

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

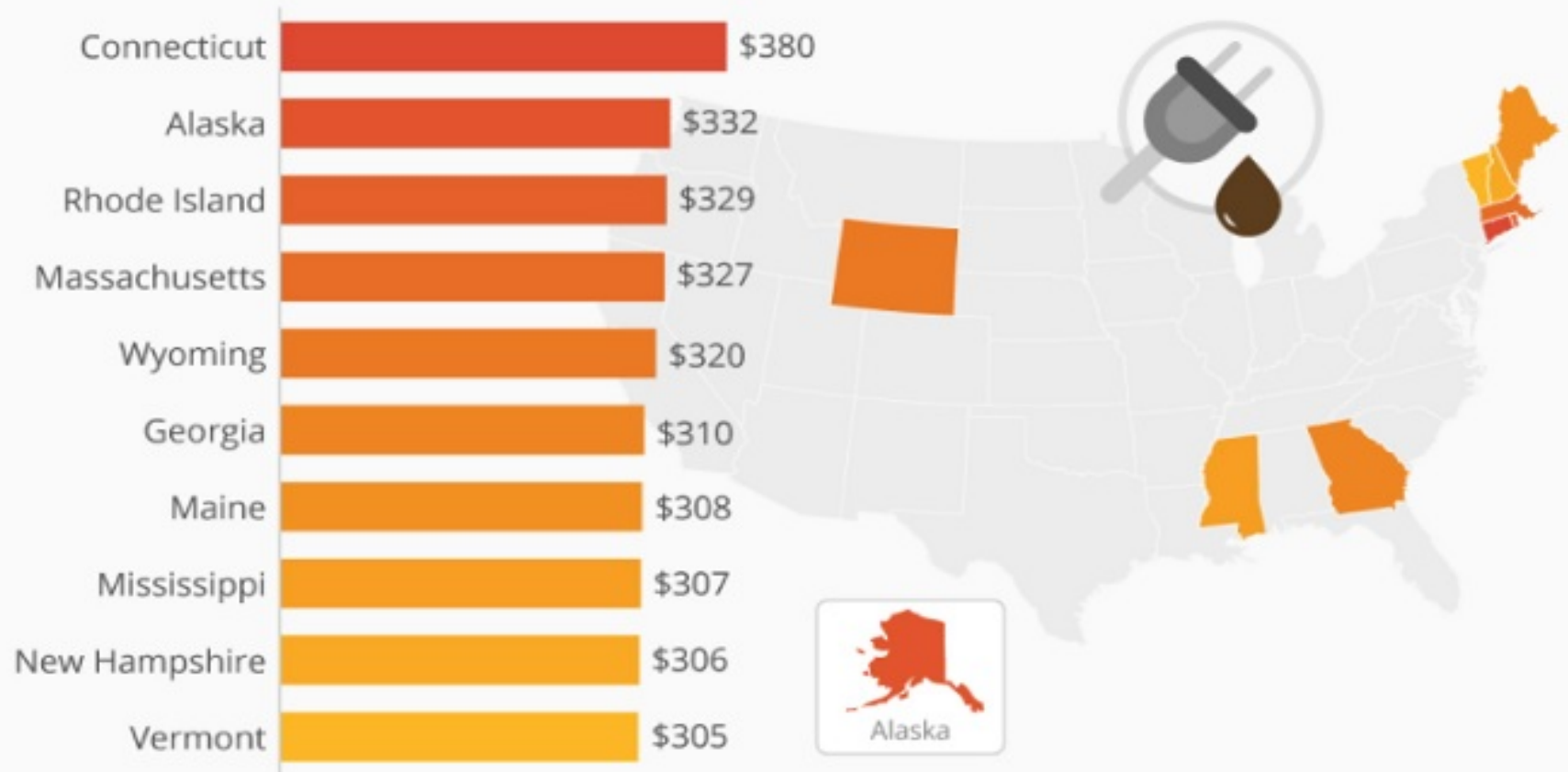


The Why



The U.S. States With The Highest Energy Costs

Average monthly energy cost by state in 2017*



* Including monthly electricity, natural gas, motor fuel and heating oil costs



@StatistaCharts

Source: WalletHub

statista

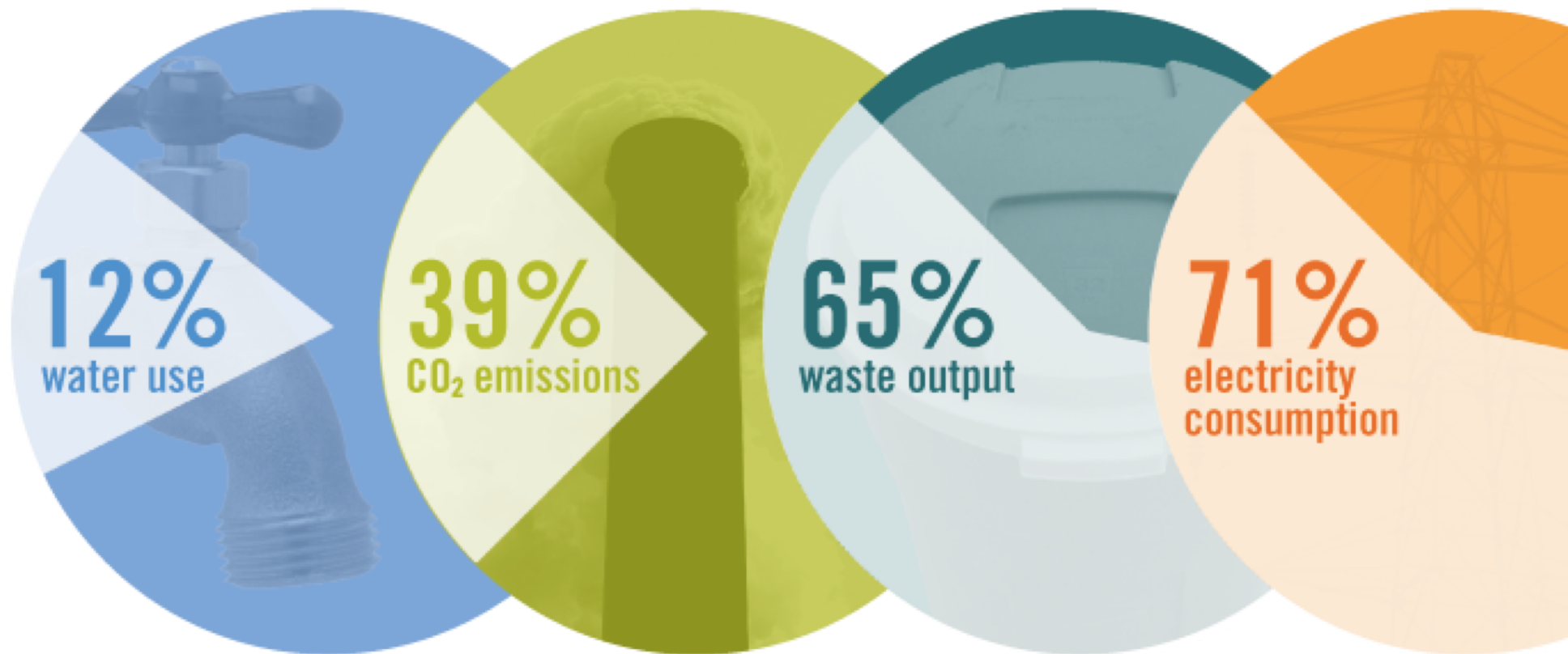
The Rhode Island Green Buildings Act (*RIGL § 37-24*)
Benefits, Compliance Options and Updates

The Rhode Island Green
Buildings Advisory Committee

The Why



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





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 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.**



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.*)



Rhode Island Stretch Code



- 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

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	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.
1			Credit	Electric Vehicles	1	D	Table 302.1, 407.4.1
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	Only a prerequisite for Schools & Healthcare
	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	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							

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 RI Energy Code AND the Green Buildings Act AND to qualify for utility incentives.

nationalgrid

THE POWER OF ACTION