



## Memorandum

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September 10, 2020 (Rev. November 3, 2020)

TO: Mr. Alex Elvin, Martha's Vineyard Commission (MVC)

CC: Richard Andre, Vineyard Power (VP)  
Susan Nilson, P.E., Foth Infrastructure & Environment, LLC (Foth)

FR: Carlos Pena, P.E. (Foth)

RE: Tisbury Marine Terminal Project – 190 Beach Road, Tisbury, MA – Pre-Development of Regional Impact (DRI) Conference Call on June 24, 2020

Pursuant to our pre-Development of Regional Impact (DRI) conference call on June 24, 2020, with members and staff from the Martha's Vineyard Commission (MVC), kindly accept the below stated responses to questions asked during the conference call along with noted attachments:

- 1) Confirm TMT berth maintenance cycle: Tisbury Marine Terminal (TMT) expects to perform maintenance dredging every five to ten years.
- 2) Confirm no outside storage of hazardous materials and remove proposed fuel tank: There will not be any permanent outside storage of regulated waste or regulated recyclable waste. All regulated waste storage and handling procedures will be based on the waste generators classification and fully compliant with MADEP 310 CMR 30 and applicable United States Environmental Protection Agency (USEPA) regulations. Proposed dock fuel tank deleted from plans.
- 3) Coordinate Beach Road curb-cuts and utility connections with MassDOT: TMT has subcontracted with Greenman-Pedersen, Inc. (GPI) to coordinate curb-cuts and utility connections along with obtaining the Massachusetts Department of Transportation (MassDOT) Access Permits for the project.
- 4) Forward list of Required Permits, Studies, MassDOT Plans & Project Schedule: Attached, please find the following or as provided:
  - a. List of Required Permits (Previously Submitted)
  - b. Completed Studies:

- ♦ Applied Coastal: Sediment Transport Study.
  - ♦ Normandeau Associates: Essential Fish Habitat Study (pending).
  - ♦ Tighe & Bond: Traffic Report.
  - ♦ Greenman & Pedersen: Beach Road Utility and Curb-Cut Plan & MassDOT Access Permit (pending).
  - ♦ Field Engineering: Stormwater Report.
  - ♦ Vineyard Land Surveying & Engineering: Site Plan Approval (pending).
  - ♦ Saltonstall Architects: O&M Building Design/Build project.
- c. Copy of updated MassDOT Beach Road Plan – to be submitted prior to the Land Use Planning Commission (LUPC) meeting.
- d. Preliminary TMT Project Schedule:
- ♦ Permitting: April 2020 to May 2021.
  - ♦ Final Design & Bid Documents: March 2021 to June 2021.
  - ♦ Terminal Construction: July 2021 to January 2023.
  - ♦ Dredging: October 2021 to January 2022 or October 2022 to January 2023.
  - ♦ Building Construction: January 2022 to March 2023.
- 5) Forward copy of Tighe & Bond Traffic Report: Attached, please find the following:
- a. Tighe & Bond Traffic Report (Previously submitted).
- 6) Confirm container locations and heights: TMT will locate containers where needed in the terminal yard and on the piers. All containers shall be single stacked.
- 7) Confirm car and truck parking and circulation patterns: Attached, please find the following:
- a. Copy of Preliminary TMT Parking & Truck Circulation Plan (Previously submitted).
- 8) Add trees along Beach Road: TMT is working with GPI to specify previously MassDOT approved trees and plantings along Beach Road and as shown on the attached project plans (**Appendix A**).

- 9) Resolve proposed crosswalk and seawall conflicts: TMT will work with MassDOT to coordinate the location of proposed Beach Road crosswalks and light posts to accommodate the proposed TMT terminal and building. The proposed public beach landing has been modified to accommodate access from the crosswalk and as shown on the TMT project plans (**Appendix B**).
- 10) Confirm no helicopter landings at the TMT terminal: TMT confirms there will be no helicopter landings at the new terminal.
- 11) Confirm location and size of public beach at landing and address erosion issues: TMT proposes to construct a public beach at the landing site to grades and elevation consistent with regulatory requirements and as shown on the project plans. The proposed terminal and public beach landing have been designed to mitigate for any potential erosion issues.
- 12) Confirm proposed TMT operations schedule: To be submitted prior to the LUPC meeting.
- 13) Confirm homeland security measures for the TMT operations: To be further discussed with MVC during DRI application process.
- 14) Confirm public housing emergency assistance policy: To be submitted prior to the LUPC meeting.
- 15) Confirm workforce options: To be submitted prior to the LUPC meeting.
- 16) Confirm TMT Building Layout and Footprint: TMT is working with Saltonstall Architects to finalize the building layout and footprint (**Appendix C**).
- 17) Confirm coordination of project design and navigational requirements with the Steamship Authority (SSA): TMT is in the process of contacting the SSA and coordinating proposed project design and navigational requirements.
- 18) Confirm proposed TMT operations and schedules at the airport: To be submitted prior to the LUPC meeting.

## **Please describe TMT's Typical Operations Schedule**

Tisbury Marine Terminal's (TMT) Operation and Maintenance (O&M) facility is being designed and constructed to initially service one or more 800 MW to 1,600 MW wind farms in the Massachusetts/Rhode Island Wind Energy Area located in federal waters south of Martha's Vineyard. O&M activities are supported by a number of onshore and offshore supporting mechanisms to minimize potential downtimes and allow for the regular, effective, and uninterrupted flow of maintenance activities. The proposed O&M Facility includes office space, a warehouse, harbor area and quayside, and outdoor laydown area with car parking and shall be dimensioned to facilitate 25 to 40 personnel including office staff, and warehouse managers and technicians.

The building, including both warehouse and office space, will support the offshore wind operations. The office facilities for the staff will include reception, offices, meeting rooms, and welfare facilities. The office will have high speed internet capabilities for daily use. The warehouse will be designed to provide a safe and efficient operational flow and will include storage space for O&M consumables, access doors for deliveries, forklift and/or lifting facility for loading and receiving equipment, drying facilities for survival suits, lockers for personal protection equipment (PPE), hazardous product area in accordance with applicable Laws, and other required maintenance equipment.

A combination of accommodation vessels, crew transfer vessels and potentially helicopters are utilized during a wind farm's operation and maintenance phase. The TMT O&M facility will be the centralized location for O&M operations including material storage, day-to-day management of the wind farm, and dispatching of technicians. Due to the water depths in Vineyard Haven Channel and proximity to the Massachusetts/Rhode Island Wind Development area, crew transfer vessels (CTVs), service accommodation and transfer vessels (SATVs), and/or smaller monitoring vessels can be expected operate from TMT's O&M facility.

- Crew transfer vessels (CTV) are mainly used to transport offshore personnel and smaller cargo units and serve as 'point-to-point' shuttle vessels. CTVs can be used in water depths of 9 to 13 ft (3-4m) and have a typical draft of 6.5 to 9 ft (2-3m)
- Service accommodation and transfer vessels (SATV) are fully equipped, live-aboard vessel, that enables technicians to live comfortably on board without requiring daily port calls. This vessel is larger than a CTV and can remain out in the wind farm area for longer periods of time returning for spare parts, crew transfers, and refueling once to a few times a week. SATVs can be used in water depths of 9 to 16 ft (3-5m) and have a typical draft of 6.5 to 13 ft (2-4m)
- Other survey/monitoring vessels could be utilized for environmental mitigation or other miscellaneous/unscheduled maintenance work

Helicopter(s) may be used to support the vessel logistics. Note the supporting helicopter if required would not operate from TMT's proposed O&M facility.

The logistical approach will aim to have shared use, where possible, to maximize efficiency and minimize any potential environmental impact of the transport of personnel, materials, and tools. Depending on the logistics strategy selected and frequency of port calls, the daily workflow may vary at the O&M facility. Vessels, such as the SATV, may remain out in the wind farm area for a few days or a week at a time while others, like the CTV, will make daily trips to and from the wind farm area. Unexpected maintenance activities can reasonably be expected year-round. Due to higher accessibility, lower wind

speeds, and favorable working conditions (e.g. weather and wave height), more activities can occur during the summer months to complete anticipated and scheduled maintenance activities.

Office staff and warehouse managers are expected to arrive and depart the O&M Facility each day during typical working hours arriving in the morning and departing in the afternoon. As frequently as daily, technicians are expected to arrive to the site in the morning. An example of a typical daily workflow of technicians can be found in Figure 1 below. When technicians arrive, they will need to change into their protection equipment (PPE), gather maintenance equipment/tools, and be briefed on the activities of the day(s) including participation in safety trainings. When the vessel(s) are at the O&M Facility berthing area, they will be carefully loaded by crane from the quayside with any of the required maintenance equipment and spare parts for the particular activities of the day(s). The technicians are expected to then sail offshore, complete the maintenance activities, and return to the O&M facility at the end of the workday/week. Upon returning, the technicians will handle any waste, finish required reporting, utilize welfare facilities, and return home.

### Example of a typical daily workflow

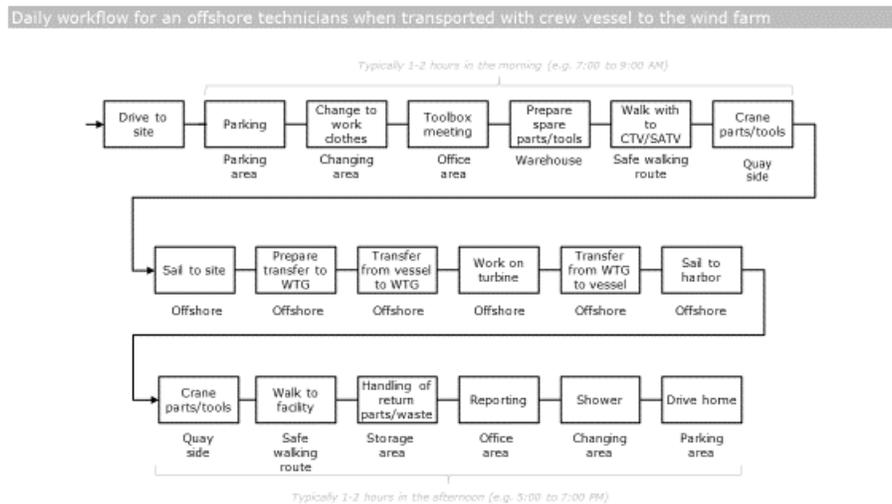


Figure 1 Example of a Typical Daily Workflow

## Describe Economic Development & Workforce Options

The Massachusetts Clean Energy Center *2018 Massachusetts Offshore Wind Workforce Assessment* provides a comprehensive analysis of the workforce needs and economic development impacts associated with the deployment of 1600 megawatts of offshore wind in Massachusetts. The report describes the jobs associated with planning, constructing and servicing offshore wind projects and provides information on the education, skills and health and safety credentials required for each job. Importantly, the report highlights the opportunities for Massachusetts residents to work in this

emerging industry, and identifies recommendations and key strategies to better position the Commonwealth, offshore wind industry, educational institutions, non-profits, and labor to develop and serve a burgeoning offshore wind workforce.

During the Operations & Maintenance phase of a project, the turbines, foundations, cables, and other components are inspected regularly, and any necessary repairs or upkeep are performed. These functions are needed during the full life of a wind farm which is estimated in excess of 25 years creating a project's longest lasting jobs. Beyond direct job opportunities, the offshore wind industry according to the Massachusetts Offshore Wind Workforce Assessment, will bring induced impacts driven by the reinvestment and spending of earnings by direct and indirect beneficiaries associated with increased business at local restaurants, hotels, and retail establishments.

Operating and maintaining offshore wind projects will require workers drawn from a diverse range of occupations that represent a wide distribution of skill and educational levels, ranging from white collar jobs such as environmental scientists and engineers to blue collar jobs such as machine operators. The workforce needs of offshore wind projects are well aligned with the education and skill levels of Southeast Massachusetts (SEMA) residents, a region characterized by traditional blue-collar urban areas bordered by more affluent suburbs. In referencing the *2018 Massachusetts Offshore Wind Workforce Assessment*, it is anticipated that in order to initially service 800 MW to 1,600 MW projects, up to 40 personnel including office staff, and warehouse managers and technicians could be required. Unexpected maintenance activities can reasonably be expected year-round. More activities can occur during the summer months to complete anticipated and scheduled maintenance activities. Further, the broad occupational needs of projects also provide opportunities for project staff to work their way up the occupational ladder within the emerging Offshore Wind (OSW) industry, whether through continuing education or on-the-job training and acquired experience during the project period. Notably, these steady and well-paying jobs will have a significant positive impact on Martha's Vineyard economy, which experiences severe seasonal fluctuations in employment due to its large tourism and building trades dependent economy. Adding long-term and high-quality year-round employment will significantly increase the number of opportunities for local workers to obtain presently unavailable stable sources of full-time year-round income.

Additionally, this proposed upgrade to the Tisbury Marine Terminal is consistent with the town's strategic objectives of maintaining a working waterfront and improving the Beach Road corridor for both business and recreational uses. The Vineyard Haven Harbor has been registered District of Critical Planning Concern (DCPC), by town residents in 2000, with the purpose to maintain and enhance the cultural heritage and economic vitality of the Vineyard Haven Harbor and waterfront, and to protect the health, safety and well-being of Town residents and visitors. Specifically, these regulations seek to maintain the Vineyard Haven Harbor as a year-round working waterfront with facilities for loading and unloading bulk cargo; to promote the Town's longstanding tradition of marine industries, services and maritime hospitality including ship design, building, and repair, traditional sail training and sailing yacht charters, and the provision of necessary services to visiting mariners; to enhance and protect views of the harbor and pedestrian access along the waterfront by discouraging waterfront development and by maintaining the beaches in their natural, unimpeded and unimproved condition; to protect fish, shellfish and wildlife habitats and improve water quality; to provide residents with opportunities for marine recreation; and to promote harbor safety, avoid harbor congestion and prudently manage the limited navigational resources of the harbor. The proposed upgrades will increase tax revenue and act as a local stimulus for the island economy.

Vineyard Power is assisting the local business, the Tisbury Marine Terminal, in promoting an opportunity for the development of their Vineyard Haven harbor facility as an offshore wind hub in order for the community to capitalize on the opportunity to provide key services to the burgeoning Massachusetts offshore wind industry. The Vineyard Power Cooperative, a member owned 501-c-12 non-profit, that is based on the island of Martha's Vineyard was formed in November 2009, with a Mission is to produce electricity from local, renewable resources while advocating for and keeping the benefits within our island community and its Vision is to make the island of Martha's Vineyard 100% renewable in electricity, transportation and home heating by 2040.

TMT has signed an Option Lease agreement with Vineyard Wind, contingent upon the Tisbury Marine Terminal Offshore Wind Hub being permitted and constructed in alignment with Vineyard Wind's construction schedule. Assuming Vineyard Wind achieves its required federal permits and meets other milestones, Vineyard Wind would likely be the first lessee of TMT's Offshore Wind Hub.

In January 2015, Vineyard Wind and Vineyard Power signed the nation's first, federally recognized, offshore wind Community Benefit Agreement (CBA) in the United States for offshore wind development. Vineyard Power Coop and Vineyard Wind's CBA aims to bring specific value from offshore wind development to Martha's Vineyard including, but not limited to, locating an operations & maintenance facility in Vineyard Haven harbor, local funding for workforce education & training, funding the development of solar & storage projects that will enhance the island's resiliency.

In May 2018, in a major step forward for the only Island-based partnership in the race to develop offshore wind, Vineyard Wind won the right to negotiate a 20-year state contract to build an 800-megawatt wind farm south of Martha's Vineyard. At the time of the announcement Governor Charlie Baker said "By positioning Massachusetts as a hub for the emerging offshore wind industry, this competitive procurement will ensure the Commonwealth continues to lead the nation in innovation and renewable energy generation." The administration stated that the Vineyard Wind project wound up being ranked number one in a complicated evaluation process, partly because of its stated commitment to community benefits, including workforce training.

Massachusetts Secretary of Energy and Environmental Affairs Matt Beaton said "A lot of folks on the Vineyard are well aware of the Vineyard Wind team creating their new home on the Vineyard, their commitment to wanting to make sure this first, largest-in-the-nation offshore wind development not only delivers in a cost effective way, but in a socially and environmentally responsible way". He concluded: "This puts Martha's Vineyard back in the spotlight for all the reasons we know — it is a place that is environmentally conscious . . . and now it has the potential to lead the way in creating clean energy for all of Massachusetts through offshore wind farms."

**In summary, the Tisbury Marine Terminal's Offshore Wind Hub could deliver the following:**

**Economic Benefits:**

- Will provide much needed year-round jobs for our island community.
- These jobs are anticipated to last for the entire project- which is expected to be for 25 years.
- This new sector will require technical skills and will diversify of our island economy.
- Brings economic development to our community by providing new economic opportunities in the offshore wind industry.

## Environmental Benefits

- Will support the reduction in global greenhouse gas emissions by providing critical services required to support offshore wind farm.
- Support of critical offshore wind farm infrastructure projects will be the biggest single measure we can take that addresses our need to mitigate climate change and have a positive impact on sea level rise and reduce potential negative impacts to our coast shorelines and ocean acidification impacts.

## Aligns with the Town of Tisbury Goals

- Project proposed upgrades to the Tisbury Harbor are consistent with the Town's strategic objectives of maintaining a working waterfront.
- Will improve the Beach Road corridor for both business and recreational usages.
- Enhance public access to the shoreline while maintaining the working waterfront
- Will support our efforts to become a 100% fossil fuel free economy.

## Other

- Project will maintain and improve Tisbury Marine Terminal marine infrastructure for critical island services
- Will create a centralized control facility that has the unique ability to provide operational and maintenance services for offshore wind farms.

## References Documents

Massachusetts Clean Energy Center: "2018 Massachusetts Offshore Wind Workforce Assessment"  
<https://files.masscec.com/2018%20MassCEC%20Workforce%20Study.pdf>

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## Describe TMT's response to the Martha's Vineyard Housing Policy

Tisbury Marine Terminal calculated affordability based on expected average salary of **\$70,000** for an offshore O&M technician as stated in *Massachusetts Offshore Wind Workforce Assessment*, and assuming 40 personnel for the below calculations. The project has also been advised by Mr. Delos "Dee" Lander, Senior Vice President, Rockland Trust, and by Jon Hartzband, Broker at Martha's Vineyard Island Wide Realty.

**We have provided several examples on housing affordability based on current information and assumptions.**

**1. Rent as an individual with an average salary for Offshore Wind Technician of \$70,000 (2018 Massachusetts Offshore Wind Workforce Assessment ; U.S. Bureau of Labor Statistics)**

The monthly household income of this employee will be \$5,833 before tax and an after tax income of approximately \$4,433 (assuming total tax rate of 24%).

With \$4,433 at the employee's disposal every month, and a **standard industry benchmark that your monthly rent is targeted on average 30% of your monthly net monthly income**, this would equate to a target rent of \$1,330 per month. The employee would be left with \$3,103 to spend on other common living expenses- a portion of this remaining money should go to savings while part of it should go to daily necessities such as groceries, transportation, clothing, dining out, home utilities, etc.

An additional industry benchmark is that certain landlords typically require that your annual income is at least 40 times the monthly rent. To determine how much rent an employee could afford, **simply divide your combined annual incomes by 40** which, in this case equate to \$1750 per month.

- **The average salary for an offshore wind technician would support a monthly rent in the range of \$1,330 to \$1,750 per month.**
- **The current rental market for a one bedroom apartment or, a private bedroom in a house with shared kitchen and private bathroom is currently between \$1,000-1,500 per month.**

## **2. Rent as a couple with an average salary for Offshore Wind Technician of \$70,000 plus a partner with a \$50,000 salary for a combined income of \$120,000**

The total monthly household income for this household would be **\$10,000** before tax and an after tax income approximately **\$7,600** (assuming total tax rate of 24%).

With \$7,600 at this household's disposal every month, and a **standard industry benchmark that your monthly rent is targeted on average 30% of your monthly net monthly income**, this would equate to a target rent of \$2,280 per month. This household would be left with \$5,320 to spend on other common living expenses- a portion of this remaining money should go to savings while part of it should go to daily necessities such as groceries, transportation, clothing, dining out, home utilities, etc.

An additional industry benchmark is that certain landlords typically require that your annual income is at least 40 times the monthly rent. To determine how much rent this household could afford, **simply divide your combined annual incomes by 40**, which equates to \$3,000 per month.

- **The average salary for an offshore wind technician household would support a monthly rent in the range of \$2,280 to \$3,000 per month.**
- **The current rental market for a one to two bedroom apartment is currently between \$1,500-2,500 per month.**

## **3. Purchase a 3-4 bedroom home as an individual with an average salary for Offshore Wind Technician of \$70,000**

Rockland Trust approves the loan amount of a mortgage based on the borrower's Debt to Income ratio. The base line ratio that they use is 43% and could increase to a maximum of 50% depending on the credit rating of the borrower, or if it is the borrower's first time home purchase. We will use the

conservative 43% ratio for our calculation. The debt includes local property taxes and home owners insurance plus any other debt including car loan, car lease, student loans and credit card debt. In addition, the debt obligation includes local property taxes and home owners insurance.

We have used a house purchase for \$700,000 with a 10% down payment, which equates to a mortgage application for \$630,000. We've assumed average property taxes of \$3,600/year, or \$300/month, plus insurance of \$150/month.

We've assumed a 30 year mortgage at 3.25 % which would amount to a monthly mortgage payment of \$2,742 and with taxes and insurance equal a monthly payment of \$3,192. This borrower's monthly Debt: Income Ratio would be  $\$3,192/(\$70,000/12) = 55\%$ .

**This borrower would not be able to borrow the \$630,000.**

**4. Purchase a 3-4 bedroom home as an individual with an average salary for Offshore Wind Technician of \$70,000 and rent out two bedrooms to friends or co-workers.**

We have used a house purchase for \$700,000 with a 10% down payment, which equates to a mortgage application for \$630,000. We've assumed the average property taxes of \$3,600/year, or \$300/month, plus insurance of \$150/month.

We've assumed a 30 year mortgage at 3.25% which would amount to a monthly mortgage payment of \$2,742 and with taxes and insurance equal a monthly payment of \$3,192. Certain lending institutions will give the borrower credit for 75% of the rental income for renting bedrooms in the house. The current rental market for a bedroom on Martha's Vineyard is approximate \$1,000/month and would boost this borrower's annual income by  $\$24,000 * 75\%$ , or \$18,000.

This borrower's monthly Debt: Income Ratio would be  $\$3,192/(\$7,000+\$18,000/12) = 43.5\%$ .

**This borrower would potentially be in a position to borrow the \$630,000.**

**5. Purchase a 3-4 bedroom home as a couple with an average salary for Offshore Wind Technician of \$70,000 plus a partner with a \$50,000 salary for a combined income of \$120,000**

We have used a 3-4 bedroom house purchase for \$700,000 with a 10% down payment, which equates to a mortgage application for \$630,000. We've assumed the average property taxes of \$3,600/year, or \$300/month, plus insurance of \$150/month.

Rockland Trust offers a 30 year mortgage at 3.25% would amount to a monthly mortgage payment of \$2,742 and with taxes and insurance equal a monthly payment of \$3,192.

This borrower's monthly Debt : Income Ratio would be  $\$3,136/(\$70,000+\$50,000/12) = 31\%$ .

**This borrower would be in a position to borrow the \$630,000.**

**In fact, this borrower would be able to borrow approximately \$875,000 and be in a position to purchase a \$975,000 home.** In this range, there is a far greater inventory and a wider selection

of bedroom count, guest apartments and multi-family living options. There are currently approximately 20 properties available in this price range.

Data provided by Jon Hartzband, Broker at Martha's Vineyard island wide realty - Via [Link](#) multiple listing service.

6. From time to time, the projects could require seasonal maintenance campaigns that will temporarily bring non-resident technicians to the island. These seasonal campaigns will be carried out sometime between June and September and coincide with the increase in island population and limited housing options. Currently, the potential companies can explore renting or purchasing homes for these seasonal workers and other industry visitors.

### **References Documents**

Massachusetts Clean Energy Center: "2018 Massachusetts Offshore Wind Workforce Assessment"  
<https://files.masscec.com/2018%20MassCEC%20Workforce%20Study.pdf>