



## Working from home will change NYC's energy landscape

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Get ready—we are going to be spending a lot more time at home. Telecommuting has grown over 80% from 2005, and this number is expected to rise given that 79% of American laborers hope to work remotely at least part-time. The trend saves money for companies too—around \$11,000 per year for each full-time telecommuter (Global Workplace Analytics).

The capability to work remotely also makes for a good insurance policy when inclement conditions prevent travel. The federal government estimates it saved \$32 million during four snow days in 2013/14 due to federal employees' ability to work from home. The trend towards remote work will continue, especially as enterprise cloud computing enables employees to tap into private corporate networks from the comfort of home.

What could the home office paradigm mean for real estate in NYC? How will this shift our building stock's energy and environmental footprint? It's likely that commercial office space will experience reduced energy use throughout the city, with much of that load dispersing to residential stock consisting of tenants powering tablets, smart phones, computers, and electric heating and cooling throughout the day.

This paradigm shift could be a beneficial for New Yorkers - less time and fewer resources spent on transportation—but the change could pose serious challenges. Electronic devices have already increased residential energy demand. In the commercial sector, energy use has flattened during the past 15 years—largely because they are run by engineers and operations managers with mandates to invest in cost- and energy-saving technologies. Tenants spending more time at home (especially during those 2 to 6 p.m. peak demand hours) may be surprised to see their energy bill and carbon footprint grow once separated from company operations. Many individuals will find that their residences are less resilient, lacking the storm-hardening and backup power upgrades installed to mitigate the risk of events like Superstorm Sandy, which flooded 51 square miles of the city. Still, this risk is more distributed, which offsets some of the vulnerability.

In the near term, employees will shift from spending a majority of their week at the office to spending more of their work day at home. Residential properties will begin seeing a spike in daytime energy consumption. The finger has long been pointed at the commercial building stock to reduce energy consumption and environmental footprint. As server rooms, telecommunication closets, and workers themselves leave conventional NYC office buildings, the finger will turn towards the residential sector.

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