

## **The Potential of a Green Code in New York State**

The following are excerpts of the IGCC 2012 or references to work done by a Green Advisory Working Group (formerly called a Green Code Technical Subcommittee of NYS) :

### **Chapter 1**

#### 101.3 Scope.

The provisions of this code shall apply to the design, construction, addition, alteration, change of occupancy, relocation, replacement, repair, equipment, building site, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures and to the site on which the building is located. Occupancy classifications shall be determined in accordance with the Building and Energy Conservation Construction Code of New York State.

##### 101.3.1 Residential construction.

In lieu of the requirements of this code residential buildings may be deemed-to-comply with this code where ICC-700 is permitted (Note – the IGCC approach is to include residential application via ICC-700 only when selected and adopted at the local level – Option “C” on final page of this summary) :

1. The Green Advisory Working Group (formerly called a Green Code Technical Subcommittee) discussed the referencing of (if applicable) ICC 700, with a minimum energy efficiency category requirements of the Bronze performance level or equivalent.
2. Group R-2 and R-4 portions of mixed use buildings that comply with ICC 700 with a minimum energy efficiency category requirements of the Bronze performance level or equivalent. The remainder of the building and the site upon which the building is located shall comply with the provisions of this code.

#### Exceptions:

1. The code shall not apply to equipment or systems that are used primarily for industrial or manufacturing.
2. The code shall not apply to temporary structures approved under Section 3103 of the Building Code of New York State.
3. Where ASHRAE 189.1 is selected in accordance with Section 301.1.1, ASHRAE 189.1 shall not apply to buildings identified in Exceptions 1 through 3.

#### 101. Intent.

This code is intended to safeguard the environment, public health, safety and general welfare through the establishment of requirements to reduce the negative impacts and increase the positive impacts of the built environment on the natural environment and building occupants. This code is not intended to abridge or supersede safety, health or environmental requirements under other applicable codes or ordinances.

105.6 Approved programs.

The authority having jurisdiction shall be permitted to approve a national or state program such as LEED, Green Globes, or PassiveHouse in place of this code. Buildings approved in writing by such a program shall be considered to be in compliance with this code.

Chapter 1 also contains a local legislation recommendation from ICC to provide guidance for a local green code adoption.

**Chapter 2** contains definitions as is the standard for ICC codes.

**Chapter 3** is set by the IGCC as the functional recommendation to localities for local adoption of additional standards which could adopt as an example, the ICC-700 for residential applications. (A statement of the potential applicability of building types will be presented at the Feb. 13<sup>th</sup> Code Council meeting).

#### **Chapter 4**

Requires a minimal site assessment of soil and site conditions and also points to New York regulations already in place such as : NYS Department of Environmental Conservation, including but not limited to the SPDES General Permit for Storm-water Discharges, and requirements of Municipal Separate Storm Sewer Systems (MS4) permit. Also, soil and water quality shall be protected in accordance with applicable provisions of the NYS Department of Environmental Conservation, including but not limited to the SPDES General Permit for Storm-water Discharges, and requirements of Municipal Separate Storm Sewer Systems (MS4) permit . If approved by the AHJ (authority having jurisdiction) this chapter allows the reuse of non-potable water for outdoor fountains or watering needs.

#### **Chapter 5 Material Resource Conservation**

Materials stored and handled onsite during construction phases shall comply with the applicable manufacturer's printed instructions. Where manufacturer's printed instructions are not available, approved standards or guidelines shall be followed.

Moisture control considerations are specified in a general common sense approach.

Also, the levels of mercury allowed in fluorescent lamps is held to a minimum for pollution control reasons specifying commonly available bulbs.

A large section for the specifications of straw-bale construction were developed to specify moisture and structural control of these building materials.

#### **Chapter 6 Energy Conservation**

Fossil and electric fuel uses in buildings are specified to be metered for all new systems. Geothermal heat pumps and fan motor (over 1 hp) efficiencies are listed which do not yet appear in the energy code.

Heat recovery and renewable power requirements are specified for conditioned spaces which contain a swimming pool located in conditioned spaces (50% of peak HVAC load). Similar provisions are considered for new snow melt systems.

Waste water heat recovery is required for traditionally large users of hot water such as laundries,

health clubs, and hospitals.

Exceptions:

1. Waste water heat recovery systems are not required for single-story slab-on-grade and single –story on crawl-space buildings.
2. Where there is no cooling tower. (This exception does not apply to restaurants and laundry facilities)
3. Where pumping cost for heat recovery exceeds the cost of recovered heat.

Light reduction controls for hotels and exterior use are specified to be installed for times when these spaces are not in use.

Renewable power systems are specified with many options for compliance which include passive solar, simply building with proper space in mind for future renewable systems (space on the roof), and other options which actually provide for much more flexibility (and possible cost savings) as compared to the Energy Code of NYS with a number of exceptions.

### **Chapter 7 Water Conservation**

Requires commonly available fixtures for new construction to be specified as low water use and would specify high water use facilities such as car wash arrangements to reuse 50% of their water demand. The code would provide minimum design criteria for water systems such as water treatment systems where the water softener shall have a maximum water consumption during regeneration of 5 gallons (18.9 L) per 1000 grains (17.1 g/L) of hardness removed as measured in accordance with NSF 44.

Where non-potable water is used for a water use application, signage shall be provided that reads as follows: “Non-potable water is utilized for [APPLICATION NAME]. Caution: non-potable water. DO NOT DRINK.”

Rainwater collection and distribution systems are specified to control sanitation such as treatment and protection (from insects and vermin) such as from freezing.

Gray water systems are specified in the IGCC but are seen as not as much of a mandate in the state of New York where traditionally, the availability of water is of less concern. This area of the code would need further consideration given there are related regulations in place for some buildings such as found in New York State Department of Health regulations.

### **Chapter 8 Indoor Air Quality**

Indoor air quality control is accomplished by specifying the levels of material allowance permitted in building construction with minimal levels listed in the code.

## **Chapter 9 Commissioning**

On the subject of commissioning, the decision was made to mainly defer to the requirements found in the Energy Code of NYS.

## **Chapter 10**

Existing building renovations are approached in the IGCC with a basic requirement of requiring application of some of the provisions of the green code to an extent of 10 % of the construction cost of the renovation project. As an alternative, during the green group discussions, it was discussed that another method to place in the code could be similar to the existing buildings code which is based upon 3 levels of rehabilitation work instead of project cost.

## **Chapter 11**

Allows site conditions which exist to remain and uses the minimal site provision found in the prior chapters when applicable to renovation projects which disturb the existing site. An historic building site exemption applies similar to historic building themselves.

## **Summary**

In summary, there were 3 basic options discussed at the direction of our administration which would allow for state or municipal adoption scenarios to be considered by the Code Council and municipal officials. The basic concepts of these approaches were, for the sake of our group discussions, labeled options “A”, “B”, & “C”.

These concepts are :

Option “A” would be to adopt via the traditional Code Council votes, a statewide Green Code for application throughout the state (with the exception of only Chapter 6 applicable in the five counties of NYC).

Option “B” could be the adoption on a statewide level by the Code Council, specific recommendations such as Chapter 6 alone, to apply throughout the full state of New York and to basically be incorporated into the Energy Conservation Construction Code of NYS.

Option “C” may be to simply look at the recommendations summarized above in this document as a recommendation to localities to proceed with on their own accord and to consider the concept of a “pre-approved” more restrictive local (MRLS) standard which, if adopted by municipalities and as worked on by the Green Advisory Working Group, would have already been potentially supported by the Code Council. (See the following IGCC “Legislation” wording for use under Option “C”.

The suggested Legislation for municipal adoption is included in the basic form provided in the IGCC 2012 and attached below.

## LEGISLATION

The *International Codes* are designed and promulgated to be adopted by reference by legislative action. Jurisdictions wishing to adopt the 2012 *International Green Construction Code*<sup>TM</sup> as an enforceable regulation governing structures and premises should ensure that certain factual information is included in the adopting legislation at the time adoption is being considered by the appropriate governmental body. The following sample adoption legislation addresses several key elements, including the information required for insertion into the code text.

### SAMPLE LEGISLATION FOR ADOPTION OF THE *INTERNATIONAL GREEN CONSTRUCTION CODE* ORDINANCE NO. \_\_\_\_\_

A[N] [ORDINANCE/STATUTE/REGULATION] of the [JURISDICTION] adopting the 2012 edition of the *International Green Construction Code*<sup>TM</sup>, regulating and governing the impact of buildings and structures on the environment in the [JURISDICTION]; providing for the issuance of permits and collection of fees therefor; repealing [ORDINANCE/STATUTE/REGULATION] No. \_\_\_\_\_ of the [JURISDICTION] and all other ordinances or parts of laws in conflict therewith.

The [GOVERNING BODY] of the [JURISDICTION] does ordain as follows:

**Section 1.** That a certain document, three (3) copies of which are on file in the office of the [TITLE OF JURISDICTION'S KEEPER OF RECORDS] of [NAME OF JURISDICTION], being marked and designated as the *International Green Construction Code*, 2012 edition, including Appendix Chapters [FILL IN THE APPENDIX CHAPTERS BEING ADOPTED], as published by the International Code Council, be and is hereby adopted as the Green Construction Code of the [JURISDICTION], in the State of [STATE NAME] regulating and governing the conditions and maintenance of structures and premises as herein provided; the standards for physical things and conditions essential to safeguard the environment, public health, safety and general welfare through the establishment of requirements to reduce the negative impacts and increase the positive impacts of the built environment on the natural environment and building occupants; and each and all of the regulations, provisions, penalties, conditions and terms of said Green Construction Code on file in the office of the [JURISDICTION] are hereby referred to, adopted, and made a part hereof, as if fully set out in this legislation, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this ordinance.

**Section 2.** The following sections are hereby revised:

Section 101.1. Insert: [NAME OF JURISDICTION]

Table 302.1. Insert: [JURISDICTIONAL REQUIREMENTS]