


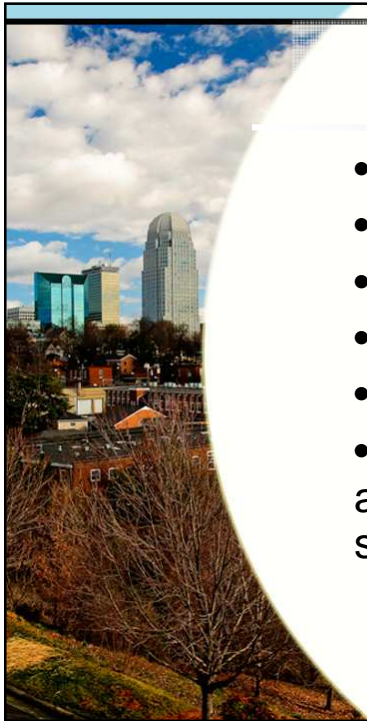
# North Carolina Leadership in Energy Codes

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Mathis Consulting Company



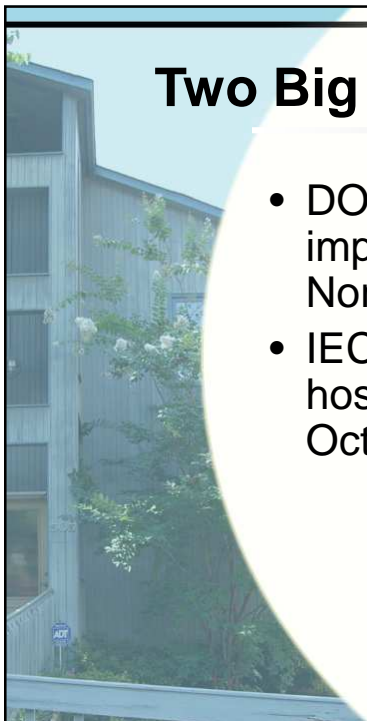
## Why Building Codes?

- Set the bar for the WORST ALLOWABLE CONSTRUCTION
- Ensure affordable performance
- Filling the gap in enforcement and education
- Sets the stage for real innovation




## Rapidly Changing Landscape

- NCECC 2012
- ASHRAE 90.1 2010
- IECC 2012
- IgCC (2012)
- ASHRAE 189
- New versions of LEED and other above code standards



## Two Big NC opportunities

- DOE project for 30% improved efficiency for 2012 North Carolina code.
- IECC final action hearings hosted in Charlotte this October.



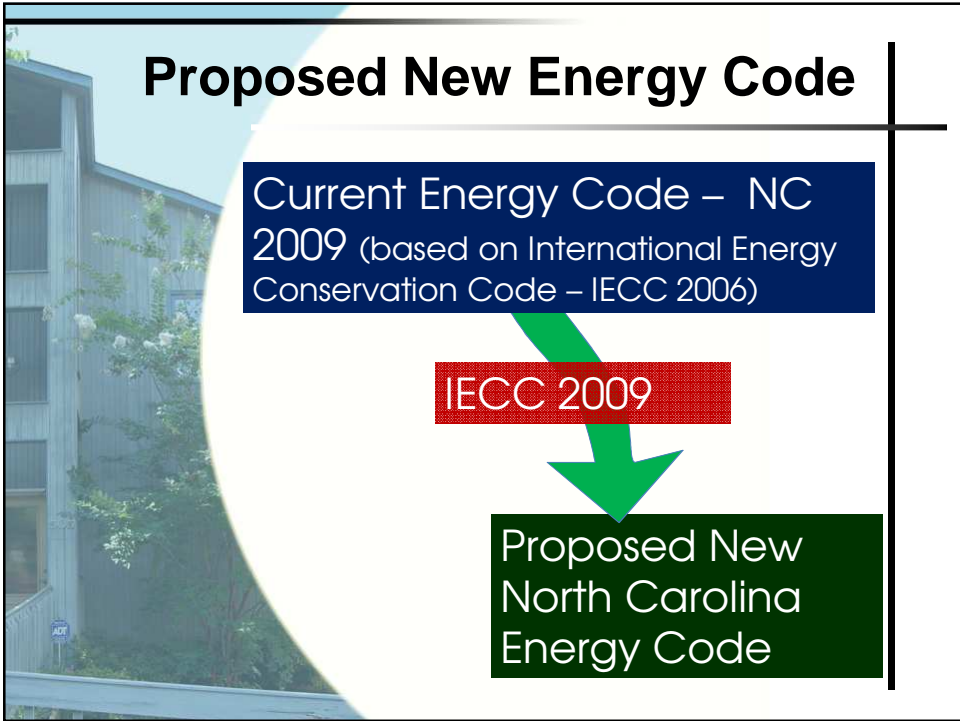
## **DOE 30% Project**

- Mathis Consulting and Appalachian State University
- Endorsed by Governor's Office, State Energy Office



## **Primary Goals**

- Improve building energy efficiency by at least 30% from the 2006 IECC
- Provide resources for training and infrastructure development



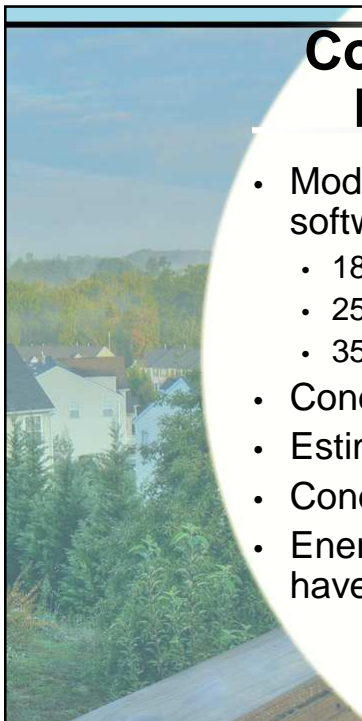
**OVERVIEW OF PROPOSED ENERGY CODES**

The slide features a background image of a cityscape with several skyscrapers and residential buildings under a blue sky with white clouds. The text 'OVERVIEW OF PROPOSED ENERGY CODES' is centered in a bold, black, sans-serif font.



## **Residential Buildings**

- Incremental improvements in insulation and fenestration
- Air barrier installation with optional testing
- Duct sealing and testing
- Ventilation
- Improved lighting efficiency



## **Conducted Energy and Economic Analysis**

- Modeled 3 homes using REMRate software
  - 1800 sf. Chatham
  - 2500 sf. Harvard
  - 3500 sf. Manchester
- Conducted over 300 computer runs
- Estimated costs for each measure
- Conducted economic analysis
- Energy code recommendations have the best economic return



## Commercial Buildings


- ASHRAE 90.1 2010 insulation values
- Air sealing
- More efficient windows
- Lighting power density reduced
- Lighting controls
- HVAC controls
- Systems Completion



## The Good News

The recommended energy code measures:

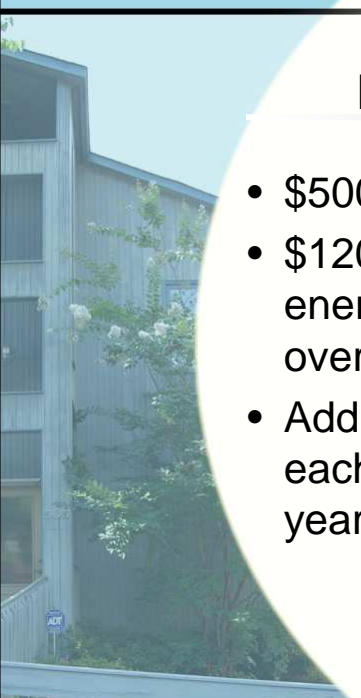
- Enhances owner comfort
- Improves building performance
- Decreases A/C size between ½ ton and 1 ton
- Reduces NC's future energy demands



## Net Annual Savings


Annual Energy Savings > Increase in Mortgage Payment

**Net Annual Savings** = Annual Energy Savings - Annual Increase in Mortgage Payment



## Impact of Higher Efficiency Buildings

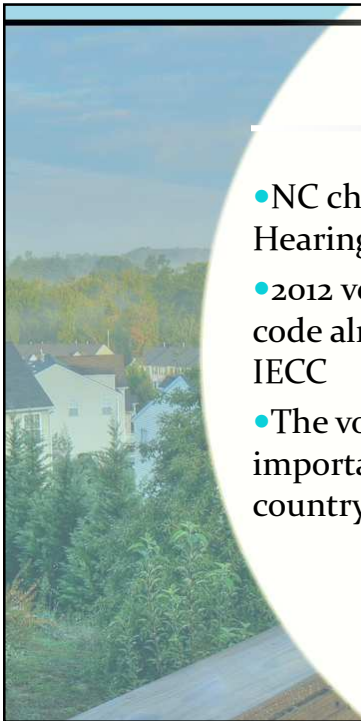
- \$500 Million Investment
- \$120 Million per year in energy savings – \$3.6 Billion over 30 years
- Additional 2,000 jobs created each year for the next three years



## Switching Gears

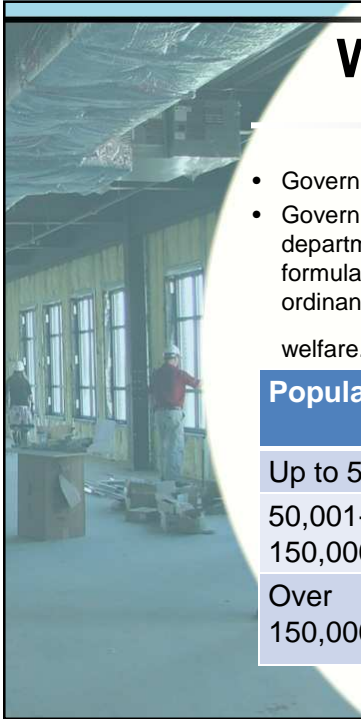
Setting the bar for the National Energy Model Code

Final Action Hearings in Charlotte this October



## North Carolina Leadership in EE


- NC chosen as host state of Final Action Hearings
- 2012 version of NC energy conservation code already 30% more efficient than 2006 IECC
- The vote in Charlotte is one of the most important national energy decisions our country will make this decade.



## Who Can Vote?

- Governmental members registered with ICC
- Government/Municipality (includes agencies, departments & units) engaged in administration, formulation or enforcement of laws, regulations or ordinances relating to public health, safety and welfare.

Population	Annual Dues	Delegation Size
Up to 50,000	\$100	4
50,001-150,000	\$180	8
Over 150,000	\$280	12



## Resources for Participation in Final Action Hearings

- International Code Council “Code of Honor” Scholarships opening July 12,2010
- North Carolina Building Inspector’s Association:
  - Upcoming webinars
  - Funding for travel scholarships
- Mathis Consulting Company
  - Education and outreach to government members, those wanting to participate
  - Assistance throughout process: From registration to on the ground support at Final Action Hearing



## See you in Charlotte!!

Please Contact us at Mathis Consulting  
for support for the Charlotte hearings.

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