

# NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE

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## Part 5 Compliance Form Building Design by Acceptable Practice

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Date: \_\_\_\_\_

Building Address: \_\_\_\_\_

County: \_\_\_\_\_

Architect, Engineer or Contractor: \_\_\_\_\_

Phone: \_\_\_\_\_

Permit Applicant: \_\_\_\_\_

Phone: \_\_\_\_\_

### I. HEATING DEGREE DAYS (Table 2-1)

- ☐ 5000 - 6000      ☐ 7000 - 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 is residential with one or two dwelling units.
- ☐ Building is less than 5,000 gross square feet.
- ☐ Building is three stories or less in height.
- ☐ Ratio of glazing area to gross wall area is equal to or less than 17%.

### 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 DATA: 7814.2

Envelope Component	Minimum Required	Provided	Plan/Spec. Reference
Exterior Wall	R =	R =	
Roof/ Ceiling	R =	R =	
Floor	R =	R =	
Foundation wall	R =	R =	
Slab edge insulation	R =	R =	
Glazing	R =	R =	
Entrance Door	R =	R =	
Insulated depth below grade	D =	D =	
Skylight	R =	R =	
Skylight % of total roof area	1 % Maximum	% =	

### Vapor Retarder: 7814.2(c)

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

**Insulation Continuity: 7814.2(d)**

Location Required	Required	Specified	Plan/Spec. Reference
Plate lines	Continuity		
Sill lines	Continuity		
Band joists	Continuity		
Corners	Continuity		
Party Walls	R - 10 each side		

**Infiltration Rate: 7814.2(h)**

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

**Joint Sealing: 7814.10(l)**

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

**Air Infiltration Barrier: 7814.10(j)**

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

**Fireplace: 7814.10(k), (m)**

Required	Specified	Plan/Spec. Reference
Outside combustion air duct w/ damper		
Flue damper w/ max. 20 cfm, or damper & non-combustible doors		
Gas fireplace ignition		

**VI. HVAC EQUIPMENT PERFORMANCE: 7814.11 (Table 5-3)**

Equipment	Minimum Performance	Specified Performance	Plan/Spec. Reference
Furnace			
Boiler			
Heat pump			
Central air conditioner			

**VII. HVAC CONTROL: 7814.12****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		

## VIII. DUCT SYSTEM: 7814.13

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

## IX. VENTILATION SYSTEMS: 7814.13

Category	Required	Provided	Plan/Spec. Reference
Supply	Damper at envelope		
Exhaust	Damper at envelope		
Supply	on/off switch		
Exhaust	on/off switch		

## X. PIPING INSULATION: 7814.15

Piping Type	Insulation Required	Provided	Plan/Spec. Reference
Heating distribution*	$\geq 1 \frac{1}{2}$		
Service hot water**	$\geq \frac{3}{4}$		

## **XI. SERVICE WATER HEATING: 7814.21 (Table 5-4)**

### **Performance Requirements**

Water Heaters	Minimum Performance	Specified Performance	Plan/Spec. Reference
Storage			
Instantaneous			
Pool			

### **Controls**

Category	Required Control	Control Provided	Plan/Spec. Reference
System	automatic control		
System	temp. setting range		
Pool heater	IID		
Pool heater	on/off switch		
Electric water heater	separate switch		
Gas/Oil water heater	separate valve		

## **XII. ELECTRICAL POWER: 7814.31**

Category	Required control	Control Provided	Plan/Spec. Reference

# Energy Code Review Checklist

## PART 5

Electric Comfort Heat, 5000 - 6000 Degree Days

Project: \_\_\_\_\_ Date: \_\_\_\_\_

Important Characteristics:      Glazing Area 17% or less      3 stories or less in height  
    Roof glazing area 1% or less      Floor Area less than 5000 sf

Description	Code Section	Compliance Plans/Field	
1. Heating system is electric.	7814.2		
2. Walls have minimum R23 insulation & vapor barrier.	7814.2		
3. Windows & skylights min. R2.6 and are caulked & weatherstripped.	7814.2		
4. Doors min. R-2.5 and are caulked & weatherstripped	7814.2		
5. Roof or ceiling must have a min. of R26 insulation & vapor barrier.	7814.2		
6. Insulation installed on foundation walls or in floor over basement.	7814.2		
7. If insulation is installed on foundation walls, then:	7814.2		
a. Foundation wall insulation a min. of R10. (generally 2" of rigid insulation)	7814.2		
b. Foundation wall insulation extends at least 84" below grade or at least to the top of the footing.	7814.2		
8. Insulation in floor over basement, must have a min. of R19 w/ vapor barrier.	7814.2		
9. If residence has a first floor slab-on-grade, then:	7814.2		
a. If residence had a first floor slab-on-grade, slab edge insulation must have a min. of R10	7814.2		
b. Slab edge insulation must extend 24" below top of slab; or along slab edge, then horizontally 24" under slab.	7814.2		
10. Fireplace units must contain the following:			
a. A 20 cfm damper & outside combustion air (if damper alone does not meet 20 cfm, tight-fitting fireplace doors must be added)			
b. Gas fireplace may not utilize continuously operated standing pilot.			
11. HVAC Systems shall contain at least one <b>automatic</b> thermostat for each dwelling unit (in the case of baseboard electric system, at least one automatic thermostat for largest connected load or common group of rooms)	7814.12		
12. Central air conditioners min. efficiency of 9.7 SEER (single package systems) and 10.0 Seer (split systems).	7814.11		

# Energy Code Review Checklist

## PART 5

Electric Comfort Heat, 7000 - 9000 Degree Days

Project: \_\_\_\_\_ Date: \_\_\_\_\_

Important Characteristics:      Glazing Area 17% or less      3 stories or less in height  
    Roof glazing area 1% or less      Floor Area less than 5000 sf

Description	Code Section	Compliance Plans/Field	
1. Heating system is electric.	7814.2		
2. Walls have minimum R23 insulation & vapor barrier.	7814.2		
3. Windows & skylights min. R2.6 and are caulked & weatherstripped.	7814.2		
4. Doors min. R-2.5 and are caulked & weatherstripped	7814.2		
5. Roof or ceiling must have a min. of R33 insulation & vapor barrier.	7814.2		
6. Insulation installed on foundation walls or in floor over basement.	7814.2		
7. If insulation is installed on foundation walls, then:	7814.2		
a. Foundation wall insulation a min. of R10. (generally 2" of rigid insulation)	7814.2		
b. Foundation wall insulation extends at least 84" below grade or at least to the top of the footing.	7814.2		
8. Insulation in floor over basement, must have a min. of R24 w/ vapor barrier.	7814.2		
9. If residence has a first floor slab-on-grade, then:	7814.2		
a. If residence had a first floor slab-on-grade, slab edge insulation must have a min. of R10	7814.2		
b. Slab edge insulation must extend 24" below top of slab; or along slab edge, then horizontally 24" under slab.	7814.2		
10. Fireplace units must contain the following:			
a. A 20 cfm damper & outside combustion air (if damper alone does not meet 20 cfm, tight-fitting fireplace doors must be added)			
b. Gas fireplace may not utilize continuously operated standing pilot.			
11. HVAC Systems shall contain at least one <b>automatic</b> thermostat for each dwelling unit (in the case of baseboard electric system, at least one automatic thermostat for largest connected load or common group of rooms)	7814.12		
12. Central air conditioners min. efficiency of 9.7 SEER (single package systems) and 10.0 Seer (split systems).	7814.11		



# Energy Code Review Checklist

## PART 5

Non-Electric Comfort Heat, 5000 - 6000 Degree Days

Project: \_\_\_\_\_ Date: \_\_\_\_\_

Important Characteristics:

Glazing Area 17% or less

3 stories or less in height

Roof glazing area 1% or less

Floor Area less than 5000 sf

Description	Code Section	Compliance Plans/Field	
1. Heating system is non-electric (oil, gas, heat pump).	7814.2		
2. Walls have minimum R18 insulation & vapor barrier.	7814.2		
3. Windows & skylights min. R1.7 and are caulked & weatherstripped.	7814.2		
4. Doors min. R-2.5 and are caulked & weatherstripped	7814.2		
5. Roof or ceiling must have a min. of R19 insulation & vapor barrier.	7814.2		
6. If insulation is installed on foundation walls, then:	7814.2		
a. Foundation wall insulation a min. of R10. (2" of rigid insulation of equivalent)	7814.2		
b. Foundation wall insulation extends at least 24" below grade.	7814.2		
7. Insulation in floor over basement, must have a min. of R19 w/ vapor barrier.	7814.2		
8. If residence has a first floor slab-on-grade, then:	7814.2		
a. Slab edge insulation must have a min of R10.	7814.2		
b. Slab edge insulation must extend 24" below top of slab; or along slab edge, then horizontally 24" under slab.	7814.2		
9. Fireplace units must contain the following:			
a. A 20 cfm damper & outside combustion air (if damper alone does not meet 20 cfm, tight-fitting fireplace doors must be added)			
b. Gas fireplace may not utilize continuously operated standing pilot.			
10. Heating system must have automatic thermostats & meet min. efficiency			
a. For gas-fired heating system, 78% AFUE	7814.11		
b. For oil-fired heating system, 80% AFUE	7814.11		
c. Heat pumps must have a min. efficiency of 9.7 SEER + 6.6 HSPF (single package systems) and 10.0 SEER + 6.8 HSPF (split systems).	7814.11		
d. Central air conditioners min. efficiency of 9.7 SEER (single package systems) and 10.0 Seer (split systems).	7814.11		
11. If ductwork runs in an unheated, uninsulated space, the ductwork must have a min. of 1" insulation	7814.13		
12. For hydronic & steam heating systems, if piping runs in unheated, uninsulated space, the piping must have a min. of 1.5" of insulation	7814.14		
a. Combination service/domestic water boilers must use unfired storage tank for domestic hot water which is insulated to R-6, or boiler must have a min. AFUE of 83%	Amend-ments		

# Energy Code Review Checklist

## PART 5

Non-Electric Comfort Heat, 7000 - 9000 Degree Days

Project: \_\_\_\_\_ Date: \_\_\_\_\_

Important Characteristics: Glazing Area 17% or less 3 stories or less in height  
Roof glazing area 1% or less Floor Area less than 5000 sf

Description	Code Section	Compliance Plans/Field
1. Heating system is non-electric (oil, gas, heat pump).	7814.2	
2. Walls have minimum R18 insulation & vapor barrier.	7814.2	
3. Windows & skylights min. R1.7 and are caulked & weatherstripped.	7814.2	
4. Doors min. R-2.5 and are caulked & weatherstripped	7814.2	
5. Roof or ceiling must have a min. of R24 insulation & vapor barrier.	7814.2	
6. If insulation is installed on foundation walls, then:	7814.2	
a. Foundation wall insulation a min. of R10. (2" of rigid insulation of equivalent)	7814.2	
b. Foundation wall insulation extends at least 24" below grade.	7814.2	
7. Insulation in floor over basement, must have a min. of R19 w/ vapor barrier.	7814.2	
8. If residence has a first floor slab-on-grade, then:	7814.2	
a. Slab edge insulation must have a min of R10.	7814.2	
b. Slab edge insulation must extend 24" below top of slab; or along slab edge, then horizontally 24" under slab.	7814.2	
9. Fireplace units must contain the following:		
a. A 20 cfm damper & outside combustion air (if damper alone does not meet 20 cfm, tight-fitting fireplace doors must be added)		
b. Gas fireplace may not utilize continuously operated standing pilot.		
10. Heating system must have automatic thermostats & meet min. efficiency		
a. For gas-fired heating system, 78% AFUE	7814.11	
b. For oil-fired heating system, 80% AFUE	7814.11	
c. Heat pumps must have a min. efficiency of 9.7 SEER + 6.6 HSPF (single package systems) and 10.0 SEER + 6.8 HSPF (split systems).	7814.11	
d. Central air conditioners min. efficiency of 9.7 SEER (single package systems) and 10.0 SEER (split systems).	7814.11	
11. If ductwork runs in an unheated, uninsulated space, the ductwork must have a min. of 1" insulation	7814.13	
12. For hydronic & steam heating systems, if piping runs in unheated, uninsulated space, the piping must have a min. of 1.5" of insulation	7814.14	
a. Combination service/domestic water boilers must use unfired storage tank for domestic hot water which is insulated to R-6, or boiler must have a min. AFUE of 83%	Amendments	