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**RESPONSE TO COMMENTS ON THE DRAFT  
REVISED GREENHOUSE GAS EMISSIONS POLICY AND PROTOCOL**

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A draft of the Massachusetts Environmental Policy Act (MEPA) Revised Greenhouse Gas (GHG) Emissions Policy and Protocol (“the Policy” or the “GHG Policy” hereinafter) was published in the *Environmental Monitor* on February 10, 2010, which initiated the public comment period. The comment period closed on March 12, 2010. The Executive Office of Energy and Environmental Affairs (EEA) and the MEPA Office extend their appreciation to the organizations and individuals who provided comments on the Policy revisions.

Comments support the majority of the proposed revisions to the Policy, including the retention of a case-by case approach to the analysis, clarification of the project baseline for building-related emissions, elimination of the requirement to model an alternative with greater GHG emissions-related mitigation, requirements to use an energy model approved by the Internal Revenue Service (IRS), and the use of self-certification as an enforcement tool. Several comment letters urged the Policy be expanded beyond its specified scope to increase the number and types of projects that are subject to MEPA review and the Policy. In addition, many letters urged that all direct and indirect GHG emissions from all phases of a project be included in the analysis. After careful review, the following discussion summarizes the primary comments provided on the Policy (summaries of the comments received are presented in italics), provides EEA’s response to key issues raised by commenters, and identifies those instances where the Policy has been revised in response.

**PURPOSE OF THE POLICY**

***There should be a phased-in sequence of Environmental Impact Report (EIR) assignments used as research efforts to develop a gradual accumulation of credible and reviewed data.***

This suggestion proposes a completely different approach to addressing MEPA’s statutory obligations under the Global Warming Solutions Act of 2008 (Chapter 298 of the Acts of 2008) than the approach reflected in the current policy. The MEPA statute and regulations

(301 CMR 11.00) require every project proponent to identify the environmental impacts associated with the specific project and to ensure that state agency actions include requirements to avoid, minimize and mitigate the project's expected impacts. The MEPA Office therefore believes it is more consistent with the requirements and intent of MEPA to require every project to undergo a project-specific review of expected GHG emissions. The MEPA Office also believes that this type of project-specific review is required under the Global Warming Solutions Act, which amended the MEPA statute to provide that:

In considering and issuing permits, licenses and other administrative approvals and decisions, the respective agency, department, board, commission or authority shall also consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise. M.G.L. c. 30, §61.

Since 2007 when the Policy was introduced, numerous projects have submitted EIRs providing an estimate of project-related GHG emissions and proposing alternatives with lower GHG emissions. These projects have used modeling software to predict that significant emissions reductions are achievable through adoption of mitigation measures designed to reduce energy consumption and vehicle trips. Projects subject to the GHG policy that have completed MEPA review have provided agencies with emissions reduction data for numerous project types of varying sizes and scale. To date, projects that have completed MEPA review have estimated that they will reduce GHG emissions associated with energy use by an average of 16% below what is required under the current state building code. Mobile source GHG emission reductions have been estimated at an average of 6.5% below the construction design year Build Condition without Mitigation. The MEPA Office believes that these results are consistent with the intent and requirements of the amendments to the MEPA statute and to the Policy.

#### APPLICABILITY OF THE POLICY

***The Policy should establish significance thresholds for carbon dioxide equivalents in Environmental Notification Forms (ENFs) and EIRs to capture projects that may have substantial GHG emissions but are not subject to MEPA review because they do not trigger existing MEPA thresholds. Setting forth concrete thresholds for GHG emissions as part of the GHG Policy and Protocol will guarantee that every project that is likely to produce material GHG emissions will undergo review.***

The Policy and proposed revisions are intended to provide guidance regarding compliance with the MEPA statute and regulations (301 CMR 11.00). Nothing in the policy is intended to or should be construed to supersede the MEPA regulations. The Policy addresses the type of analysis required of projects that are currently subject to MEPA review and required to submit an EIR. It does not create any new MEPA review thresholds or require MEPA review where it is not otherwise required. The stakeholder working group convened by the MEPA Office considered whether an EIR threshold for CO<sub>2</sub> emissions should be established in the Policy and at what level of emissions the threshold should be established. The Secretary has determined that the establishment of an EIR threshold for CO<sub>2</sub> emissions will be addressed as part of a comprehensive effort to incorporate the concept of GHG emissions into the MEPA regulations in accordance with the Global Warming Solutions Act. Revised regulations are

expected to be released for public review and comment in accordance with M.G.L. Chapter 30A in the coming months.

***The GHG Policy and Protocol should require quantification of all GHG emissions from all phases and elements of proposed projects.***

Both of these issues were considered when the Policy was created and prior to drafting the revisions. To date, projects subject to the Policy with the potential to emit significant levels of GHGs other than CO<sub>2</sub> (e.g. landfills) are required to analyze these sources. In addition, revisions to the Policy clarify that under certain specific circumstances, quantification of indirect emissions associated with water and wastewater treatment, construction period emissions and land alteration will be required where these additional indirect sources of emissions are expected to be larger than average (e.g. very large users of water or wastewater generators). Examples of projects where these considerations are being applied include the Haverhill Municipal Landfill Capping (EEA No. 12626) and the Orleans Comprehensive Wastewater Management Plan (CWMP) (EEA No. 14415). In addition, because MEPA requires proponents to mitigate impacts to the maximum extent feasible, proponents are required to evaluate applicable mitigation measures and adopt them where feasible even if the impact of these measures on the project's emissions will not be quantified.

Based on the experience of the MEPA Office to date in applying the requirements of the Policy, and after considering the benefits associated with accounting for additional marginal emissions and the costs to proponents of generating the additional data, EEA believes that the major sources of GHG emissions associated with projects undergoing MEPA review are being accounted for. In the absence of any evidence that the Policy and its application are not addressing significant sources of GHG emissions associated with projects undergoing MEPA review, the current approach will be retained.

***The Policy should require quantification of all GHG emissions, including biomass power plants. These projects should be required to analyze GHG emissions associated with the burning of fuel sources as well as elimination of carbon sinks.***

Biomass projects that are subject to MEPA review and require preparation of an EIR are, and will continue to be, subject to the Policy. Certain biomass power plants will trigger a mandatory EIR under the current MEPA regulations due to their size and magnitude of environmental impacts. For those projects that do not trigger a mandatory EIR, the Secretary will carefully review all new biomass power plant proposals on a case-specific basis to determine whether an EIR is warranted in light of the project's likely environmental impacts, including its GHG emissions. Biomass projects that are subject to the Policy will be required to quantify their direct and indirect GHG emissions, and to evaluate all feasible measures to reduce and mitigate those emissions.

The Policy will not introduce new GHG thresholds or identify additional types of projects that will be subject to review at this time. However, as noted above, the Secretary has determined that the establishment of an EIR threshold for CO<sub>2</sub> emissions will be addressed as part of a comprehensive effort to incorporate the concept of GHG emissions into the MEPA

regulations in accordance with the Global Warming Solutions Act. With respect to applicability thresholds, the MEPA Office believes that CO<sub>2</sub> emissions from biomass combustion should be treated the same way as CO<sub>2</sub> emissions from fossil fuel combustion. The MEPA Office therefore expects that introduction of this new threshold will create a new requirement for many biomass power plants to prepare an EIR on a mandatory basis, thereby subjecting them to mandatory treatment under the GHG Policy. This treatment of biomass projects is consistent with the comments provided by MassDEP to the United States Environmental Protection Agency (EPA) urging EPA not to categorically treat all carbon dioxide emissions that result from combustion of biomass as “carbon neutral” for purposes of its proposed “GHG Tailoring Rule”. (See EPA Docket ID No. EPA-HQ-OAR-2009-0517 and MassDEP comments dated December 23, 2009).

Consistent with the methodology prescribed for other projects that involve process-related emissions (rather than building-related emissions), the Secretary will likely require projects that require the preparation of an EIR and that involve conversion of a significant amount of biomass to model categories of GHG emissions in addition to those identified in the Policy (i.e. direct emissions, indirect emissions from stationary sources and indirect emissions from transportation). The MEPA Office will work with the Division of Energy Resources (DOER) and EEA staff to develop appropriate analysis requirements and methodology for biomass power plants that are subject to the Policy. It is important to note that DOER has commissioned a study from the Manomet Center for Conservation Sciences to support its development of biomass policy and examine the sustainability of biomass power plants. This study may inform the development of the MEPA GHG analysis for these projects.

***The Policy should require proponents to consider the effects of climate change on a project and the project’s impacts on resources that are vulnerable to climate change.***

The stakeholder working group was asked to consider this topic, but did not make specific recommendations regarding the treatment of impacts and adaptation for climate change. As noted in the Policy, this issue will be addressed more comprehensively by the Advisory Committee the Secretary has separately established to assess climate change adaptation strategies pursuant to the Global Warming Solutions Act. The MEPA Office will review the Advisory Committee’s recommendations for how MEPA should approach this challenging issue and begin a separate process for establishing criteria for assessment of this particular environmental impact during the MEPA process.

In the interim, MEPA will continue to require the assessment of climate change impacts on a case by case basis and will identify these requirements in Scoping documents. An example of a project that required this type of analysis is the Waterfront Square at Revere Beach Project (EEA No. 14080).

***Public transit, pedestrian or bicycle projects are expected to have minimal or negative net emissions and their emissions should be considered “de minimis.”***

Many pedestrian and bicycle projects will have minimal or negative net emissions; however, a determination of whether emissions are “de minimis”, especially in regard to public transit projects, will be made during MEPA review of the specific project. GHG emissions associated with large public transit projects will vary depending on the type of project, proposed

routes and technologies, and should include consideration of secondary growth impacts. Analysis of GHG emissions will support efforts by the Massachusetts Department of Transportation (MassDOT) to minimize GHG emissions associated with transportation projects and/or demonstrate the GHG benefits of these projects.

***The Policy should include a sunset clause or be reconsidered within a few years (e.g. three to five years).***

It is anticipated that the Policy will be subject to periodic revisions as federal and state laws regarding climate change are implemented and evolve. Due to the rapidly evolving nature of the state of the art for analysis of GHG emissions, no specific sunset provision will be established at this time.

## QUANTIFICATION OF EMISSIONS

***Quantification of GHG emissions should be required as early as possible in the process and is crucial to meeting the mandates of the Global Warming Solutions Act. The Secretary should require quantification of GHG emissions as part of the ENF.***

As reflected in the revised Policy, the MEPA Office will apply the requirements of the Policy to all projects that require the preparation of an EIR (unless the project's emissions are considered de minimis). However, EEA has declined to expand the Policy to apply to projects at the ENF stage of review. Review of projects through an ENF filing is typically preliminary and conceptual in nature, and it would therefore be difficult to expect project proponents to undertake a detailed analysis of project-related impacts at that time. However, the Secretary will encourage every proponent to consider feasible mitigation measures for project-related greenhouse gas emissions at all stages of MEPA review.

***The ENF form should include more detailed descriptions of the development site and proposed land alteration plan to support the analysis of impacts associated with land alteration/clearing.***

See above.

***The Policy should recognize forest conversion as a potentially significant source of GHG emissions that should be considered as part of MEPA review. The Policy should include specific guidance on estimating forest-based GHG emissions and emissions reductions so that potential impacts and proposed mitigation measures can be adequately assessed. For example, EEA could compile existing data from the U.S. Forest Service's Forest Inventory Assessment (FIA) into a "look-up" table based on the most common forest types in Massachusetts.***

The Policy does recognize land alteration, which includes forest loss, as a potentially significant source of GHG emissions. As indicated in the Final Revised Policy, the Secretary will likely require any project that will alter more than 50 acres of land identify, quantify, and mitigate GHG emissions associated with land alteration. EEA believes that projects with the largest amounts of land or forest conversion (i.e. those that propose to alter greater than 50 acres) are the most appropriate types of project to begin implementing this requirement. However,

EEA is still in the process of developing a specific methodology for this type of analysis in a project-specific context. Based upon the experience of the MEPA Office in applying this requirement to projects that will alter greater than 50 acres of land, EEA will consider revising the Policy in the future to require additional analysis of land/forest conversion impacts by smaller projects.

***The Build Without Mitigation conditions should not be the sole baseline measure for transportation projects. These types of projects address a pressing public need or problem such as traffic congestion, access needs or inadequate transportation system capacity. Accordingly, the condition that represents the problem (i.e No Build) should be taken into account in the analysis.***

As noted in the revised Policy, the Protocol does not address every project type and scoping of the GHG analysis will be tailored to individual projects. The MEPA Office will work closely with MassDOT to scope the GHG analysis for transportation projects consistent with the specific project purpose, as well as the objectives of the Policy, to ensure that the analysis will provide adequate information regarding GHG impacts and the relative benefits of mitigation measures.

## MITIGATION MEASURES

***The Appendix continues to include many measures that may benefit the environment and potentially indirectly reduce GHG emissions but are not directly related to project GHG performance. The Appendix should segregate these measures from those for which, if applicable to a specific project, quantification might reasonably be expected.***

As the introduction to the revised Policy notes, the Appendix includes language clarifying that the GHG Policy has been updated and refined to provide more specific guidance to proponents regarding its use. It clearly states that the Appendix is intended to be a resource for all project proponents subject to the Policy; it is not a mandatory list of measures that must be modeled for every project, it is not limited to measures that can be analyzed with energy modeling software, and it includes some measures whose GHG reduction benefits may be indirect or difficult to quantify. The Appendix is intended to guide a reviewer or project proponent through the various measures that may be applicable to various aspects of its project. The MEPA Office believes that organization of the Appendix by type of analysis would reduce the usefulness of the document. The Scope for each project will further define what measures should be analyzed and how they should be analyzed.

***Measures in the Appendix that indirectly reduce GHG emissions should be eliminated including tree planting, thermal massing, demand control ventilation, and provision of electric vehicle charging stations.***

Many of the measures identified by the commenter have in fact been included as mitigation measures by certain project proponents. The MEPA Office believes that this

demonstrates that the measures are feasible for some proponents and can be considered during MEPA review even when projects are at an early stage of design. As noted above, the Appendix is intended to be a resource for all project proponents subject to the Policy, not a mandatory list of measures that must be modeled and committed to for every project including some measures whose GHG reduction benefits may be indirect or difficult to quantify.

***Minimization of disturbance of natural vegetation on a property is an essential element of sustainable design principles, and should be strongly encouraged for all projects involving significant amounts of land alteration. Retention of natural vegetation on a property has ancillary energy and climate change benefits including prevention of the immediate loss of stored carbon, provision of shading and wind buffers for building, reduction in water demand associated with irrigation and reduction of stormwater runoff.***

The Appendix will continue to include minimization of land alteration as a mitigation measure.

***Feasibility determinations should take into account funding available through existing state and federal programs aimed at reducing GHG emissions, such as the utility-administered energy efficiency programs.***

The Secretary has routinely required project proponents to account for funding available through existing state and federal programs aimed at reducing GHG emissions, such as the utility-administered energy efficiency programs, when assessing the feasibility of energy efficiency and other GHG reduction measures.

***The Building Mechanical Systems section should be expanded to include the use of heat recovery ventilation.***

The language within this section was reorganized to increase its clarity and includes heat recovery ventilation as a mitigation measure.

***The criteria of real, additional, verifiable, permanent and enforceable is inconsistent with the remainder of the GHG analysis and more appropriate for offsets that are legally required and/or part of a market transaction.***

The Policy prioritizes direct mitigation over off-site measures. Offsets were included in the Policy but there was agreement that offsets, including funding of programs, should be subject to verification standards to guarantee that the proposed project or funds result in the identified reductions. The purpose of the language is to ensure that the measures represent commitments to new GHG emissions reductions rather than a mere commitment to provide funding or implement a project that would have occurred absent the Policy.

***The Policy should recognize forest conversion as a potentially significant source of GHG emissions that should be considered as part of MEPA review. EEA should approve the optional purchase of forest offsets from the Climate Action Reserve (CAR) if onsite mitigation is not feasible or desirable.***

The MEPA Office will review offset proposals including contributions to the CAR program on a case-by-case basis.

#### ENFORCEMENT/SECTION 61 FINDINGS

***Mitigation and monitoring commitments should be detailed in permitting documents including: a timeline for implementation, milestones for specific achievements, expected levels of GHG reductions, performance metrics for evaluating effectiveness of reduction measures and requirements for alternative mitigation in the event of failed mitigation projects.***

The MEPA regulations require that EIRs include detailed mitigation measures, a timeline for implementation and identification of who is responsible for implementing and/or funding mitigation. Draft Section 61 Findings associated with each state agency action should memorialize the commitments and are subject to public review and comment as part of the EIR review process. Also, the regulations require that state agencies provide the final Section 61 Findings to the MEPA Office and publish the Findings in the Environmental Monitor.

***Public participation should be facilitated and encouraged. To that end, all information regarding the implementation and effectiveness of mitigation commitments, including all monitoring reports, should be submitted to the lead agency or the MEPA office in electronic format and accessible in print and online to the public.***

Currently, all reports, updates, comment letters or other documents pertaining to a project that are received by the MEPA Office are available for public inspection at the MEPA Offices (100 Cambridge Street, 9<sup>th</sup> Floor, Boston, MA) at any time upon request during regular business hours. Upon implementation of E-MEPA, an electronic filing and document storage program, all filings, comment letters, Certificates and other documents related to project review will be available in electronic format on-line.

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### **LIST OF COMMENTERS:**

- Massachusetts Department of Transportation
- Conservation Law Foundation
- Mass Audubon
- Joint letter from Charles River Watershed Association/Clean Water Action/Conservation Law Foundation/Environment Massachusetts /Environmental League of Massachusetts/Health Link/Mass Audubon/Mass Climate Action Network/Pacific Forest Trust
- Pacific Forest Trust
- Epsilon Associates
- National Association of Industrial and Office Properties
- Stephen Kaiser
- Airxchange
- Ellen Moyer
- Massachusetts Forest Watch
- Lee Allen
- Christina Marks
- Chris Matera
- Christine Pellerin
- Leonard and Susan Weeks
- Geoffrey Brown
- Margaret Sheehan
- Sandra and Charles Kosterman
- Edwina Kreps
- Glen Ayers
- Jesse R. Weeks
- Gretchen Brewer
- David Beebe
- Gene Theroux
- Bill August
- Hope Macary
- Jonathan von Ranson
- Tom Neilson
- Richard Stafursky
- Stuart and Lee Ann Warner
- Nan Finkenaur
- Sharon Friedner
- Wendy LaPointe
- Angela Rowan
- Jenny Hall
- Elizabeth L. Adams
- Pierre L. Belheumer

- Hazel Dawkins
- Diane Kanzler
- Joshua W. Lane
- Gary Greene
- Howard Stone
- John Cevasco
- John Haigis
- Jay DiPucchio
- Lee Ann Warner
- Yahara Katzeff
- Sandi Waskewicz
- Daniel and Jimena Jacome
- John Miller
- Claudia Hurley
- Katie Vitorino
- David Nordstrom
- Kate Albrecht
- Charles Michael Toomey
- Janet Masucci
- Susan
- Alexandra Dawson
- Patrice Pare
- Steve Vitorino
- Kristyn Mekal
- Hillary Lister
- Michael Muller
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