THE AIA 2030 COMMITMENT: BUILDING ENERGY LITERACY

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2030 OVERVIEW | TARGETS

- 2005: 50% Fossil fuel energy consumption
- 2010: 60% Fossil fuel energy consumption
- 2015: 70% Fossil fuel energy consumption
- 2020: 80% Fossil fuel energy reduction
- 2025: 90% Fossil fuel energy reduction
- 2030: 100% carbon neutral

Source: 2010 2030 Inc. / Architecture 2030
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Long range sustainability action plan that aligns with the stated 2030 benchmarks for achieving carbon neutrality.
2015 REPORTING DATA

The Program Continues to Grow

Number of signatory firms increased by 19%

The Institute is focused on increasing value to small firms
2015 REPORTING DATA

Total Area Reported

Continue to see more projects than ever are being reported.

Building area reported increased to 2.6B GSF – 8.3% increase.
Predicted Project Performance

Average pEUI increased by 1.5% but remained mostly flat across all reporting years.

Time to meet the challenge!
2015 REPORTING DATA

The Impact of Modeling

59% of projects used energy modeling
41% of projects used code equivalent baselines
Only Modeled Projects reach the reduction targets

Percent Improvement by pEUI Reduction Bins
## 2015 Reporting Data

### Whole building projects by use type

<table>
<thead>
<tr>
<th>Use type</th>
<th>Average pEUI reduction</th>
<th>Number of projects</th>
<th>Total GSF (million)</th>
<th>Average GSF</th>
<th>Average EUI*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>40.8</td>
<td>530</td>
<td>93.3</td>
<td>176,011</td>
<td>52</td>
</tr>
<tr>
<td>Higher education</td>
<td>40.7</td>
<td>428</td>
<td>47.0</td>
<td>109,857</td>
<td>82</td>
</tr>
<tr>
<td>K-12 education</td>
<td>43.7</td>
<td>413</td>
<td>32.3</td>
<td>78,268</td>
<td>45</td>
</tr>
<tr>
<td>Laboratory</td>
<td>46.3</td>
<td>198</td>
<td>25.5</td>
<td>128,712</td>
<td>201</td>
</tr>
<tr>
<td>Healthcare</td>
<td>38.1</td>
<td>606</td>
<td>131.0</td>
<td>216,222</td>
<td>125</td>
</tr>
<tr>
<td>Office</td>
<td>42.1</td>
<td>1,076</td>
<td>455.2</td>
<td>423,012</td>
<td>60</td>
</tr>
<tr>
<td>Retail</td>
<td>32.8</td>
<td>650</td>
<td>379.0</td>
<td>583,014</td>
<td>75</td>
</tr>
<tr>
<td>Multi-family residential</td>
<td>41.8</td>
<td>640</td>
<td>204.5</td>
<td>319,554</td>
<td>42</td>
</tr>
<tr>
<td>Single-family residential</td>
<td>46.4</td>
<td>155</td>
<td>1.5</td>
<td>9,348</td>
<td>26</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>35.8</td>
<td>679</td>
<td>619.4</td>
<td>912,261</td>
<td>61</td>
</tr>
<tr>
<td>Other</td>
<td>38.3</td>
<td>607</td>
<td>213.6</td>
<td>351,842</td>
<td>103</td>
</tr>
</tbody>
</table>
**2015 REPORTING DATA**

### Interiors projects by use type

<table>
<thead>
<tr>
<th>Use Type</th>
<th>Average pEUI reduction</th>
<th>Number of projects</th>
<th>Total GSF (million)</th>
<th>Average GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>28.2</td>
<td>67</td>
<td>3.1</td>
<td>45,545</td>
</tr>
<tr>
<td>Higher education</td>
<td>27.3</td>
<td>79</td>
<td>2.2</td>
<td>27,456</td>
</tr>
<tr>
<td>K-12 education</td>
<td>2.3</td>
<td>63</td>
<td>10.7</td>
<td>169,111</td>
</tr>
<tr>
<td>Laboratory</td>
<td>19.0</td>
<td>96</td>
<td>1.7</td>
<td>17,802</td>
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<tr>
<td>Healthcare</td>
<td>25.5</td>
<td>433</td>
<td>8.8</td>
<td>20,328</td>
</tr>
<tr>
<td>Office</td>
<td>28.1</td>
<td>800</td>
<td>40.5</td>
<td>50,666</td>
</tr>
<tr>
<td>Retail</td>
<td>35.3</td>
<td>142</td>
<td>2.0</td>
<td>14,097</td>
</tr>
<tr>
<td>Mixed use</td>
<td>30.9</td>
<td>39</td>
<td>3.4</td>
<td>87,693</td>
</tr>
<tr>
<td>Other</td>
<td>18.1</td>
<td>58</td>
<td>2.5</td>
<td>43,123</td>
</tr>
</tbody>
</table>
2015 Key Takeaways

- We can only meet 2030 targets with energy modeling.
- More firms are signing on. Good potential for more reporting next year.
- The pEUI reduction and overall GSF continues to grow and improve. But not as fast as we would like.
- The DDx is a new tool with greater value propositions.
A BIG STEP FORWARD…

to
TESTIMONIALS

• “…DDx allows us to learn from our past projects and utilize that knowledge to constantly improve…” - Nathan Kipnis, FAIA, Principal, Kipnis Architecture + Planning

• “Being able to access the data and see immediate results on how our projects are performing created a bit of a ‘wow factor’ that has gotten people within the firm excited and more engaged…” - Melissa DeStout, project architect with Perkins Eastman.
Let’s go live!
(if we can)
- 140-person, Boston based office
- Research and Healthcare Focus
- Integrated Building Science Group
PROGRESS TOWARDS GOALS | EUI REDUCTION

Reduction from Average Building

- 2010: 35%
- 2011: 35%
- 2012: 37%
- 2013: 34%
- 2014: 37%
- 2015: 38%

Reduction Target
PROGRESS TOWARDS GOALS | INTERIOR PROJECTS

Reduction in Interior Project LPD

- 2010: 21%
- 2011: 22%
- 2012: 17%
- 2013: 20%
- 2014: 22%
- 2015: 28%

Reduction Target: 25%

Legend:
- AIA
- Payette

Years:
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
PROGRESS OVER TIME

Predicted Energy Reduction vs. Year of Completion of Design.

Old Reduction Target

New Reduction Target

IMPACT OF INTERNATIONAL WORK

Predicted Energy Reduction vs Year of Completion of Design

Old Reduction Target
New Reduction Target

Sample data points for Domestic and Foreign designs, showing trends and comparisons.