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# **Building Energy Codes: A Design for a More Energy Efficient Future?**

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# Energy Efficiency Portfolio Standard (EEPS)

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- **June 2008 - PSC orders EEPS with the goal to reduce electricity usage by 15% from the level forecasted for 2015 with a comparable goal for natural gas usage**
  - *PSC approved about 100 new programs, increased role of utilities in program administration and more than tripled annual expenditures for energy efficiency*
  - *Energy Code and Appliance Standards are a source of cost effective energy savings and reflect about one third of the EEPS 2015 energy savings goal*
    - Codes & Standards = 9,360 GWh and 6,752 Billion Btu
    - Energy Code, only = 2,158 GWh, 4,960 Billion Btu
    - Most of these energy savings are expected after 2012

# Energy Code Administration

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- **NY Department of State (DOS) – Code administration, technical support and training**
- **NY Energy Research and Development Authority (NYSERDA) works closely with DOS to provide technical support and training**
- **Regulated utilities - no direct, formal role**
- **Code enforcement is a responsibility of more than 3,500 code officials representing about 1,600 municipalities**

# Energy Codes: National Buzz

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- Energy codes are a major contributor to energy efficiency goals in New York, California and many other states
- DOE's goal is a 30% increase in building energy performance by 2012
- Estimates for electric saving by updating energy codes are as high as 59 TWh by 2020 (Source: IEE 12/09)



# National Action

- ARRA funding used to enhance Energy Code standards and compliance
- NY Energy Code updated to 2009 IECC/AHSRAE 90.1-2007 and 2009 IECC effective 12/10
  - *Applies to most renovations (50% rule is out!)*



# Trust but Verify

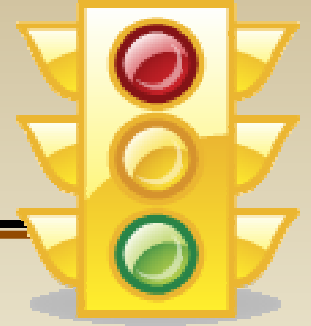
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- Regulators must consider the efficient use of ratepayer funds, fairness to diverse stakeholders and the short and long term future
- Can regulators depend on Energy Code savings to meet energy saving goals, transmission and distribution planning objectives and emission remediation?
- Yes, but.....



# A Yellow Light is Blinking

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- **A key to Energy Code success is the training of building professionals especially as codes become more complex**
- **The Energy Code is usually given a lower priority compared to health and safety**
  - *Of the 126 hours of Building Code training offered in NY, only 5 hours relate to the Energy Code.*
- **ARRA funding is being used to initiate training and technical assistance to help achieve 90% compliance goal, but there are no guarantees of ongoing funding**
  - *Without a strong commitment to training and technical assistance, 90% compliance will be a “tall order.”*

# A Look Back

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- **NY State Energy Office Study (1993) reported that about one-half of the Building Code officials found the Energy Code difficult to understand and about 26% of the design professionals agreed**





# Political Uncertainty

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- Will future administrations, both at the national and local level, support Energy Codes?
- Highly optimistic estimates of potential are based on aggressive energy code options (e.g., passage of American Clean Energy and Security Act ), but the current political climate makes Federal action doubtful



# Economic/Timing Uncertainty

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- Savings derived from Energy Codes are strongly linked to economic activity. Buildings need to be built and refurbished
- Difficult to depend on savings on an annual basis because of lag time related to construction



# Evaluation is Critical to Regulators

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- **Protect ratepayer/taxpayer interests**
- **Improve programs (measures & operations)**
- **Track progress toward energy goals**
- **Document cost effectiveness of program & portfolio**
- **Update deemed savings and technical manuals**
- **Document energy savings to facilitate planning/forecasting and to defer T&D upgrades**
- **Monitor environmental benefits**
- **Without credible evaluation, the future of energy efficiency will be in jeopardy!!!!!!!!!!**

# Evaluation Challenges

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- How many buildings have been affected by the Energy Code? What measures?
- What is the compliance rate overall? By measure?
- What is the baseline?
- How do we account for naturally occurring energy efficiency and the changing baseline?
- Regulators are looking for evidence that ratepayer subsidized programs and measures are cost effective. How do you, for example, put a dollar value on a training session?
- Did the Energy Code cause the change or was it a result of something else (e.g., another energy program, the economy or new technology)?
- If only we were in Hollywood.....

**“You've been given a great gift, George: A chance to see what the world would be like without you.”**

Source: It's a Wonderful Life (1946, RKO Radio Pictures)

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# Current Activities in New York

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- **Training at locations across the state and on-line for key stakeholders including Code officials, design professionals and contractors**
- **Technical assistance services such as project reviews for architectural and engineering design firms and targeted assistance for rural communities and historic homes**
- **Assessment of compliance with Energy Code prior to the 12/10 update to establish baseline and help identify compliance issues and barriers – results this summer**

# Future Code Efforts in New York

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- **NYSERDA is proposing an “Advanced Energy Codes and Standards” effort to be funded with System Benefits Charge funds**
- **Key Strategies:**
  - *Code Support Advisory Group*
  - *Annual Statewide Compliance Assessments*
  - *Development and Delivery of Advanced Training and tools*
  - *Technical Support Studies and Resources*
- **Estimated cost for these proposals is \$3-4 million annually**

# One More Thing...

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*“A problem is a chance for  
you to do your best.”*

Duke Ellington

(1899-1974)

American genius





# More Information

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## NY DOS -- Energy Code

<http://www.dos.state.ny.us/code/energycode/nyenergycode.htm>

## NYSERDA -- Energy Code

<http://nyserdacodetraining.com>

## New York PSC

[http://www.dps.state.ny.us/EEPS\\_Evaluation.html](http://www.dps.state.ny.us/EEPS_Evaluation.html)

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**Thank You!**

