

Implementation of the New Energy Code



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In accordance with the Department of Labor and Industry's statute 326.0981, Subd. 11,

“This educational offering is recognized by the Minnesota Department of Labor and Industry as satisfying **1.5 hours** of credit toward **Building Officials and Residential Contractors** continuing education requirements.”

For additional continuing education approvals, please see your credit tracking card.

Objectives

- Describe lessons learned from other states
- Explain how to improve the accuracy and repeatability of tests
- Explain the multiple interpretations of multifamily testing.
- Is ductwork inside or outside?
- List resources that can help with implementation.
- Identify what trainings would be helpful to bring everyone up to speed
- Explain how testing requirements apply to upgrades and renovations of existing homes.

Lessons learned from other states

- Duct Testing – MD
 - Commercial contractors more likely to pass
- Ductwork inside or out – MD
 - If it is outside at rough-in it is outside at finish
- Ductwork inside or out – IL
 - No clarification given. Situations would continually come up where clarification was needed.

Lessons learned from other states

- Blower Door / Duct Leakage Test – MD
 - If test fails, a builder will find another tester that will pass it
 - Large builders test their own work
- Ventilation – IL
 - Verifying ventilation air flow is not enforced
- Blower Door / Duct Leakage Test – IL
 - Hard to give enough hands on training in 1 day
 - Training was available to HVAC contractors and insulators (most in Chicago area)

Lessons learned from other states

- Multifamily Blower Door Testing – IL
 - Testing of individual units is allowed
- Building Science Hotline – IL
 - 7 days a week
 - Mostly contractors in the field
 - # of calls vary from < 10 to > 25 calls per month
 - CAZ testing, duct testing, ventilation / moisture issues

Lessons learned from other states

- Many states lack the capacity to meet testing requirements
 - Needs to be a testing infrastructure available at competitive prices or there will be a backlash to testing
- Need to educate industry professionals on ventilation
 - How much
 - Balanced required – is it balanced?

Lessons learned from GA

- Multi-day DET necessary to cover what to do if it fails
- Need continuing ed classes for verifiers
- Need a central database of verifiers

Lessons learned from GA

- Need an equipment loan program for remote areas of the state
 - Local builders association
 - Verifiers can judge if demand warrants purchase.
- Need certification reciprocity with other states
 - GA, AL, SC, TN
 - Why not MN, IA, WI, IL
- Need a discussion on who can test
 - Independent 3rd party vs certified verifier vs no requirement
- Need for a consistent curriculum

Lessons learned from GA

- The testing requirements of the code are a huge change for contractors and for building officials.
- May take years before it is fully implemented in a consistent way. Metro likely to be first.

Accuracy and Repeatability



**Not Accurate
Not Precise**



**Accurate
Not Precise**



**Not Accurate
Precise**



**Accurate
Precise**

Accuracy and Repeatability

- Building setup
 - follow code wording
 - And follow RESNET Chapter 8
- Automated multipoint tests
 - Automated single point test
- Correct for density
- Reporting the results

Multiple Interpretations of Multifamily Testing

- Test entire building as a single zone
- Test each unit individually
- Adjacent units open to outside?
- Do you have control of the building?
- Test units with adjoining spaces at the same pressure
- Do sampling of individual units
 - What if a unit fails
- WA State – all buildings > 3 stories
 - may not need to pass

Ductwork - Inside or Out?

- Duct going up an exterior wall
- Duct of bonus room going through garage ceiling
- Attic ducts foamed to the ceiling below
- Bonus room ducts foamed to the floor above

Resources for Implementation

- Builders Associations
 - bamn.org
- MM Building Performance Association
 - mbpa.us
- Fresh Energy
 - fresh-energy.org
- Southface
 - <http://www.southface.org/learning-center/library/building-energy-codes>
- Washington State University
 - <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx>
- ???

Upgrades and Renovations

Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code.

Identify Needed Trainings

- Implementation will be an ongoing challenge
- Continuing education
- Air sealing
- Duct sealing
- DET trainings
- Ventilation systems
- Verifying balanced ventilation



Thank You



Questions?

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