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# **COMNET: Commercial Energy Services Network**

## **Supporting Existing Commercial Building Energy Rating Systems**

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**[www.imt.org/COMNET](http://www.imt.org/COMNET)**

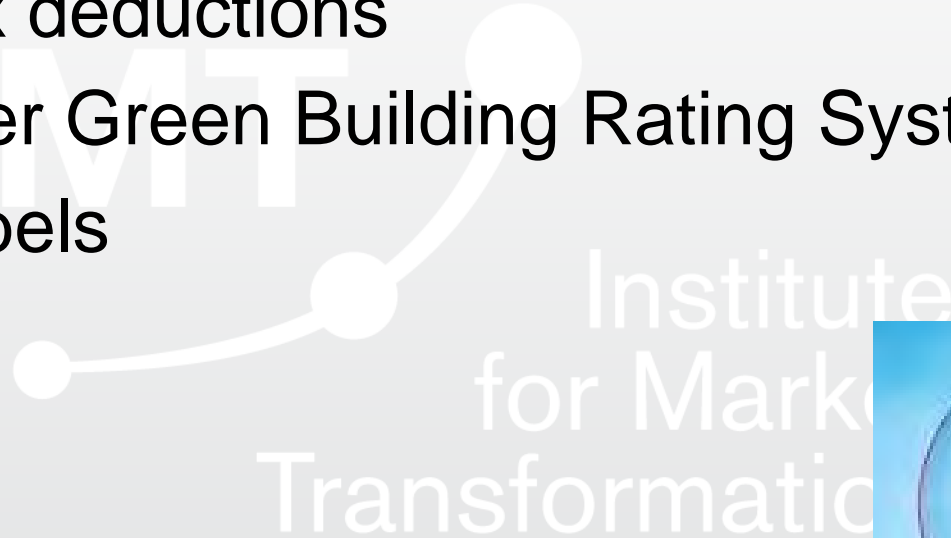
**Institute for Market Transformation (IMT)**

**Natural Resources Defense Council (NRDC)**

# Purpose of COMNET

Standardize the software and procedures for:

- Federal tax deductions
- Credit under Green Building Rating Systems
- Energy Labels



## Issues in Current Energy Modeling

- Several important policies to improve energy efficiency of commercial buildings are thwarted by lack of consensus methodology for consistently and affordably calculating
  - energy savings compared to code
  - total energy use
- A central problem is the lack of a consensus methodology for consistently, accurately and affordably generating this data.

## Issues in Current Energy Modeling - Example

Commercial Buildings Tax Energy Efficient Tax Deduction, 2005 Energy Policy Act (EPAct 2005):

- \$1.80/sf tax deduction for 50% savings over ASHRAE 90.1 (2001).
- Demonstrating compliance often costs more than the value of the incentive.
- Congress recently extended through 2013.

## Technical standards for software that:

- Automatically generates multiple reference buildings (ASHRAE 90.1, Title 24, etc.) and compares energy use to these reference buildings;
- Generates more realistic and standardized projections of total energy use (including unregulated energy);
- Incorporates ENERGY STAR technical methodology and calculates Target Finder rating.

## Issues in Credentialing of Energy Auditors and Energy Modelers

- Fragmentation: There are 13+ credentials which address commercial building energy rating.
- A total of about 12,000 people hold these credentials, but far fewer are qualified to rate commercial buildings.
- These credentials vary significantly in terms of rigor, requirements and standards.
- None of the credentials provide a high level of quality assurance or professional accountability.

## National credentials for energy auditors and energy modelers

- Build on existing credentials (and enhance their market value) by providing a manageable, cost-effective, “legal-grade” process to boost quality assurance and professional accountability.
- Create industry standards that provide a unified, streamlined process for the training and certification of commercial building energy assessors.

## What have we done?

- Developing a technical standard for rating the designed energy efficiency of commercial buildings based on ASHRAE 90.1 and modeled in part on the California Alternative Calculation Method.
- The draft COMNET Technical Manual has gone through two rounds of public comment and will soon be published as voluntary guidelines for incorporation into building energy simulation software.



## What do we have to do?

- Engage in a more robust consensus process to transform the COMNET Technical Manual into a robust consensus standard.
- Develop and test a consensus standard for accrediting and holding accountable commercial building energy auditors and modelers.
- Make maximum use of existing training and accreditation organizations, systems and credentials (e.g. AEE, ASHRAE, BCA, BPI).

# COMNET Benefits

- Empower designer to perform one energy calculation that is recognized by multiple rating systems.
- Save time for energy auditors and modelers.
- Increase predictability of energy ratings.
- Apples-to-apples comparisons between the requirements of different programs.
- Enable market-based programs to complement each other.
- Enhance code compliance through third-party rater inspections.

Document compliance to qualify for

- EPCACT 2005 Energy Efficient Commercial Buildings Tax Deduction
- USGBC's LEED™ NC energy points
- Designed to Meet ENERGY STAR™ designation
- Producing EUI outputs specifically for ENERGY STAR's Target Finder™
- Integration into ASHRAE technical specs (COMNET is already referenced by ASHRAE Building EQ)

- Performance-based energy code compliance
- Generating estimates of operating costs for commercial building appraisals
- Enabling comparison of “designed-performance” energy efficiency ratings among buildings
- Utility, State or Federal performance-based incentive programs

- Sheer variety of commercial buildings requires multiple skill sets for modeling and inspection.
- Requires development of new verification and testing criteria.
- Different types of commercial buildings each require distinct rating classes.
- Process loads...

# Project Team

## New Buildings Institute (Project Management)

### **Institutional Lead**

- Institute for Market Transformation
- RESNET

### **Technical Lead**

- Architectural Energy Corporation
  - Energy Soft
  - Florida Solar Energy Center
  - Energy and Environmental Economics
  - McHugh Energy Consultants
  - NRDC



# Thank You

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