



Identifying Opportunities for Financing Multi-tenant Projects

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Stephanie Sienkowski

ACEEE

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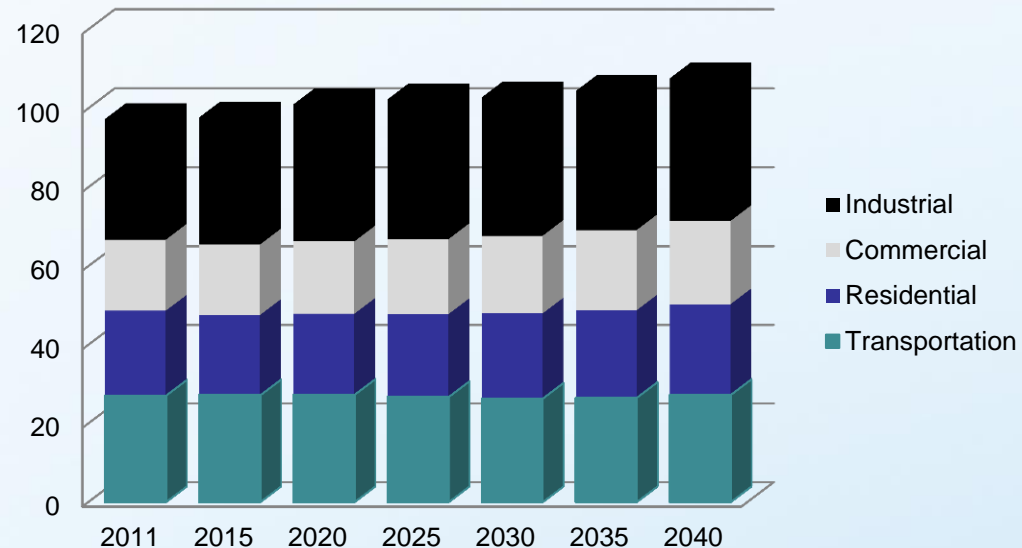
According to an estimate by the U.S. Department of Energy, 30% of energy in buildings is used inefficiently or unnecessarily and every year \$20 billion can be saved if the energy efficiency of commercial and industrial buildings improved by 10 percent. – (DOE 2012)

Overview Of The Market

- Scaling EE retrofits is a \$279 billion investment opportunity.
- Create > 3.3 million new direct and indirect cumulative job years in the U.S.
- Mitigate over 600 million metric tons of CO₂ per year (~10% of US emissions in 2010).
- Biggest opportunity in residential space. – (Deutsche Bank & The Rockefeller Foundation 2012)

The Rockefeller Foundation and DB Climate Change Advisors. 2012. "United States Building Energy Efficiency Retrofits: Market Sizing and Financing Models."
https://www.dbadvisors.com/content/_media/United_States_Building_Energy_Efficiency_Retrofits.pdf. Frankfurt am Main: Deutsche Bank AG.

Energy use (quadrillion BTU)



Expected growth from 2011-2040:

- Transportation .7%
- Residential 6.7%
- **Commercial 17.3%**
- **Industrial 18.2%**

(EIA 2013)

Common Energy Efficiency Barriers

Split-incentives with multi-tenant buildings

- Neither the owner nor tenant wants to bear the cost of the retrofit because the other will gain
- Long lease lengths make it difficult to negotiate retrofits because parties prefer letting leases expire to amending existing leases

Valuation

- Customers do not see the value in spending money to install EE upgrades
- Banks rarely consider energy efficiency investments when underwriting

Competing investment priorities

- Buildings are required or urged by various entities to install systems, making environmental upgrades potentially a lower priority

Upfront capital costs

- Limited debt capacity for Class B and C buildings
- Long payback periods

Owner-Tenant Models And Challenges

- Buildings are owned and managed in a variety of ways
- Different markets have very different needs and opportunities
- No one size fits all approach to attractive financing

Single-tenant buildings are easier to reach

Owner-occupied

- Challenges – good credit and proof that savings outweigh costs

REIT

- Challenges - proof of increased building value

Multi-tenant and multi-family buildings are harder to reach

Owner Pays

- Challenges – tenant space is invaded, leases must be renegotiated.

Tenant Pays

- Challenges – payback period of upgrades, owner's approval to renovate space, support of other tenants.

Financing Mechanisms

Mechanism	Upsides	Downsides
On-bill financing/On-bill repayment	Can be structured to “follow the meter,” decreasing upfront capital cost and stretching repayment out over a long period.	Availability is still limited and there is not much capital available for large projects. Best for small businesses.
Property assessed financing (PACE)	No upfront cost, ability to transfer ownership, financing is off balance sheet.	Needs significant regulatory support and standardization at the state level.
ESCO financing	Provides turnkey project development. ESCOs assume technical and performance risks of projects.	MUSH markets are preferred because those buildings typically have stable energy loads and good credit.
Energy service agreement (ESA)/Managed energy service agreements (MESA)	Mitigates high upfront capital costs and does not require enabling legislation. The investment fund pays for and installs the upgrades.	This relatively new structure. Potential legal ramifications of changes to FASB.
Performance-based contracting	No upfront capital costs. Repayment is calculated through savings.	Buildings with good credit are preferred for these projects.

Complimentary Solutions

Credit enhancement financing mechanisms reduce the risk to the financier and can extend the payback period

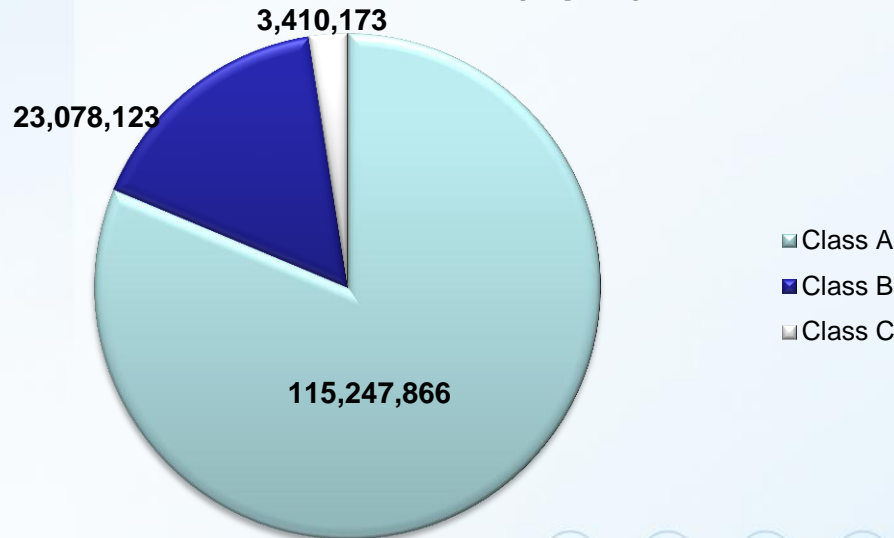
Green leases reduce the split-incentive problem

Sub-metering can assist tenants in controlling their energy use and potentially drive demand for improvements

Comprehensive benchmarking, which includes recording, reporting and utilizing data appropriately, can help green leasing and financiers make sound investment decisions

New York City Case Study

New York City LEED or Energy Star Certified Market (sq. ft.)



(Costar 2012)

The city estimates that the laws will generate \$700 million in savings and create roughly 17,800 construction jobs over ten years – (IMT 2012)

- High potential for efficiency in Class B and C buildings.
- Greener, Greater Buildings Plan:
 - Large buildings must benchmark efficiency annually
 - Conduct an audit and retro-commissioning study every 10 years
 - Upgrade lighting to meet code and install sub-metering
 - Adopt the local energy code – (PlaNYC 2012)

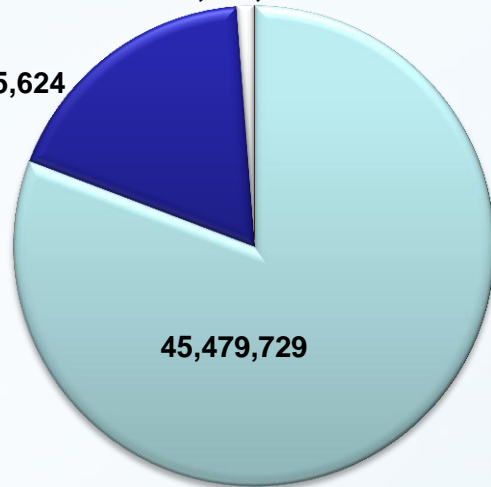
Seattle Case Study

Seattle LEED or Energy Star Certified

Market (sq. ft.)

22,024,017

71,235,624



■ Class A
■ Class B
■ Class C

(Costar 2012)

In January 2010, the Seattle City Council passed CB 116731, establishing mandatory energy performance disclosure in commercial and large multi-family buildings. – (BetterBricks and Cushman & Wakefield)

- Seattle's hydropower base makes energy significantly less expensive than in other parts of the U.S.
- Many Class C buildings are targeted for demolition and redevelopment.
- Puget Sound Energy works with designers and developers of major remodels and new commercial facilities, and proposes cost-effective energy efficient upgrades that exceed energy codes or standard practice – (PSE 2011)

Questions?

Casey Bell

ACEEE

(p): +1-202-507-4746

(e): cbell@aceee.org

Stephanie Sienkowski

ACEEE

(p): +1-202-507-4042

(e): ssienkowski@aceee.org