

Energy-Aligned Lease Language Model

Description

The Energy-Aligned Lease Language Model is a financial calculator that shows how energy efficiency dollars will flow in high, low, and expected retrofit performance scenarios based on key input variables. The aim of the model is to illustrate potential scenarios and effects of implementing a performance buffer.*

Organization of the Model

The "Input_Output 15 Yr Projection" tab provides a 15 year overview for a 10 year lease. The "Input_Output 20 Yr Projection" tab provides a 20 year overview for a 15 year lease. The "Analysis 15 Yr Projection" tab provides calculation data for the 15 year overview/10 year lease. The "Analysis 20 Yr Projection" tab provides calculation data for the 20 year overview/15 year lease.

Features of the Model

The model includes an Inputs & Assumptions table, which generates three kinds of charts: Energy Savings Allocation, Energy Savings NPV, and Cost to Tenant Per Square Foot.

The Inputs & Assumptions table is where all known variables are added into the model in order to generate energy savings projections under different performance scenarios.** For notes on each variable, see "Input_Output 15 Yr Projection" and "Input_Output 20 Yr Projection" tabs.

The Energy Savings Allocation (ESA) chart is displayed in three different scenarios depending on the performance of the retrofit equipment: Expected, Underperforming, and Overperforming. Each ESA graph provides details including: year of retrofit implementation within a 10 or 15 year lease, the tenant space's proportional share in retrofit cost, and the adjusted payback period in years. The total bar height shows annual energy savings after the retrofit has been installed. Gray sections indicate the tenant's annual payback to the owner of the retrofit costs. Orange sections indicate annual energy savings that flow back to the tenant. Blue sections indicate annual energy savings that flow back to the owner after the end of the lease.

Corresponding to each ESA chart is an Energy Savings NPV (ESN) chart, which is located below. The ESN chart sums up the NPV to the owner and the tenant of the transaction.

The Cost to Tenant Per Square Foot (CTPSF) chart is directly generated from inputs and compares various costs per square foot to the tenant across factors including: Lease Rent, Energy and non-Energy Operational Expenses in the Base Year, Tenant's Annual Proportional Share of Retrofit Costs, and Downside Energy Savings Uncertainty. This chart illustrates the small cost of retrofits relative to other tenant expenses and shows that the downside uncertainty in the savings is minimal.

Directions

1. Determine if the lease is 10 or 15 years and choose the corresponding worksheet to input data.
2. Input all available data in the yellow boxes corresponding to each variable in the Inputs & Assumptions table.
3. View generated energy savings calculations in different performance scenarios.
4. Change inputs to model various energy savings outcomes.

Notes

*One limitation of the model is the length of duration projected in both 10 and 15 year leases. Because the model stops at 15 and 20 year horizons, it cannot show the full benefits to the owner for long-pay back retrofit projects that occur late in the lease.

**Cells used for calculation steps are hidden in the "Inputs & Assumptions" table for simplicity of viewing.

ENERGY-ALIGNED LEASE MODEL

15 YEAR PROJECTION

INPUTS & ASSUMPTIONS	
Tenant lease info	
Gross square footage	210,000
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	2
First Comparison Year after implementation	3
Retrofit cost psf	\$ 2.50
Retrofit cost (tenant space's proportionate share)	\$ 525,000
Annual energy savings psf	
Projected energy savings (% , bundled)	22%
Projected energy savings psf (in dollars)	\$ 0.47
Projected simple payback period (yrs, bundled)	5.4
Performance Buffer	20%
Adjusted Payback Period (reflecting Performance Buffer)	6.7
Range of deviation from projected energy savings	
Savings in Under-Performing scenario	18%
Savings in Over-Performing scenario	26%
Other	
Discount rate (NPV)	5.00%
Annual % degradation of energy savings	1.00%
KEY	
	Input
	Fixed
	Calculated

NOTES
<i>Unless otherwise indicated, starting assumptions come from working group feedback.</i>
Input gross rental square footage - use square footage number upon which OpEx pass through will be based
Based on working group feedback, 10 yr leases are common in industry - for simplicity, model assumes 10 year lease
Input Annual Base Rent from lease, per square foot
Input OpEx base year - for all building common area operating expenses except for energy, per square foot
Input OpEx base year - for building common area energy expenses, per square foot
Input assumption for annual escalation of non-energy building common area operating expenses
Input assumption for annual escalation of building common area energy expenses
Input the lease year during which energy conservation measures are completed
For sake of simplicity, energy savings and CapEx pass-through are modeled to commence in the year following implementation. Stub year is disregarded.
Input cost of retrofit, psf
= Retrofit psf * gross sq footage
Input projected energy savings assumption
Calculated based on projected energy savings, retrofit cost and OpEx (at time of implementation)
Input tenant's retrofit Performance Buffer, as negotiated per Energy Aligned Lease clause
= Payback period / tenant-negotiated discount rate (elongates amortization period to reflect variability in energy savings)
Input range of deviation of actual energy savings from projected savings, to establish under- & over-performing model scenarios
= Projected energy savings minus (projected energy savings * deviation of projected from actual savings)
= Projected energy savings plus (projected energy savings * deviation of projected from actual savings)
Fixed percentage by which energy savings degrade per year over the life of the projection - model assumes 1.00% annual degradation.

OUTPUT - NPV/GRAPHS

EXPECTED SAVINGS

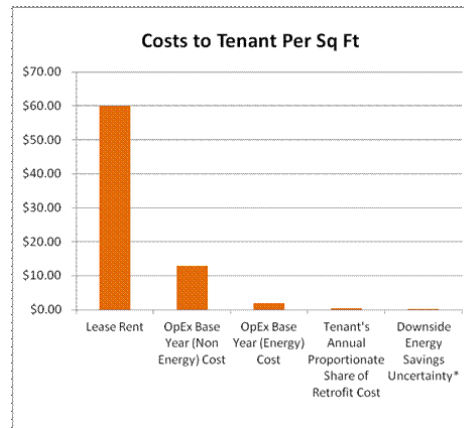
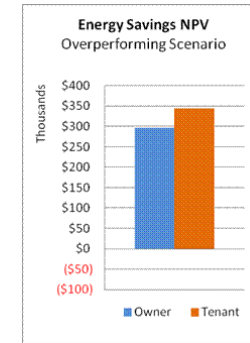
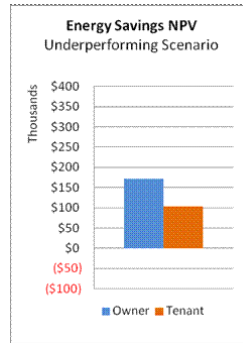
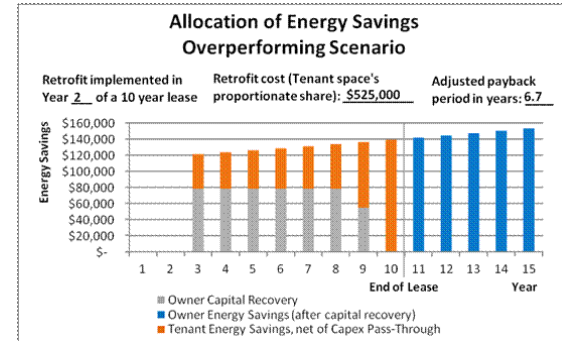
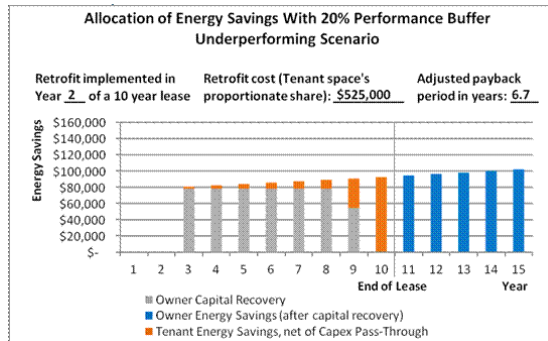
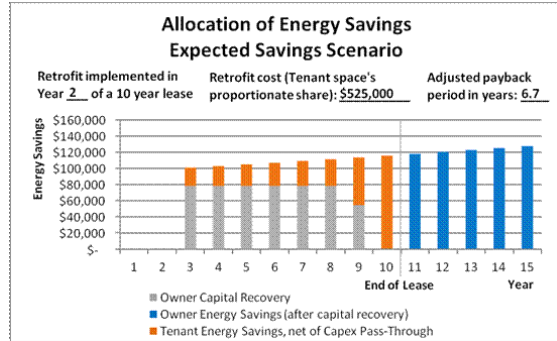
LOWER THAN EXPECTED SAVINGS

HIGHER THAN EXPECTED SAVINGS

TENANT NPV	\$223,867
OWNER NPV	\$233,941

TENANT NPV	\$103,636
OWNER NPV	\$171,907

TENANT NPV	\$344,097
OWNER NPV	\$295,975



	Lease Rent	OpEx Base Year (Non Energy) Cost	OpEx Base Year (Energy) Cost	Tenant's Annual Proportionate Share of Retrofit Cost	Downside Energy Savings Uncertainty*
Per sf	\$60.00	\$13.00	\$2.00	\$0.37	\$0.09
As %	100%	21.67%	3.33%	0.62%	0.16%
Total Cost	\$12,600,000	\$2,730,000	\$420,000	\$78,422	\$19,605

*i.e., Amount of Performance Buffer as % of annual base rent.

ENERGY-ALIGNED LEASE MODEL

20 YEAR PROJECTION

INPUTS & ASSUMPTIONS

Tenant lease info

Gross square footage	200,000
Lease term (yrs)	15
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 implemented	3
First Comparison Year after implementation	4
Retrofit cost psf	\$ 3.00
Retrofit cost total (Tenant space's proportional share)	\$ 600,000

Annual energy savings psf

Projected energy savings (% , bundled)	25%
Projected simple payback period (yrs, bundled)	5.5
Performance Buffer	20%
Adjusted Payback Period (reflecting Performance Buffer)	6.9
Range of deviation from projected 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	

NOTES

Unless otherwise indicated, starting assumptions come from working group feedback.

- Input gross rental square footage - use square footage number upon which OpEx pass through will be based
- Based on working group feedback, 10 and 15 yr leases are most common in industry - for simplicity, model assumes a 15 year lease term.
- Input Annual Base Rent from lease, per square foot
- Input OpEx base year - for all building common area operating expenses except for energy, per square foot
- Input OpEx base year - for building common area energy expenses, per square foot
- Input assumption for annual escalation of non-energy building common area operating expenses
- Input assumption for annual escalation of building common area energy expenses
- Input the lease year during which energy conservation measures are completed
- For sake of simplicity, energy savings and CapEx pass-through are modeled to commence in the year following implementation. Stub year is disregarded.
- Input cost of retrofit, psf
- = Retrofit psf * gross sq footage
- Input projected energy savings assumption
- Calculated based on projected energy savings, retrofit cost and OpEx (at time of implementation)
- Input tenant's retrofit Performance Buffer, as negotiated per Energy Aligned Lease clause
- = Payback period / tenant-negotiated discount rate (elongates amortization period to reflect variability in energy savings)
- Input range of deviation of actual energy savings from projected savings, to establish under- & over-performing model scenarios
- = Projected energy savings minus (projected energy savings * deviation of projected from actual savings)
- = Projected energy savings plus (projected energy savings * deviation of projected from actual savings)
- Fixed percentage by which energy savings degrade per year over the life of the projection - model assumes 1.00% annual degradation.

EXPECTED SAVINGS

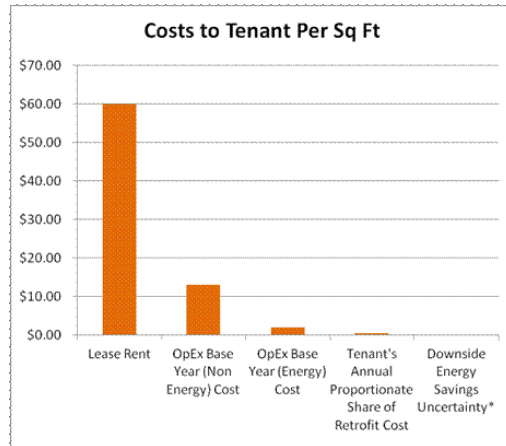
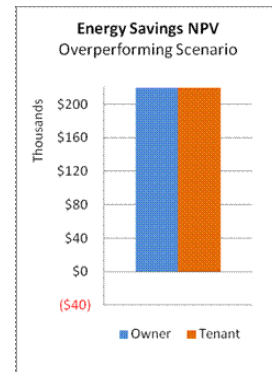
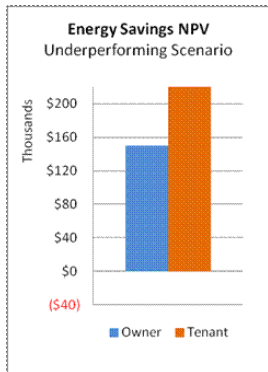
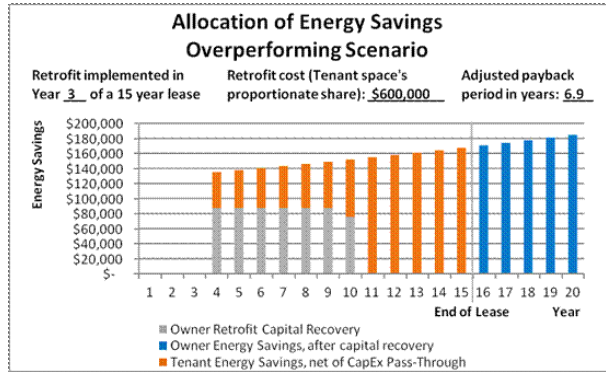
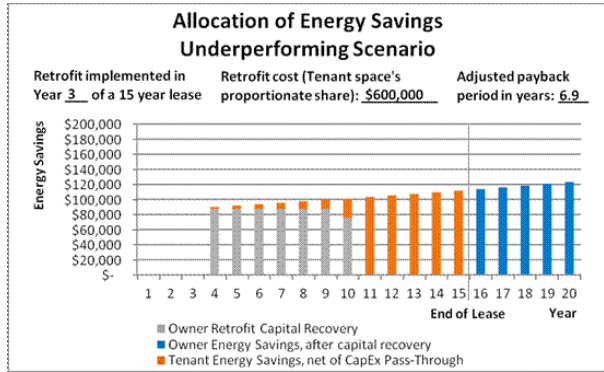
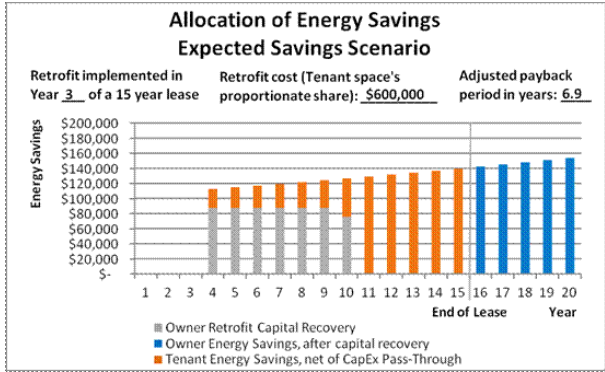
LOWER THAN EXPECTED SAVINGS

HIGHER THAN EXPECTED SAVINGS

TENANT NPV	\$496,257
OWNER NPV	\$208,449

TENANT NPV	\$315,170
OWNER NPV	\$149,870

TENANT NPV	\$677,344
OWNER NPV	\$267,027



	Lease Rent	OpEx Base Year (Non Energy) Cost	OpEx Base Year (Energy) Cost	Tenant's Annual Proportionate Share of Retrofit Cost	Downside Energy Savings Uncertainty*
Per sf	\$60.00	\$13.00	\$2.00	\$0.44	\$0.11
As %	100.0%	21.7%	3.3%	0.7%	0.2%
Total Cost	\$12,000,000	\$2,600,000	\$400,000	\$87,418	\$21,855

ENERGY ALIGNED LEASE MODEL

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
AMORTIZATION (SIMPLE PAYBACK PERIOD)																		
Year	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Notes	
BASELINE COSTS WITHOUT EE RETROFITS																		
OpEx Costs psf: non energy (baseline)	\$	13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	\$ 18.00	\$ 18.53	\$ 19.09	\$ 19.66	\$ 20.25	Baseline costs (non-energy and energy) compound annually at historical % set in Assumptions
OpEx Costs psf: energy (baseline)	\$	2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 2.25	\$ 2.32	\$ 2.39	\$ 2.46	\$ 2.53	\$ 2.61	\$ 2.69	\$ 2.77	\$ 2.85	\$ 2.94	\$ 3.03	\$ 3.12	
ENERGY COSTS WITH EE RETROFITS																		
OpEx Energy Costs psf: (under-performing retrofit scenario)	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.80	\$ 1.86	\$ 1.92	\$ 1.98	\$ 2.04	\$ 2.11	\$ 2.18	\$ 2.25	\$ 2.32	\$ 2.39	\$ 2.47	\$ 2.55	\$ 2.63	
OpEx Energy Costs psf: (performing retrofit scenario)	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.70	\$ 1.76	\$ 1.82	\$ 1.88	\$ 1.94	\$ 2.00	\$ 2.07	\$ 2.14	\$ 2.21	\$ 2.28	\$ 2.35	\$ 2.43	\$ 2.51	
OpEx Energy Costs psf: (over-performing retrofit scenario)	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.61	\$ 1.66	\$ 1.72	\$ 1.78	\$ 1.84	\$ 1.90	\$ 1.96	\$ 2.03	\$ 2.09	\$ 2.16	\$ 2.24	\$ 2.31	\$ 2.39	
TENANT PAYS: WITH EE RETROFITS																		
LOWER THAN EXPECTED SAVINGS (under-performing)																		
OpEx Costs psf: non energy	\$	13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	#N/A	#N/A	#N/A	#N/A	#N/A	User can determine when retrofits are implemented in Assumptions. Model calculates the reduction in OpEx energy costs psf beginning in the first Comparison Year after retrofits are implemented, based on lower-than-expected savings scenario and compounded annually at historical % set in Assumptions. CapEx is calculated starting in the first Comparison Year after retrofits are implemented, using negotiated amortization period set in Assumptions.
OpEx Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.80	\$ 1.86	\$ 1.92	\$ 1.98	\$ 2.04	\$ 2.11	\$ 2.18	\$ 2.25	#N/A	#N/A	#N/A	#N/A	#N/A	
CapEx Pass Through Costs psf: energy	\$	-	\$ -	\$ -	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.26	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A	
OpEx + CapEx Pass Through Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 2.17	\$ 2.23	\$ 2.29	\$ 2.35	\$ 2.42	\$ 2.48	\$ 2.44	\$ 2.25	#N/A	#N/A	#N/A	#N/A	#N/A	
Energy savings vs. baseline psf	\$	-	\$ -	\$ -	\$ 0.011	\$ 0.019	\$ 0.027	\$ 0.034	\$ 0.042	\$ 0.051	\$ 0.173	\$ 0.441	#N/A	#N/A	#N/A	#N/A	#N/A	
Tenant Savings (baseline vs. actual costs)	\$	-	\$ -	\$ 0	\$ 2,353	\$ 3,944	\$ 5,567	\$ 7,221	\$ 8,908	\$ 10,629	\$ 36,335	\$ 92,594	#N/A	#N/A	#N/A	#N/A	#N/A	
EXPECTED SAVINGS (retrofit performs as projected)																		
OpEx Costs psf: non energy	\$	13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	#N/A	#N/A	#N/A	#N/A	#N/A	User can determine when retrofits are implemented in Assumptions. Model calculates the reduction in OpEx energy costs psf beginning in the first Comparison Year after retrofits are implemented, based on expected savings scenario and compounded annually at historical % set in Assumptions. CapEx is calculated starting in first Comparison Year after retrofits are implemented, using negotiated amortization period set in Assumptions.
OpEx Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.70	\$ 1.76	\$ 1.82	\$ 1.88	\$ 1.94	\$ 2.00	\$ 2.07	\$ 2.14	#N/A	#N/A	#N/A	#N/A	#N/A	
CapEx Pass Through Costs psf: energy	\$	-	\$ -	\$ -	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.26	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A	
OpEx + CapEx Pass Through Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 2.08	\$ 2.13	\$ 2.19	\$ 2.25	\$ 2.31	\$ 2.38	\$ 2.33	\$ 2.14	#N/A	#N/A	#N/A	#N/A	#N/A	
Energy savings vs. baseline psf	\$	-	\$ -	\$ -	\$ 0.107	\$ 0.117	\$ 0.126	\$ 0.136	\$ 0.146	\$ 0.157	\$ 0.281	\$ 0.551	#N/A	#N/A	#N/A	#N/A	#N/A	
Tenant Savings (baseline vs. actual costs)	\$	-	\$ -	\$ -	\$ 22,546	\$ 24,535	\$ 26,564	\$ 28,632	\$ 30,741	\$ 32,891	\$ 59,036	\$ 115,742	#N/A	#N/A	#N/A	#N/A	#N/A	
HIGHER THAN EXPECTED SAVINGS (over-performing)																		
OpEx Costs psf: non energy	\$	13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	#N/A	#N/A	#N/A	#N/A	#N/A	User can determine when retrofits are implemented in Assumptions. Model calculates the reduction in OpEx energy costs psf beginning in the first Comparison Year after retrofits are implemented, based on higher-than-expected savings scenario and compounded annually at historical % set in Assumptions. CapEx is calculated starting in the first Comparison Year after retrofits are implemented, using negotiated amortization period set in Assumptions.
OpEx Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.61	\$ 1.66	\$ 1.72	\$ 1.78	\$ 1.84	\$ 1.90	\$ 1.96	\$ 2.03	#N/A	#N/A	#N/A	#N/A	#N/A	
CapEx Pass Through Costs psf: energy	\$	-	\$ -	\$ -	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.37	\$ 0.26	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A	
OpEx + CapEx Pass Through Costs psf: energy	\$	2.00	\$ 2.06	\$ 2.12	\$ 1.98	\$ 2.04	\$ 2.09	\$ 2.15	\$ 2.21	\$ 2.27	\$ 2.22	\$ 2.03	#N/A	#N/A	#N/A	#N/A	#N/A	
Energy savings vs. baseline psf	\$	-	\$ -	\$ -	\$ 0.204	\$ 0.215	\$ 0.226	\$ 0.238	\$ 0.250	\$ 0.263	\$ 0.389	\$ 0.661	#N/A	#N/A	#N/A	#N/A	#N/A	
Tenant Savings (baseline vs. actual costs)	\$	-	\$ -	\$ -	\$ 42,740	\$ 45,127	\$ 47,561	\$ 50,042	\$ 52,573	\$ 55,154	\$ 81,737	\$ 138,890	#N/A	#N/A	#N/A	#N/A	#N/A	
LANDLORD PAYS: WITH EE RETROFITS																		
LOWER THAN EXPECTED SAVINGS (under-performing)																		
Landlord Retrofit Capital Expense (total)	\$	-	\$ -	\$ (525,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Model assumes that, in undertaking retrofit improvements, benefits to Landlord accrue, in part, upon negotiation of new lease (or extension of existing lease). Specifically, the Landlord benefits from reduced energy costs psf (difference between what energy costs would have been without retrofits at the end of the lease term and what they now are with retrofits) minus any remaining amortized CapEx costs (which the model assumes that the Landlord will have to pay). The lease is assumed to turn over to a new tenant in year 10, and the landlord's cashflow is only calculated to year 15, which conservatively discounts the NPV of energy savings accrued to the landlord (since energy savings would continue past year 15 for measures with long useful lives).
Landlord Retrofit Capital Recovery	\$	-	\$ -	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Landlord energy savings psf (after lease expiration)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.45	\$ 0.46	\$ 0.47	\$ 0.48	\$ 0.49		
Landlord Energy Savings total (after lease expiration)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94,418	\$ 96,278	\$ 98,174	\$ 100,108	\$ 102,080		
Landlord Retrofit Capital and Energy Savings Cash Flow	\$	-	\$ -	\$ (525,000)	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ 94,418	\$ 96,278	\$ 98,174	\$ 100,108	\$ 102,080	
EXPECTED SAVINGS (retrofit performs as projected)																		
Landlord Retrofit Capital Expense (total)	\$	-	\$ -	\$ (525,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Model assumes that, in undertaking retrofit improvements, benefits to Landlord accrue, in part, upon negotiation of new lease (or extension of existing lease). Specifically, the Landlord benefits from reduced energy costs psf (difference between what energy costs would have been without retrofits at the end of the lease term and what they now are with retrofits) minus any remaining amortized CapEx costs (which the model assumes that the Landlord will have to pay). The lease is assumed to turn over to a new tenant in year 10, and the landlord's cashflow is only calculated to year 15, which conservatively discounts the NPV of energy savings accrued to the landlord (since energy savings would continue past year 15 for measures with long useful lives).
Landlord Retrofit Capital Recovery	\$	-	\$ -	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Landlord savings psf	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.56	\$ 0.57	\$ 0.58	\$ 0.60	\$ 0.61		
Landlord Energy Savings total (after lease expiration)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 118,022	\$ 120,347	\$ 122,718	\$ 125,135	\$ 127,601		
Landlord Retrofit Capital and Energy Savings Cash Flow	\$	-	\$ -	\$ (525,000)	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ 118,022	\$ 120,347	\$ 122,718	\$ 125,135	\$ 127,601	
HIGHER THAN EXPECTED SAVINGS (over-performing)																		
Landlord Retrofit Capital Expense (total)	\$	-	\$ -	\$ (525,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Model assumes that, in undertaking retrofit improvements, benefits to Landlord accrue, in part, upon negotiation of new lease (or extension of existing lease). Specifically, the Landlord benefits from reduced energy costs psf (difference between what energy costs would have been without retrofits at the end of the lease term and what they now are with retrofits) minus any remaining amortized CapEx costs (which the model assumes that the Landlord will have to pay). The lease is assumed to turn over to a new tenant in year 10, and the landlord's cashflow is only calculated to year 15, which conservatively discounts the NPV of energy savings accrued to the landlord (since energy savings would continue past year 15 for measures with long useful lives).
Landlord Retrofit Capital Recovery	\$	-	\$ -	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Landlord savings psf	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.67	\$ 0.69	\$ 0.70	\$ 0.72	\$ 0.73		
Landlord Energy Savings total (after lease expiration)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,626	\$ 144,416	\$ 147,261	\$ 150,163	\$ 153,121		
Landlord Retrofit Capital and Energy Savings Cash Flow	\$	-	\$ -	\$ (525,000)	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ 141,626	\$ 144,416	\$ 147,261	\$ 150,163	\$ 153,121	
TOTAL SAVINGS																		
Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Total Energy Savings - Underperforming Scenario	\$	-	\$ -	\$ 80,774	\$ 82,366	\$ 83,988	\$ 85,643	\$ 87,330	\$ 89,050	\$ 90,805	\$ 92,594	\$ 94,418	\$ 96,278	\$ 98,174	\$ 100,108	\$ 102,080		
Total Energy Savings - Expected Savings Scenario	\$	-	\$ -	\$ 100,968	\$ 102,957	\$ 104,985	\$ 107,054	\$ 109,162	\$ 111,313	\$ 113,506	\$ 115,742	\$ 118,022	\$ 120,347	\$ 122,718	\$ 125,135	\$ 127,601		
Total Energy Savings - Overperforming Scenario	\$	-	\$ -	\$ 121,162	\$ 123,548	\$ 125,962	\$ 128,464	\$ 130,995	\$ 133,576	\$ 136,207	\$ 138,890	\$ 141,626	\$ 144,416	\$ 147,261	\$ 150,163	\$ 153,121		
LL Retrofit Capital Recovery - Underperforming	\$	-	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -		
LL Energy Savings (after capital recovery) - Underperforming	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94,418	\$ 96,278	\$ 98,174	\$ 100,108	\$ 102,080		
LL Retrofit Capital Recovery - Expected Savings	\$	-	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -		
LL Energy Savings (after capital recovery) - Expected Savings	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 118,022	\$ 120,347	\$ 122,718	\$ 125,135	\$ 127,601		
LL Retrofit Capital Recovery - Overperforming	\$	-	\$ -	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 78,422	\$ 54,470	\$ -	\$ -	\$ -	\$ -	\$ -		
LL Energy Savings (after capital recovery) - Overperforming	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,626	\$ 144,416	\$ 147,261	\$ 150,163	\$ 153,121		
Tenant Energy Savings - Underperforming	\$	-	\$ -	\$ 2,353	\$ 3,944	\$ 5,567	\$ 7,221	\$ 8,908	\$ 10,629	\$ 36,335	\$ 92,594	\$ -	\$ -	\$ -	\$ -	\$ -		
Tenant Energy Savings - Expected Savings	\$	-	\$ -	\$ 22,546	\$ 24,535	\$ 26,564	\$ 28,632	\$ 30,741	\$ 32,891	\$ 59,036	\$ 115,742	\$ -	\$ -	\$ -	\$ -	\$ -		
Tenant Energy Savings - Overperforming	\$	-	\$ -	\$ 42,740	\$ 45,127	\$ 47,561	\$ 50,042	\$ 52,573	\$ 55,154	\$ 81,737	\$ 138,890	\$ -	\$ -	\$ -	\$ -	\$ -		

ENERGY ALIGNED LEASE MODEL																							
AMORTIZATION (SIMPLE PAYBACK PERIOD)		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Year	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Notes	
Savings Degradation %	0	100.0%	100.0%	100.0%	100.0%	99.00%	97.03%	96.06%	95.10%	94.15%	93.21%	92.27%	91.35%	90.44%	89.53%	88.64%	87.75%	86.87%	86.01%	85.15%	84.30%	Yrs remaining (whole/partial) that Landlord has to pay CapEx	
BASILINE COSTS WITHOUT EE RETROFITS																							
OpEx Costs p/af: non energy (baseline)	\$ 13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	\$ 18.00	\$ 18.53	\$ 19.09	\$ 19.66	\$ 20.25	\$ 20.86	\$ 21.49	\$ 22.13	\$ 22.80	\$ 23.48	Baseline costs (non-energy and energy) compound annually at historical % set in Assumptions	
OpEx Costs p/af: energy (baseline)	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 2.25	\$ 2.32	\$ 2.39	\$ 2.46	\$ 2.53	\$ 2.61	\$ 2.69	\$ 2.77	\$ 2.85	\$ 2.94	\$ 3.03	\$ 3.12	\$ 3.21	\$ 3.31	\$ 3.40	\$ 3.51	\$ 3.61		
OpEx Costs total: non energy (baseline)	\$ 2,600,000	\$ 2,678,000	\$ 2,758,340	\$ 2,841,090	\$ 2,926,323	\$ 3,014,113	\$ 3,104,536	\$ 3,197,672	\$ 3,293,602	\$ 3,392,410	\$ 3,494,183	\$ 3,599,000	\$ 3,706,978	\$ 3,818,188	\$ 3,932,733	\$ 4,050,715	\$ 4,172,237	\$ 4,297,404	\$ 4,426,326	\$ 4,559,116	\$ 4,695,899		
OpEx Costs total: energy (baseline)	\$ 400,000	\$ 412,000	\$ 424,360	\$ 437,091	\$ 450,204	\$ 463,710	\$ 477,621	\$ 491,950	\$ 506,708	\$ 521,909	\$ 537,567	\$ 553,694	\$ 570,304	\$ 587,413	\$ 605,036	\$ 623,187	\$ 641,883	\$ 661,139	\$ 680,973	\$ 701,402	\$ 722,444		
OPEx TOTAL (BASELINE)	\$ 3,000,000	\$ 3,090,000	\$ 3,182,700	\$ 3,278,181	\$ 3,376,526	\$ 3,477,822	\$ 3,582,157	\$ 3,689,622	\$ 3,800,310	\$ 3,914,320	\$ 4,031,749	\$ 4,152,702	\$ 4,277,283	\$ 4,405,601	\$ 4,537,769	\$ 4,673,902	\$ 4,814,119	\$ 4,958,543	\$ 5,107,299	\$ 5,260,518	\$ 5,418,334		
ENERGY COSTS WITH EE RETROFITS																							
OpEx Energy Costs p/af: (underperforming retrofit scenario)	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 1.80	\$ 1.86	\$ 1.92	\$ 1.98	\$ 2.05	\$ 2.11	\$ 2.18	\$ 2.25	\$ 2.33	\$ 2.40	\$ 2.48	\$ 2.56	\$ 2.64	\$ 2.73	\$ 2.81	\$ 2.90	\$ 3.00		
OpEx Energy Costs p/af: (performing retrofit scenario)	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 1.69	\$ 1.74	\$ 1.80	\$ 1.86	\$ 1.93	\$ 1.99	\$ 2.06	\$ 2.12	\$ 2.19	\$ 2.27	\$ 2.34	\$ 2.42	\$ 2.50	\$ 2.58	\$ 2.67	\$ 2.75	\$ 2.84		
OpEx Energy Costs p/af: (over-performing retrofit scenario)	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 1.59	\$ 1.63	\$ 1.69	\$ 1.74	\$ 1.80	\$ 1.87	\$ 1.93	\$ 1.99	\$ 2.06	\$ 2.13	\$ 2.20	\$ 2.28	\$ 2.36	\$ 2.44	\$ 2.52	\$ 2.60	\$ 2.69		
TENANT PAYS: WITH EE RETROFITS																							
LOWER THAN EXPECTED SAVINGS (under-performing)																							
OpEx Costs p/af: non energy	\$ 13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	\$ 18.00	\$ 18.53	\$ 19.09	\$ 19.66	\$ 20.25	#N/A	#N/A	#N/A	#N/A	#N/A	User can determine when retrofits are implemented in Assumptions. Model calculates the reduction in OpEx energy costs p/af beginning in the first Comparison Year after retrofits are implemented, based on lower-than-expected savings scenario and compounded annually at historical % set in Assumptions. CapEx is calculated starting in the first Comparison Year after retrofits are implemented, using negotiated amortization period set in Assumptions.	
OpEx Costs p/af: energy	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 1.80	\$ 1.86	\$ 1.92	\$ 1.98	\$ 2.05	\$ 2.11	\$ 2.18	\$ 2.25	\$ 2.33	\$ 2.40	\$ 2.48	\$ 2.56	#N/A	#N/A	#N/A	#N/A	#N/A		
CapEx Pass Through Costs p/af: energy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.38	\$ -	\$ -	\$ -	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A		
OpEx + CapEx Pass Through Costs p/af: energy	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 2.24	\$ 2.30	\$ 2.36	\$ 2.42	\$ 2.48	\$ 2.55	\$ 2.56	\$ 2.25	\$ 2.33	\$ 2.40	\$ 2.48	\$ 2.56	#N/A	#N/A	#N/A	#N/A	#N/A		
Energy savings vs. baseline p/af	\$ -	\$ -	\$ -	\$ -	\$ 0.013	\$ 0.022	\$ 0.031	\$ 0.040	\$ 0.050	\$ 0.059	\$ 0.129	\$ 0.516	\$ 0.526	\$ 0.537	\$ 0.547	\$ 0.558	#N/A	#N/A	#N/A	#N/A	#N/A		
Total OpEx Costs: non energy	\$ 2,600,000	\$ 2,678,000	\$ 2,758,340	\$ 2,841,090	\$ 2,926,323	\$ 3,014,113	\$ 3,104,536	\$ 3,197,672	\$ 3,293,602	\$ 3,392,410	\$ 3,494,183	\$ 3,599,000	\$ 3,706,978	\$ 3,818,188	\$ 3,932,733	\$ 4,050,715	#N/A	#N/A	#N/A	#N/A	#N/A		
Total OpEx Costs: energy	\$ 400,000	\$ 412,000	\$ 424,360	\$ 437,091	\$ 450,204	\$ 463,710	\$ 477,621	\$ 491,950	\$ 506,708	\$ 521,909	\$ 537,567	\$ 553,694	\$ 570,304	\$ 587,413	\$ 605,036	\$ 623,187	#N/A	#N/A	#N/A	#N/A	#N/A		
Total CapEx Pass Through Costs: energy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
TOTAL OPEx + CAPEX PASS THROUGH	\$ 3,000,000	\$ 3,090,000	\$ 3,182,700	\$ 3,278,181	\$ 3,376,526	\$ 3,477,822	\$ 3,582,157	\$ 3,689,622	\$ 3,800,310	\$ 3,914,320	\$ 4,031,749	\$ 4,152,702	\$ 4,277,283	\$ 4,405,601	\$ 4,537,769	\$ 4,673,902	\$ 4,814,119	\$ 4,958,543	\$ 5,107,299	\$ 5,260,518	\$ 5,418,334		
Tenant Savings (baseline vs. actual costs)	\$ -	\$ -	\$ -	\$ -	\$ 2,623	\$ 4,396	\$ 6,205	\$ 8,049	\$ 9,930	\$ 11,848	\$ 25,731	\$ 103,216	\$ 105,249	\$ 107,322	\$ 109,437	\$ 111,593	#N/A	#N/A	#N/A	#N/A	#N/A		
HIGHER THAN EXPECTED SAVINGS (over-performing)																							
OpEx Costs p/af: non energy	\$ 13.00	\$ 13.39	\$ 13.79	\$ 14.21	\$ 14.63	\$ 15.07	\$ 15.52	\$ 15.99	\$ 16.47	\$ 16.96	\$ 17.47	\$ 18.00	\$ 18.53	\$ 19.09	\$ 19.66	\$ 20.25	#N/A	#N/A	#N/A	#N/A	#N/A	User can determine when retrofits are implemented in Assumptions. Model calculates the reduction in OpEx energy costs p/af beginning in the first Comparison Year after retrofits are implemented, based on higher-than-expected savings scenario and compounded annually at historical % set in Assumptions. CapEx is calculated starting in the first Comparison Year after retrofits are implemented, using negotiated amortization period set in Assumptions.	
OpEx Costs p/af: energy	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 1.58	\$ 1.63	\$ 1.69	\$ 1.74	\$ 1.80	\$ 1.87	\$ 1.93	\$ 1.99	\$ 2.06	\$ 2.13	\$ 2.20	\$ 2.28	#N/A	#N/A	#N/A	#N/A	#N/A		
CapEx Pass Through Costs p/af: energy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.44	\$ 0.38	\$ -	\$ -	\$ -	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A		
OpEx + CapEx Pass Through Costs p/af: energy	\$ 2.00	\$ 2.06	\$ 2.12	\$ 2.19	\$ 2.01	\$ 2.07	\$ 2.12	\$ 2.18	\$ 2.24	\$ 2.30	\$ 2.31	\$ 1.99	\$ 2.06	\$ 2.13	\$ 2.20	\$ 2.28	#N/A	#N/A	#N/A	#N/A	#N/A		
Energy savings vs. baseline p/af	\$ -	\$ -	\$ -	\$ -	\$ 0.238	\$ 0.252	\$ 0.265	\$ 0.279	\$ 0.293	\$ 0.307	\$ 0.382	\$ 0.774	\$ 0.789	\$ 0.805	\$ 0.821	\$ 0.837	#N/A	#N/A	#N/A	#N/A	#N/A		
Total OpEx Costs: non energy	\$ 2,600,000	\$ 2,678,000	\$ 2,758,340	\$ 2,841,090	\$ 2,926,323	\$ 3,014,113	\$ 3,104,536	\$ 3,197,672	\$ 3,293,602	\$ 3,392,410	\$ 3,494,183	\$ 3,599,000	\$ 3,706,978	\$ 3,818,188	\$ 3,932,733	\$ 4,050,715	#N/A	#N/A	#N/A	#N/A	#N/A		
Total OpEx Costs: energy	\$ 400,000	\$ 412,000	\$ 424,360	\$ 437,091	\$ 337,653	\$ 348,941	\$ 360,592	\$ 372,615	\$ 385,023	\$ 397,827	\$ 411,039	\$ 424,674	\$ 438,743	\$ 453,260	\$ 468,240	\$ 483,696	#N/A	#N/A	#N/A	#N/A	#N/A		
Total CapEx Pass Through Costs: energy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	#N/A	#N/A	#N/A	#N/A	#N/A		
TOTAL OPEx + CAPEX PASS THROUGH	\$ 3,000,000	\$ 3,090,000	\$ 3,182,700	\$ 3,278,181	\$ 3,328,884	\$ 3,450,472	\$ 3,582,546	\$ 3,725,705	\$ 3,876,043	\$ 4,034,335	\$ 4,206,713	\$ 4,393,662	\$ 4,596,232	\$ 4,814,721	\$ 5,049,973	\$ 5,307,411	\$ 5,589,904	\$ 5,899,457	\$ 6,237,119	\$ 6,604,819	\$ 7,014,819		
Tenant Savings (baseline vs. actual costs)	\$ -	\$ -	\$ -	\$ -	\$ 25,133	\$ 27,350	\$ 29,611	\$ 31,916	\$ 34,267	\$ 36,664	\$ 51,036	\$ 129,020	\$ 131,561	\$ 134,153	\$ 136,796	\$ 139,491	#N/A	#N/A	#N/A	#N/A	#N/A		
LANDLORD PAYS: WITH EE RETROFITS																							
LOWER THAN EXPECTED SAVINGS (under-performing)																							
Landlord Retrofit Capital Expense (total cost)	\$ -	\$ -	\$ -	\$ (600,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Model assumes that, in undertaking retrofit improvements, benefits to Landlord accrue, in part, upon expiration of existing lease and negotiation of new lease (or renewal of existing lease). Specifically, the Landlord benefits from reduced energy costs p/af (difference between what energy costs would have been without retrofits at the end of the lease term and what they now are with retrofits) minus any remaining unamortized CapEx costs (which the model assumes that the Landlord will have to pay). Model assumes a 20 year average lifespan for installed energy efficiency measures.	
Landlord Retrofit Capital Recovery	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord savings p/af (after lease expiration)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord Energy Savings total (after lease expiration)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord Retrofit Capital and Energy Savings Cash Flow	\$ -	\$ -	\$ -	\$ (600,000)	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 123,026	
HIGHER THAN EXPECTED SAVINGS (over-performing)																							
Landlord Retrofit Capital Expense (total cost)	\$ -	\$ -	\$ -	\$ (600,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord Retrofit Capital Recovery	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord savings p/af (after lease expiration)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord Energy Savings total (after lease expiration)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Landlord Retrofit Capital and Energy Savings Cash Flow	\$ -	\$ -	\$ -	\$ (600,000)	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 153,783	
Summary of Savings and Costs																							
Total Energy Savings - Underperforming Scenario	\$ -	\$ -	\$ -	\$ -	\$ 90,041	\$ 91,815	\$ 93,623	\$ 95,466	\$ 97,348	\$ 99,266	\$ 101,222	\$ 103,216	\$ 105,249	\$ 107,322	\$ 109,437	\$ 111,593	\$ 113,791	\$ 116,033	\$ 118,319	\$ 120,649	\$ 123,026		
Total Energy Savings - Overperforming Scenario	\$ -	\$ -	\$ -	\$ -	\$ 125,551	\$ 114,768	\$ 117,029	\$ 119,335	\$ 121,685	\$ 124,083	\$ 126,527	\$ 129,020	\$ 131,561	\$ 134,153	\$ 136,796	\$ 139,491	\$ 142,239	\$ 145,041	\$ 147,898	\$ 150,812	\$ 153,783		
Total Energy Savings - Expected Savings Scenario	\$ -	\$ -	\$ -	\$ -	\$ 135,061	\$ 137,722	\$ 140,435	\$ 143,201	\$ 146,023	\$ 148,899	\$ 151,832	\$ 154,824	\$ 157,874	\$ 160,984	\$ 164,155	\$ 167,389	\$ 170,687	\$ 174,049	\$ 177,478	\$ 180,974	\$ 185,539		
LL Retrofit Capital Recovery - Underperforming	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,418	\$ 75,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
LL Energy Savings (after capital recovery) - Underperforming	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 123,026		
LL Retrofit Capital Recovery - Expected Savings	\$ -	\$ -	\$ -	\$ -	\$ 87,418	\$ 87,418	\$ 87,418	\$ 87,4															