

ekotrope 

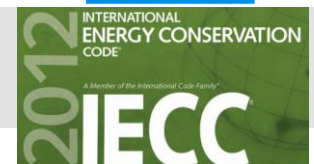


Agenda

- Who is Ekotrope?
- How do we plan to move the market?
- What is our technology?
- A real example.

Ekotrope Background

- Software company in Cambridge, MA
- MIT based technology developed for NASA
- Energy design software
- Nationally Accredited **HERS Rating Software by RESNET**
- **Energy Star** compliant
- **IECC 2006/2009/2012 Performance** certified



State of the Market

Most Builders Don't Emphasize Performance

- Energy efficient means more expensive.
- Marketing benefits of high efficiency buildings don't exceed costs.

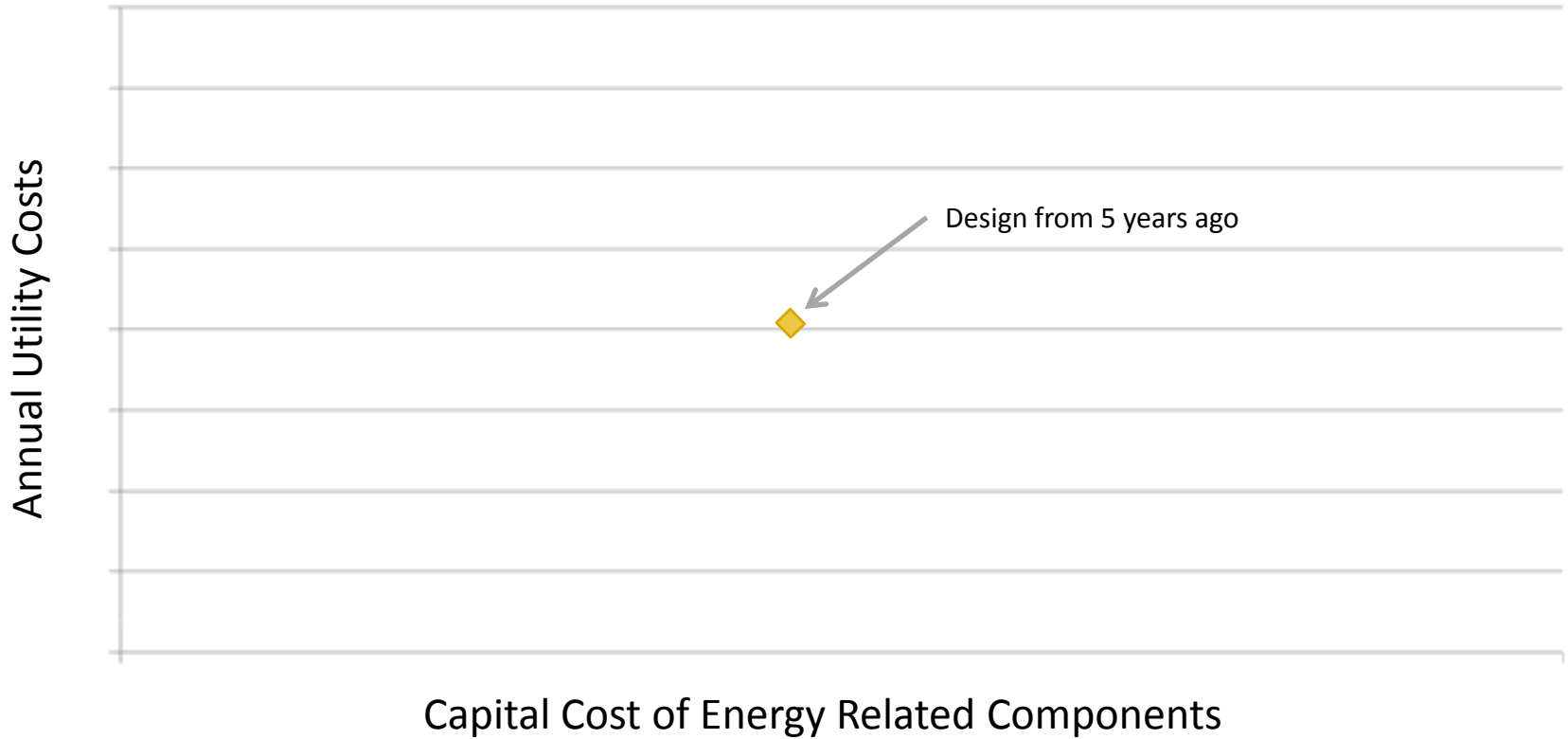
Some Builders *do* Emphasize Performance

- Design process is backwards and broken.
- Performance and cost are separated.
- "Optimizing" designs takes too much time.

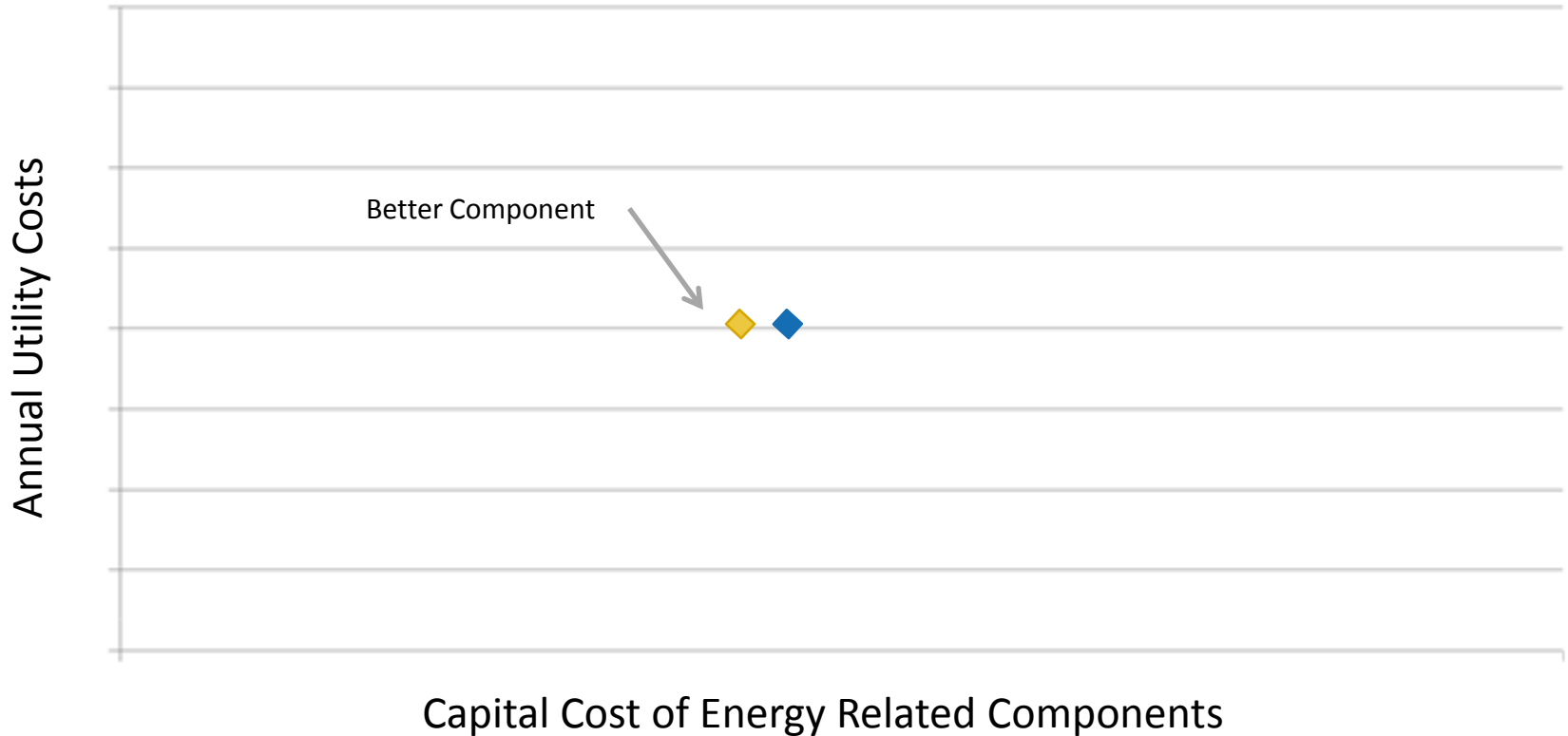
Our Solution

1. Upstream energy rating to integrate it into the design process.
2. Include cost in a comprehensive comparative analysis. (Energy efficient \neq more expensive)
3. Clearly illustrate the benefits of high efficiency designs to realize value of improved performance.

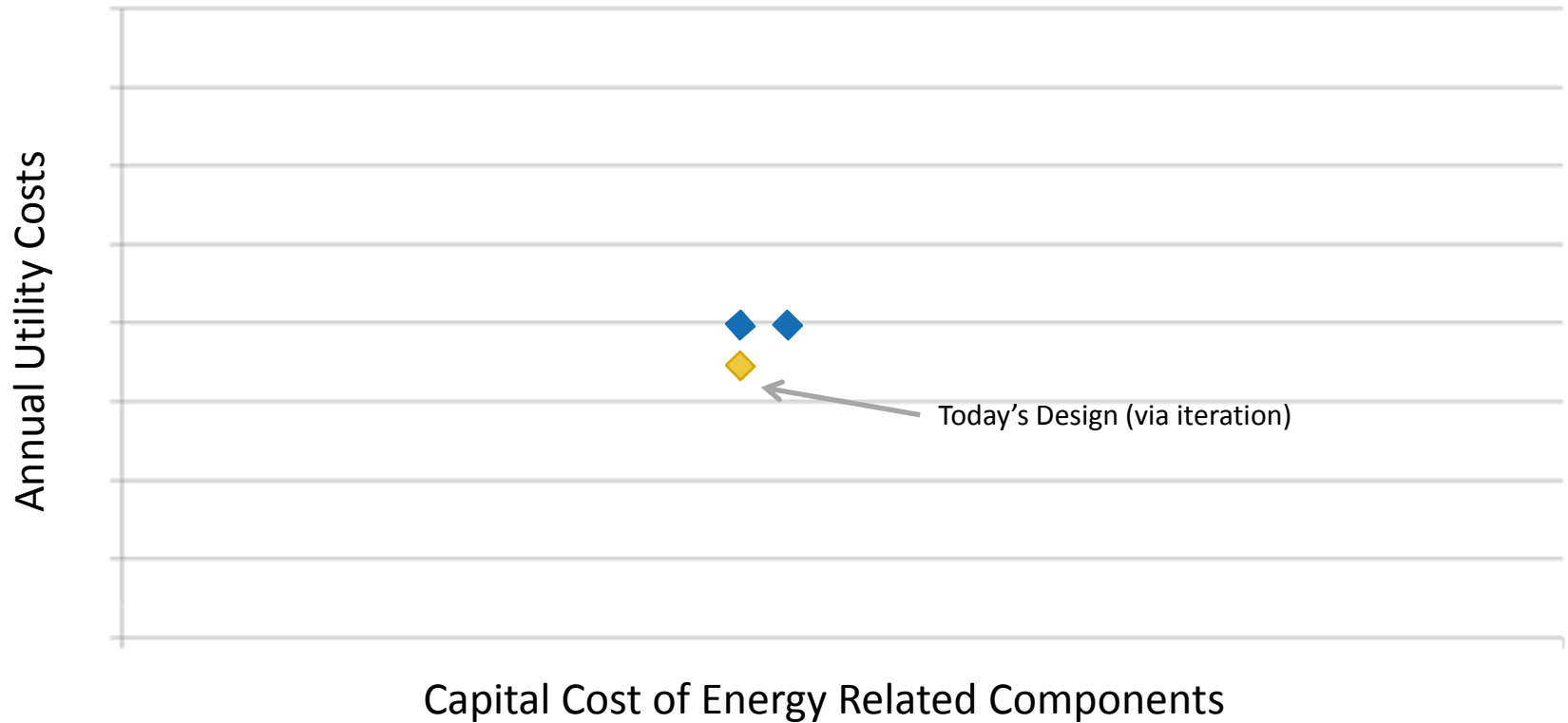
How Building Design Process Works Today



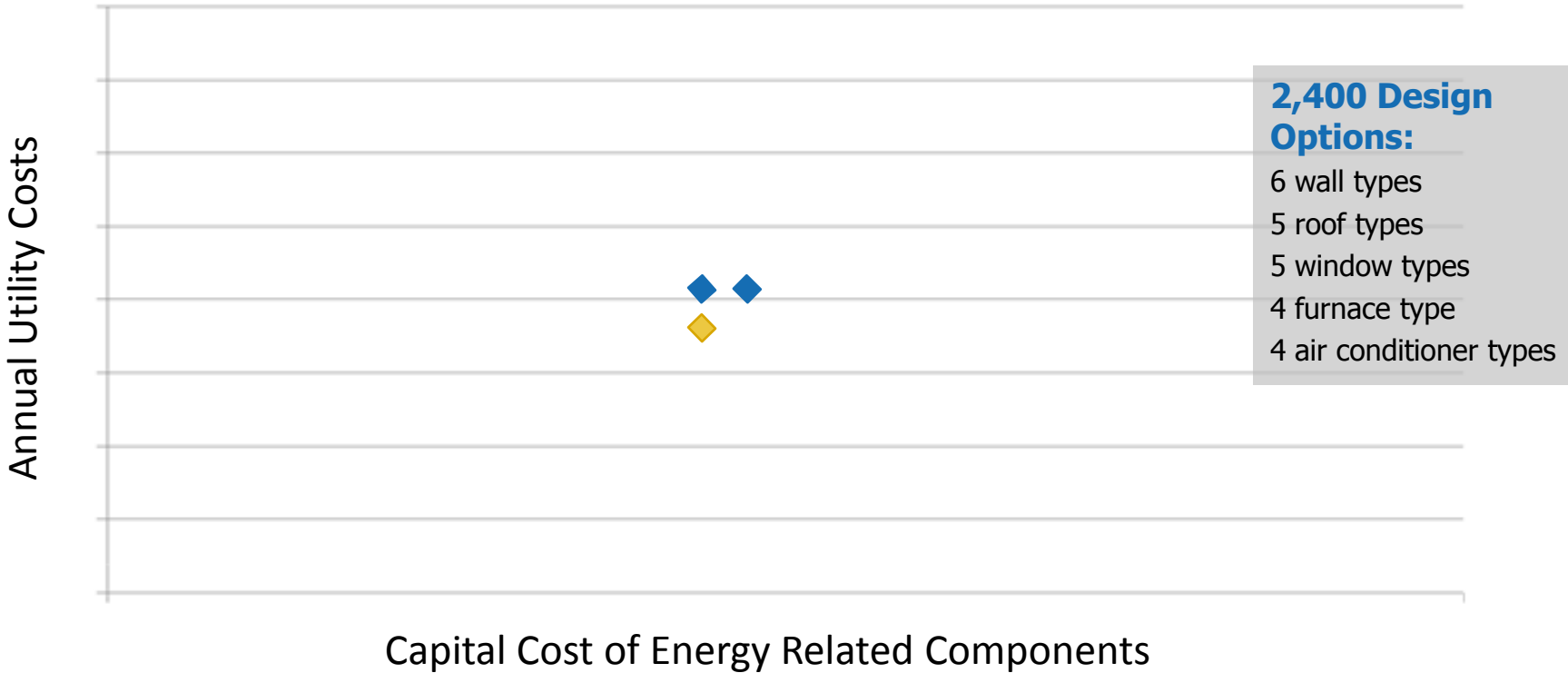
How Building Design Process Works Today



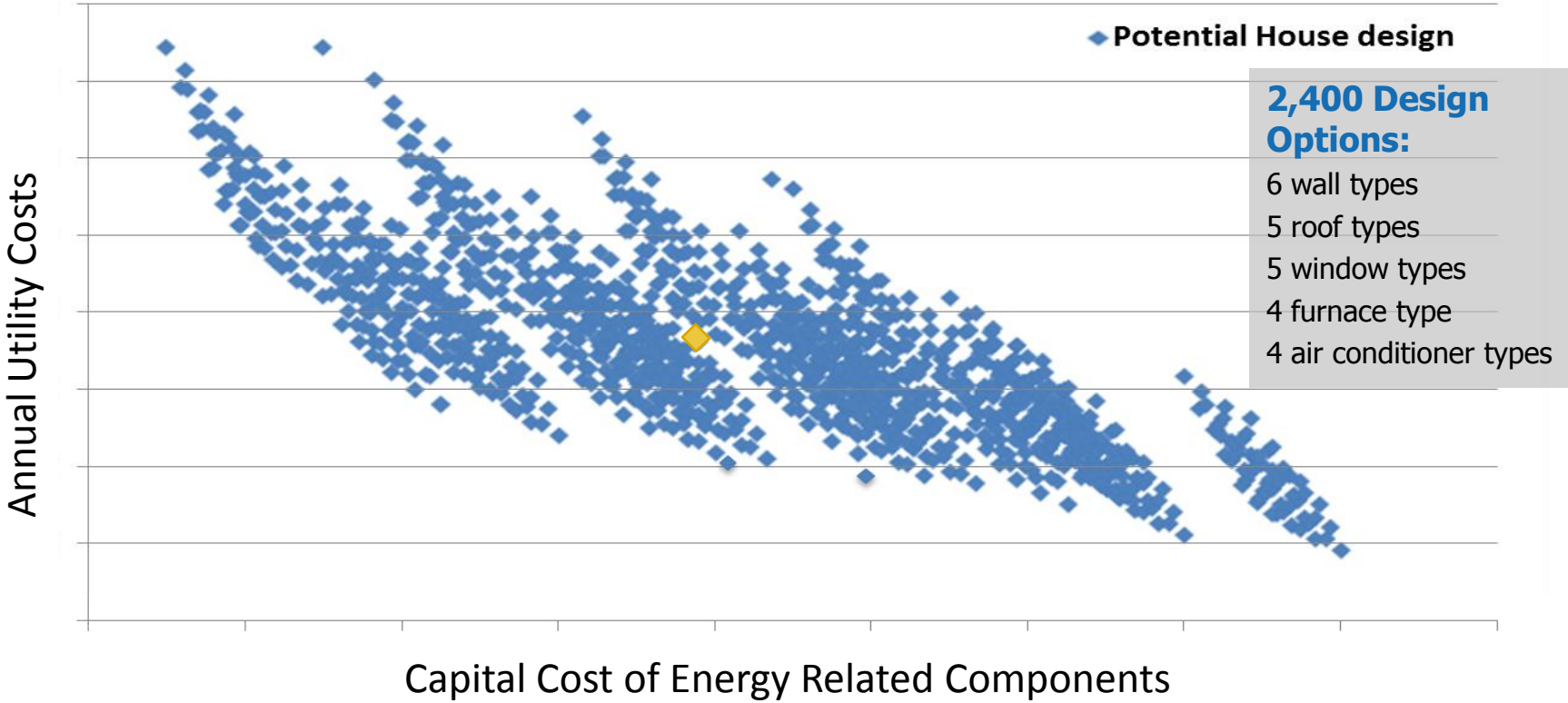
How Building Design Process Works Today



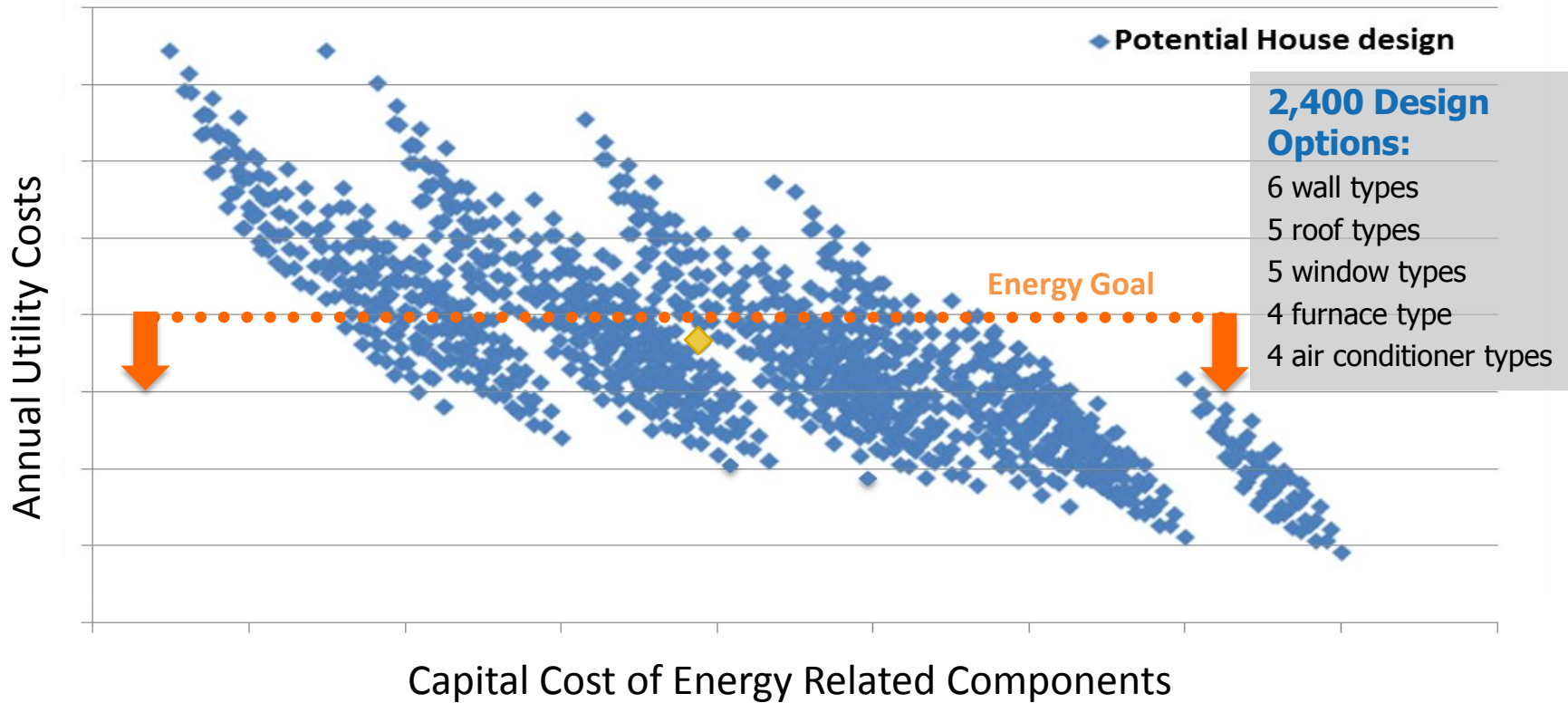
Our Technology



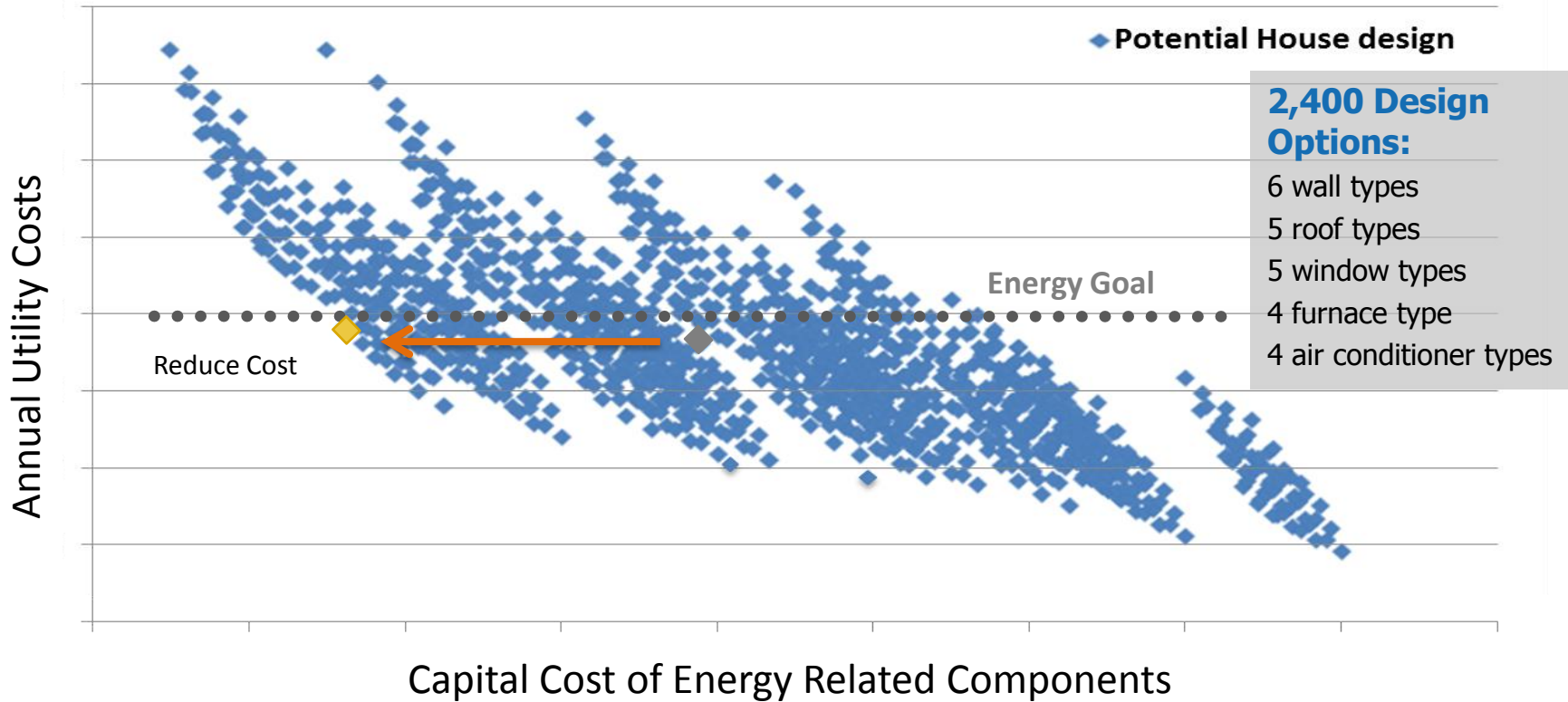
Our Technology



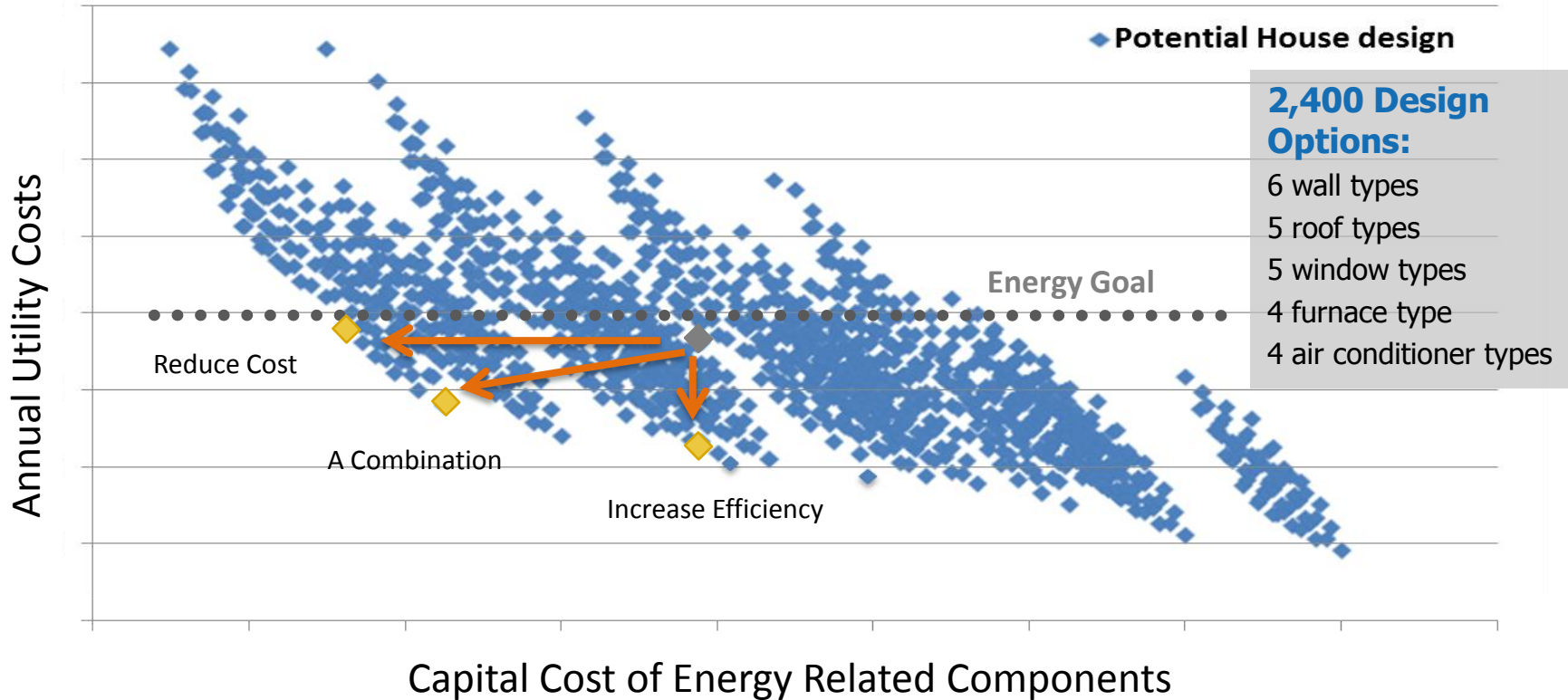
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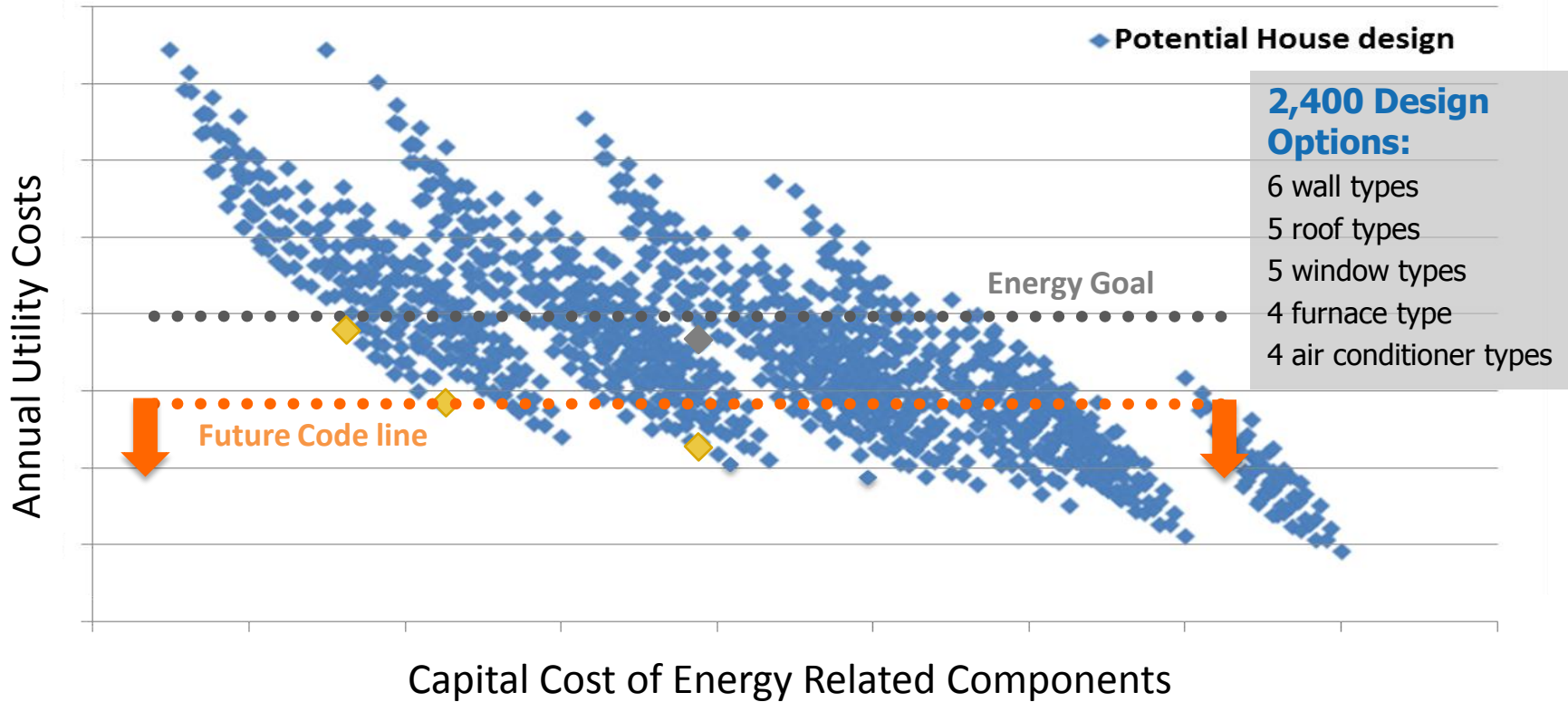
Our Technology



Our Technology



Our Technology



State of the Market

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Some Builders *do* Emphasize Performance

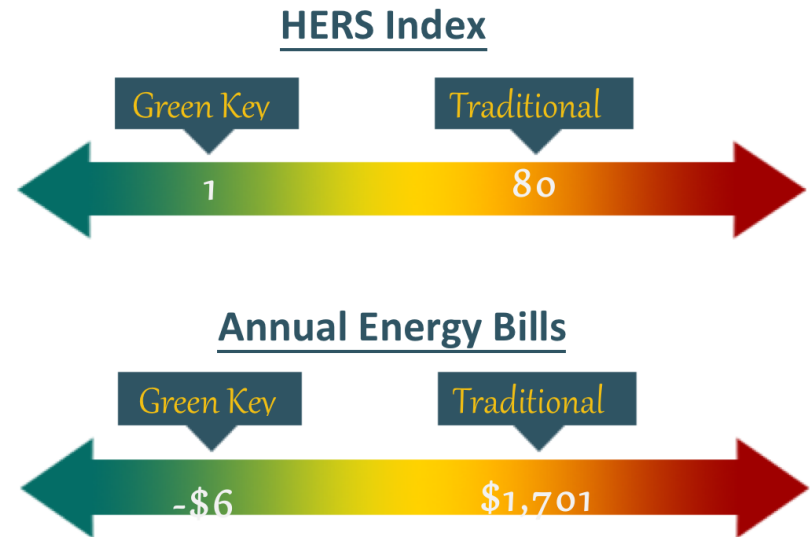
- Design process is backwards and broken.
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Moving the Market

1. Make designing energy efficient designs easier.
2. Find lower cost energy efficient designs.
3. Illustrate the benefits of high efficiency designs.

Case Study: 145 Home Net-Zero Development

	Traditional Home	Green Key Home
HERS	80	1
Energy Bill	\$1,701	-\$6
Cost	\$40,387	\$59,873
Payback (typ. Mortgage)	-	1 Years
Total Annual \$	\$4,303	\$3,851
Trees Saved	-	711







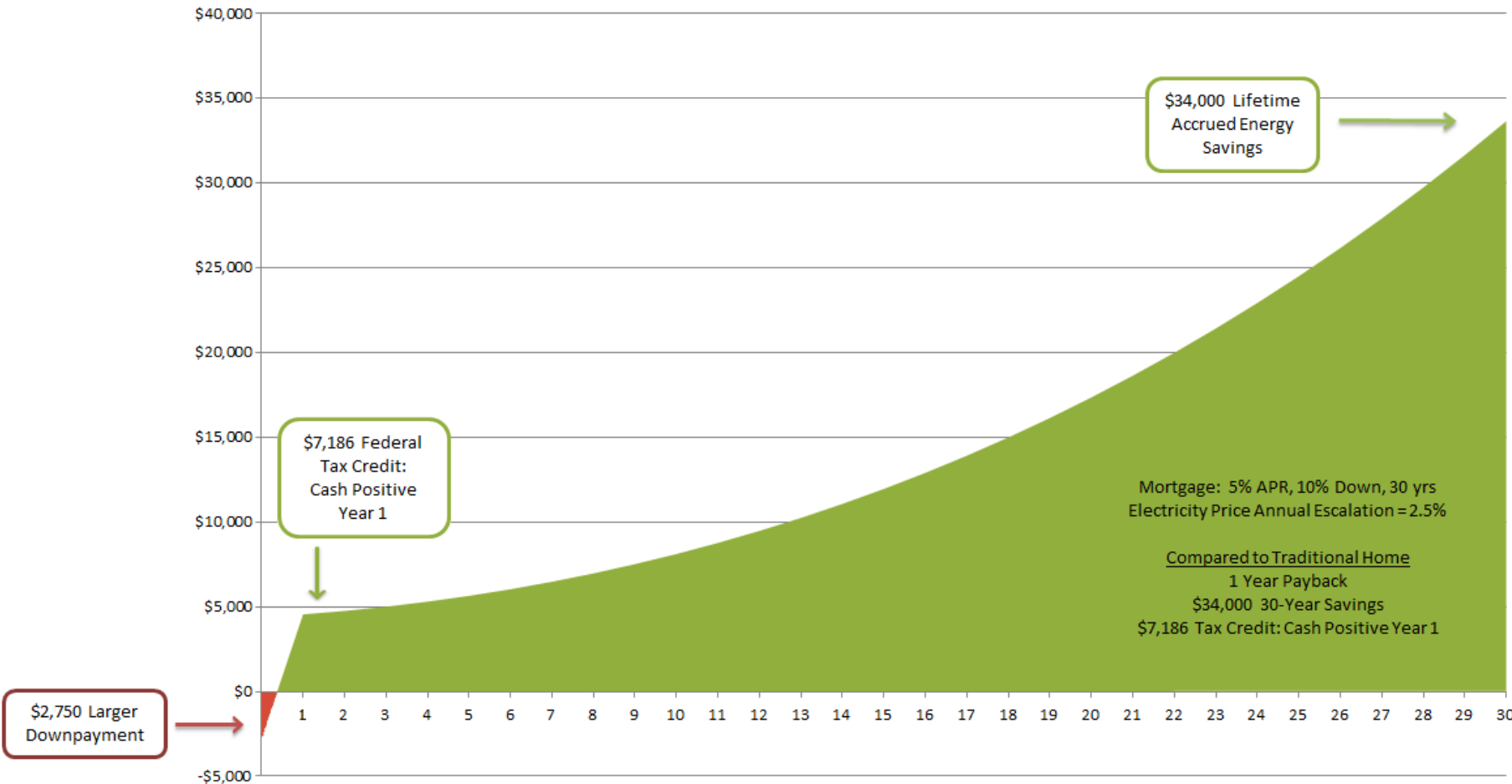
Comparison to Top-10 Builder

	Traditional Net-Zero	Green Key Home
HERS	1	0
Energy Bill	-\$17	-\$19
Cost (Energy Components)	\$58,660	\$52,842
Total Annual \$	\$3,762	\$3,385

\$6,000 Saved

	Traditional Net-Zero	Green Key Home
Exterior Walls	Low density spray foam	Fiberglass batts
HVAC System	18 SEER, 9.5 HSPF	15 SEER, 9 HSPF
PV System	EchoWatts hybrid PV / solar hot water	Straight PV
Hot Water	Electric supplement for EchoWatts	GE heat pump water heater

Payback on Net Zero vs. Traditional



Q&A



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