Sustainability at the Mueller Redevelopment

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Green Building, Commercial Group

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Sustainability at the Mueller Redevelopment

Green Building Requirements

What is Green Building?
What does it take to achieve a Green Building Rating?

Results

What benefits do Green Buildings provide?

Current Projects

What projects are currently being rated in the Mueller neighborhood?
Integrative Approach - Key Stakeholders

Adapted from graphic by Bill Reed
Austin’s Green Building Legacy

1st Green Building program
1990
City of Austin

1st rating system
1991
Austin Energy Green Building (AEGB)

1st Green Building program
1990
City of Austin

Local Government Honor Award
1992
UN Earth Summit, Rio De Janeiro

1990 25 + years of history

25th Anniversary Celebration & Charrette
2016
Austin

Adoption of Climate Protection Plan
2007
City of Austin

Habitat Scroll of Honour
2011
United Nations awarded

10,000th home rated
2012
AEGB

Environmental Awareness Award
2010
City of Austin

Public Sector Leadership Award
2003
USGBC awarded

UN Convention on Climate Change
2015
Austin Mayor attends, Paris

Dell Seton Medical Center at UT
2018
AEGB

Host of 1st USGBC Conference
2002
AEGB

AEGB

2017

City of Austin

AEGB

AEGB

UN Convention on Climate Change
2015
Austin Mayor attends, Paris

1st Green Building program
1990
City of Austin

Local Government Honor Award
1992
UN Earth Summit, Rio De Janeiro

1st rating system
1991
Austin Energy Green Building (AEGB)
# AEGB Market Reach and Acceleration

<table>
<thead>
<tr>
<th></th>
<th>Underway</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commercial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projects</td>
<td>119</td>
<td>261</td>
</tr>
<tr>
<td>Million (sf)</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>Res Units</td>
<td>6,000</td>
<td>8,900</td>
</tr>
<tr>
<td><strong>Multifamily</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Res Units</td>
<td>3,440</td>
<td>25,888</td>
</tr>
<tr>
<td><strong>Single Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homes</td>
<td>1,312</td>
<td>15,432</td>
</tr>
</tbody>
</table>

![Map Image](image.png)

*Note: The map image is not translatable.*
Climate Protection Plan, City Initiatives & Austin Energy Goals (2025)

- Imagine Austin
- Zero Waste Plan
- Watershed Protection
- Austin Water Forward
- Vision Zero
- AE Generation Resource Plan
  - 800 MW Conservation Goal with 100 MW of DR
  - 950 MW Solar Goal with 110 MW of Local Solar
  - 55% Renewables Goal
  - 10 MW Storage Goal
  - 20% Emissions Reduction
# Austin Energy Green Building

## Local Sustainability Goals

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet COA Environmental Initiatives including the AE Generation Resource Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Austin Energy Green Building

Mission Statement: To cultivate innovation in building and transportation for the enrichment of the community’s environmental, economic and human well-being.

- **Single Family**
  - Production + custom

- **Multi-family**
  - Residential ≤ 7 stories

- **Commercial**
  - All commercial
  - Residential 7+ stories
Green Building: Star Powered

The star rating achieved by a project is determined by the number of sustainability measures incorporated into the project.

<table>
<thead>
<tr>
<th>Basic Requirements</th>
<th>1 Star</th>
</tr>
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<tbody>
<tr>
<td>35 – 44 pts</td>
<td>2 Star</td>
</tr>
<tr>
<td>45 – 54 pts</td>
<td>3 Star</td>
</tr>
<tr>
<td>55 – 74 pts</td>
<td>4 Star</td>
</tr>
<tr>
<td>75 pts or more</td>
<td>5 Star</td>
</tr>
</tbody>
</table>
## 2016 Commercial Rating

<table>
<thead>
<tr>
<th>Categories</th>
<th>Points</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Design</td>
<td>2</td>
<td>2.00%</td>
</tr>
<tr>
<td>Site</td>
<td>21</td>
<td>21.00%</td>
</tr>
<tr>
<td>Energy</td>
<td>29</td>
<td>29.00%</td>
</tr>
<tr>
<td>Water</td>
<td>13</td>
<td>13.00%</td>
</tr>
<tr>
<td>Indoor Environmental Quality</td>
<td>15</td>
<td>15.00%</td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td>12</td>
<td>12.00%</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>3.00%</td>
</tr>
<tr>
<td>Innovation</td>
<td>5</td>
<td>5.00%</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

![Commercial Rating – Point Allocation](image)
LEED Certification Systems
Mueller Design Guidelines

Commercial Projects > 25,000 sq ft
Multifamily Projects
2-Star AEGB Ratings
and/or
LEED Certification

Single Family Projects
3-Star AEGB Rating
Mueller by the Numbers

According to the Plan*

- Commercial ft²: 4.5 M ft²
  (14,000 employees)
  - 1,900,000 ft² institutional
  - 750,000 ft² retail
  - 1,900,000 ft² office/other commercial
- Dwelling Units: 6,200
  (14,000 new residents)
  - 3,650 apartments and condos
  - 2,550 single family homes, row houses, shop houses and Mueller houses
  - 25% of homes affordable
    (1,550 units for 80% MFI)

*subject to change

Results to Date (rated projects)

- Commercial 2.2 M ft²
  (43% built-out)
  - 1,214,000 M ft² institutional
  - 637,000 ft² retail
  - 420,000 ft² office/other commercial
- Dwelling Units: 3,636
  (44% built-out)
  - 2,013 apartments and condos
  - 1,623 single family homes, row houses, shop houses and Mueller houses
  - 25% of homes affordable
    (963 affordable homes)
Single Family

1,623 Rated Homes
- 3-Star: 1448
- 4-Star: 65
- 5-Star: 110

Total Savings
- 1,100 kW (Demand)
- 2,200 MWh (Energy)
- 30,000 tons diverted
Multifamily

2,013 Rated Units

- 1-Star: AMLI Phase I
- 2-Star: AMLI Phase II, Aldrich 51
- 3-Star: Mosaic, Elements, Greenway Lofts, Wildflower Terrace, Overture at Mueller
- LEED Silver: Wildflower Terrace
- LEED Platinum: AMLI Phase I and II

Total Savings

- 696 kW (Demand)
- 3,966 MWh (Energy)
- 9,071 Tons diverted (79%)
- 627,000 gals irrigation (100%)
- 14.6 M gals indoor (26%)
Commercial

53 Rated Projects
2.2 million ft²

Total Savings
• 5,875 kW (Demand)
• 17,408 MWh (Energy)
• 44,434 tons diverted (88%)
• 5.63 M gals irrigation (85%)
• 6.58 M gals indoor (32%)

Reclaimed Water Savings
• Irrigation: 24.7 M gals
• Projects that use reclaimed water indoors: Mueller Central, Mueller Diamond, Frost Bank, AISD PAC, and HEB
**AEGB 3-Star**
- Neighbors Emergency Center
- Strictly Pediatrics at Mueller
- South Regional Retail
  (26 at 3-Star)

**LEED Silver**
- Mueller Retail Building 10
- The Thinkery
- Residence Inn
- Wildflower Terrace
- Mueller Cinema

**LEED Silver and AEGB 3-Star**
- Starbucks
- Mueller Market District
AEGB 4-Star

- Satellite Dialysis
- Ella Wooten and John Gaines Parks
- Home Depot
- Alamo Drafthouse

LEED Gold

- Dell Children’s Medical Center
- Dell Pediatric Research Institute
- Frost Bank
- SEDL

AEGB 4-Star and LEED Gold

- H-E-B
- Seton Administration Offices
- Mueller Central – Visitors Center
- Mueller Diamond
**AEGB 5-Star**
- AISD Performing Arts Center

**LEED Platinum**
- Ronald McDonald House
- AMLI, Phase I and II
  (LEED for Homes and LEED NC)

**AEGB 5-Star and LEED Platinum**
- Dell Children’s Medical Center (2)
What do the Numbers Mean?

Annual Project Savings effectively:

- Planted 337,500 trees or 17,000 acres of forest in Austin parks
- Removed 29,500,000 Vehicle Miles or 2,500 cars from Austin’s busy roadways
- Provided electricity for 2,000 average Austin residences for a year
Current Projects

Mueller Cinema Building, Mueller Diamond, Mueller Town Center Park, Texas Mutual Insurance, Austin Energy Headquarters
LEED ND Gold

Mueller is one of the largest projects to participate in the program

Goal: Silver
Achieved: Gold
USGBC 2018 Leadership Awards

USGBC recognizes Mueller with 2018 Leadership Award during Greenbuild Conference.
Pictured (left to right):

- Jim Walker, Austin Community Leader
- Kathie Tovo, Mayor Pro Tem, Austin City Council District 9
- Sarah Talkington, Commercial Group Manager, Austin Energy Green Building
- Gail Vittori, Co-Director, Center for Maximum Potential Building Services
- Mahesh Ramanujam, President and CEO, USGBC
- Greg Weaver, Executive Vice President, Catellus Development Corporation
Mueller Energy Center

The Mueller Energy Center provides chilled water cooling, steam for sterilization, and onsite electric production to Seton’s Dell Children’s Medical Center. Other commercial projects can purchase chilled water for cooling their buildings. Additional capacity is being added to service new customers.

994,468 ft²
Customer facilities supplied with chilled water

3,817 tons
Peak cooling
Solar at Mueller

Solar ready construction guidelines at Mueller allowed commercial and residential customers to readily install PV solar panels and served as a guide for the solar ready ordinance introduced into the energy code.

232 kW
Commercial

Solar capacity on AEGB commercial rated buildings
Austin SHINES Project
Pairing Energy Storage with Solar

- Sustainable and Holistic Integration of Energy Storage and Solar PV
  - Residential
  - Commercial
  - Grid Scale
Mueller Energy Storage Update

The temporary fence will be replaced by a permanent perimeter wall and customer viewing area with educational signs that tie into the trail system in the neighborhood. A ribbon cutting is planned for the summer.
Thank you!

Contact me:
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