

Title 24 Energy Compliance for New Residences and Multi-Family Buildings

What You Need to Know

Hotel/motel buildings, and multi-family residential buildings taller than three stories comply with Title 24 in a manner similar to nonresidential/commercial buildings (refer to the "Commercial" section of this website).

Energy efficient buildings are rapidly becoming a political mandate; however, the plancheck "playing field" is still highly unpredictable from jurisdiction to jurisdiction. Programs such as Build-It-Green are rapidly becoming part of local planning codes. This means that even the most lax jurisdictions are at least asking for Title 24, and often additional documentation. Still, various types of Title 24 fraud have not been eradicated due to spotty Title 24 planchecking abilities in various jurisdictions throughout the state.

While fraudulent Title 24 compliance may, in some cases, reduce upfront construction cost, it increases utility bills, and creates potential liabilities in the areas of construction and real estate law. When you consider, too, that good Title 24 practice really amounts to little more than financial common sense, the reasons to use one of the less scrupulous energy consultants become nonsensical. "Good Title 24 practice" is the key phrase here, and that is exactly what EasyTitle24.com strives to provide. With EasyTitle24.com's website, you can save on documentation costs by lending us a hand, or you can give us the entire task.

EasyTitle24.com's reports are designed to lawfully document Title 24 energy compliance for even the most strict jurisdictions. We do so in the most cost-effective manner possible, while leaving builders and owners with maximum flexibility. The Title 24 compliance approach we use, and recommend for new homes is exclusively the *performance method*. This method is the most flexible and comprehensive, while being no more difficult—and often easier—than other approaches. An additional benefit of this approach is that heating and air conditioning load calculations are automatically produced, as required by code.

Insulation: Standard insulation is very cost-effective up to R-38. After that, increased R-values give diminished returns. Of course, the R-value you can install will depend on the depth of the cavity into which it is installed, and the choice of products available. Never compress batt insulation, as doing so reduces its R-value. Some jurisdictions require a ±1 inch ventilated air space above insulation in vaulted ceilings. The latest "green" initiative in this area is "Quality Insulation Installation," which is a large HERS-verified credit that can most practically be achieved with the newer spray insulation products. See EnergyStar's "Thermal Bypass Checklist Guide" for more information.

Glazing: Fenestration (including frames, glazing, coatings, orientation, and overhangs) is the most important factor influencing residential energy consumption. Metal conducts heat much more rapidly than vinyl, wood, or fiberglass, so avoid aluminum windows whenever possible, or at least choose a "thermally broken" frame. "Hard-coat low-e" is a very cost-effective coating in the cooler climates, while "soft-coat low-e" [0.04 emissivity] is cost-effective everywhere else. The new 2005 Standards heavily penalize Southwest to Northwest glazing area greater than 5% of the habitable floor area. Beyond this, EasyTitle24.com does not recommend making Title 24 the tail that wags the design dog.

Mechanical Systems: Electric resistance space and/or water heating are very heavily penalized in Title 24. Heatpumps, and point-of-use electric instant water heaters are possible alternatives for the all-electric home. In very remote areas, wood or pellet stoves might be allowed as the primary source of heat. For all others, mechanical systems should not be problematic. Expert duct sealing is a great energy saver practically speaking; however—in order to get credit for this in Title 24—the ductwork must to be tested by a third party (HERS rater). This credit is so great that it is quite cost-effective, even with the cost of verification added in. If HERS is chosen, then several simple credits can be piggy-backed on.

Mandatory Measures: These apply—if relevant—to all residential construction, including additions and mere alterations. These measures are listed on a form called the "MF-1R," and most builders, and manufacturers, should be well aware them. For homeowners, the most significant of these are the new energy-saving lighting requirements that apply to all indoor and outdoor lighting.

What You Need to Provide (for New Residences)

This can be used as a transmittal form

Notes, plan sheet
number, or CAD
filename

- Floor plan dimensioned or to scale showing the following:
 - North arrow or plot line bearing
 - All exterior windows, doors, and skylights
 - All mechanical equipment
 - Project address
 - All walls and room names
 - All ceiling heights
- Window and door schedule/notes, or elevations to scale, indicating sizes, operator types, and frame material (metal, vinyl, wood, or fiberglass).
- An indication of exterior wall construction/stud size (possibly in section).
- An indication of whether floors will be raised, or slab (possibly in elevations).
- N/A For all single rafter sloped ceilings (true vaults):
 - An indication [detail] of the construction assembly, including rafter size
 - A clear indication, either in plan and/or section, of the extent of the vault
- Indications of the types of heating, air conditioning, and water heating systems. Equipment efficiency ratings (if known), or make and model numbers (if known).
- N/A Indications of any special materials/methods you think may affect energy consumption (e.g. radiant barrier roof sheathing, housewrap infiltration barrier, third party duct testing, etc.).
- Project contact information for billing and for responsible designer.

From	Project Name
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Full Service Prices

Single family homes10¢ / sqft starting at \$250

Multi-family buildings ±\$195 / unique unit type

"sqft" means "Conditioned Floor Area" in square feet. By rule, stairs are counted twice (once for each floor they intersect), and fireplace footprints are included; but chimneys, flues, and unconditioned rooms—like garages and mechanical closets—are not included in Conditioned Floor Area. Fees may vary by ±\$10 according to how difficult, or easy, Title 24 compliance is.