

# NAREIT 2017 Leader In The Light

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Sustainable Real Estate Practices

## Working Forum



real foundations

# Jeff Bedell

# Fuel Cell Program

- ◆ 2014 Danbury Pilot – 750KW as a PPA
- ◆ 2016 Executed 5 new projects (3.5 MW)
  - ◆ Owned through Lease structure over \$22mil
  - ◆ Average ROI 12% - 17.4% (sensitivities: fuel, production)
  - ◆ Driven by Incentives and ITC
  - ◆ Minimal Technology Risk; Macerich taking the fuel risk
- ◆ 2017 assessing 6 additional projects over 5MW



Export Data

Installation Size: 1,500 kW

Choose Site

Submit



Home Export Data



**16,370,184 kWh**  
Lifetime Energy Generated

**55 %**  
Efficiency

**5,961,106 lbs**  
Lifetime CO2 Avoided


**Macerich - Danbury Fair Mall**  
7 Backus Ave  
Danbury, CT  
Installation Size: 750 kW



Fuel



Electricity



Performance Energy Generation CO<sub>2</sub> Reduction Gas Consumed

Note: Data may vary from monthly statements.

[About Bloom](#) | [How a Fuel Cell Works](#) | [Contact Bloom](#) | [Change Password](#) | [Log Out](#)


**Bloomconnect** | Bloom Energy Customer Portal



Home Export Data

**MACERICH**<sup>®</sup> **840,270 kWh** Lifetime Energy Generated **62 %** Efficiency **133,736** Pounds of coal not burned 

**Macerich - Deptford**  
1750 Deptford Center Road  
Deptford, NJ  
Installation Size: 750 kW

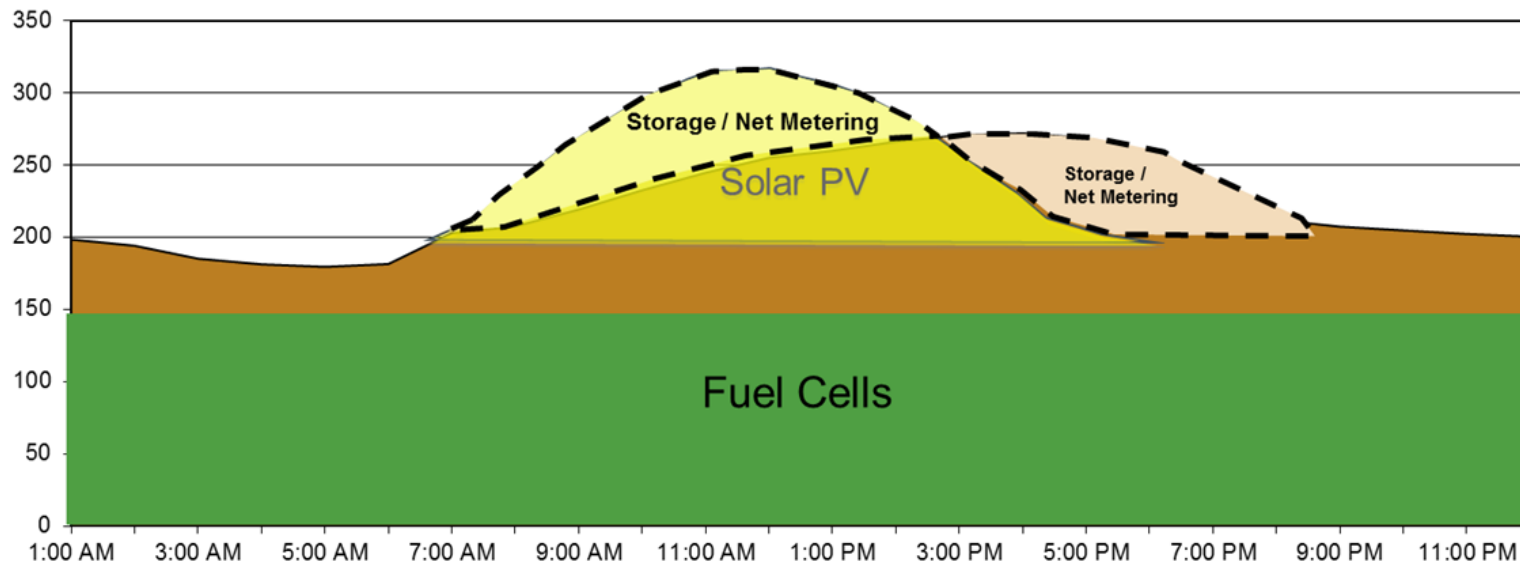
 **Fuel**   **Electricity**

**Performance** **Energy Generation** **CO<sub>2</sub> Reduction** **Gas Consumed**

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## Load Curve with Fuel Cells + Solar + Storage



- DG technologies can be sized respectively to match customer load curves
- Size solar and storage for peak of load curve
- Fuel cells with solar and storage provide peak islanding capability

# Micro Grids at Retail Centers

- Key Advantages:
  - Operating cost savings
  - Long term pricing hedge
  - Redundancy and back-up
  - Local load shaping
  - Local dispatch, and emergency shelter

# Questions

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# Kelly Meissner

# Ventas EMS Selection Process

## ◆ First, identified an issue/goal...

### ➤ Issues:

- a) Large, complex portfolio
- b) Limited visibility into portfolio-wide utility data

### ➤ Goal: Improve data quality and aggregation process for sustainability and investor reporting

## ◆ ...and a solution:

- Implement a sustainability software platform to consolidate all of Ventas' disparate utility data



**“Here’s a list of 100,000 warehouses full of data. I’d like you to condense them down to one meaningful warehouse.”**



# Ventas EMS Selection Process

- ◆ Conducted a request for proposal (RFP) process:
  - Cross-functional internal team (construction, asset management, IT)
  - RFP requirements:
    - Utility data aggregation, analysis, verification
    - Sustainability survey submission and project management
    - Sustainability project tracking, measurement, and verification
    - ENERGY STAR ® interface
    - Technical requirements (per IT)

# Ventas EMS Selection Process

## ◆ Also considered:

- Ease of use/user interface
- Customer support
- Company history, experience, financials
- Price
- Customer feedback (informal)
- 'intangibles'

## ◆ RFP logistics:

- 6 vendors evaluated
- Allowed 2 weeks for initial responses, followed by 2-hour Q&A/Demo sessions
- Several rounds of follow-up questions and discussions

# Ventas EMS Selection Process

- ◆ Obtained internal buy-in and approval
  - Financial benefit
  - Business Process Improvement
  - Risk Mitigation / Regulatory Compliance
  - Investor Relations Benefit
  - Stakeholder Engagement / Brand Benefit



**“Do you accept my strategic recommendation now?”**

© 2010 Bime.com

# Ventas EMS Selection Process

## ◆ Selected partner

- Evaluated each group and scored on a 1-3 scale against each RFP component, weighted for importance
- Also factored in price, customer feedback (informal), 'intangibles', etc.



**"Of course we'll make a decision ...  
once we have considered the 5243 factors."**

# Ventas EMS Selection Process

## ◆ Takeaways

- If you are buying software, include IT early and often; also legal team if/when necessary (for contract)
- Get internal buy-in; make a strong, thoughtful case
- Don't get sucked in by a sales pitch
- Talk to existing customers (as many as possible), but better if it's not the client references provided by the vendor
- Ask lots of questions/follow-ups



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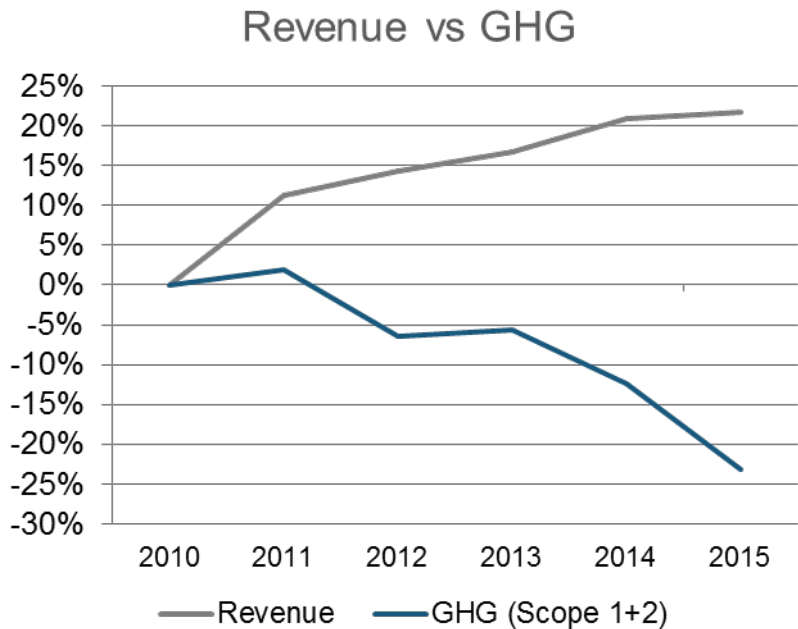
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# Michael Chang



## Host Hotels &amp; Resorts

## Historical GHG Performance



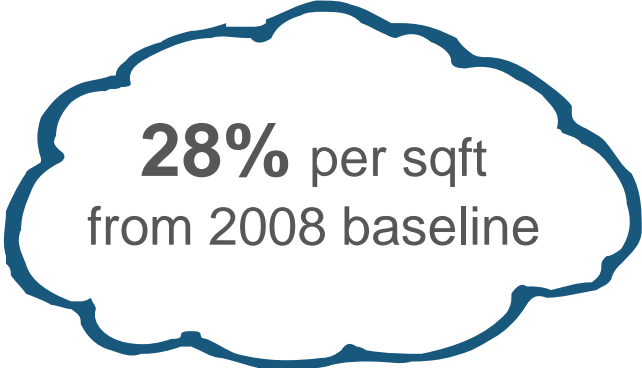
- ◆ Revenue growth of 22% alongside a 23% decrease in GHG emissions over the past 5 years
- ◆ Met all 2017 environmental targets two years early

## Host Hotels & Resorts

# Science Based Target (SBT)

- ◆ GHG reduction targets that are in line with the level of decarbonization required to keep the average global temp increase less than 2°C
- ◆ Host is the first hospitality and real estate company to set a science based target

New 2020 GHG Goal

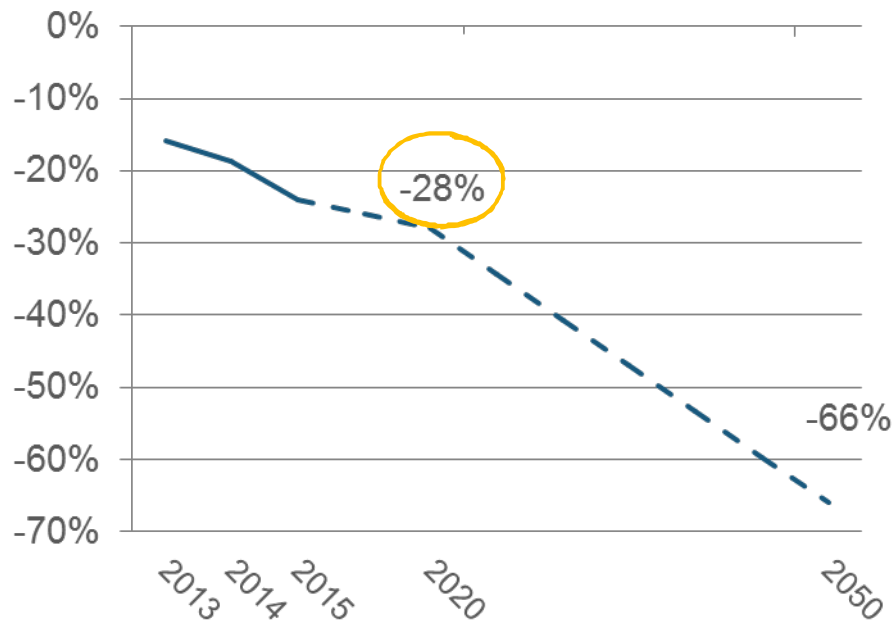


**28%** per sqft  
from 2008 baseline

## Host Hotels &amp; Resorts

## SBT – Methodology

## GHG Reduction



- ◆ Sectoral Decarbonization Approach (SDA)
- ◆ Representative Concentration Pathways (RCPs) 2.6
- ◆ Linear pathway to a 66% reduction by 2050

## Host Hotels & Resorts

# SBT – Feasibility Analysis

- ◆ Energy ROI Projects
  - ◆ LED Lighting
  - ◆ Solar PV
  - ◆ Fuel Switching
  - ◆ In-room EMS
  - ◆ Remote monitoring and fault detection
  
- ◆ Maintenance capex
  
- ◆ Brand sustainability targets



Fairmont Kea Lani Solar Project

## Host Hotels & Resorts

# SBT – Additional Eligibility Criteria

### Boundary

Must cover company wide Scope 1 and Scope 2 emissions

### Timeframe

Must cover a min of 5 years to a max of 15 years from announcement

### Level of ambition

Must be in line with at least the decarbonization required to keep global temps from increasing 2°C

### Scope 3

Set an ambitious Scope 3 target if greater than 40% of total Scope 1, 2, and 3 emissions

### Reporting

Disclose company-wide GHG emissions inventory on an annual basis

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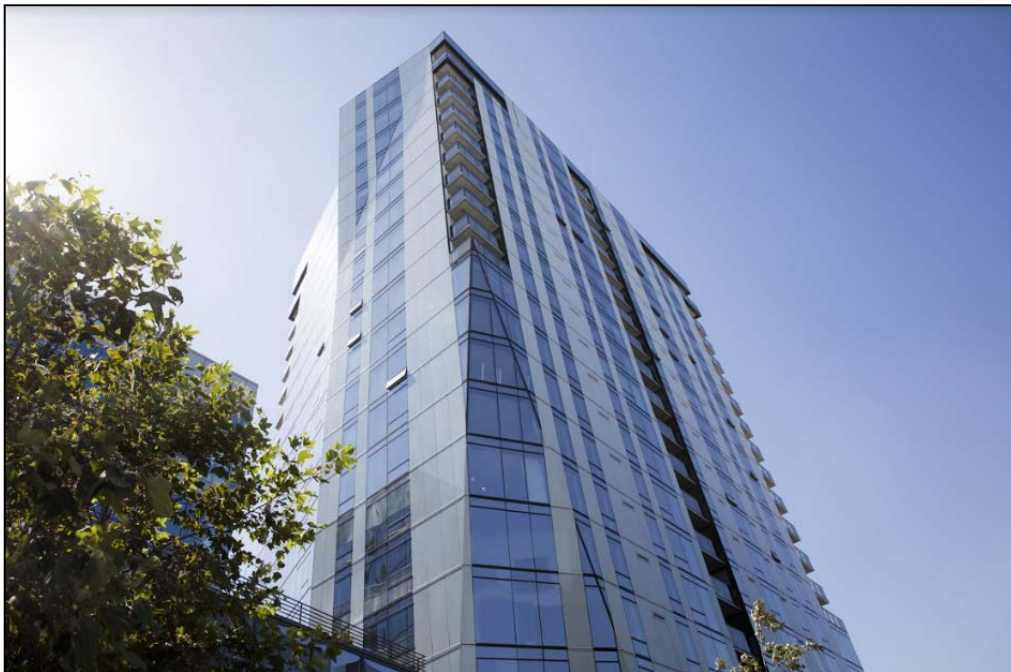
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# Sara Neff



# WELL for Multifamily Pilot

# Project Background



Location: Hollywood

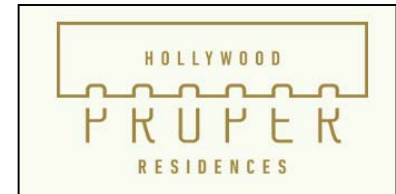
Campus: LEED Master Site,  
LEED Gold Office/Retail

Units: 200

Type: Luxury

Previous Residential  
Experience: 0!

# WELL Team



Architect



# Why WELL?

Architect

LEED



# Timeline

- ◆ Project Design
- ◆ Construction 75% Complete
- ◆ Decision to pursue WELL
- ◆ Delos Consulting and Documentation
- ◆ Construction Complete
- ◆ Preliminary Delos Audit
- ◆ Building Alterations
- ◆ Additional IAQ Testing
- ◆ IWBI Performance Verification with WELL Assessor
- ◆ **Results ???**







# Takeaways





# NARIET MEMBER PANEL: SUCCESS STORIES

**JEFF BEDELL ~ MACERICH**

750 KW

2014, DANBURY

"CRAWL"

EFFICIENCY DETERIORATION < 52% (A LITTLE EARLY) BUT DOESN'T MATTER... (BLOOM CONTRACTUALLY BOUND TO MAINTAIN EFFICIENCY)

"WALK"

SEVERAL MORE ONLINE

WE WANT TO OWN IT WITHIN 6 YEARS

2017 "RUN"

ASSESSING 7 MORE PROPERTIES FOR NEW PROJECTS, IT'S 2 GO!

BLOOM ENERGY FUEL CELL

\$/kWh LONG TERM RENEWABLE CONTRACTS WOULD BE IDEAL!

**KELLY MEISNER ~ VENTAS**

CENTRALIZED SOFTWARE PLATFORM; RFP PROCESS...

DEFINE REQUIREMENTS

- DATA
- SUBMISSIONS
- SERVICES
- PROJECT TRACKING (OF ALL PROJECTS)

CUSTOMER FEEDBACK

TEAM: INVOLVE THE RIGHT PEOPLE

PROJECT MANAGEMENT KEY

WHAT IS VALUED MOST TO THE BUSINESS?

OH, BTW YOU'RE DOING A PILOT!

Q. ITC EXTENDED FOR 2017? ~ NOT YET.

Q. BLOOM'S SMALLEST UNIT? 50 KW VERSION.

Q. HOW IS THE "FIT"?

VERIFICATION? Q. METHODOLOGY/APPROACH?

SCIENCEBASED TARGET.ORG (3 WEEKS)

**MICHAEL CHANG ~ HOST HOTELS**

ROI \$35m!

SCIENCE-BASED TARGETS

SETTING TARGET CARBON-BASED GOALS THAT MATTER.

DO YOUR GOALS ALIGN W. SCIENCE?

MUST KNOW SCOPE 1/SCOPE 2 REQUIREMENTS FIRST!

Q. ANNOUNCED PUBLICLY?

~ CDP LIKES ~ GOOD P.R.

Q. HOW TO GET MGMT. COS ON BOARD?

~ WE DON'T MANAGE; WE ALIGN GOALS W. LOCAL OPERATORS

Q. HOW TO MAKE THE GOAL "DIGESTIBLE" FOR CERTAIN AUDIENCES? ... THE SCIENCE ...

~ WE DIDN'T BRING IT UP!

LESSONS

- TIMING IS TRICKY
- WELL IS EXPENSIVE
- WELL IS STRICT ON NUMBERS

Q. DID YOU PRE-CERTIFY?

~ NO. WELL FOR MULTIFAMILY, BASIC

Q. IS WELL FLEXIBLE W. OFFICES?

~ CORE AND SHELL MAY BE FLEXIBLE ~ FLEXIBLE W. PILOTS

LEED? HELD HOSTAGE BY ARCHITECT!

WELL CERTIFICATION

HAVEN'T PASSED AIR QUALITY YET

**SARA NEFF ~ KILROY**

Q. CHARGING A PREMIUM FOR WELL CERT?

~ OPERATOR WILL INVESTIGATE; MUST BE MARKETED