

# Claimed Savings Program for Enhanced Code Compliance

For Illinois Stakeholders Advisory  
Group

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# Agenda

- **MEEA Code Activity**
- **Status of Illinois Energy Codes**
- **DCEO Activity**
- **Why Utility Codes Programs**
- **Framework of Claimed Savings Program**
- **Overview of Existing Programs in other states**
- **Outline of the IL Codes Claimed Savings Working Group**

# MEEA's Code Activity

## Adoption

- Work in
  - Illinois
  - Indiana
  - Kansas
  - Minnesota
  - Missouri
  - Nebraska
  - Ohio
  - Wisconsin

## Compliance

- DOE Pilot Study
- White Paper on Utility Claimed Savings for Code Compliance
- Formation of Code Compliance Collaborative

# MEEA Codes Resources

- MEEA website
  - Up-to-date for all EE policies across Midwest
  - Links to Relevant papers, articles and protocols (will be continually populated -- See next slide for some examples)
- MEEA Staff
  - Isaac Elnecave, Chris Burgess, Matthew Guidice, Steve Kismohr
- MEEA Annual Codes Conference

# Links from the MEEA Website

- *Utility Programs and Building Energy Codes: How utility programs can help realize the potential of building energy codes and how energy codes can help utilities achieve energy efficiency goals, 2012, by Isaac Elnecave, MEEA*  
[http://mwalliance.org/sites/default/files/uploads/MEEA\\_2012\\_Utility-Programs-and-Building-Energy-Codes.pdf](http://mwalliance.org/sites/default/files/uploads/MEEA_2012_Utility-Programs-and-Building-Energy-Codes.pdf)
- *Californian Compliance Improvement Advisory Group Website:* [www.caciag.com](http://www.caciag.com)
- *1.5% Energy Efficiency Solutions Project, By the Minnesota Environmental Initiative*  
[http://www.environmental-initiative.org/images/files/1\\_5EESolutionsFinalReportwithoutAppendices.pdf](http://www.environmental-initiative.org/images/files/1_5EESolutionsFinalReportwithoutAppendices.pdf)
- *Special Plans Examiner/Inspector System in Washington State, by the Northwest Energy Efficiency Alliance* [www.mwalliance.org/policy/midwest-regional-energy-codes-conference](http://www.mwalliance.org/policy/midwest-regional-energy-codes-conference)
- *A Comprehensive Approach to Energy Code Education, by David Cohan, Northwest Energy Efficiency Alliance*
- <http://www.aceee.org/files/proceedings/2012/data/papers/0193-000325.pdf>

# Status of Illinois Energy Codes

- Recently Adopted the 2012 IECC Statewide
- Home Rule for Residential until 2010
- Commercial Adopted Statewide 2006
- Update Code Every 3 Years
- Capital Development Board Responsible for Update
- DCEO Responsible for Implementation
- Significant Code Training Funded by DCEO
- Limited Ability for Stretch Codes

# DCEO Codes Training PY2011-12

## 35 Full-day training events

- 1 Better Buildings Better Business Conf.
- 14 ComEd (Nicor, Peoples, Northshore)
- 10 Ameren Gas & Ameren Electric
- 10 full-days for Chicago Building Dept.

## 986 Participants Trained

## Most attendees in following lines of work:

- Building Officials and Field Inspectors
- Builders and Contractors
- Architects
- Building Performance Contractors, Raters
- Engineers
- Educators

**Illinois Energy Codes FREE Training**

Don't Miss Out!  
Register Now!

HARPER COLLEGE  
Feb 16, 2012  
LEWIS & CLARK COMMUNITY COLLEGE  
Godfrey, IL Feb 21, 2012  
HEARTLAND COMMUNITY COLLEGE  
Normal, IL Feb 27, 2012  
KANKAKEE COMMUNITY COLLEGE  
Kankakee, IL Mar 5, 2012  
ROCK VALLEY COLLEGE  
Rockford, IL Mar 13, 2012  
JOHN WOOD COMMUNITY COLLEGE  
Quincy, IL Mar 15, 2012  
BLACK HAWK COLLEGE  
Moline, IL Mar 22, 2012  
ILLINOIS CENTRAL COLLEGE  
East Peoria, IL Mar 27, 2012  
SOUTHWESTERN ILLINOIS COLLEGE  
Springfield, IL Mar 30, 2012  
NEW! MORaine VALLEY COM. COLLEGE  
Plain Hills, IL Apr 5, 2012  
LINCOLN LAND COMMUNITY COLLEGE  
Springfield, IL Apr 10, 2012  
ILLINOIS EASTERN COMMUNITY COL  
Olney, IL Apr 11, 2012  
HARPER COLLEGE  
Feb 16, 2012  
NEW! SOUTH SUBURBAN COLLEGE  
Oak Forest, IL Apr 20, 2012  
NEW! ROCK VALLEY COLLEGE  
Rockford, IL Apr 25, 2012  
ILLINOIS VALLEY COMMUNITY COLLEGE  
Ogenvy, IL Apr 26, 2012  
MCHEMRY COUNTY COLLEGE  
Corydon, IL May 5, 2012  
DANVILLE COMMUNITY COLLEGE  
Danville, IL May 10, 2012  
NEW! WILBUR WRIGHT COLLEGE  
Chicago, IL May 28 and Jun 4, 2012

To Register Click Here!  
<http://www.surveymonkey.com/s/BITEILEnergyCodesTraining>

Seminars start from 8:00a to 4:00p.

Illinois Energy Office - Energy Efficiency Education & Codes  
500 E. Monroe, Springfield, IL 62701

[HTTP://WWW.IL.DCEO.NET/ENERGYCODES](http://www.il.dceo.net/energycodes)

# DCEO Codes Technical Assistance PY2011-12

## Illinois Energy Office

Energy Codes **HOT LINE 708-770-0554**

## Technical Assistance

Verbal inquiries and e-mail interpretations FREE to designers, builders, code officials and anyone looking for unbiased advice on:

- *the Illinois Energy Efficient Building Act,*
- *Code compliance, IECC, IgCC, ASHRAE 90.1,*
- *COMcheck, REScheck,*
- *REM/Rate, REM/Design*
- Same-day response or w/in 24-hrs.

### • Responded to 190 Inquiries (9 Months)

- 21 questions/month
- 139 e-mail and written responses
- 51 verbal inquiries
- [www.ildceo.net/energycode](http://www.ildceo.net/energycode)

# Code Compliance Rates

- Illinois Residential – 79% (with caveats) (PNNL Pilot Study; 2011)
- Iowa Residential – 70% (PNNL Pilot Study)

# Utility Role in Codes Compliance

- Code Compliance Levels Remain Relatively Low:
  - Main Responsibility of code Officials is Health/Safety
  - Increasing Complexity of Energy Codes
  - Lack of Resources/Training
- Increasing Requirements for EEPS Require Finding Non-Traditional Ways to Generate Savings from EE Programs
- Utilities Have Experience with Design and Construction of Energy Efficient Buildings
- Utilities Can Provide Expertise/Resources/Assistance to Aid Building Practitioners in Improving Compliance

# Compliance Program Framework

- **Work Out Program Elements**
  - Actions that will result in measurable savings
- **Develop Methodology for Measuring Energy Savings**
- **Determine Attribution Rates**
  - not all energy savings due to increased compliance comes from utility actions
- **Allocation**
  - multiple utilities within state; different utilities cover different fuels

# Types of Energy Savings

- Residential Code Compliance Work Mostly Saves on HVAC Operation (Natural Gas in Cold Climates)
- Commercial Code Compliance Gains Savings for Both: Electricity through Commercial Lighting and HVAC and Natural Gas through Envelope/HVAC Improvements

# How Does A Codes Program Differ from Traditional Programs

- Codes are adopted and enforced by governmental agencies
- Multiple organizations (Stakeholders) are interested and willing to participate
- Codes affect all new buildings
- “Customers” cannot choose to participate
- Utility Actions affect adoption not behavior
- Cost-Effectiveness Different From Traditional Programs

# Program Elements

- What Utility Related Activities are Appropriate and Will Result in Code Compliance Enhancement
- Utility Do NOT Want to Be Code Police

# Measurement

- Establishing Compliance Rates
- Converting Compliance Rates into Energy Savings (PNNL Developing Tool Specifically for this Effort)

# State of Claimed Savings Program Across Country

- No State Has Established a Full Compliance Enhancement Program....Yet
- States have Begun Incorporating Parts
- Significant Activity in Several States

# Some Utility Activity

# California

- Codes Compliance Subprogram
- Have Established Compliance Improvement Advisory Group
- Have not Yet Established Means of Measuring/Attributing Savings Due to Compliance Enhancement

# CA Compliance Improvement Efforts

- Comprehensive Needs Assessment
- Role-based Training (participatory, not lectures)
- Compliance Improvement Advisory Group (CIAG)
- Testing and Certification of Professionals
- Best-practices Assessment
- Support of 3<sup>rd</sup> Party testing (e.g., HERS Raters, Acceptance Testing)
- Guides, checklists, manuals, etc.

# Massachusetts

- 3 Year Plan Due by October 2012
- Stakeholders have established that increasing compliance is a desired policy goal.

## Initiatives

- 1. MA Amendments to IECC
  - 2. Code Compliance Support
  - 3. Stretch Code Development
  - 4. Stretch Code Compliance Support
- 
- 1. Appliance Standards Advocacy

# MA Code Compliance Support

- Training (Classroom and Hands-on)
  - Breaking up Training by Sectors
- Webinars
- Circuit Riders
- Code Ambassadors
- Administration of 3<sup>rd</sup> Party Plan Review and Inspections

# MA Utility Code Program Overview

## Massachusetts Codes Program Data

		Electricity	Natural Gas
3 Year Savings	Compliance	3.3%	3%
	Appliance Standards	3.7%	1%
	Stretch Codes*	0%	0%
3 Year Cost (total)	Compliance	\$4,000,000	
	Appliance Standards	\$1,500,000	
	Stretch Codes	\$600,000	

\*Note: Stretch Code Savings Expected after first 3 year cycle

# Washington

- Establishment of Utility Codes Group
- Special Plans Examiner/Inspection Program
- Helped Improve Compliance from about 55% to 75%.
- Cost of Program: \$1.5 million/year (in the 90's)

# Colorado

- Xcel Developing Pilot in Colorado
- Choosing Specific Municipalities
- Test out whether Measures such as Intensive Training Work
- Testing out Measurement Methodology

# DCEO & IL Utility Codes Working Group

# DCEO & IL Utility Codes Program

- Bring together DCEO and state utilities:
  - DCEO
  - Ameren
  - ComEd
  - Nicor
  - North Shore Gas
  - Peoples Gas
- MEEA is technical expert and coordinator of process
- Began in October of 2012
- Target completion for program write-up for filings

# IL Utility Codes WG Goals

## **Explore the Possibility of a Claimed Savings Program for Enhanced Codes Compliance**

The working group will develop the program design elements of the proposed utility claimed savings.

This TRC analysis will result in a cost effectiveness calculation through modeling software and will also seek to leverage IL's Technical Resource Manual.

These calculations will be used in the upcoming Program Portfolio 3-Year Plan. In addition, a three year expected savings projection will be formulated.

# IL Utility Codes WG Outcomes

**MEEA will facilitate a working group of IL Utilities and DCEO to form a utility claimed savings program under the IL EEPS.**

- How a utility claimed savings program can be developed;
- Agree on Program Elements
- How to measure and determine claimable savings;
- Agree on attribution amongst stakeholders;
- How to develop a program worksheet for cost effectiveness analysis;
- How to incorporate findings into the next DCEO and utilities program filings.

# IL Utility Codes WG Activity

- First working group call October 9, 2012
- First in-person meeting October 29, 2012
- 5 In-Person/Teleconferences
- Discussion on Program Elements, Potential Savings, TRC,
- Sample program design, including TRC and Program Elements completed by Summer

# IL Utility Codes WG Findings

- Establish Potential Energy Savings
  - Commercial Savings:
    - **117,000 MMBTU/Electric; 85,300 MMBTU/Natural Gas**
  - Residential Savings:
    - **13,700 MMBTU/Electric; 123,200 MMBTU Natural Gas**
- Working with ADM on Measuring Code Compliance
- Discussion with PNNL on Converting Code Compliance to Actual MMBTUs

# Next Steps

- Complete TRC
- Program Elements
- Complete Filing Requirements

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