

# GEW4-14

## Chapter 6, 302.1, Table 302.1, 903.1, Table 903.1, A106

**Proponent:** Gary Klein, Affiliated International Management, LLC, representing self (gary@aim4sustainability.com); Craig Conner ([craig.conner@mac.com](mailto:craig.conner@mac.com)) representing self.

Revise as follows:

~~**601.3 Application.** Buildings and their associated building sites shall comply with Section 601.3.1 or Section 601.3.2. Buildings shall be designed and constructed in accordance with the *International Energy Conservation Code*.~~

~~**601.3.1 Performance-based compliance.** Buildings designed on a performance basis shall comply with Sections 602, 608.6, 609, 610 and 611.~~

~~**601.3.2 Prescriptive-based compliance.** Buildings designed on a prescriptive basis shall comply with the requirements of Sections 605, 606, 607, 608, 609, 610 and 611.~~

~~**601.4 Minimum requirements.** Buildings shall be provided with metering complying with Section 603, and commissioning complying with Section 611. Where required in accordance with Section 604.1, building shall be provided with automated demand response complying with Section 604.~~

~~**601.5.1 Multiple buildings on a site.** For building sites with multiple buildings, the energy use associated with the building site shall be assigned on a proportional basis to each building based on total gross floor area of each building in relation to the total gross floor area of all buildings on the building site.~~

~~Where energy is derived from either renewable or waste energy, or both sources located on the building site, within individual buildings, or on individual buildings and delivered to multiple buildings, the energy so derived shall be assigned on a proportional basis to the buildings served based on building gross floor area. Energy delivered from renewable and waste energy sources located on or within a building shall be assigned to that building.~~

~~**Exception:** Where it can be shown that energy to be used at the building site is associated with a specific building, that energy use shall be assigned to that specific building.~~

~~**601.5.2 Mixed use buildings.** Where buildings have more than one use, the energy use requirements shall be based on each individual occupancy.~~

### ~~602 MODELED PERFORMANCE PATHWAY REQUIREMENTS~~

### ~~603 ENERGY METERING, MONITORING AND REPORTING~~

### ~~604 AUTOMATED DEMAND RESPONSE (AUTO-DR) INFRASTRUCTURE~~

### ~~605 BUILDING ENVELOPE SYSTEMS~~

### ~~606 BUILDING MECHANICAL SYSTEMS~~

### ~~607 BUILDING SERVICE WATER HEATING SYSTEMS~~

### ~~608 BUILDING ELECTRICAL POWER AND LIGHTING SYSTEMS~~

**609 SPECIFIC APPLIANCES AND EQUIPMENT**

**610 BUILDING RENEWABLE ENERGY SYSTEMS**

**611 ENERGY SYSTEMS COMMISSIONING AND COMPLETION**

Revise as follows:

**302.1 Requirements determined by the jurisdiction.** The jurisdiction shall indicate the following information in Table 302.1 for inclusion in its code adopting ordinance:

**TABLE 302.1  
REQUIREMENTS DETERMINED BY THE JURISDICTION**

Section	Section Title or Description and Directives	Jurisdictional Requirements
<b>CHAPTER 6. ENERGY CONSERVATION, EFFICIENCY AND CO<sub>2</sub>e EMISSION REDUCTION</b>		
302.1, 302.1.1, 602.1	<del>zEPI of Jurisdictional Choice — The jurisdiction shall indicate a zEPI of 46 or less in each occupancy for which it intends to require enhanced energy performance.</del>	Occupancy: _____ zEPI: _____
604.1	<del>Automated demand response infrastructure</del>	<input type="checkbox"/> Yes <input type="checkbox"/> No

(portions of table not shown remain unchanged)

Revise as follows:

**903.1 General.** Where application is made for construction as described in this section, the registered design professional in responsible charge or approved agency shall perform commissioning during construction and after occupancy as required by Table 903.1. Where Table 903.1 specifies that commissioning is to be done on a periodic basis, the registered design professional in responsible charge shall provide a schedule of periodic commissioning with the submittal documents that shall be reviewed and *approved* by the *code official*. The approved agency shall be qualified and shall demonstrate competence, to the satisfaction of the *code official*, for the commissioning of the particular type of construction or operation. The registered design professional in responsible charge and engineers of record involved in the design of the project are permitted to act as the approved agency provided those personnel meet the qualification requirements of this section to the satisfaction of the *code official*. The approved agency shall provide written documentation to the *code official* demonstrating competence and relevant experience or training. Experience or training shall be considered relevant where the documented experience or training is related in complexity to the same type of commissioning activities for projects of similar complexity and material qualities.

**TABLE 903.1  
COMMISSIONING PLAN**

CONSTRUCTION OR SYSTEM REQUIRING VERIFICATION	PREOCCUPANCY	POST-OCCUPANCY	METHOD	OCCURRENCE		SECTION/ REFERENCED STANDARD
				Preoccupancy	Post-occupancy	
<b>Chapter 6: Energy</b>						
Energy consumption, monitoring, targeting and reporting						
a.—Monitoring system	X	None	Inspection and verification	During construction and prior to occupancy	None	603, 610.5

CONSTRUCTION OR SYSTEM REQUIRING VERIFICATION	PREOCCUPANCY	POST-OCCUPANCY	METHOD	OCCURRENCE		SECTION/ REFERENCED STANDARD
				Preoccupancy	Post-occupancy	
b. Calibration	X	X	Testing and review and evaluation or test reports	During commissioning	Annually	603, 610.5
Mechanical systems completion — all buildings						
a. Air system balancing — provide the means for system balancing	X	None	Inspection and verification	During construction and prior to occupancy	None	611.1.2.4 and through reference to IECC
b. Hydronic system balancing — provide means for system balancing	X	None	Inspection and verification	During construction and prior to occupancy	None	611.1.2.2 and through reference to IECC
c. Mechanical system manuals — construction documents to require O&M manual	X	None	Verification of construction documents	Plan review	None	611.1.5.2
Mechanical systems — buildings over 5,000 square feet total building floor area						
a. Commissioning required and noted in plans and specifications	X	None	Verification of construction documents	Plan review	None	611.1
b. Documentation of required commissioning outcomes	X	None	Verification with the building owner	Subsequent to completion of all commissioning activities	None	611.1
c. Preparation and availability of a commissioning plan	X	None	Verification with the RDP or commissioning agent	Between plan review and commissioning initiation	None	611.1.1
d. Balance HVAC systems (both air and hydronic)	X	X	HVAC system installer/contractor or commissioning agent	After installation of HVAC systems and prior to occupancy	TBD	611.1.2
e. Functional performance testing of HVAC equipment	X	X	HVAC system installer/contractor or commissioning agent	After installation of HVAC systems and prior to occupancy	TBD	611.1.3
f. Functional performance testing of HVAC controls and control systems	X	X	HVAC system installer/contractor or commissioning agent	After installation of HVAC systems and prior to occupancy	TBD	611.1.3.2

CONSTRUCTION OR SYSTEM REQUIRING VERIFICATION	PREOCCUPANCY	POST-OCCUPANCY	METHOD	OCCURRENCE		SECTION/ REFERENCED STANDARD
				Preoccupancy	Post-occupancy	
g. Preparation of preliminary commissioning report	None	X	HVAC system installer/contractor or commissioning agent	None	Subsequent to commissioning	611.1.4
h. Acceptance of HVAC systems and equipment/system verification report	None	X	Building owner	None	Letter verifying receipt of the commissioning report	611.1.4.1
i. Preparation and distribution of final HVAC system completion — Documentation that construction documents require drawings, manuals, balancing reports and commissioning report be provided to the owner and that they have been provided	None	X	RDP, contractor or commissioning authority	None	90 days after final certificate of occupancy	611.1.5
<b>Chapter 6: Lighting</b>						
Auto demand reduction control system functionality	X	X	Functional testing	Final inspection	18-24 months	604.4
Plug load controls	X	None	Functional testing	Final inspection	None	608.6
Connection of appliances to switched receptacles	—	X	Field inspection	None	18-24 months	608.6
Specified transformer nameplate efficiency rating	X	None	Field inspection	Final inspection	None	608.8.1.4
Verification of lamp	X	X	Field inspection	Final inspection	18-24 months	608.10
Verification of ballast	X	None	Field inspection	Final inspection	None	608.10
Lighting controls						
a. Installation	X	None	Field inspection	Post-installation	None	608.11
b. Calibration	X	X	System installer/contractor or commissioning agent	Post-installation	18-24 months	611.3.3

(portions of Table not shown remain unchanged)

**Delete without substitution**

**A106 ENERGY CONSERVATION, EFFICIENCY AND EARTH ATMOSPHERIC QUALITY**

**Reason:** The IGCC energy chapter is the largest impediment for those considering adopting the IGCC. Many code officials just want to use the IECC. Few can read through Chapter 6 and understand it. Even catching up with all the accumulated changes in the 2015 IECC will be a challenge to many. The main calculations in the energy chapter, the zEPI and CO2 emission calculations, are not the same as the IECC or ASHRAE 90.1. This is not an overlay to the IECC. With this change the IgCC would refer to the IECC for energy related provisions.

**Cost Impact:** Will not increase the cost of construction. The IgCC will now refer to the IECC for practically all of the energy related provisions.

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