Zero Net Energy:
Is It Scalable?

Getting to Zero National Forum | Jolt Session | September 17, 2013

Brad Jacobson, AIA, LEED AP BD+C

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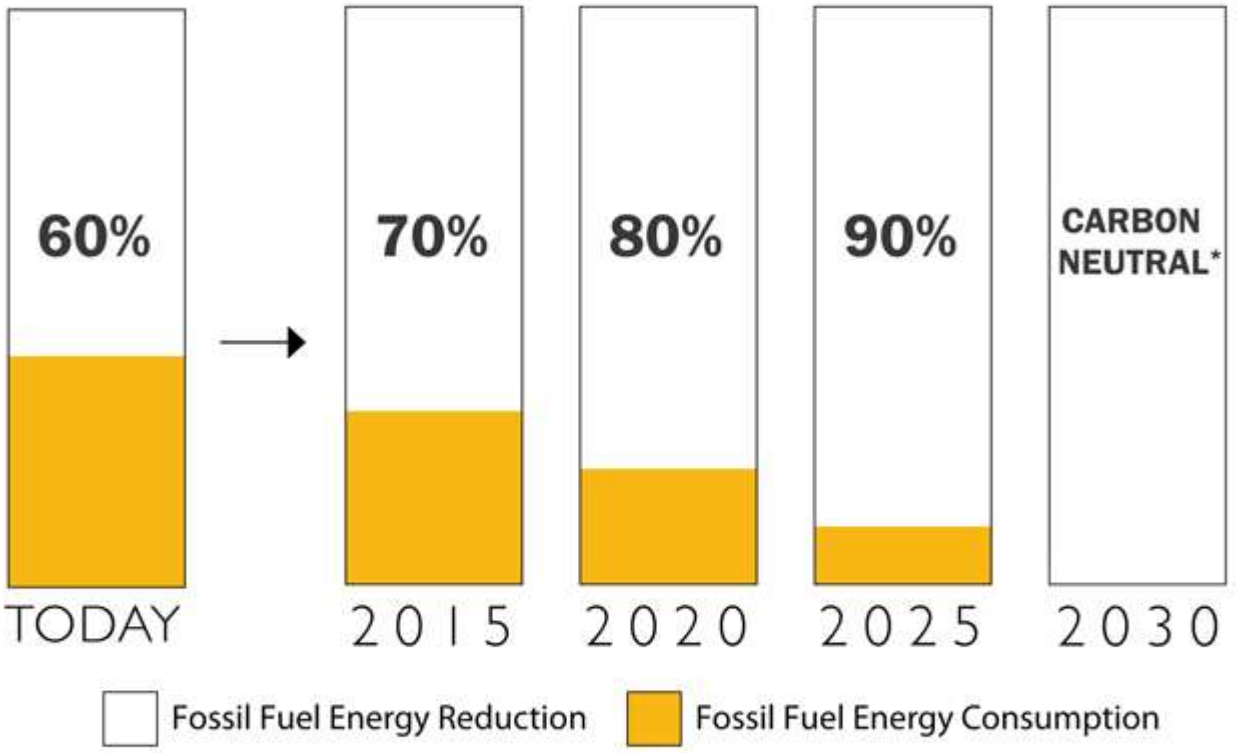
Year One Results



The 2030 Challenge

**Using no fossil fuel GHG-emitting energy to operate.*

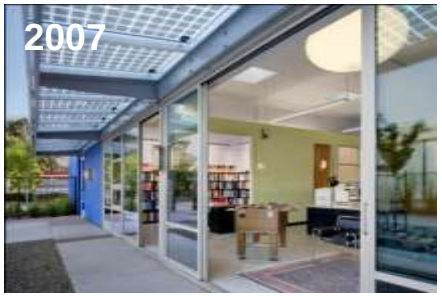
The Path to Scalability

Audubon at Debs Park
Size: 6,700 SF
17.4 kBtu/SF

Stanford Green Dorm
Size: 21,500 SF
35.6 kBtu/SF

AOP Watershed Exhibit
Size: 2,100 SF
14.8 kBtu/SF

Chartwell School
Size: 21,200 SF
27.9 kBtu/SF



IDeAs Z² Building
Size: 6,560 SF
21.2 kBtu/SF

Marin Country Day School
Size: 33,700 SF
20.5 kBtu/SF

Nevada State College
Carbon Neutral Master Plan
Size: 509 acres

The Packard Foundation
Size: 49,000 SF
21.3 kBtu/SF

Exploratorium at Pier 15
Size: 200,000 SF
47 kBtu/SF

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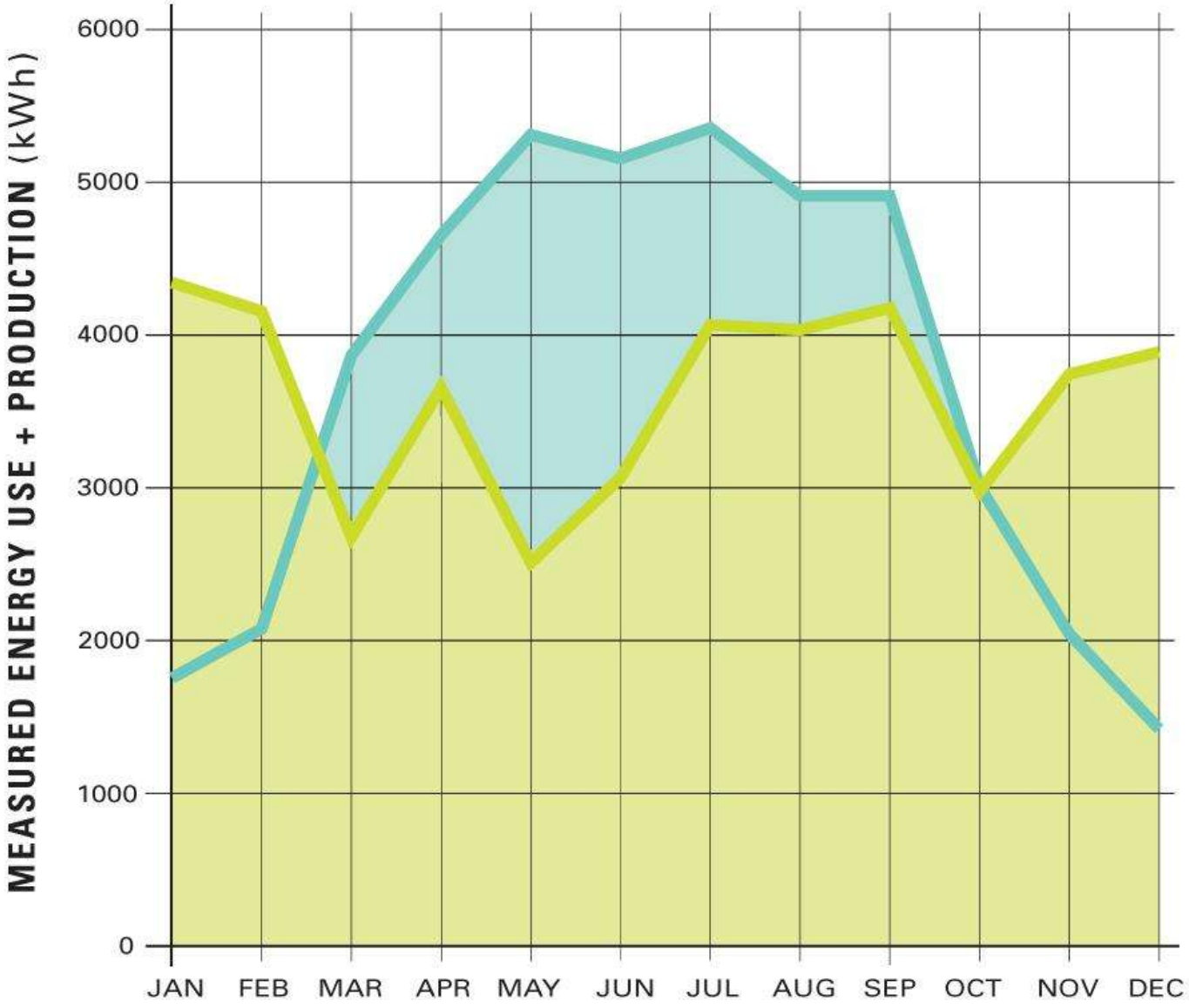
IDeAs Z² Building

San Jose, California

Year Completed : 2007
Size : 6,560 SF
EUI : 21.2 kBtu/SF (measured)
ILFI Net Zero Energy Certified

Year One Results



ENERGY USED:
- 43,423 kWh

ENERGY MADE:
+ 44,543 kWh

NET ENERGY:
+1,120 kWh

103%

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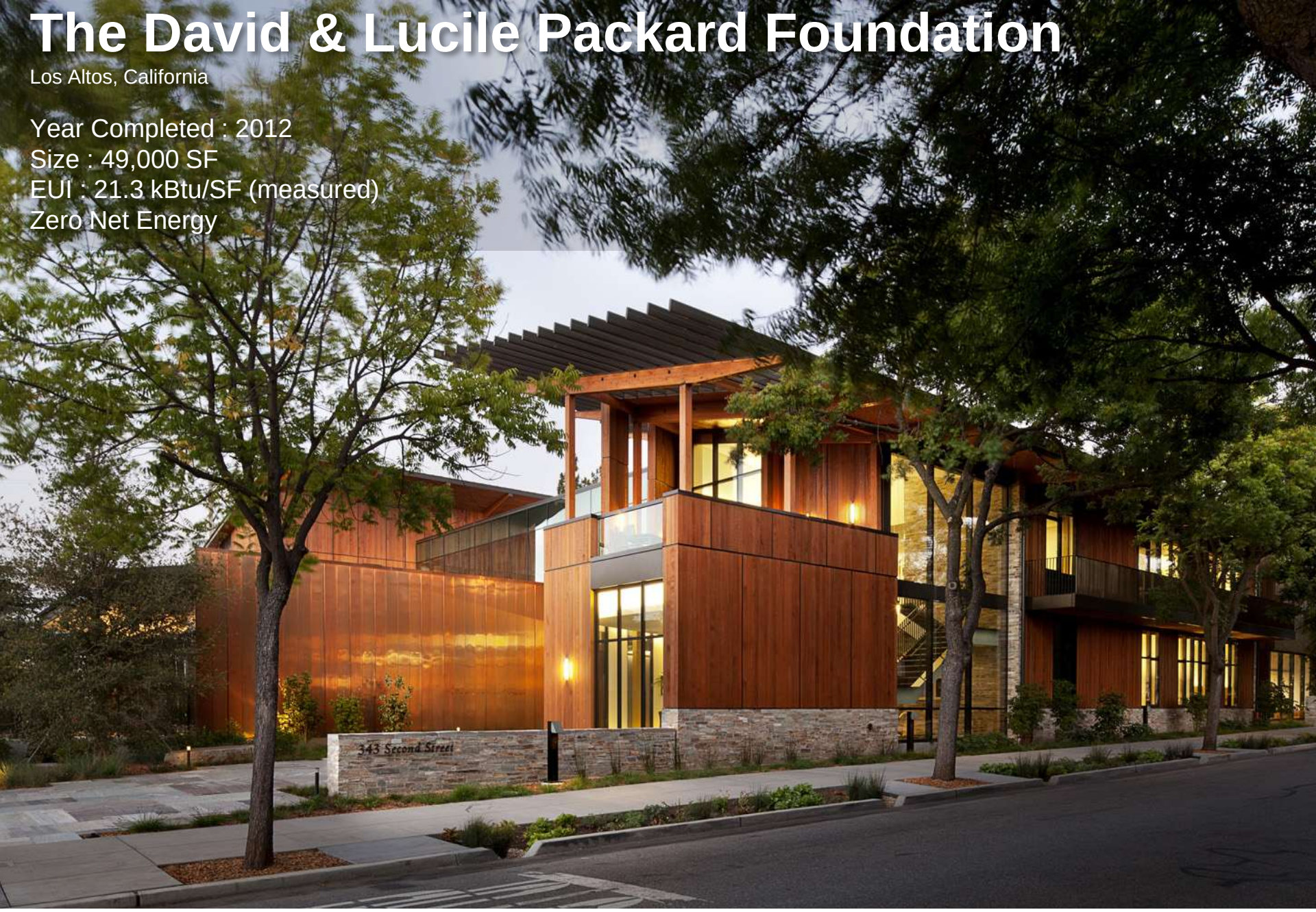
The David & Lucile Packard Foundation

Los Altos, California

Year Completed : 2012
Size : 49,000 SF
EUI : 21.3 kBtu/SF (measured)
Zero Net Energy



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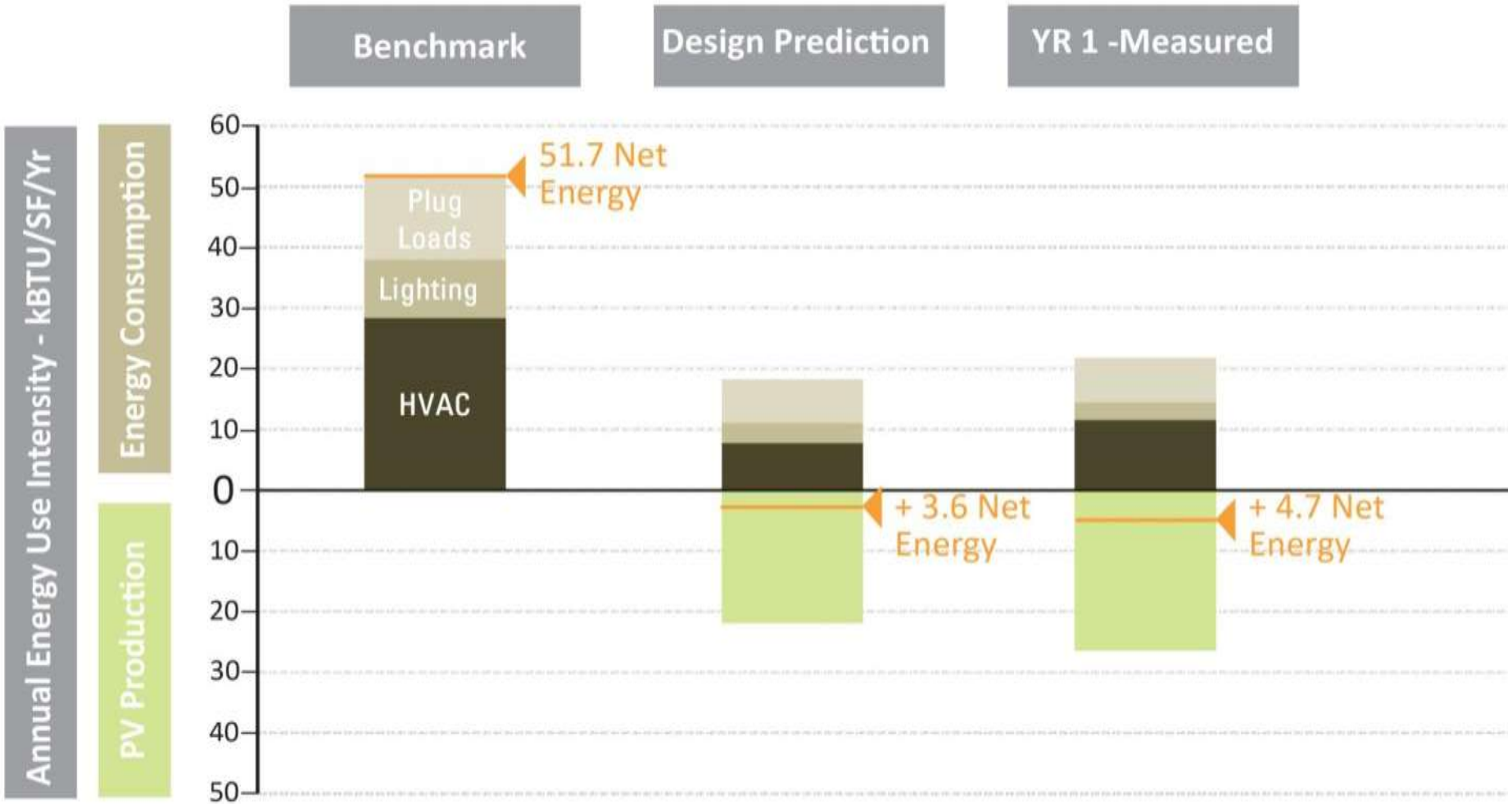
Year One Results



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The Exploratorium at Pier 15

San Francisco, California

Year Completed : 2013
Size : 200,000 SF
EUI : 47 kBtu/SF (predicted)
Zero Net Energy

TODAY'S ENERGY DASHBOARD

SEPTEMBER 6, 2013

2:26pm

What the data mean

Energy consumption and production vary depending on the time of the year. The goal is to only consume this same amount of energy yearly, thereby annually achieving "net zero energy." There will be months where we produce more than we consume, and other months where we consume more than we produce.

Our total energy production since opening day, April 17, 2013, is **841,308 kWh**

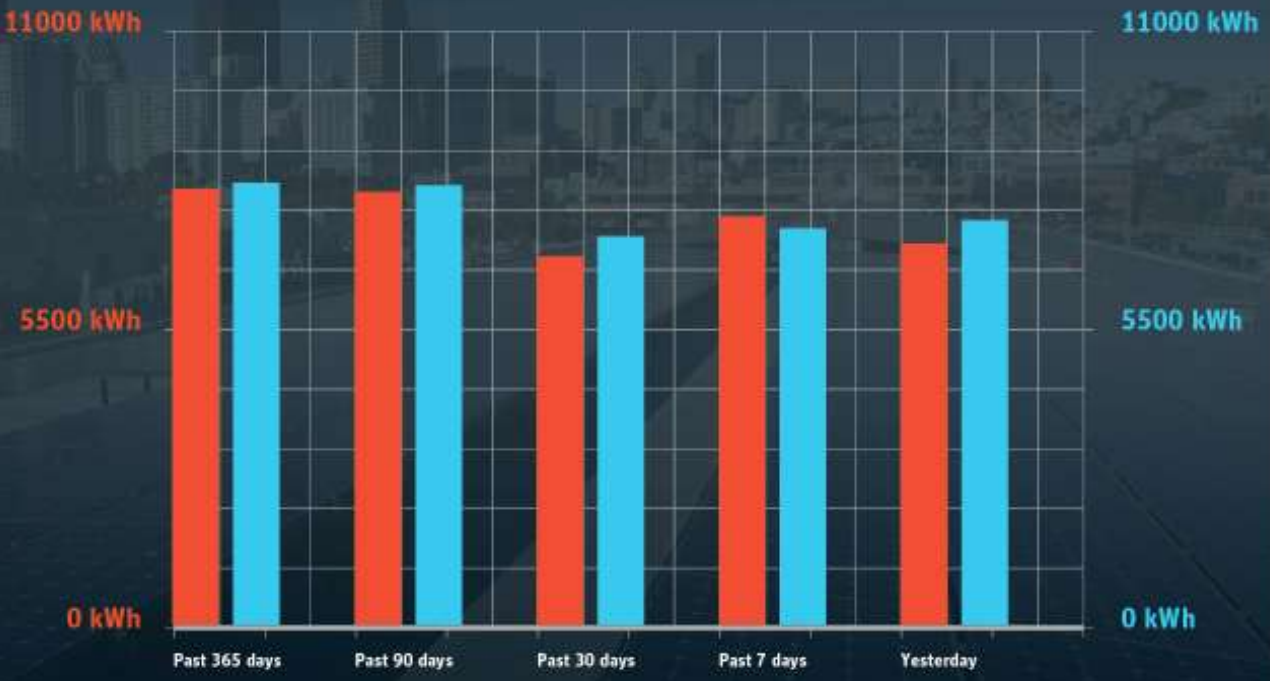
	Total Production (kWh)	Total Consumption (kWh)
Yesterday	7,202	7,646
Past 7 days	54,053	52,418
Past 30 days	208,784	220,165
Past 90 days	736,360	747,741
Year to Date	841,308	852,689
Since April, 2013	841,308	852,689

Daily Production (kilowatt-hours)

The average amount of energy being generated by the solar panel array each day

Daily Consumption (kilowatt-hours)

The average amount of energy being consumed by the Exploratorium each day



exploratorium

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