Forbes
GREEN TECH 9/21/2014

New York's Billion Dollar Bet On Energy Efficiency

By **Michael Kanellos**

Efficiency advocates have touted for years that efficiency is far and away the most economical form of energy available. Now they are going to have the opportunity to prove it on a grand scale.

New York City will formally unveil a plan tomorrow that will involve investing $1 billion into making public buildings more energy efficient over the next ten years. The changes will involve swapping out old lights for LEDs, replacing aged air conditioners and other changes. In the end, the goal is to reduce emissions by 80% by 2050 compared to a 2005 baseline. Like his predecessor, DeBlasio is also out to get building owners to embrace efficiency.

Expect to see many of these efficiency measures backed by financing plans such as MESA, PACE or bill-on-pay that effectively allow upgrades to be funded through savings. Energy efficiency retrofits are drawing a growing number of institutional investors, as companies promoting these ideas say they can retrofit buildings, curb energy consumption and earn a steady 6% plus return for investors.

The initiative will help kick off a United Nations conference on climate change in the city.

Buildings account for roughly 40% of energy use nationwide, but have a disproportionate impact in large cities like New York, where buildings consume around75% of all energy.

Will it work? Efficiency can be challenging. You can calculate with a fair degree of accuracy how much energy an individual solar array will produce over a 30 year period. Efficiency gains vary from building to building and can be impacted by such unpredictables as tenant behavior. But in general, yes, efficiency works. LEDs linked to networks that dynamically dim lights can cut light power by up to 90%.

The Empire State Building conducted a massive energy retrofit a few years ago that is saving the building owners $4.4 million a year. Another benefit: resiliency. The heating systems in a number of buildings got knocked out during Hurricane Sandy. To that end, landlords are looking at ways to replace district steam heating with new types of heating. Efficiency and resiliency can be accomplished in the same retrofit.

The stumbling block that has held back efficiency for years has been uncertainty. Better software and new financing models, however, are dramatically winnowing away any doubt. Property owners really do now face a choice between paying a large amount of money to utility every month or returning it to themselves and their partners. The main impact of this program could ultimately be in showing investors that efficiency isn't as difficult as it seems.