



## The Green Energy Newsletter

Written by Architects and Engineers - for  
Architects, Builders, Developers & Real Estate  
Professionals.

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### **NEWS BREAK:**

Our editor, Alan Hugenot, who is also Director of Energy Compliance at Mark English Architects is now a Certified HERS-Rater with CalCERTS. This now allows him to verify the energy efficiency of the heating and cooling installations on completed projects. And this provides our Title 24 clients with ONE STOP SHOPPING when it comes to energy efficiency. .

### **THE ENERGY EFFICIENCY COMPLIANCE PROCESS FOR PROJECTS**

We often get asked, “Who does what with Energy Compliance?” with regard to new residential construction and existing residential remodels. The traditional roles of Architect, Building Contractor, and Sub Contractors are well understood. But, as energy efficiency has become more regulated and the documentation required by the California Energy Efficiency Code (Title 24) has become more complicated, there has been a parallel proliferation of various *Energy Experts* and different *Energy Raters* each claiming to be the **Real Green Expert**. This seeming power vacuum has spawned a plethora of organizations competing for market share and each claiming to be the **True Green Authority**, some with governmental sanctions, but many without any official charter what-so-ever.

Unfortunately, in this free market we now have: BUILD-IT-GREEN, the CEC, CalCERTS, CBPCA, CHEERS, CABEC, CSLB, CARB, CEE, CPUC, CHPS, CalSEIA, DSIRE, EPA, Energy Star, EERE, IREC, LBNL, NCSEA, NREL, REPP, ResNET, SBIC, and finally in *last place for residential* and definitely not LEED...ing the pack is the USGBC, with LEED for Neighborhoods. Yet, this alphabet soup does not even include the public utilities which also have their own proliferation of sub-agencies..... So you might well be left asking, “Who are all these people?..... The short answer is....

**“At Green Compliance Plus<sup>®</sup> we strive to be all of those people for you”.**

The underlying truth hidden beneath the green chaos is that, on any project there are actually only (2) players that make any difference where energy is concerned; the Title 24 Documents Author (a CEPE or CEA certified by CABEC), and the HERS-Rater (certified by CalCERTS, CBPCA, or CHEERS). These are the guys with the official sanctions from the State of California to actually file the necessary paperwork.

Here at Green Compliance Plus<sup>®</sup> we are certified and licensed by California to do both halves of the Energy Analysis and Verifications for you. We can handle all your energy headaches. So here is what the energy players do on a California residential construction project:

**WHAT ENERGY ANALYSTS DO:** As registered California Certified Energy Analysts (CEA's) we assist Architects, Builders and Developers by providing the following services:

**1. Existing Home Energy Audits:** The Certified Energy Analyst (CEA) performs a site survey of an existing home and identifies all energy consuming equipment; Lighting, HVAC and Appliances. The CEA also measures the home and determines R-values and U-values for the existing building envelope. Performing a general ducting and systems visual inspection, looking at hot water tank blankets and insulation, hot water re-circ systems etc. The CEA may also decide that a duct blower test or door blower test, usually done by a HERS-rater may be required to determine the tightness of the building and ducting leakage.

**2. Existing Home Energy Modeling & Selection of Energy-Efficiency Measures (ECM's):** The CEA then identifies appropriate ECM's by simulating the home's energy usage with a Title 24 Energy Efficiency Modeling program. The results of this analysis allow the CEA to select the most effective upgrades to meet the intended certification of Title 24, Energy Star, Green Point Ratings, LEED for Neighborhoods, Federal Tax Credits or New Solar Homes Partnerships, within the specific performance guidelines.

**3. New Homes Title 24 Documentation & Modeling:** California Certified Energy Analysts (CEA's) serve as Title 24 Documentation Authors for Architects, Builders and Developers, by providing the official forms documenting the INTENDED (CF-1R), INSTALLED (CF-6R), and the VERIFIED & TESTED SYSTEMS (CF-4R).

*Note: Some jurisdictions (for example Stockton) are now requiring that any permit applications requiring Title 24 documentation, must be authored by a CABEC certified CEPE or CEA.*

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**WHAT HERS-Raters DO:** As registered and certified Home Energy Raters we are trained by our HERS Provider (CalCERTS) to evaluate installation techniques, take key measurements, and perform inspections and duct testing procedures to verify a home's energy efficient performance and then electronically file with our HERS provider (CalCERTS) the Title 24 forms which verify that a new home matches the CF-1R created by the Title 24 Author.

*Note: RESNET and GreenPoint Raters, must first become certified as HERS-Raters with either CalCERTS, CBPCA or CHEERS, before they can legally provide any Title 24 rating services on California homes.*

**1. Completion of Field Verification.** As HERS-Raters we conduct on-site **Third Party Field Verification** and diagnostic testing of the completed construction and then fills out the Title 24, CF-4R Certificate of Field Verification and Diagnostic Testing. This field verification ensures that energy-saving measures are consistent with the chosen performance guidelines as specified in the CF-1R issued by the Title 24 Documentation Author. As the HERS-Rater we follow the inspection protocols and testing guidelines of our Provider (CalCERTS). The full testing process may include a blower door test (to test the leakiness of the houses thermal envelope), a duct blaster test (to test the leakiness of the duct system), and even a smoke test to locate the duct leaks. This may be followed with completion of a thermal bypass checklist (a visual inspection of common construction areas where air can flow through or around insulation

**2. Forms Processing:** As the HERS-Rater we then process the CF-4R and CF-6R forms electronically through our HERS Provider (CalCERTS) who administers a State-approved rating system and maintains the completed Title 24 forms electronically. The local Building Department Official will require the CF-6R form to finalize the Building Permit, and provide a Certificate of Occupancy. Also the Building Department Official may require a copy of the CF-4R to be filed with the final permit sign-off.

**3. Energy Star for Homes & GreenPoint Rating:** Finally, if the local jurisdiction utilizes GreenPoint ratings in their residential energy code, as most of the jurisdictions in Bay area and Northern California are beginning to do. Then as your HERS-Rater we will also verify the homes GreenPoint rating in accordance with Build-It-Green's GreenPoint checklist. If the homeowner wants to achieve EPA's Energy Star for homes ratings, then as HERS-Rater we can also provide that, as well as verifications for the various Tax Incentive programs which have been created to stimulate Energy Efficiency.

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**REMEMBER WE DO TITLE 24** - If you have questions on any aspect of Green Energy, Sustainability, LEED, Green Point Ratings or Title 24, give Alan or Mark a call at **(415 391-0186)** to discuss your Title 24 documentation needs or any Green Energy Subject. **We provide the best Title 24 service in California**, through the synergism of an Architect and an Energy Engineer working together to enhance your project.