



Rhode Island Green Buildings Act



RIGL §37-24-5

The Green Buildings Act (*RIGL 37-24*)



In 2005 Gov. Carcieri signed an Executive Order requiring all State Buildings to “Strive” to become LEED Certified at the Silver Level.

On November 9, 2009 Gov. Carcieri signed the Green Buildings Act into law.

Public Law No. 2009-212

Title 37 of the R.I. General Laws

Public Property & Works

§37-24, *et. seq.*





The Green Buildings Act requires that:

All new construction projects over 5,000 gsf, and all renovation projects over 10,000 gsf, constructed by a “public agency” that have not entered the design phase prior to Jan. 1, 2010 be designed and constructed to the LEED Certified or equivalent high performance green building standard.





“Construction” is defined as:

The process of building, altering, repairing, improving, or demolishing forty percent (40%) or more of any public structures or buildings, or other public improvements of any kind to any public real property.





“Forty percent (40%) or more of any public structures or buildings” shall mean the LESSER OF the following values:

- 1. The Gross Square Footage (GSF) of the structure, OR**
- 2. The currently listed insurance value of the structure, OR**
- 3. The currently held insured value of the structure, OR**
- 4. The currently listed tax value of the structure, OR**
- 5. The currently listed market value of the structure.**





A “public agency” is defined as:

Every State Office, Board, Commission, Committee, Bureau, Department or Public Institution of Higher Education.

Any physical asset owned, leased or controlled in whole or in part by the State or any agency or political subdivision thereof...



The Green Buildings Act (*RIGL 37-24*)



Public Safety Buildings
City & Town Municipal Buildings
Public Libraries
Public Multi-Family Housing
All State Owned Buildings
All State Leased Buildings
All State Colleges and Universities

**In general, the law pertains to all
“Public Properties”**



High Performance Green Building Standards



Currently 37,143 Registered and Certified Projects in LEED Database



Leadership in Energy & Environmental Design

“To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.”

Mission statement - USGBC



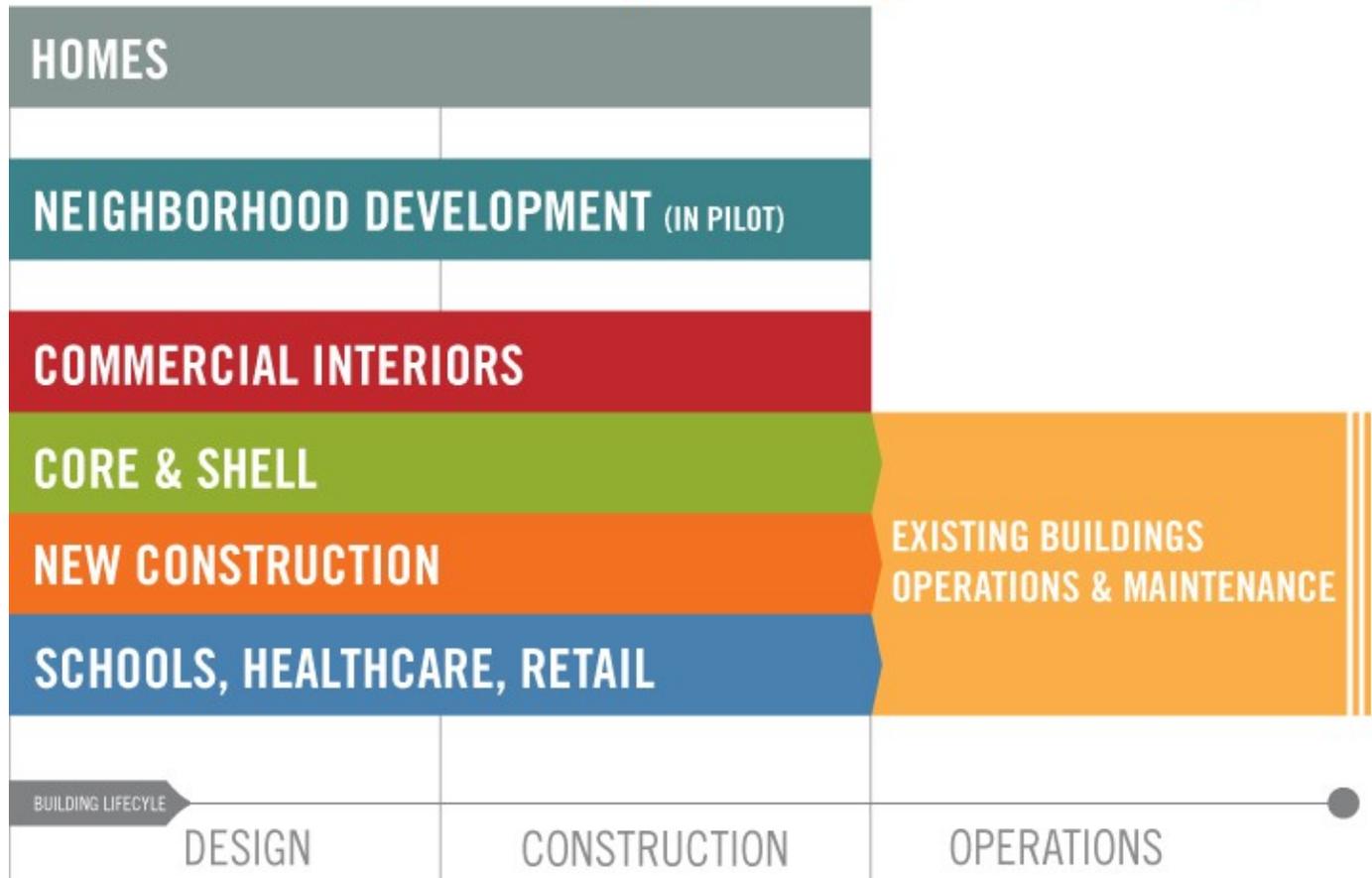
High Performance Green Building Standards



High Performance Green Building Standards



LEED address the complete lifecycle of buildings:





Four Certification Levels



40-49

50-59

60-79

80+

Points



The Green Buildings Act requires that all Public Schools seeking any State Funding shall be designed and constructed to meet the Northeast Collaborative for High Performance Schools Protocol (NE-CHPS)



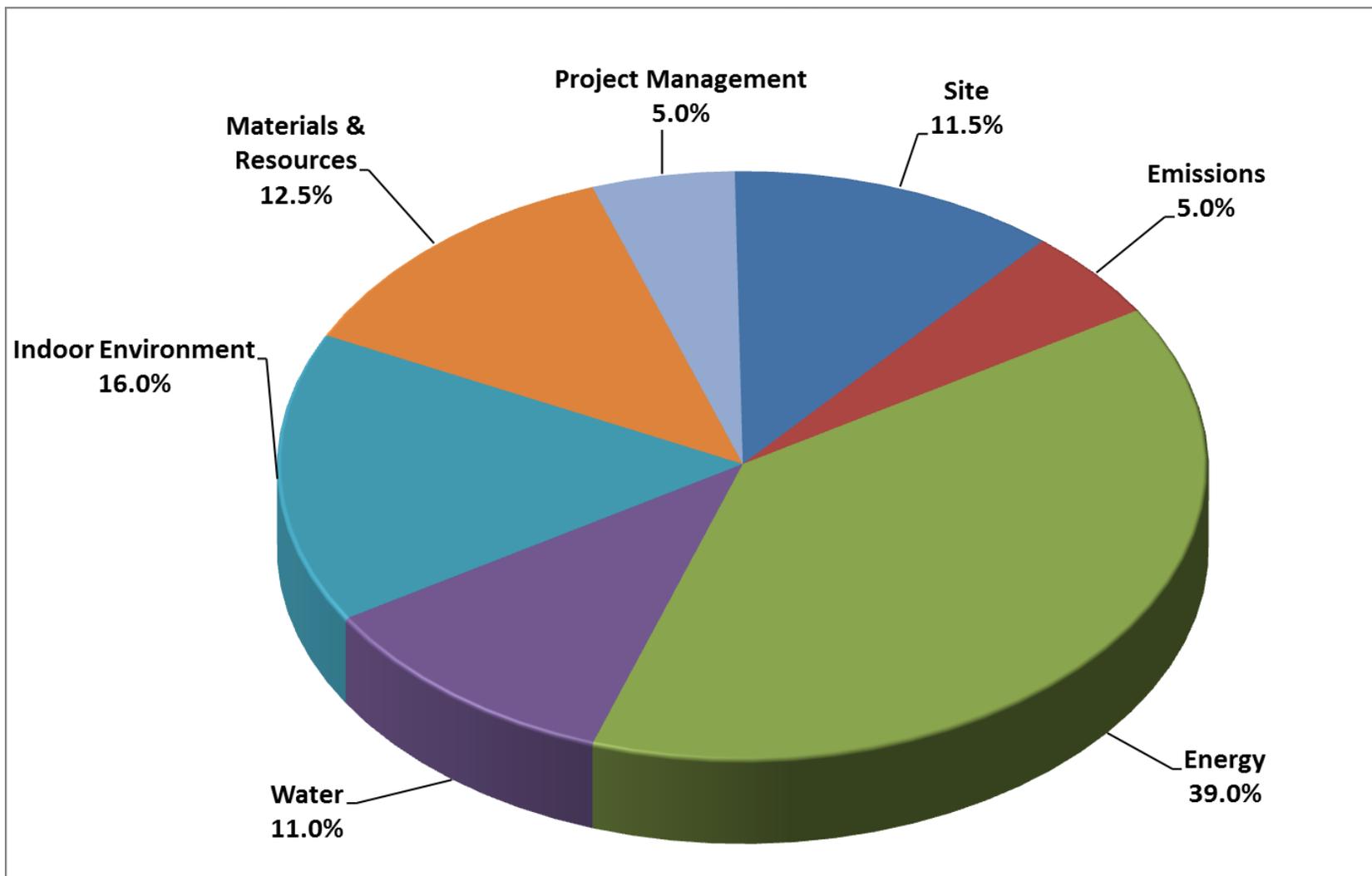


**The Green Buildings Act also recognizes
“Green Globes” as an equivalent high performance
building standard**



The Green Building Initiative

High Performance Green Building Standards



High Performance Green Building Standards



Green Globes® Rating/Certification

85-100%	A green stylized 'G' icon with four blue dots inside, representing the highest certification level.	Reserved for select building designs which serve as national or world leaders in energy and environmental performance. The project introduces design practices that can be adopted and implemented by others.
70-84%	A green stylized 'G' icon with three blue dots inside, representing a high certification level.	Demonstrates leadership in energy and environmental design practices and a commitment to continuous improvement and industry leadership.
55-69%	A green stylized 'G' icon with two blue dots inside, representing a moderate certification level.	Demonstrates excellent progress in achieving eco-efficiency results through current best practices in energy and environmental design.
35-54%	A green stylized 'G' icon with one blue dot inside, representing the minimum certification level.	Demonstrates movement beyond awareness and commitment to sound energy and environmental design practices by demonstrating good progress in reducing environmental impacts.

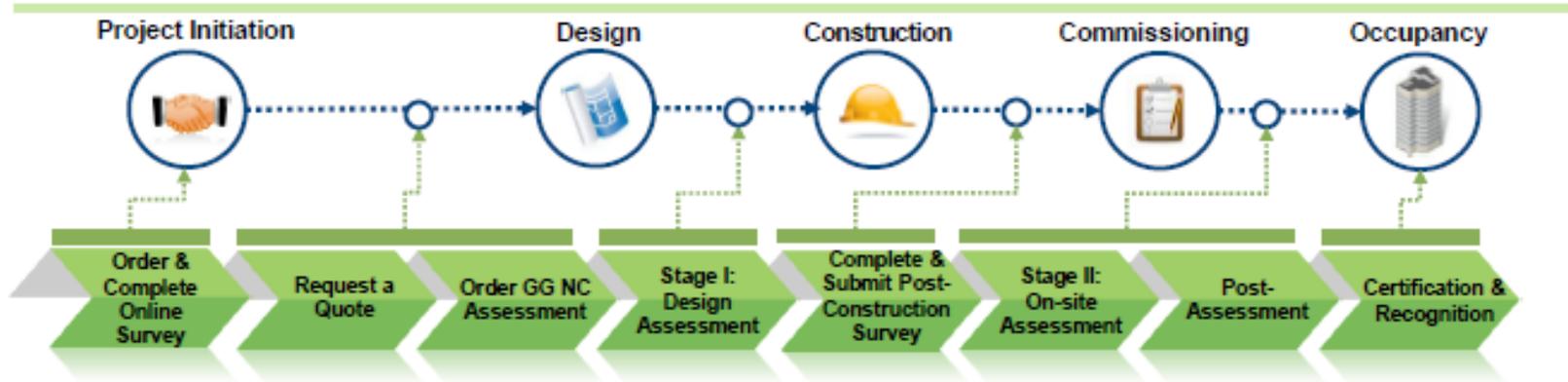
Buildings with a minimum score of 35% achieve certification



High Performance Green Building Standards



Green Globes Assessment & Certification New Construction Process



1. Client orders, submits payment for, and completes the online survey
2. Client requests and receives quote from GBI
3. Client orders and submits payment for the GG NC assessment (score \geq 35% on survey required)
4. Stage I Design Assessment – design review includes written report with recommendations
5. Client updates the online survey to reflect design changes, if needed
6. Stage II On-Site Assessment – on-site meetings and building tour
7. Post Assessment – client delivers any missing documentation, assessor prepares report with recommendations, GBI issues final report, client reviews findings
8. Certification and public recognition of the achievement



In 2010 the Green Buildings Advisory Committee was formed to help implement the Green Buildings Act

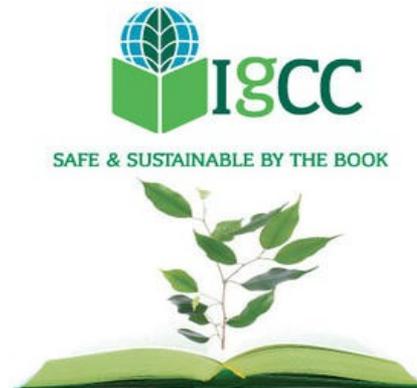
In crafting the rules and regulations to implement the Act, the International Green Construction Code (IGCC) was added as an equivalent high performance standard

... Giving Rhode Island the unique distinction of being the First State to adopt the IGCC





In 2012/13 the Green Buildings Advisory Committee has conducted extensive reviews of the 2012 IgCC and has made recommendations within Table 302.1. (Requirements Determined by Jurisdiction) to ensure that the IGCC is truly an equivalent high performance building standard



High Performance Green Building Standards



TABLE 302.1
REQUIREMENTS DETERMINED BY THE JURISDICTION
(with Rhode Island Green Buildings Act modifications, 19-September-2012)

Section	Section Title or Description and Directives	Jurisdictional Requirements	
CHAPTER 1. SCOPE			
101.3 Exception 1.1	Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height above grade plane with separate means of egress, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
101.3 Exception 1.2	Group R-3 residential buildings, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
101.3 Exception 1.3	Group R-2 and R-4 residential buildings four stories or less in height above grade plane, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 4. SITE DEVELOPMENT AND LAND USE			
402.2.1	Flood hazard area preservation, general	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
402.2.2	Flood hazard area preservation, specific	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
402.3	Surface water protection	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
402.5	Conservation area	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.7	Agricultural land	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
402.8	Greenfield sites	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
407.4.1	High occupancy vehicle parking	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
407.4.2	Low emission, hybrid and electric vehicle parking	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
409.1	Light pollution control	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
CHAPTER 5. MATERIAL RESOURCE CONSERVATION AND EFFICIENCY			
503.1	Minimum percentage of waste material diverted from landfills.	<input type="checkbox"/> 50% <input checked="" type="checkbox"/> 65% <input type="checkbox"/> 75%	
CHAPTER 6. ENERGY CONSERVATION, EFFICIENCY AND CO₂e EMISSION REDUCTION			
Table 302.1, 302.1.1, 602.1	zEPI of Jurisdictional Choice – The jurisdiction shall indicate a zEPI of 46 or less in each occupancy for which it intends to require enhanced performance.	Occupancy: <u>n/a</u> zEPI: <u>n/a</u>	
604.1	Automated demand response infrastructure	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 7. WATER RESOURCE CONSERVATION, QUALITY AND EFFICIENCY			
702.7	Municipal reclaimed water.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 8. INDOOR ENVIRONMENTAL QUALITY AND COMFORT			
804.2	Post-Construction Pre-Occupancy Baseline IAQ Testing	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
807.1	Sound transmission and sound levels	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 10. EXISTING BUILDINGS			
1007.2	Evaluation of existing buildings	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1007.3	Post Certificate of Occupancy zEPI, energy demand, and CO ₂ e emissions reporting	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
APPENDIX A PROJECT ELECTIVES			
A101	Project Electives	Min. Required: <u>8</u>	

2012 INTERNATIONAL GREEN CONSTRUCTION CODE™





The Green Buildings Act will be administered and enforced by the Department of Administration:

RIDOA will monitor and document ongoing operations savings resulting from building “green”, and shall publish an annual report of findings.

RIDOA will also form a “Green Buildings Advisory Committee” to provide advice on implementing and administering the Act and providing feedback.



Table 302.1 as well all other Forms and Information on the Green Buildings Act can be found on the RI State Building Commissioner's Website



<http://www.ribcc.ri.gov/gba/>

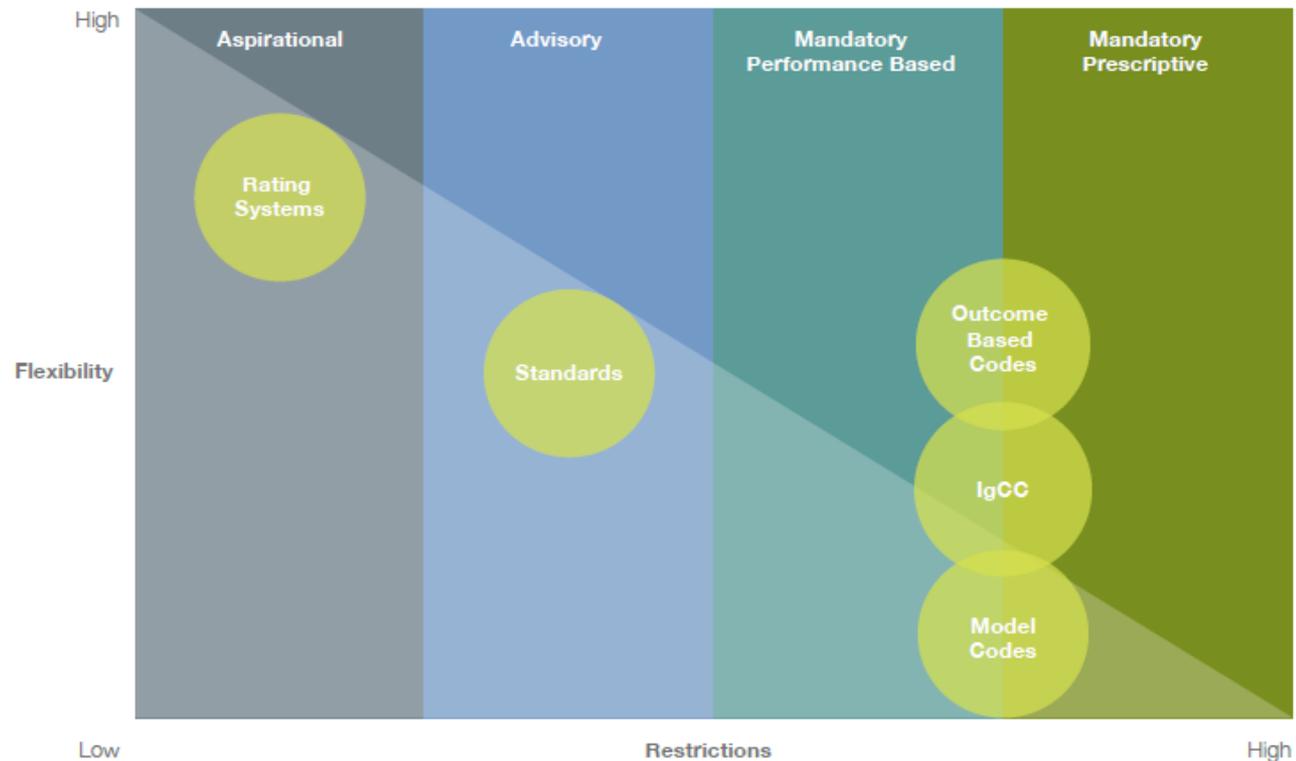


Compliance Options



Compliance Options:

- LEED-NC v3.0
- NE-CHPS v2.0
- Green Globes
- IgCC 2012
- Other



Compliance Option Comparison



Site Development & Land Use:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 <i>(w/ RI Amendments*)</i>
Site Selection	Elective credit	Elective credit	Elective credit	Requirements for site selection
Brownfield Development	Elective credit	Elective credit	NA	Project Elective
Community Connectivity	Elective credits	Elective credit	Elective credit	NA
Alternative Transportation	Elective credits	Elective credit	Elective credit	Requirements for alternative transportation
Stormwater Management	Elective credits for quality & quantity control	Elective credits for quality & quantity control	Elective credit for quantity control	Requirements for quantity control
Heat Island Reduction	Elective credits for roofing and hardscapes	Elective credits roofing and hardscapes	Elective credits roofing and hardscapes	Requirements for hardscapes



Compliance Option Comparison



Water Conservation & Quality:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 (w/ RI Amendments*)
Flow Fixtures	20% Prerequisite Additional elective credits	Elective credits	20% Prerequisite Additional elective credits	≅30% reduction required Additional Project Electives
Irrigation Systems	Elective credits	Elective credits	Elective credits for landscape & athletic fields	50% reduction required in Chapter 4
Greywater Systems	Elective credits	Elective credits	Elective Credits	Project Elective Requirements if systems are included
HVAC Equipment	Innovation & Design credit	NA	Innovation Credit	Requirements for the use of potable water for HVAC systems



Compliance Option Comparison



Energy & Atmosphere:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 <i>(w/ RI Amendments*)</i>
Baseline	ASHRAE 90.1-2007	ASHRAE 90.1-2007	ASHRAE 90.1-2007	ASHRAE 90.1-2010
	10% reduction Prerequisite		25% Reduction Prerequisite	10% reduction required (zEPI 51)
		Elective Credit(s)		
Energy Use Reduction	Additional elective credits		Additional elective credits	Additional Project Electives
	Prescriptive and performance options	Prescriptive and performance options	Prescriptive and performance options	Prescriptive and performance options
	Site Energy	Site Energy	Site Energy	Source Energy
Carbon Emissions Reduction	NA	Elective Credit(s)	Elective credit for carbon footprinting	≤ Baseline Case



Compliance Option Comparison



Energy & Atmosphere:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 <i>(w/ RI Amendments*)</i>
Energy Metering	Elective credit	Elective Credit(s)	Elective Credit	Sub-metering required
Automated Demand Response	Innovation & Design Credit	Elective Credit(s)	Innovation Credit(s)	Project Elective
Renewable Energy	Elective credits	Elective Credit(s)	Elective Credits	Minimum 2% on-site renewable energy
Commissioning	Prerequisite & Elective Credit	Elective Credit(s)	Prerequisite & Elective Credit	Required



Compliance Option Comparison



Indoor Environmental Quality:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 <i>(w/ RI Amendments*)</i>
ASHRAE 62.1	Prerequisite	Elective Credit(s)	Prerequisite	Required
ASHRAE 55	Elective Credit	Elective Credit(s)	Prerequisite	Required
Construction IAQ Management	Elective Credit	Elective Credit(s)	Elective Credit	Required
Post Construction IAQ Management	Elective Credit	Elective Credit(s)	Elective Credit	Required*
Low VOC Materials	Elective Credit	Elective Credit(s)	Prerequisite	≥ 85% Required
Daylighting	Elective Credit	Elective Credit(s)	≥ 75% Required for classrooms	≥ 50% Required
Acoustics	Innovation & Design Credit	Elective Credit(s)	ANSI 12.60 required for classrooms	Project Elective*
Walk-off Systems	Elective Credit	Elective Credit(s)	Prerequisite	NA



Compliance Option Comparison



Materials & Resources:

	LEED-NC 3.0	Green Globes	NE-CHPS 2.0	IgCC 2012 <i>(w/ RI Amendments*)</i>
Construction Waste Management	Elective Credits	Elective Credit(s)	Elective Credits	Required
Occupant Recycling	Prerequisite	Elective Credit(s)	Prerequisite	Required
Recycled Content	Elective Credits	Elective Credit(s)	Elective Credits	
Regional Materials	Elective Credits	Elective Credit(s)	Elective Credits	≥ 55% Combined Required
Material Reuse	Elective Credits	Elective Credit(s)	Elective Credits	
Certified Wood	Elective Credits	Elective Credit(s)	Elective Credits	
Lifecycle Analysis	Innovation & Design Credit	Elective Credit(s)	Innovation Credit	Project Elective



How To Comply?



LEED-NC v3.0, Green Globes & NE-CHPS:

- Projects shall formally register and pursue third-party certification
- A rating system scorecard shall be submitted with pre and post construction certification letters
- A “Good Faith Effort” is recognized if:
 - Third-party certification is pursued
 - The minimum number of credits is submitted AND
 - No more than 15% of the total number of required credits are denied



How To Comply?



IgCC 2012:

- IgCC Table 302.1 and Project Elective selections shall be submitted with pre and post construction certification letters
- A “Good Faith Effort” is recognized if:
 - Table 302.1 is provided
 - Project Electives are selected
 - All applicable requirements of the IgCC are incorporated into the contract documents
 - Systems completion is verified by the Designer of Record, CxA & Owner per IgCC requirements
(e.g., submittal reviews, periodic site observation, etc.)



Owner Considerations



- Compliance options all address similar issues of sustainability but vary in flexibility
- Project teams should evaluate compliance options on a project by project basis. One size does not fit all!
- Energy model summary reports should be provided for all projects using performance based compliance
- Commissioning is required for all compliance options but commissioning scope may vary
- New versions of LEED-NC and NE-CHPS have been developed and are being evaluated by the Advisory Council

