

# NGBS 2020 vs. GreenPoint Rated National – Multifamily



## OVERVIEW

Both the ICC-700 National Green Building Standard® (NGBS) and GreenPoint Rated (GPR) systems offer a framework for assessing the health, performance, and sustainability of new and renovated buildings.

The NGBS was developed through an open consensus process and is the first and only residential-specific rating system to be approved by the American National Standards Institute (ANSI). Applicable to new and existing buildings, the NGBS is designed to serve residential buildings of all types irrespective of the building height, construction style, or climate zone. The NGBS’s scope includes single-family homes, multifamily and mixed-use buildings, and land development.

There are two GreenPoint Rated systems: 1) the Existing Home Rating System, which is similar in scope to the NGBS Existing Buildings scoring path; and 2) the New Home Rating System, which is similar in scope to the NGBS New Construction scoring path.

## CERTIFICATION PROGRAM COMPARISON

Both certification programs – NGBS Green administered by Home Innovation Research Labs, and the GPR program by Build It Green – have one important feature: both are based on the NGBS. However, there are two key differences between the programs. First, **GPR is based on the significantly outdated 2012 NGBS**, which sets a baseline of the 2012 ICC I-codes. In most locations nationwide, the 2012 I-codes are **below the locally adopted code minimum**. NGBS Green is currently based on the 2015 NGBS and the 2020 NGBS. The 2015 NGBS sets a baseline of the 2015 I-codes and the 2020 NGBS sets a baseline of the 2018 I-codes. Home Innovation recently announced the sunset of the 2015 NGBS for its certification program, as its baseline is becoming outdated.

Second, rather than using the NGBS in its entirety as it was developed by the Consensus Committee, GPR has cherry-picked the green building practices that are required to earn its certification. This is important for two reasons: 1) buildings earning a GPR certification are NOT NGBS compliant; and 2) the NGBS as administered by GPR would not retain its approval as an ANSI standard because it has been so significantly altered by Build It Green.

## CATEGORIES OF GREEN PRACTICES

NGBS Green and GPR have practices in five identical categories. NGBS Green includes an additional category for building operation, maintenance, and building owner education; GPR has no comparable category.

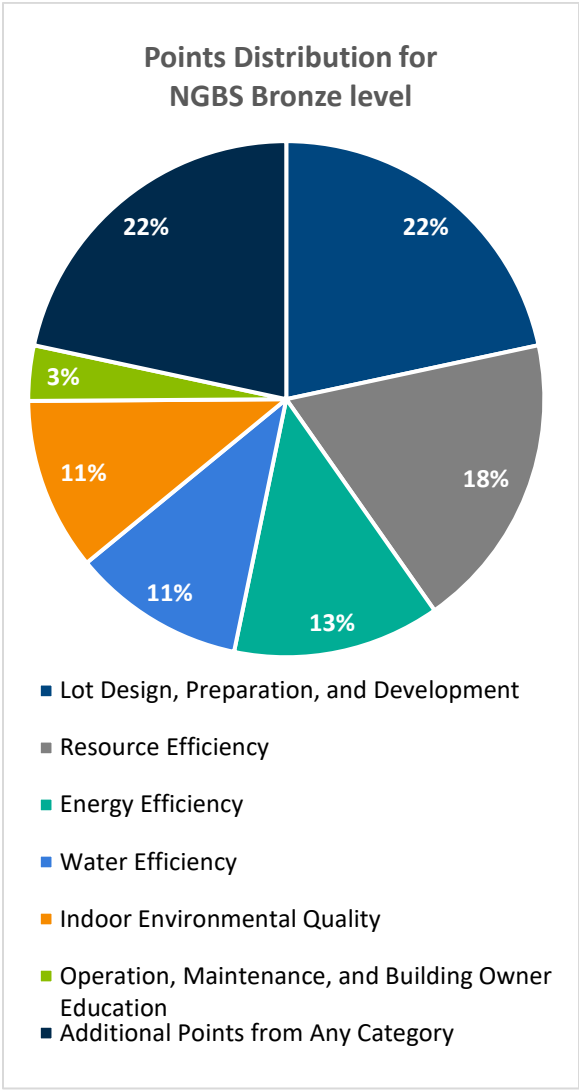
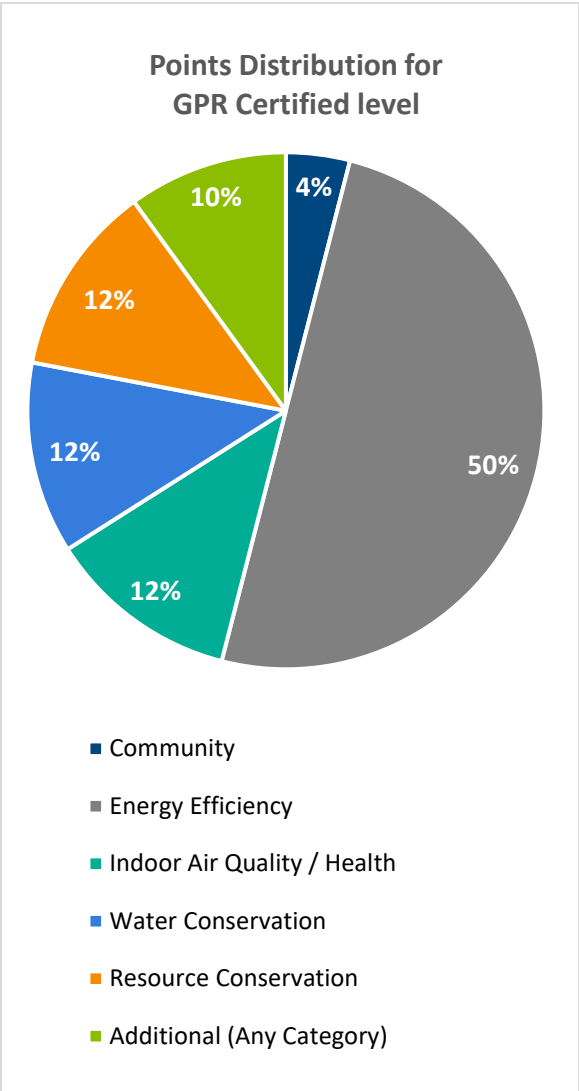
NGBS GREEN	GREENPOINT RATED
<ul style="list-style-type: none"> <li>• Lot Design, Preparation, and Development</li> <li>• Resource Efficiency</li> <li>• Energy Efficiency</li> <li>• Water Efficiency</li> <li>• Indoor Environmental Quality</li> <li>• Operations, Maintenance, and Homeowner Education</li> </ul>	<ul style="list-style-type: none"> <li>• Community</li> <li>• Resource Conservation</li> <li>• Resource Efficiency</li> <li>• Water Conservation</li> <li>• Indoor Air Quality / Health</li> </ul>

# MINIMUM POINTS DISTRIBUTION COMPARISON

While both programs address similar categories of green practices, the distribution of practices available under each category differ. As you can see in the pie charts below, NGBS Green certification presents a more balanced offering of green practices.

The chart below shows minimum points distribution, in percentage, for GreenPoint Rated – Certified level. Of the total 50 points, 25 points (50%) are focused on Energy Efficiency, and only 2 points (4%) are dedicated to Community. This is a significant disparity between percentage allocation amongst the categories.

The chart below shows percentage points distribution for NGBS Green Certified – Bronze level. The number of points that are achievable within each of the NGBS section is relatively even, with each comparable category having between 11% and 22% of the available points. Additionally, an equal proportion of points is needed in each category to move to a higher certification level. (Refer the threshold point rating table below for more detail.)



**Table 303**  
**Threshold Point Ratings for Green Buildings**

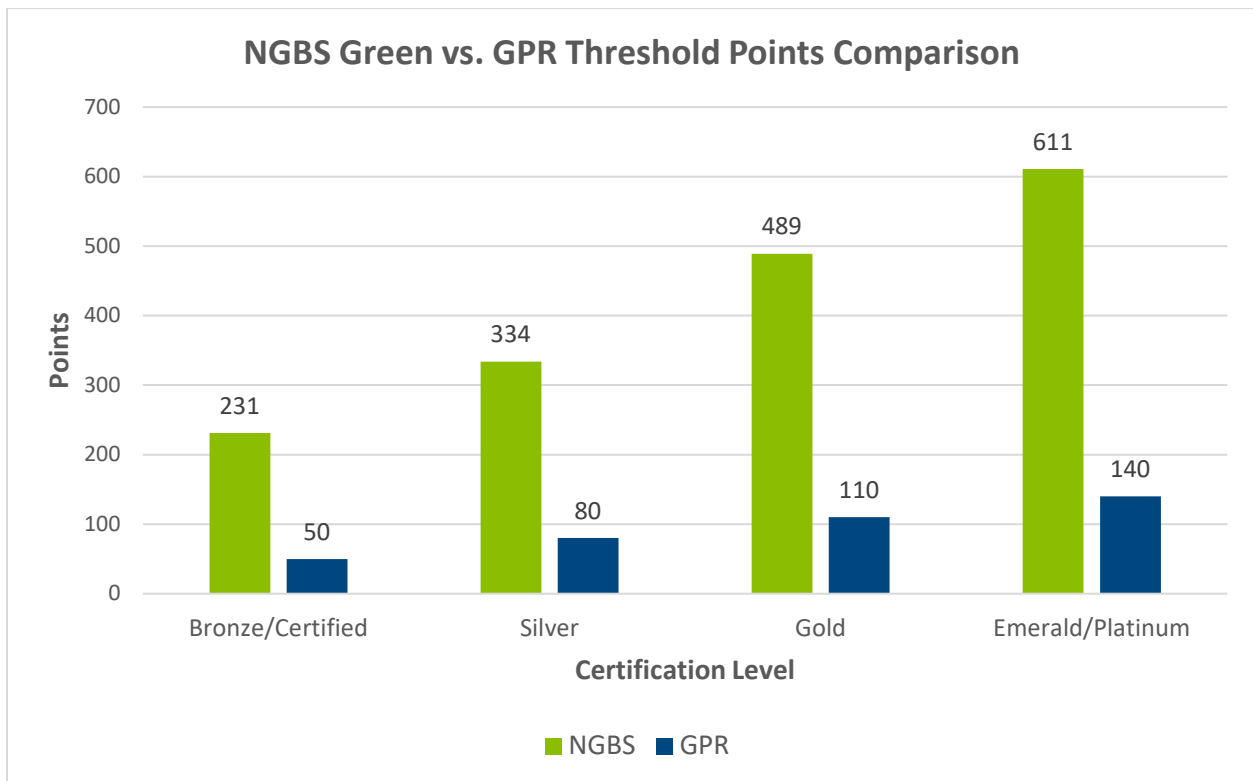
Green Building Categories			Rating Level Points <sup>(a) (b)</sup>			
			BRONZE	SILVER	GOLD	EMERALD
1.	Chapter 5	Lot Design, Preparation, and Development	50	64	93	121
2.	Chapter 6	Resource Efficiency	43	59	89	119
3.	Chapter 7	Energy Efficiency	30	45	60	70
4.	Chapter 8	Water Efficiency	25	39	67	92
5.	Chapter 9	Indoor Environmental Quality	25	42	69	97
6.	Chapter 10	Operation, Maintenance, and Building Owner Education	8	10	11	12
7.		Additional Points from Any Category	50	75	100	100
<b>Total Points:</b>			<b>231</b>	<b>334</b>	<b>489</b>	<b>611</b>

- (a) In addition to the threshold number of points in each category, all mandatory provisions of each category shall be implemented.
- (b) For dwelling units greater than 4,000 sq. ft. (372 m<sup>2</sup>), the number of points in Category 7 (Additional Points from Any Category) shall be increased in accordance with Section 601.1. The "Total Points" shall be increased by the same number of points.

Source: 2020 National Green Building Standard®

### POINTS COMPARISON

The chart below shows the huge discrepancy between the overall threshold points for NGBS Green and GPR certification level. At the lowest certification tiers, NGBS Green compliance requires nearly 200 more points than GPR. At the highest, NGBS Green requires more than 470.



## NON-CALIFORNIA MANDATORY REQUIREMENTS

GPR has two short lists of prerequisites (mandatory practices) for multifamily buildings – one for California and another for the other 49 states. Below is a comparison of GPR prerequisites with corresponding NGBS requirements. Most GPR prerequisites have a similar or more rigorous requirements within the NGBS.

GPR National (non-CA) Multifamily prerequisites	NGBS 2020 Comparable Requirements
1. Meet ICC 700 2012 NGBS Mandatory Measures	1. Meet ICC 700 2020 NGBS Mandatory Measures
2. Roofing warranty for shingle roofing	2. N/A
3. Meet ASHRAE 62.2-2016 Ventilation Residential Standards	3. Meet ASHRAE 62.2-2010 Ventilation Residential Standards (mandatory if air infiltration is below 5ACH50 or 0.33ELR)
4. Home Outperforms ASHRAE 90.1-2010 or HERS Index [HERS Index of 70 OR a 5% threshold above ASHRAE 90.1-2010 must be achieved]	4. Exceed ASHRAE 90.1-2010 or HERS Index [HERS Index of 59 OR a 11.6% threshold above ASHRAE 90.1-2010 must be achieved – See figure below for direct comparison]
5. Complete and submit GPR Checklist	5. Complete and submit NGBS Green Scoring Tool
6. Complete Green Appraisal Addendum and share with Appraiser	6. Complete Residential Green and Energy Addendum and share with Appraiser (optional for points)

## MANDATORY REQUIREMENTS

GPR requires ICC-700 2012 mandatory measures for non-CA multifamily buildings. As an ANSI standard, the NGBS is updated on a regular basis. To date, the NGBS has been updated about every three years. The 2012 NGBS was published in 2013 and was based on the 2009 IECC. Since that publication date, three other NGBS versions have been released. The 2020 NGBS was approved by ANSI in January 2020 and is based on the 2020 IECC. There are key differences between the mandatory requirements in these two rating systems, which position the 2020 NGBS as a more rigorous standard. Below is a list of additional mandatory practices for every chapter in the 2020 NGBS that are more rigorous than the 2012 NGBS.

2020 NGBS Additional Mandatory Practices over 2012 NGBS	
<b>Chapter 6</b>	<ul style="list-style-type: none"> <li>Construction and waste management plan must include information on the proper handling and disposal of hazardous waste</li> </ul>
<b>Chapter 7</b>	<ul style="list-style-type: none"> <li>Grade I insulation installation is now mandatory for 2020 NGBS as opposed to 2012 NGBS which accepts Grade II insulation</li> </ul>
<b>Chapter 8</b>	<ul style="list-style-type: none"> <li>If irrigation system is installed, irrigation plan and implementation are executed by qualified professional certified by a WaterSense labeled program or equivalent program</li> <li>Pools must have dedicated meter to measure water supplied to pool or spa</li> </ul>
<b>Chapter 9</b>	<ul style="list-style-type: none"> <li>Carbon monoxide alarms mandatory for buildings regulated by the IRC</li> <li>Microbial growth and moisture inspection</li> <li>Radon testing (mandatory for Zone 1)</li> </ul>
<b>Chapter 10</b>	<ul style="list-style-type: none"> <li>Training of building owners, for single-family and multifamily projects</li> <li>Occupant manual must be compiled and distributed</li> </ul>

Figure 1 below shows an energy efficiency comparison between GPR and the 2020 NGBS Bronze for multifamily new construction. The 2020 NGBS Bronze is significantly higher (6.6%) than GPR MF New Homes in Energy Efficiency. NGBS requires higher energy performance as you move up the certification levels. 2020 NGBS Emerald in comparison with GPR MF New Home is about 26% higher in energy efficiency as shown in Figure 2.

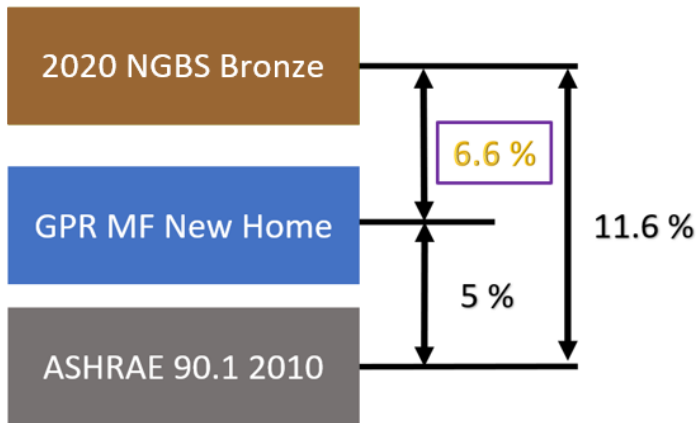


Figure 1

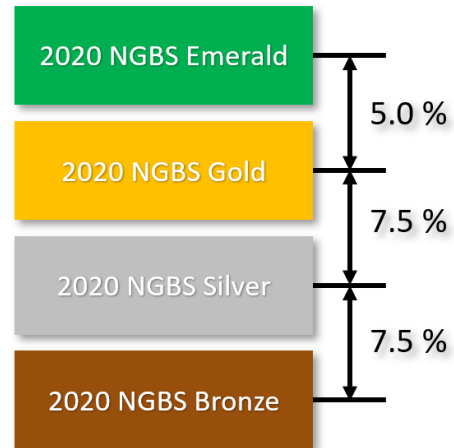


Figure 2

Source: [https://www.homeinnovation.com/-/media/Files/Certification/Green\\_Building/2020-Energy-Comparison-mid-high.pdf](https://www.homeinnovation.com/-/media/Files/Certification/Green_Building/2020-Energy-Comparison-mid-high.pdf)

## VERIFICATION REQUIREMENTS:

The verification process for GPR is similar to the NGBS Green verification process.

Most NGBS new construction projects are required to be inspected at least twice by an independent, third-party NGBS Green Verifier. The verifier must perform a rough inspection before the drywall is installed to observe the wall cavities, and a final inspection once the project is complete. Most practices must be visually inspected to receive points – documentation, photos, or written assertions are not allowed as alternatives. NGBS allows sampling of 1 in 5 or 1 in 7 units (depending on the verifier’s experience and credentials) for projects with more than 20 units.

The GPR verification process starts with a plan review, followed by rough and final inspections. Two distinct site visits are required during this process. The rough verification visit typically occurs at the pre-drywall phase before a majority of the building interior walls have been closed with drywall or other wall coverings. A final verification is required to check those measures that were not visible from the first site visit. GPR allows sampling of 1 in 7 of occupied/unoccupied units for voluntary practices.

## CERTIFICATION COST (Based on 4-Story, 100-Unit New Construction)

The following represents the cost of certification to each program based on a 4-story 100-unit New Construction project.

### NGBS Green Certification Cost

Registration is FREE

Certification Fees: = \$700/building + (\$30/unit x 100 units)

**TOTAL Cost = \$3,700**

### GPR Certification Cost

Application Cost = \$400 + (\$15/unit x 100 units) = \$1,900

Certification Cost = \$35/unit x 100 units = \$3,500

**TOTAL Cost (Application Cost + Certification Cost) = \$5,400**

GPR's cost for certification of this representative building is 46% higher than the cost to certify using NGBS Green. GPR's application cost is \$1,900, whereas NGBS Green offers free registration. The NGBS Green total cost per unit for certification is \$30, as opposed to GPR's \$50 (Application Cost + Certification cost) per unit – 67% higher than NGBS.

## CONCLUSION

Both NGBS Green and GPR certification programs offer frameworks for assessing the health, performance, and sustainability of new and renovated buildings. Because it is based on the entire NGBS, NGBS Green certification is more rigorous and comprehensive, covering many green building practices that GPR does not address. On a national level, GPR depends on ICC 700 2012 for mandatory measure, which is far less stringent than the 2020 NGBS mandatory practices. Bronze-level NGBS compliance requires almost 7% higher energy performance than GPR. Also, for mid-rise multifamily buildings, GPR application and certification costs are significantly higher than NGBS Green certification fees. Overall, NGBS Green is a more rigorous and cost-effective green certification option than GPR.