New Hampshire Residential Energy Code Application for Certification of Compliance

New Construction

A. Owner/Owner Builder: (Company Name if applicable)			**B. General Contractor** (Company Name)		
Name:			Name:		
Mail Address:			Mail Address:		
City:	State:	Zip:	City:	State:	Zip:
Phone: E-Mail:			Phone: E-Mail:		

C. Proposed Structure: Map Lot	**D. Official Use Only:** **Date Rec'd:**
Street:	**Approved by:** **Date:**
City:	**Approval Number:**

E. Type of Construction:

☐ New Residence ☐ Small Commercial

If you are building an Addition, Sunroom Addition or Renovating, Use Addition Application.

Stamp:

F. Compliance Method:

☐ Performance Package
☐ NH Architect or Engineer Certification
☐ Rescheck Software
☐ Other
☐ Third party Home Energy Rating
☐ Exempt (if exempt complete **box I**)

G. Who is Submitting this Application?

☐ Owner ☐ Designer
☐ Builder ☐ Other (explain)
☐ Architect

H. Additional Information:

Total Floor Area ft^2
(Heated Space)_____ ft^2
Heating System
AFUE %_____ %
Highest Window U Value **0.**_____
Window Type ☐ Clear ☐ Low-e ☐ Low-e Argon

Basement
Heated? ☐ Yes ☐ No
☐ Full Basement
☐ Walk Out Basement
☐ Slab on Grade
☐ Other _____

I. Structure is EXEMPT because:

☐ NH Modular Home Program
☐ Mobile Home
☐ Greenhouse for agricultural use only
☐ On a historic register
☐ Addition less than 150 ft^2
☐ Contains no provision for fossil fuel heat.
☐ Low energy use (less than 1 watt/ ft^2)

Fuel Type(s): ☐ Oil ☐ Gas ☐ Propane ☐ Electric ☐ Wood ☐ Other
Heating System Type ☐ Hot Water ☐ Hot Air ☐ Stove ☐ Resistance ☐ Heat Pump

Signature_____ Print Name_____ Date_____

J. Drawing of Structure (you may attach a plan in lieu of this page) include side view if sloped ceilings are planned. Note window and door locations & identify to correspond with window list.)

Scale: One square equals _____ feet

New Construction Take off Worksheet

Complete Box K & L for performance packages. Complete Box K- Q Rescheck© Software

K. Window Area Including: Windows, Basement windows in conditioned basements, Glazed Doors Skylights

	Width x	Height **x**	Number =	R.O. Area	U-value	Model	Manufacturer
A	x	x	=	in^2			
B	x	x	=	+ in^2			
C	x	x	=	+ in^2			
D	x	x	=	+ in^2			
E	x	x	=	+ in^2			
F	x	x	=	+ in^2			
G	x	x	=	+ in^2			
H	x	x	=	+ in^2			
I	x	x	=	+ in^2			
Total Square Inches Glass (Glazing)				in^2	÷ 144 =	ft^2	←Enter this number on page 4 box R Glazing Area

Window Type: ☐ Clear ☐ Low-e ☐ Low-e + Argon ☐ Other (describe) _____

L. Area of Above Grade Walls Enclosing Heated Space

Add lengths of walls (including basement walls more than 50% above grade if Floor (basement ceiling) is not insulated) in feet.

Floor	Front	Side 1	Back	Side 2	Total	Wall Height	Gross Wall Area
1st		+	+	+	=	**x** =	**ft^2**
2nd		+	+	+	=	**x** =	+ **ft^2**
other		+	+	+	=	**x** =	+ **ft^2**
						Total = Enter this number on page 4 box R Gross Wall Area →	**ft^2**

If showing compliance using performance package method STOP HERE. If showing compliance using Rescheck complete below.

M. Area of Solid Doors (Use unit or rough opening dimensions) Do not include cellar door

	Width * x	Height* x	number	= Door Area	U value	Model	Manufacturer
1.	x	x		in^2			
2.	x	x		+ in^2			
3.	x	x		+ in^2			
			Total	in^2	÷ 144 =		Total **ft^2** doors

N. Area of Conditioned Basement (below grade) **Walls** (Heated Basement)

Add lengths of walls (including basement walls more than 50% above grade if Floor (basement ceiling) is not insulated) in feet.

Front	Side 1	Back	Side 2	Total	Wall Height	Gross Wall Area
	+	+	+	=	x	= **ft^2**

O. Area of Ceilings Over Heated Space

	Length	Width	Area
Flat		x	ft^2
Sloped		x	ft^2

P. Area of Floor (basement ceiling)

	Length	Width	Area
Flat		x	
Sloped		x	
		Total	ft^2

Q. Slab Length

+	
Total	**ft**

Perimeter---(running feet)

Use this form for **NEW CONSTRUCTION ONLY 2X6 or LOG Walls ONLY**	**NEW CONSTRUCTION Performance Package Worksheet**	

R PLANNED GLAZING PERCENTAGE	**S. CHOSEN PERFORMANCE PACKAGE**
100 x_____ **ft²** / _____ **ft²** = _____ **Glazing Area** (from box k) **Gross Wall Area** (From box L) **Glazing Percentage**	→ _____--_____

T.	PACKAGE REQUIREMENTS		_____YOUR PROPOSED STRUCTURE_____	
	Copy selected performance package requirements from below.		Planned R or U Values	Brands / Models / insulation type and thickness
Window U Value (smaller U is better)				
Ceiling R Value				
Above Grade Wall R Value				
Floor R Value				
Door U-Value	**. 35**			
% AFUE Efficiency				
Basement Wall				
Slab				

Choose a performance package from the chart below. Performance package MUST BE greater than or equal to your planned glazing percentage as figured above. The packages with a + indicate a higher efficiency (approximately 15% more efficient) than the minimum energy code

Maximum Glazing % ->	**10 % Packages**				**13 % Packages**				**15% Packages**			
Performance Package ->	10-1	10-2	10-3	10 +	13-1	13-2	13-3	13+	15-1	15-2	15-3	15+
Window U-Value	.35	.4	.45	.35	.35	.39	.45	.33	.32	.36	.40	.31
Ceiling R Value	30	30	38	38	30	38	38	38	38	38	38	38
Above Grade Wall R-Value	19	19	19	19	19	19	19	19	19	19	19	21
Floor R-Value	19	30	19	30	30	19	30	30	30	19	30	30
Door U-Value	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
% AFUE Efficiency	82	82	82	85	83	84	86	84	84	85	86	86
Basement Wall	11	13	13	13	13	11	13	19	13	13	13	19
Slab R Value	5	8	5	10	5	8	8	10	8	8	13	10

Maximum Glazing % ->	**18% Packages**			**25% Packages**			**10% Log**		**13 % Log**		**18 % Log**	
Performance Package->	18-1	18-2	18 +	25-1	25-2	25 +	10-A	10-B	13- A	13-B	18-A	18-B
Window U-Value	.32	.36	.30	.32	.34	.27	.4	.35	.35	.33	.32	.28
Ceiling R-Value	38	38	38	38	49	38	38	38	38	38	38	38
Above Grade Wall R Value	19	21	21	19	21	21	8" Log	8" Log	8" Log	8" Log	8" Log	8" Log
Floor R Value	30	30	30	30	30	30	30	30	30	30	30	30
Door U-Value	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
% AFUE Efficiency	84	86	90*	89*	86	87	86	85	86	85	90*	86
Basement Wall	15	15	19	19	19	19	10	10	18	18	18	18
Slab R Value	13	13	10	5	10	13	10	10	10	10	10	10

New Hampshire Residential Energy Code
New Construction Only

This Booklet contains the *Application for Certificate of Compliance* for the New Hampshire Energy Code for new residential and small commercial structures. ***Please read these directions!*** Additional resources for completing this application can be found at our website www.puc.state.nh.us if you still need further help please call us for assistance.

You must obtain Certification if you plan to:

- Build a new home with any provision at all for fossil fuel (oil, gas, LP, propane) or electric heat.
- Construct a commercial structure less than 4000 square feet. (You may use commercial code instead)
- Alter (Renovate) a structure.
- Winterize a seasonal home or part of an existing structure, such as finishing a room over a garage

Construct an addition with more than 150 square feet of total floor space (use Addition application not New Construction.)
You May be exempt .if you are:

- Siting a mobile home (covered by federal regulations)
- Siting a modular home certified by the NH Modular Home Program. Contact the Office of the Fire Marshall 603 271-3294 for details.
- Making no provision for electric or fossil fuel heat
- Renovating or adding to a certified historic building

In municipalities with a building code, deal directly with your building inspector; otherwise submit this completed application to the Public Utilities Commission.

Express InstructionsHow to prepare application

If you are:	You must complete the following:
Building a **New Single Family Home** (Stick Built or Log) and complying using a **PERFORMANCE PACKAGE**	Complete page 1 New Construction Data Page Boxes A B C D E G H and I Complete page 2 Drawing of Structure Box J Complete Page 3 New Construction Take off Worksheet Boxes K and L Complete Page 4 Performance Package Worksheet Box R S and T
Building a New Single Family Home (Stick Built or Log) and complying using **Rescheck Software approach** **www.puc.state.nh.us/energycode/energypg.html**	Complete page 1 New Construction Data Page Boxes A- H, and I if Exempt Complete page 2 Drawing of Structure Box J Complete Page 3 New Construction Take off Worksheet Boxes K and L, M, N, , P, Q Attach page 1 printout from Rescheck Submit Rescheck page 1 print out.
Exempt	Complete Page 1
Building an Addition, Sunroom Addition or Renovating a structure.	Complete the Addition Application which can be downloaded at www.puc.state.nh.us/energycode/energypg.html

Directions for completing application
For compliance with the
NH ENERY CODE
NEW CONSTRUCTION ONLY

Page 1 Must be completed for all applications.

Box A. **OWNER/OWNER BUILDER** All applicants must include this information.

Box B **GENERAL CONTRACTOR** If a general contractor is involved with the project, Complete this box..

Box C **PROPOSED** STRUCTURE Must be completed for all structures. The Map and Lot number must be included .

Box D **OFFICIAL USE ONLY** Skip this box.

Box E **TYPE OF CONSTRUCTION**.

New Residence Means any residential building under 4 stories, or a commercial building less than 4000 square feet.

Small Commercial means a commercial building of up to 4000 square feet. To show compliance with a small commercial building, you may choose to use either this application (residential) *OR* you may use the commercial code.

Box F **COMPLIANCE METHOD** Enter how you are showing compliance with the energy code.

Performance Package To show compliance using this method, you only need to determine Wall Area and Window Area. Once these are known, a ratio called **glazing percentage** can be determined. Then, choose a package consisting of insulation, window and heating values, based on your design. This option will work with most structures. Follow the Instructions in the Table below labeled 'How to prepare application.'

Rescheck Software. This ***free, user friendly software*** can be downloaded by going to the Energy Codes page at the NHPUC Website. This software option allows for greater flexibility in design of the energy components. If you can't fit into a performance package, you may be able to get your structure to comply using **Rescheck**. New to the latest version of rescheck, in the tools menu you will find a module called **area-calc** which will help you accurately determine the wall, ceiling and window areas required for using this software.

Third Party Home Energy Rating You may present a rating completed by a certified HERS rater from approved software such as REM Rate with a minimum HERS RATING score of 83.

NH Architect or Engineer Certification If your structure has been designed by a NH architect or engineer, he or she has the responsibility of certifying your construction plans and submitting a letter to the stating that the structure meets the code requirements. And stating the method he used to determine that the structure complies. This letter should be taken directly to the town and a copy sent to the NH Public Utilities Commission . With this certification, you do not need to submit an application.

Exempt If the structure is exempt check this box and fill out box I.

Box G **WHO IS SUBMITTING THIS APPLICATION** Check the Appropriate box.

Box H **ADDITIONAL INFORMATION**

Total Floor Area (heated space) The total floor area for each floor of heated space.

Heating system AFUE % This is a rating for heating equipment. This information is available from the manufacturer or is available through GAMA a third party rating organization.

Window U-Value All Windows must be NFRC Rated, or you must use the default table. (If you use the default table your windows will NOT pass the performance package method for complying.) Enter the Highest U-value for any planned window.

Window Type Check box indicating if window is Clear, Low-e or Low e-Argon.

Heating fuel type Check the box for each fuel type you will be using. Place the letter P next to your primary fuel source.

Heating System Type. Check the type(s) of heating system you will be using.

Box I **STRUCTURE IS EXEMPT** Complete this box ONLY if your structure is exempt. The following are valid reasons for Exemptions

NH Modular Homes Program. You are exempt from showing compliance with the Energy Code on this application if you are siting a Modular home which is in the NH Modular Homes Program. Contact the Office of the Fire Marshall 603 271-3294 for details. Please note that modular homes in this program are pre-certified by a third party as to meeting the energy code, they are not exempt from the Energy Code.

On A Historic Register If the structure you are adding to or renovating is on a historical register, you are exempt from the energy code.

Contains No Provision for Fossil Fuel Heat. If you will have no provision for fossil fuel heat including oil, gas, propane, LP, or Electric Heat both central and space heat systems, then you are exempt from the code. Most exemptions of this type are granted for people with wood heat only, though solar exemptions have also been approved. Since geothermal heat pumps require electricity, they are not exempt from the energy code.

Mobile Home. All Mobile Homes are regulated by federal standards, and are therefore not required to be approved as meeting the NH Energy Code.

Greenhouses for Agricultural Use Only. A greenhouse used exclusively for agricultural purposes is exempt from the code.

Additions Less than 150 Square Feet This exemption is designed to allow mudrooms and breezeways to be exempt from the code.

Low Energy Usage If you can show that you will use less than 1 watt per ft^2 You are exempt from the code. This is a VERY RARE exemption, as virtually all buildings use more energy than 1 watt per ft^2.

Signature Please sign and date the application.

Page 2 Scale Drawing

Complete this page or attach copy of plan with required information.

Box J **DRAWING OF STRUCTURE** Please make a scale drawing of the structure. If there are only flat ceilings you need only show a floor plan, if there are sloped ceilings please show an elevation showing those sloped ceilings. Please identify the locations of all doors and windows to correspond with window schedule on page 3.

Page 3 Take Off Worksheet

Box K. **WINDOW AREA** In this box you will calculate the rough openings for all the windows in your structure. For each size window enter and multiply the **Width x Height** (in inches) **x number of windows of that size**. Enter that number under **R.O Area** (Rough Opening). Then enter the NFRC rated U-Value of the window and the model and manufacturer. Do that for each size window, glass door and skylight. Add the Rough Openings for each size window to find the Total Rough Opening. Divide that number by 144 to find total rough openings of windows in square feet. **Enter the total rough opening(s) of all windows in square feet onto Page *4 Box R Glazing Area*** You can look up the U-Value of any rated window at www.NFRC.org by clicking on product directory.

Box L **ABOVE GRADE WALLS SURROUNDING HEATED SPACE** With this box you will calculate the area of all vertical walls separating heated from unheated space. Remember this includes both walls separating heated space from outside space as well as heated space from unheated attic space. If your basement is heated you will include as above grade walls, the basement walls that are 50% or greater above grade. Enter the length, width and height of each above grade wall and multiply them out to find total wall area. If the wall is odd shaped, you may figure the area by dividing the wall into rectangles and triangular areas and adding them together. **Enter the total area of all above grade walls in square feet onto Page *4 Box R gross wall area.***

IF YOU ARE USING THE PERFORMANCE PACKAGE METHOD FOR SHOWING COMPLIANCE WITH THE ENERGY CODE, SKIP FORWARD TO THE DIRECTIONS FOR BOX R.

IF YOU ARE SHOWING COMPLIANCE USING RESCHECK SOFTWARE COMPLETE BOXES M, N, AND O

Box M **SOLID DOOR AREA** Enter the area (width x height) in inches and number of each size door. Then enter the U-value of the door, the Model and Manufacturer. Add up the total number of square inches and divide by 144 and enter the total square feet of door area. A solid door means any door that is 50% or greater solid. A door, such as a nine-lite, which is less than 50% glass, may be counted as a solid door.

Box N **AREA OF CONDITIONED BASEMENT** (below grade) **WALLS** This section applies to conditioned (heated) basements with walls that are more than 50% below grade. Enter the length of each wall and add them up. Multiply that total by the wall height and enter the **Gross Wall Area.** NOTE: The presence of a heating system in a basement does not mean that it must be considered a conditioned space. A basement is

considered a conditioned space if it is intentionally heated such as having a separate heating zone in the basement. You may choose to call a basement conditioned even if it is not intentionally heated.

Box O AREA OF CEILINGS OVER HEATED SPACE In this section you will find the area of flat ceilings and of sloped ceilings. Enter the length and width of each ceiling area and multiply Length x Width. You will calculate both the area of flat ceiling and the area of sloped ceiling. DO NOT add these two numbers together.

BOX P FLOOR AREA In this section you will calculate the area of floor (basement ceiling). This will be calculated when the basement is unheated and the floor (basement ceiling) is to be insulated. Enter the length and the width of the floor to be insulated and multiply length x width and enter that area. If there is a second area of ceiling to be insulated enter that and add them up to find total floor (basement ceiling) to be insulated.

BOX Q SLAB LENGTH In this section you will find the length(s) of any slab edge at or within 1 foot of grade. You are looking for a length of slab edge not an area. Any slab edge (the edge of the basement floor) which is at grade or has up to one foot of dirt above it, should be entered in this box.

Page 4 Determining Compliance Package

BOX R PLANNED GLAZING PERCENTAGE In this section you will determine the Glazing Percentage of your structure. This ratio of walls to windows. Enter the Glazing area from Box K and the Gross Wall area from Box L and divide window area by wall area and multiply by 100. Round this to the nearest percent. This is your Planned Glazing Percentage.

BOX S CHOSEN PERFORMANCE PACKAGE In this section you will choose a performance package from the chart at the bottom of page 4. You must pick a package that is greater than or equal to the Glazing Percentage you figured in Box R. Select a package where you can meet or beat all of the listed efficiencies for that package. If you are building a log home select one of the log packages, if you are building a stick built home pick one of the non log packages. For example, if you have a 2 x 6 stick built structure, and 14% Glazing Percentage then you could choose any of the 15%, 18% or 25% packages. When considering R-Values and % AFUE Efficiency, a higher number is more efficient, when considering windows and door U-Values, lower is better. Enter your chosen performance package in Box S.

BOX T PACKAGE REQUIREMENTS AND YOUR PROPOSED STRUCTURE In this chart you will enter the package requirements from the package you chose in Box S into the column marked Package Requirements. Under Your Proposed Structure, in the column marked Planned R or U Values, you will enter the efficiency for the component in question. For example if you chose package 15-2 you would enter .36 under the Window U- value required by the package. Under the Planned R or U value column you would enter the U-Value of the window you plan to install. That U-value must be less than or equal to .36.

SUBMIT APPLICATION. Send application to the Public Utilities Commission, 8 Old Suncook Road, Concord NH 03301

NH Energy Code Window and Door Default tables.

These tables should be used when you do not have an NFRC Rated door or window.

	Wood/Vinyl		Metal Clad Wood		Metal Without Thermal Break		Metal Without Thermal Break		Steel Doors		Wooden Doors		
Window Type	single	double	single	double	single	double	single	double	w/foam core	w/out foam core			
Operable	.89	.55	.90	.57	1.08	.65	1.27	.87	.35	.60	w/panel 1.75”	.54	.36
Fixed	.98	.56	.98	.56	1.07	.63	1.13	.69			Hollow	.46	.32
Skylights	1.47	.84	1.75	1.05	1.89	1.11	1.98	1.31			Solid core	.40	.26
											w/panel 1.125”	.39	.28

Notes

1. Glazing area for new construction is the ratio of glazing assemblies (including sliding glass doors, skylights and windows in conditioned basements but excluding solid doors) to the gross vertical wall area, expressed as a percentage.
2. Glazing U-Values must be documented by the National Fenestration Rating Council (NFRC) or taken from the default table above.
3. Ceiling R-Values do not assume raised or oversized truss construction. If the insulation achieves its full thickness over the exterior walls or is continuous such as a roof deck or built-up roof, R-30 insulation may be substituted for R-38. Ceiling R-Values are the sum of cavity insulation and insulating sheathing (if used). Scuttles or pull-down stairs must be insulated to at least R-10 and may not exceed 15 square feet.
4. Wall R- Values are the sum of the cavity insulation and insulating sheathing (if used). Do not include exterior siding, structural sheathing or interior drywall. For example, an R-19 requirement could be met with R-19 cavity insulation or R-13 cavity insulation plus R-6 insulating sheathing. Include band joists between heated floors. Metal framed walls do not meet the requirements of prescriptive packages.
5. Floor requirements apply to floors over unconditioned space such as basements or crawlspaces. Floors over outside air must be insulated to at least R-30. If floors over unheated basements are insulated do not consider the basements walls, windows or doors for the purposes of this code. If basement or crawlspace walls are insulated, do not include floor areas.
6. Walls of basement below un-insulated floors must be insulated from the top of the rim joist to 10 feet below grade or to the bottom of the basement wall whichever is less. Basement walls less than 50% below grade must be considered above-grade walls and insulated accordingly. Basement windows under un-insulated floors must be included with other glazing and meet the same u-value requirements. Basement doors under un-insulated floors must have a maximum U-value of 0.35 except for 1 interior cellar access door, for example at top of cellar stairs. The walls of heated basements must be insulated to the required levels and the Floor (basement ceiling) ignored. A basement is considered heated only if provision is made to heat it with fossil or eclectically derived heat. The presence of a furnace, boiler or woodstove does not make a basement ‘heated’ under this code.
7. Crawlspace R-Values are for walls of unventilated crawlspaces. The insulation must extend from the top of the wall, (including sill plate) to at least 12 inches below grade.
8. Slab R-Values are for slabs without embedded heating pipes and require insulation to extend a total of 48 inches down from the top of the slab and under it;; a total of 48 inches down from the top of the slab and horizontally away from it covered with at least 10 inches of soil or pavement; or straight down 48” from the top of the slab. Add an additional R-2 for slabs having embedded heating pipes or un-insulated ducts.

REMEMBER: Glazing areas and U-Values are maximum acceptable levels. Insulati0on R-Values are minimum acceptable levels. The R-values listed are those of the insulation only and do not include any structural elements. If `your planned design does not meet the provisions of any of the prescriptive Packages, consider using the Rescheck software. Package available for download from the PUC at www.state.nh.us/energypg.html.

NEW HAMPSHIRE ENERGY CODE
Summary of Basic Requirements

Air Leakage	Joints, penetrations and all other similar openings in the building envelope that are sources of air leakage must be caulked, gasketed, weather-stripped or otherwise sealed. The maximum leakage rates for manufactured windows and doors are shown in the 'notes' section. Recessed lights must be type IC rated and installed with no penetrations or installed in appropriate air-tight assemblies with 0.5 in clearance from insulation.
Vapor Retarder	Vapor retarders must be installed on the warm-in-winter side of all non-vented framed ceilings, walls and floors. In floors, exterior rated sheathing qualifies as a vapor retarder. This requirement does not apply where moisture or its freezing will not damage building materials.
Materials and Insulation Information	Materials and equipment must be identified so that compliance can be determined. Manufacturer manuals for all installed heating, cooling and service water heating equipment must be provided. Insulation R-values, glazing and door U-values and heating and cooling equipment efficiency must be clearly marked on the building plans, drawings, specifications or Area Calculation Worksheet.
Duct Insulation	Supply and return ducts for heating and cooling systems located in unconditioned spaces must be insulated to at least R-5 Exceptions: Insulation is not required for exhaust air ducts, ducts within HVAC equipment or when the design temperature difference between the air in the duct and the surrounding air is 15° F or less.
Duct Construction	Ducts must be sealed using mastic with fibrous backing tape. For fibrous ducts pressure-sensitive tape may be used. Other sealants may be approved by the building official. Duct tape is not permitted. The HVAC system must provide a means for balancing air and water systems.
Temperature Controls	Where used to control comfort heating, thermostatic controls shall be capable of being set locally or remotely by adjustment or selection of sensors down to 55° F (13°C) or lower. Where used to control comfort cooling, thermostatic controls shall be capable if being set locally or remotely by adjustment or selection of sensors up to 85° (29°C) or higher. Where used to control both comfort heating and cooling, thermostatic controls shall be capable of providing a temperature range or deadband of at least 5° F (Δ3°C) within which the supply of heating and cooling energy is shut off or reduced to a minimum.
HVAC Piping Insulation	HVAC piping in unconditioned spaces conveying fluids at temperatures above 120°F or chilled fluids at less than 55°F must be insulated to R-4
Heated Swimming Pools	All heated swimming pools must have an on/off pool heater switch. Heated pools require a pool cover unless more than 20% of the heating energy is from renewable sources. Any swimming pool pump must be equipped with a time clock.
Circulating and Non-Circulating Hot Water Systems	Circulating hot water systems must have automatic or manual controls and must be insulated. ALL DOMESTIC HOT WATER SYSTEMS flowing through unconditioned space shall be insulated to a minimum of R-3.
Electric System	Each multifamily dwelling unit must be equipped with a separate electric meter.