

Local Law 97

ARTICLE 321 – PRESCRIPTIVE ENERGY CONSERVATION MEASURES FOR CERTAIN COVERED BUILDINGS

# Template Instructions

For version 1.4, issued 9/4/2024

### **Article 321 Template Instructions – overview**

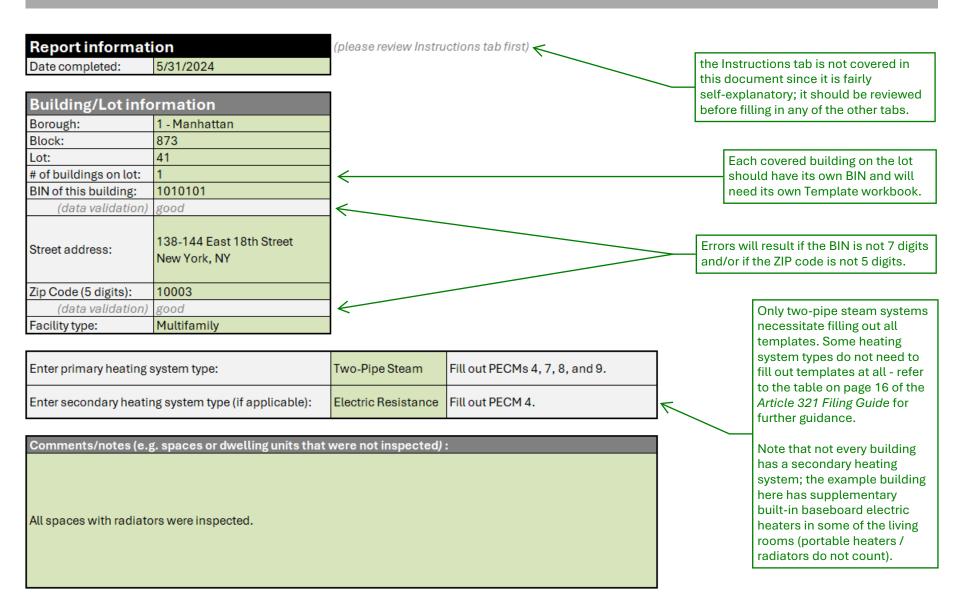
As noted in <u>section II(A)</u> of the *Article 321 Filing Guide*, four of the thirteen Prescriptive Energy Conservation Measures ("PECMs") included under the Article 321 Prescriptive Pathway require detailed supporting documentation, one acceptable form of which is a template workbook provided by the Department of Buildings. That workbook, containing four template worksheets, is downloadable <u>here</u>.

This document provides examples for each template to show how they can be successfully completed. Our sample building is a hypothetical multifamily building – mid-size, rent-regulated and pre-war, featuring a two-pipe steam heating system with supplemental electric resistance heaters. Each section of this document corresponds to one or more of the fillable tabs (worksheets) in the workbook:

- "Submittal Information" tab
- "4. Radiator temperature controls" tab
- "7. Indoor/outdoor temperature sensors" tab
- "8. Steam traps initial survey" tab
- "8a. Steam traps full building" tab
- "9. Master steam system venting" tab
- Sample errors

Comments and questions related to the Article 321 Templates, Template Instructions, and Filing Guide may be sent to the Department at <a href="mailto:GHGEmissions@buildings.nyc.gov">GHGEmissions@buildings.nyc.gov</a>.

#### "Submittal Information" tab



(#1) Temperature set points

(#2) Repair leaks

(#3) Heating system function

(#4) Radiator temperature controls\*

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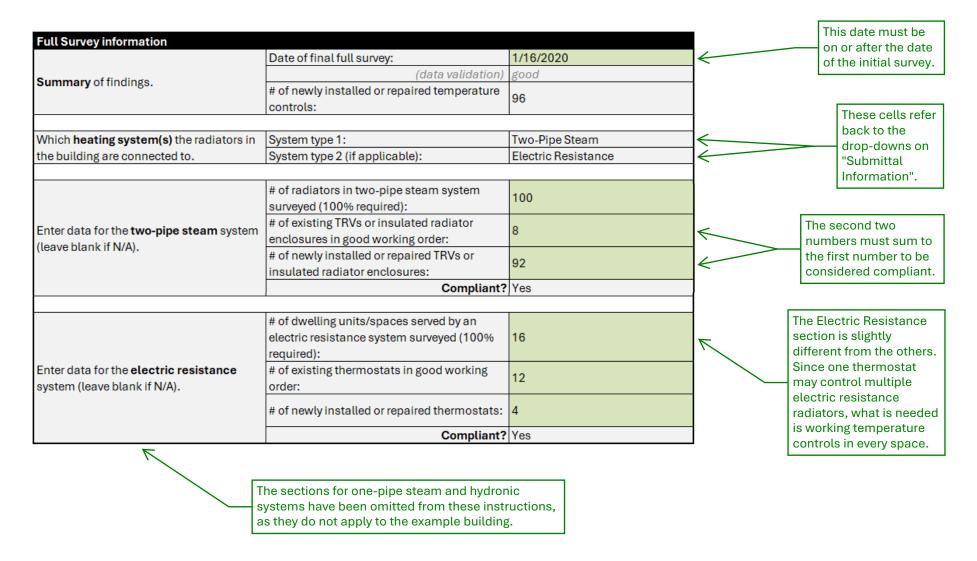
(#5) Piping insulation

(#6) Water tank insulation

## "4. Radiator temperature controls" tab (p. 1 of 2)

		1	
Method of compliance:	Inspection/survey	K	If "Completed utility
Date of last documented inspection:	1/16/2020		incentive/rebate program" is
(data validation)	good		selected here, then there is
Means of compliance:	Complete this worksheet.		no need to fill out the worksheet. However, the date of final inspection must have been on or after the effective
Initial Survey information			date of LL97 (11/15/2019).
Total # of radiators (in steam and electric			
resistance systems) and/or existing	132		
controls (in hydronic systems):			The number of radiators
Minimum 20% sample size:	27		inspected during the initial
Timmani 2070 dampto di20.	12.		survey must be at least 20%
	Conversations with the facility manager		of the total number of
How the 20% of radiators/controls to be	Occupant reports on over- and under-		radiators in the building.
sampled were selected (up to 3):		\	For hydronic systems, the
Sampled were selected (up to 5).	heated spaces	/	20% applies to the total
	Testing		number of <b>existing</b> controls;
	I		the PECM does not require
Date of initial survey:	11/16/2019		new controls to be installed
(data validation)	good	l , /	in hydronic systems where they are not needed.
# of radiators/controls surveyed:	28	K	they are not needed.
Compliant?	Yes		
# of radiators with missing /			If this number is non-zero,
malfunctioning temperature controls:	1		then a full survey is required.
Full survey required?	Yes - fill out the remainder of this worksheet.		

#### "4. Radiator temperature controls" tab (p. 2 of 2)



## "7. Indoor/outdoor temperature sensors" tab

ate of initial survey:	12/1/2023				
(data validation)	good				
ate of final survey (if applicable):	2/14/2024			If "utility	
(data validation)	good			incentive/rebate	
	1		-	program" or	
	Primary system type:	Two-Pipe Steam		"Screenshot(s)from a	
nter data for <b>primary</b> heating system.	Method of compliance:	Inspection/survey	<b>↓</b> ←	digital control system"	
,	Means of compliance:	Complete this worksheet.		is selected here, then	
	# of primary heating plants (e.g. boilers):	2		out the worksheet.	
	# of primary heating plants with outdoor	2			
	reset/setback controls in good working order:			All boilers in the	
	Compliant?	Yes	1 /	heating system should	
	For primary steam systems ONLY:			have outdoor reset	
	Total # of spaces or radiators in building:			controls installed.	
"Inspection/Survey" is chosen as the	(for Multifamily, this is the # of dwelling units. For	16			
nethod of compliance, complete this	HOW, this is the # total spaces or radiators served			T1: .: .: .	
ection.	by the system):		-	This section refers	
	Total # of spaces or radiators with wireless	F		to the requirement	
	sensors at radiator that are in good working order:	5		in 1 RCNY §103-17 that in systems	
	% of spaces or radiators with wireless sensors at		1.	using wireless	
	radiator that are in good working order:	31%		sensors, at least	
	Compliant?	Yes		25% of spaces	
		I	_	must have such	
	Secondary system type:	Electric Resistance	-	sensors.	
Enter data for <b>secondary</b> heating system	Method of compliance:	Inspection/survey	-	00.100.01	
f applicable).	Means of compliance:	Complete this worksheet.			
K					
\ _					
	e secondary heating system section only ne				
to k	pe filled out when such a system is present.				

(#1) Temperature set points (#7) Indoor/outdoor temp. sensors\*

(#2) Repair leaks (#8) Steam traps\*

(#3) Heating system function

(#4) Radiator temperature controls\*

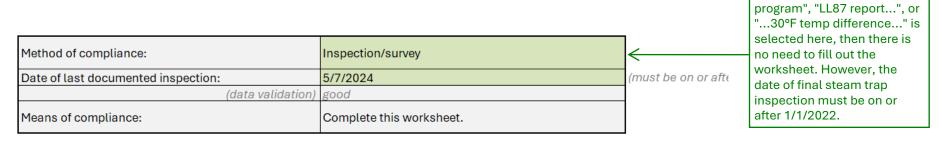
(#10) Lighting

(#5) Piping insulation

(#6) Water tank insulation (#12) Exhaust fan timers (#13) Radiant barriers

If "...utility incentive/rebate

## "8. Steam traps – initial survey" tab (p. 1 of 2)



Fill out Row 12, then fill out "List of inspected steam traps" below.

		Common area	Non-common owner area	Non-common tenant area	Entire building		he sample percentages
	# of discrete spaces of this type in the building	2	4	20	26	l t	and definitions of space ypes come from the Article 321 Filing Guide.
	% of spaces required to be surveyed	100%	20%	10%	n/a		he rest of this table is
Enter the results of the <b>initial survey</b> of	# of spaces required to be surveyed	2	1	2	5		auto-populated based on the "List of inspected
steam traps	Survey complete?	Yes	Yes	Yes			team traps" section at
(	# of steam traps surveyed (100% in spaces required to be	3	1	8	12	the bottom of	he bottom of the tab.
	# of missing / malfunctioning steam traps in sample	0	0	8	8		
	% of missing / malfunctioning steam traps in sample	0%	0%	100%	67%	Should any of th	Should any of the
Full-building surve	y (all steam traps) required?	Yes - complete tab	o 8a.	<			percentages of missing or malfunctioning steam traps exceed 20%, then a survey of all radiators in the building must be conducted.

## "8. Steam traps – initial survey" tab (p. 2 of 2)

List of inspected steam traps - initial survey								
Floor	Room/space description	# of traps of similar condition	Steam trap condition	Space type	Date of initial survey (must be on or after 1/1/2022)	Date of confirmed correction (if applicable)		
Cellar	Gym	2	Functioning	Common area	2/29/2024			
1	Lobby	1	Functioning	Common area	2/29/2024			
Cellar	Compactor room	1	Functioning	Non-common owner area	2/29/2024			
2	Apartment 2B	6	Functioning	Non-common tenant area	2/29/2024			
5	Artist Studio 5C	2	Not functioning / missing	Non-common tenant area	2/29/2024	5/7/2024		

If necessary, the data from this list can be copied and pasted directly into the list on the next tab, "8a. Steam traps – full building".

The number of entries under each Space type (Common, Non-common owner, Non-common tenant) should match the "# of spaces required to be surveyed" from Row 14 otherwise "Survey complete?" in Row 15 will return a "No".

## "8a. Steam traps – full building" tab

Have all steam traps that were not functioning or Yes - compliant missing been repaired, replaced, or installed?

Note that the number of entries under each Space type should match the "# of discrete spaces of this type in the building" that is entered on the "Steam Traps - initial survey" tab - otherwise "Survey complete?" will return a "No".

		Common area	Non-common owner area	Non-common tenant area	Entire building
	# of discrete spaces of this type in the building	2	4	20	26
	Survey complete?	Yes	Yes	Yes	
Summary of full-	# of total steam traps surveyed	3	4	104	111
-	# of steam traps that were not functioning or missing on initial full survey	0	0	32	32
	# of steam traps that are not functioning or missing on latest survey	0	0	0	0

To be compliant, whenever the initial steam trap condition is "Not functioning / missing", then the corrective action must be "Newly installed / repaired".

List of inspected steam traps - full survey								
Floor	Room/space description	# of traps of similar condition	Steam trap condition (inital survey)	Space type	Date of initial survey (must be on or after 1/1/2022)	Date of confirmed correction (if applicable)	Corrective action (latest survey)	
Cellar	Gym	2	Functioning	Common area	2/29/2024			
1	Lobby	1	Functioning	Common area	2/29/2024			
Cellar	Compactor room	1	Functioning	Non-common owner area	2/29/2024			
2	Apartment 2B	6	Functioning	Non-common tenant area	2/29/2024		No action	
5	Artist Studio 5C	2	Not functioning / missing	Non-common tenant area	2/29/2024	5///2024	Newly installed / Repaired	
Cellar	Manager's office	1	Functioning	Non-common owner area	3/1/2024			

#### "9. Master steam system venting" tab (p. 1 of 2)

Steam system return type: Atmospheric (non-vacuum / gravity)
Is PECM 9 required? Yes

As noted in the Article 321 Filing Guide, steam systems that use a vacuum pump do not need master venting installed.

Method of compliance:	Inspection/survey
Date of last documented inspection:	5/6/2024
(data validation)	good
Means of compliance:	Complete this worksheet.

If "...utility incentive/rebate program", "LL87 report...", or "Schematic diagram(s)..." is selected here, then there is no need to fill out the worksheet. However, the date of final inspection must have been on or after the effective date of LL97 (11/15/2019).

Date of initial survey:	2/27/2024	
(data validation)	good	
Date of final survey	5/6/2024	
(if applicable):	5/0/2024	
(data validation)	good	

"Missing vents" can include those that were mistakenly removed in the past.

**Initial Survey information** Total # of required # found in good f needing repair / # of missing # of vents not Location of vents vents working order replacement vents inspected At mains 2 0 2 0 0 At large horizontal pipe runs 4 0 0 0 4 0 At risers 6 1 2 3 At vertical pipes branching 1 1 0 0 0 off a main

"Vents not inspected" can include those that are (or should be) located within spaces that were not viewable during the initial survey. These vents must be inspected and confirmed to be in good working order during the final survey.

Required actions after initial survey

Replace the 4 vent(s) needing repair/replacement. Install the 4 missing vent(s). Inspect the 3 vent(s) not inspected. Conduct final survey.

This cell can remain orange for submission and still be considered compliant, since it is the final survey results that matter.

### "9. Master steam system venting" tab (p.2 of 2)

Required actions after initial survey

Replace the 4 vent(s) needing repair/replacement. Install the 4 missing vent(s). Inspect the 3 vent(s) not inspected. Conduct final survey.

This cell can remain orange for submission and still be considered compliant, since it is the final survey results that matter.

Final Survey information							
Location of vents	Corrective action or additional inspection needed?	# of vents to be installed or repaired (from Initial Survey)	Have all vents been inspected?	Corrective action taken	# of vents found to be in good working order		
At mains	Yes	2	Yes	Newly installed / Repaired	2		
At large horizontal pipe runs	Yes	4	Yes	Newly installed / Repaired	4		
At risers	Yes	2	Yes	Newly installed / Repaired	6		
At vertical pipes branching off a main	No	0	Yes	No action	1		

Have all vents found to be missing or not functioning been newly installed or repaired?

Yes - compliant

To be considered compliant, the following must be true of the data in this table:

- all vents must have been inspected;
- vents that needed to have been installed and repaired have had the appropriate corrective action; and
- the number of vents in good working order must match the total number of required vents.

#### Sample errors

Data validation errors are for fields that must be correct: dates, ZIP code, BIN, etc. Unlike non-compliances, errors must be fixed before submission of the worksheet. For example, if the last inspection/survey was too far in the past, then an error will be returned and a new inspection/survey must be conducted.

