Memo

To: MEETS Coalition Members
From: Rob Harmon, Director
Date: November 3, 2016
RE: Market Assessment

I recently received a request for an assessment of the potential market for MEETS in the U.S. Needless to say, the market is "huge" and just how huge is dependent on many variables. Below is an assessment I did in late 2014. I don't believe the numbers would need much updating.

Industry and Market Analysis

Market Size

Market size estimates for the energy efficiency market vary, and are dependent on the analyst's view of how much savings is cost-effective. Policy advocates tend to value the investable opportunity in the United States at hundreds of billions. ($279 Bn. investment opportunity with ten-year savings on the order of $1 trillion[1], according to one source; $580 Bn. investment opportunity according to another.[2])

Market and Growth Drivers

Near-term growth will be driven by a combination of factors including:

- Desire by utilities, energy service companies, building owners and others to "pay for performance" (metered energy efficiency), to insure they only pay for realized value rather than relying on deemed savings.
- More generally, desire to reduce dependency on both domestic and foreign fossil fuels for energy production, energy security, and to augment other sustainable energy sources.

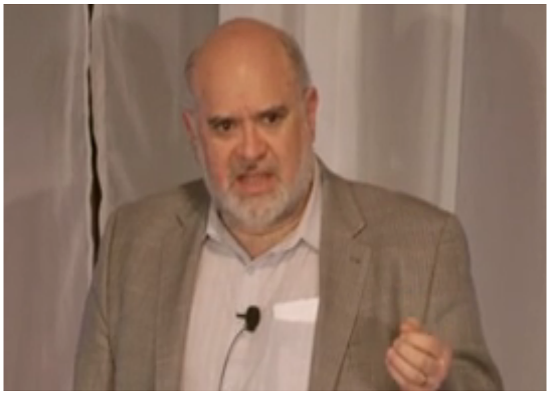
Long-term growth will be driven by the desire of:

- Utilities to re-characterize energy efficiency as part of a growth strategy in which they can invest and grow revenues and returns.
- Building owners to substantially upgrade buildings with outside capital.
- Investors to capture long-term cash flows from stable assets.

[1] United States Building Energy Efficiency Retrofits Market Sizing and Financing Models (March 2012), (Rockefeller Foundation and DB Climate Change Advisors, http://www.rockefellerfoundation.org/

[2] McKinsey, 2009

Underlying the growth of the market is a consistent, long-term, sustained push at national, state, and local government levels to maximize efficiency as a resource.



CPUC Commissioner Michel Florio, explaining California's policy requiring all cost effective Energy Efficiency to be harvested before new generation can be deployed. (Video of presentation "Cracking the Code in Energy Efficiency", at 17:55 (see footnote)

The views of Michel Florio, Commissioner of the California Public Utility Commission, are illustrative.

"Long term, California has very aggressive carbon reduction goals and there's just no way to get to the 2050 targets without energy efficiency being a key component of that."

"We have an institutional market failure here, where no actor is in a position to capture the [full value of efficiency as realized by the building]."[3]

This institutional market failure is exactly what MEETS was designed to allow the capital markets to address. New York and other states have similarly ambitious goals.[4]

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[3] Mr. Florio spoke on June 17, 2014 at Equilibrium Capital Group, LLC's Forum in San Francisco. His remarks are available at http://vimeo.com/106023463. Mr. Florio also spoke to the MEETS transaction system: "What is exciting to me about the MEETS concept is for the first time we are… able to measure the change in consumption that an energy efficiency investment creates, and monetize that investment so a third party investor or the utility itself can capture that full 20-30 year value stream."

[4] See, eg, *De Blasio Orders a Greener City, Setting Goals for Energy Efficiency of Buildings,* http://www.nytimes.com/2014/09/21/nyregion/new-york-city-plans-major-energy-efficiency-improvements-in-its-buildings.html?_r=0 , and the backlash: *Landlord group sees red over de Blasio's green energy plan* - http://therealdeal.com/blog/2014/09/29/trade-group-slams-de-blasios-energy-efficiency-program "A trade group representing rent-regulated housing landlords is warning that changes to a program designed to promote energy efficiency could hit small building owners with big costs."

Historically the national governments of the world's largest energy consuming economies – the U.S. and China – were laggards in this policy process worldwide, but in November, 2014, the world saw tangible evidence that China– now the world's largest energy consumer and world's largest greenhouse gas emitter – intends to step up its efforts on efficiency and energy consumption growth, with the announcement of the U.S.- China compact on climate.

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U.S. and China announce climate deal

NEW LIMITS ON GREENHOUSE GASES

Xi agrees to a cap on carbon emissions by 2030

BY DAVID NAKAMURA AND STEVEN MUFSON

BEIJING — Chinese leader Xi Jinping and President Obama struck a deal Wednesday to limit greenhouse gases, with China committing for the first time to cap carbon emissions and Obama unveiling a plan for deeper U.S. emissions reductions through 2025.

China, the world's biggest emitter of greenhouse gases, pledged in the far-reaching agreement to cap its rapidly growing carbon emissions by 2030, or earlier if possible. It also set a daunting goal of increasing the share of non-fossil fuels to 20 percent of the country's energy mix by 2030.

Obama announced a target to cut U.S. emissions 26 to 28 percent below 2005 levels by 2025, the first time the president has set a goal beyond the existing 17 percent target by 2020.

The announcement capped a trip that also resulted in steps to cut tariffs on technology products, adopt warning measures to reduce the chance of accidental military conflict, and ease visas.

The two countries together account for about 40 percent of the world's greenhouse-gas emissions, and their commitments are likely to energize talks underway to set new post-2020 targets when climate negotiators meet in Paris in December of next year.

"The announcement provides a real shot of momentum for international climate negotiations," one administration official said before the joint announcement

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In addition, the 2015 Paris Climate Agreement calls for significant cuts to GHG emissions globally. As of October 2016, 192 UNFCCC members have signed the treaty, 94 of which have ratified it.[5]

[5] https://en.wikipedia.org/wiki/Paris_Agreement