MVC POLICY FOR DRI REVIEW

Energy

May 2021

This policy is one of a series prepared to help applicants and members of the public understand how the MVC evaluates proposed Developments of Regional Impact (DRIs), as mandated by its enabling legislation, Chapter 831 of the Acts of 1977 as amended.

The Commission is mandated to weigh the benefits and detriments of certain proposals to determine whether they should be approved, approved with conditions, or denied. Consult the Commission's website (mvcommission.org/DRI), or call the office at (508) 693-3453, to obtain the other necessary documents.

This policy reflects MVC practices in reviewing developments over the past generation. It is set forth in order to assist applicants in preparing proposals that address the Commission's concerns.

The Commission will use this policy during review of the benefits and detriments of a DRI, and to formulate conditions attached to DRIs that are approved. It should therefore be used by applicants to help design projects, and could serve as the basis of proposals or "offers" to offset anticipated detriments. Applicants are invited to consult the MVC staff for help in identifying which policies apply to their project.

This policy is generally a good indication of the Commission's concerns and can help the Commission evaluate the merits of a proposal. However, the Commission weighs the overall benefits and detriments of all aspects of a project, and evaluates each proposal on its own merits. Based on the particular circumstances of each proposal, the Commission could deny a project that respects some or even all of the policy, or might approve one that does not meet all parts of the policy. The Commission recognizes that there might be special circumstances whereby deviations from the policy are appropriate.

The Commission intends to review and update this policy at least once every five years.

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Adopted by the Martha's Vineyard Commission on May 6, 2021

1. BACKGROUND

Energy Use on Martha's Vineyard

The accelerating climate crisis sets a clear imperative for communities around the world to quickly and significantly reduce their consumption of fossil fuels. Although the impact of fossil fuels on the changing global environment has been understood for some time, increased public awareness of the gravity and urgency of the situation has led to demand for changes in policy. The MVC has issued this policy in response to the increasing need to reduce our consumption of fossil fuels. Energy sources on the Vineyard include oil, propane, gasoline, diesel, jet fuel, and electricity, with at least one third of that energy used for the heating and cooling of buildings.

Changes in the Island's energy mix over time are dictated by cost, technology, policies, regulations, and other factors. As of 2020, about 7.7 percent of the electricity on Martha's Vineyard was generated by on-Island renewable sources, and the rest by off-Island natural gas, nuclear, coal, oil, hydroelectric, and renewable sources. However, legislation adopted in Massachusetts requires utilities to provide an increasing portion of their energy from renewable sources over the coming years. In addition, the Global Warming Solutions Act (GWSA) of 2008 requires the state to reduce its greenhouse gas emissions 25% below 1990 levels by 2020, and 80% by 2050. Other pending legislation would set even more ambitious goals to address the crisis. Guided by various laws, regulations, and executive orders that build on the GWSA, the state is on track to meet the goal for 2020, but much more is required to meet the goal for 2050.

In 2019, the Martha's Vineyard Commission adopted an Emergency Climate Crisis Resolution (see attachment), agreeing to develop a framework for reviewing DRIs in light of the potential impacts of climate change on the Island, and to pursue official policies to that end.

Reducing our consumption of fossil fuels benefits the Island in several ways:

- ***Climate change mitigation:*** Widespread energy and greenhouse-gas emissions reduction by way of efficiency, conservation, reduced fossil fuel use, and renewable energy generation will help reduce the effects of climate change, which include more frequent and severe storms and flooding, the loss of coastal areas and infrastructure to sea-level rise, higher average temperatures, increased drought, and the risk of increased vector-borne diseases including Lyme disease. While this policy applies to only a small portion of development on the Island, our hope is that it will help establish a standard for Island towns to pursue in terms of zoning bylaws or other measures to reduce greenhouse gas emissions in the building sector.

- ***Reliability of supply:*** Because the Island depends almost entirely on imported energy, we face higher energy costs, and concerns about reliability. For example, fossil fuel prices are subject to fluctuation and volatility, and increased storms and flooding expose us to periodic interruptions in the power supply. On a longer timescale, the depletion of fossil fuels worldwide increases the potential of supply shortages and further price fluctuations that are beyond our control.

- ***Economic impacts:*** Energy costs on the Vineyard are especially high, and contribute significantly to our higher cost of living. Island gasoline prices are among the highest in the nation, and oil and propane bills are among the primary expenses for Island households. Furthermore, money spent on fossil fuel energy could instead be spent on local goods including renewable energy, and expanding business opportunities and renewable energy development on the Island.

- ***Traffic and infrastructure:*** Reducing the number of tank trucks delivering oil and propane on the Vineyard will improve the quality and safety of Island roads, reduce pressure on Steamship Authority ferries, and further reduce carbon emissions.

- ***Other environmental and health consequences:*** Burning fossil fuels, in addition to exacerbating climate change, results in air and water pollution that is changing the natural environment and endangering public health. In the past, the Cape and Islands have experienced some of the poorest summer air quality in Massachusetts.

2. GOALS AND OBJECTIVES

The goals of this policy are to 1) reduce or eliminate the consumption of fossil fuels, and the emission of greenhouse gases, associated with DRIs, 2) maximize the energy efficiency of DRI buildings, parking lots, and other structures, and 3) improve energy resilience. The MVC recognizes that these three goals cannot be achieved in one fell swoop. Accordingly, this policy sets forth a variety of strategies, techniques, and methodologies that may be used to assist in achieving the goals over time, including the following:

- Reduce carbon emissions.
- Design and implement efficient all-electric systems.
- Design for energy efficiency by employing widely used standards.
- Advance the development of on-Island renewable energy, by incorporating onsite solar and/or equivalent on-Island renewable generation.
- Facilitate the adoption of electric vehicles.

Targets and Approaches

In setting this policy, the MVC establishes clear energy-efficiency targets that are commensurate with the challenges we face. It also relies on methodologies that are as standardized and widely used as possible, and aims not to overburden applicants. To encourage improved energy practices, this policy establishes the following targets:

- All-electric design for new residential and commercial construction (while also discouraging onsite fossil fuel use for residential and commercial renovations).
- Energy efficiency targets based on established and widely used standards: the Massachusetts Stretch Energy Code (and Building Code), the International Energy Conservation Code (IECC) as adopted by Massachusetts, and the Environmental Protection Agency Energy Star program.
- Onsite renewable energy to the extent feasible.
- Pedestal-ready (or equivalent), or full electric vehicle charging stations for parking spots.

3. POLICY

In determining whether or not to approve a DRI project, the MVC assesses the overall benefits and detriment of the project. When assessing the energy impact, the MVC will evaluate the extent to which the application supports the goals of this policy, including the project's ability to achieve the energy targets set out below.

	Energy efficiency standard	Power source preference	Additional deliverables
1. RESIDENTIAL			
1.1 New construction (all sizes)	• MA Stretch Energy Code in towns where it has been adopted; otherwise MA Building Code	• All electric, including pools (excluding cooking and generators) • Onsite solar*	• Additional design review/modeling as part of application materials, if required
1.2 Modifications that amount to more than 50% of the existing floor area or current assessed value	• MA Stretch Energy Code in towns where it has been adopted; otherwise MA Building Code	• No additional fossil fuel-using equipment to be installed • Onsite solar for additional electricity usage*	• Additional design review/modeling as part of application materials, if required
1.3 Modifications that amount to less than 50% of the existing floor area or current assessed value and require a new heating and/or cooling system	• MA Stretch Energy Code in towns where it has been adopted; otherwise MA Building Code	• No additional fossil fuel-using equipment to be installed • Onsite solar for additional electricity usage*	
2. COMMERCIAL			
2.1 New construction, including residential components of commercial developments	• Energy Star design certification • International Energy Conservation Code	• All electric, including pools (excluding cooking and generators) • Onsite solar*	• Additional design review as part of application materials, if required • Affidavit by a registered building professional regarding IECC compliance • IECC preliminary commissioning report
2.2 Modifications that amount to more than 50% of the existing floor area or current assessed value	• Energy Star design certification • International Energy Conservation Code	• No additional fossil fuel-using equipment installed • Onsite solar for additional electricity usage* • Master plan for future transition to all-electric power provided to the MVC	• Additional design review as part of application materials, if required • Affidavit by a registered building professional regarding IECC compliance • IECC preliminary commissioning report
2.3 Modifications that amount to less than 50% of floor area or current assessed value	• International Energy Conservation Code	• No additional fossil fuel-using equipment installed	• Additional design review as part of application materials, if required • Affidavit by a registered building professional regarding IECC compliance, if required • IECC preliminary commissioning report
3. PARKING			
3.1 Stand-alone (under DRI Checklist 3.1) or associated with another project	NA	NA	• Pedestal-ready or equivalent (or full) electric vehicle charging stations for all residential and fleet vehicle spots • LED for all lighting

*To the maximum extent feasible.

4. PLANNING AND DESIGN PRINCIPLES

In addition to energy efficiency and greenhouse-gas reduction associated with a building's operation, all DRI applicants should aim to minimize their project's energy consumption by considering the following planning and design elements.

- ***Location and land use:*** Locate development (and incorporate mixed land uses such as commercial and residential development) to minimize reliance on vehicles and encourage walking and biking.

- ***Transportation:*** Encourage use of public transit, cycling, walking, and fuel-efficient vehicles.

- ***Siting:*** Wherever possible, preserve open space, locate projects on previously developed sites, or within a half-mile of basic services, and design a sustainable layout, in terms of shading, lighting, etc.

- ***Building location and orientation:*** Locate and orient buildings to maximize solar gain for heating, daylighting, and generating electricity.

- ***Solar-ready design:*** Design all buildings to allow for the installation of solar hot water and/or solar electric panels on the roof (either now or in the future), unless doing so would be impossible or inappropriate due to site conditions or historic context.

- ***Landscaping:*** Make landscaping choices with energy concerns in mind (shading, wind breaks, minimal irrigation and mowing, etc.).

- ***Materials and resources:*** Reduce building material waste and use environmentally sound materials, both in project construction and ongoing use.

5. APPLICATION OF THE POLICY, AND SUBMITTAL REQUIREMENTS

This section describes the key steps for designing a project in accordance with the Energy Policy. Applicants are encouraged to consult the MVC staff for assistance in applying the policy to their projects. Applicants are encouraged to complete these steps prior to the public hearing.

In the case of a DRI where the MVC will not be reviewing building plans (e.g. a residential subdivision), this policy shall nevertheless apply to all future buildings on the site. In such cases, the applicant should outline a procedure by which the builders of subsequent buildings, or a qualified building performance analyst, will demonstrate to the MVC that they are adhering to this policy. The MVC may also stipulate this measure in its conditions of approval.

Step 1: Determine the standards that apply.

Applicants will be required to submit a narrative outline of how each element of this policy is addressed.

Step 2: Calculate and confirm the energy efficiency of the project (if applicable).

For residential projects, and residential components of multi-use projects:

Design to achieve compliance with the MA Stretch Energy Code or MA Building Code, as applicable. Applicants should provide the Building or Stretch Code certification to the MVC as part of the application materials.

For commercial projects:

Design to achieve compliance with the International Energy Conservation Code and obtain the EPA "Designed to Earn the Energy Star" (DEES) certification by employing a qualified building performance analyst during the design phase of the project. (DEES certification does not apply to modifications that affect less than 50% of the total floor area.) If it is not possible to meet the DEES certification requirements, describe the limitations and outline other measures that will support the goals of this policy. Applicants should provide the appropriate Energy Star certification and/or an affidavit by a registered building professional regarding IECC compliance (as applicable) to the MVC as part of the application materials.

For energy-intensive commercial or residential projects, the MVC may require additional design review and/or energy modeling by an independent building performance analyst as part of the application materials.

Step 3: Consistent with the goals of this policy and the targets set out in section 3, provide information showing all-electric design and any onsite renewable energy generation (if applicable), or other mitigation measures.

Additionally, for projects with existing onsite fossil-fuel-powered equipment, applicants must provide information regarding the replacement of existing equipment at the end of its life. The commission may also require more detailed plans prior to issuance of a building permit.

Applicants are strongly encouraged to design the project with onsite renewable energy generation to the maximum extent feasible, as a goal.

Step 4: Provide a description of how the planning and design elements in section 4 of this policy have been addressed.

The planning and design elements outlined in section 4 should be described in a one- or two-page narrative submitted with the DRI application. In developing this narrative, the applicant may also consider the embodied carbon, or overall carbon footprint, of the proposed materials.

Step 5: Provide a plan for electric-vehicle charging stations (parking areas only).

All parking spots for fleet vehicles, and/or residential units, including multi-unit or mixed-use buildings, should include pedestal-ready infrastructure for electric-vehicle charging stations (or full stations). For parking spots that will be used for other purposes, the MVC may require the applicant to provide a plan for the future installation of electric-vehicle charging stations and/or the necessary infrastructure. All lighting for parking areas must be LED.

Post-approval steps

- *Submit IECC preliminary commissioning report.* The applicant shall provide the IECC preliminary commissioning report to the MVC prior to final inspection.

Submittal Requirements (Summary)

The following materials, as they apply to the project, should be submitted as part of the DRI application:

- Narrative outline of how each element of this policy is addressed (see step 1)
- MA Building Code, MA Stretch Code, or "Designed to Earn the Energy Star" certification; and/or affidavit regarding IECC compliance (see step 2)
- Information showing all-electric design specifications and any onsite renewable energy generation (see step 3)
- Narrative of the planning and design elements (see step 4)
- Plans for the development of electric vehicle infrastructure (see step 5)

Martha's Vineyard Commission 2019 Climate Crisis Resolution

The continued burning of fossil fuels, resulting in the emission of greenhouse gases, and the consequences of unsustainable development and extraction of resources are having a detrimental impact on the environment and are threatening the livability of our planet and, more relevantly, our island. Specifically, these factors are contributing to rising sea levels; extreme climate disruption; ocean acidification; adverse health impacts; economic destabilization; increased pollution and, ultimately, human survivability.

Chapter 831 of the Massachusetts 1977 Acts and Resolves, as amended, vests in the Martha's Vineyard Commission authority to protect the Island's "unique natural, historical, ecological, scientific, cultural, and other values." Chapter 831 recognizes that "[t]hese values are being threatened and may be irreversibly damaged by uncoordinated or inappropriate uses of the land". The Commission believes it is necessary and appropriate to exercise its authority to protect Island values in the face of the climate crisis.

Accordingly, the Commission RESOLVES to:

Develop a framework to enable the Commission to factor into its review and consideration of Developments of Regional Impact and regional policy and planning initiatives the imperative to reduce the detrimental impacts of the climate crisis on the Island and to secure the benefits of policies designed to minimize those impacts – to the intent of protecting the Island values, its people, economy and environment.

Support the non-binding resolution, to be presented at the spring Town Meeting of each Island Town by each Town's Energy Committee, the goals of which are to:

- Reduce fossil fuel use on the Island (from a 2018 baseline) by 50% by 2030 and by 100% by 2040;
- Increase the fraction of our electricity use that is renewable by 50% by 2030 and by 100% by 2040; and
- Foster biosphere carbon capture through:
    - » Adoption of regenerative agriculture and landscaping;
    - » Protection and expansion of wetlands; and
    - » Preservation of woodland resources.

Draft a Commission Master Energy Plan that is consistent with the goals set out in the non-binding resolution and that will assist the Island in meeting those goals.

Draft a Commission Master Adaptation Plan that will facilitate both Town and regional planning and implementation initiatives designed to improve resiliency in the face of the climate crisis.