

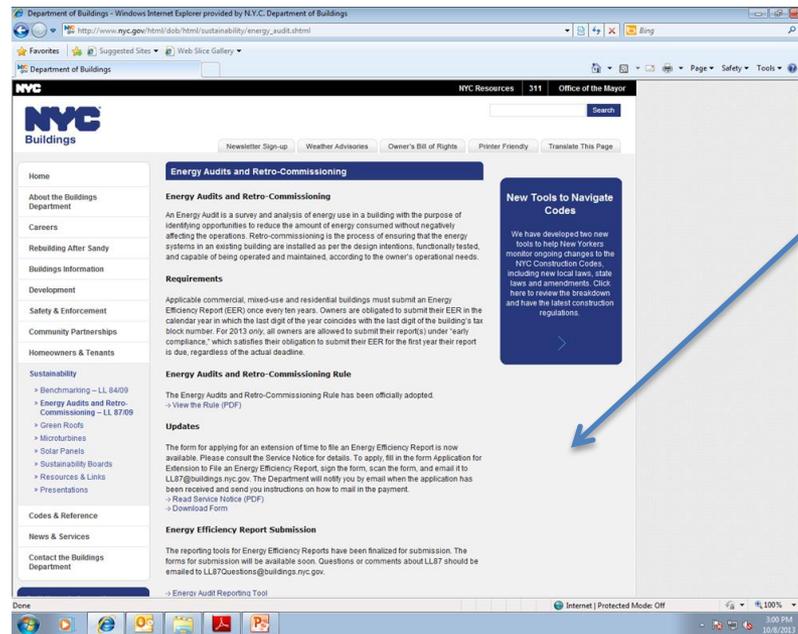
# Local Law 87/09

## Energy Audits & Retro-commissioning

Information Session

# LL87 Webpage

<http://www1.nyc.gov/site/buildings/business/energy-audits-and-retro-commissioning.page>



Main Source of Information from DOB

# What is an EER?

An Energy Efficiency Report (EER) is the report required to be filed pursuant to section 28-308.4.

An EER includes:

- EERC1 (Professional Certification: Energy Auditor and Owner Statements) form
- Energy Audit Tool
- EERC2 (Professional Certification: Retro-commissioning Agent and Owner Statements) form
- Retro-commissioning Tool

# Exemptions, Exceptions, Deferrals

## Exemptions:

### Energy Efficiency Report (EER):

- Building owners do not have to file if the building is classified as Class 1 pursuant to subdivision 1802 of the real property tax law of the state of New York (1, 2, or 3 family dwellings that are not condominiums or 1, 2, or 3 family condos of 3 stories or less – status should be indicated on your tax bill from the Department of Finance)

# Exemptions, Exceptions, Deferrals

## Exceptions:

Conducting an Energy Audit: Building owners do not have to have an energy audit conducted if:

- The building has received an EPA Energy Star label for at least *2 of the 3 years preceding* the filing of the building's Energy Efficiency Report (EER)\*
- The building has received LEED Certification within 4 years prior to the filing of the building's EER\*
- The building is a SIMPLE BUILDING and 6/7 of the items listed in the law are satisfied (this only applies to the building's first EER filing)\*

***Simple Building: No central cooling or chilled water system***

\*Certified by an RDP

# Exemptions, Exceptions, Deferrals

Conducting Retro-commissioning: Building owners do not have to conduct retro-commissioning if:

- The building has received LEED Certification *within 2 years prior* to the filing of the building's EER  
AND
- The building has earned the LEED point for Existing Building Commissioning investigation and analysis  
AND
- The building has earned the LEED point for Existing Building Commissioning implementation

# Exemptions, Exceptions, Deferrals

## Extension of time to file an EER:

Building owners must file by Oct 1<sup>st</sup> of their reporting year

- Financial Hardship (one year – may be renewed annually)
  - Property taxes in arrears within 2 years prior to filing of EER on the DOF's annual New York City tax lien sale list
  - Exempt from real property taxes pursuant to sections 420-a, 420-b, 446 or 462 of the real property tax law
  - Had outstanding balances under the Department of Housing Preservation and Development's Emergency Repair Program that resulted in the property's inclusion, within 2 years prior to filing of EER, on the DOF's annual New York city tax lien sale list
  - Has an active or effective commitment letter from a governmental agency that provides for the financing of the rehabilitation, within a period of 5 years or less, for the purposes of affordable housing for low or moderate income families
- Good Faith Effort (one year – may only be granted twice)
  - One Example : Hurricane Sandy wiped out base building systems, so unable to complete LL87 work

# EER2: Application for Extension of Time to File Energy Efficiency Report

**NYC Buildings** EER2: Application for Extension of Time to File Energy Efficiency Report (EER)

*Must be typewritten and completed by Building Owner or its Agent and filed with the Department of Buildings by Oct. 1<sup>st</sup> of the year in which the EER is due.*

Enter document submission PIN here:

**1 Location Information** Required for all applications.

Street No. \_\_\_\_\_ Street Name: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Borough \_\_\_\_\_ Block \_\_\_\_\_ Lot \_\_\_\_\_ BIN(s) \_\_\_\_\_ Filing Yr \_\_\_\_\_

**2 Ownership Information** Required for all applications.

Building Owner \_\_\_\_\_  
Owner or Agent's Contact Name and Title \_\_\_\_\_  
Owner or Agent's Email \_\_\_\_\_  
Owner or Agent's Contact Telephone No. \_\_\_\_\_

**3 Exceptions to the requirement of filing an Energy Efficiency Report as per AC § 28-308.4, by December 31<sup>st</sup> of the year in which the report is due. Review AC § 28-308.4 and 1RCNY § 103-07(1) to determine if you qualify for an extension of time to file your EER and then check all that apply and provide any relevant supporting documentation.**

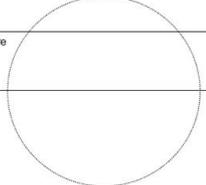
- Despite my good faith efforts, as documented, I am unable to complete the required energy audit and retro-commissioning prior to the due date for this Energy Efficiency Report - (insert year): Dec 31, \_\_\_\_\_. (attach relevant documentation to support owner's good faith effort.)
- Based on the financial hardship of the above building, I am unable to file this Energy Efficiency Report by the due date of (insert year): Dec 31, \_\_\_\_\_. My assertion of financial hardship for the building is based on one of the following: (check as applicable and provide required documentation.)
  - Building has had arrears of property taxes, or water or wastewater charges that resulted in building's inclusion on the Department of Finance's annual New York City tax lien sale list, within two years prior to the due date of this Energy Efficiency Report. (Attach certification from Department of Finance.)
  - Building is exempt from real property taxes pursuant to sections 420-a, 420-b, 446 or 462 of the New York City Real Property Tax Law and applicable local law and the owner had negative revenue less expenses during the two years prior to the due date of this Energy Efficiency Report, as certified by a certified public accountant. (Attach certification.)
  - Building has had outstanding balances under New York City Department of Housing Preservation and Development's emergency repair program that resulted in the building's inclusion, within two year's prior to the due date of the Energy Efficiency Report on the Department of Finance's annual New York City tax lien sale list. (Attach certification from Department of Finance.)
  - Building has an active or effective commitment letter from a governmental agency that provides for the financing of the rehabilitation, within a period of five years or less from the due date of the EER, by such government agency, for the purposes of affordable housing for low or moderate income families. (Attach copy of commitment letter.)

# Exemptions, Exceptions, Deferrals

Deferral of filing an EER: Building owners can defer filing until the next filing year for a building (ten years) if:

- The building is less than ten years old, AND/OR
  - The building has substantially changed its base building systems
- AND**
- The building can demonstrate that it meets the energy code as in effect
    - for new buildings constructed on or after July 1, 2010
- OR**
- as in effect at the time the building was built/altered, whichever is later

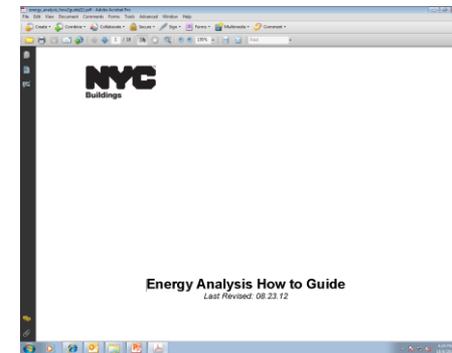
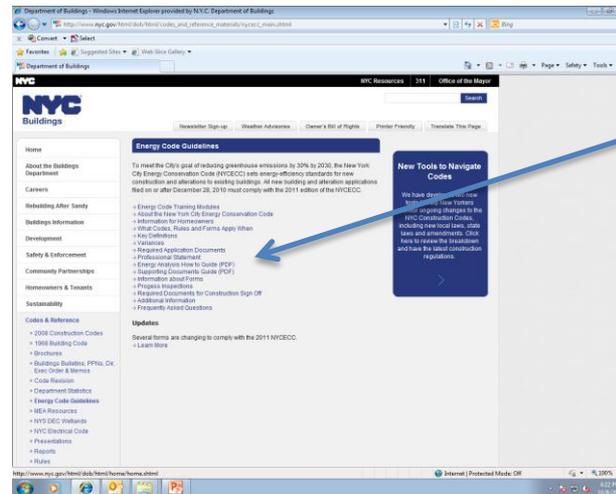
# EER1: Application to Defer Filing an Energy Efficiency Report

	EER1: Application to Defer Filing an Energy Efficiency Report (EER)	Enter document submission PIN here:
	Must be typewritten and completed by Building Owner or its Agent.	
<b>1 Location Information</b> Required for all applications.		
Street No. _____ Street Name _____ Zip Code _____ Borough _____ Block _____ Lot _____ BIN(s) _____ First Assigned Filing Yr _____		
<b>2 Ownership Information</b> Required for all applications.		
Building Owner _____ Owner or Agent's Contact Name and Title _____ Owner or Agent's Email _____ Owner or Agent's Contact Telephone No. _____		
<b>3 Application to defer requirement of filing an Energy Efficiency Report as per AC § 28-308.4.1 Due Dates. Review AC § 28-308.4.1 to determine if you qualify for the right to defer filing an EER until the 10<sup>th</sup> calendar year after such assigned calendar year. Provide any relevant supporting documentation.</b>		
<input type="checkbox"/> Building is less than 10 years old at the commencement of the first assigned calendar year, and all base building systems are in compliance with the New York city energy conservation code as in effect for new buildings constructed on or after July 1, 2010, or currently in effect, whichever is later.		
<input type="checkbox"/> Building has undergone substantial rehabilitation, as certified by a registered design professional, within the 10 year period prior to the assigned calendar year in which the energy efficiency report is due, such that at the commencement of such calendar year, all of the base building systems of such building are in compliance with the New York city energy conservation code as in effect for new buildings constructed on and after July 1, 2010, or as in effect on the date of such substantial rehabilitation, whichever is later.		
<b>4 Professional's Certification</b>		
I hereby state that I have exercised a professional standard of care in certifying that the filed application is complete and in accordance with applicable laws, rules of the Department of Buildings and the Rules of the City of New York, as of this date. I am aware the Commissioner will rely upon the truth and accuracy of this statement. I have notified the owner that this application has been professionally certified. If an audit or other exam discloses non-compliance, I agree to notify the owner of the remedial measures that must be taken to meet legal requirements. I further realize that any misrepresentation or falsification of facts made knowingly or negligently by me, my agents or employees, or by others with my knowledge, will render me liable for legal and disciplinary action by the Department of Buildings and other appropriate authorities, including being barred from filing any documents with the Department of Buildings, and termination of participation in the professional certification procedures at the Department of Buildings.		Name (please print) _____ <hr/> Signature _____ Date _____
License Number _____		 P.E. / R.A. Seal (apply seal, then sign and date over seal)

# Demonstrating Energy Code Compliance

## DOB website

- Codes & Reference
  - Energy Code Guidelines
    - Energy Analysis How To Guide



# Demonstrating Compliance

Building owners need to submit by 12/31 of the building's filing year  
Normal Compliance

- In the calendar year that coincides with the last digit of the building's tax block number
  - Conduct energy audit and retro-commissioning activities
  - Fill out the **EA Professional Certification Form (EERC1)** and **EA Reporting Tool** and the **Retro-cx Professional Certification Form (EERC2)** and the **Retro-cx Reporting Tool**
  - Submit via email to [LL87@buildings.nyc.gov](mailto:LL87@buildings.nyc.gov)
  - Mail in payment (as described in an email the department will send to the owner or owner's representative listed on the Professional Certification Forms after they are submitted to DOB)

# Demonstrating Compliance

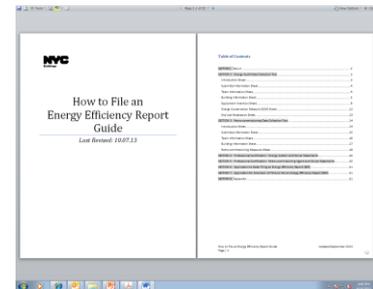
## Early Compliance (2013 ONLY)

- Independent of the actual filing year of the building
  - Same process as for normal compliance **ONLY**
    - » There is no requirement to fill out the reporting tools, although it is **HIGHLY ENCOURAGED**
    - » Not required to follow the Rule

For those due in 2013 – Rule is optional

For both normal and early compliance

- Service Notice
- How to File an Energy Efficiency Report Guide
- Example Tools (EA & Retro-cx)



# Naming Files & Forms for DOB Submission

## Tools:

- For the Energy Audit: BBL\_X\_LL87EATool\_Rev#
- For the Retro-cx: BBL\_X\_LL87RCxTool\_Rev#
  - BBL: Borough, Block, Lot (example: 1001530001 is for 280 Broadway in the borough of Manhattan (1); block 153; and lot 1)
  - X is A, B, or C, etc. depending on whether more than one EER is being submitted for this BBL (example: 5 buildings are on one BBL, 3 out of 5 of those buildings are served by the same base building systems – they share a boiler, while the other 2 are each served by their own respective systems – there will be three EERs submitted for this BBL, and so A, B, and C will be filed)
  - Rev # will be zero for the first EER submitted (if the DOB auditor requests that an EER be re-submitted with modifications, the re-submitted EER would be Rev1)

## Forms:

- EERC1: BBL\_X\_EERC1 and EERC2: BBL\_X\_EERC2
- EER1: BBL\_EER1 and EER2: BBL\_EER2

# Reporting Tools Energy Audit Instruction Sheet



## LOCAL LAW 87 - ENERGY AUDIT DATA COLLECTION TOOL

Welcome to the Local Law 87 (LL87) Energy Audit Data Collection Workbook from the New York City Department of Buildings. As part of the Greener, Greater Buildings Plan (GGBP), the City of New York enacted Local Law 87 which requires large buildings to undergo an energy audit once every ten years. This workbook captures critical information about your Lot/Building that should have been included in the energy audit that was performed. New York City Department of Buildings will use the information found on this workbook to verify compliance with Local Law 87.

For more information and to download a copy of Local Law 87/Rule visit:

[http://www.nyc.gov/html/dob/html/sustainability/energy\\_audit.shtml](http://www.nyc.gov/html/dob/html/sustainability/energy_audit.shtml)

Questions or comments about this tool should be e-mailed to:

[LL87Questions@buildings.nyc.gov](mailto:LL87Questions@buildings.nyc.gov)

**Tip #1:** Only cells shaded in blue need to be entered/edited manually as mandatory fields. Enter "N/A" or leave as blank if a particular field does not apply. Do not "Change/Edit" white or grey cells.

**Tip #2:** Follow the formatting guidelines and/or instructions presented as pop-up comments (as indicated by a red triangle located in the upper right hand corner) for certain fields.

**Tip #3:** Provide a justification or explanation within the "Comments/Notes" window located at the bottom of each tab for any mandatory field entered as "N/A" or left blank.

**Tip #4:** Team Info(1), Building Info(1), Equipment Inventory(1), ECMs(1) and End Use Breakdown(1) tabs/sheets can be copied multiple times in their entirety manually, if needed for multiple buildings or multiple base building systems data entry. Do not Cut, Copy, Paste or Edit portions of sections within any sheet to add more systems/components.

**Tip #5:** Use Energy Star Portfolio Manager Technical Reference "Thermal Energy Conversions" for all unit conversions/heat contents of each fuel type.

**Note:** This Energy Efficiency Report does not replace the Energy Audit Report. A complete copy of the Energy Audit report can be requested at any time for review and enforcement purposes. See AC §28-308.2.1 for the contents of the Energy Audit report.

What fields need to be completed

What to do if base building systems don't require all fields

Not to change white or grey fields

Copying of tabs

What to do if "N/A"

# Reporting Tools Energy Audit Submittal Information Sheet

The number of buildings on the lot may be different from the number of buildings listed on the Buildings Information Sheet, depending on base building systems configuration



## SUBMITTAL INFORMATION

Energy Efficiency Report (EER) Submission Information	
Submitted by:	Doe John
Company:	123 Development
Phone:	(123) 456-7890
Extension (If Applicable):	1234
E-mail:	<a href="mailto:JD@greenabc.com">JD@greenabc.com</a>
Date:	12/01/2013
Early Compliance:	Yes
Filing Status:	Initial Filing

The person indicated on this sheet is the one who will be contacted by DOB for information or additional documentation

Lot Information	
Borough:	Manhattan
Block:	23456
Lot:	7890
# of Buildings on Lot:	1

Building(s) Information			
BIN	Address(es)	Zip Code	
1	0101010	123 Sustainability Way	00000
2			
3			
4			
5			

Atypical situations should be explained in the comment box

Comments/Notes: (If Applicable)





# Reporting Tools Energy Audit Building Information Sheet

Space Types	
Bank/Financial Institution (%):	0%
Courthouse (%):	0%
Data Center (%):	0%
Hospital (%):	0%
Hotel (%):	0%
House of Worship (%):	0%
K-12 School (%):	0%
Medical Office (%):	0%
Office (%):	0%
Residence Hall/Dorm (%):	0%
Retail (%):	0%
Senior Care Facility (%):	0%
Supermarket/Grocery (%):	0%
Warehouse (%):	0%
Multifamily (%):	0%
Other (%):	0%
<b>TOTAL (%)</b>	<b>0%</b>

Metering Configuration	
Multi-tenant?	Yes
Residential Tenants - Check all that apply:	
Tenants directly metered	<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Gas
Tenants sub-metered by building owner	<input type="checkbox"/> Electric <input type="checkbox"/> Gas
Tenants not directly metered or sub-metered	<input type="checkbox"/> Electric <input checked="" type="checkbox"/> Gas
Commercial Tenants - Check all that apply:	
Tenants directly metered	
Tenants sub-metered by building owner	
Tenants not directly metered or sub-metered	

Benchmarking	
Portfolio Manager Building ID:	XXXXXXXXXX
Year benchmarked (full year prior to audit):	2008
Facility Type:	Multifamily
if "Other", please specify:	
Rating:	34
Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.):	158.7
Site Energy Intensity (kBtu/Sq. Ft.):	91.1
Total GHG Emissions (MTCO <sub>2</sub> e):	435.85
Energy Cost Index (\$/Sq. Ft.):	2.56
<i>Certification of the EER by the registered design professional or approved agency does not attest to the validity of the above benchmarking data, only that it was accurately transferred from the "Energy Star Statement of Energy Performance" as completed for Local Law 84 compliance.</i>	

Energy Systems	
Check all that applies:	
<input type="checkbox"/> Shared Energy Systems or meters for Multiple Buildings on a single lot	
<input type="checkbox"/> Shared Energy Systems or meters for Multiple Buildings on multiple lots	
<input type="checkbox"/> Shared electric meter	
<input type="checkbox"/> Shared gas meter	
<input type="checkbox"/> Shared utility steam meter	

Space types, metering configuration, benchmarking (LL84)

# Reporting Tools Energy Audit Equipment Inventory Sheet



BASE BUILDING SYSTEMS INFORMATION

Index:

[Heating Components](#)  
[Cooling Components](#)  
[DHW Systems](#)

[Mechanical Ventilation](#)  
[Lighting Components](#)  
[Envelope](#)

[Generating Equipment](#)  
[Process Loads](#)

Heating, cooling, DHW, mechanical ventilation, lighting, envelope, etc.

Back to Top Heating Components					
Heating System	Heating System 1	Heating System 2	Heating System 3	Heating System 4	Heating System 5
Heating System Type	Hot Water Boiler				
if 'Other', please specify:					
Quantity	3				
Equipment Tag#(s)	HWB-1; HWB-2; HWB-3				
Spaces Served	Whole Building				
Year Installed	1992; 1992; 2005				
Fuel Source	Natural Gas				
if 'Other' or 'Dual Fuel', please specify:					
Controls	Other				
if 'Other', please specify:	Aquastat Setpoint				
Burners	Burner 1	Burner 2	Burner 3	Burner 4	Burner 5
Equipment Type	On/Off				
Quantity	3				
Year Installed	1992; 1992; 2005				
Distribution Systems	Distribution System 1	Distribution System 2	Distribution System 3	Distribution System 4	Distribution System 5
Central Distribution Type	Hydronic				
End Use Equipment / Terminals	Terminal Type 1	Terminal Type 2	Terminal Type 3	Terminal Type 4	Terminal Type 5
Equipment Type	Radiator				
if 'Other', please specify:					
Controls	None				
if 'Other', please specify:					

# Reporting Tools Energy Audit Building Information Sheet

Simple Building Qualification

Simple Building	
Select the applicable requirements. A minimum of six requirements must be met in order to be excused from performing an energy audit for the first energy efficiency report.	
Requirements Met*:	5
<input checked="" type="checkbox"/>	Heating Controls- Each dwelling unit has one or more thermostatic controls for heating, OR a BMS- or EMS controlled central heating system incorporates between 10 and 30 sensors located in at least 10% of dwelling units or heated spaces.
<input checked="" type="checkbox"/>	Common area and exterior lighting is in compliance with the New York City Energy Conservation Code as in effect for new lighting installed on or after July 1, 2010.
<input checked="" type="checkbox"/>	All faucets and showerheads meet the standards of table 604.4 of the New York City Plumbing Code as in effect for new plumbing systems installed on or after July 1, 2010.
<input checked="" type="checkbox"/>	All exposed pipes used to convey heat or hot water for systems are insulated in accordance with the standards of the New York City Energy Conservation Code as in effect for heating and hot water systems installed on or after July 1, 2010.
<input checked="" type="checkbox"/>	All domestic hot water tanks that do not have built-in insulation are insulated with a minimum insulation value of R-8.
<input type="checkbox"/>	All common area washing machines are front-loading.
<input type="checkbox"/>	The roof complies with section 1504.8 of the New York City Building Code as in effect for buildings constructed on or after July 1, 2010.
<b>NOTE: If one requirement is not satisfied, all of the remaining requirements MUST be met.</b>	
<i>*THIS BUILDING MUST HAVE AN ENERGY AUDIT CONDUCTED. SIMPLE BUILDING EXCEPTION DOES NOT APPLY TO THIS BUILDING. CONTINUE COMPLETING THIS WORKBOOK IN ITS ENTIRETY FOR SUBMISSION.</i>	

# Reporting Tools Energy Audit Energy Conservation Measure Sheet



## ENERGY CONSERVATION MEASURES SUMMARY AND RECOMMENDATIONS

The items on the dropdown selections are NOT intended as instruction or guidance.

**Department of Buildings:**  
Interactions between measures must be taken into account while calculating with the highest operational priority and/or best return on investment will be savings are calculated Manually (Spreadsheets) or with the help of Comp. Utilized in the comments window below.

ECM #	Category	Measure Name	Measure Description	Annual Energy Savings					Total Annual Energy Savings (kBtu)	Total Annual Cost Savings (\$)	Implementation (\$)
				Electricity (kWh)	Natural Gas (Therms)	Fuel Oil (Gallons)	Steam (lb.)	Other Type (Units)			
				1	Lighting	Upgrade to Fluorescent	Upgrade Interior Common Area Lighting	43,054.00			
2	Domestic_Hot_Water	Install Low-Flow Aerators	Install Low Flow Aerators and Showerheads	0.00	250.00	0.00	0.00	0.00	25,000.00	\$375.00	\$3,000.00
3	HVAC_Controls_and_Sensors	Install TRVs	Install Thermostatic Radiator Valves in all apartment units	14.00	3,360.00	0.00	0.00	0.00	336,047.77	\$5,042.52	\$60,000.00
4	Heating_System	Replace Boiler	Replace existing atmospheric type boilers with condensing boilers	7,684.00	2,550.00	0.00	0.00	0.00	281,217.81	\$5,208.12	\$75,000.00
5	Domestic_Hot_Water	Separate DHW from Heating	Upgrade existing DHW system	0.00	1,070.00	0.00	0.00	0.00	107,000.00	\$1,605.00	\$25,000.00
6	Envelope	Increase insulation - Roof	Increase roof insulation to R-37	-969.00	570.00	0.00	0.00	0.00	53,693.77	\$680.58	\$15,000.00
7	Envelope	Replace Windows	Install Low E Double Pane Aluminum Windows with Thermal	990.00	2,630.00	0.00	0.00	0.00	266,377.88	\$4,123.20	\$240,000.00
8											
9											
10											
11											
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15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
<b>TOTAL</b>				<b>50,773.00</b>	<b>9,440.00</b>				<b>1,117,237.48</b>	<b>\$23,299.14</b>	<b>\$458,000.00</b>

# Reporting Tools Energy Audit End Use Breakdown Sheet



## END USE BREAKDOWN

End Uses Type	Existing Annual Energy Use						Proposed Annual Energy Use						% Reduction
	Electricity (kWh)	Natural Gas (Therms)	Fuel Oil (Gallons)	Steam (lb.)	Other Type (Units)	Total Site Energy Use (kBtu)	Electricity (kWh)	Natural Gas (Therms)	Fuel Oil (Gallons)	Steam (lb.)	Other Type (Units)	Total Site Energy Use (kBtu)	
Space Heating	31,923	35,002				3,609,121	24,225	26,882				2,770,856	23%
Domestic Hot Water		12,775				1,277,530		11,455				1,145,530	10%
Space Cooling	91,386					311,809	91,365					311,737	0%
Ventilation	163,292					557,152	163,292					557,152	0%
Lighting	271,950					927,893	228,896					780,993	16%
Conveyance												0	#DIV/0!
Process Loads												0	#DIV/0!
Plug Loads/Miscellaneous	54,431					185,719	54,431					185,719	0%
Other												0	#DIV/0!
if "Other", please specify Type:													
Total Estimated	612,982	47,777				6,869,225	562,209	38,337				5,751,987	16%
Total per Sq.Ft.	8	1				91	7	1				76	16%

# Reporting Tools Retro-cx Retro-commissioning Measures Sheet

Compliant, Notes, Explanation of Deficiency Corrected, Approach Taken to Comply, etc.



## RETRO-COMMISSIONING IMPLEMENTATION SUMMARY

The items on the list are NOT intended as instruction or guidance.

Retro-Commissioning Measure List	Compliant	Notes	Explanation of Deficiency Corrected
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### 1. Operating protocols, calibration, and sequencing:

Retro-Commissioning Measure List	Compliant	Notes	Explanation of Deficiency Corrected	Annual Energy Savings based on Fuel Type					Total Annual Energy Savings (kBtu)	Annual Cost Savings (\$)	Simple Payback (Years)	
				Electricity (kWh)	Natural Gas (Therms)	Fuel Oil (Gallons)	Steam (lb.)	Other Fuel Type (kBtu)				
1.1. HVAC temperature and humidity set points and setbacks are operating schedules reflect major space occupancy patterns and requirements.			Temperature setpoints and setbacks for all AHUs were adjusted to meet current facility requirements.									
1.2. HVAC sensors are properly calibrated.			Implemented RCME1: Temperature setpoints were noted in the appendix section of the retro-commissioning report based on the interviews with building maintenance staff, building occupants, space temperature measurements, functional testing on HVAC controls, and data logging. There was no BMS system. There were no humidity setpoints and setbacks required per CFR. Operating schedules reflected major space occupancy patterns and the CFR.									
1.3. HVAC controls are functioning and control sequences are current facility requirements.			Implemented RCME2: All critical sensors and sample set of monitoring sensors were tested for proper calibration. Gauge readings were compared against instrument measured readings and recommendation was made to calibrate/replace (if calibration is not possible) all monitoring sensors that were out of calibration by +/- 20% and all critical sensors that were out of calibration by +/- 10%.									
1.4. Loads are distributed equally across equipment when appropriate (boilers, pumps, etc. that run in parallel).			Implemented RCME3: All control sequences and critical controls that are part of a control sequence of all major equipment serving base building system were functionally tested, field observed and data logged to confirm proper operation as per current facility requirements.									
			N/A								#VALUE!	
										98,500.00	\$1,477.50	2

# EERC1: Professional Certification Energy Auditor and Owner Statements

**NYC Buildings** EERC1: Professional Certification: Energy Auditor and Owner Statements  
Must be typewritten. Enter document submission PIN here:

**1 Filing Status** Required for all applications:  
 Indicate type:  Initial Filing  Simple Buildings  Amendment  If filing for Early Compliance, please check here  
 Exception  LEED-EB  ENERGY STAR  SUPERIOR ENERGY PERFORMANCE (NO LABEL)

**2 Location Information** Required for all applications:  
 House No(s) \_\_\_\_\_ Street Name \_\_\_\_\_  
 Borough \_\_\_\_\_ Block \_\_\_\_\_ Lot \_\_\_\_\_ BIN(s) \_\_\_\_\_ CB No. \_\_\_\_\_

**3 Energy Audit Team Structure** Required for all applications:  
 Choose one:  Registered Design Professional *if selected, 4 & 5A*  
 Registered Design Professional Supervising Energy Auditor(s) *if selected, 4 & 5A*  
 DOB Registered Energy Auditor *if selected, 5B*

**4 Professional's Certification**  
 I hereby state that I have exercised a professional standard of care in certifying that the filed application is complete and in accordance with applicable laws including AC § 28-308.2, rules of the Department of Buildings, and the Rules of the City of New York, including TRCNY § 103-07(c)(1) and 103-07(e), as of this date. I am aware the Commissioner will rely upon the truth and accuracy of this statement. I have notified the owner that this application has been professionally certified. If an audit or other exam discloses non-compliance, I agree to notify the owner of the remedial measures that must be taken to meet legal requirements. I further realize that any misrepresentation or fabrication of facts made knowingly or negligently by me, my agents or employees, or by others with my knowledge, will render me liable for legal and disciplinary action by the Department of Buildings and other appropriate authorities, including being barred from filing any documents with the Department of Buildings, and termination of participation in the professional certification procedures at the Department of Buildings.

Name (please print) \_\_\_\_\_  
 Signature \_\_\_\_\_ Date \_\_\_\_\_  
 P.E. / R.A. Seal (apply seal, then sign and date over seal)

License Number \_\_\_\_\_

**5 Energy Audit Team Qualifications** Complete 5A OR 5B for all applications:  
 Choose one:  Registered Design Professional  Supervised Lead Auditor

**5A** Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Middle Initial \_\_\_\_\_  
 Type of Certification: Choose one  NYSERDA Flex Tech Consultant  Building Energy Assessment Professional (BEAP)  
 Certified Energy Auditor (CEA)  High-Performance Building Design Professional (HPBD)  
 Certified Energy Manager (CEM)  Multifamily Building Analyst (MFBA) *for multi-family residential buildings only*

Certification Expiration Date: \_\_\_\_\_  
 Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Middle Initial \_\_\_\_\_

**5B** Type of Certification: Choose one  Certified Energy Auditor (CEA)  Building Energy Assessment Professional (BEAP)  
 Certified Energy Manager (CEM)  High-Performance Building Design Professional (HPBD)  
 Multifamily Building Analyst (MFBA) *for multi-family residential buildings only*

DOB Registration Number: \_\_\_\_\_  
 Certification Expiration Date: \_\_\_\_\_

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Indicate whether there is an exception or if a SIMPLE BUILDING, etc.

Describe the team structure – if the RDP is also the certification holder or supervising

RDP Seal

Indicate type of certification held by Energy Auditor

**THIS IS WHERE THE RDP CERTIFIES THAT AN AUDIT WAS PERFORMED THAT MET THE CRITERIA OF THE LAW**

# EERC2: Professional Certification Retro-Commissioning Agent & Owner Statements

**NYC Buildings** EERC2: Professional Certification: Retro-commissioning Agent and Owner Statements  
*Must be typewritten.* Enter document submission PIN here:

**1 Filing Status** *Required for all applications.*  
Indicate type:  Initial Filing  Amendment  Exception (LEED)

**2 Location Information** *Required for all applications.*  
House No(s) Street Name  
Borough Block Lot BIN(s) CB No.

**3 Retro-commissioning Team Structure** *Required for all applications.*  
Choose one:  Registered Design Professional # selected: 4 & 54  Certified Refrigerating System Operating Engineer # selected: 4 & 54  
 Registered Design Professional Supervising Retro-commissioning Agent(s) # selected: 4 & 5A  
 DOB Registered Retro-commissioning Agent # selected: 5B  Licensed High Pressure Boiler Operating Engineer # selected: 4 & 54

**4 Professional's Certification**  
I hereby state that I have exercised a professional standard of care in certifying that the filed application is complete and in accordance with applicable laws including AC § 28-308.3, including the rules of the Department of Buildings and the Rules of the City of New York, including 1RCNY § 103-07(c)(2) and 103-07(g), as of this date. I am aware the Commissioner will rely upon the truth and accuracy of this statement. I have notified the owner that this application has been professionally certified. If an audit or other exam discloses non-compliance, I agree to notify the owner of the remedial measures that must be taken to meet legal requirements. I further realize that any misrepresentation or falsification of facts made knowingly or negligently by me, my agents or employees, or by others with my knowledge, will render me liable for legal and disciplinary action by the Department of Buildings and other appropriate authorities, including being barred from filing any documents with the Department of Buildings, and termination of participation in the professional certification procedures at the Department of Buildings.

Name (please print) \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_  
P.E. / R.A. Seal (apply seal, then sign and date over seal)

License Number \_\_\_\_\_

**5 Retro-commissioning Team Qualifications** *Complete 5A OR 5B for all applications.*  
5A Choose one:  Registered Design Professional  Supervised Lead Retro-commissioning Agent  
Last Name First Name Middle Initial  
Type of Certification: Choose one  Certified Commissioning Professional (CCP)  Commissioning Process Management Professional (CPMP)  
 Certified Building Commissioning Professional (CBCP)  High-Performance Building Design Professional (HPBD)  
 Existing Building Commissioning Professional (EBCP)  
Certification Expiration Date: \_\_\_\_\_ Years of Experience Retro-commissioning buildings >50,000 sqf: \_\_\_\_\_

5B Last Name First Name Middle Initial  
Type of Certification: Choose one  Certified Commissioning Professional (CCP)  Commissioning Process Management Professional (CPMP)  
 Certified Building Commissioning Professional (CBCP)  Existing Building Commissioning Professional (EBCP)  
DOB Registration Number: \_\_\_\_\_ Years of Experience Retro-commissioning buildings >50,000 sqf: \_\_\_\_\_  
Certification Expiration Date: \_\_\_\_\_

08/13

Indicate whether there is an exception

Describe the team structure – if the RDP is also the certification holder or supervising

RDP Seal

Indicate type of certification held by Retro-cx Agent

**THIS IS WHERE THE RDP CERTIFIES THAT RETRO-CX WAS PERFORMED THAT MET THE CRITERIA OF THE LAW**

# Approved Agents

## Who can do this work?

- Registered Design Professionals (PE or RA) can act as the Auditor and/or Retro-cx Agent if they have the required certification(s) **OR** they can supervise a team that has an individual with the required certification(s)
- For retro-cx, a certified Refrigerating System Operating Engineer or a licensed High Pressure Boiler Operator can be substituted for the RDP
- Non-Registered Design Professionals (not a PE or an RA) can act as the Auditor and/or Retro-cx Agent if they have the required certification(s) **AND** they have registered with the Department of Buildings
- **Until the registration program is in place, non-RDPs cannot conduct this work**
- **In any case, the energy auditor or retro-cx agent performing or supervising may not be on the staff of the building being audited/retro-commissioned**

# Energy Auditor Certifications (For RDPs or Those on RDP team)

- NYSERDA approved Flex-Tech consultant
- CEM or CEA– Certified Energy Manager/Auditor (AEE)
- HPBD – High Performance Building Design Professional (ASHRAE)
- BEAP – Building Energy Assessment Professional (ASHRAE)
- MFBA – Multifamily Building Analyst (BPI) –  
*for multifamily audits only!*

# Retro-cx Agent Certifications (For RDPs or Those on RDP team)

- CCP-Certified Commissioning Professional (BCA)
- CBCP-Certified Building Commissioning Professional (AEE)
- EBCP-Existing Building Commissioning Professional (AEE)
- CPMP-Commissioning Process Management Professional (ASHRAE)
- ACPAP-Accredited Commissioning Process Authority Professional (Univ. of Wisconsin)

# Required Certification(s) for Non-RDPs Registered With the Department

- To perform energy audits:
  - CEM/CEA from AEE
  - HPBD from ASHRAE
  - BEAP from ASHRAE
  - MFBA from BPI (for multifamily audits only)
- To perform retro-commissioning:
  - CCP from BCA
  - CBCP from AEE
  - EBCP from AEE
  - CPMP from ASHRAE

# Questions?

[LL87Questions@buildings.nyc.gov](mailto:LL87Questions@buildings.nyc.gov)