



COMNET: Commercial Energy Services Network

Supporting Existing Commercial
Building Energy Rating Systems

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www.imt.org/COMNET

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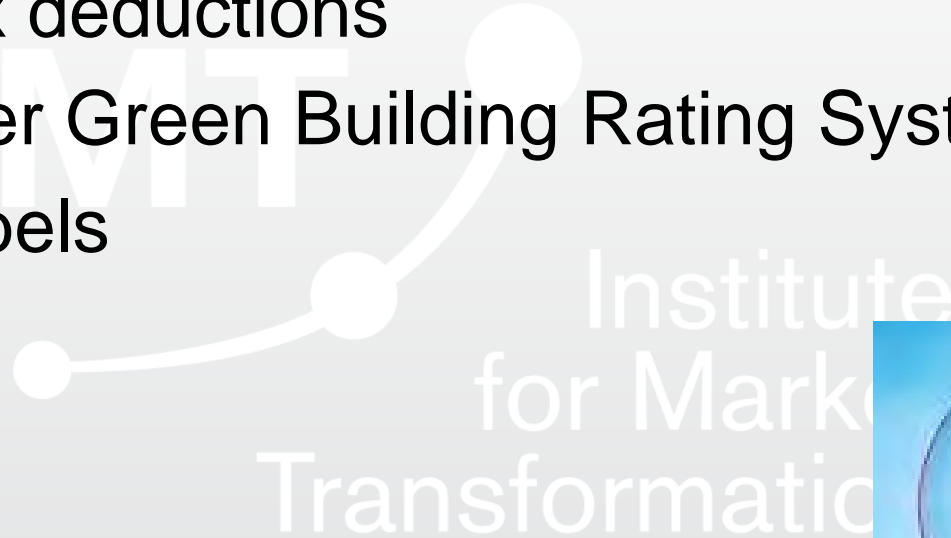
Institute for Market Transformation (IMT)

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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