Engaging Commercial Tenants and Occupants in Energy Efficiency

June 6, 2018
Today’s Speakers

• Cindy Jacobs, Senior Advisor, EPA ENERGY STAR

• Daniel Egan, Vice President, Head of Sustainability and Utilities at Vornado Realty Trust

• Will Teichman, Senior Director of Strategic Operations at Kimco Realty Corp.

• Sam Stockdale, VP Global Real Estate at JPMorgan Chase
Ideas and Examples from ENERGY STAR

- Successes in Sustainability: Tenants and Landlords Team Up on Energy Efficiency Case Study Report
- 8 Great Strategies to Engage Tenants
- Energy Efficiency Competition Guide
- Bring Your Green to Work

www.energystar.gov
Energy Efficiency Improvement Act of 2015

• Focused on significant potential for energy savings and environmental benefits through greater efficiency in tenant spaces

• Directed EPA to develop recognition for efficiency tenant spaces as part of a “voluntary program within…Energy Star… to promote energy efficiency in separate spaces leased by tenants.”
2018 ENERGY STAR®
CHARTER TENANT SPACE

This space has been verified
to meet energy design criteria
set by the U.S. EPA
Pilot: Charter Tenants

- Launched in fall of 2017 with office tenants
- EPA worked with Charter Tenants (and landlords where involved) to test concept and implementation
- DOE labs (PNNL and NREL) provided analytical support
- More interest than anticipated
  - Over 140 spaces started in pilot
  - Close to 50 have completed all the steps for ENERGY STAR Charter Tenant Space recognition
How Did Charter Tenants Earn Recognition?

• Met 5 criteria and completed an application provided by EPA
  1. Estimated energy use
  2. Meter
  3. Light efficiently
  4. Purchase efficient equipment
  5. Share Data

• Had a Professional Engineer or Registered Architect verify the information and stamp the application

• Submitted the completed, stamped, and signed application to EPA
Next Steps

• June 12: Announcement of ENERGY STAR Charter Tenant Spaces
• Assess results of pilot and determine effort needed for market-scale recognition
• Work with DOE/labs to improve and refine analysis
• Stay tuned at [www.energystar.gov/tenantrecognition](http://www.energystar.gov/tenantrecognition) for updates
Vornado Sustainability Timeline

2007: Merchandise Mart gains LEED Silver Certification in Chicago (largest LEED Certified building in USA).

2009: Vornado commissions 6.2 megawatt cogeneration plant at One Penn Plaza.

2011: Vornado installs 1 megawatt solar panel installation on the roof of Bergen Town Center in Paramus, NJ.

2014: $450 million issued in Green Bonds; proceeds to go towards energy efficiency and sustainability work.

Early 2000s: Vornado develops electricity submetering network to visualize and manage energy consumption.


2008: Vornado establishes corporate sustainability program, commitment to energy efficiency, resource conservation.


2012-present: Vornado launches Energy Efficiency Capital Expenditure program, dedicating funding to projects whose energy and resource conservation have a measurable reduction to operating expense.
Submetering Legislation in VNO Markets

California: Title 24
- Newly installed electrical service must be equipped with metering that measures both instantaneous consumption and demand readings.
- Electrical power distribution systems to permit disaggregation of loads downstream from the service meter.

New York: Local Law 88
- Commercial spaces over 10,000 SF must be submetered if direct meter service is not available.
- Landlords must present tenants with consumption information on a monthly basis.
Submetering and Energy Efficiency

**Split Incentive:** When tenants do not pay their own electricity, they are not financially incentivized to reduce consumption.

**The Need to Collaborate:** Without a transactional relationship in place, Landlord and Tenant often do not interact on energy consumption.

**Recognized Best Practice:** Submetering for electricity is a requirement to achieve Energy Star for Tenant designation.

<table>
<thead>
<tr>
<th></th>
<th>Resolves Split Incentive Issue</th>
<th>Brings Together Landlord and Tenant</th>
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</thead>
<tbody>
<tr>
<td>Electric Rent Inclusion</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Direct Meter</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Submeter</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
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2017 ENERGY STAR TENANT SPACE
This space has been verified to meet strict energy design criteria set by the U.S. EPA
## Portfolio Investment in Submetering

### Electricity Submeter and Direct Meter Tenants by Property Type

<table>
<thead>
<tr>
<th></th>
<th>Submeter</th>
<th>Direct Meter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Tenants</td>
<td>%</td>
</tr>
<tr>
<td>Office</td>
<td>86%</td>
<td>1,098</td>
<td>9%</td>
</tr>
<tr>
<td>Retail</td>
<td>15%</td>
<td>22</td>
<td>76%</td>
</tr>
<tr>
<td>Residential</td>
<td>9%</td>
<td>310</td>
<td>87%</td>
</tr>
<tr>
<td>Total</td>
<td>74%</td>
<td>1,430</td>
<td>19%</td>
</tr>
</tbody>
</table>

Includes NY, CA, IL properties
Beyond Just Billing

**Left: Lighting Retrofit Project, Before and After**

**Right: Steam valve repair, before and after**

Usage (kWh)

- Four-Week Average Prior to Install
- Week Post Install
Tenant Behavior Impacts Landlord Goals

**TOTAL REDUCTION GOAL**

35% BY 2026 OVER 2009 BASELINE

**GHG EMISSIONS REDUCTION GOALS**

- Landlord Emissions
- Tenant Emissions

2009 TOTAL 2026 TOTAL

**LANDLORD EMISSION REDUCTION**

40% BY 2026

What’s being cut:
- HVAC-Related Steam
- Fan Systems
- Elevators
- Lighting
- Pump Systems
- Other

**TENANT EMISSION REDUCTION**

30% BY 2026

What’s being cut:
- Lighting
- Plugload
- Supplemental HVAC and Other
It’s all about Tenant Engagement!

Who Would Be Eligible to Apply?

- Tenants in office spaces (with retail and warehouses to follow)
- Tenants with operational control of (at minimum):
  - Lighting
  - Plug and miscellaneous loads
- Tenants occupying contiguous space with at least one entrance to common space (e.g. office suite; lobby; elevator)
- Tenants at any major stage of lease:
  - Design
  - Build-out
  - Operation
Empower your Tenants with Relevant Data

Left: Customized Tenant Baseline Report for NYC 80 x 50 Plan

Right: Submeter Billing Notification
Engaging Commercial Tenants

Will Teichman
Sr. Director of Strategic Operations
Kimco Realty Corporation
KIMCO SNAPSHOT

- Kimco Realty Corporation
- 50+ year old Real Estate Investment Trust (REIT)
- One of North America’s largest owners and operators of open-air shopping centers
- 545 employees, headquartered in New Hyde Park, NY
- NYSE: KIM, S&P 500 Index
- Launched formal sustainability program in 2011

IN COLLABORATION WITH

Dow Jones Sustainability Indices

In Collaboration with RobecoSAM

GREEN LEASE LEADER

G R E S B
Green Star
NATIONAL PORTFOLIO, LOCALLY MANAGED

Over 500 shopping centers (84 million square feet) across the top U.S. metropolitan markets:

Over 8,000 leased tenant spaces, including:
As of 2009, U.S. commercial building stock totaled **84 billion square feet**, broken out into the following sectors:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Gross Lease</th>
<th>Net Lease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
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<tr>
<td>Office</td>
<td></td>
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<tr>
<td>Health Care</td>
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</tbody>
</table>

- Gross and net leases represent extremes on a continuum of potential lease forms
- **In a gross lease:**
  - Tenant pays a fixed all-inclusive rent that covers the premises, utilities, maintenance, etc.
  - Landlord bears responsibility for most maintenance and building improvement activities
- **In a net lease:**
  - Tenant pays a base rent, then pays operating expenses either directly or through a “pass through” charge
  - Landlord only maintains common areas, and relies on tenant charge recoveries to recoup capital project costs

Source: Slicing, Dicing and Scoping the Size of the U.S. Commercial Real Estate Market, Florance et al, © CoStar 2010
INDUSTRY CONTEXT: RETAIL ENERGY USE

- Site infrastructure often dedicates a single utility meter to each tenant.
- Net Lease dictates that in situations where they don’t control their meter, tenants reimburse landlord for this expense.
- Common area energy expenses are included in Common Area Maintenance (CAM) charges.

Energy Use at a Typical Grocery-Anchored Shopping Center

- Landlord: 15%
- Tenants: 85%
DRIVING SUSTAINABILITY IN OUR BUSINESS

Issues

- Energy & Emissions
- Water
- Waste
- Building Materials

Approach

- Measurement
- Operations
- Retrofits
- Engaging Tenants

COMMON AREA ENERGY CONSUMPTION

- 2011: 122,759 MWH
- 2012: 124,318 MWH
- 2013: 114,031 MWH
- 2014: 106,866 MWH
- 2015: 103,626 MWH
- 2016: 100,857 MWH

18.2% decrease
ENGAGING TENANTS – CONSTRUCTION STDS

Overview

• Developed a standard spec for tenant build-outs, as a part of Kimco’s green leasing effort

• Spec has two levels:
  **Base**
  • Low or no-cost environmentally preferable materials and construction processes
  • Energy Star® and Water Sense® products standard
  **Premium (LEED Ready)**
  • Increased lighting and HVAC efficiency requirements
  • Specs set to payback within typical 5-yr lease term

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>Premium (LEED Ready)</th>
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<tbody>
<tr>
<td>Exterior Storefront &amp; Signage</td>
<td></td>
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<tr>
<td>Exterior Service Door</td>
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<tr>
<td>Water and Gas Metering</td>
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<tr>
<td>Demising/Corridor Partitions</td>
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<tr>
<td>Ceiling System</td>
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<td>Floor Slab/Flooring</td>
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<tr>
<td>Restroom</td>
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<tr>
<td>Restroom Fixtures</td>
<td></td>
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<tr>
<td>Paint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical &amp; Lighting</td>
<td></td>
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<tr>
<td>Mechanical HVAC System</td>
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<tr>
<td>Fire Alarm</td>
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<tr>
<td>Life Safety System</td>
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<tr>
<td>Fire Protection System</td>
<td></td>
<td></td>
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<tr>
<td>Roof Penetration</td>
<td></td>
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<tr>
<td>Telephone Conduit</td>
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</table>

- Environmentally preferable base criteria
- Enhancement to base criteria
ENGAGING TENANTS – SUB-METERING

Overview

• Most properties in Kimco’s portfolio were built by another developer

• In many cases, retail properties are “master-metered” (tenants share a meter) due to cost considerations, local/utility norms, etc.

• Pro-rata share (of sq ft) billing is the standard

• Sub-metering our tenants leads to:
  • Tenant access to performance data
  • Fair tenant billing based on actual consumption, leading to improved Kimco recoveries
  • Economic incentive for tenants to conserve

Goal: Sub-meter 100% of tenant electric, gas & water by YE 2018.

- 500 Properties → ~325 (65%) In Scope
- 9,000 units → ~4,600 (50%) In Scope
Overview

• ~85% of utility consumption occurs inside of tenant spaces at open air retail centers

• After paying rent and payroll, retailers expend an additional 5-10% of sales to cover utilities, maintenance, marketing and other expenses

• By helping our tenants improve the efficiency of their operations, the total cost of occupancy at Kimco centers is lower and tenants have a greater likelihood of succeeding
FOR MORE INFORMATION

Corporate Responsibility Site

http://kimcocr.com

2016 Corporate Responsibility Report


Contact Info:

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Kimco Realty Corporation
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JPMorgan Chase & Co.
ENERGY STAR Ambassadors Program

Engaging Tenants and Occupants in Energy Efficiency

Sam Stockdale, Vice President, Global Real Estate
Commitment to Sustainability

In July 2017, JPMorgan announced its commitment to source renewable energy for 100% of its global power needs by 2020.

- ENERGY STAR Ambassador Program = Opportunity to engage & educate branch managers and clients about Energy Star and our new operational sustainability commitment

- JPMC’s commitment to achieving the 2020 goal hinges on three fundamental strategies that focus on reducing its existing global energy footprint:

  1) Improving Building Energy Efficiency
     - LED retrofit programs
     - BMS installations
     - Installation of Thermal energy blankets

  2) Installing On-site Renewable energy sources
     - Solar Panels Installation
     - Fuel Cell Technology

  3) Executing Power Purchase Agreements (PPAs)
Reconciling the Big Picture with Local Initiatives

1) Improving Building Energy Efficiency
   - **LED retrofit program:** In 2016, JPMC announced its LED lighting installation initiative in partnership with Current (General Electric). About 4,500 Chase branches will be installed with LED lighting, which equates to a total of 1.4 million light bulbs installed—cutting lighting energy consumption by 50 percent, or the equivalent of taking nearly 27,000 cars off the road
     - To date, 2,500 branches have been retrofitted with LED lighting fixtures
   - **Retail Building Management Systems (BMS) program:** JPMC plans to install BMS across nearly 4,400 retail branches to synchronize lighting, heating, ventilation, air conditioning and irrigation systems with operational control
     - The BMS sensors, software and lighting controls will reduce electric and gas consumption of Chase branches by 15 percent and water consumption from irrigation systems by 20 percent
   - **Installation of thermal blankets:** Installation of thermal energy blankets above the ceiling tiles in more than 1,700 retail branches

2) The Result of these programs led to our ability to achieve 108 Energy Star certifications at bank branches across the country
Generating Excitement about Upcoming Initiatives

2) Installing On-site Renewable energy sources
   - **Solar Panel Installation:** Development of on-site solar power generation for up to 1,400 bank-owned retail and 40 commercial buildings globally
   - **Fuel Cell Technology:** JPMC is planning to install large capacity fuel cell technology across multiple US sites, starting with Chase Metrotech Center in Brooklyn, New York

3) Executing Power Purchase Agreements (PPAs)
   - JPMC executed a PPA to secure renewable energy for nearly 10% of its energy use from a 100.5 megawatt wind farm in Erath County, Texas
   - The firm intends to execute additional PPAs to further offset its global energy footprint
## Upcoming Webinars

<table>
<thead>
<tr>
<th>Date</th>
<th>Webinar</th>
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<tbody>
<tr>
<td>Wednesday, June 20, 1:00 pm EDT</td>
<td>Preparing for EPA's ENERGY STAR metric updates</td>
</tr>
<tr>
<td>Tuesday, June 26, 1:00 pm EDT</td>
<td>Portfolio Manager web services: August 2018 schema changes</td>
</tr>
<tr>
<td>Wednesday, June 27, 1:00 pm EDT</td>
<td>Success stories on energy efficiency competitions</td>
</tr>
</tbody>
</table>

Register at [https://esbuildings.webex.com/](https://esbuildings.webex.com/)
Questions and Discussion