

**Editor's Note:** Everyone is aware of the Wall Street melt down and the oversized bail out, but we normally wouldn't imagine that it could affect energy efficiency design, yet it does. So, although this newsletter is dedicated to upcoming changes in Title 24, be sure to also read the second article below on [Breaking Energy Tax Credit News](#).

## 2009 TITLE 24 CHANGES

Since last Wednesday, I have been able to review a draft copy of the upcoming 2008 version of the [Residential Compliance Manual](#) and here is a rundown of the important changes in the new [2008 Building Energy Standards](#) (which will take effect in July 2009). The changes allow great new things for residential like: COOL ROOFS, ICE STORAGE and credits for COOLING TOWERS, things which were available to Non-Residential building since 2005, but they also tightened up the requirements to include [Unconditioned Zone Modeling](#) (UZM) the impact of which I haven't yet fully analyzed, but it seems that this may pick up the slab floor in the garage and the thermal mass of the patio etc.. They also made the "standard prescriptive model", which we model our performance against more efficient by upgrading the prescriptive requirements. I'll speak more about these impacts in future newsletters. Meantime, here is a listing of the major changes:

### ALL COMPLIANCE APPROACHES:

- Section 10-103 Revisions allowing for electronic compliance documentation registration submittals, and for electronic retention of compliance documentation for future use.
- Section 10-113 Revisions to clarify requirements for low-sloped and steep-sloped roofs.
- Section 118 Revisions to Mandatory Requirements for Insulation and Roofing Products, including introduction of Solar Reflectance Index (SRI) for cool roof compliance. (Yes, Residential Cool Roofs).
- Section 119 Revisions to Mandatory Requirements for Lighting Control Devices.
- Reorganizing the Joint Appendices into one for Residential and one for Non-Residential, and incorporating relevant sections of the ACM Manuals into the Reference Appendices

**PERSCRPTIVE COMPLIANCE APPROACH:** *These modifications change the "standard residence" which our performance model has to meet or exceed.*

- COOL ROOFS: Requirements were added for low-sloped and steep-sloped roofs.
- FENESTRATION Upgraded fenestration requirements to include Solar Heat Gain Coefficient and U-Factor.
- MECHANICAL VENTILATION: New requirements to maintain indoor air quality in line with ASHRAE 62.2 requirements.
- SWIMMING POOLS & SPAS: Updated requirements to include two-speed pumps and time clocks, and limit flow velocity.
- FAN EFFICIENCY MEASURES: New requirements for fan energy use and minimum airflow rates.
- REFRIGERANT CHARGE: Updated requirements for charge verification procedures and TXV functional tests. Added optional HERS charge verification, and new alternative methods for compliance with charge verification.
- HOT WATER DEMAND LOOPS: Improved cross flow prevention requirements and pump protection.
- UNDER SLAB PIPE INSULATION Added requirements for under-slab hot water pipe insulation in order to mitigate heat loss.

#### PERFORMANCE COMPLIANCE APPROACH REQUIREMENTS:

- CALCULATIONS were revised for Slab Heat Flow, Furnace Fan Modeling, HVAC Sizing Credit, Duct Leakage, Low Leakage Air Handlers and Water Heating.
- MODEL CALCULATION CHANGES: Improved roof and attic modeling, Unconditioned Zone Modeling (UZM), in order to better model thermal interactions in attics such as radiant barriers, cool roofs and ducts.
- COOLER & CHILLER CREDITS: compliance option credits were added for distributed energy storage, evaporative cooled condensers, and evaporative coolers.

**BREAKING ENERGY TAX CREDIT NEWS:** If you watched the presidential debate Friday night you heard Jim Lehrer ask both nominees, "What will you cut from your program now that tax revenues are shrinking?"

Last week [Green Compliance Plus](#) mentioned that Architects should take advantage of the IRS TAX CREDITS for ENERGY EFFICIENCY, which was created by the [Energy Policy Act of 2005](#) which have been available since February 2006 (and which our Title 24 modeling program can provide the required IRS certifying forms for) that can get your client with a new residence a \$2000 tax credit.

However, with the government's proposed bail-out of Wall Street, it appears that all the energy efficiency tax credits may be in danger because the legislators in congress can't seem to get their heads together and move in the same direction.

For instance, in a related bill, which allows additional tax credits for RENEWABLE ENERGY SOURCES, HR 6049, the [Renewable Energy and Job Creation Act of 2008](#), which had been previously passed by the house, but had then been repeatedly rejected eight times by the Senate, suddenly looked like a good idea to the Senators last week when faced with our current financial crisis, so they suddenly approved it with bi-partisan support. They sent it for signature to the White House. That new bill (HR 6049) extended the existing renewable energy tax credits for another eight years.

But, Friday afternoon (just before the presidential debate) the House of Representatives who had approved HR6049 nine times, reversed themselves while working on the bail out plan. The House Democrats decided to attempt a change to the funding for the tax credit approved in the previous bill (HR 6049) by introducing a new bill (HR 7060), that plans to pay for the "lost revenue" from renewable (alternative) tax credits with money created by tightening other loop holes in the tax code, with the implied threat that, "if they can't find the money somewhere else they won't continue to allow the alternative credit". The final outcome remains to be seen, but the portent is that energy efficiency tax credits may be an endangered species during the current financial crisis. **AS IT STANDS NOW:** For homes built in 2008 both the Energy Efficiency tax credits and the Renewable Energy Tax Credits are available, but that could be changing for 2009.....We'll keep you posted as things develop.

**KNOWLEDGE IS POWER:** Making sure that the particular application works with the overall HVAC concept and satisfies Title 24 compliance, while keeping up on new developments is a full time job... So, isn't it time for you to begin using your own "in-house" energy experts? .....That is who we are at GREEN COMPLIANCE PLUS..... your own, on call (24/7), Title 24, Green Energy Compliance Consultants.

Once we computer model your project for Title 24 compliance, our project specific energy analysis based on that model can point the way to that *Brighter Shade of Green* your clients are seeking.

Give Alan a call at Green Compliance Plus and we'll discuss your concerns.