

## What is COMNET?

COMNET (the Commercial Energy Services Network) is a new project intended to create a unified technical protocol for comparing the energy efficiency of, and calculating an energy rating for, commercial buildings. New Buildings Institute is managing the project team with initial support from the Energy Foundation.

COMNET seeks to fill an important void by creating clear, consistent, rigorous and easy-to-use methods for demonstrating compliance with tax deduction provisions for energy-efficient commercial buildings and building systems, as created by the Energy Policy Act of 2005 and extended to December 31, 2013. The new protocol is being designed to allow use in code compliance, utility incentive programs, appraisal and financing, and commercial building energy labeling. It is intended that COMNET will complement various existing calculation methods used in these areas, as well as emerging methods under development. The COMNET team is committed to working with interested private and public agencies on technical, policy, and management issues to ensure maximum compatibility and applicability.

By creating a streamlined process with technical rigor, consistency, and versatility of use across many programs, COMNET will make it easier for building owners, designers and operators to pursue the rewards of energy efficiency at less cost. COMNET will also save government money, while cutting down energy use and associated greenhouse gas emissions.

In many ways, COMNET is envisioned as a commercial-sector equivalent of the Residential Energy Services Network (RESNET) energy-rating program for homes. RESNET is already established and widely recognized by major programs and agencies, including ENERGY STAR, the U.S. Green Building Council, utility energy efficiency programs and by more than a dozen states as a means to demonstrate code compliance. Notably, RESNET is also accepted by the Internal Revenue Service and the U.S. Department of Energy as a basis for tax credits for residential energy efficiency. RESNET is an active member of the COMNET team.

With the growing national and international interest in commercial building energy rating and labeling, COMNET seeks to facilitate favorable conditions for an accelerated convergence of existing building rating tools toward a common market-friendly national commercial building energy rating/labeling framework. Current terms used to describe two kinds of ratings have focused on “asset ratings” and “operational ratings.” The “asset” rating refers to the energy features built into the building and therefore the potential or “designed” energy performance (rating) of the building. The “operational” rating refers to the “achieved” energy performance of the building in actual operation.

Like RESNET, COMNET is expecting to help generate “designed” ratings of buildings and/or building systems — that is, the calculation and rating of energy savings will be based on actual physical features of the building as determined from design plans and field verification. One critical technical aspect of COMNET will be the establishment of standard rule set for defining hypothetical reference buildings or systems against which the subject building or systems will be compared. This rule set will be made readily available in the public domain

so that any provider can freely incorporate the rules into energy modeling software for automatic generation of reference buildings. We envision that COMNET will allow either standard assumptions or customized parameters, or both, to be used to define operating conditions for the subject building.

COMNET is working to complement EPA's ENERGY STAR, currently the most successful and best-established commercial-building operational rating system in the United States. The ENERGY STAR program provides a national energy performance rating system for buildings, based on a percentile scale. A score a 75 or higher on EPA's scale qualifies as an ENERGY STAR building and implies that the building is better than 75% of similar buildings in similar climates, operated under similar conditions. EPA's rating system can also be used during the design phase of buildings. Through Target Finder, it is possible to generate a consistent "design" rating based on the estimated energy use of the design. COMNET will focus on the design -rating approach. The COMNET team is maintaining strong communication and collaboration with EPA to ensure mutual support for both programs. One specific desirable outcome will be that the COMNET protocol will be available to generate input data for use in ENERGY STAR's Target Finder™ tool.

In addition, the COMNET team has initiated communications with the ASHRAE Building Energy Label Program that is aiming at both "asset" and "operations" energy ratings for a commercial buildings energy label. Both project teams will consult closely on an ongoing basis.

In California, the COMNET team is coordinating its technical work to integrate with coming changes in the Title 24 Nonresidential Standards compliance framework being supported by the California Energy Commission in conjunction with continuing US Energy Department development of the EnergyPlus energy simulation software tool at the National Renewable Energy Lab.

To ensure the credibility of the system, COMNET will provide certification standards for raters of commercial buildings. RESNET has a comprehensive system for certifying trainers, raters, and field inspectors for the home energy rating program. RESNET's system is a clear starting point for developing COMNET certification protocols. Clearly, however, COMNET certification will have to reflect many technical and institutional factors unique to the commercial sector. RESNET and the Institute for Market Transformation (IMT), under the supervision of NBI, are now taking the lead on mapping out criteria and procedures for certification of individuals and institutions involved with COMNET training and implementation. A primary focus of this work will be to ensure compatibility with existing certification processes already in place among professional societies and governmental licensing agencies and to make maximum appropriate use of existing certifications and credentials.

COMNET's technical team is led by Architectural Energy Corporation, with assistance from the Natural Resources Defense Council, and with broad input expected from many others.