Green Building Practice Summary  

3/17/2011

Sector: Commercial

Category/Practice: Energy / Installed Insulation standards

Proposed GB practice

Description
All insulation must be installed to Residential Energy Services Network (RESNET) Grade I standard, except RESNET Grade II will be accepted for cavity insulation in exterior walls that include continuous exterior insulation as specified in 2009 International Energy Conservation Code Table 502.2 (1) installed to RESNET Grade I standard.

Applicability
New construction: Applies  
Additions: Applies  
Alterations: Applies

Intent
Ensure as-designed insulation performance through proper installation.

Benefits and Costs

Triple Bottom Line Benefits

People: Improved comfort.


Environment: Reduced CO2 emissions through reduction of fuel use associated with heating and cooling.

Costs Passed to Owner
No additional cost for builder. Negligible cost for inspector training/certification.

Lost Opportunity
Once this insulation is encapsulated the opportunity to correct it is gone. Construction is the only time to get it right.

Implementation

Availability of products and/or services
Not an issue. This is just ensuring that existing products are installed as designed.

Practicality
Very practical.
Certification Issues
RESNET certification for insulation inspection

Enforcement Procedures
Permit application/plan review: Insulation details must be provided.

Field inspection: Visual inspection of all installed insulation will be performed by City building inspectors. At final inspection, access into attic, including ladders, will be required to inspect attic insulation.

Certificate of Occupancy: See above.

Support Materials Needs
Insulation installation guides for all types of insulation.

Training Needs – Industry
Builders will need to be trained as to proper installation.

Training Needs - Staff
Inspectors will need to be trained for insulation installation inspection.

Background

Current practice
There is no current system for grading insulation installation in commercial buildings.

Context
Often, in commercial buildings, insulation is installed in such a way that performance is substantially diminished. Fiberglass insulation in stud cavities is often installed with gaps, voids, and/or compression. Rigid insulation is often installed with gaps between sheets, not firmly attached to sheathing underneath, and/or with damaged edges. Polyurethane spray foam is often installed unevenly and/or with voids.

Related GB practices
Continuous air barrier

Known objections
- Possible construction delay waiting for inspection.