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To:	SMART, DOER (ENE)
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I would like to address two very specific issues relative to the SMART program in Massachusetts. The first issue is the use of public monetary incentives to encourage the development of large-scale solar arrays on existing forested land. The second issue is the long-term safety of large-scale solar arrays.

The use of public monetary incentives to encourage the development of large-scale solar arrays on existing forested land, as is presently conducted by the Start of Massachusetts' SMART program, is an extremely poor public policy. This development of solar arrays on existing forested land requires the complete removal of trees (i.e. clear-cutting) of nearly double the area required by the actual solar array. In addition, the area under and immediately around the array needs to be "grubbed', a process in which all the tree stumps, brush, and organic material are removed, leaving a disturbed, bare, soil surface for the installation of the support structures for the solar panels and access lanes between rows of panels. This exposure of the soil, albeit with a subsequent planting of grass, can be a serious concern for high-slope areas as these exposed areas will inevitably erode and allow significantly more storm-water runoff and sediment to impact local streams and waterways in the neighborhoods and towns where these developments occur. This situation is particularly true for central and western Massachusetts where the forested lands are steeply sloped; existing lands with mild slopes have already been developed for agriculture, transportation, or urban and suburban land use. Removal of trees and other forest plants seriously degrades the ability of the land and soil to absorb and sequester carbon; this significantly off-sets the value of the use of solar arrays to reduce the amounts of carbon dioxide in the atmosphere from the use of fossil fuels for power generation. Forests also contain some of the very best wildlife habitat in the State, and to actively encourage the removal of forest as part of the SMART program is contributing to the further degradation and fragmentation of these wildlife habitats. In short - It makes no sense to cut down a forest to install solar panels with the intent of reducing the "carbon foot-print" of the region. Save the forests (!) and install the solar arrays in areas such as roofs, parking lots, and degraded lands such as brown-fields, landfills, sand and gravel pits, areas along highways, along with the dual-use of agriculture pasture under solar arrays. To use public money to create incentives for the removal of forested land, whether public or private, to install solar panels needs to end, period. A very simple change to eliminate presently forested land from the SMART program should be immediately implemented.

The safety of the large-scale solar arrays needs to be more carefully examined. Specifically, there have been reports of large-scale power fluctuations for homes in the vicinity of installed large solar arrays due to rapidly changing power output from these arrays due to local

weather conditions (clouds) in which a sudden increase in solar intensity creates a large "pulse" of electrical energy surging on to a power grid without sufficient on-site equipment to mitigate the surge. These power surges can lead to damage to electrical devices in nearby homes, and also creates the potential for electrical fires in those homes. In addition, there have been reports of instances (albeit in Japan) in which solar panels have been damaged from high winds from storms, allowing panels to come in contact with each other, causing short-circuiting, over-heating, and subsequently burning of the panels. The burning of solar panels could lead to serious public safety issues, along with release of potentially toxic components used in the construction of the panels. Safety should be the first concern in any SMART program, and these safety issues need to be addressed.

In conclusion, the State's policy of encouraging the development of large-scale solar arrays on existing forested land needs to be ended immediately. By this I mean that any large-scale solar array project that entails greater than incidental tree removal should not be supported by the SMART program. The policy of large-scale tree removal for solar array installation is both counter-productive to the stated goal of reducing the carbon foot print of the region, conserving wildlife habitat, and it imposes a significant burden on local communities already trying to deal with the impact of increased storm-water on existing infrastructure from increased rainfall created by climate change. We will all need to accommodate the impacts of climate change, but let's be a little careful in those accommodations so as not to create other problems, such as not cutting down the forests that hold back the water and soil during storms and are some of the best wildlife habitats in the State.

Thank you for the opportunity to address these issues.

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