Integrated Sustainability: **GREEN** Goes Mainstream

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  Trammell Crow Co.
- Matt Bearden
  Gables Residential
- James Hannah
  Bright Power

**MODERATOR:**
- Peter Zadoretzky
  Bozzuto Management Co.
Abbey Ehman
Senior Associate, Sustainability Chair
Sustainability Task Force

GOALS

- Advance TCC’s though leadership position on the Built Environment
- Ensure TCC continues to emerge as a market leader in Sustainability

ORGANIZATION

- All volunteer effort
- Diverse representation
- 12-month commitment
ABBEY EHMAN – Senior Associate | SoCal-Los Angeles
MATT CRAMER – Senior Vice President | SoCal-Newport Beach
GEORGE FARISH – Vice President | Houston
JW FIELDS – Senior Associate | Houston
STEPHEN KRAGER – Development Manager | Phoenix
CYNTHIA LANGHORST – Senior Director | Corporate
JOHN LARSON – Development Manager | Phoenix
SEAN LINDENMUTH – Construction Manager | MidAtlantic
JAMES MURRAY-COLEMAN – Senior Vice President | NE Metro
CHRIS NICKOLA – Associate Project Manager | Midwest
JONATHAN PROBST – Senior Associate | Dallas
Sustainability Task Force

**ORGANIZATION**
- Education
- Documentation
- Innovation

**MEASURABLES**
- Best Practices
- Third-party Reporting
- Shared Values
Sustainability – Impact + Evolution

VALUE CREATION

- Cost savings
- Market differentiation
- Policy implications
The Fillmore
Phoenix, AZ
LA Plaza Village
Los Angeles, CA
NATIONAL PORTFOLIO STATUS

STABILIZED
29,098 Communities (104)

DEVELOPMENT & LEASE-UP
3,097 Communities (11)

INVESTMENT PIPELINE
2,119 Communities (7)
Green Building Certifications

- LEED for Homes Design and Construction
- LEED for Building Design and Construction
- EarthCraft Multifamily
- EarthCraft Light Commercial
- EarthCraft Community
- National Green Building Standard
- Florida Green Building Coalition
- Austin Energy Green Building
Gables Brookhaven
Brookhaven, GA
Taking Care of the Way People Live®
James Hannah
VP, Client Energy Services
## Preventing Energy/Water Creep – What is it?

<table>
<thead>
<tr>
<th>Usage By Fuel</th>
<th>Full Year 2013 - Owner</th>
<th>Most Recent Year - Owner</th>
<th>Difference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Usage</td>
<td>5,969</td>
<td>6,521</td>
<td>+9%</td>
<td>552 mmBTU</td>
</tr>
<tr>
<td>Electric Usage</td>
<td>492,081</td>
<td>494,574</td>
<td>~</td>
<td>2,493 kWh</td>
</tr>
<tr>
<td>Gas Usage</td>
<td>42,898</td>
<td>48,330</td>
<td>+13%</td>
<td>5,432 Therms</td>
</tr>
<tr>
<td>Water Usage</td>
<td>4,545</td>
<td>4,811</td>
<td>+6%</td>
<td>266 kGal</td>
</tr>
</tbody>
</table>
How Do You Prevent Energy Creep?
Coordinated Transition from Development to Management

• Ensure that design decisions account for management team’s capabilities
• Complete commissioning of building systems with management team
• Metering is properly configured and billed
• Ensure maintenance protocol and service contracts are in place
Pro-active Monitoring and Management

DHW Mixing Valve – Functioning normal again after contractor called & addressed issue.
Tenant Engagement

• Training on proper use of in-unit controls

• Gamification of energy use

• Regular communication on seasonal tips on how to reduce energy and water use
Continuous Investments and Upgrades
## Moving in the right direction!

<table>
<thead>
<tr>
<th>Usage By Fuel</th>
<th>Q3 2015 - Owner</th>
<th>Most Recent Year - Owner</th>
<th>Difference</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Usage</td>
<td>2,208</td>
<td>1,659</td>
<td><strong>-25%</strong></td>
<td>mmBTU</td>
</tr>
<tr>
<td>Electric Usage</td>
<td>242,668</td>
<td>220,938</td>
<td><strong>-9%</strong></td>
<td>kWh</td>
</tr>
<tr>
<td>Gas Usage</td>
<td>13,799</td>
<td>9,053</td>
<td><strong>-34%</strong></td>
<td>Therms</td>
</tr>
<tr>
<td>Water Usage</td>
<td>3,583</td>
<td>3,299</td>
<td><strong>-8%</strong></td>
<td>kGal</td>
</tr>
</tbody>
</table>
THANK YOU!

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