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Who does solar energy benefit? During peak periods, everyone!

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The summer has just started and already New England has seen a few periods of incredibly hot weather. In May, for example, 25 of 31 days were significantly hotter than the historical average. That means we've started-and continue to run-air conditioning systems in addition to all of our other electricity usage. In some areas, this collective increase of energy use can lead to brownouts, and businesses and home-owners may be asked by their utilities to limit their electricity usage during periods of peak demand. Some utilities may even increase costs for electricity used during certain hours that coincide with periods of peak demands.

What is peak demand? For electricity, it's a period or periods in which electrical power is expected to be provided for a sustained period at a significantly higher than average supply level. To meet this demand, utilities have to engage alternateâ€”and possibly less efficient and more expensiveâ€”energy sources to keep up with energy consumption and avoid brownouts. Enter solar energy. Peak periods of electricity use (from air conditioning, fans, etc.) generally occur in the afternoon on hot, sunny days. Coincidentally, solar's prime generation time is in the afternoon on hot, sunny days. The contribution of solar energy during peak demand is significant since reducing peak energy demand can help reduce the likelihood of brownouts and rolling blackouts when temperatures rise. An increase in solar energy produced during peak periods equals decreased demand on the grid, and decreased demand on the grid means lower costs of energy during peak periods. The reality is that solar has the potential to bring the price of peak energy down for ratepayers across the board.

Need proof? Here's a good example from California, which has perhaps more than its fair share of sunny afternoons. An early 2015 report from Wall Street consultancy Sanford Bernstein & Co. found that the rapid increase in the amount of solar PV available on the electricity grid in California (a seven-fold expansion in only four years, from 0.7 gigawatts (GW) in 2010 to 4.8 GW in 2014) had helped reduce system loads significantlyâ€”so much that peak prices were put off until later in the day, when demand was lower. Lower demand means lower prices. The report concludes that ALL power consumers in California benefit from lower afternoon power prices, not just those with rooftop solar PV panels.

While Massachusetts' growth is not quite at the levels of California's, the state has seen a rapid uptake in solar PV installations and it's reasonable to project what has been documented on the west coast can also work on the east coast.

There's also the obvious environmental benefit of installing solar energy-using renewable energy means we're reducing our dependency on fossil fuels and adopting cleaner ways of producing energy - and that's a win-win for everyone. Companies CAN make a difference by considering solar as part of their overall business strategy.

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