BuildZero.Org - Background

- Team
- History: Zero Energy Building Design and Energy Modeling
- Vision
- Challenges
- Mission: Digital Infrastructure = Cloud Software Platform

- Software prototype demo
- Questions
High Performance Buildings

- Passive House Design / Build
- Zero Energy Design / Build

Silicon Valley
• Research
• Innovation
PH Tools: PHPP Energy Modeling

- Excel SS – 36 worksheet tabs
- Comprehensive variables
- Detailed thermal energy flows
- Modeling predicts energy loads
- Solves EB Equation
PH Tools: PHPP Energy Modeling

Worksheets
PH Tools: PHPP Energy Modeling

Verification Metrics

Monthly Heating Demand
Energy Balance Graphs
Create an energy conscious culture that sustainably produces what it consumes.

BuildZero.Org
Every second 3 minute 200 day 4,000 year 1.5M new US buildings

99% without energy/carbon focused design: an enormous opportunity cost

25%+ of building stock by 2030
Barriers to Climate Action Policy Implementation

1. Inertia of existing building culture

Lack of:
2. Knowledge and Design Skills (Software/Al)
3. Policy Implementation Logistics (Software)
4. Decision Support Tools (Analytics Software)
5. Community Engagement (Software)
Empower local communities, with modern digital tools, to easily create buildings that produce the energy they use.
BuildZero Platform – Open International Standards: Inter-operability for software and data sharing

<table>
<thead>
<tr>
<th>Area</th>
<th>Standards</th>
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<tbody>
<tr>
<td>Energy Calculations</td>
<td>EN ISO 52000 (EPB compliant) (formerly ISO 13789/90 etc.)</td>
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<tr>
<td>Energy Model Validation</td>
<td>IEA &amp; NREL “BESTtest” (ASHRAE Std 140)</td>
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<td>GIS Data</td>
<td>OGC (Open Geospatial Consortium)-GML3 &amp; others</td>
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<td>BZ Buildings Data Model</td>
<td>CityGML + Energy ADE</td>
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<tr>
<td>Open Source Software</td>
<td>JavaScript libraries, GIS, 3D data, BZ core, etc. …</td>
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<td>GIS (e.g. Open Street Maps), imagery, terrain, cadaster, lidar, etc. …</td>
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BuildZero transforms our ability to mitigate climate change.

... an open access digital platform that powers Zero Energy, Zero Carbon policy implementation.
• BuildZero Technology Stack
• Building Energy Designer demo
Through access to interactive data you can navigate the path to creating our zero energy future.
Build Zero: The Social Enterprise Model

- Drive usage to achieve adoption
- Introduce transaction fees to enable revenue source to fund platform growth
- Secure sponsorship
- Add premium user capabilities
- Offer brand advertising for energy conscious companies with aligned purpose
How You Can Help Build a Movement

Opportunities

- Test
- Invest
- Request