

VI. Compliance Documentation Guide

Compliance Documentation Requirements

This Compliance Documentation Guide gives building design professionals and code enforcement officials an overview of the *COMcheck-EZ* compliance documentation materials and explains how to document the energy code requirements that apply to a variety of commercial building situations.

Included in this guide are sample forms and worksheets. Blank forms and worksheets have been included in the chapters for Envelope, Mechanical and Lighting .

In addition to completing these forms, the code requires that a design professional or designated representative fill out a project narrative that describes the building systems design intent. This descriptive narrative must include a listing of the designs, concepts and criteria that have been defined by the owner and design team to be important to document compliance with the energy efficiency guidelines. A sample Descriptive Narrative is available to give you an idea of how to prepare one for your project.

Code Officials

The code official that is responsible for reviewing your plans, specifications and compliance documentation will vary by jurisdiction. You are responsible for compiling all relevant documents and submitting those documents to the appropriate authority in a timely fashion in order for your permit process to proceed smoothly.

Compliance Documents

Plans and Specifications

A set of construction documents including plans and specifications must be submitted to the code official. All building envelope, mechanical, lighting, and electric power distribution system plans and specifications must contain sufficient

information to identify and verify all of the building envelope assembly with thermal and solar ratings; all mechanical system components and arrangements; all mechanical equipment capacities with efficiency ratings, including all motors; all lighting systems arrangements; all lighting ratings; all lighting and mechanical systems sequence(s) of operation.

Documentation that must be submitted is explained in section 104 of the code and includes:

1. Written statement of Energy Code compliance by the design professional.
2. Certification of completed HVAC systems by the design professional (only if requested by the code official, 1 & 2-family homes are exempt)
3. Scaled drawings that detail the required construction features, and
4. Explanation of which Chapter and compliance path was used and the forms or reports that show the building complies. Where MECcheck has been used, the source file for the building should be included with the reports.

Design

All building envelope, mechanical, lighting, and electric power distribution systems including controls, sequence(s) of operation and supporting documentation must be designed and specified by a qualified professional as consistent with the professional licensing and registration laws of New York State Department of Education and the Uniform Fire Prevention and Building Code.

Administration

The qualified design professional or other legally recognized professional appointed by the design professional or owner is responsible for the review and certification that all submittals and shop drawings conform to the building envelope, mechanical, lighting, and electric power distribution construction documents.

System Operation & Maintenance

Operation and maintenance manuals (O&M's) must be provided to the building owner by the contractor for all systems impacting energy use.

- O&M submission as a condition of final acceptance must be part of the construction documents and construction documents must include a description of their format and content.
- The operation manuals must provide all relevant information needed for day-to-day operation and management of each system so as not to degrade the energy efficiency levels and operation as installed.
- The maintenance manuals must describe equipment inventory and support the intended building maintenance program so as not to degrade the equipment performance energy efficiency levels as installed.

Documentation for Verification and Operations

A summary of the design, construction features and systems must be provided to the code official and building owner. This summary must contain sufficient information to completely describe the building systems (building envelope, mechanical systems; service water heating; lighting systems; and electric power distribution systems), including operational features and controls. The information required for each building system should include:

- A basic description of the building systems design intent including a listing of the ideas, concepts, limitations and criteria that have been defined by the owner and design team to be important to achieve energy efficiency guidelines (Descriptive Narrative).
- A listing of the building systems component performance ratings including U-value and R-value ratings and lighting, transformer, motor equipment efficiency ratings and capacities. This may be provided using prepared forms from the *COMcheck* Compliance Guideline Manual.
- A summary of building lighting, heating and cooling (if applied) loads. A summary must be provided on a system or zone basis indicating relationship of HVAC calculated load to equipment capacity.
- A description of the sequence of operation of the mechanical and lighting systems and their interaction with other systems, including fire prevention and fire protection systems. A reference to specific sections in the project specifications or drawings containing this description is an acceptable form of compliance.
- A description of the mechanical and lighting systems testing requirements and the criteria for passing to be used for final systems acceptance. A reference to specific sections in the project specifications or drawings containing this description is an acceptable form of compliance.
- Certification from the qualified design professional (s), building owner/developer or authorized representative stating that the building envelope, mechanical, lighting, and electric power distribution systems have been installed in substantial accord with the approved construction documents.
- Documentation from the design professional or other qualified appointed professional that the mechanical and lighting systems are operating as designed. For DDC HVAC controls system, a trend report of the accepted systems must document compliance to design requirements.
- Approval by the code official of the design concepts, testing procedures, and acceptance criteria, is not required, but the code official may reject the compliance documents if these sections are incomplete, or if they specify any design elements that violate other requirements of the code.

Acceptance

All building systems, including envelope mechanical, lighting control, and electric power distribution systems must be installed in accordance with the construction documents and installation should be verified and tested in accordance with the applicable standards of the code and construction documents.

In addition, the following documents are recommended to be submitted to the code official and owner prior to permanent occupancy:

1. Confirmation by the building owner/developer or authorized representative that they have received all building envelope, mechanical, lighting, and electric power distribution system record drawings from the installing contractors and that the qualified design professional or other appointed or legally recognized professional has reviewed their reasonable accuracy.
2. Confirmation by the building owner/developer or authorized representative that they have received all construction documents including reports, controls documentation, operation manual(s) and maintenance manual(s).