



LL87 OF 2009 COMPLIANCE GUIDELINES



NYCTM
Buildings

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SECTION 1

INTRODUCTION

This document describes the process for achieving compliance with **Local Law 87 of 2009, Energy Audits & Retro-commissioning**. It outlines the established submission procedures and contents of the **EER (Energy Efficiency Report)**, required to be submitted once every ten years in the calendar year in which EER is due. It identifies the necessary steps to be taken by the owner/owner's representative and the consultant when submitting a complete EER to the Department of Buildings. This guide also covers the following processes:

- how to comply for new buildings
- how to apply for a deferral (buildings undergoing alterations)
- how to apply for an extension
- how to challenge a violation
- how to report multiple covered buildings on different blocks with shared base building systems
- how to report multiple covered buildings under residential cooperative corporations.

A complete **Energy Efficiency Report (EER)** submission consists of certification forms (both energy audit **EERC1** and retro-commissioning **EERC2**), the data collection tools (web based energy audit template tool and excel based retro-commissioning spreadsheet tool - unless excused from one or both, as denoted on the respective certification forms), final reports (both energy audit and retro-commissioning reports), and **DERPA (Deep Energy Retrofit Plan Analysis) Report**. The EER submission is due by December 31st of the respective reporting year, as determined by the final digit of the property's tax block number.

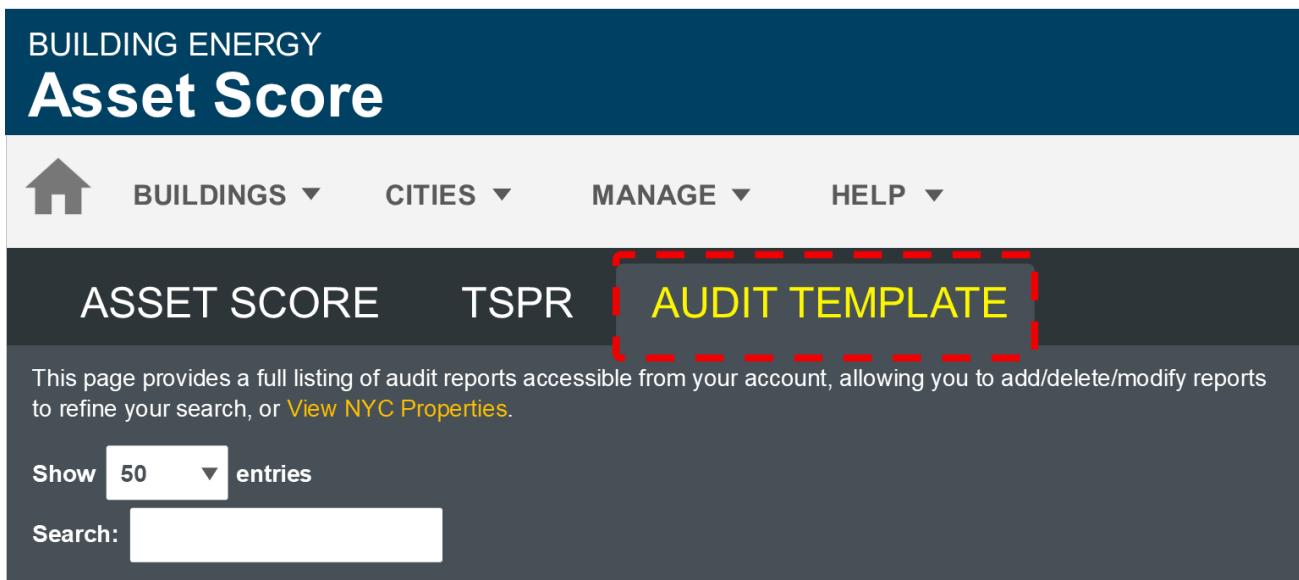
The energy audit and retro-commissioning reports must be kept on file at the building until submission of the subsequent EER, and can be requested by the Department of Buildings at any time for comprehensive review. A site inspection, as part of the comprehensive review, may also be conducted to verify what has been reported.

Should questions arise during the completion of any of the tasks described herein, they can be directed to the **NYC Sustainability Help Center (SHC)** by emailing LL87@NYCsustainability.org.

SECTION 2

ENERGY AUDIT REPORTING REQUIREMENTS

Utilize the web based **Energy Asset Score Audit Template (Audit Template)** to collect, store and report building energy audit data for LL87/09. The NYC Department of Buildings and the NYC Mayor’s Office of Sustainability (MOS) have worked closely with the US Department of Energy (DOE) and Pacific Northwest National Laboratory (PNNL) to develop the New York City specific energy **Audit Template** feature of the web based Building Energy Asset Score platform. *It shall be noted that the previous excel based energy audit data collection spreadsheet tool will no longer be accepted by the Department.*

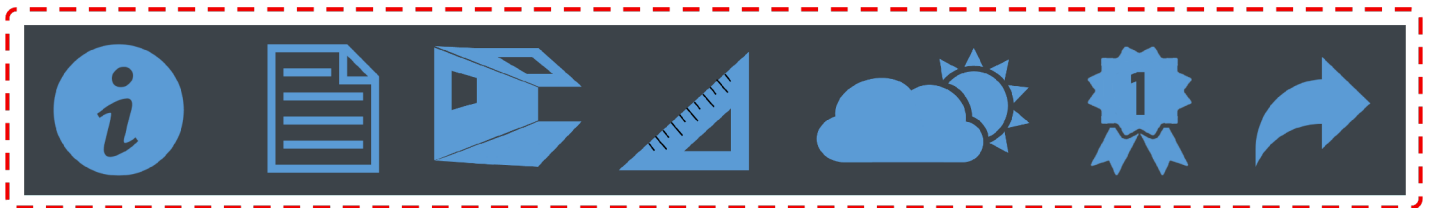


This required Audit Template tool serves as a summarized version of the comprehensive Energy Audit Report, focusing towards data collection of the quantitative component of the energy audit exercise. An energy audit must be conducted prior to completing the Audit Template tool. Energy audit requirements can be found in the law §28-308.2 and rules of the law 1 RCNY §103-07, paragraphs (d) and (e). Qualifications for those conducting the energy audit are included in the Rules for Local Law 87, 1 RCNY §103-07, paragraph (c). Though these qualifications are necessary for conducting the actual audit, the energy audit template tool does not have to be completed by the qualified energy auditor.

SECTION 3

COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL

To access the **Audit Template Tool**, visit buildingenergyscore.energy.gov, register for an Asset Score account, and login. The Energy Audit data entry screens need to be completed for each BIN on a BBL. Following are the seven steps required to successfully input the energy audit data into the **Energy Audit Template Tool**, accomplished by navigating among the tabs available on the data entry screens, before finally submitting to the Department when complete:



STEP 1: Building Information

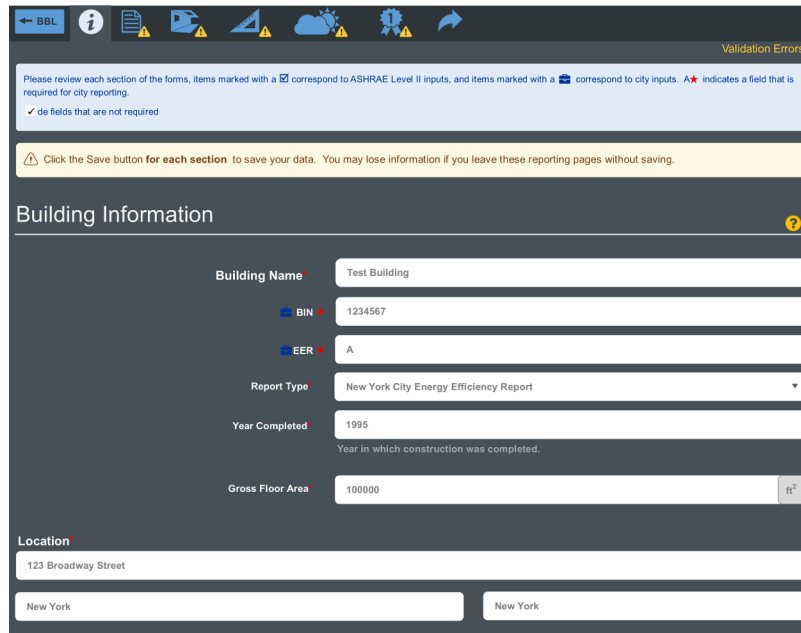
Select **NYC Energy Efficiency Report** for New York City Audit Template Tool from the green Audit Reporting Tool button on the drop down menu and enter the Borough, Block, and Lot (BBL) information. Multiple buildings may be added to a BBL property, linked by their Building Information Numbers (BIN#s); however, individual building data is entered and submitted separately.






Enter building name, report type, year of construction, gross floor area, and location. Click the **Create Building** button to continue. More information in completing this building information tab of the template tool can be found [here](#).


SECTION 3


COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL *(continued)*



Validation Errors

Please review each section of the forms. Items marked with a  correspond to ASHRAE Level II inputs, and items marked with a  correspond to city inputs.  indicates a field that is required for city reporting.

 de fields that are not required

 Click the Save button for each section to save your data. You may lose information if you leave these reporting pages without saving.

Building Information

Building Name: Test Building

BIN: 1234567

EER: A

Report Type: New York City Energy Efficiency Report

Year Completed: 1995
Year in which construction was completed.

Gross Floor Area: 100000 ft²

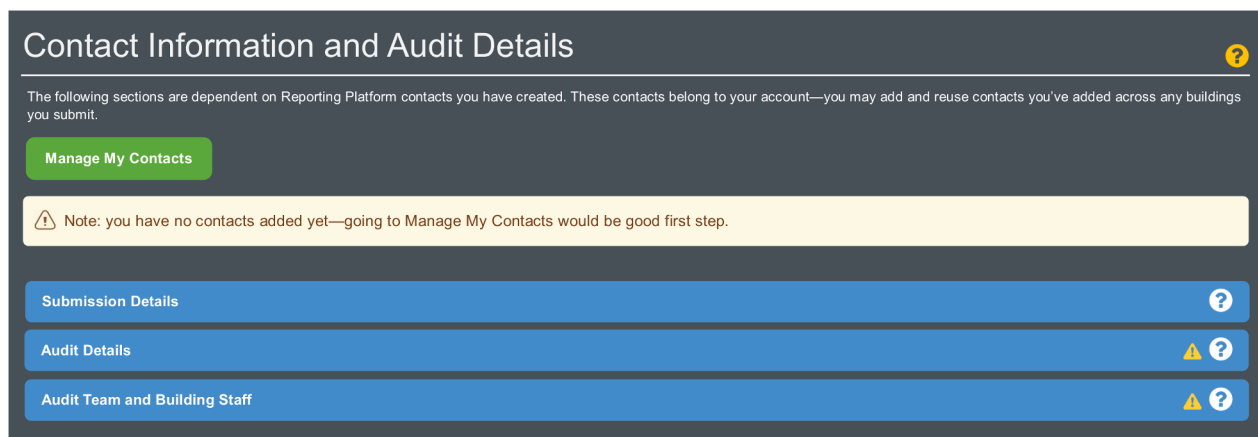
Location

123 Broadway Street

New York New York

STEP 2: Contact Information and Audit Details


Sections to complete on this screen include building audit contacts; audit details, including details such as the dates of audit completion; and the names of the audit team and/or building staff and their qualifications, as required for submission. Submission Information is auto populated and displayed for reference purposes. More information for completing this contact information and audit details tab of the template tool can be found [here](#).



Contact Information and Audit Details

The following sections are dependent on Reporting Platform contacts you have created. These contacts belong to your account—you may add and reuse contacts you've added across any buildings you submit.

[Manage My Contacts](#)

 Note: you have no contacts added yet—going to Manage My Contacts would be good first step.

















- Submission Details
- Audit Details
- Audit Team and Building Staff

SECTION 3

COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL *(continued)*

STEP 3: Facility Description

Complete sections related to information of the audited building, including building use types, building envelope characteristics and major installed equipment components such as HVAC, lighting, and service hot water systems. The information shall be based on on-site observations, review of architectural drawings and specifications, measurements or engineering calculations. More information for completing this facility description tab of the template tool can be found [here](#).

Facility Description 	
Building Characteristics	 
Use Types	 
Construction	 
Lighting	 
HVAC	 
Service Hot Water System	 
Operations	
Process Loads	 

STEP 4: Utility Data and Benchmarking

Sections to complete on this screen include fields where historical monthly utility data for the building is to be entered. Specify energy supply sources and enter energy use data. An annual summary displaying the average annual energy use and cost by energy supply source will be generated. Metering and energy systems configuration entries are required to be entered. Benchmarking data, including the building's Energy Use Intensity (EUI) and target energy savings are to be provided in this section. More information for completing this utility data and benchmarking tab of the template tool can be found [here](#).

SECTION 3

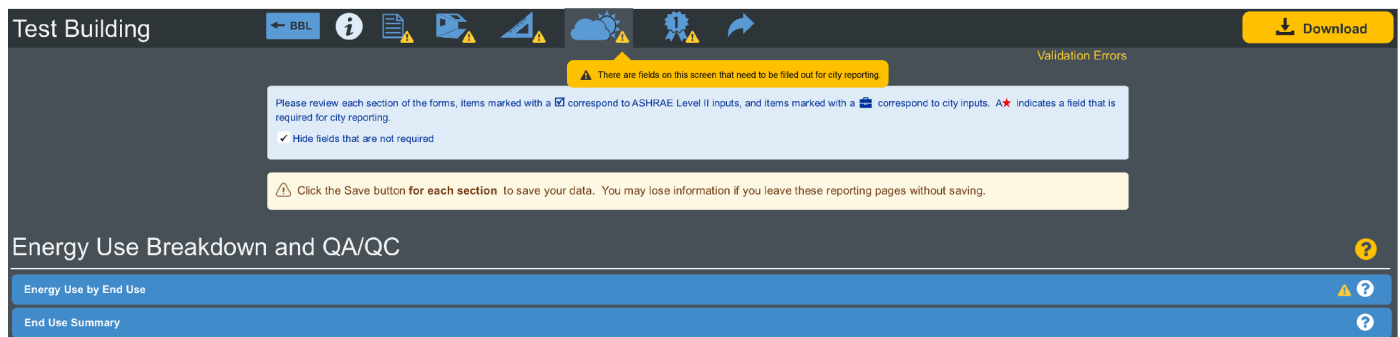
COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL *(continued)*

Utility Data and Benchmarking	
Ownership Details	⚠ ?
Metering Configuration	⚠ ?
Energy Systems Configuration	⚠ ?
Available Energy Sources	⚠ ?
Metered Energy Supply Source Details	?
Energy Reporting Years & Data Impact	?
Building Metered Energy	?
BBL Metered Energy	?
Building Delivered Energy	?
BBL Delivered Energy	?
Building Annual Summary	?
Benchmarking	⚠ ?

STEP 5: Energy Use Breakdown and QA/QC



This screen includes a section where the energy consumption of end use systems in the building for all energy supply sources is to be entered. Identify each system or piece of equipment that uses energy, along with its energy type, and assign to an end use system type. A table comparing the total energy use by end use with the total energy use by energy type will automatically be calculated and displayed. This will be used to verify that the estimated energy use by end use estimates align with historical energy use. It is expected that a QA/QC section will be added at a later date. More information for completing this energy use breakdown and QA/QC tab of the template tool can be found [here](#).

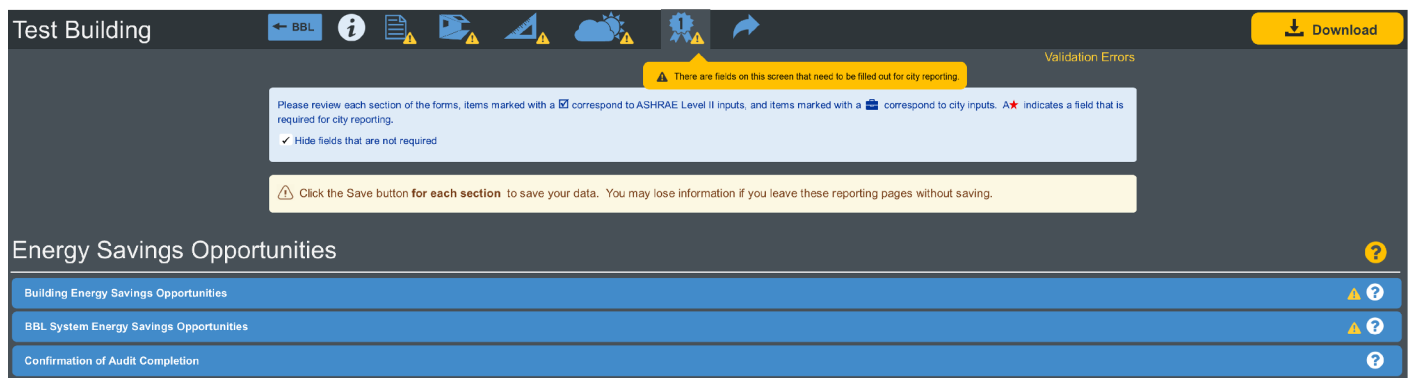


SECTION 3

COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL (continued)

STEP 6: Energy Savings Opportunities

Enter packages of recommended low cost, no cost, and potential capital energy efficiency measures and energy and cost savings that have been manually calculated or generated by a third party energy modelling software program. Calculated net measure costs, ROI and number of years required for payback will be displayed. More information for completing this energy savings opportunity tab of the template tool can be found [here](#).



Use this section to enter and report the energy savings opportunities that result from the energy audit. Energy Efficiency Measures (EEM) may be entered into a table as a part of a package in one of two recommended categories: **Low Cost** and **No Cost**, and **Potential Capital**.

NOTE: Packages should only include measures that affect the same system. For example, enter measures associated with the Measure Categories of Boiler Plant improvements and Lighting Improvements as separate packages, since they would affect different systems: Heating Systems and Lighting Systems.

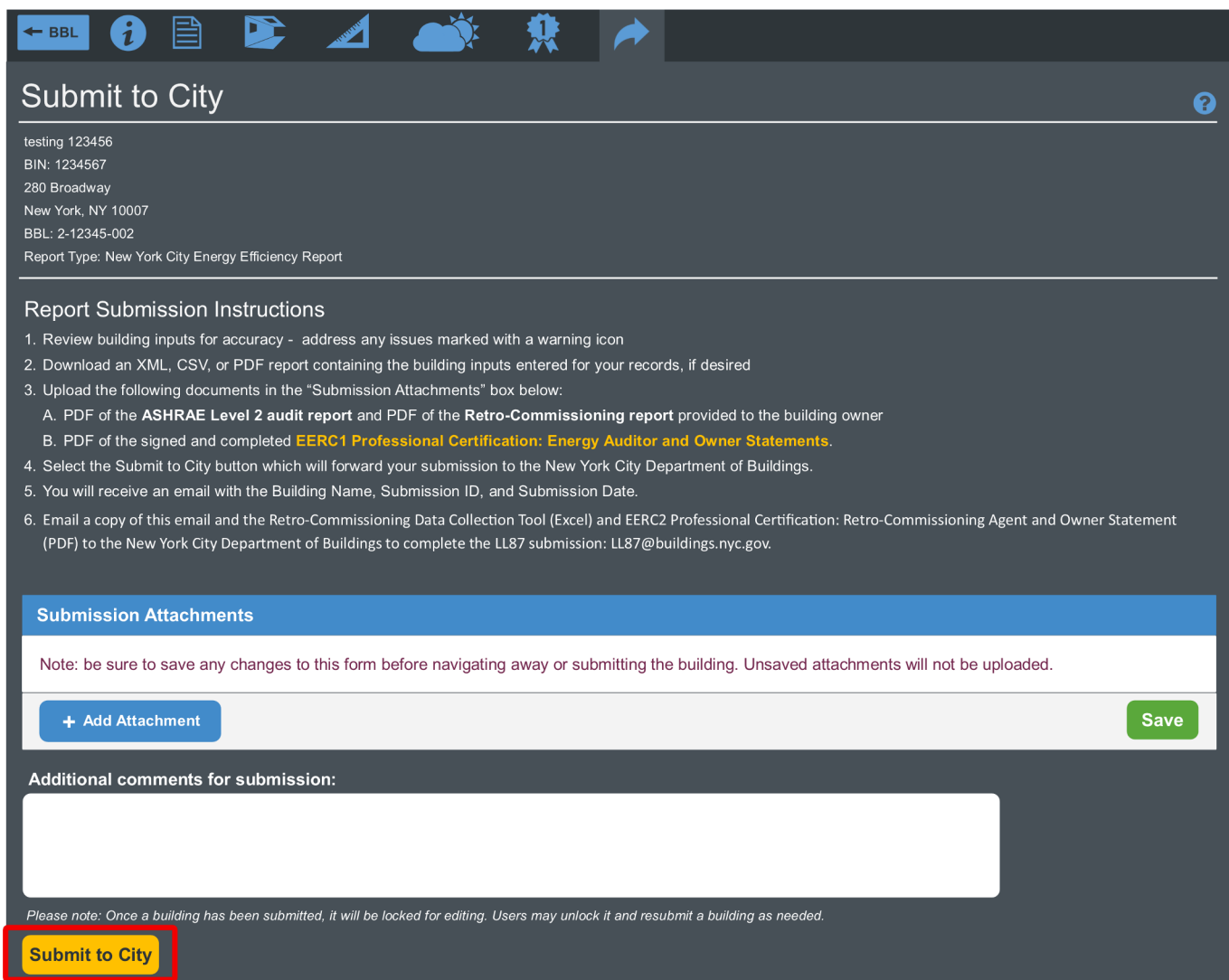
To create entries in the energy savings opportunities table, select **Low Cost** and **No Cost** or **Potential Capital** from the Recommendation Category drop down menu and press the green **Add** button. You may create and assign and/or edit a custom Package Name to a measure entry or a group of entries, or accept the default counter values (e.g. Package 1, Package 2). Add measures to packages by selecting the blue **Add Measure** button.

SECTION 3

COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL (continued)

STEP 7: Submit to City

After all of the energy audit data has been entered for the building, use this section to submit the completed energy audit template tool to the Department of Buildings. Once a building has been submitted, it will be locked for editing. Submitted reports may be viewed by selecting the yellow Download button. More information for completing this energy savings opportunity tab of the template tool can be found [here](#).



The screenshot shows a web interface for submitting an energy audit report. At the top, there is a navigation bar with icons for back, info, document, folder, ruler, weather, and a submit button. Below the navigation bar, the page title is "Submit to City" with a help icon. The main content area displays building information: "testing 123456", "BIN: 1234567", "280 Broadway", "New York, NY 10007", "BBL: 2-12345-002", and "Report Type: New York City Energy Efficiency Report". Below this is a section titled "Report Submission Instructions" with a list of 6 steps. The 3rd step includes sub-points A and B regarding report uploads. Below the instructions is a "Submission Attachments" section with a note: "Note: be sure to save any changes to this form before navigating away or submitting the building. Unsaved attachments will not be uploaded." There are two buttons: "+ Add Attachment" and "Save". Below that is a text area for "Additional comments for submission:". At the bottom, a note states: "Please note: Once a building has been submitted, it will be locked for editing. Users may unlock it and resubmit a building as needed." A yellow "Submit to City" button is highlighted with a red box.

SECTION 3

COMPLETING & SUBMITTING ENERGY AUDIT TEMPLATE TOOL (continued)

The following documents are required to be uploaded through the Audit Template **Submit to City** page:

1. A PDF of the complete **ASHRAE Level 2 Energy Audit** report and **Retro-Commissioning** report that is required to be provided to the building owner.
2. A PDF of the signed and completed **EERC1 Professional Certification: Energy Auditor and Owner Statements**.

Select the **Submit to City** button, which will forward your submission to the New York City Department of Buildings. A notice will appear on the City Submission screen referencing the city the report was submitted to, submission ID date of submission, and version number. An auto-generated reply email will also be sent to the submitter with the Building Name, Submission ID, and Submission Date.



Once the auto generated email (see the example above) is received, submit a PDF copy of that email and the Retro-Commissioning Data Collection Tool (Excel Workbook) and EERC2 Professional Certification: Retro-Commissioning Agent and Owner Statement (PDF) to LL87@buildings.nyc.gov to complete the LL87 submission.

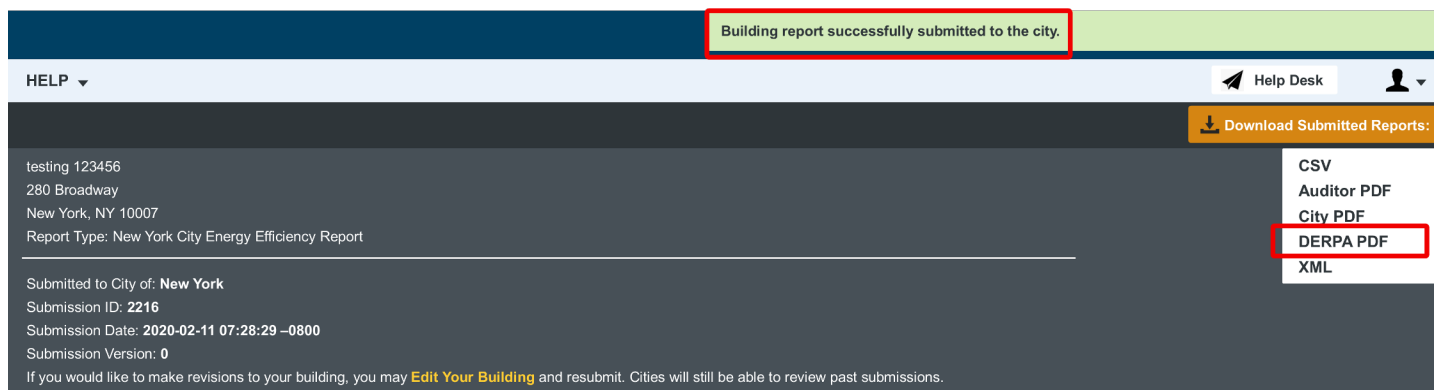
SECTION 4

WHAT IS A DERPA REPORT?

DERPA (Deep Energy Retrofit Plan Analysis) outlines an informational pathway for buildings to achieve aggressive energy performance levels. It highlights those energy efficiency measures that should be considered as part of long-term capital planning efforts. MOS engaged a Technical Working Group (TWG) to analyze the deep energy retrofit strategies that will be required to achieve 80x50 targets. The DERPA report applies deep energy retrofit strategies that are specific to the buildings' characteristics as entered through the energy Audit Template tool, and suggests a sequencing of opportunities that would allow for phasing in these strategies over time. This report is required to be submitted as part of the EER according to 1 RCNY §103-07, paragraphs (h).

The DERPA report can be generated via one of the following two methods:

- 1. Default Method:** This method is an auto-generation of the DERPA report PDF through the energy Audit Template tool based on the inputs made by the user. Once the user successfully submits the energy Audit Template tool to the City, a non-customized DERPA report PDF is auto-generated as well as submitted to the City as default. See the screenshot below of the confirmation page.



- 2. Custom Method:** This method involves a few steps that are required to import the output data of the energy Audit Template tool in .csv format into the DERPA tool excel spreadsheet in order to generate a customized DERPA report. A customized DERPA report allows a consultant to internalize the resource, adapt it into their own protocols, tailor the content for practicality and sequence the

SECTION 4

WHAT IS A DERPA REPORT?

(continued)

deeper energy conservation measures to meet their client's needs. It gives user more control over the default method stated above. Refer to the **DERPA User Manual** for step by step instructions on how to generate custom DERPA reports through this method utilizing excel-based **80x50 DERPA tool**.

*NOTE: When generating the DERPA report using the optional **Custom Method** above, the DERPA PDF report must be submitted through LL87@buildings.nyc.gov to complete the EER submission along with the PDF copy of the auto generated submission email, the Retro-Commissioning Data Collection Tool (Excel Workbook) and EER2C Professional Certification: Retro-Commissioning Agent and Owner Statement (PDF) as per Step 7 in SECTION 3 above.*

SECTION 5

RETRO-COMMISSIONING REPORTING REQUIREMENTS

Retro-commissioning requirements can be found in the law §28-308.3 and 1 RCNY §103-07, paragraphs (f) and (g). Qualifications for those conducting the retro-commissioning are included in the Rule for Local Law 87, 1 RCNY §103-07, paragraph (c). Though these qualifications are necessary for the retro-commissioning agent, the retro-commissioning data collection tool does not have to be completed by the retro-commissioning agent. Retro-commissioning agent is responsible to develop a comprehensive retro-commissioning report that gets uploaded as a PDF through the energy audit template tool. Retro-commissioning agent is also required to complete the Excel based **Retro-commissioning Data Collection Tool** that serves as a summary of the retro-commissioning report. Retro-commissioning must be conducted prior to completing this tool.

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING

The **Retro-commissioning Data Collection Tool** is an Excel-based workbook comprised of spreadsheets to document the retro-commissioning findings. This reporting tool requires completion of seven worksheets: Introduction, Submittal Information, Team Information, Building Information, Inventory, Identification and Correction. The retro-commissioning tool is only compatible with Excel versions 2007 or later. If you have an earlier version of Excel, you may experience difficulties utilizing the tool. Refer to the **completed example** of the Retro-commissioning Data Collection Tool.

WORKSHEET 1: Introduction

This sheet explains which fields must be completed, clarifies what to do if the base building systems do not align with the requirements of all of the fields, and instructs the user not to change/edit the white or grey fields. It also informs the user about the existence of pop-up instructions, which are indicated by a red triangle located in the upper right hand corner of certain fields. Users are instructed to provide an explanation for any field in which N/A is entered. Users are also directed to the thermal energy conversions reference for use within the tool. Finally, the introduction sheet reminds the user that the retro-commissioning tool does not replace the complete retro-commissioning report referenced in SECTION 1 of this document.

LOCAL LAW 87 - RETRO-COMMISSIONING DATA COLLECTION TOOL

Welcome to the Local Law 87 (LL87) Retro-Commissioning 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 retro-commissioning once every ten years. This workbook captures critical information about your Lot/Building that should have been included in the retro-commissioning 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:

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

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

LL87@NYCsustainability.org

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) and RCMs(1) tabs/sheets can be copied multiple times in their entirety manually, if needed for multiple buildings information entry. Do not Cut, Copy, Paste or Edit portions of sections within any sheet.

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

Note: This Retro-Commissioning tool is only a summary of a full Retro-Cx report. It does not replace the Retro-Commissioning report. A complete copy of the Retro-Commissioning report must also be submitted to the department for review and enforcement purposes. See AC §28-308.3.1 for the contents of the Retro-Commissioning report.

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING *(continued)*

WORKSHEET 2: Submittal Information

Energy Efficiency Report (EER) Submission Information	
Submitted by:	Doe John
Company:	123 abc Development Inc.
Phone:	(123) 456-7890
Extension (If Applicable):	1234
E-mail:	JO@123abc.com
Date:	12/20/2020
Filing Status:	Initial Filing

Lot Information	
Borough:	Manhattan
Block:	2040
Lot:	7890
# of Buildings on Lot:	1

Building(s) Information			
	BIN	Address(es)	Zip Code
1	0101010	123 Sustainability Way	00001
2	0101011	456 Green Zone Street	00001
3			
4			
5			
6			
7			
8			
9			
0			
1			
2			
3			
4			
5			

Comments/Notes: (If Applicable)
The above two listed BINs/buildings are on the same lot together exceeding 100,000 gcf and sharing a common central heating system as a shared "Based Building System".

This sheet asks the user to input basic information about the submission, the lot, and the specific buildings on the lot that are included in this workbook. It allows the user to enter comments/notes at the bottom of the page if further information is necessary.

The individual who is listed on this sheet is who will be contacted by DOB, if necessary, with regard to questions or requests for additional documentation.

The number of buildings on the lot may be different from the number of buildings that are listed in the Building Information section of this tab, depending on the base building systems configuration.

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING *(continued)*

WORKSHEET 3: Team Information

This sheet asks the user to input basic information about the team that is performing the retro-commissioning, with special attention to the registered design professional (RDP) or Approved Agent, and the certification holder – specifically: license number for the RDP, certification holder’s type of certification and expiration date. The retro-commissioning report date is the date when the retro-commissioning report was delivered to the owner.

TEAM INFORMATION	
Retro-Commissioning Team Information	
Name of professional signing off:	Smith Joe
License:	PE
License #:	012345
Organization/Company:	XYZ green consultants
Address:	123 Green CT, New York, NY 00001
Telephone:	(212) 000-0001
Qualified Commissioning Agent:	Smith Joe
Years of Experience:	10
Type of Certification:	Commissioning Process Professional certified by NEBB
Certification Expiration Date:	12/20/2021
Retro-Commissioning Report Date:	12/01/2020
Comments/Notes: <i>(If Applicable)</i>	

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING *(continued)*

WORKSHEET 4: Building Information

This sheet asks the user to input basic information about building contacts. It also captures the information on the building management team and building maintenance staff with whom the consultant has directly coordinated the energy audit and retro-commissioning exercises.

BUILDING INFORMATION	
<i>Building Contacts</i>	
Building Owner:	123 abc Development Inc.
Owner's Representative:	None
Management Company:	Roe Jane Inc.
Property Management Contact Person:	Roe Jane
Telephone:	(212) 000-0002
Building Operator:	Doe Jane
Operator's Certification:	BOC
	if "Other", please specify:
License # (if applicable):	Not Applicable
State:	New York
<i>Comments/Notes: (If Applicable)</i>	

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING (continued)

WORKSHEET 5: Inventory

This sheet consolidates all of the applicable major equipment systems subject to the retro-commissioning testing requirements. It provides a snapshot of the equipment inventory with the help of two schedules: **Major Equipment Inventory for Group R occupancies** and **Major Equipment Inventory for other than Group R occupancies**. The user is required to determine the occupancy type as **R** or **other than R** and only complete the applicable inventory schedule(s). This form is useful in capturing the quantity, location, sample (%) tested, date(s) of pre-testing verification, date(s) of functional performance testing and confirmation of FPT forms inclusion within the report.

MAJOR EQUIPMENT INVENTORY							
Major Equipment Inventory (Group R Occupancies)	Boilers with rated input capacity ≥ 300,000 Btu/h	Chillers	Cooling towers and Dry coolers	Air Handling Units (AHU) ≥ 2,500 CFMs	Fan Coil Units (FCU) ≥ 2,500 CFMs	Heat Recovery Units (HRU) ≥ 2,500 CFMs	Heating and Ventilation Units (H&V) ≥ 2,500
Quantity located in common areas	2	2	N/A	2	N/A	N/A	N/A
Quantity located in non-common owner areas	0	0	N/A	0	N/A	N/A	N/A
Quantity located in non-common tenant areas	0	0	N/A	0	N/A	N/A	N/A
Sample (%) Tested (Common Areas)	100%	100%	N/A	100%	N/A	N/A	N/A
Sample (%) Tested (Non-Common Owner Areas)	0%	0%	N/A	0%	N/A	N/A	N/A
Sample (%) Tested (Non-Common Tenant Areas)	0%	0%	N/A	0%	N/A	N/A	N/A
Date(s) Pre-testing verification conducted 1RCNY §(1)(i)	10/1/2019; 11/7/2019	6/7/2019	N/A	9/7/2019; 10/1/2019	N/A	N/A	N/A
Date(s) Functional Performance Test (FPT) conducted 1RCNY §(1)(ii)	11/7/2019; 11/20/2019; 12/10/2019	6/7/2019; 7/6/2019	N/A	9/7/2019; 10/1/2019	N/A	N/A	N/A
FPT forms provided in the Retro-Cx report	Yes	Yes	No	Yes	No	No	No

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING *(continued)*

WORKSHEET 6: Identification

This sheet goes hand in hand with **WORKSHEET 7: Correction**. It captures the summary of the retro-commissioning testing and identification of deficiencies for each test criteria within the rules of the law.

For each listed category: If **YES** is selected for the column labeled **Deficiency Identified**, enter the corresponding RCM# that matches the RCM# in the **Correction** worksheet and the summary of testing methodology. If **NO** is selected for the column labeled **Deficiency Identified**, list the project specific information on major equipment, sub-equipment and components tested in common areas, non-common owner areas, and non-common tenant areas and the summary of the testing methodology adopted to arrive to the conclusion that there exists no deficiency as compared to the established CFR. Refer to the section within the retro-commissioning report for the details on the testing documentation. If **NOT APPLICABLE** is selected for the column labeled **Deficiency Identified**, provide a statement on the justification.

RETRO-COMMISSIONING TESTING SUMMARY

	Deficiency Identified	Summary of Testing Methodology
1RCNY 103-07 f(1) HVAC and Service Water Equipment		
Pre-testing verification	YES	RCM#9 RCM#10 RCM#11 Pre-testing verification checks for cleanliness and proper operation, primarily through visual observations, are conducted on the major equipment, associated sub-equipment and components. Pre-testing verifications checklists for Boilers (B-1 & B-2), Chillers (CH-1 and CH-2), AHUs (AHU-1 and AHU-2), Packaged AC unit (RTAC-1), Heat Exchanger (HX-1) and Pumps (P-1, P-2 and P-3), located in the common areas, can be found in the retro-commissioning report.
Functional performance testing	YES	RCM#3 RCM#4 Functional performance testing has been conducted on all major equipment, associated sub-equipment and components located in the common areas. Functional performance test forms have been provided for Boilers (B-1 & B-2), Chillers (CH-1 and CH-2), AHUs (AHU-1 and AHU-2), Packaged AC unit (RTAC-1), Heat Exchanger (HX-1) and Pumps (P-1, P-2 and P-3) in the retro-commissioning report. Functional performance testing includes documentation on all functions related to controls sequence of operation, impacting energy consumption of the major equipment, economizer function, staging and load distribution, automatic reset functions and integrated system level testing. Testing results obtained through field observations, measurements, data logging and interviews with facility staff are documented within the forms.
		RCM#1 Temperature and pressure setpoints are noted in the appendix section of the retro-commissioning report through field observations and measurements of Boilers (B-1 & B-2), Chillers (CH-1 and CH-2), AHUs (AHU-1 and

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING *(continued)*

WORKSHEET 7: Correction

This is the last sheet of the retro-commissioning tool. It provides a retro-commissioning master list of findings. This sheet lists all retro-commissioning measures (RCM) that are subject to correction. It captures the summary of methodology of correction adopted. List, quantify and describe all associated items adjusted, calibrated, balanced, repaired, replaced, installed, insulated, tuned or cleaned within the **Measure Description and Summary of Deficiency Corrected** column for each RCM.

The user shall categorize each RCM based on the base building system and then sub-categorize based on the applicable retro-commissioning criteria, completing the status of implementation, date deficiency is corrected, date deficiency is verified, by whom the correction was made, actual cost of implementation, annual energy savings and savings to investment ratio.

RETRO-COMMISSIONING MASTER LIST OF FINDINGS

Retro-Commissioning Measures											
RCM #	Retro-Commissioning Category	Sub-Category	Measure Description and Summary of Deficiency Corrected	Status of Implementation	Provide explanation if the Status of Implementation is "In Progress" or "Not Applicable"	Deficiency Corrected (Date)	Deficiency verified by the Reference agent as Corrected (Date)	By whom the correction was made	Actual cost (\$) of implementation	Annual Savings	
										Electricity (kWh)	Natural Gas (therms)
1	HVAC and service water equipment	Temperature and pressure setpoints and setbacks	Temperature setpoints for the two major AHU units (AHU-1 and AHU-2) in the common areas were adjusted to meet the current facility requirements (CFR).	Completed		06/25/2020 11/01/2020	4/2/20	KVI Mechanical Services	\$1000	42133	304
2	HVAC and service water equipment	Sensors	Calibrated CO2, Mkt, Sat and enthalpy sensor for the rooftop packaged air conditioning unit. Replaced SAT, Mkt and Sat sensors for the packaged air conditioning unit (RTAC-1) because calibration was not possible.	Completed		4/27/20	4/2/20	KVI Mechanical Services	\$285		
3	HVAC and service water equipment	Functional performance testing	1) Adjusted settings on heat timer control panel for automatic control of the burners to avoid manual bypassing and minimize excessive cycling. 2) Repaired malfunctioning coil switch in the basement controlling NEW-1 unit.	Completed		4/27/20	4/2/20	KVI Mechanical Services	\$120		308
4	HVAC and service water equipment	Functional performance testing	Corrected outdoor reset function for the chillers (Ch-1) and (Ch-2) to meet the current facility required outdoor reset schedule.	Completed		4/28/20	4/2/20	HVAC Contractor, Inc.	\$1400	33840	
5	HVAC and service water distribution	Water-side distribution	Repaired the EPDM/RW coil supply valves serving the AHU-1 and AHU-2.	Completed		4/26/20	4/2/20	ABC Contractors	\$7000	26401	304
			Existing lamps within the lighting fixtures in the hallways, basement,								

SECTION 6

COMPLETING AND SUBMITTING THE RETRO-COMMISSIONING (continued)

NAMING CONVENTION: Retro-commissioning Tool

When submitting the Retro-commissioning data collection tool, applicants must save the tools with the following naming convention:

BBL_X_LL87RCxTool_Rev#

BBL: 10 digit Borough, Block, & Lot number. The Borough number is 1 digit, the block number is 5 digits, and the lot number is 4 digits. If any of these numbers are less than the number of digits specified, zeroes must be placed in front of the remaining digits, until they total the requisite number of digits for that entry. (i.e. If your block number is only 4 digits long, put one zero between the borough number and the block number)

X: A, B, C, etc. if more than one EER are being submitted for this BBL. (example: If there are 5 buildings on one BBL, and a group of 3 buildings are served by the same base building systems while the other 2 buildings are each served by their own respective base building systems; there would be three EERs submitted and each of those three would have a different letter (A,B,C) in the space where the X placeholder is). If only one EER is being submitted, use the letter A, where the X is.

Rev #: the rev # will be zero when the EER is first submitted. If the DOB Auditor requests that the EER be re-submitted with modifications, the re-submitted EER would be Rev 1, and so forth.

For the one digit borough number: Manhattan = 1; Bronx = 2; Brooklyn = 3; Queens = 4; and Staten Island = 5.

SECTION 7

PROFESSIONAL CERTIFICATION: ENERGY AUDITOR AND OWNER STATEMENTS

This form ([EERC1](#)) is required to be included as part of a complete Energy Efficiency Report (EER) submission, and is meant to be uploaded via the web based energy Audit Template Tool.

The Registered Design Professional (RDP) or DOB registered Approved Agent (not permitted when filing for exceptions to energy audit) and the owner will sign and date this form. The RDP is required to apply their New York State seal to the document.

This form will require the applicant to provide the filing status for the building(s) included in the EER. A completed scanned form is required for each EER (through the Audit Template tool submittal). It is on this form that the RDP will indicate whether the filing is a normal submittal (initial filing), the building is a simple building (only indicate if applying to skip the energy audit in the case of providing proof of having satisfied six out of seven of the requisite items listed in §28-308.2 Exceptions, in the law), the filing is an amendment (as requested by DOB), or if the applicant is applying for a specific exception from completing the energy audit (LEED-EB, ENERGY STAR, or no ENERGY STAR label category but building exhibits superior energy performance), as provided for in the law.

It is essential to identify within the form if the EER is for a single building or multiple buildings that share a base building system. Base building systems include: the building envelope, HVAC (Heating, Ventilation and Air Conditioning) systems, conveying systems, domestic hot water systems, and electrical and lighting systems. Multiple buildings that do not share a base building system are required to be submitted as separate EERs. Shared base building system, in case when submitting for multiple buildings, must be provided within the EERC1 form. For multiple buildings being submitted as one EER, list all BIN#s and attach a separate sheet for additional BIN#s if the space is insufficient within the form.

This form also requires basic location information, and information on the Energy Audit Team Structure (RDP conducting the energy audit, RDP supervising energy

SECTION 7

PROFESSIONAL CERTIFICATION: ENERGY AUDITOR AND OWNER STATEMENTS *(continued)*

auditors or DOB registered energy auditor), the certification(s), and the certification expiration date(s) of those performing the audit, or the DOB Registration Number (in the case of a DOB registered energy auditor).

The owner/owner's representative must complete **Owner's Statement** section of the EERC1 form including the name, relationship to owner, business name/agency, contact information, signature and date. *Providing an e-mail address is critical for future means of communication between the Department and the owner/owner's representative.*

The applicant is required to complete all of the applicable sections of this professional certification form in its entirety. Once completed, it is to be scanned into a legible and readable PDF document for the purpose of electronic submission to the Department via the web based energy Audit Template tool.

SECTION 8

PROFESSIONAL CERTIFICATION: RETRO-COMMISSIONING AGENT AND OWNER STATEMENTS

This form ([EERC2](#)) is required to be included as part of a complete Energy Efficiency Report (EER) submission, and is meant to accompany the Retro-commissioning Data Collection Tool (excel based retro-commissioning spreadsheet).

The Registered Design Professional (RDP) or Approved Agent and the owner will sign and date this form. The RDP is required to apply their New York seal to the document.

The form will require the applicant to provide the filing status for the building(s)

SECTION 8

PROFESSIONAL CERTIFICATION: RETRO-COMMISSIONING AGENT AND OWNER STATEMENTS *(continued)*

included in the EER. A completed form is required for each EER (with the Data Collection tool submittal). It is on this form that the RDP will indicate whether the filing is a normal (initial) filing, the filing is an amendment (requested by DOB), or if the applicant is applying for a specific exception (LEED-EB), as provided for in the law. For multiple buildings being submitted as one EER, list all BIN#s and attach a separate sheet for additional BIN#s if the space is insufficient within the form.

This form also requires basic location information, and information on the Retro-commissioning Team Structure (RDP conducting the retro-commissioning, RDP supervising retro-commissioning agent(s), Certified Refrigerating System Operating Engineer, Licensed High Pressure Boiler Operating Engineer, or DOB registered retro-commissioning agent), the certification(s) and certification expiration date(s) of those performing the retro-commissioning, or the DOB Registration Number (in the case of an DOB registered retro-commissioning agent).

The owner/owner's representative must complete **Owner's Statement** section of the EERC2 form including the name, relationship to owner, business name/agency, contact information, signature and date. *Providing an e-mail address is critical for future means of communication between the Department and the owner/owner's representative.*

The applicant is required to complete all the applicable sections of this professional certification form in its entirety. Once completed, it is to be scanned into a legible and readable PDF document for the purpose of electronic submission to LL87@buildings.nyc.gov along with the pdf copy of the auto generated email received upon submission of the audit Template Tool and the Retro-Commissioning Data Collection Tool (Excel Workbook).

SECTION 9

PROCESS TO COMPLY FOR NEW BUILDINGS

For New Buildings (NBs filings) with a First Temporary Certificate of Occupancy that is less than ten years old at the time the building is due to comply with Local Law 87/09, owners do not need to submit an EER nor a Request for Deferral. Refer to the [Service Notice](#) for additional details.

SECTION 10

APPLICATION TO DEFER FILING AN ENERGY EFFICIENCY REPORT (EER)

For existing buildings that are undergoing Type 1 Alterations (Alt-1), owners must request for deferral by completing and submitting an **Application to Defer Filing an EER (form EER1)** and proof of compliance with the **NYC Energy Code (NYCECC)** that was in effect at the time of application approval of the alteration. The form must be submitted with documentation that substantiates that the building complies with the Energy Code, such as a full set of drawings, completed energy analysis, and dates of substantial rehabilitation of all base building systems including DOB job numbers from the Building Information System. Proof of compliance must include all lesser and included permits affecting base building systems.

For buildings that are undergoing Type 2 (Alt-2) and Type 3 (Alt-3) alterations, which are causing difficulty with compliance during the year in which they are due, owners should submit an extension request (*see SECTION 11*).

NOTE: EER1 form must be notarized

SECTION 11

APPLICATION FOR EXTENSION OF TIME TO FILE AN ENERGY EFFICIENCY REPORT (EER)

If an owner is unable complete their EER prior to December 31st of the year in which it is due, an extension may be requested by completing and submitting an **Application for Extension of Time to File and Energy Efficiency Report (form EER2)**. The only two conditions for which this is applicable are: Good Faith Effort and Financial Hardship. Financial Hardship is very specifically defined in the law 28-308.1. Applicant buildings must meet the criteria in order to qualify. It is encouraged to provide any relevant supporting documentation depending upon the reasons stated under the good faith effort. An Application for Extension must be filed by December 31st of the year in which it is due. Up to two extensions may be granted.

NOTE: EER2 form must be notarized.

SECTION 12

REPORTING MULTIPLE BUILDINGS FOR COOPERATIVE CORPORATIONS

A cooperative corporation that owns multiple covered buildings located on different tax block numbers may consolidate all such energy efficiency reports into one EER, disaggregated by covered building, due no later than the year in which the last energy efficiency report would be due.

It shall be noted that both the reporting tools and the reports (energy audit and retro-commissioning) must have disaggregated information for each covered building or group of covered buildings sharing a base building system. Applicant must list all BBL#s and corresponding BIN#s for the multiple covered buildings under the same cooperative cooperation, on the **Multiple Building Reporting Form**. The owner/owner's representative must sign and date the **Owner's Statement** section of the form. The completed form must be submitted by December 31st of the calendar year in which the earliest covered building is due to comply. Email the completed form to ll87@buildings.nyc.gov with **Multiple Buildings Report - Multiple Buildings for Cooperative Corporations** in the subject heading.

SECTION 13

REPORTING MULTIPLE COVERED BUILDINGS ON DIFFERENT BLOCKS WITH SHARED BASE BUILDING SYSTEMS

Two or more buildings on separate blocks that constitute a covered building are subject to the requirements for an EER for each grouping of buildings that share base building systems. The due date for the EER will be in the calendar year with a final digit that is the same as the last digit of the block number that is highest or with respect to a city building. The applicant must list all BBL#s and corresponding BIN#s for the multiple covered buildings, on different blocks sharing base building system(s), on the **Multiple Building Reporting Form**. The owner/owner's representative must sign and date the **Owner's Statement** section of the form. The completed form must be submitted by December 31st of the calendar year in which the earliest covered building is due to comply.

Email the completed form to ll87@buildings.nyc.gov with **Multiple Buildings Report - Multiple Covered Buildings on Different Blocks with Shared Base Building Systems** in the subject heading.

SECTION 14

CHALLENGES TO VIOLATIONS

Failure to submit an EER may result in the issuance of a violation. An owner may challenge a violation by completing and submitting a Local Law 87/09 Energy Audits and Retro-commissioning **Violation Challenge Form**. This form must be submitted within thirty days from the postmark date of the violation served by the Department. The applicant must provide any relevant supporting documentation justifying the reason for the challenge. The completed form along with supporting documentation, must be submitted to the Department of Buildings, Sustainability Enforcement Unit, 280 Broadway, 3rd Floor, New York, NY 10007 or emailed to ll87@buildings.nyc.gov with **LL87 Violation Challenge Documentation** in the subject heading.

SECTION 15

RESOURCES

- [Professional Certification:Energy Auditor and Owner Statements \(Form EERC1\)](#)
- [Professional Certification:Retro-Commissioning Agent and Owner Statements \(Form EERC2\)](#)
- [Application to Defer Filing an Energy Efficiency Report \(Form EER1\)](#)
- [Application for Extension of Time to File an Energy Efficiency Report \(Form EER2\)](#)
- [Multiple Buildings Reporting Form For Cooperative Corporations](#)
- [Multiple Covered Buildings on Different Blocks with Shared Base Building Systems](#)
- [Violation Challenge Form](#)
- [General LL87/09 Frequently Asked Questions](#)
- [Online Energy Audit Template Tool Questions](#)
- [Energy Audit Template Tool Resources](#)
- [Energy Audit Template Tool Recorded Training Webinar \(PDF\)](#)
- [Energy Audit Template Tool Recorded Training Webinar \(MP4\)](#)

If you have questions regarding LL87/09 compliance, contact:

NYC Sustainability Help Center

Email: LL87@NYCsustainability.org

Phone: (212) 566-5584

