433. See Campbell v. City Council of Lynn, supra at 778, 616 N.E.2d 445.

[9] [10] The judge found that the church had not met its burden of proving that the height restriction was unreasonable because it had not shown "that limiting the spire to 12 [feet] would prevent or significantly impede the religious use of the [t]emple or substantially diminish or detract from its usefulness." **By considering only whether the height restriction prevented or diminished the temple's religious "usefulness," the judge's focus was again too narrow. There are several ways in which an applicant may demonstrate "unreasonableness." See, e.g., Trustees of Tufts College v. Medford, supra at 759-760, 616 N.E.2d 433 (zoning requirement unreasonable if it detracts from usefulness of structure, imposes excessive costs on applicant, or impairs character of proposed structure). See also Rogers v. Norfolk, 432 Mass. 374, 385, 734 N.E.2d 1143 (2000) ("proof of cost of compliance is only one way" to show unreasonableness, and court must consider other aspects such as use or character of property); Campbell v. City Council of Lynn, supra at 778, 616 N.E.2d 445 (same). The judge should have considered whether compliance with Belmont's height restrictions would have impaired the character of the temple, while taking into account the special characteristics of its exempt use.**

[11] The judge dismissed the church's desire to build a steeple as a "purely" aesthetic issue. But matters of aesthetic and architectural beauty are among the factors to be considered in deciding whether a zoning requirement "impairs the character" of a proposed exempt use. Trustees of Tufts College v. Medford, supra at 757, 759 & n. 6, 616 N.E.2d 433. The "character" of the temple with its steeple surely encompasses both its architectural beauty, as well as its religious symbolism. See Petrucci v. Board of Appeals of Westwood, 45 Mass.App.Ct. 818, 826-827, 702 N.E.2d 47 (1998) (Dover Amendment precluded application of zoning ordinance that would "disturb the sense of the building's continuity" and ruin its "architectural integrity"). The record is replete with evidence that the steeple is integral to the specific character of the contemplated use. The church's architect based his design on an approved church prototype. There was uncontradicted testimony that the church values an ascendency of space for the religious symbol, a statue of the Angel Moroni, because he considered the design of a well-proportioned steeple to be part of his assignment.FN20 There was evidence that all but three of the church's numerous temples located in countries around the world have steeples. FN21 The Mormon religion is hardly unique in this regard: **churches have long built steeples** to "express elevation toward

the infinite, [their] spires soaring into the heavens." J. Sallis, Stone 63 (Ind. Univ. Press 1994), and a steeple is the precise architectural feature that most often makes the public identify the building as a religious structure. The judge found that, "[w]hile a spire may have inspirational value and may embody the Mormon value of ascendancy towards heaven, that is not a matter of religious doctrine...." It is not permissible for a judge to determine what is or is not a matter of religious doctrine. See Fortin v. Roman Catholic Bishop of Worcester, 416 Mass. 781, 785, 625 N.E.2d 1352 (1994). See also Fowler v. Rhode Island, 345 U.S. 67, 70, 73 S.Ct. 526, 97 L.Ed. 828 (1953) ("no business of courts to say ... what is a religious practice or activity"). In any event, religious "doctrine" is not the defining test whether imposition of a zoning requirement will impair the character of a religious building.

FN20. Because there was evidence that not all Mormon temples are topped by a figure of the Angel Moroni, the judge found the presence of the Angel Moroni "is not a matter of religious doctrine and is not in any way related to the religious use of the [t]emple." Catholic or Protestant religious services may be conducted in buildings that do not bear an exterior sign of a cross; that would not support a finding that a cross is "not in any way related to the religious use" of the building.

FN21. At the time of trial, the church had 110 temples operating or under construction worldwide.

The board found, and there was no evidence to the contrary, that **no municipal concern was served by controlling the steeple height of churches**. It concluded that **the height exemption requested by the church was reasonable in light of the function of a steeple**, and the importance of proportionality of steeple height to building height. Once it determined that the Dover Amendment was implicated, it was permissible for the board to consider whether something less than the original design of the steeple height was reasonable. It did so, and the church voluntarily amended its design to reduce the height of the steeple.FN22 We agree with the board that **a rigid application of Belmont's height restrictions for uninhabited "projections" would impair the character of the temple without advancing any municipal concern.**

FN22. In its initial application, the church proposed a temple that would be 94,100 square feet, fifty-eight feet high, with six steeples, the tallest of which would be 156 feet high. The church later submitted a revised plan that reduced the size of the proposed temple to 68,000 square feet, a height of fifty-six feet, and a single steeple of eighty-three feet.

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Because we conclude that the height restriction imposed on uninhabited "projections" under § 4.2.2 of the Belmont bylaws may not reasonably be imposed on the church because of the Dover Amendment, we need not address whether the judge impermissibly exceeded her authority in annulling the decision of the board to issue a special permit.FN23 We also need not consider whether the Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. § 2000cc (2000), prohibits the application of the Belmont height limitation to the church's proposed steeple. The judgment of the Superior Court is vacated. The case is remanded to the Superior Court. A new judgment is to be entered affirming the decision of the board of appeals of Belmont.

FN23. The board found that the **"benefits [of the church's proposed steeple] outweigh the burdens," and concluded that the height of the steeple was reasonable** "(a) as a Dover type regulation of height, (b) as a special permit matter or (c) a combination of the two."



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June 17, 2009

Tisbury Zoning Board of Appeals 215 Spring Street, P.O. Box 1239 Vineyard Haven, MA 02568

To Whom It May Concern:

Massachusetts Farm Bureau Federation is strongly in support of the appeal by Northern Pines Farm for construction of a "MET tower" on agricultural property at 60 Kuffies Point owned by Mr. & Mrs. John R. Packer. We believe that the denial of such permit by the Building Inspector creates a "catch-22" situation whereby a farmer/landowner is denied the opportunity to use alternative energy sources to reduce operating costs and make a farm more economically viable.

The Packer property is clearly historically a farm parcel; that is not in dispute. Energy is a normal farm input; that too is not in dispute. Any good farmer is constantly seeking ways to manage input costs, and energy is one of those cost centers that must be explored. The only way to effectively determine whether or not wind energy can be a viable tool in reducing energy costs is through testing via a MET tower.

Farm Bureau would argue that the structure itself, when designed for the purpose of determining energy opportunities to meet the needs of the farm, is exempt from zoning review under the agricultural protections afforded in MGL Chapter 40A, Section 3. Certainly the Town is within its rights to condition such a tower as it relates to public safety concerns; will it fall only on the landowner's property? Is it property beaconed to meet FAA requirements? Does it obstruct any vehicle sightlines along a public way? These are the kinds of questions that the ZBA needs to have answered and properly conditioned. However, to say that the structure is NOT agricultural under 40A;3 is outrageous. The purpose of this project is to reduce energy input costs to local farms, and local schools, and to increase profit opportunities for these farms. I cannot be any clearer that this MET tower is clearly a first step in achieving farm sustainability for farms on Martha's Vineyard.

We urge your approval of this project with appropriate conditions relative only to public safety.

Sincerely,

Allaspie

Douglas P. Gillespie Executive Director

Renewable Energy Trust

July 30, 2009

Ms. Clarissa Allen Mr. Mitch Posin Allen Farm, Inc. 421 South Road Chilmark, MA 02535

Re:

Notice of Financial Assistance Commonwealth Wind Incentive Program: Community Scale (Solicitation No. 2009-CWIPCS-01)

Dear Ms. Allen and Mr. Posin:

I am pleased to inform you that the Governing Board of the Massachusetts Renewable Energy Trust (the "Trust") has voted to approve your request for financial assistance from the Trust in an amount not to exceed \$41,000. This award and the release of any Grant funds are contingent on authorization, execution and delivery of the attached Award Documents **by August 27, 2009**. If the Award Documents are not executed and returned to Jeanne Napolitano, the Massachusetts Technology Collaborative's Grants and Contracts Administrator, by **August 27, 2009**, the Trust may, in the sole exercise of its discretion, rescind the Grant.

All communication and publicity regarding this Grant must be coordinated through Emily Dahl, Public Information Officer (508.870.0312 ext. 1-256). We look forward to working with you on the successful implementation of the Project. Please contact Elizabeth Kennedy or Tyler Leeds (508.870.0312, ext. 1-241 or 1-273) if you have any questions.

Very truly yours,

M.C. Wall

M. Carter Wall Executive Director Massachusetts Renewable Energy Trust

Enclosures

cc: Brian K. Nelson, Nelson Mechanical Design, Inc.



Federal Aviation Administration Air Traffic Airspace Branch, ASW-520 2601 Meacham Blvd. Fort Worth, TX 76137-0520

Aeronautical Study No. 2009-WTE-7938-OE

Issued Date: 08/20/2009

Brian K. Nelson Brian K. Nelson Mechanical Design, Inc. P.O. Box 4778 Vineyard Haven, MA 02568

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Met Tower Allen Farm Met Tower
Location:	Chillmark, MA
Latitude:	41-20-54.39N NAD 83
Longitude:	70-43-33.93W
Heights:	165 feet above ground level (AGL)
	263 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

At least 10 days prior to start of construction (7460-2, Part I)

___X__ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

As a result of this structure being critical to flight safety, it is required that the FAA be kept appraised as to the status of the project. Failure to respond to periodic FAA inquiries could invalidate this determination.

This aeronautical study included evaluation of a structure that exists at this time. Action will be taken to ensure aeronautical charts are updated to reflect the most current coordinates, elevation and height as indicated in the case description.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 08/20/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

Additional wind turbines or met towers proposed in the future may cause a cumulative effect on the national airspace system. This determination is based, in part, on the foregoing description which includes specific coordinates and heights . Any changes in coordinates will void this determination. Any future construction or alteration requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (718) 553-2611. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2009-WTE-7938-OE.

(DNE-WT)

Signature Control No: 648870-117917312 Angelique Lestrad Technician

cc: NACO w/map

brian@nmdgreen.com

From: Sent:	Correia, Anne - West Wareham, MA [Anne.Correia@ma.usda.gov] Wednesday, September 02, 2009 3:13 PM
Cc:	'allenfarm@vineyard.net'; 'briankingnelson@yahoo.com'; 'brian@nmdgreen.com'; 'Phil Burt'; 'kgalligan@capelightcompact.org'; 'djohnsonmorris@barnstablecounty.org'; 'wclark@umext.umass.edu'
Subject:	Congratulations

AGRICULTURE SECRETARY VILSACK ANNOUNCES MORE THAN \$13 MILLION TO HELP MEET COUNTRY'S RENEWABLE ENERGY NEEDS

http://www.usda.gov/wps/portal?contentidonly=true&contentid=2009/09/0417.xml

I will be in touch to start processing soon

Thanks

Anne Correía USDA - Rural Development 15 Cranberry Hwy West Wareham, MA 02576 508-295-5151 Ext 136

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