

Energy Conservation Construction Code of the New York State (2007) Guidelines

Last revised: 4/1/08

1. Purpose

To provide for a cleaner and more energy-efficient New York, the Department of Buildings requires the following documents when filing a New Building (NB) or Alteration application. All NB, A1, A2 and A3OT applications must now include the following information:

- Professional Statement of Compliance by the design professional (Section 2.A. below);
- Energy Analysis demonstrating compliance (Section 2.B. below); and
- Drawing set supporting Energy Analysis (Section 2.C. below).

These guidelines will assist applicants when filing an NB, A1, A2 or A3OT application to demonstrate compliance with the Energy Conservation Construction Code of New York State (ECCCNYS).

2. New Requirements for NB, A1, A2 and A3OT Applications

To demonstrate compliance with the ECCCNYS, all NB, A1, A2 and A3OT applications must now include the following information:

A. Professional Statement

Each architect or engineer who files an application with the Department shall include a signed and sealed statement on the PW-1 as follows:

"To the best of my knowledge, belief and professional judgment, these plans and specifications are in compliance with the Energy Conservation Construction Code of New York State."

If the project is exempt from the ECCCNYS, the architect or engineer shall indicate on what basis the project is exempt (Chapter 1, Section 101.x.y.z).

B. Energy Analysis

- I) <u>Residential</u>: For one- and two-family residential buildings and all residential buildings three stories or lower, the design professional may use any one of the following formats approved by the New York State Department of State for the Energy Analysis:
 - <u>REScheck</u> software: Include only page one of the four-page report, indicating the project *passes*;
 - Prescriptive Package Worksheet: one page;
 - Trade-Off Worksheet: two pages; or

- Home energy rating system software approved by New York State: entire report.
- II) <u>Commercial</u>: For all other building types, including residential buildings four stories or higher but excluding 1- and 2-family residential buildings four stories or higher, the professional may use any one of the following formats approved by the New York State Department of State for the Energy Analysis:
 - <u>COMcheck</u> software: Include the Envelope Compliance Certificate indicating the envelope *passes*, the Lighting Application Worksheet(s) indicating the lighting *passes*, and the Mechanical Compliance Certificate from the same report, indicating the mechanical equipment and systems used; or
 - <u>Prescriptive Package</u> Worksheet: five pages (or more, if required for lighting).

NOTE: In March, 2008, the State adopted the 2004 version of the reference standard, ASHRAE 90.1. This version becomes effective on April 9, 2008. New York City will enforce the new standard beginning October 15, 2008. At that point, all commercial applications for which the applicant is using ASHRAE 90.1 for any part of ECCCNYS compliance must use ASHRAE 90.1/2004.

- III) <u>Formats</u>: All of the above software and manual formats for the Energy Analysis are free from the <u>New York State</u> website. The interactive software may be downloaded and saved online. Additionally, the software programs are available from the U.S. Department of Energy website at <u>www.energycodes.gov/</u>. Be sure to obtain the New York form if you use the USDOE source.
- IV) <u>Complex Buildings</u>: For buildings requiring energy modeling, the Energy Cost Budget Worksheet, Form <u>EC-1</u>, may be used to demonstrate compliance with ECCCNYS. EC-1 is available in the Forms section of our website, <u>www.nyc.gov/buildings</u>.
- V) Where the team elects to underperform the prescriptive requirements of the ECCCNYS in one discipline (e.g. the envelope), it must demonstrate that the underperformance is fully mitigated in the other disciplines (Lighting/Power, Mechanical) by having one professional sign and seal the <u>entire</u> Energy Analysis in the *initial filing* drawing set. This may require the use of energy modeling and the Energy Cost Budget Worksheet, Form <u>EC-1</u>.

VI) Where each discipline complies with the respective prescriptive requirements of the ECCCNYS (Envelope, Lighting/Power, Mechanical Systems), each professional must sign and seal his/her respective required report. However, these must still be assembled on the Energy Analysis sheet in the *initial filing* drawing set, and they must all come from the same run of the software report.

C. Drawing Set

Drawings showing the use of the information provided in the Energy Analysis shall be provided in the drawing set. For lighting, the following options are acceptable, to be placed on the Energy Analysis sheet, and are only required for commercial occupancies, as defined in this Code:

- I. COMcheck Lighting Application Worksheet(s); or
- II. Lighting Fixture Schedule with counts, together with the Lighting Panel Schedule showing all connected loads.

Each professional applicant shall retain supporting documentation for his/her work, including calculations, for six years following award of the Certificate of Occupancy or sign-off.

3. Applicability (ECCCNYS §101.4)

In accordance with the ECCCNYS, the following buildings must comply with the noted provisions of the Code:

- One- and two-family residential buildings and all residential buildings of three stories or less must comply with Chapters 1, 2, 3, 4 and 10;
- All other buildings, including multiple dwelling residential buildings four stories or higher but excluding one- and two-family residences four stories or higher, must comply with Chapters 1, 2, 3, 8 and 10 (or ASHRAE 90.1/2004, as noted above);
- Except where explicitly stated in the Code, the ECCCNYS is not retroactive in existing buildings;
- Additions to existing buildings must comply with the ECCCNYS with respect to new construction;
- Alterations must comply with the Energy Code where 50% or more of any building system or subsystem, measured in appropriate units, is being replaced within any 12-month period, with some exceptions;
- In mixed-use buildings, each major use shall comply with the requirements of its occupancy.

4. Exempt Buildings (ECCCNYS §101.5.2)

In accordance with the ECCCNYS, the following buildings are exempt from the Code provisions:

- Buildings with a peak design rate of energy usage less that 3.4 Btu/h/SF, or that
 do not contain conditioned space, are exempt from the thermal envelope
 provisions only;
- Buildings whose energy usage is entirely supplied from renewable energy sources;
- Historic buildings (ECCCNYS §101.4. 3); and
- Nonresidential farm buildings.

5. Reconsiderations

The applicant must obtain Code reconsiderations from the NYS Department of State prior to plan approval. The State does not authorize local jurisdictions to provide reconsiderations for ECCNYS compliance.

6. Construction

Applicants shall update the Energy Analysis throughout construction when substitutions are made or plans are revised and shall demonstrate that compliance is maintained.

7. Plan Examination

Plan examiners shall check for each professional's Professional Statement and Energy Analysis for the project. Examiners may look to determine the completeness of the work and the veracity of the Energy Analysis. At this time, however, plan examiners shall issue objections only for the lack of Statement and/or Energy Analysis as appropriate.

8. Additional Information

A. Technical Information and Training Opportunities

A variety of sources, including the United States Department of Energy, the International Code Council and the New York State Department of State, provide substantial information, guidance and training opportunities, including self-paced training, on their websites regarding energy-conserving design and the ECCCNYS. Please visit the following sites for more information:

- http://www.eere.energy.gov/
- http://www.dos.state.ny.us/code/energycode/
 nyenergycode.htm

- http://www.energycodes.gov/training/
- http://www.iccsafe.org/training/
- http://www.ashrae.org/publications/detail/16056#

B. Code Availability

The ECCCNYS is available for purchase at the website of the International Code Council. Visit http://www.iccsafe.org and click on ICC Store, then on State and Local Codes. Be sure to purchase the New York State version.

NOTE: In March 2008, the State updated this 2007 publication; effective April 9, 2008, applicants must use the 2004 version of ASHRAE 90.1, **not** the 2001 version as referenced in the published ECCCNYS. Effective October 15, the Department will enforce the use of ASHRAE 90.1/2004.

Please see our related sites and additional links under the Practice Green section of our website:

- Conserve Energy!
- Conserve Water!
- Green Building
- PlaNYC 2030