# Academy of Architecture for Health
## On-line Professional Development

## Carbon/Energy Roadmaps for Healthcare Organizations

## Design Award Case Study Series

August 21, 2018

2:00 pm – 3:00 pm ET

1:00 pm – 2:00 pm CT

12:00 am – 1:00 pm MT

11:00 am – 12:00 pm PT

**Presenters**
**Arash Guity, PE, CEM, LEED AP, BD+C**
Mazzetti / lightstep

**Breeze Glazer, LEED AP, BD+C**
lightstep

**Moderator**
**Stacy Robben, FSMPS, LEED AP, BD+C**
The Boldt Company

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Academy of Architecture for Health On-line Professional Development

## Carbon/Energy Roadmaps for Healthcare Organizations

### Design Award Case Study Series

August 21, 2018

2:00 pm – 3:00 pm ET

1:00 pm – 2:00 pm CT

12:00 am – 1:00 pm MT

11:00 am – 12:00 pm PT

**Presenters**
**Arash Guity, PE, CEM, LEED AP, BD+C**
Mazzetti / lightstep

**Breeze Glazer, LEED AP, BD+C**
lightstep

**Moderator**
**Stacy Robben, FSMPS, LEED AP, BD+C**
The Boldt Company

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Design Award Case Study Series

The Academy's multi-channel on-line approach provides emerging professionals, journeymen, and master professionals with convenient and economical opportunities to develop their chosen area of interest.

Case Study Series sessions are tailored to provide healthcare design professionals with examination of the why and how of award-winning designs.

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Copyright Materials

This presentation is protected by US and International Copyright laws. Reproduction, distribution, display and use of the presentation without written permission of the speaker is prohibited.

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Compliance Statement

"AIA Knowledge" is a Registered Provider with The American Institute of Architects Continuing Education Systems (AIA/CES).  Credit(s) earned on completion of this program will be reported to AIA/CES for AIA members.  Certificates of Completion for both AIA members and non-AIA members are available upon special request.

This program is registered with AIA/CES for continuing professional education.  As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

# AIA/CES Reporting Details

All attendees will be eligible to receive:
1 AIA LU/HSW (AIA continuing education)

In order to receive credit, each attendee must complete the webinar survey/report form **at the conclusion of the presentation.**

Follow the link provided:

- **in the Chat box** at the conclusion of the live presentation;
- **in the follow-up email** you (*or the person who registered your site*) will receive one hour after the webinar.
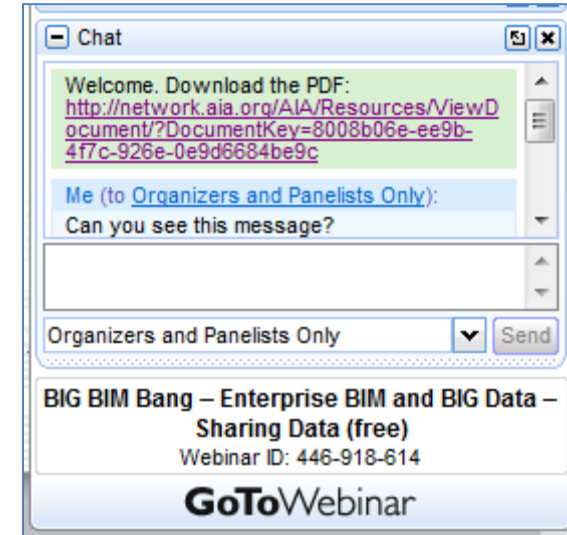
# Questions?

Submit a question to the moderator via the chat box.

Content-related questions will be answered during the Q&A portion at the end as time allows.

Tech support questions will be answered by AIA staff promptly.



**AIA Knowledge Community**
Academy of Architecture for Health

# Presenter Content

The AIA Knowledge Community provides this webinar to share knowledge with its members and other attendees. The AIA Knowledge Community and Academy of Architecture for Health own and take responsibility for material presented on slides bearing the AIA trademark.

All other information, opinions and graphic material contained in this presentation was assembled without compensation – by the Presenter.

Enjoy!

# Carbon/Energy Roadmaps for Healthcare Organizations

## Presenters

**Breeze Glazer**
MArch, LEED AP, BD+C
Lightstep

Breeze@lightstep.design

**Arash Guity**
PE, CEM, LEED AP, BD+C
Mazzetti / lightstep

Arash@lightstep.design

**AIA Knowledge Community**
Academy of Architecture for Health

AIA

# Why would an organization want to develop a carbon/energy roadmap?

## WHY DEVELOP AN ENERGY CARBON ROADMAP?

- Meet sustainability goals

- Develop strategies

- Developed a tailored approach

- Communicate with stakeholders
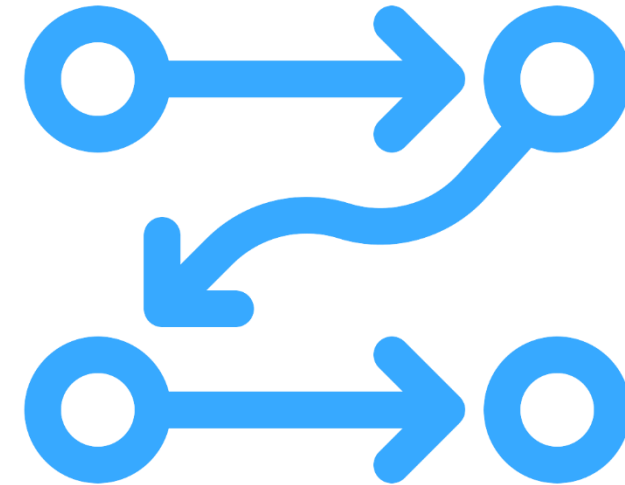
# What should be included in an energy/carbon roadmap?

AIA Knowledge Community
Academy of Architecture for Health
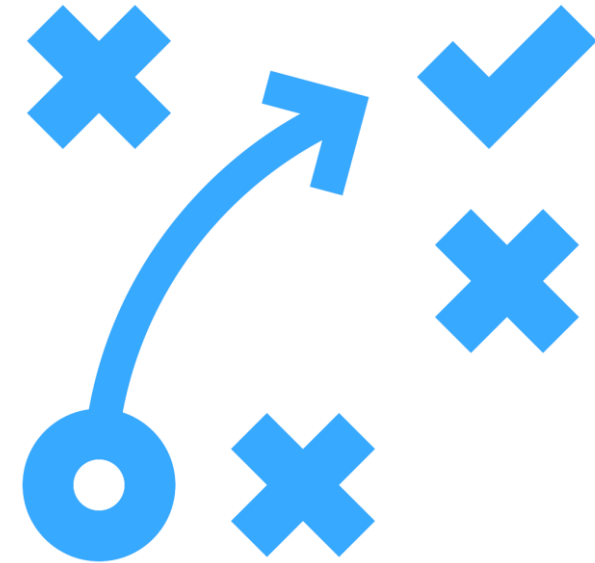
AIA

# IDEAL ENERGY/CARBON ROADMAP COMPONENTS

- Assessment of current state

- Evaluate improvement opportunities

- Flexibility

- Incorporation into master plan

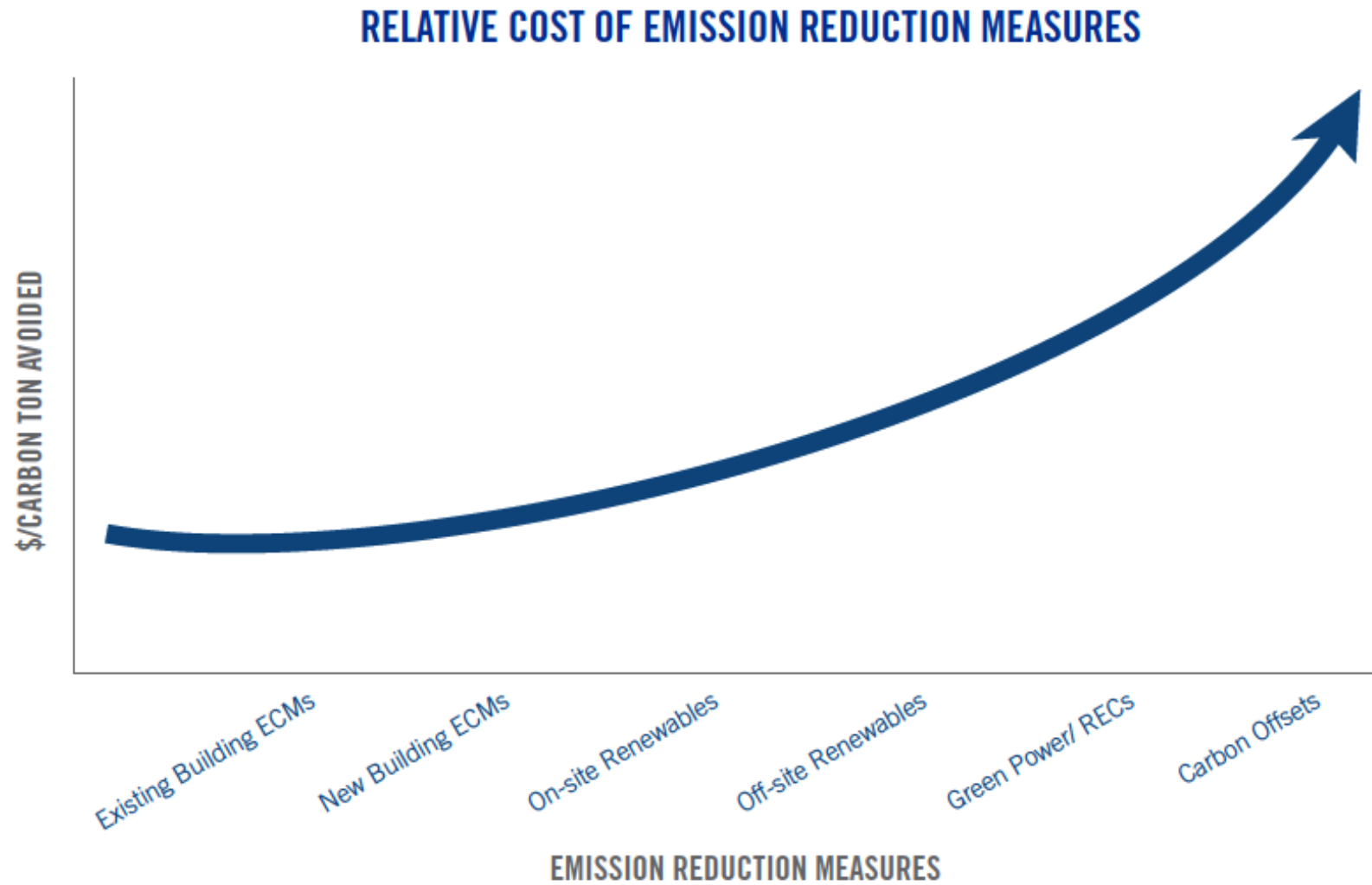- Involvement and input from stakeholders
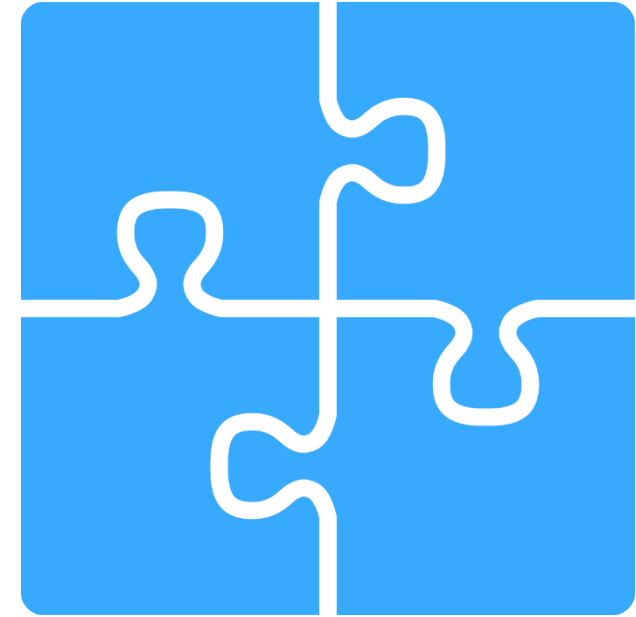
# What are the primary potential strategies to consider?
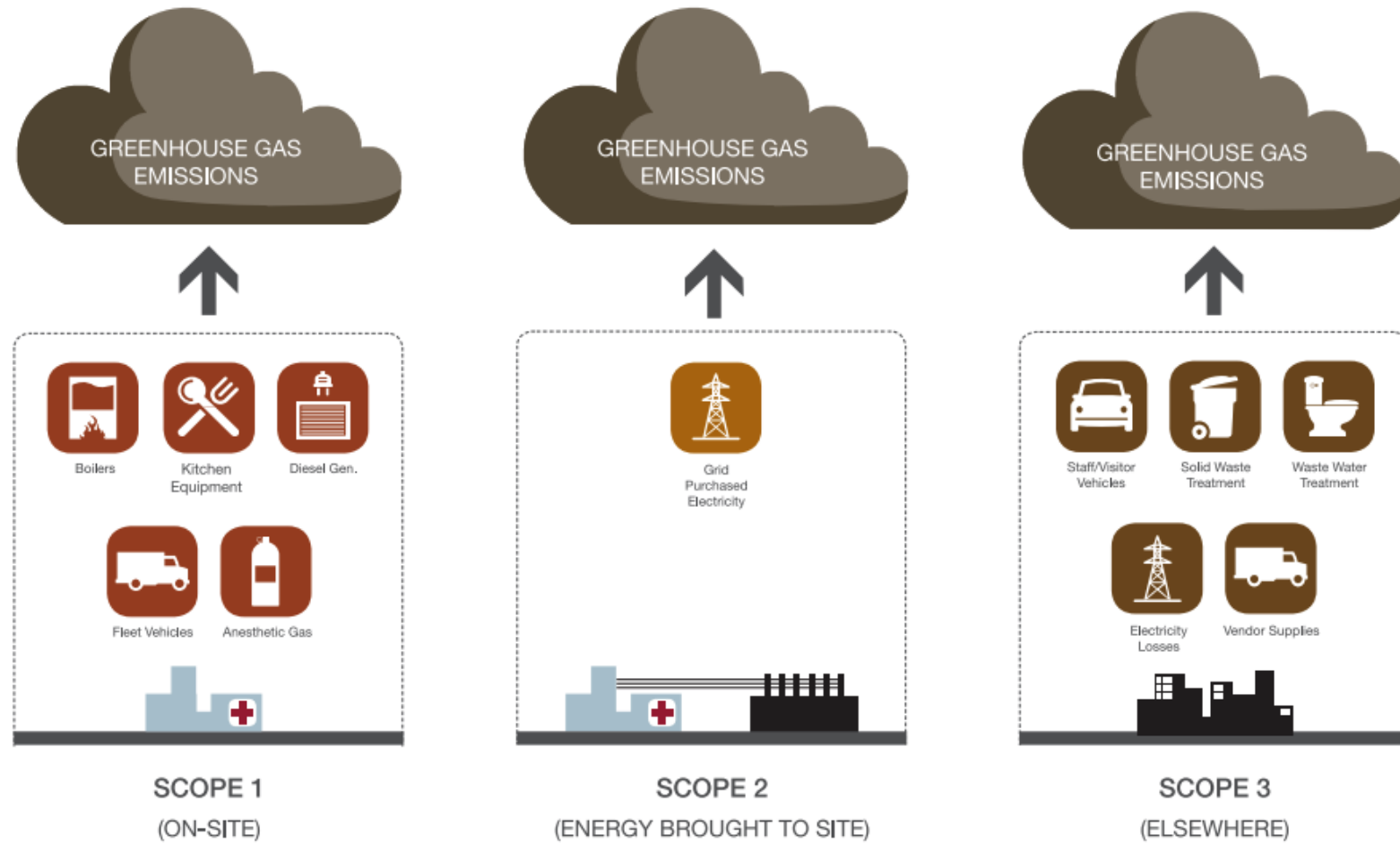
## POTENTIAL STRATEGIES TO CONSIDER

- New building energy targets

- Existing building energy targets

- Renewable energy options
  - On-site
  - Off-site
- Environmental credits/offsets
  - RECs
  - Carbon offsets

# COST EFFECTIVENESS OF STRATEGIES



**RELATIVE COST OF EMISSION REDUCTION MEASURES**

$/CARBON TON AVOIDED

Existing Building ECMs · New Building ECMs · On-site Renewables · Off-site Renewables · Green Power/ RECs · Carbon Offsets

EMISSION REDUCTION MEASURES

# COST EFFECTIVENESS OF STRATEGIES



**SCOPE 1**
(ON-SITE)

Boilers · Kitchen Equipment · Diesel Gen. · Fleet Vehicles · Anesthetic Gas

**SCOPE 2**
(ENERGY BROUGHT TO SITE)

Grid Purchased Electricity

**SCOPE 3**
(ELSEWHERE)

Staff/Visitor Vehicles · Solid Waste Treatment · Waste Water Treatment · Electricity Losses · Vendor Supplies

car·bon-neu·tral

/ˌkärbənˈnootrəl/ 🔊

*adjective*

making no net release of carbon dioxide to the atmosphere, especially through offsetting emissions by planting trees.

# WHO IS GOING CARBON NEUTRAL?

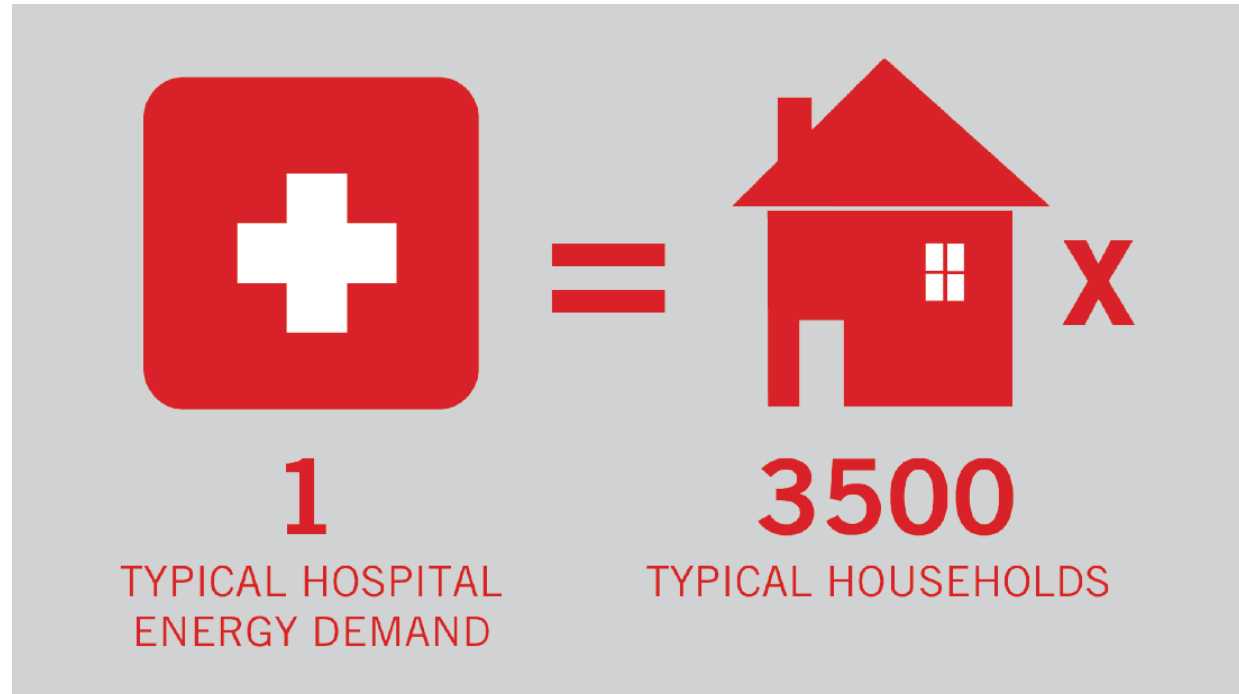"Healthcare in America, including activities such as hospital care, scientific research, and the production and distribution of pharmaceutical drugs, was found to produce 8% of the country's total carbon dioxide output"

Academy of Architecture for Health

1 TYPICAL HOSPITAL ENERGY DEMAND = 3500 TYPICAL HOUSEHOLDS X

AIA

# Case Study: UC Davis Health

In November 2013, University of California President Janet Napolitano announced the Carbon Neutrality Initiative, which commits UC to emitting net zero greenhouse gases from its buildings and vehicle fleet by 2025.

- The largest health campus in the UC system

- Major contributor of GHG

- Undergoing new master plan through 2030

# CAMPUS CARBON EMISSION EQUIVALENCIES

Per Year

CO2 EMISSIONS FROM

**65,645,514**

Pounds of coal burned

OR

CARBON SEQUESTERED BY

**70,671**

acres of U.S. forests in one year

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

**GOALS AND ASSESSMENT**

- UC Carbon Neutrality Initiative

- Current programs and Initiatives

- Current campus facilities characteristics

- Cogen plant considerations

Started with workshop with UC Davis Health staff

Facilities has strong expertise but had challenges making the case for energy project investments.

Realized the primary need wasn't our expertise in where to reduce energy but visualization and scenario planning for deployment of capital. Show impacts of options.

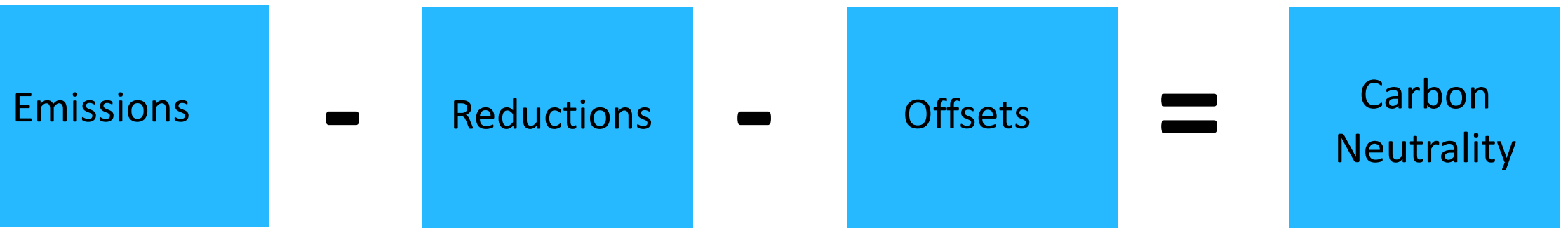Roadmap had to be dynamic, user friendly and transparent

Respond to changing variables over time

# REPORT BASED CARBON ROADMAP



static

Emissions **-** Reductions **-** Offsets **=** Carbon Neutrality

Emissions **-** Reductions **-** Offsets **=** Carbon Neutrality

existing buildings
new buildings
future Buildings

energy retrofits
modeled savings

electricity
natural Gas

lightstep

VARIABLES

**Emissions** − **Reductions** − **Offsets** = **Carbon Neutrality**

hospital
admin / MOB
ambulatory
research

lighting
HVAC
Controls
Envelope ++

on-site renewable
off-site renewable
green power
grid

COST    TIME    COST    TIME    COST    TIME    COST

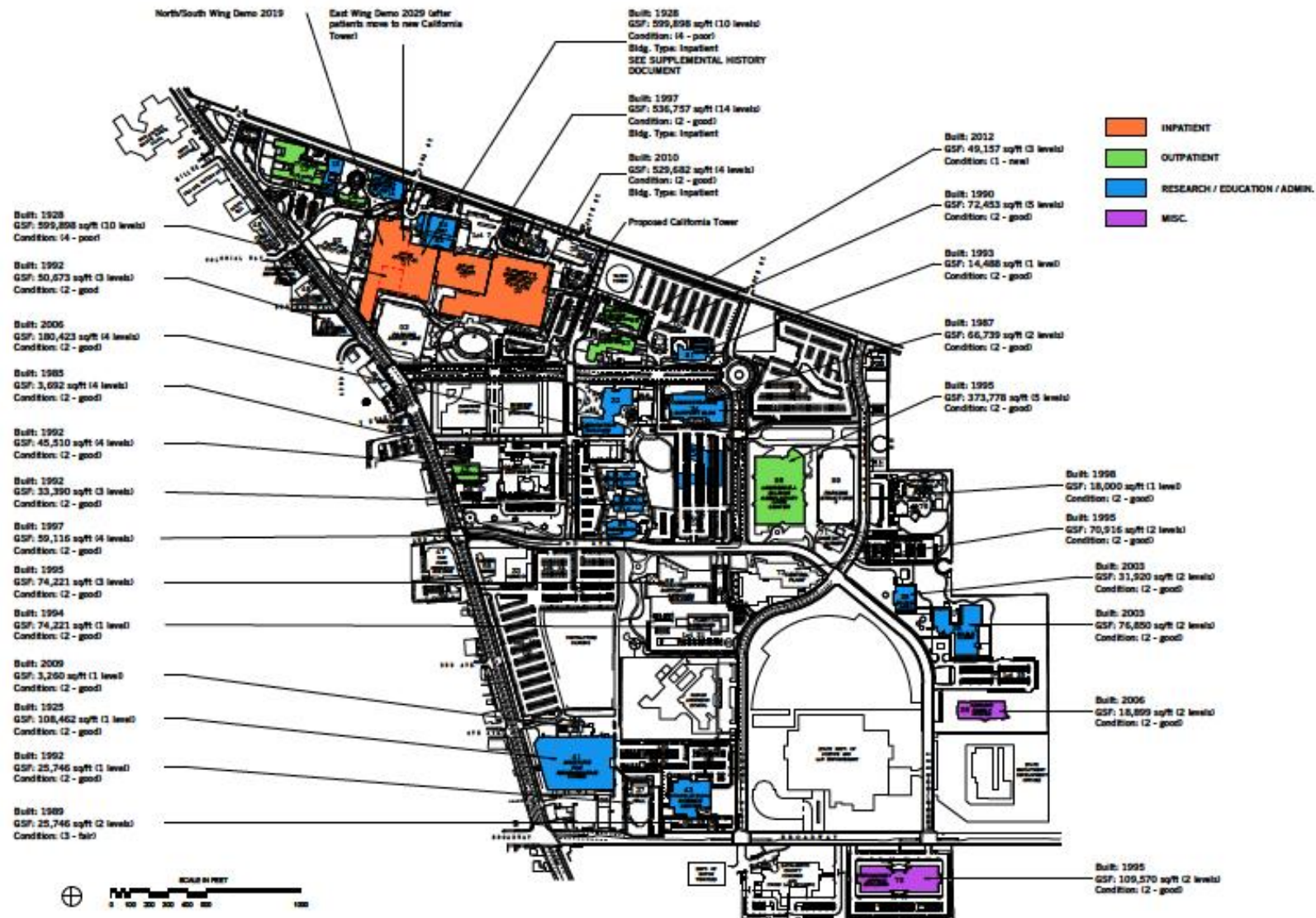lightstep                          VARIABLES

- **Gamification** is the process of taking something that already exists – a website, an enterprise application, an online community – and integrating game mechanics into it to motivate participation, engagement, and loyalty.

**DASHBOARD BASED CARBON ROADMAP**



dynamic

# Methodology and Approach

UCDAVIS MEDICAL CENTER — Facility Masterplan Existing Floor Plans — BUILDING TYPE — ECG PERKINS+WILL — 3/29/2017

lightstep

**EVALUATE CURRENT CONDITIONS**

Campus Initiatives

Building Stock

    Existing buildings

Master Plan

    New buildings

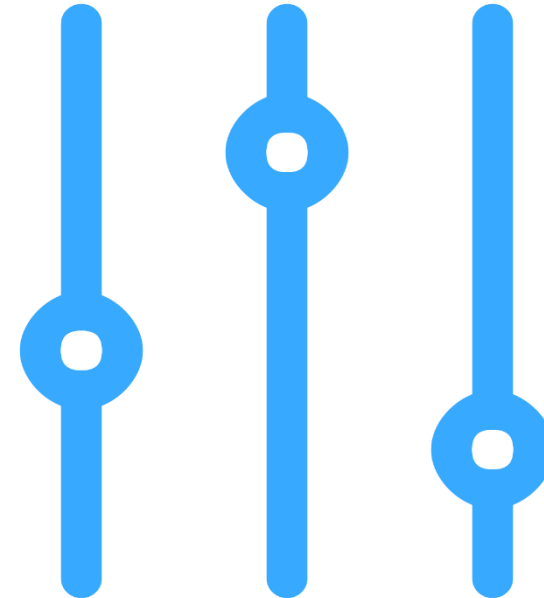Renewable Energy Initiatives

Cogen plant

# EVALUATE POTENTIAL OPPORTUNITIES AND INCORPORATE INTO MASTER PLAN

## Building Strategies

- New buildings
- Existing buildings

## Renewables

- On-site
- Off-site
- REC's
- Carbon offsets

# Dynamic Dashboard

# SUPPORTING ENERGY CALCULATIONS

| Input Field | | Data |
|---|---|---|
| Current Year | | 2017 |
| Current Hospital Building Area (SF) | | 1,750,000 |
| Current MOB/Administrative/Support building area (SF) | | 2,650,000 |
| Current total campus area (SF) | | 4,400,000 |
| Current EUI - Hospital Buildings (kBTU/SF/yr) | | 275 |
| Current EUI - MOB/Administrative/Support Buildings (kBTU/SF/yr) | | 125 |
| Current Hospital Building Electricty % | | 80% |
| Current Hospital Building NG % | | 20% |
| Current MOB/Administrative/Support Building Electricty % | | 80% |
| Current MOB/Administrative/Support Building NG % | | 20% |
| Current Total Annual Hospital Energy Consumption - Electricity (kWh) | | 112,837,046 |
| Current Total Annual Hospital Energy Consumption - Natural Gas (Therms) | | 962,500 |
| Current Total Annual MOB/Administrative/Support Energy Consumption - Electricity (kWh) | | 77,667,057 |
| Current Total Annual MOB/Administrative/Support Energy Consumption - Natural Gas (Therms) | Calculated | 662,500 |
| Current Total Annual Energy Consumption - Electricity (kWh) | UC Davis Utility Data | 190,504,103 |
| Current Total Annual On-Site Renewable Energy Production (kWh) | Estimated | 400,000 |
| Current Total Annual Off-Site Renewable Energy Production (kWh) | Estimated | - |
| Current Total Annual Renewable Energy Credits (RECs) Purchases (kWh) | Estimated | - |
| Current Net Total Annual Energy Consumption - Electricity (kWh) | Calculated | 190,104,103 |
| Current Total Annual Energy Consumption - Natural Gas (Therms) | UC Davis Utility Data | 1,625,000 |
| Current Total Annual Off-Site Renewable Energy Production - Directed Biogas (Therms) | Estimated | - |
| Current Net Total Annual Energy Consumption (Therms) | Calculated | 1,625,000 |
| Current Total Annual GHG emissions - Carbon (MT CO2e) | UC Davis Utility Data | 61,293.08 |
| | | |
| Carbon goal (MT CO2e) | UC Policy | 0 |
| Carbon Reduction Goal date | UC Policy | 2025 |
| Years to goal | | 8 |
| | | |
| Planned Hospital Building Demolition Area (SF) | Master plan | 500,000 |
| Planned Hospital Building Additions Area (SF) | Master plan | 1,250,000 |
| Planned MOB/Administrative/Support Building Demolition Area (SF) | Master plan | 400,000 |
| Planned MOB/Administrative/Support Building Additions Area (SF) | Master plan | 900,000 |
| Planned Campus Area (SF) | Master plan | 5,650,000 |
| Target New Hospital Building EUI (kBTU/SF/yr) | | 150 |
| Target New MOB/Administrative/Support Building EUI (kBTU/SF/yr) | | 50 |
| Target EUI - Existing Hospital Buildings (kBTU/SF/yr) | | 200 |
| Target EUI - Existing MOB/Administrative/Support Buildings (kBTU/SF/yr) | | 75 |
| Target Hospital Building Electricty % | | 80% |
| Target Hospital Building NG % | | 20% |
| Target MOB/Administrative/Support Building Electricty % | | 80% |
| Target MOB/Administrative/Support Building NG % | | 20% |
| Target Total Annual Hospital Energy Consumption - Electricity (kWh) | | 102,579,132 |
| Target Total Annual Hospital Energy Consumption - Natural Gas (Therms) | | 875,000 |
| Target Total Annual MOB/Administrative/Support Energy Consumption - Electricity (kWh) | | 50,117,233 |
| Target Total Annual MOB/Administrative/Support Energy Consumption - Natural Gas (Therms) | | 427,500 |
| Target Total Annual Energy Consumption - Electricity (kWh) | | 152,696,366 |
| Target Available roof area for On-Site solar | | 1,600,000 |
| Target Total Annual On-Site Renewable Energy Production (kWh) | | 42,400,000 |
| Target Total Annual Off-Site Renewable Energy Production (kWh) | | 128,000,000 |
| Target Total Annual Renewable Energy Credits (RECs) Purchases (kWh) | | 520,000 |
| Target Net Total Annual Energy Consumption - Electricity (kWh) | | (18,223,634) |
| Target Total Annual Energy Consumption - Natural Gas (Therms) | | 1,302,500 |
| Target Total Annual Off-Site Renewable Energy Production - Directed Biogas (Therms) | | 350,918 |
| Target Net Total Annual Energy Consumption - Natural Gas (Therms) | | 951,582 |
| Target Total Annual GHG emissions - Carbon (MT CO2e) | | (0.00) |

lightstep
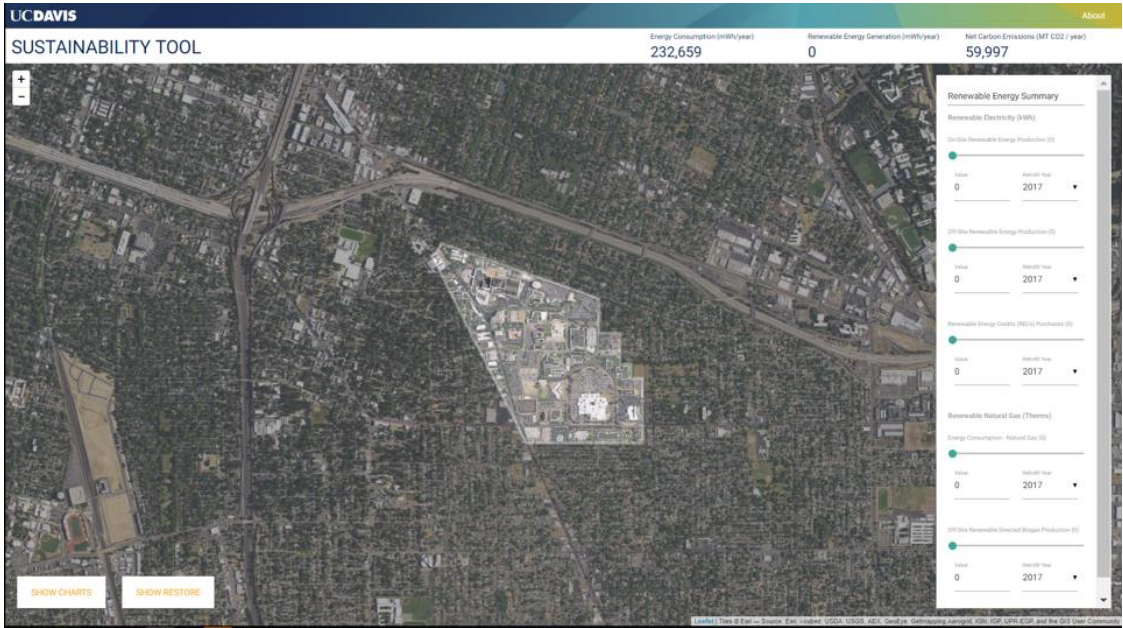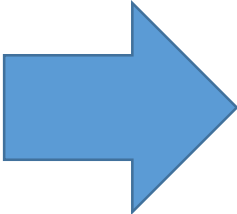
ONLINE TOOL METHODOLOGY

*Energy Use Intensity (EUI) - KBtu/SF/year*

Hopsital EUI = 275 *To be updated*  
Admin/support EUI = 100 *To be updated*  
Research EUI = 150 *To be updated*

*The EUI is broken down into gas and electricity because each has a different carbon conversion rate. The breakdown was assumed to be 20% gas; 80% electricity*

| 20% | 80% | | 20% | 80% | | 20% | 80% |

Gas | Electricity | Gas | Electricity | Gas | Electricity

*Subtract energy when Energy Conservation Measures (ECMs) are applied to buildings. Subtraction percentage based on number of ECMs applied, type of ECM, & building type*

*Reduced by* **4-23%** | *Reduced by* **5-34%** | *Reduced by* **5-31%** | *Reduced by* **5-45%** | *Reduced by* **TBD** | *Reduced by* **TBD**

Reduced EUI, gas (KBtu)  
Convert KBtu to therms  
**x Total hopsital SF**

Reduced EUI, electricity (KBtu)  
Convert KBtu to KWh  
**x Total hopsital SF**

Reduced EUI, gas (KBtu)  
Convert KBtu to therms  
**x Total admin SF**

Reduced EUI, electricity (KBtu)  
Convert KBtu to KWh  
**x Total admin SF**

Reduced EUI, gas (KBtu)  
Convert KBtu to therms  
**x Total admin SF**

Reduced EUI, elec  
Convert KBtu to K  
**x Total admin SI**

Convert therms to Carbon | Convert KWh to Carbon | Convert therms to Carbon | Convert KWh to Carbon | Convert therms to Carbon | Convert KWh to C

On-site Renewables

Off-Site Renewables

Renewable Energy Credits (RECs) Perchases

Renewable Natural Gas

Off-Site Renewable Biogas Production

**Carbon Generation** → **UC Davis Medical Net Carbon Emissions** — **Carbon Consumption** → Total Metric Tons of Carbon consumed

lightstep

- Tracks campus energy use from buildings and related inventory of GHG emissions

- Interactive tool to model energy and carbon reduction impacts from energy retrofit options

- Current and planned inventory of renewable energy, green power and RECs

- Dynamic roadmap to test, visualize and compare scenarios to achieve carbon neutrality

- Accessible by web and mobile devices

lightstep

## THE WEB TOOL PROVIDES THE FOLLOWING:

1. Total campus energy use from UCDMC buildings and related inventory of GHG emissions

2. Energy use and GHG emissions on an individual building level (estimated)

3. Interactive tool to model the relative energy and carbon reduction impacts from applying energy retrofits on the campus and building levels

4. Current inventory of purchased green power and RECs

5. Dynamic carbon roadmap to test, visualize and compare multiple scenarios to achieve GHG reductions over time

# Upcoming Break for Questions and Comments

Submit a question to the moderator via the chat box.
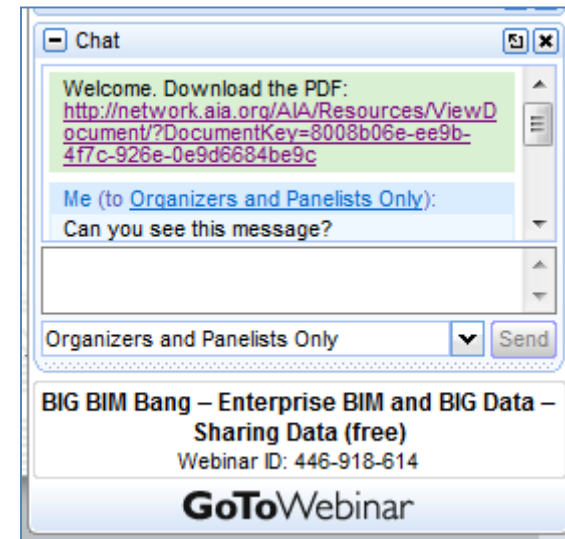
# SUSTAINABILITY TOOL

Energy Consumption (mWh/year)
**232,659**

Renewable Energy Generation (mWh/year)
**0**

Net Carbon Emissions (MT CO2 / year)
**59,997**

← BACK TO CAMPUS VIEW

## Surgery & Emergency Services Pavilion

**Carbon Footprint:** 11,008 (kWH/year) (-3,002)
**Energy Use Intensity:** 275 (kBtu) (-75)
**Total Energy:** 42,688,827 (kWH/year) (-11,642,407)
**Total Electricity:** 34,153,001 (kWH/year) (-9,314,455)
**Total Gas:** 291,325 (therms) (-79,452)

### Retrofit Year

2017 ▼

### Lighting Upgrades

UPGRADE FIXTURES TO LED

UPGRADE LIGHTING CONTROLS

### HVAC Upgrades

REPROGRAM HVAC CONTROLS

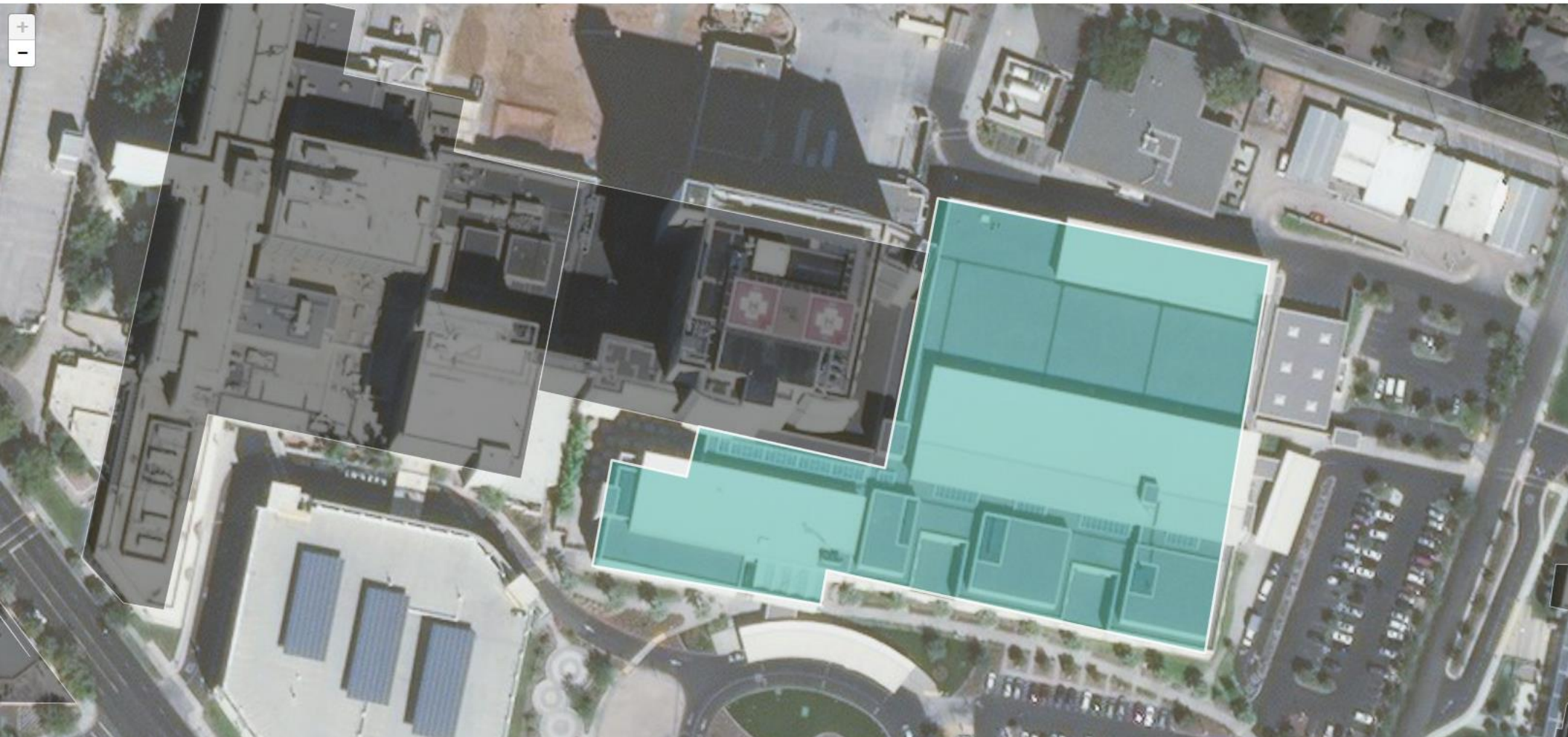REBALANCE AIRFLOW

UPGRADE MECHANICAL EQUIPMENT

SHOW CHARTS

Aerogrid, IGN, IGP, UPR-EGP, and the GIS User Community

**2.** Energy use and GHG emissions on an individual building level (estimated)

SUSTAINABILITY TOOL

About

Energy Consumption (mWh/year)
219,084

Renewable Energy Generation (mWh/year)
0

Net Carbon Emissions (MT CO2 / year)
56,424

← BACK TO CAMPUS VIEW

## Surgery & Emergency Services Pavilion

Carbon Footprint: 7,436 (kWH/year) (571)
Energy Use Intensity: 188 (kBtu) (12)
Total Energy: 29,113,566 (kWH/year) (1,932,853)
Total Electricity: 22,540,981 (kWH/year) (2,297,566)
Total Gas: 224,320 (therms) (-12,448)

Retrofit Year

2017 ▼

Lighting Upgrades
UPGRADE FIXTURES TO LED

UPGRADE LIGHTING CONTROLS

HVAC Upgrades
REPROGRAM HVAC CONTROLS

REBALANCE AIRFLOW

UPGRADE MECHANICAL EQUIPMENT

SHOW CHARTS

3. Interactive tool to model the relative energy and carbon reduction impacts from applying energy retrofits on the campus and building levels

R-EGP, and the GIS User Community

# SUSTAINABILITY TOOL

Energy Consumption (mWh/year)
**219,084**

Renewable Energy Generation (mWh/year)
**0**

Net Carbon Emissions (MT CO2 / year)
**56,424**

## Renewable Energy Summary

### Renewable Electricity (kWh)

On-Site Renewable Energy Production (0)

| Value | Retrofit Year |
|-------|---------------|
| 0 | 2017 |

Off-Site Renewable Energy Production (0)

| Value | Retrofit Year |
|-------|---------------|
| 0 | 2022 |

Renewable Energy Credits (RECs) Purchases (0)

| Value | Retrofit Year |
|-------|---------------|
| 0 | 2017 |

### Renewable Natural Gas (Therms)

Energy Consumption - Natural Gas (0)

| Value | Retrofit Year |
|-------|---------------|
| 0 | 2017 |

Off-Site Renewable Directed Biogas Production (0)

SHOW CHARTS    SHOW RESTORE

**4.    Current inventory of purchased green power and RECs**

# SUSTAINABILITY TOOL

| Energy Consumption (mWh/year) | Renewable Energy Generation (mWh/year) | Net Carbon Emissions (MT CO2 / year) |
|---|---|---|
| 219,084 | 107,542 | 27,471 |

## Renewable Energy Summary

**Renewable Electricity (kWh)**

On-Site Renewable Energy Production (25,099,956)

| | Retrofit Year |
|---|---|
| 25099956 | 2017 |

Off-Site Renewable Energy Production (44,158,152)

| | Retrofit Year |
|---|---|
| 44158152 | 2022 |

Renewable Energy Credits (RECs) Purchases (29,498,001)

| | Retrofit Year |
|---|---|
| 29498001 | 2017 |

**Renewable Natural Gas (Therms)**

Energy Consumption - Natural Gas (299,867)

| | Retrofit Year |
|---|---|
| 299867 | 2017 |

Off-Site Renewable Directed Biogas Production (0)

SHOW CHARTS     SHOW RESTORE

**4.     Current inventory of purchased green power and RECs**

X, GeoEye, Getmapping,Aerogrid, IGN, IGP, UPR-EGP, and the GIS User Community

SUSTAINABILITY TOOL
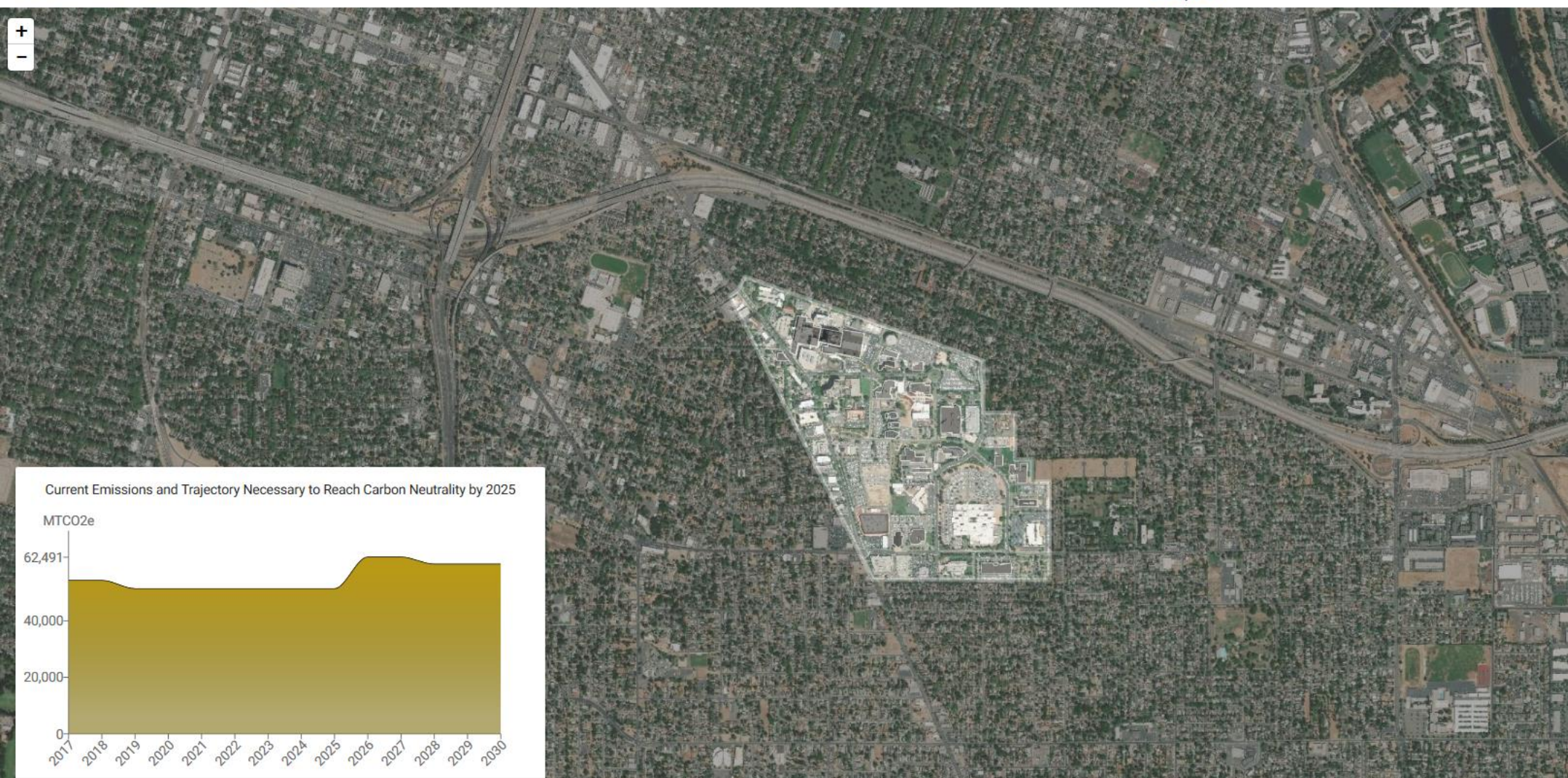
Energy Consumption (mWh/year)
232,659

Renewable Energy Generation (mWh/year)
0

Net Carbon Emissions (MT CO2 / year)
59,997

**Renewable Energy Summary**

Renewable Electricity (kWh)

On-Site Renewable Energy Production (0)

0 Value
Retrofit Year
2017

Off-Site Renewable Energy Production (0)

0 Value
Retrofit Year
2022

Renewable Energy Credits (RECs) Purchases (0)

0 Value
Retrofit Year
2017

Renewable Natural Gas (Therms)

Energy Consumption - Natural Gas (4)

4 Value
Retrofit Year
2017

**Current Emissions and Trajectory Necessary to Reach Carbon Neutrality by 2025**

MTCO2e

62,491

40,000

20,000

0

2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030
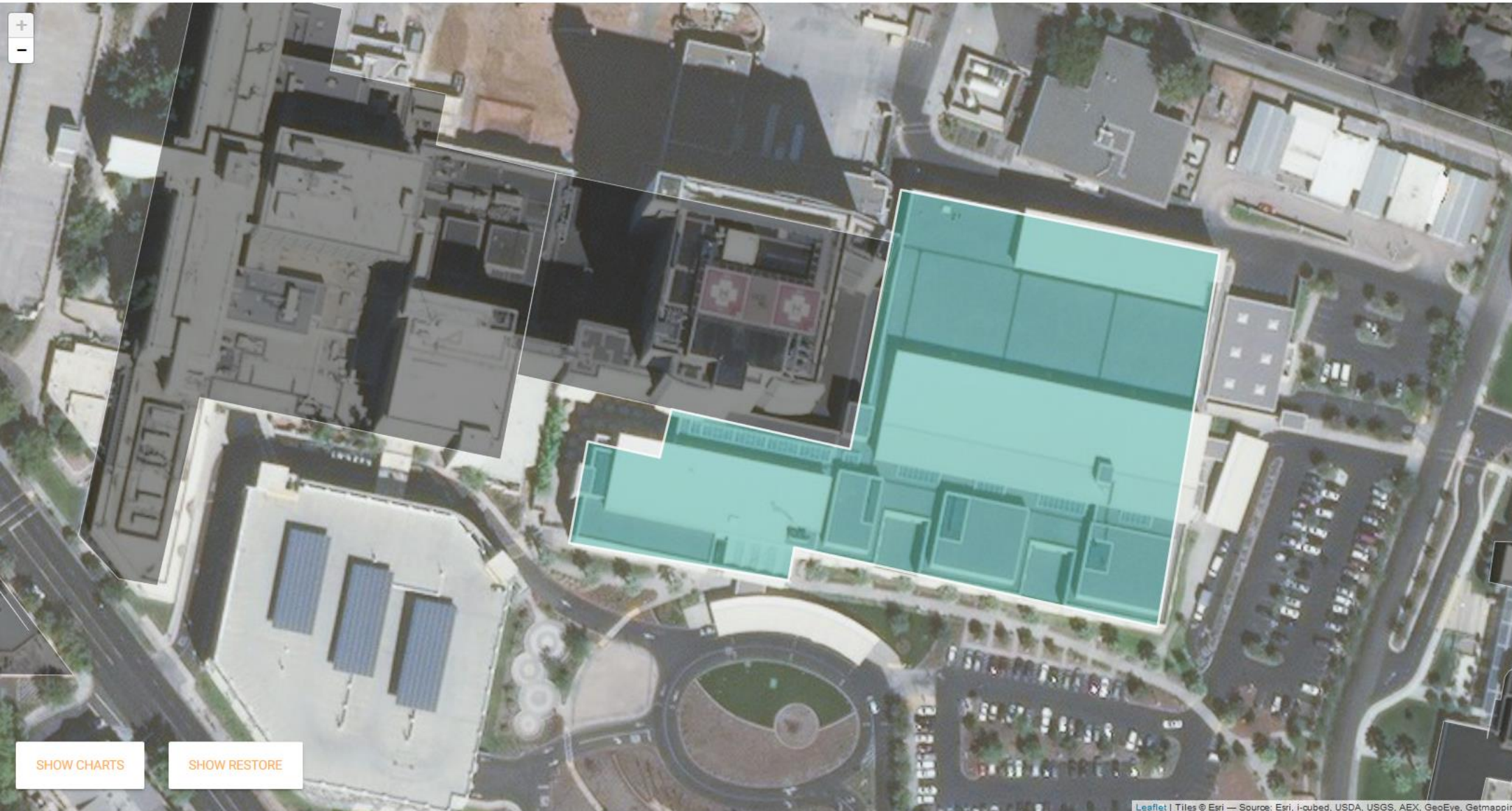
HIDE CHARTS    AREA    BAR

5. Dynamic carbon roadmap to test, visualize and compare multiple scenarios to achieve GHG reductions over time

# SUSTAINABILITY TOOL

| Energy Consumption (mWh/year) | Renewable Energy Generation (mWh/year) | Net Carbon Emissions (MT CO2 / year) |
|---|---|---|
| 223,780 | 104,601 | 29,731 |

## Renewable Energy Summary

### Renewable Electricity (kWh)

On-Site Renewable Energy Production (23,145,269)

| | Retrofit Year |
|---|---|
| 23145269 | 2017 ▾ |

Off-Site Renewable Energy Production (33,896,046)

| | Retrofit Year |
|---|---|
| 33896046 | 2022 ▾ |

Renewable Energy Credits (RECs) Purchases (36,339,405)

| | Retrofit Year |
|---|---|
| 36339405 | 2017 ▾ |

### Renewable Natural Gas (Therms)

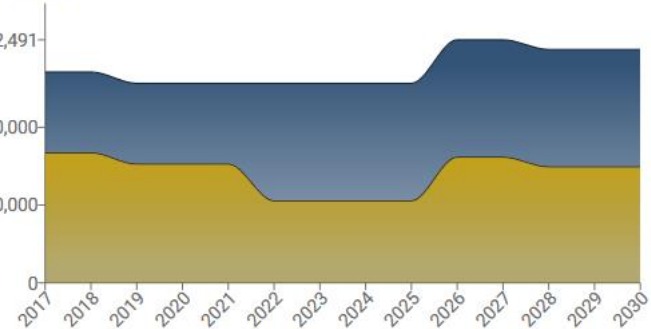Energy Consumption - Natural Gas (382,941)

| | Retrofit Year |
|---|---|
| 382941 | 2017 ▾ |

Off-Site Renewable Directed Biogas Production (0)

### Current Emissions and Trajectory Necessary to Reach Carbon Neutrality by 2025

MTCO2e

62,491

40,000

20,000

0

2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

HIDE CHARTS    AREA    BAR

# SUSTAINABILITY TOOL

| Energy Consumption (mWh/year) | Renewable Energy Generation (mWh/year) | Net Carbon Emissions (MT CO2 / year) |
|---|---|---|
| 223,780 | 104,601 | 29,731 |

## Renewable Energy Summary

**Renewable Electricity (kWh)**

On-Site Renewable Energy Production (23,145,269)

| | Retrofit Year |
|---|---|
| 23145269 | 2017 ▼ |

Off-Site Renewable Energy Production (33,896,046)

| | Retrofit Year |
|---|---|
| 33896046 | 2022 ▼ |

Renewable Energy Credits (RECs) Purchases (36,339,405)

| | Retrofit Year |
|---|---|
| 36339405 | 2017 ▼ |

**Renewable Natural Gas (Therms)**

Energy Consumption - Natural Gas (382,941)

| | Retrofit Year |
|---|---|
| 382941 | 2017 ▼ |

Off-Site Renewable Directed Biogas Production (0)

### Admin, Medical, and Renewable CO2 components with Net Emissions
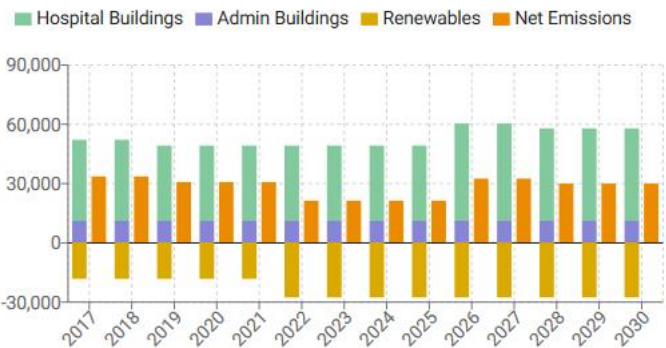
Legend: Hospital Buildings, Admin Buildings, Renewables, Net Emissions

HIDE CHARTS    AREA    BAR

Leaflet | Tiles © Esri — Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, UPR-EGP, and the GIS User Community

# Time for Questions and Comments

# ???-!!!

## Moderator
**Stacy Robben, FSMPS, LEED AP, BD+C**
The Boldt Company

**AIA**

# CES Credit

All attendees are eligible to receive:
1.0 HSW/CEU (AIA continuing education)

Attendees at your site can submit for credit by individually completing the webinar's survey and report form. The survey closes **Friday, August 24, 2018 at 12:30** am EDT.

The URL to the webinar survey/form https://www.research.net/r/AAH1807 will be emailed to the person who registered your site.

More continuing education questions?  Email . . . knowledgecommunities@aia.org.

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Join us at The Academy of Architecture for Health!

- **Receive Academy Update newsletters**
- **Access to resources**
  - ✓ Knowledge Repository
  - ✓ Webinars
  - ✓ Award programs
  - ✓ Scholarships, Fellowships
  - ✓ Emerging professionals benefits
  - ✓ National and regional conferences and events
  - ✓ Social media, publications, blogs and Twitter

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# To join us or update your account go to . . .

THE AMERICAN INSTITUTE OF ARCHITECTS
**AIA** KnowledgeNet

| AAH Home ▾ | Discussion | Library | Blogs | Events ▾ | Directory | Participate ▾ | Communities ▾ | search |

**AIA** Academy of Architecture for Health

Webinar Resources | 2016 Healthcare Design Awards | Member List | BRIK Knowledgebase

# AIA Academy of Architecture for Health

The AAH mission is to improve both the quality of healthcare design and the design of healthy communities by developing, documenting and disseminating knowledge; educating design practitioners and other related constituencies; advancing the practice of architecture; and affiliating and advocating with others that share these priorities.

**Meet the Board >**

Congratulations to the 2016 AIA/AAH Healthcare Design Award recipients!

▶ JOIN this Knowledge Community

**Click here**

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**

# Upcoming Webinars*

| Date | Series | Topic |
|------|--------|-------|
| 9/11 | **Masters Studio Series** | **Providing Healthcare in the Prison Environment** |
| 10/9 | **Case Study Series Series** | **2018 AIA AAH Award-Winning Overseas Healthcare Projects: Asia + Latin America** |
| 11/6 | **Out of the Box Series** | **Creativity: Frank Zilm** |

*Dates and topics are subject to change

Visit www.aia.org/aah for more information and to register.

**AIA Knowledge Community**
Academy of Architecture for Health

**AIA**