

3. When is a Residential Building Considered a Commercial Building?

The International Energy Conservation Code (IECC) is composed of two parts. One part applies to commercial buildings and the other to residential buildings. Multifamily buildings may fall under either category depending on the number of stories and the type of residential occupancy. Where a building includes both residential and commercial occupancies, each occupancy must be separately considered and meet the applicable provisions of the IECC.

The definitions of *residential building* and *commercial building* are the key to understanding whether the residential or commercial provisions apply. The definitions are identical in sections R202 for residential and C202 for commercial.

COMMERCIAL BUILDING. For this code, all buildings that are not included in the definition of “residential buildings.”

RESIDENTIAL BUILDING. For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) as well as Group R-2, R-3 and R-4 buildings three stories or less in height above grade plane.

One- and Two-Family Dwellings. Group R-3, one and two family dwellings, are not affected by the three story limitation. These types of buildings are considered residential regardless of the number of stories.

Apartments, Condominiums, and Small Residential Care/Assisted Living Facilities. If a Group R-2 or R-4 is over three stories in height it is considered a commercial building and be required to comply with the commercial provisions of the energy code. Group R-2 includes apartments and condominiums where three or more units are attached. It also includes related types of buildings such as dormitories, boarding houses, and convents. Group R-4 includes small residential care/assisted living facilities. Refer to Section 310 of the International Building Code (IBC) for the complete definition of the R-4 Group. Group R-4 must be differentiated from larger buildings of a similar type that are classified as institutional by the IBC and must comply with the commercial provisions of the energy code.

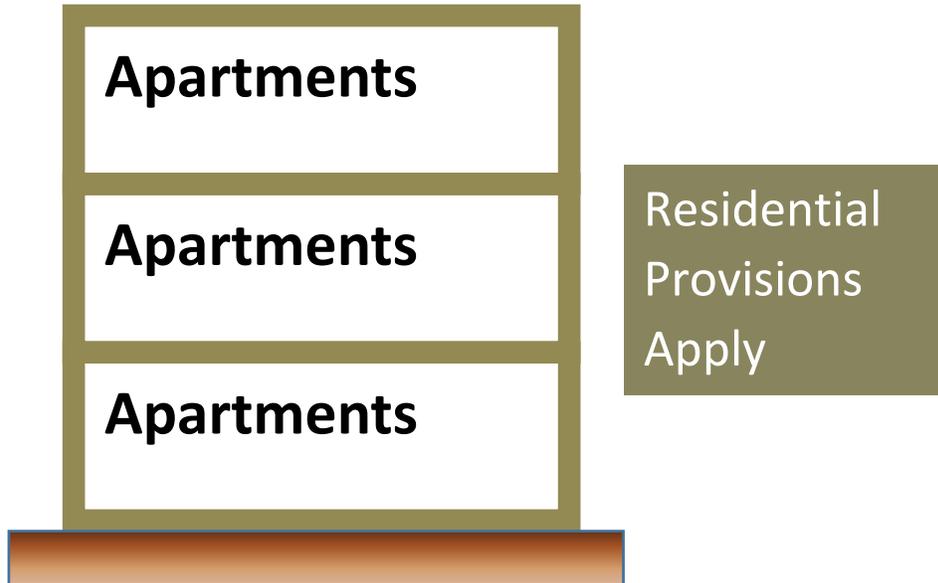
Hotels and Motels. These Group R1 buildings must comply with the commercial provisions of the code regardless of the number of stories.

Mixed Occupancy. Where a building includes both residential and commercial occupancies, each occupancy is separately considered and must meet the applicable provisions of the IECC—Commercial and Residential Provisions. (R101.4.6)

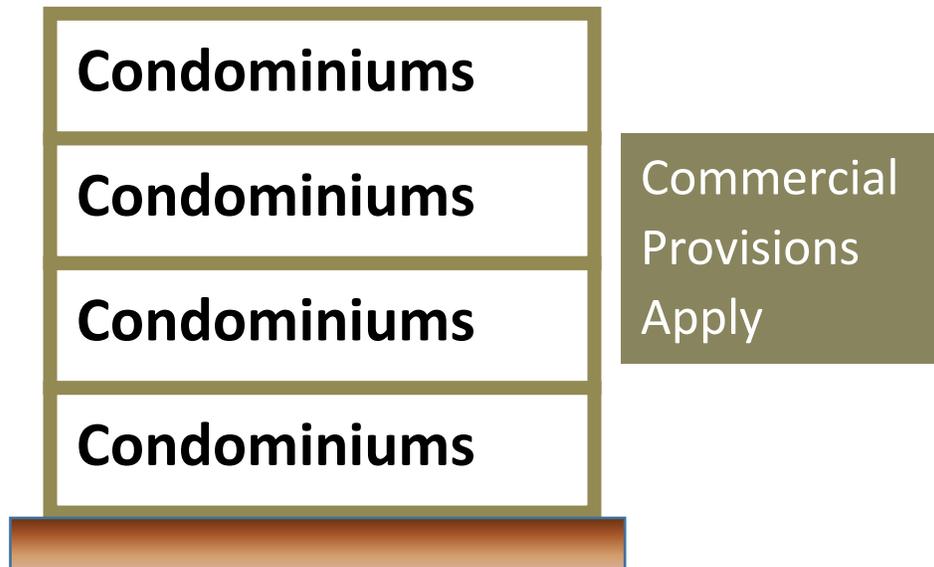
Next we will look at some common examples.



Example 1. An apartment building is three stories above grade. Would the commercial or residential provisions apply? The residential provisions would apply since the Group R-2 building is three stories of less in height.

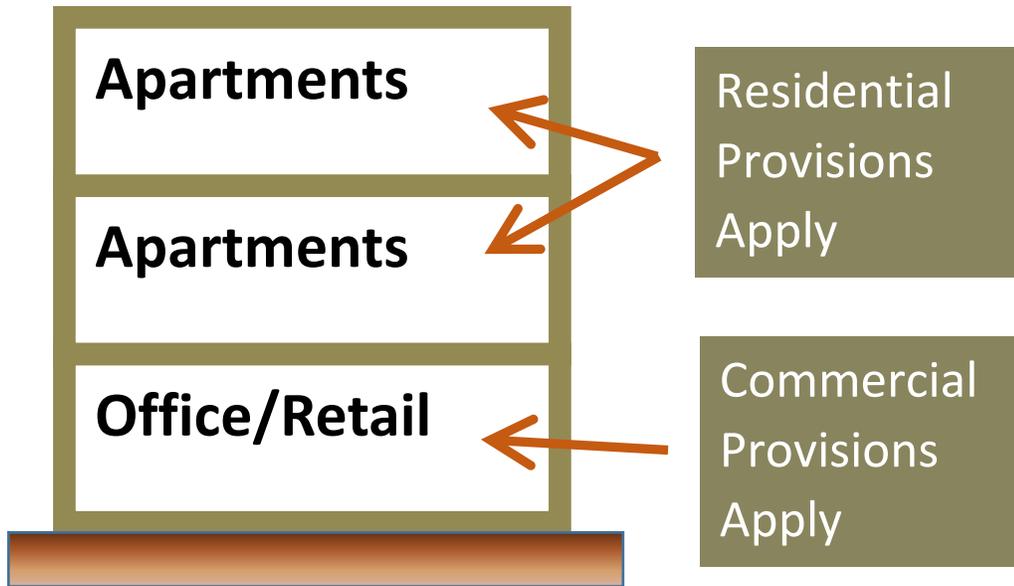


Example 2. A condominium building is four stories above grade. Would the commercial or residential provisions apply? The commercial provisions of the energy code would apply to the entire building since the Group R-2 building is more than three stories in height.

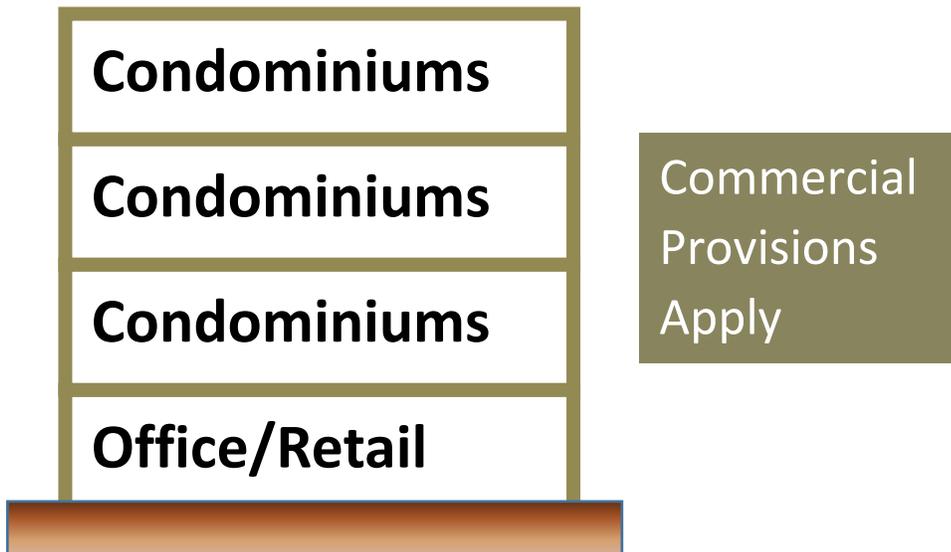




Example 3. A mixed occupancy building is 3-stories above grade with office and retail space on the ground floor and apartments on the second and third floor. Would the commercial or residential provisions apply? The mixed occupancy building presents a more complex question. The commercial provisions of the energy code apply to the first floor since it is not a residential occupancy. The residential provisions of the energy code apply to the second and third floor since they are an Group R-2 occupancy but not above the third floor.



Example 4. A mixed occupancy building is 4-stories above grade with office and retail space on the ground floor and condominiums on the second, third, and fourth floor. Would the commercial or residential provisions apply? The commercial provisions of the energy code apply to the entire building since the building is over three stories in height.





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Code References

2012 IECC Sections C202 General Definitions and R202 General Definitions. The definitions of commercial and residential buildings is included earlier in this article.

2012 IBC Chapter 3: Use and Occupancy Classification

Plan Review

1. First determine the residential building occupancy group.
2. Apply the definition of residential building as discussed above to determine if the residential or commercial energy code provisions apply.

Field Inspection

1. Verify that the building configuration (number of stories) is per permit submittal documents.
2. Verify compliance with either the commercial or residential provisions of the energy code.

Resources

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