

Welcome



Benefits, Compliance Options and Updates to the RI Green Buildings Act



RIGL § 37-24

PACE Representatives, Inc. Provider #40107994
Course #RIGBAC202001

Introduction



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Provider #40107994

Introduction



Course Description

The state of Rhode Island has been a leader in the implementation of measures to minimize the impact of commercial buildings on the environment. Recent examples of this include passing of the Green Buildings Act (RIGL § 37-24) and Governor Raimondo's executive order directing the development of a stretch code. This presentation will provide attendees with an overview of why and how the Green Buildings Act was developed, including what types of projects are required to comply. The different compliance options allowed by the Green Buildings Act will be reviewed in detail, including the IgCC stretch code path.

Learning Objectives

- Understand the impact of buildings on the natural environment
- Understand the development of the Rhode Island Green Buildings Act (RIGBAC)
- Understand what projects must comply with the RIGBAC
- Understand the different compliance paths available in the RIGBAC

Presenting Today



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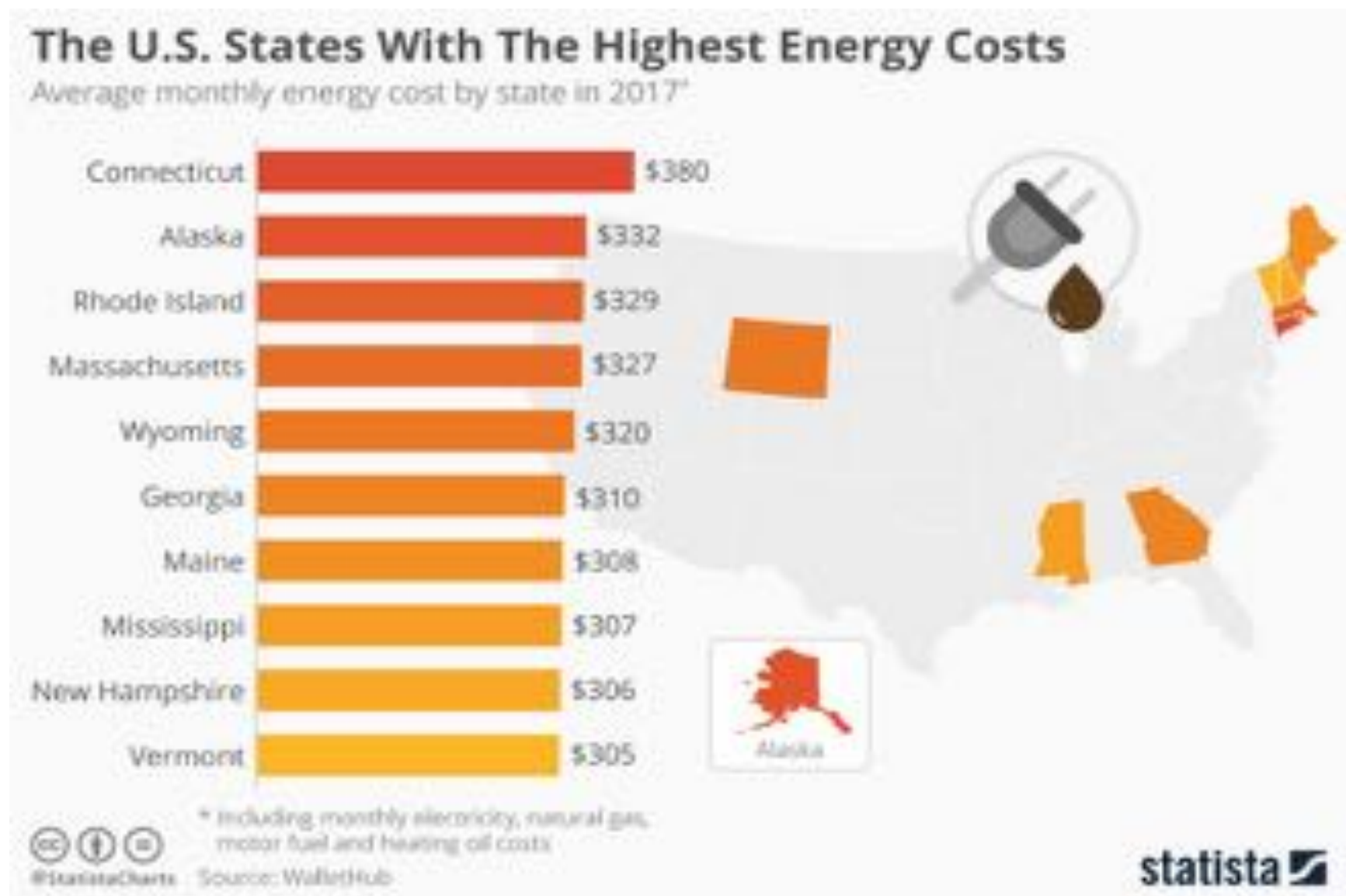
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The Why



The Why



The Why



Benefits of LEED

Environmental benefits:

- Enhance and protect ecosystems and biodiversity
- Improve air and water quality
- Reduce solid waste
- Conserve natural resources

Economic benefits:

- Reduce operating costs
- Enhance asset value and profits
- Improve employee productivity and satisfaction
- Optimize life-cycle economic performance

Health and community benefits:

- Improve air, thermal, and acoustic environments
- Enhance occupant comfort and health
- Minimize strain on local infrastructure
- Contribute to overall quality of life

The Why



HEALTHfx
HEALTH CO-BENEFITS OF
GREEN BUILDINGS

#THEHEALTHFXSTUDY
THEHEALTHFXSTUDY.COM

THE IMPACT

COMPARED TO
"CONVENTIONAL
COMMERCIAL BUILDINGS,"¹
THE GREEN-CERTIFIED
BUILDINGS STUDIED SAVED

\$7.5B
IN ENERGY COSTS²



PLUS AN
ADDITIONAL

\$5.8B IN COMBINED HEALTH
AND CLIMATE BENEFITS:

\$1.4B

FROM AVERTING
NEGATIVE IMPACTS
OF CLIMATE
CHANGE³

\$4.4B

FROM REDUCTIONS IN AIR
POLLUTION RESULTING IN
**FEWER DEATHS, HOSPITAL
VISITS, LOST DAYS OF
WORK AND SCHOOL,
AND MORE⁴**

FOR A TOTAL
BENEFIT OF

**\$13.3B
SAVED**

FROM
2000-2016⁵

¹ 2016 USG, LEED® buildings 2000-2014

² Energy cost savings were calculated based on the prices for each energy type

³ Includes carbon dioxide, methane and nitrous oxide and their associated climate damages. These are economic benefits associated with avoiding the negative consequences of climate change – such as the spread of disease and coastal damage

⁴ Includes public health impacts from exposure to ozone and PM_{2.5}, including deaths, hospitalizations and asthma attacks avoided

⁵ The study analyzed LEED-certified buildings in the United States, Brazil, China, Germany, India and Turkey. This accounts for 90% of LEED buildings, and 30% of all green-certified buildings

MacNaughton K, Gao X, Buonassisi J, Cardona-Leland J, Spengler J, Bernstein A, and Allen J. Energy Savings, Emission Reductions, and Health Co-Benefits of the Green Building Movement

10 January 2016. *Journal of Exposure Science and Environmental Epidemiology*

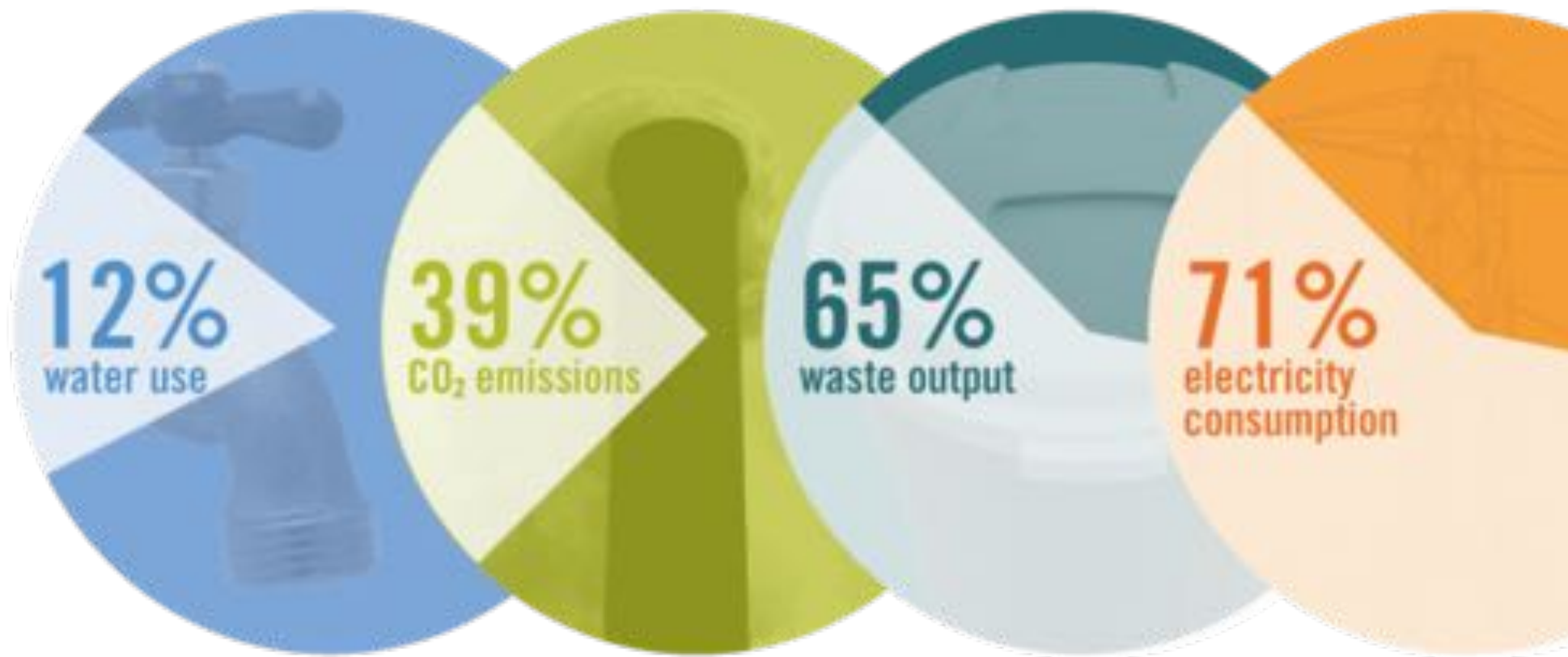
Primary support for the study came from United Technologies and its UTC Climate, Controls & Security business

© 2016 United Technologies

The Why



CURRENT IMPACT of U.S. BUILDINGS ON OUR RESOURCES...



The Why





Complying with the Green Buildings Act at a minimum saves:

- **20% of project water use**
- **10% of project energy use**
- **65% of construction & demolition waste**

- **Provides for Improved Indoor Air Quality**
- **Requires the use of sustainable building materials**
- **Requires Sustainable Site Development Strategies**

The When



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

2009 - Gov. Carcieri signed the Green Buildings Act into law.

2010 – The Green Buildings Advisory Council is formed.

2015 – Gov. Raimondo signed an Executive Order (#15-17) requiring the Office of Energy Resources (OER) to establish a voluntary stretch building code base on the IgCC.

2017 – The Green Buildings Act is amended to include a pilot program for LEED for Sites and LEED ND.

2018 – OER issues the First Edition of the RI Stretch Code for Commercial Construction



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” ... be designed and constructed to **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...



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 over **96,000 LEED projects** in **167 countries and territories**
(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:



High Performance Green Building Standards



Four Certification Levels



High Performance Green Building Standards



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)



High Performance Green Building Standards



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



The Green Building Initiative

High Performance Green Building Standards



In 2010 the Green Buildings Committee was formed to help Rhode Island



SAFE & SUSTAINABLE BY THE BOOK

In crafting the Rhode Island Green Buildings Code, the International Green Construction Code (IgCC) was added as an equivalent standard

Committee was formed to help Rhode Island implement the Green Buildings Act

To implement the Act, the Rhode Island Green Buildings Code (IgCC) was adopted as an equivalent standard



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

High Performance Green Building Standards



- In 2016/17 the Green Buildings Advisory Committee (GBAC) worked with the RI Office of Energy Resources to create Rhode Island's first voluntary stretch codes.
- Rhode Island's Commercial Stretch Code is based on the 2015 IgCC
- The GBAC worked to ensure that both the residential and commercial Stretch Codes are truly an equivalent high performance building standard



Access the Rhode Island's Stretch Codes at: www.energy.ri.gov/policies-programs/lead-by-example/rhode-island-stretch-codes.php

High Performance Green Building Standards



Green Buildings Act revised in 2017 by Governor Raimondo

- DOA to pursue up to 4 pilot projects using LEED ND &/o SITES through Dec 31, 2020
- “subject to evaluation and continuation by the general assembly thereafter.”
- Free technical assistance & certification from USGBC for up to 4 pilot projects
- GBA Committee to issue a recommendation to the General Assembly by Dec 31, 2020

How to Comply



The Green Buildings Act is administered and enforced by the Rhode Island Department of Administration. (RIDOA)

RIDOA is tasked with monitoring and documenting ongoing operations savings resulting from building “green”, and publishing an annual report of findings.

RIDOA also supports a “Green Buildings Advisory Committee” to provide advice on implementing and administering the Act and providing support to the local AEC community.

How to Comply



Compliance Path Considerations:

- Compliance path options all address the five key areas of sustainability but vary in details and 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 pursuing performance based energy compliance
- Commissioning is required for all compliance options but commissioning scope may vary
- The latest versions of LEED-NC, NE-CHPS, RI Stretch Codes, or Green Globes should be used, unless otherwise specified by the Advisory Committee

How To Comply



LEED-NC, 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 / Rhode Island Stretch Code:

- 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 Stretch Code are incorporated into the contract documents
 - Systems completion is verified by the Designer of Record, CxA & Owner per IgCC/Stretch Code requirements (*e.g., submittal reviews, periodic site observation, etc.*)

How to Comply



[Company Letterhead]

[date]

Office of the Building Code Commissioner
State of Rhode Island and Providence Plantations
Department of Administration
One Capitol Hill, Providence, RI 02908
(401) 222-3033

Rec: Green Buildings Act Post Construction Certification
[project name]
[project address]

In accordance with Rhode Island General Law 37-24-4, I, _____ RI
Registration # _____ being a registered professional Architect/Engineer and the
Registered Design Professional in responsible charge of the project named above, hereby
certify that, to the best of my knowledge, the project has been constructed in accordance
with the approved construction documents, and less specific items listed below, meets all
applicable provisions of the Green Buildings Act compliance path & checklist as submitted
with the Preconstruction Project Certification dated [date].

1. item
2. item
3. item

Sincerely,

[name typed]
RI Registration # _____

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Department of Administration
Office of the State Building Code Commissioner
One Capitol Hill
Providence, RI 02908-0859
(401) 222-1129

Green Buildings Act Preconstruction Project Certification

Date: _____
Property Owner of Record: _____
Project Title: _____
Project Address: _____
Name of Building: _____
Summary of Work: _____

In accordance with Rhode Island General Law section 37-24-4, I, _____ RI
Registration # _____ being a registered professional Architect/Engineer and the Registered
Design Professional in responsible charge of the project named above, hereby certify that, to the best of
my knowledge, such drawings, computations, and specifications meet all applicable provisions of the
Green Buildings Act using the compliance path indicated below:

☐ Current version of the USGBC's LEED green building rating system.
(project checklist attached)

☐ Current version of Green Building Institute's Green Globes rating system.
(project checklist attached)

☐ Current version of RI Collaborative for High Performance Schools RI CHPS rating system.
(project checklist attached)

☐ Current version of ICC's IGCC.
(Table 303.1 Project Electives Checklist attached)

☐ Alternate equivalent compliance path not listed above.
(supporting documentation must be submitted with one of the above attached)

Firm Name: _____
Address: _____
Phone: _____

Signature of Architect / Engineer
Signature of Owner

Owners Statement:
I hereby acknowledge the above and agree to notify the
Building Official of any changes to this agreement.

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

Rhode Island Stretch Code



What is the RI Stretch Code?



Rhode Island Stretch Code



What is the IgCC?

- An overlay code to the existing family of ICC codes
- Translates the principals of sustainability contained in rating systems into a code
- It provides flexibility for adopting jurisdictions to customize to meet regional needs
- Applies to new and existing commercial and high rise residential buildings
- Does not apply to single family homes or low rise residential buildings
- Provides a predictive, enforceable and reliable framework for regulating green building

Rhode Island Stretch Code



What does the IgCC Cover?

The IgCC provides model code language to establish baseline regulations for new and existing buildings for:

- Site Development and Land Use
- Material Resource Conservation
- Energy Conservation
- Water Resource Conservation
- Indoor Environmental Quality and Comfort
- Commissioning and Operations and Maintenance

Rhode Island Stretch Code



How does the IgCC Compare?

IgCC 2015 vs. IECC 2015

- **+/-10% energy use reduction**
- The IgCC Addresses more than just energy
 - Site Development and Land Use
 - Material Resource Conservation and Efficiency
 - Water Resource Conservation and Quality
 - Indoor Environment Quality
 - Operations and Maintenance

Rhode Island Stretch Code



How does the IgCC Compare?

IgCC 2015 vs. LEED-NC V4.1

- Both address; Site, Material, Energy, Water & IEQ
- Base IgCC compliance would achieve 38 points and would not qualify for LEED Certification
- Jurisdictional Requirements and Project Electives could achieve an additional 43 points and qualify for up to 81 points and LEED Platinum Certification

Rhode Island Stretch Code



38	43	31	Project Totals (pre-certification estimates)		110 Points		
Certified 40-49 points Silver 50-59 points Gold 60-79 points Platin							
Yes	?	No					
			1	General	1 Point	Phase	IgCC Section:
			1	Credit	Integrative Process	1	D
Not addressed in the IgCC							
Yes	?	No					
3	2	11	Location and Transportation	16 Points	Phase	IgCC Section:	Comments:
			Credit	LEED for Neighborhood Development	8 to 16	D	N/A
1			Credit	Sensitive Land Protection	1	D	Table 302.1 & 402
	2		Credit	High Priority Site	1 to 2	D	A104.3 & A104.4
		5	Credit	Surrounding Density and Diverse Uses	1 to 5	D	Could meet credit intent through selection of Project Electives A104.3 or A104.4
		5	Credit	Access to Quality Transit	1 to 5	D	No correlation between IgCC requirements and LEED credit
1			Credit	Bicycle Facilities	1	D	407 & A104.7
		1	Credit	Reduced Parking Footprint	1	D	No correlation between IgCC requirements and LEED credit
1			Credit	Electric Vehicles	1	D	Table 302.1, 407.4.1
IgCC does not include LEED's Bicycle Network requirement. IgCC Section 407 requires for buildings >10,000 s.f. A104.7 requires for buildings < 10,000 s.f.							
Not addressed in the IgCC							
Addressed by selection of Sections 407.4.1 & 407.4.2 as Jurisdictional Requirements in Table 302.1							
Yes	?	No					
4	5	1	Sustainable Sites	10 Points	Phase	IgCC Section:	Comments:
Y			Prereq	Construction Activity Pollution Prevention	Required	D	405
N/A			Prereq	Environmental Site Assessment	Required	D	
	1		Credit	Site Assessment	1	D	401.2
	2		Credit	Protect or Restore Habitat	1 to 2	D	A104.5
		1	Credit	Open Space	1	D	A104.2
3			Credit	Rainwater Management	2 to 3	D	403
	2		Credit	Heat Island Reduction	1 to 2	D	408.2, 408.3 & A104.9
1			Credit	Light Pollution Reduction	1	D	409
IgCC sections require at least 50% of site hardscape. At least 75% of roof area only required for climate zones 1-3. Project Elective A104.9.4 must also be selected to meet LEED credit requirements							
Yes	?	No					
6	5		Water Efficiency	11 Points	Phase	IgCC Section:	Comments:
Y			Prereq	Outdoor Water Use Reduction	Required	D	404
Y			Prereq	Indoor Water Use Reduction	Required	D	702.1
Y			Prereq	Building-Level Water Metering	Required	D	701.2
	1		Credit	Outdoor Water Use Reduction	1 to 2	D	404 & A107.3
2	4		Credit	Indoor Water Use Reduction	1 to 6	D	702.1 & A107.2
2			Credit	Cooling Tower Water Use	1 to 2	D	703.7
1			Credit	Water Metering	1	D	701.2
LEED requires no irrigation or a minimum 30% reduction. IgCC requires at least 50% reduction. 20% reduction							
50% = 1 point / 100% = 2 points							
Additional 5% reductions from 20% = 1 point. IgCC = approx. 33% reduction from baseline							
Requires metering for two or more water subsystems (e.g., irrigation, flow fixtures, DHW, boilers, reclaimed water, other process water)							
Yes	?	No					
7	21	5	Energy & Atmosphere	33 Points	Phase	IgCC Section:	Comments:
Y			Prereq	Fundamental Commissioning and Verification	Required	C	903
Y			Prereq	Minimum Energy Performance	Required	D	602.1 & 602.2.1
Y			Prereq	Building-Level Energy Metering	Required	D	603
Y			Prereq	Fundamental Refrigerant Management	Required	D	
3		3	Credit	Enhanced Commissioning	2 to 6	D	903
2	16		Credit	Optimize Energy Performance	1 to 18	D	602.1
1			Credit	Advanced Energy Metering	1	D	603
	1	1	Credit	Grid Harmonization	1 to 2	D	A106
1	4		Credit	Renewable Energy Production	1 to 5	D	610
		1	Credit	Enhanced Refrigeration Management	1	D	
IgCC monitoring and BECx requirements not extensive enough to qualify for LEED credits							
IgCC = zEPI of 46 / ASHRAE 90.1 2016 (LEED Baseline) = zEPI of 50 per USDOE determination of 8% Reduction from 90.1-2013							
1 point if AutoDR program not available. 2 points if AutoDR program is available. Confirm AutoDR availability with NGrid.							
2% = 1 / 5% = 2 / 10% = 3 / 20% = 4 / 40% = 5. Section 610 requires 0.50 W/sf or 3%							
Not addressed in the IgCC							



Chapter 3 – Jurisdictional Requirements

Key Concepts

- ASHRAE 189.1-2014 removed as a compliance option
- Jurisdictional Requirements (Table 302.1) allow jurisdictions to add stringency and address regional priorities
 - RI will include project elective requirements in Table 302.1

Rhode Island Stretch Code



**TABLE 302.1
REQUIREMENTS DETERMINED BY THE JURISDICTION**

Section	Section Title or Description and Directives	Jurisdictional Requirements	
CHAPTER 1. SCOPE AND ADMINISTRATION			
101.3 Exception 1.1	Detached one- and two-family dwellings and multiple single-family dwellings (town-houses) not more than three stories in height above grade plane with a 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	X 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	X 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	X No
CHAPTER 4. SITE DEVELOPMENT AND LAND USE			
402.2.1	Flood hazard area preservation, general	X Yes	<input type="checkbox"/> No
402.2.2	Flood hazard area preservation, specific	X Yes	<input type="checkbox"/> No
402.3	Surface water protection	X Yes	<input type="checkbox"/> No
402.5	Conservation area	<input type="checkbox"/> Yes	X No
402.6	Agricultural land	X Yes	<input type="checkbox"/> No
402.7	Greenfield sites	X Yes	<input type="checkbox"/> No
407.4.1	High-occupancy vehicle parking	X Yes	<input type="checkbox"/> No
407.4.2	Low-emission, hybrid and electric vehicle parking	X Yes	<input type="checkbox"/> No
409.1	Light pollution control	X 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% X 65% <input type="checkbox"/> 75%	
CHAPTER 6. ENERGY CONSERVATION, EFFICIENCY AND CO ₂ e EMISSION REDUCTION			
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 energy performance.	Occupancy: <u>All</u> zEPI: <u>46</u>	
604.1	Automated demand response infrastructure	<input type="checkbox"/> Yes	X No
CHAPTER 7. WATER RESOURCE CONSERVATION, QUALITY AND EFFICIENCY			
702.6	Municipal reclaimed water	<input type="checkbox"/> Yes	X No
CHAPTER 8. INDOOR ENVIRONMENTAL QUALITY AND COMFORT			
804.2	Post-Construction Pre-Occupancy Baseline IAQ Testing	X Yes	<input type="checkbox"/> No
807.1	Sound transmission and sound levels	<input type="checkbox"/> Yes	X No
CHAPTER 10. EXISTING BUILDINGS			
1007.2	Evaluation and certification of existing buildings and building sites	<input type="checkbox"/> Yes	X No
1007.3	Post-certificate of occupancy annual net energy use, energy demand, and CO ₂ e emissions reporting	X Yes	<input type="checkbox"/> No
APPENDIX A. PROJECT ELECTIVES			
A 101	Project Electives	Min. Required 6	



Appendix A – Project Electives

- Contains provisions to achieve increased conservation in all areas covered by the IgCC
- Separate tables allow for increased jurisdictional specificity to address regional priorities
- Project Electives were previously included in Chapter 3 and Table 302.1 in v2.0
- Become mandatory upon selection
- Project Elective Examples:
 - Decreased zEPI scores (in increments of five)
 - Brownfield Development
 - Increased Renewable Energy Production
 - Acoustics
 - Innovative Water Use Reduction

Rhode Island Stretch Code



TABLE A103.2
PROJECT ELECTIVES - A MINIMUM OF SIX MUST BE COMPLETED FOR STRETCH CODE COMPLIANCE

SECTION	DESCRIPTION	OWNER SELECTIONS	
A104.1.1	Flood hazard area preservation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.1.2	Flood hazard area minimization	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.1.3	Flood hazard area, existing building	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.2	Wildlife corridor	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.3	Infill site	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.4	Brownfield site	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.5	Site restoration	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.6	Mixed-use development	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.7	Changing and shower facilities	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.8	Long-term bicycle parking and storage	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.9.1	Site hardscape project elective 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.9.2	Site hardscape project elective 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.9.3	Site hardscape project elective 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A104.9.4	Roof covering project elective	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.1	Waste management	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.2	Construction waste landfill maximum	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.3(1)	Reused, recycled content, recyclable, bio-based and indigenous materials (70%)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.3(2)	Reused, recycled content, recyclable, bio-based and indigenous materials (85%)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.4	Service life plan	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.5	Design for deconstruction and building reuse	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.6	Existing building reuse	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.7	Historic building reuse	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.8	Integrated design	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A105.9	Deconstruction	<input type="checkbox"/> Yes	<input type="checkbox"/> No
A106.1	Project zEPI is at least 5 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 10 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 15 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 20 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 25 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 30 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Project zEPI is at least 35 points lower than required by Table 302.1	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Rhode Island Stretch Code



Why base the Stretch code on the IgCC?

- It is written in enforceable mandatory language
- It is consistent and coordinated with other I-Codes
- It provides flexibility to address regional priorities
- It addresses:
 - Conservation of:
 - Natural resources
 - Energy
 - Materials
 - Indoor Environmental Quality and Comfort
 - Commissioning and Operations and Maintenance



Benefit of a Voluntary Stretch Code

- National Grid has agreed to provide additional incentive funding to projects electing to follow the voluntary stretch code adopted by the State.
- Incentives would be offered up to 75% of the incremental cost of the project for projects exceeding current energy code, similar to existing programs
- The Stretch Code can be used for compliance with the Green Buildings Act AND to qualify for utility incentives.

nationalgrid

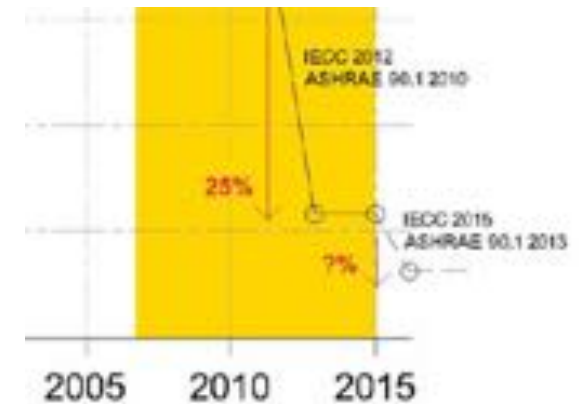
THE POWER OF ACTION

What's Coming, Future Trends



Trends for future green building codes and standards

- More compliance options
- Outcome based performance requirements
- More and better energy modeling
- More metering requirements
- Requirements for process load reductions
- Standardized baseline for building comparison
- Peak load reduction and automated demand response
- More requirements for renewable energy
- Post occupancy requirements
- Net zero energy!!



Recommended Resources



<http://www.iccsafe.org/cs/IGCC/>

U.S. DOE Building Energy Codes Program

<http://www.energycodes.gov/>

AIA Sustainability Resource Center

<http://www.aia.org/practicing/groups/kc/AIAS077433>

New Buildings Institute

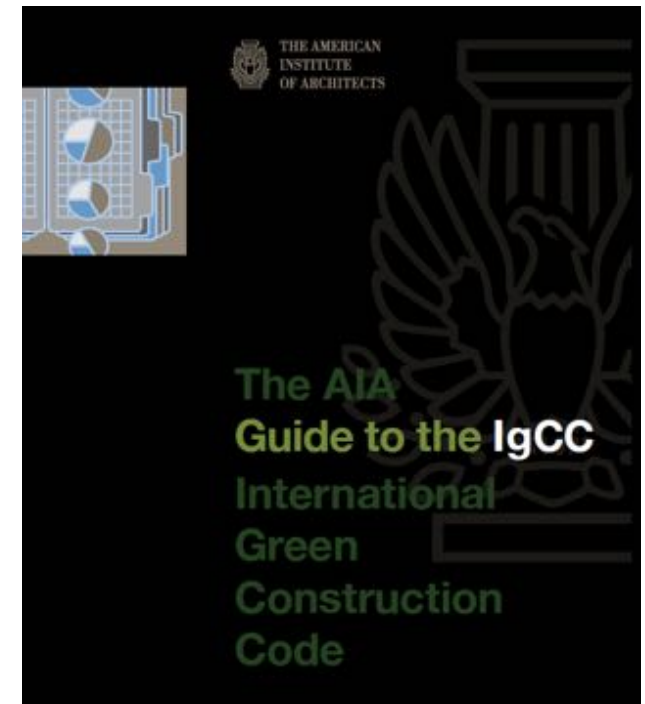
<http://www.newbuildings.org/>

U.S. Green Buildings Council

<http://www.usgbc.org/>

U.S. Energy Information Administration

<http://www.eia.gov/>



Questions?



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