

Conditioning of residential garages policy

Policy Number: E-1

Effective: July 14, 2021

Overview:

The current State Residential Energy Code would not prohibit the conditioning of a residential garage; however, it would treat the garage space no differently than the dwelling unit and would therefore make it impractical to comply from a cost/benefit standpoint. Normally these heating systems: (1) are not intended to condition the space more than a few hours in any single day and (2) are not intended to condition the space at the minimum temperature required in the living area (68 degrees Fahrenheit). The garage should therefore not be held to the same criteria as that of the adjoining living area. The Department of Labor and Industry - Construction Codes and Licensing Division that promulgates the State Energy Code is aware of the issue and has recommended a work-around that would require the garage/dwelling to be built first and the Certificate of Occupancy issued. At that point, it would be considered an existing building and a Mechanical Permit application can be made to add heating to the existing garage. The result of the work-around is that: (1) the space is less compliant from an Energy Code application, (2) the installation is more costly to the homeowner than if installed during the original construction, and (3) it creates inconsistency in the application of the code.

Details:

For the purposes of applying the State Energy Code, the following applies to the conditioning of private garages in group IRC-1, IRC-2, IRC-3 and IRC-4 occupancies of the State Residential Code and private group U garages in group R-3 and group R-4 occupancies of the State Building Code:

1. The private garage shall be limited to use by the occupants of the building.
2. The garage shall be limited to a maximum of 1000 sq. ft.
3. The garage construction shall be in compliance with the Building Envelope Requirements for Climate Zone 6A of ASHRAE 90.1-2016 for Semiheated: R-30 attics, R-13 walls, & R-19 floors, U-0.7 for swinging doors and U-1.45 for non-swinging doors (overhead garage door). There is no requirement for foundation insulation.
4. A Class I vapor barrier/retarder shall be installed between the garage and all living areas and beneath the concrete slab.
5. A frost footing is required between the semiheated garage and the living area as applicable.
6. Thermostatic controls shall be provided that turn on and off the system and can start and stop the system under two different time schedules per week.
7. The plans submitted under the Building Permit for review shall indicate the type, input rating and location of the appliance in the garage.
8. The heating appliance input rating shall be limited to the maximum permitted for semiheated structures of 14 Btu/h-ft². This rate is permitted to be *averaged* over the projected hours of operation per day based on a minimum of 4 hours. See below.

Garage Area (sq. ft.)	Maximum Input rating of Heating Appliance (BTUH) ² Based on projected hours of operation			
	Baseline (24 hours)	12 hours ¹	8 hours ¹	4 hours ¹
200	2,800 (67,200)	6,000	9,000	17,000
400	5,600 (134,400)	12,000	17,000	34,000
600	8,400 (201,600)	17,000	26,000	51,000
800	11,200 (268,800)	23,000	34,000	68,000
1000	14,000 (336,000)	28,000	42,000	84,000

Footnotes:

¹ Rounded *up* to the closest 1000th.

² Interpolation is permitted for garage areas not indicated.

