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## Massachusetts Issues Draft Protocol for Quantifying Greenhouse Gas Emissions from Development Projects

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On July 11, 2007, the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) published for public comment a draft policy on greenhouse gas (GHG) emissions (the Draft Policy), which establishes the protocol to be used to quantify GHG emissions associated with certain development projects. Under the Draft Policy, Massachusetts will become one of the first states in the nation to require developers to both quantify and mitigate emissions of greenhouse gases that are directly and indirectly generated from proposed development projects. Comments on the Draft Policy may be submitted to the Massachusetts Environmental Policy Act (MEPA) office until August 10, 2007.

The Draft Policy allows EOEEA to fully implement the two-step process set forth in its April 23, 2007, GHG emissions policy (the Original Policy). The Original Policy, currently in effect, interprets the MEPA to require developers of certain projects, including state agencies, to (1) quantify direct and indirect GHG emissions that would be generated by a proposed project, and (2) identify measures to avoid, minimize or mitigate these emissions. Upon the issuance of the Original Policy, Massachusetts became the first state in the nation to incorporate into its environmental review process the assessment of project-related GHG emissions. The quantification requirement in the Original Policy was suspended until EOEEA developed a standardized GHG quantification protocol, such as the one now proposed in the Draft Policy.

### **Projects Subject to the Original and Draft GHG Policies**

A project is subject to the Original and Draft Policies if it triggers the MEPA threshold for preparing an Environmental Impact Report (EIR), and if the project has one or more of the following characteristics:

- The project proponent is the Commonwealth or a state agency
- The Commonwealth or a state agency is providing financial assistance
- The project is privately funded and requires an air quality permit from the Department of Environmental Protection
- The project is privately funded and is (1) an office project that will generate 3,000 or more new vehicle trips per day; (2) a mixed-use project having 25% or more office space that will

generate 6,000 or more vehicle trips per day; or (3) a project that will generate 10,000 or more vehicle trips per day

### **Measures to Avoid, Minimize or Mitigate**

In accordance with the Original Policy, the MEPA scoping certificates issued by EOEEA since April 2007 have included a requirement, where applicable, that the developer identify and describe sources of project-related GHG emissions and propose measures to avoid, minimize or mitigate these emissions. Correspondingly, the EIRs for such projects must evaluate an alternative that incorporates such measures.

### **Proposed Quantification Protocol**

Under the Draft Policy, developers are required to identify sources of project-related GHG emissions, to quantify the emissions that result from those sources and to identify proposed mitigation measures that would result in emissions reductions and energy savings.

The quantification protocol focuses primarily on one GHG—carbon dioxide—for which there is readily accessible data. If a project is expected to cause significant emissions of other GHGs, the developer is required to identify the nature of those emissions in the project's Environmental Notification Form (ENF), whether or not a quantification protocol exists. If the scoping certificate issued by EOEEA in response to the ENF requires an analysis of those emissions, the MEPA office and EOEEA will provide guidance on appropriate quantification methods.

The Draft Policy requires that developers quantify “direct” CO<sub>2</sub> emissions (or emissions from the project's stationary sources), as well as “indirect” CO<sub>2</sub> emissions (or emissions associated with the energy consumed) and transportation generated by the project. EOEEA may require, on a case-by-case basis, that a developer model GHG emissions from additional emissions categories.

- **Stationary sources emissions** are emissions from on-site stationary sources at a facility, including emissions from fossil fuel combustion by boilers, heaters, furnaces, incinerators, ovens, internal combustion engines, emergency generators and combustion turbines. A developer must quantify direct emissions by estimating the fuel that will be consumed by the project's stationary sources and applying an emissions factor from a source, such as the Energy Information Administration (EIA).
- **Emissions associated with energy consumption** are those resulting from fossil fuel combustion to provide, for example, steam, hot water or cooling for a project. A developer must quantify these emissions and estimate the amount of carbon dioxide generated per megawatt-hour by using energy modeling software and applying an emissions factor. The Draft Policy recommends four software programs, but developers are free to use comparable programs.
- To quantify **transportation-related emissions**, a developer must estimate the net number of new customer, employee and truck trips that will be generated by the project, as well as the annual vehicle miles traveled (VMT) for these trips, and apply an appropriate emissions factor to convert the annual VMT into annual CO<sub>2</sub> emissions.

## **MEPA EIR Alternatives Analysis and Section 61 Finding**

MEPA requires project proponents to evaluate and implement alternatives that would minimize the environmental impacts associated with a proposed project. Consistent with this requirement, the Draft Policy states that the required alternatives analysis should compare the project's total baseline GHG emissions (that is, the estimated GHG emissions from the project **without** any mitigation) to the emissions that would result if the developer were to implement the studied alternatives. In keeping with the principles of the MEPA alternatives analysis, the developer must explain the reasons why specific alternatives were rejected, and discuss any trade-offs inherent in the GHG mitigation measures. GHG emissions reduction measures that are "selected" as part of the MEPA review process are then enforced through the "Section 61" findings made by either EOEEA or the applicable permitting agency.

## **Offsets and Opt-Outs**

The Draft Policy offers opportunities for those developers prepared to undertake cutting-edge measures to eliminate the obligation to submit the quantification analyses described above, and recognizes that the processes outlined in the Draft may not be realistic in every instance. Under the Draft Policy, EOEEA may allow developers to opt out of the quantification analysis if they commit in advance to exceptional measures to reduce GHG emissions. Conversely, EOEEA may allow proposals to mitigate emissions through off-site measures when avoidance and minimization measures are infeasible. Off-site mitigation measures could include the purchase of renewable energy for on-site use, the purchase of GHG reduction credits and the support of local or state climate action plans.

## **Conclusion**

Given the current level of national and international interest in addressing the issue of climate change, it is expected that other states may follow Massachusetts's lead in proposing to become one of the first states in the nation to require developers to both quantify and mitigate emissions of greenhouse gases that are directly and indirectly generated from proposed development projects. Comments on the Draft Policy may be submitted to the Massachusetts Environmental Policy Act office until August 10, 2007.

For more information on this or other environmental matters, contact the authors listed above.