

Comment on New England Ratepayers Association petition on net metering  
Docket No. EL20-42

Submitted on behalf of the Institute for Energy Research  
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The Institute for Energy Research submits the three attached papers regarding the impacts of rooftop solar on electricity markets. In short, incentivization of rooftop solar through net metering policies is harmful for three reasons:

- (1) As shown in IER's "Levelized Cost of Electricity from Existing Generation Sources," due to its need for backup capacity, new solar generation is a high cost source of electricity generation. Rooftop solar is even less efficient than utility scale solar generation. Subsidizing rooftop solar through net metering programs replaces cheap, efficient existing generation capacity with high cost, inefficient rooftop generation.
- (2) As described in IER's "The Solar Value Cliff: The Diminishing Value of Solar Power," the contribution of solar generation to grid capacity rapidly diminishes. At low penetrations, 5% of market share and less, solar generation can contribute to overall capacity. However, beyond 6% market share, the capacity value of marginal photovoltaic solar falls to zero as it no longer contributes to meeting peak load.
- (3) As shown in IER's "The High Cost of Rooftop Solar Subsidies," rooftop solar places expensive burdens on non-rooftop solar grid participants. This cost shifting tends to favor high-income households, which can afford rooftop panels, at the expense of low-income households, which must bear the grid maintenance costs no longer covered by rooftop solar households.