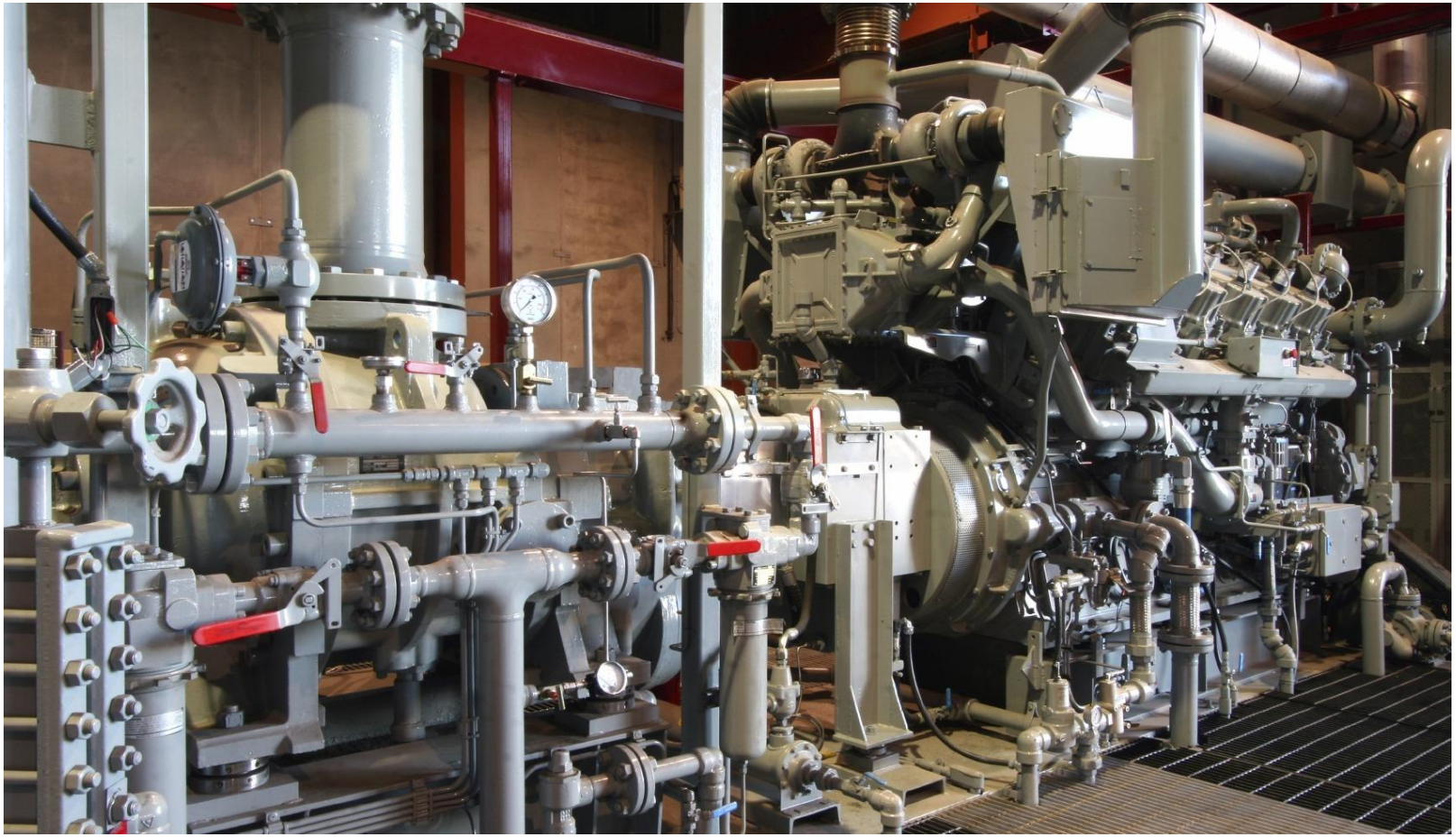
THE **ENERGY ALIGNED CLAUSE**: SOLVING THE SPLIT INCENTIVE PROBLEM

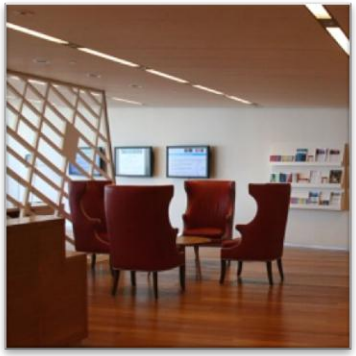
THE GOAL

Create conditions so both commercial building owners and tenants can benefit financially from energy retrofits.



THE BENEFITS

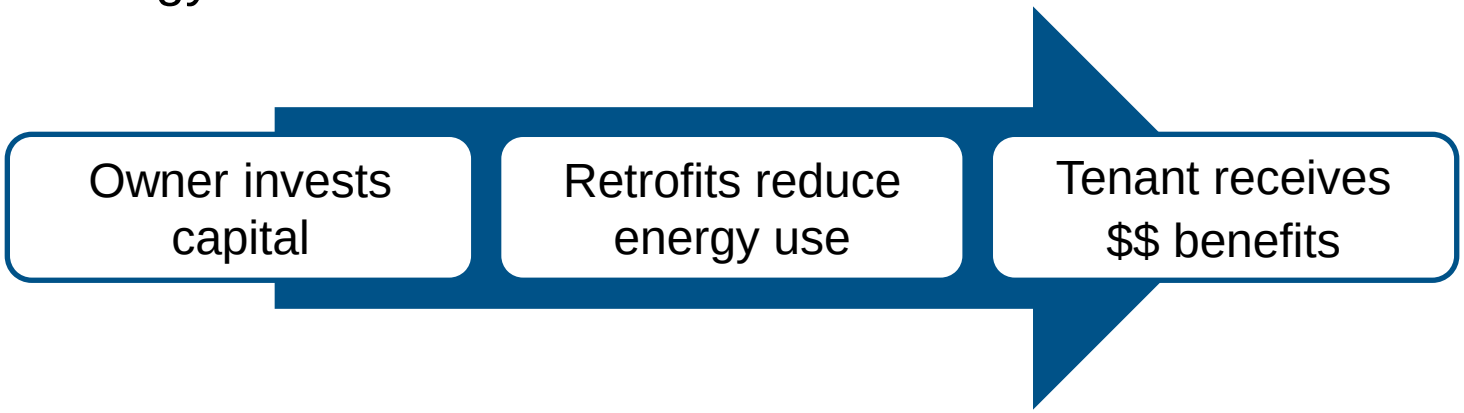
- Save building owners and tenants money.
- Improve reliability and occupant comfort.
- Increase a building’s value.
- Create green jobs in the community.
- Reduce greenhouse gas emissions.

THE "SPLIT INCENTIVE" PROBLEM

Misaligned or split incentive - a transaction where the benefits do not accrue to the person who pays for the transaction.

Here, the building owner pays for retrofits but cannot recover savings from reduced energy use that accrue to the tenant.



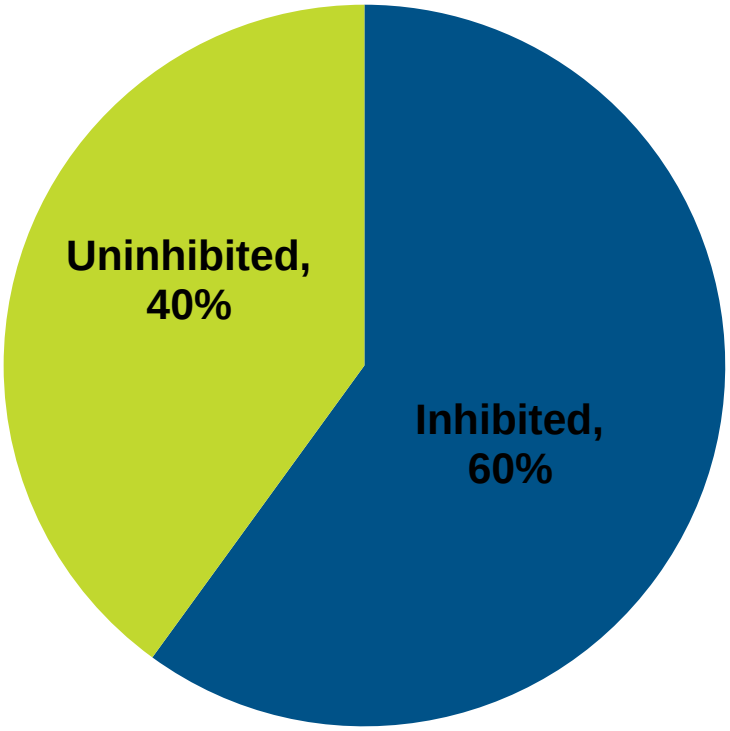
In typical New York City modified gross leases, the savings from energy retrofits are passed through to the tenants, so:

- It is not in the owners' immediate interest to invest capital in improvements.
- Thus savings and other benefits are left on the floor.

THE “SPLIT INCENTIVE” PROBLEM

In a NYC Mayor’s Office survey of 28 commercial property owners, 60% of respondents stated that the split incentive problem inhibits them from undertaking energy retrofits.

The respondents included firms that own or manage over 310 million square feet of commercial space in NYC.



Impact of the split incentive on Commercial Real Estate Owners

THE “SPLIT INCENTIVE” PROBLEM

Owners **may** pass through capital expenses. However, recovering the cost:

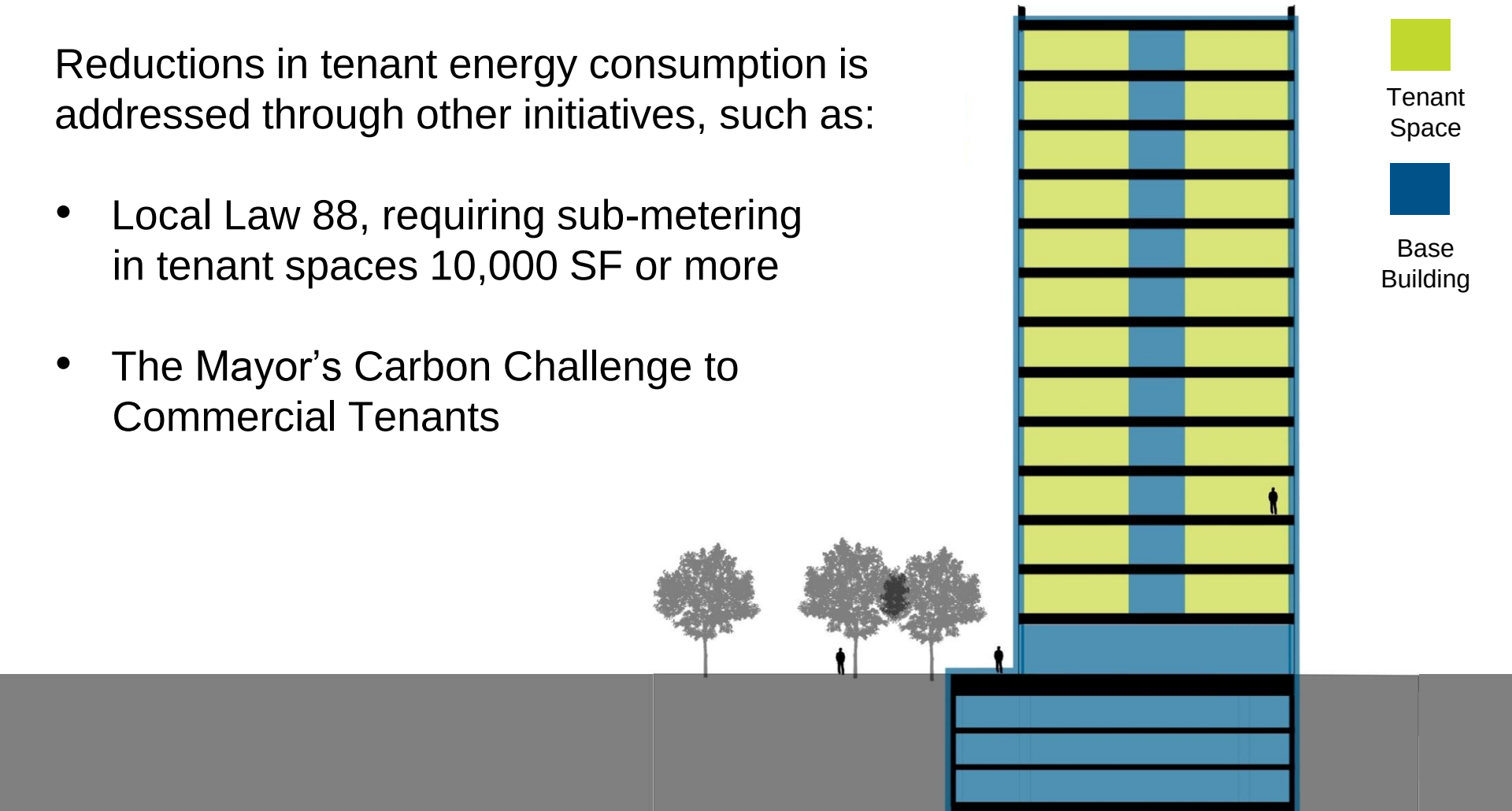
- across the useful life of the equipment is **too long** to justify large upfront investments.
- based on the actual energy savings is considered **too complex** to measure.
- based on predicted energy savings leaves **tenants at risk** for energy retrofits that underperform.

BASE BUILDING ENERGY

Energy retrofits by owners focus on reducing the energy needed for base building systems, not energy used directly by tenants.

Reductions in tenant energy consumption is addressed through other initiatives, such as:

- Local Law 88, requiring sub-metering in tenant spaces 10,000 SF or more
- The Mayor's Carbon Challenge to Commercial Tenants



BUILDING A SOLUTION

In 2010, the Mayor's Office assembled a working group to develop the lease language and financial model to address the split incentive problem.

Led by an experienced real estate lawyer, **Marc Rauch, Esq**. the group included some of the city's largest owners, tenants, management companies, and engineers:

goldman | copeland associates, p.c.

JB&B Jaros Baum & Bolles

Deutsche Bank

CUSHMAN & WAKEFIELD®

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BUILDING A SOLUTION

Owner's need: recover savings predicted by an engineer.

Tenant's concern: paying the owner based on predicted savings that might not match actual savings.

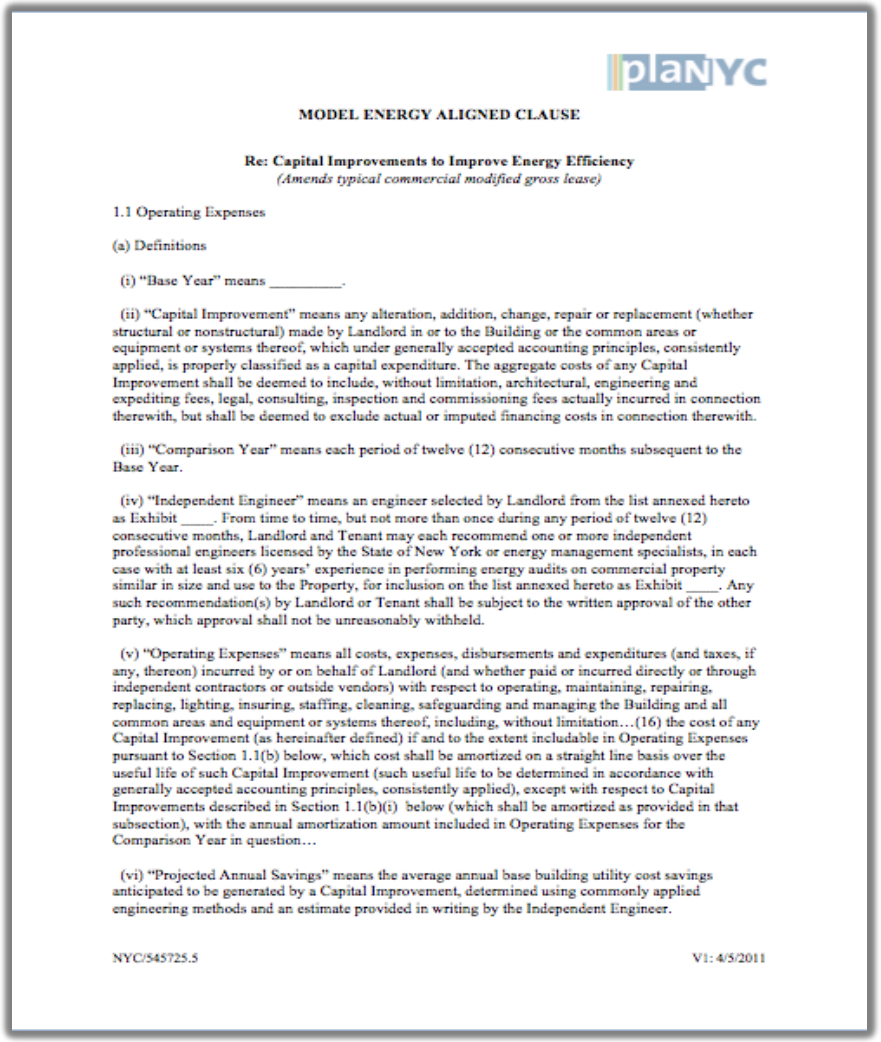
Predicted accuracy: industry experience shows actual savings are generally +/- 20% of predicted savings.

Solution: Base owners' cost recovery on predicted savings as long as tenants are protected against underperformance.

Energy Aligned Clause

Base owners' cost recovery on predicted savings, but limit owners' capital expense pass-through to 80% of such predicted savings in any given year. This is called the 20% "Performance Buffer."

THE ENERGY-ALIGNED CLAUSE



MODEL ENERGY ALIGNED CLAUSE

Re: Capital Improvements to Improve Energy Efficiency
(Amends typical commercial modified gross lease)

1.1 Operating Expenses

(a) Definitions

(i) "Base Year" means _____.

(ii) "Capital Improvement" means any alteration, addition, change, repair or replacement (whether structural or nonstructural) made by Landlord in or to the Building or the common areas or equipment or systems thereof, which under generally accepted accounting principles, consistently applied, is properly classified as a capital expenditure. The aggregate costs of any Capital Improvement shall be deemed to include, without limitation, architectural, engineering and expediting fees, legal, consulting, inspection and commissioning fees actually incurred in connection therewith, but shall be deemed to exclude actual or imputed financing costs in connection therewith.

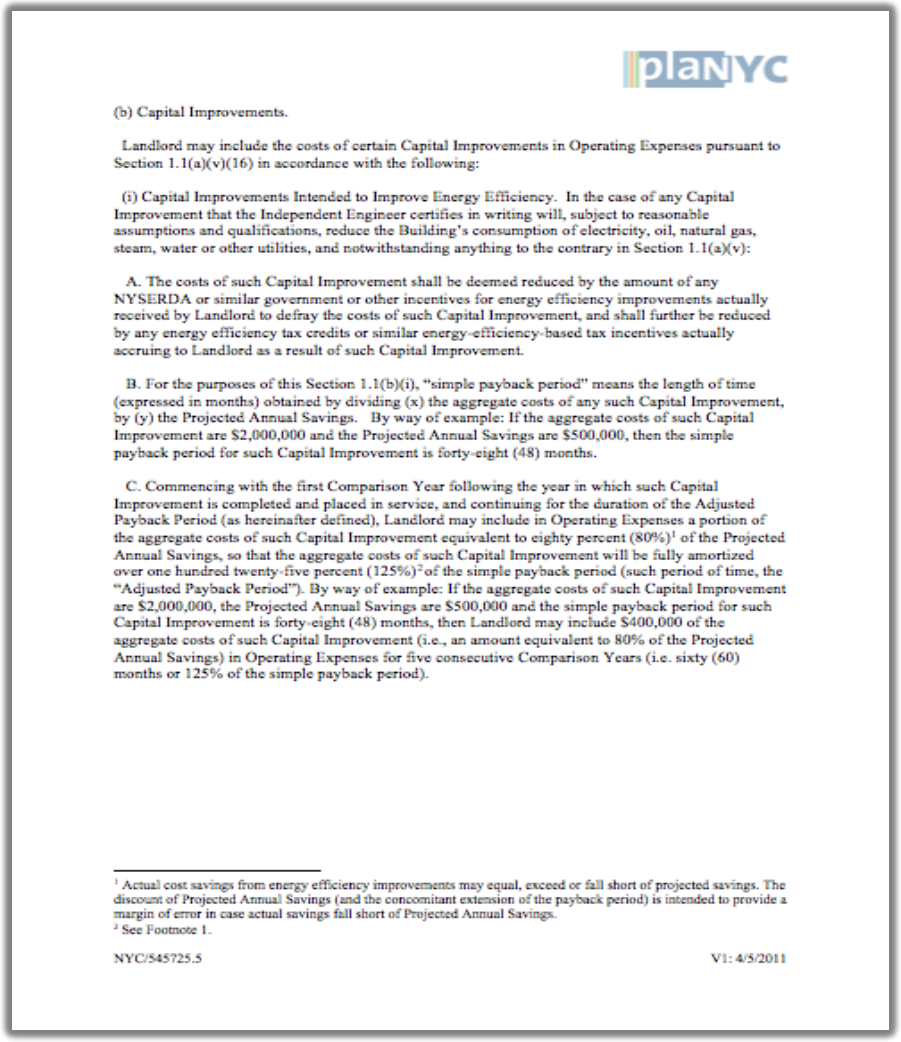
(iii) "Comparison Year" means each period of twelve (12) consecutive months subsequent to the Base Year.

(iv) "Independent Engineer" means an engineer selected by Landlord from the list annexed hereto as Exhibit ____. From time to time, but not more than once during any period of twelve (12) consecutive months, Landlord and Tenant may each recommend one or more independent professional engineers licensed by the State of New York or energy management specialists, in each case with at least six (6) years' experience in performing energy audits on commercial property similar in size and use to the Property, for inclusion on the list annexed hereto as Exhibit ____. Any such recommendation(s) by Landlord or Tenant shall be subject to the written approval of the other party, which approval shall not be unreasonably withheld.

(v) "Operating Expenses" means all costs, expenses, disbursements and expenditures (and taxes, if any, thereon) incurred by or on behalf of Landlord (and whether paid or incurred directly or through independent contractors or outside vendors) with respect to operating, maintaining, repairing, replacing, lighting, insuring, staffing, cleaning, safeguarding and managing the Building and all common areas and equipment or systems thereof, including, without limitation…(16) the cost of any Capital Improvement (as hereinafter defined) if and to the extent includable in Operating Expenses pursuant to Section 1.1(b) below, which cost shall be amortized on a straight line basis over the useful life of such Capital Improvement (such useful life to be determined in accordance with generally accepted accounting principles, consistently applied), except with respect to Capital Improvements described in Section 1.1(b)(i) below (which shall be amortized as provided in that subsection), with the annual amortization amount included in Operating Expenses for the Comparison Year in question…

(vi) "Projected Annual Savings" means the average annual base building utility cost savings anticipated to be generated by a Capital Improvement, determined using commonly applied engineering methods and an estimate provided in writing by the Independent Engineer.

NYC/545725.5 V1: 4/5/2011



(b) Capital Improvements.

Landlord may include the costs of certain Capital Improvements in Operating Expenses pursuant to Section 1.1(a)(v)(16) in accordance with the following:

(i) Capital Improvements Intended to Improve Energy Efficiency. In the case of any Capital Improvement that the Independent Engineer certifies in writing will, subject to reasonable assumptions and qualifications, reduce the Building's consumption of electricity, oil, natural gas, steam, water or other utilities, and notwithstanding anything to the contrary in Section 1.1(a)(v):

A. The costs of such Capital Improvement shall be deemed reduced by the amount of any NYSERDA or similar government or other incentives for energy efficiency improvements actually received by Landlord to defray the costs of such Capital Improvement, and shall further be reduced by any energy efficiency tax credits or similar energy-efficiency-based tax incentives actually accruing to Landlord as a result of such Capital Improvement.

B. For the purposes of this Section 1.1(b)(i), "simple payback period" means the length of time (expressed in months) obtained by dividing (x) the aggregate costs of any such Capital Improvement, by (y) the Projected Annual Savings. By way of example: If the aggregate costs of such Capital Improvement are $2,000,000 and the Projected Annual Savings are $500,000, then the simple payback period for such Capital Improvement is forty-eight (48) months.

C. Commencing with the first Comparison Year following the year in which such Capital Improvement is completed and placed in service, and continuing for the duration of the Adjusted Payback Period (as hereinafter defined), Landlord may include in Operating Expenses a portion of the aggregate costs of such Capital Improvement equivalent to eighty percent (80%)[1] of the Projected Annual Savings, so that the aggregate costs of such Capital Improvement will be fully amortized over one hundred twenty-five percent (125%)[2] of the simple payback period (such period of time, the "Adjusted Payback Period"). By way of example: If the aggregate costs of such Capital Improvement are $2,000,000, the Projected Annual Savings are $500,000 and the simple payback period for such Capital Improvement is forty-eight (48) months, then Landlord may include $400,000 of the aggregate costs of such Capital Improvement (i.e., an amount equivalent to 80% of the Projected Annual Savings) in Operating Expenses for five consecutive Comparison Years (i.e. sixty (60) months or 125% of the simple payback period).

[1] Actual cost savings from energy efficiency improvements may equal, exceed or fall short of projected savings. The discount of Projected Annual Savings (and the concomitant extension of the payback period) is intended to provide a margin of error in case actual savings fall short of Projected Annual Savings.
[2] See Footnote 1.

NYC/545725.5 V1: 4/5/2011

The clause, an overview of how it works, and the financial model are available at www.nyc.gov/eac.

KEY FEATURES OF THE CLAUSE

- The predicted savings are determined by an energy specialist agreed upon by both parties.
- Tenants are protected from underperformance by a 20% “Performance Buffer.”
- Owners are paid back in full, but the simple payback period is extended by 25%.
- Language is applicable for typical modified gross commercial leases.

KEY CONCLUSION

Aligning the incentive is **not a zero sum game** between tenants and owners.
Energy retrofits save both money.

THE FINANCIAL MODEL

The Working Group created a financial model to calculate how energy efficiency dollars would flow in high, low and expected retrofit performance scenarios based on key input variables, such as:

- Operating expenses / escalation rate
- Retrofit cost
- Predicted energy savings

INPUTS & ASSUMPTIONS		
Tenant lease info		
Gross square footage		195,122
Lease term (yrs)		10
Lease rent psf	$	60.00
OpEx base year psf	$	15.00
OpEx base year - non energy	$	13.00
OpEx base year - energy	$	2.00
OpEx projected escalation % - non energy		3.00%
OpEx projected escalation % - energy		3.00%
EE measures		
Lease year during which EE measures are implemented		1
First Comparison Year after implementation		2
Retrofit cost psf	$	2.05
Retrofit cost (tenant space's proportionate share)	$	400,000
Annual energy savings psf		
Predicted energy savings (%, bundled)		25%
Predicted energy savings psf (in dollars)	$	0.52
Predicted simple payback period (yrs, bundled)		4.0
Performance Buffer		20%
Adjusted Payback Period (reflecting Performance Buffer)		5.0
Range of deviation from predicted energy savings		20%
Savings in Under-Performing scenario		20%
Savings in Over-Performing scenario		30%
Other		
Discount rate (NPV)		5.00%
Annual % degradation of energy savings		1.00%
KEY		
Input		
Fixed		
Calculated		

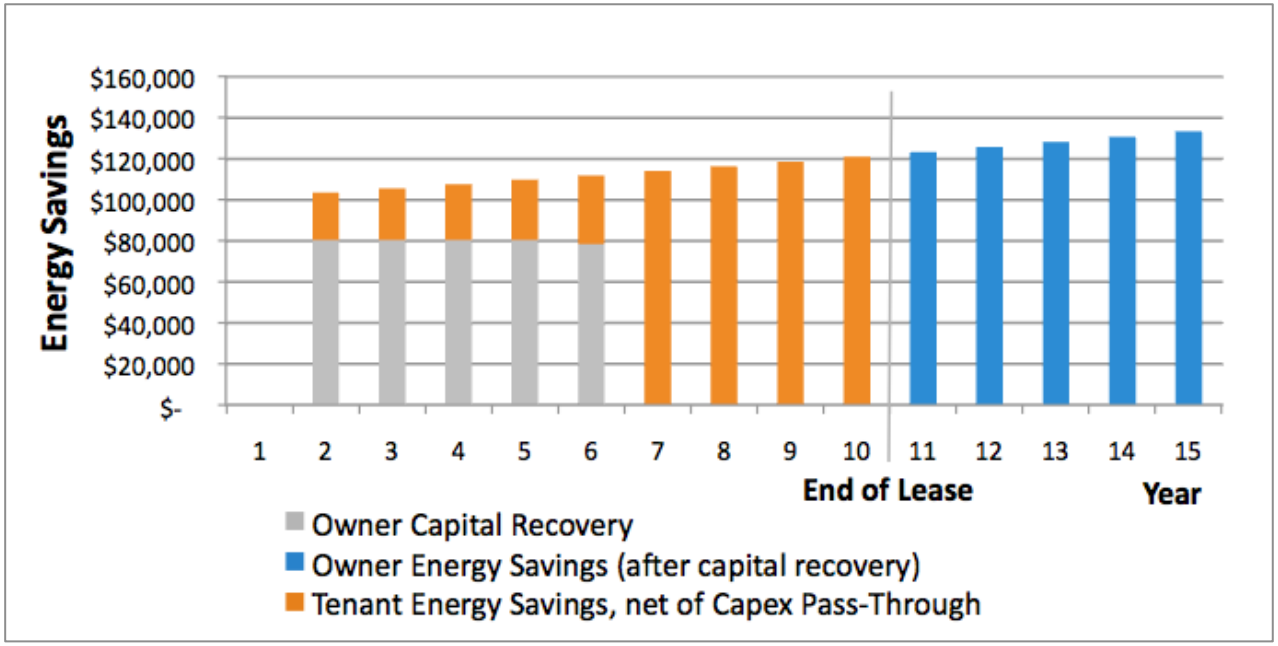
The financial model is available at www.nyc.gov/eac. "Base case" parameters for this presentation are set to $2.05 psf base year energy cost, 3% opex escalation, $400K retrofit, 25% predicted energy savings resulting in a 5.0 year adjusted payback.

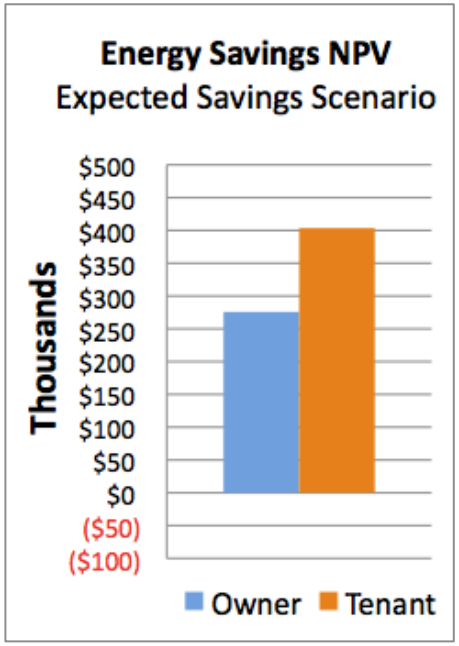
SAVINGS SCENARIOS

The scenarios that follow illustrate the savings to owner and tenant under various conditions.

	Retrofit in lease year…	% Energy Savings	Adjusted Payback (years)
Performs as Predicted	1	25%	5
Under-performing	1	25%	5
Long Payback	1	14%	8.9
Late-in-Lease	7	25%	5
Trifecta	7	14%	8.9

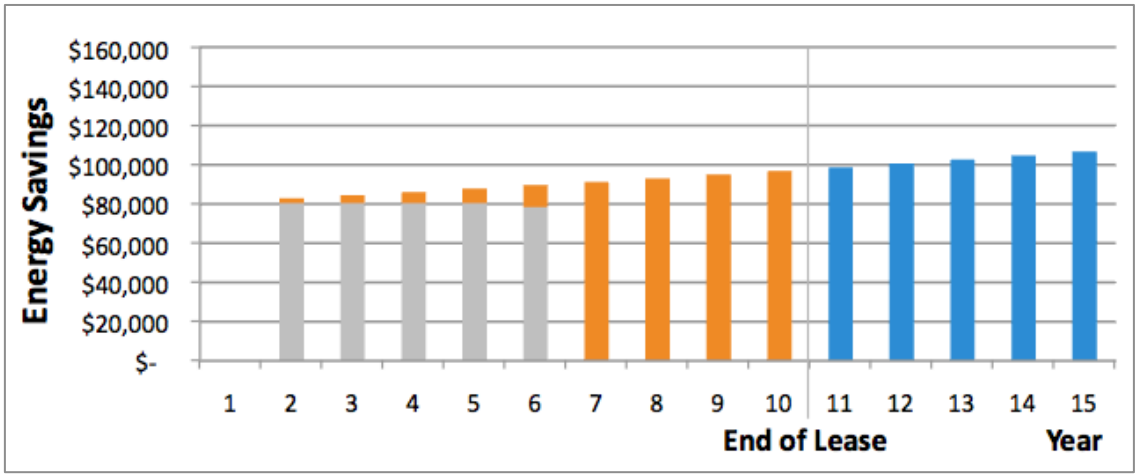
SAVINGS SCENARIO: PERFORMS AS PREDICTED

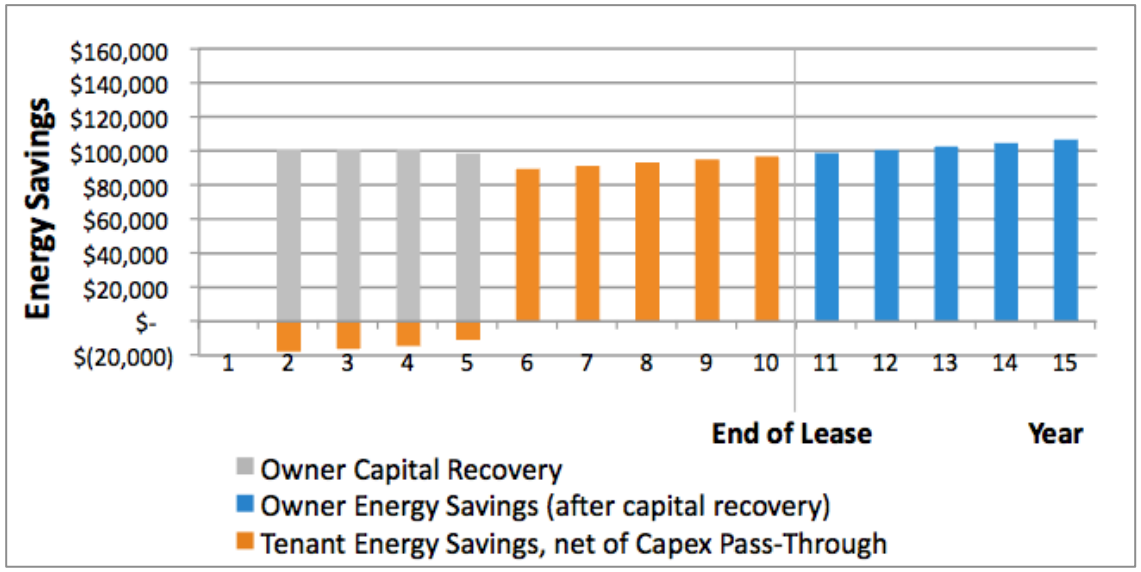




The Allocation of Energy Savings graph shows how the Owner is paid back and how much savings are realized each year for Tenant and Owner.

SAVINGS SCENARIO: UNDERPERFORMING



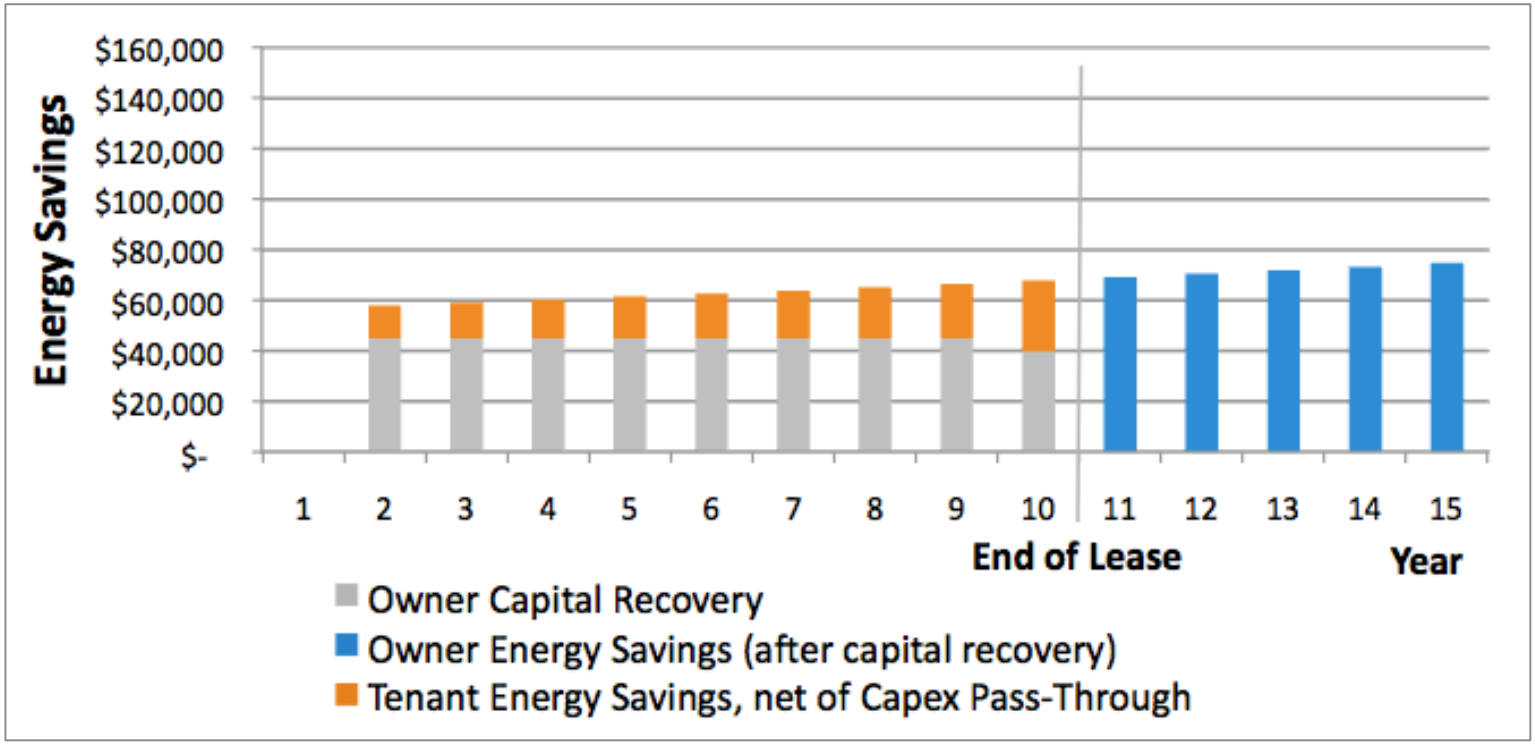


20% Under-performance:

With the 20% performance buffer, the tenant benefits from the beginning of the retrofit's operation.

With NO performance buffer, the tenant pays a little more in the early years.

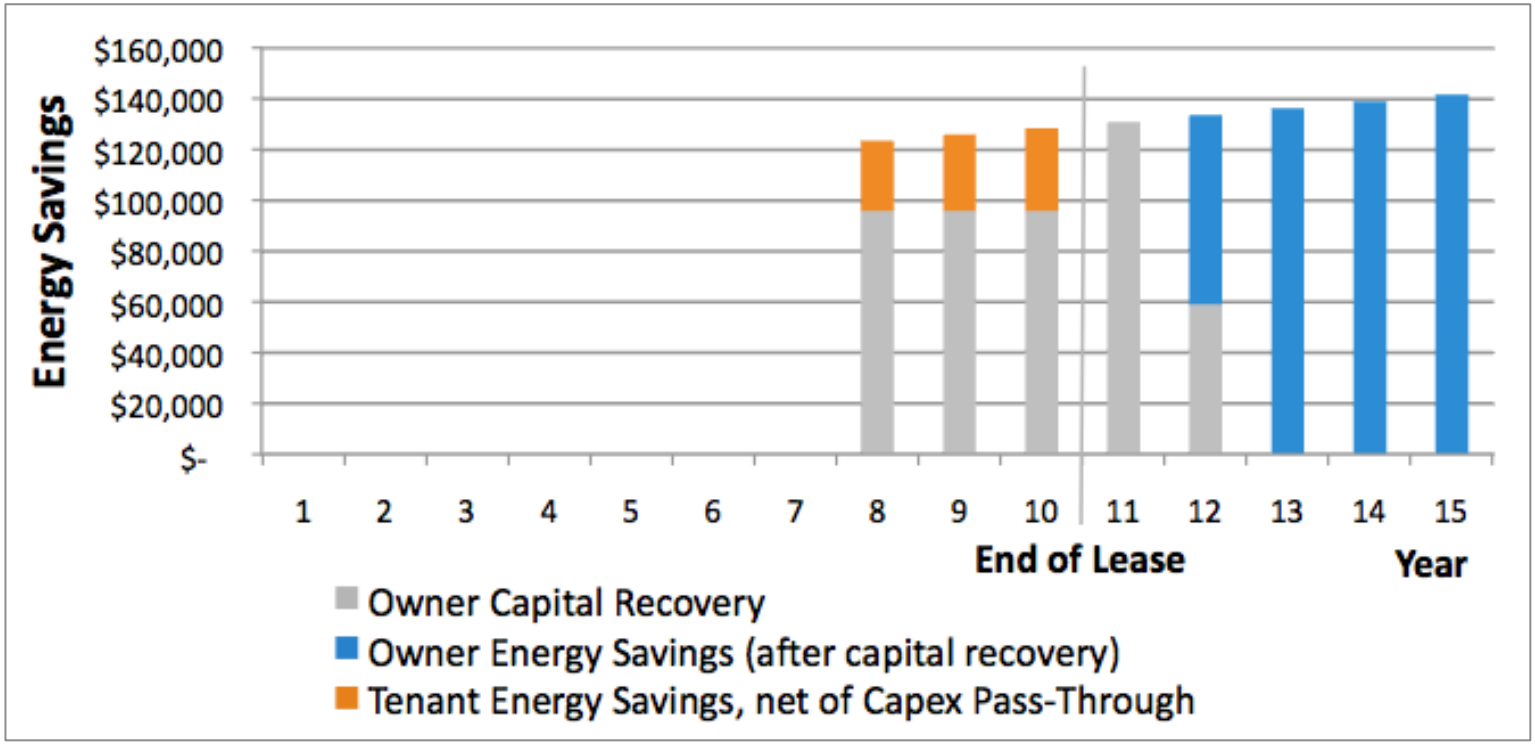
SAVINGS SCENARIO: LONG PAYBACK



Predicted % savings for this retrofit are reduced, resulting in an increased I the adjusted payback period from 5.0 to 8.9 years.

*Predicted performance for this retrofit is reduced from 25% (base case) to 14%, resulting in a longer payback period.

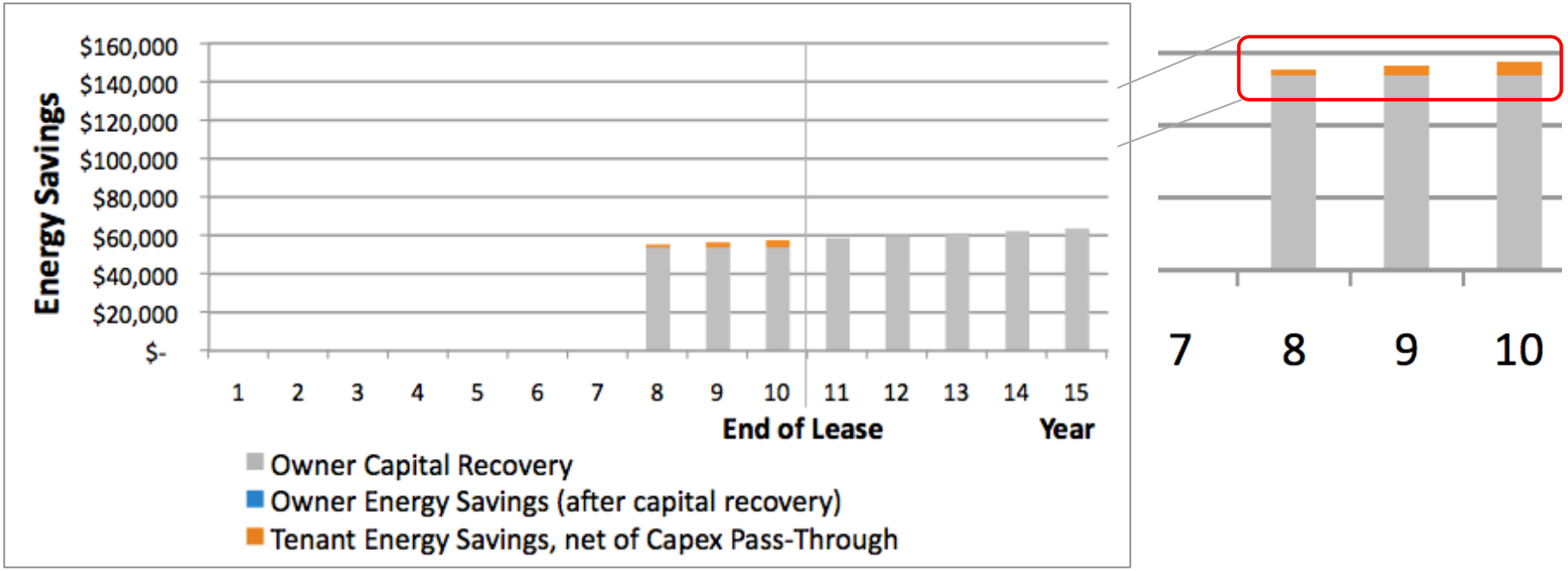
SAVINGS SCENARIO: LATE-IN-LEASE



The retrofit occurs in year 7 of the lease, with savings accruing beginning in year 8.

*The same $400K retrofit in year 1 costs $478K in year 7, resulting in the same 5-year adjusted payback period.

SAVINGS SCENARIO: THE TRIFECTA

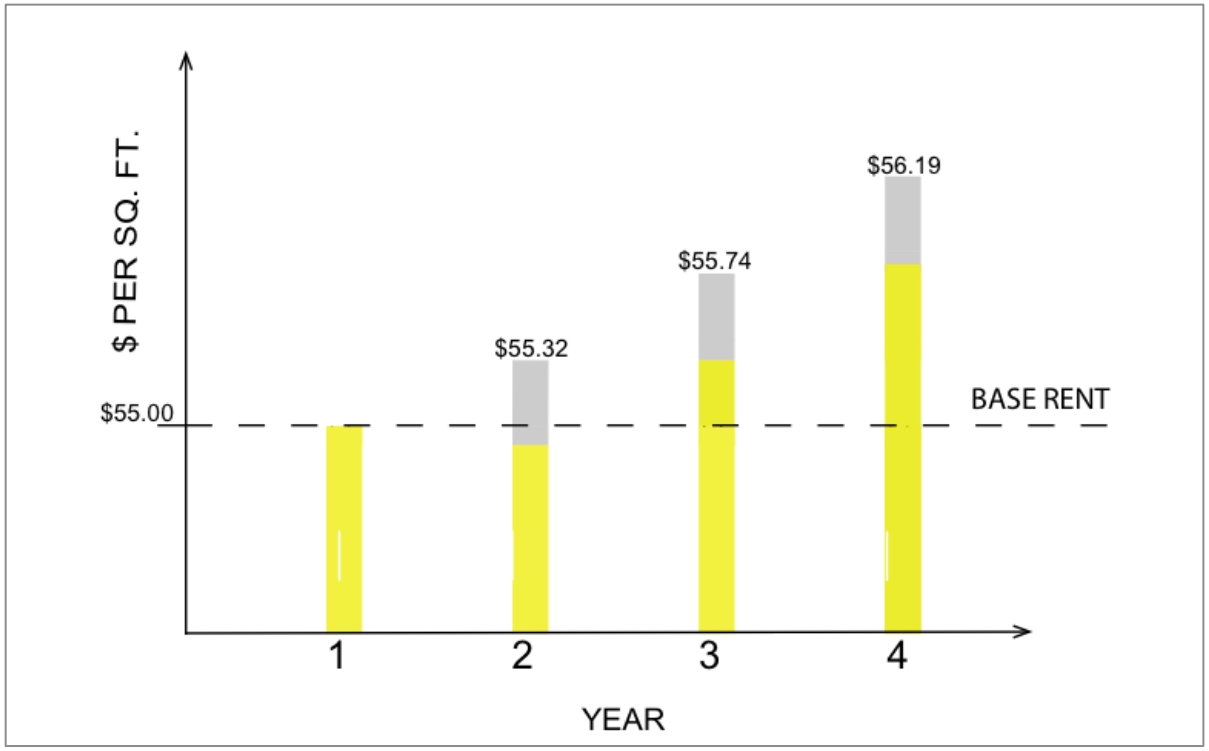


This is the trifecta you didn't bet on. The retrofit underperforms, has a long payback and occurs in late in the lease.

Yet the tenant still stands to gain.

SAVINGS AND BASE RENT

Might the energy savings cause the rent to drop below the base rent, thus requiring the tenant to pay base rent AND 80% of the predicted savings?



CapEx Pass-Through Tenant to Landlord

Base Rent + Change in OpEx

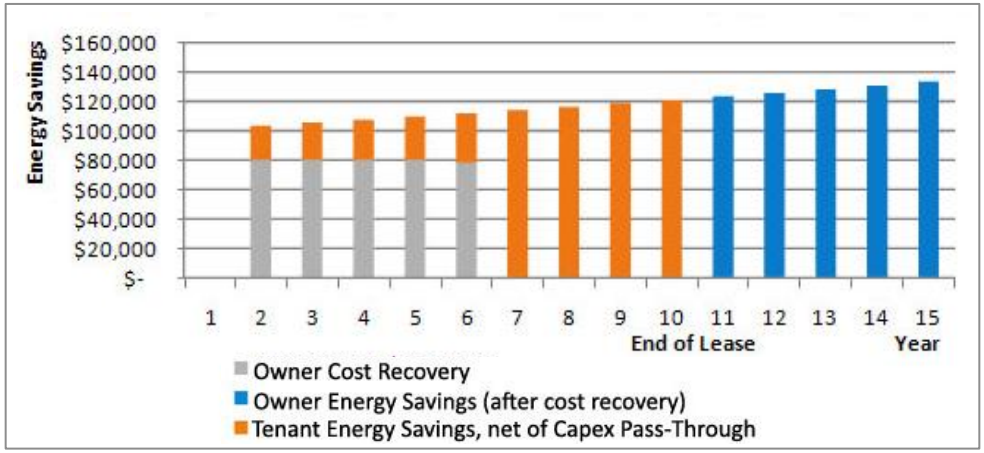
- Base OpEx, non-energy = $12
- Base OpEx, energy = $2
- Base Rent ($55) includes OpEx
- Predicted Energy Savings = 25%
- Adjusted payback period = 5 years
- OpEx escalation = 3%

No. Tenant energy savings are overwhelmed by the escalation in non-energy OpEx and the CapEx pass-through, so the risk of dipping below the Base Rent is negligible.

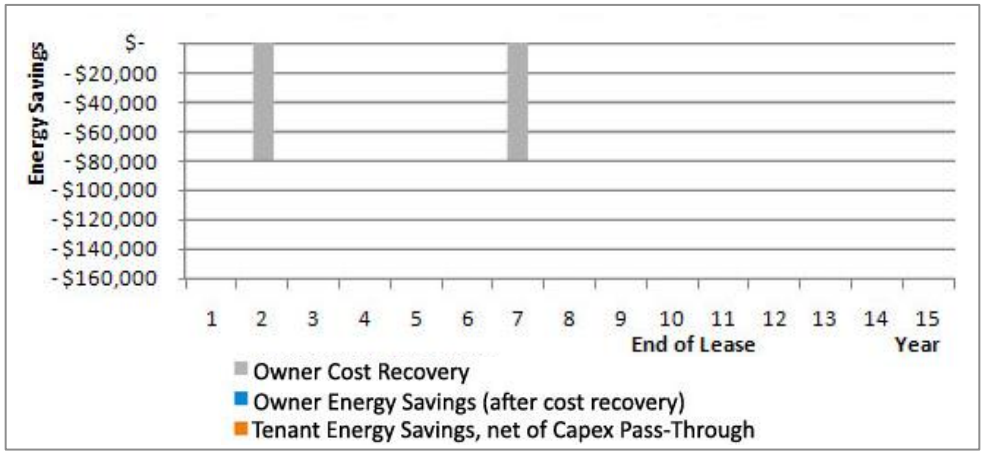
RETROFIT VERSUS REPAIR

- Currently owners are motivated to repair, not retrofit old equipment because tenants pay for repairs.
- The EAC encourages owners to upgrade inefficient equipment.

EAC RETROFIT SCENARIO
$400,000 upgrade in Year 2 with a four year simple payback period



REPAIR SCENARIO
$80,000 repairs in both Years 2 and 7



SUPPORTING ORGANIZATIONS

SUMMARY

Both Tenants and Owners Stand to Gain

- Use of the Energy Aligned Clause creates opportunity for both owner and tenant.
- The 20% performance buffer removes down-side risk for tenants under most scenarios.
- Tenants can accrue net savings even if the retrofit occurs late in lease, underperforms and has a long pay-back period.
- Tenant risk from a drastically underperforming retrofit is minimal because retrofit expense is dwarfed by overall rent expense.

IN PRACTICE

On April 5, 2011, Silverstein Properties and WilmerHale signed a lease modeled after the energy-aligned clause for 210,000 sq ft. of space in 7 WTC. A second lease was signed by MSCI Inc. on September 19, 2011.

The City of New York will use the language whenever NYC is a tenant.

"REBNY…will be recommending this language to all of our members."

- Steven Spinola,
President, REBNY

CONTACT INFO:
pr@urbangreencouncil.org

APPENDIX: COMMERCIAL LEASE TYPES

Lease Type	Who Pays Expenses	Who Pays Capital Costs	Split Incentive?
Gross Lease	Owner	Owner	
Modified Gross Lease	Owner and Tenant	Owner	✖
Triple Net Lease	Tenant	Tenant	
Multi-Tenant Office Net Lease	Tenant	Owner	✖