

NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE

Part 6 Compliance Form - 6A Building Design by Thermal Rating Method (for buildings with 1 or 2 dwelling units)

Date: _____

Building Address: _____

County: _____

Architect, Engineer or Contractor: _____

Phone: _____

Permit Applicant: _____

Phone: _____

I. HEATING DEGREE DAYS (Table 2-1)

☐ 5000 ☐ 6000 ☐ 7000 ☐ 8000 ☐ 9000

II. BUILDING DESCRIPTION (Pre-qualifying Conditions)

If the building does not meet all of the following pre-qualifying conditions, Part 5 of the Energy Code may not be used.

- ☐ Building has one or two dwelling units. (Use this form 6A)
- ☐ Building is three or more dwelling units. (Use form 6B)

III. PROJECT TYPE

- ☐ New Construction ☐ Substantial renovation of existing building
- ☐ Addition to existing building ☐ Exempt (7810.6c) _____

IV. HEATING SYSTEM TYPE

☐ Gas-fired ☐ Oil-fired ☐ Heat pump ☐ Electric

V. BUILDING ENVELOPE SYSTEMS: 7815.2

Total Thermal Rating: 7815.2(a)

The total Thermal Rating for this building is _____. The Worksheets used to develop this Thermal Rating are attached. A Thermal Rating of zero or greater indicates that the building envelope complies with the Energy Code .

Vapor Retarder: 7815.2(b)

Location Required	Location Provided	Type Provided	Plan/Spec. Reference
Walls			
Ceiling			
Floor			
Other			

Insulation Continuity: 7815.2(c)

Location Required	Required	Specified	Plan/Spec. Reference
Plate lines	Continuity		
Sill lines	Continuity		
Band joists	Continuity		
Corners	Continuity		

Infiltration Rate: 7815.2(f)

Element	Maximum Rates	Specified	Plan/Spec. Reference
Windows	0.37 cfm/lin. ft.		
Doors	0.50 cfm/sq. ft.		

Joint Sealing: 7815.2(f)

Joint Location	Sealant Type	Plan/Spec. Reference
Windows		
Doors frames		
Walls at roof/ceiling		
Walls at floors/foundation		
Wall panels		
Utility entrance		
Penetrations		
Other		
Other		

Air Infiltration Barrier: 7815.2(f)

Location	Required?	Specified	Plan/Spec. Reference
Walls	yes / no		
Other	yes / no		

Fireplace: 7815.2(g)

Required	Specified	Plan/Spec. Reference

VI. HVAC EQUIPMENT PERFORMANCE REQUIREMENTS: 7815.11

Equipment	Minimum Performance Required/Table No.	Specified Performance	Plan/Spec. Reference
Furnace	/ Table 4-5		
Boiler	/ Table 4-5		
Heat Pump	/ Table 4-6		
Central air conditioner	/ Table 4-8		

VII. HVAC CONTROL: 7815.12

Temperature Control

Required	Specified	Plan/Spec. Reference
Thermostat each dwelling unit		
Shut off at each terminal unit		

Thermostat

Required	Specified	Plan/Spec. Reference
Minimum range 45°F-85°F		
Deadband range $\geq 5^{\circ}$		
Automatic capability		

HVAC Reset

Hydronic System	Required	Specified	Plan/Spec. Reference
Heating only \geq 300,000 Btu/hr	supply water temp. reset		

VIII. DUCT SYSTEM: 7815.13

Category	Required	Provided	Plan/Spec. Reference
Duct insulation	≥ 1" thick		
Transverse joints	Sealed		

IX. VENTILATION SYSTEMS: 7815.14

System Type	Required	Specified	Plan/Spec. Reference
Supply	Damper at envelope		
Exhaust	Damper at envelope		
Supply	on/off switch		
Exhaust	on/off switch		

Energy Code Review Checklist
PART 6
All Degree Days

Project: _____ Date: _____

Important Characteristics: 1 & 2 family detached or
Multi-family < 4 stories

Description	Code Section	Compliance Plans/Field	
1. Total thermal rating must be greater than or equal to 0 (Check for attached summary worksheet)	7815.2 7815.3		
2. If slab on grade construction, slab edge insulation must start at top of slab to 24" depth or 24" beneath slab	7815.3		
3. Fireplace units must contain the following:	7813.5		
a. A 20 CFM damper and outside combustion air (if damper alone does not meet 20CFM, tight-fitting fireplace doors must be added)	7813.5		
b. Gas fireplaces may not utilize continuously operated standing pilot.	7813.5		
4. In multi-family, if a thermal break is caused by common walls, then these walls must be insulated to a minimum R-10	7815.2(c)		
5. HVAC system controls:	7813.13		
a. At least one thermostat control for each dwelling unit.	7813.13		
b. Each dwelling unit must have at least one automatic thermostat control.	7813.13		
c. Reset controls required for heating & cooling systems > 600,000 Btu/hr & heating only systems > 300,000 Btu/hr.	7813.14		
d. Economizer cycles required on some HVAC systems based on design limits.	7813.15		
6. Ventilation systems must have shutoff dampers.	7813.16		
7. HVAC pumps > 25 hp must be capable of 50% flow reduction by variable speed control.	7813.17		
8. Insulation required on HVAC equipment space heating piping (except 1 & 2 family in conditioned spaces).	7813.18		
9. Insulation required on HVAC duct systems (except 1 & 2 family in conditioned spaces).	7813.19		
10. HVAC equipment must meet min. efficiency equipment.	7815.21		

11.	Service water heating equipment must meet minimum requirements.	7813.32-39		
a.	Boilers of combination space & service water systems must meet minimum efficiencies. Such combination systems must have a storage tank insulated to R-6, or boiler must have minimum AFUE of 83%.	7813.32-33		
b.	Service water piping must be insulated (except for 1 & 2 family dwellings that contain piping 3/4" or less).	7813.33		
c.	Service water piping must be insulated (except for 1 & 2 family dwellings that contain piping 3/4" or less).	7813.34		
12.	Non-residential section of multi-family buildings have to meet:			
a.	Electrical requirements (motors).	7813.52		
b.	Lighting controls (interior and exterior).	7813.53		
c.	Fluorescent lamps ballast.	7813.53		
d.	Lighting fixtures	7813.53		
e.	Lighting systems (watts/sf).	7813.54		
f.	Each dwelling unit must have a separate electric meter.	7813.52(b)		

SUMMARY OF TOTAL THERMAL RATING

If the total thermal rating below is zero or greater, the envelope portion of the building is in compliance with the Energy Code.

A. WALL ASSEMBLY	AREA	U-VALUE	TABLE USED		THERMAL RATING
A1 Net Walls	A_w _____	U_w _____	_____	⇒	_____
	A_w _____	U_w _____	_____	⇒	_____
A2 Glazing	A_g _____	U_g _____	_____	⇒	_____
	A_g _____	U_g _____	_____	⇒	_____
A3 Doors	A_d _____	U_d _____	_____	⇒	_____
	A_d _____	U_d _____	_____	⇒	_____
Subtotal Thermal Rating for Section A (A1+A2+A3):					
B. ROOF/CEILING ASSEMBLY					
B1 Roof/Ceiling	A_r _____	U_r _____	_____	⇒	_____
	A_r _____	U_r _____	_____	⇒	_____
B2 Skylights	A_g _____	U_g _____	_____	⇒	_____
Subtotal Thermal Rating for Section B (B1+B2):					
C. ENTER DATA AS APPLICABLE (Either C1, C2, or C3)					
C1 Floor	A_f _____	U_f _____	_____	⇒	_____
C2 Foundation Wall					
Wall Perimeter	_____ ft.				
Above Grade Exposure	_____ ft.				
Insulation Depth					
<input type="checkbox"/> 24" <input type="checkbox"/> 48"					
<input type="checkbox"/> 84" <input type="checkbox"/> Footing		U_f _____	_____	⇒	_____
	Perimeter	R-Value			
C3 Slab Edge Insulation	_____	_____	_____	⇒	_____
Subtotal Thermal Rating for Section C (C1+C2+C3):					
D. TOTAL THERMAL RATING (A+B+C).....					