FIND A BETTER PLACE TO CALL HOME

A SMARTER INVESTMENT. A HEALTHIER HOME. A HAPPIER YOU.

2018 NGBS  April 2017
One Standard, All Residential

- Housing for
  - Renters / Buyers
  - Seniors
  - Students
  - Travelers (extended-stay hotels)

- Buildings that provide for living, sleeping, eating, sanitation

- Housing that is
  - Affordable / Subsidized
  - Urban walkable
  - Suburban or rural
NGBS Green Certification
Activity by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
</tr>
<tr>
<td>2011</td>
<td>8</td>
</tr>
<tr>
<td>2012</td>
<td>12</td>
</tr>
<tr>
<td>2013</td>
<td>17</td>
</tr>
<tr>
<td>2014</td>
<td>20</td>
</tr>
<tr>
<td>2015</td>
<td>25</td>
</tr>
<tr>
<td>2016</td>
<td>25</td>
</tr>
<tr>
<td>NGBS Project Type</td>
<td>Certified</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Single-Family Homes (new &amp; remodeled) *</td>
<td>12,064</td>
</tr>
<tr>
<td>Multifamily Buildings (new &amp; remodeled)</td>
<td>2,569</td>
</tr>
<tr>
<td>Units within NGBS Multifamily Buildings *</td>
<td>89,512</td>
</tr>
<tr>
<td>Land Developments</td>
<td>25</td>
</tr>
<tr>
<td>Lots within NGBS Land Developments</td>
<td>1,652</td>
</tr>
</tbody>
</table>
Green Certification Marketshare

- LEED: 25%
- NGBS Green: 33%
- Green Communities: 15%
- Green Built Gulf Coast: 8%
- EarthCraft: 8%
- Austin Energy: 4%
- Green Built WA: 3%
- Green Built TX: 3%
- Green Globes: 1%
TOP 10 STATES OVERALL
2016 NGBS GREEN CERTIFICATION

OVERALL
1. TEXAS
2. FLORIDA
3. NORTH CAROLINA
4. COLORADO
5. VIRGINIA
6. GEORGIA
7. INDIANA
8. ARIZONA
9. MISSOURI
10. SOUTH CAROLINA
Top 10 MF & SF States for 2016

1. TEXAS
2. FLORIDA
3. NORTH CAROLINA
4. COLORADO
5. VIRGINIA
6. GEORGIA
7. INDIANA
8. ARIZONA
9. SOUTH CAROLINA
10. MASSACHUSETTS

1. NORTH CAROLINA
2. DELAWARE
3. VIRGINIA
4. MISSOURI
5. MISSISSIPPI
6. FLORIDA
7. NEVADA
8. WASHINGTON
9. NEW YORK
10. MARYLAND
### SF New Construction Stats

<table>
<thead>
<tr>
<th>NGBS Version</th>
<th>2008</th>
<th>2012</th>
<th>2012 In-process</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF Homes</td>
<td>6,036</td>
<td>4,448</td>
<td>1,659</td>
</tr>
</tbody>
</table>
SF Builders

- Custom, small volume, and regional production
- Looking to set themselves apart from national production builders
- All locations: urban, suburban, ex-urban
- All price ranges
- Harder to compete in areas with a local green building program
# MF New Construction Stats

## NGBS Version

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2012</th>
<th>2012 In-process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings</td>
<td>1,333</td>
<td>932</td>
<td>1,371</td>
</tr>
<tr>
<td>Units</td>
<td>56,971</td>
<td>28,243</td>
<td>69,918</td>
</tr>
<tr>
<td>Average Height</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Average # Units</td>
<td>42</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Tallest</td>
<td>70</td>
<td>33</td>
<td>55</td>
</tr>
</tbody>
</table>
## Renovation Stats

<table>
<thead>
<tr>
<th>NGBS Version</th>
<th>2008</th>
<th>2012</th>
<th>2012 In-progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF Rehab</td>
<td>204</td>
<td>21</td>
<td>45</td>
</tr>
<tr>
<td>MF Rehab</td>
<td>151</td>
<td>126</td>
<td>68</td>
</tr>
<tr>
<td>Avg. Height</td>
<td>1-2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Average # units</td>
<td>8</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Functional Area Rehab</td>
<td>0</td>
<td>9</td>
<td>2</td>
</tr>
</tbody>
</table>
Certification Levels
2008 + 2012 NGBS

Bronze: 26%
Silver: 13%
Gold: 59%
Emerald: 2%
2008 NGBS Certification Levels

- 61% Bronze
- 24% Silver
- 12% Gold
- 3% Emerald
2012 NGBS Certification Levels

- Bronze: 60%
- Silver: 26%
- Gold: 12%
- Emerald: 2%
MF Builders

- All segments of MF industry
- Largely new construction
- Market-rate, affordable, LIHTC, conversions
- Perceived value is long term valuation
- Corporate responsibility, marketing
Multifamily

- Broad diversity of building types and locations
- Used frequently for single building project, apartment and campus communities
- MF renovation needs varied
  - Multi-year renovation
  - Rolling renovations for occupied properties
  - Minor, moderate, and gut rehab
  - Historic and affordable properties
Student Housing
The Retreat, Blacksburg, VA
Seniors Housing

- Significant increase in seniors housing, assisted living, residential memory care units
- Desire to earn NGBS Green certification
- Projects are residential in nature, not institutional, with limited care provided for residents
- Typically have facilities for sleeping, living, sanitation, and eating (meeting NGBS definition of dwelling unit)
NGBS Remodel Path:
Streamlined, Performance-based
Renovation Path

- Great opportunity to reach poorly performing existing buildings
- To date, used infrequently but MF renovations on the rise
- Pro: Focus on energy and water efficiency improvements
- Con: For MF buildings, doesn’t allow for rolling renovations which are common for occupied buildings
Historic Preservation
Artspace Artist Lofts, Michigan City, IN
Historic Renovation

- NGBS works very well with properties designated as historic
- Focus on achieving energy and water efficiency improvements regardless of how
- Restriction regarding window replacement or façade changes are not an issue
Office Conversions

- Have seen an increasing number of existing office buildings converted to residential and seeking NGBS Green certification
- Given the age of these properties can see a significant improvement in water and energy efficiency
- NGBS assures conversion addresses indoor environmental quality and not just energy
Land Development

• Have ranged in size from 8 lots to 20,000 acres
• Not used as extensively as we would like
• Land development certification can help SF homes earn certification – often developer’s actions impede builder’s ability to earn certification
Chapter 5
Site Selection & Lot Design

- Difficult for production homes to get enough number of points for certification
Lessons Learned

- Less suited to production builders
- Works well with MF projects of all types
- Renovation growing for MF buildings, but outstanding issues
- Limited use for SF remodeling
- Functional area remodeling not used
Transition to 2012 NGBS

• Approved March 2013
• SF sunset 18 months; MF sunset 3 years
  • MF deadline Feb 2016
  • SF deadline Dec 2014
• More uniformity in State code adoption
Transition to 2015 NGBS

• Approved Jan. 2016
• State Codes
  • 9 with no state code
  • 13 states still at 2009 IECC
  • 16 states between 2009 and 2012/2015
  • 8 at 2012/2015 IECC
  • 3 above 2015 IECC
• Sunset (construction completion) Dec 2021 for 2012 NGBS projects
2012 NGBS vs. 2015 NGBS

• 2012
  • Baseline is 2009 IECC
  • Bronze is roughly 15% above 2009 IECC
  • Majority of states at 2009 IECC

• 2015
  • Baseline is 2015 IECC
  • Bronze is roughly at 2015 IECC
  • More diversity – easier compliance in states at 2015 IECC, bigger lift in states still at 2009 IECC
Value Proposition

- NGBS is
  - Affordable
  - Flexible
  - Credible
  - Rigorous
- Green rating system designed specifically for residential buildings
- 4 certification levels provide broad relevance
Fine-Tune, Not Revamp

• No hands-on experience using 2015 yet
• NGBS development is faster than code adoption at the State level
• Home Innovation’s experiences as Adopting Entity can help Committee revise NGBS to maintain rigor, but become even more relevant
• NGBS is leading rating system for residential in U.S.
• Aspirational goal is to provide rigorous green certification that improves building performance + provides value to developers/builders
Market Drivers
MF Financing Incentives

- Institutional equity investors want green building certification
- Fannie Mae and Freddie Mac offer preferred financing for NGBS Green Certified buildings – new and rehab
- HUD offers significant mortgage insurance premium reduction for NGBS Green - new or rehab
Affordable Housing LIHTC Incentives

• 27 states recognize NGBS Green
• States either mandate or incentivize green certification to get higher performing, healthier residences
• Recognition can be game changer at state level
• Prior to NGBS, Enterprise Green was green rating system used most for affordable housing
Market Transformation

- Pivotal Energy downloads building and certification data nightly
- Consolidates into Axis validated rating data for distribution into the real estate market
- Goal to drive proper valuation of green homes
- Facilitate educated consumer decisions with regard to home buying and renting
Local Incentives Examples

- Density bonus; Miami, FL
- Building permit rebates; Cherry Hills, CO
- Defines High Performance Homes to be those certified as NGBS Silver, Gold, or Emerald; Maryland
- 10-year tax credit; Baltimore, MD
- Tax credit up to 35% of total costs for projects certified within Urban Transit Hubs
- 0.25 interest rate reduction for NGBS Green certified homes; Washington State
Chapter 10
Operation & Maintenance

• Too few points available to earn higher levels of certification
• Fannie Mae and HUD financing requirements will mean more buildings monitor energy performance
• Calculating energy performance in MF remains a challenge – most buildings are sub-metered
Alternative Compliance Path

- Adopted in Dallas, Baltimore, District of Columbia
- NGBS is alternative compliance path for buildings 4+ stories
- When adopted for buildings >4 stories, NGBS is sole compliance path
- Provided opportunity for third-party certification to demonstrate code compliance
Chapter 12
Functional Area
Renovation

- Rarely used
- Might be useful to consider applicability of chapter to MF and SF separately
Las Olas Walk
Fort Lauderdale, FL