BREAKOUT I SESSION C

Benchmarking & Risk Management

Vincent Martinez – CEO, Architecture 2030

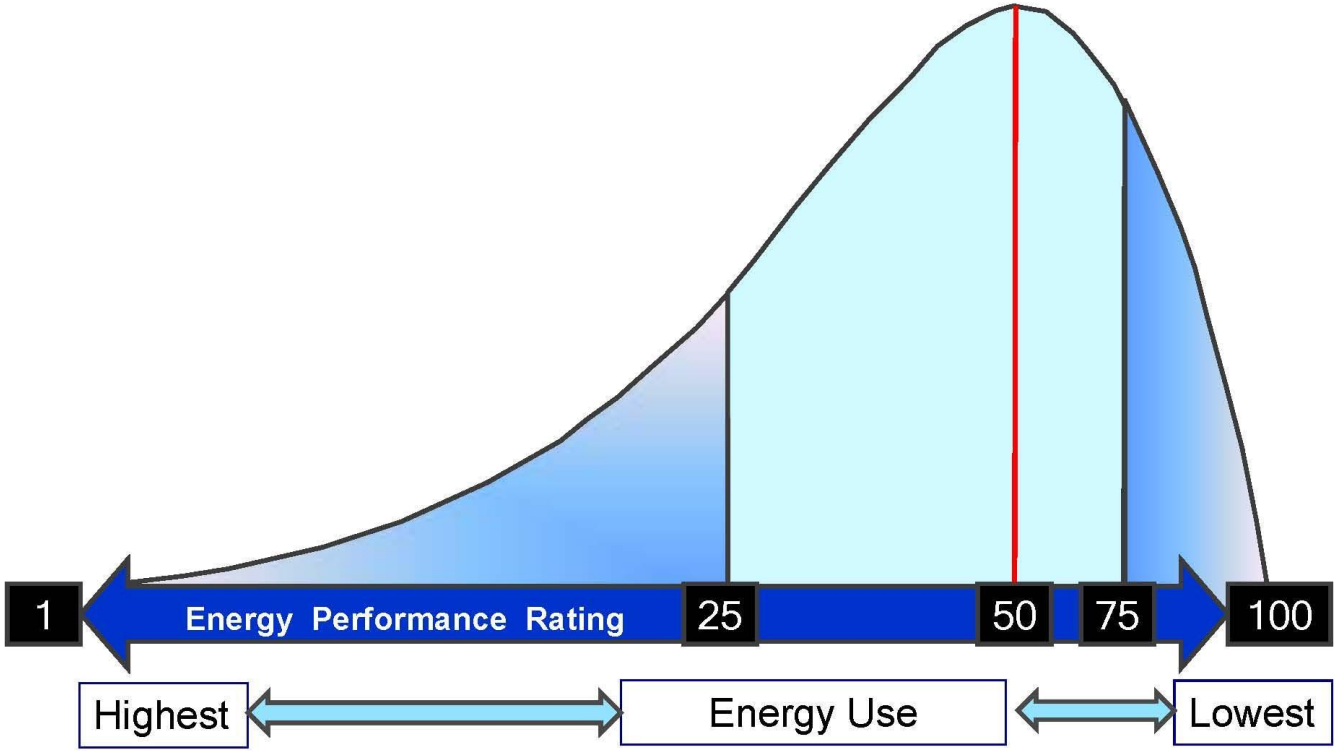
Andrew Queenan – Senior Project Architect and Sustainable Design Lead, TowerPinkster

Michigan Energy Summit- 05/14/2026

Benchmarking & Risk Management

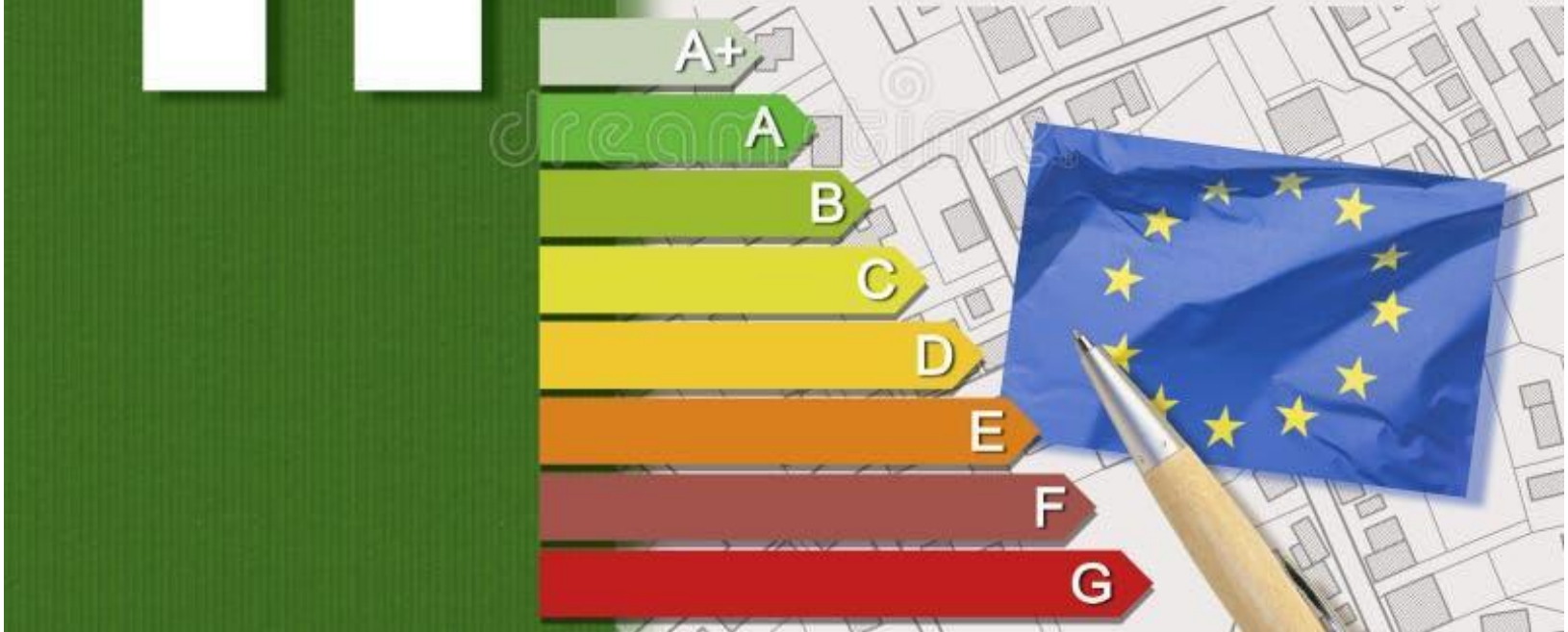
Vincent Martinez, CEO
2030, Inc. / Architecture 2030

EPA's National Energy Performance Score System

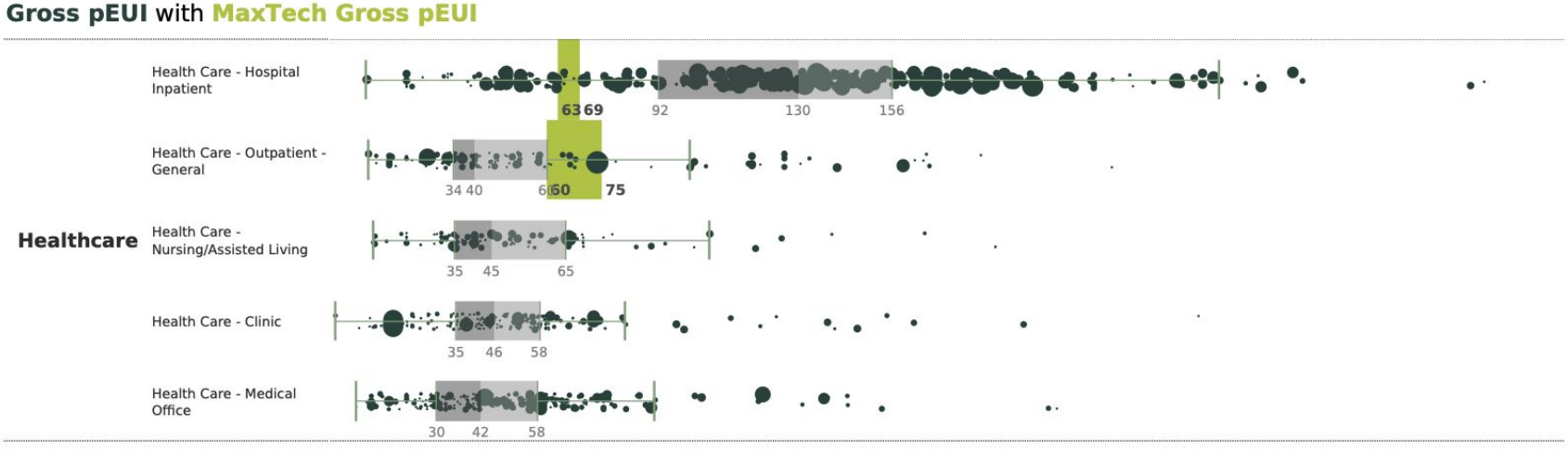


Energy Performance of Buildings Directive

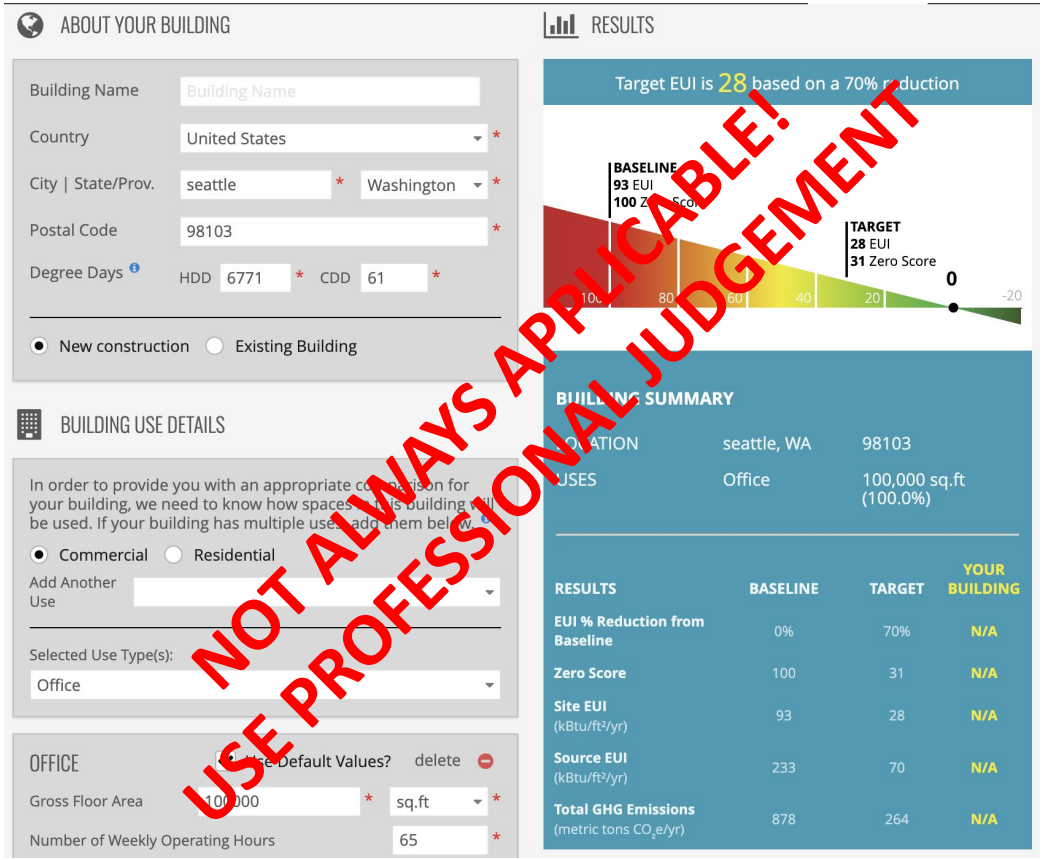
2024/1275 - EPBD



MAKING MEANINGFUL COMPARISONS



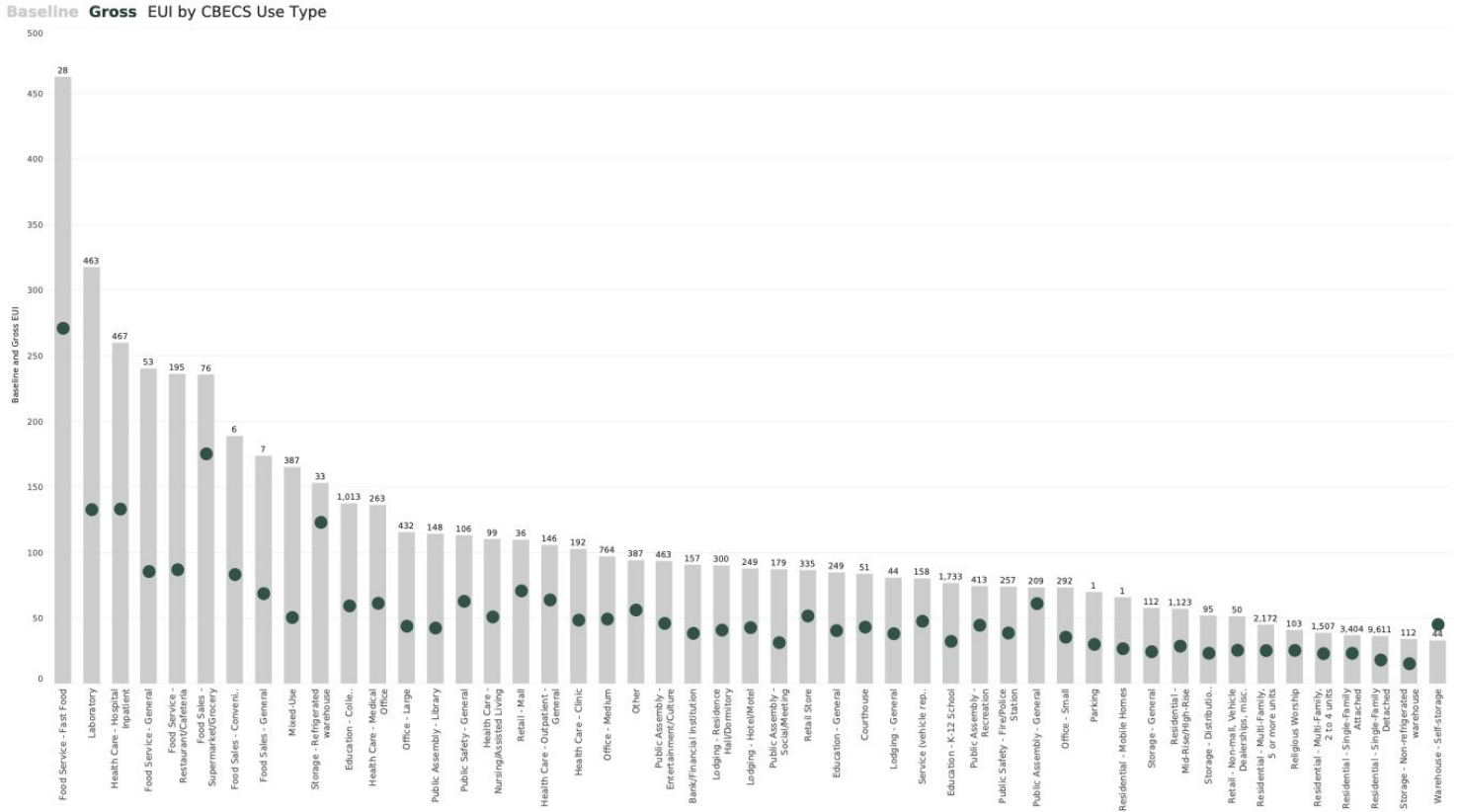
ZERO TOOL



NOT ALWAYS APPLICABLE!
USE PROFESSIONAL JUDGEMENT

https://zerotool.org/

Some building types can go further than others

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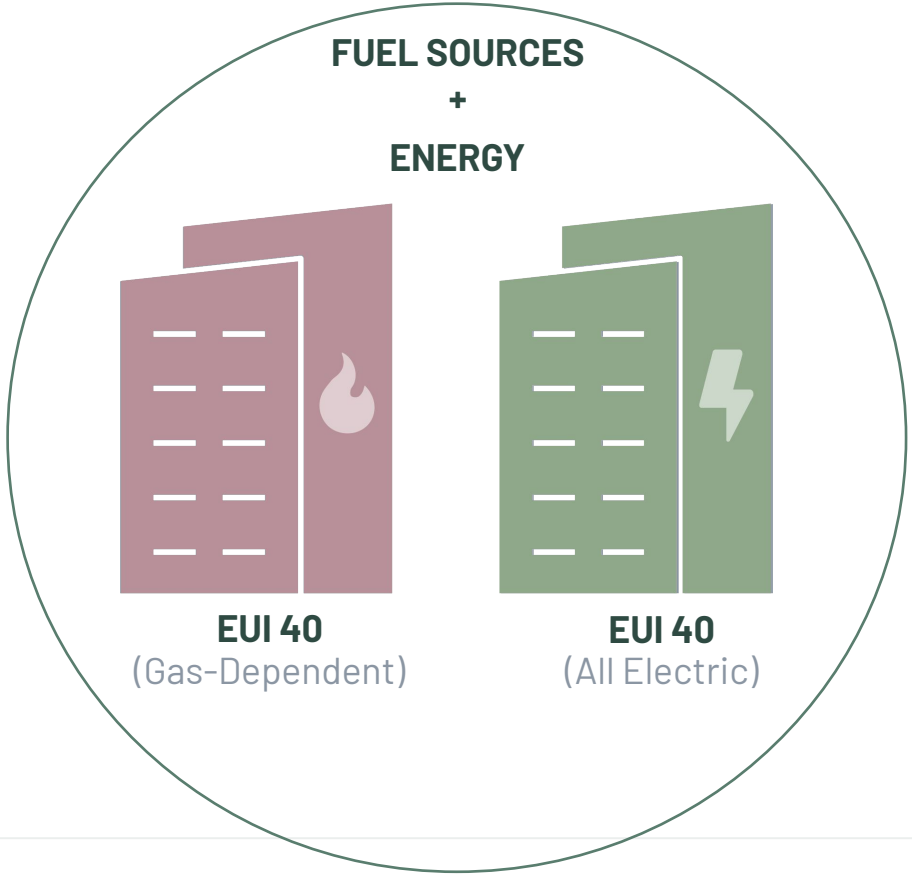
Adopt Multi-Metric Measurement



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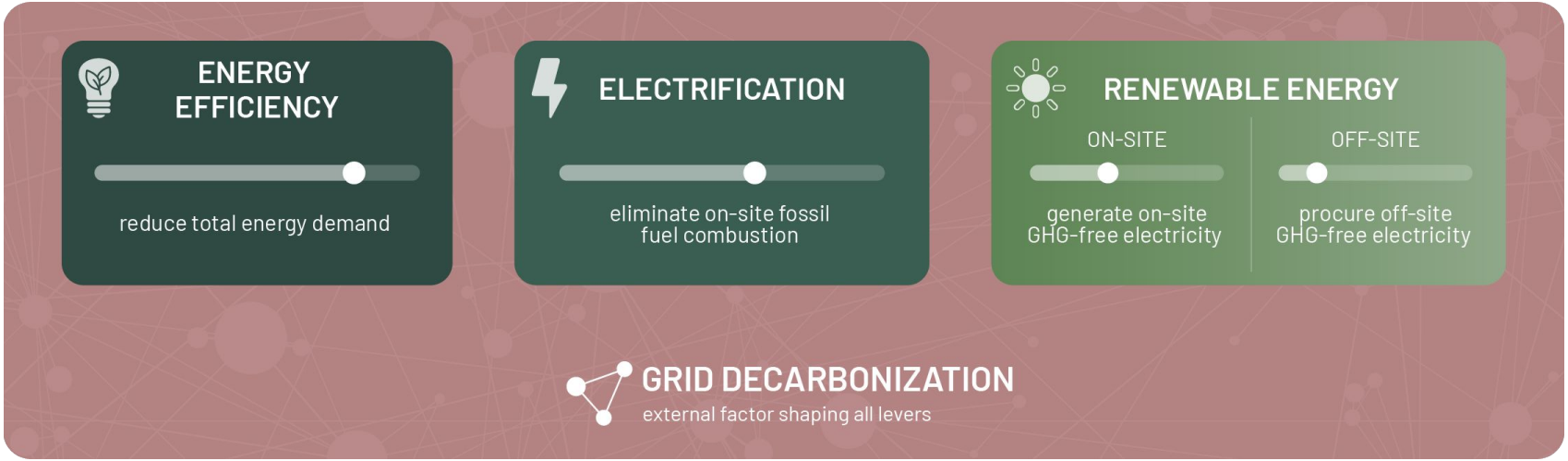
Beyond the Energy Metric

Levers of Change



THE LAST MILE PROBLEM

Transit

First mile

Last mile

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Image generated using Google gemini

California solar mandate: What you need to know

Written by: Kerry Thoubboron

Why trust EnergySage?

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NYC Buildings

October 2019

SERVICE NOTICE

Local Law 92 of 2019 and Local Law 94 of 2019: Green and Solar Roof Requirements for New Buildings and Complete Roof Replacements

Beginning November 15, 2019, all new buildings and alterations of existing buildings where the entire existing roof deck or roof assembly is being replaced must provide a sustainable roofing zone covering 100% of the roof.

SOUTH MIAMI

New homes will now require solar panels in South Miami, a first in Florida

By Carli Teproff

cteproff@miamiherald.com

Updated July 19, 2017 6:09 AM

South Miami passed a new law on July 18, 2017, requiring all new homes built in the city to have solar panels, the first such measure in Florida. The law, which goes into effect in September, also applies to some residential renovations. Al Diaz *adiaz@miamiherald.com*

The Zero-Ready Protocol

Every project must design for tomorrow

Standardize

- All-electric systems and appliances
- Reserve capacity for future loads
- Solar-ready roofs, panels and conduits

ROOF

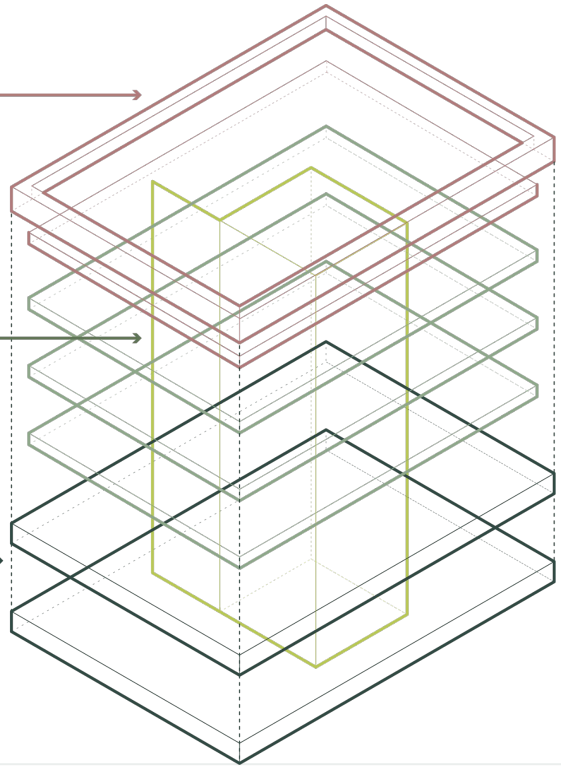
Install On-Site Solar
(or design for Solar-Readiness)

SYSTEMS

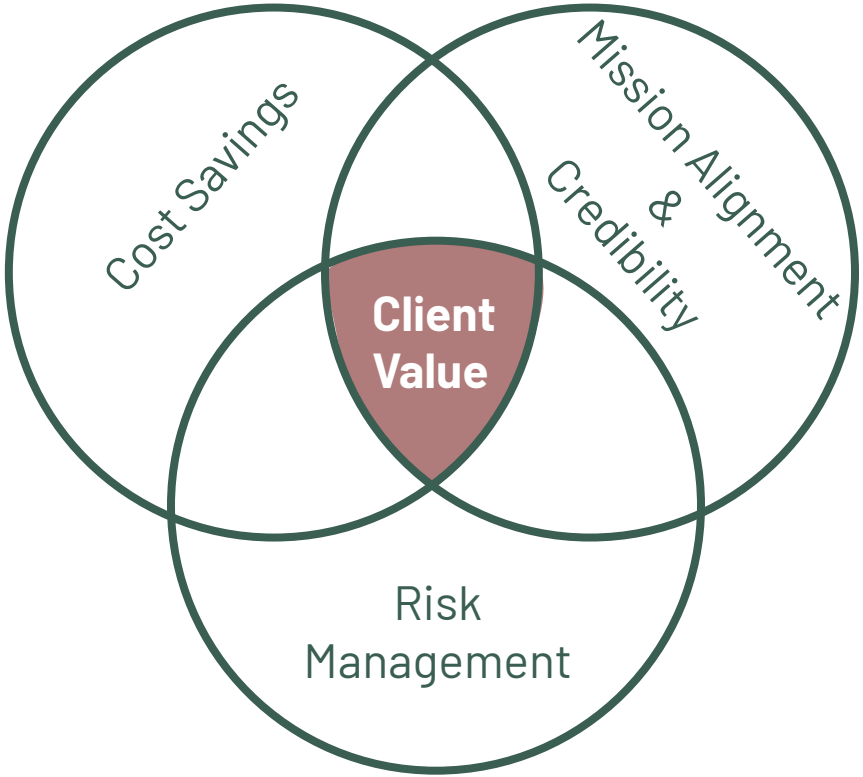
Use All-Electric Systems
(or design for Electric-Readiness)

ENVELOPE

Maximize energy efficiency within technical limits



Client Value: Outcomes clients already prioritize



Client Value: Risk Management

Transform Energy Risk into Asset De-Risking and Value Protection

Stranded Assets

Depreciation and costly future mandates

Regulatory Vulnerability

Exposure to new regulatory requirements

Loss of Market Position

Tenant commitments & investor mandates

Client Value: The Market Push and Pull

Convert Performance into Bankable, ESG-Aligned Capital

Asset De-Risking

Protects long-term valuations

Bankable ESG Capital

Unlocks new financing

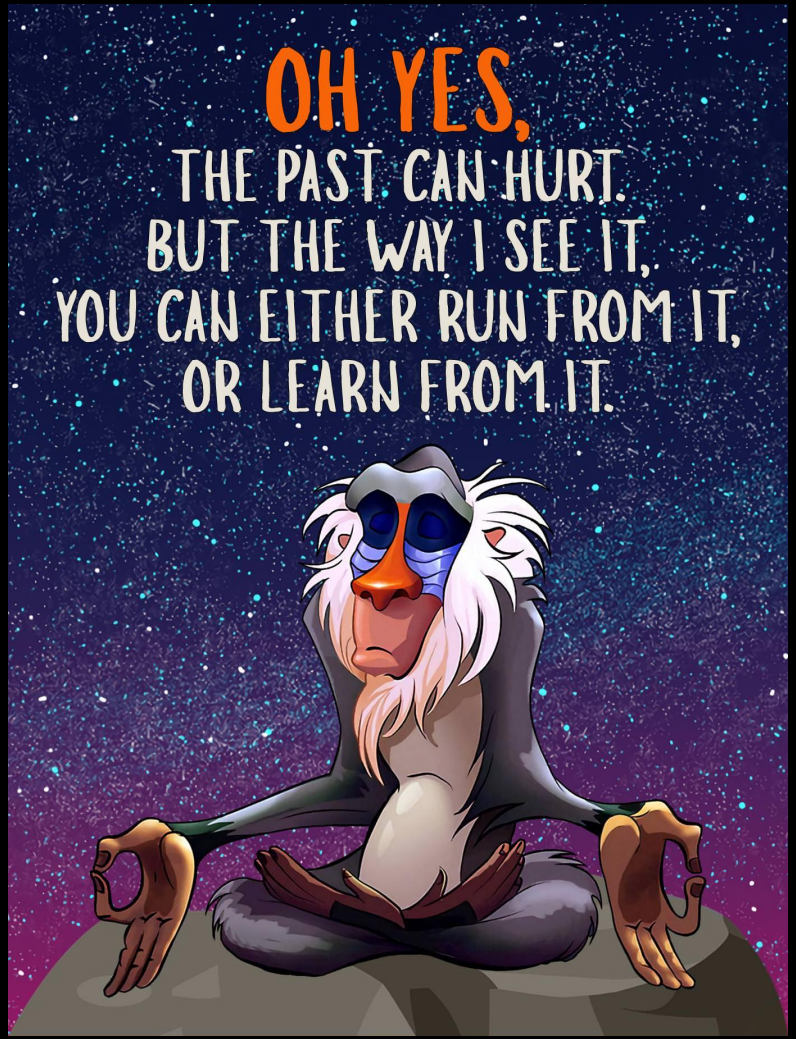
Trillion-Dollar Market

Predictable demand for required global investment

Benchmarking + Risk Management

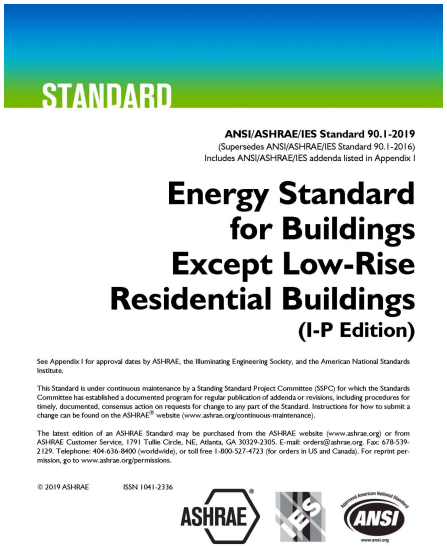
Michigan Energy Summit | Breakout Session

May 8, 2024


OH YES,
THE PAST CAN HURT.
BUT THE WAY I SEE IT,
YOU CAN EITHER RUN FROM IT,
OR LEARN FROM IT.

THE RISK LANDSCAPE:

- Reveal hidden financial, operational, and regulatory risks.
- Apply Systems thinking to our process



efficiency first

Energy Efficiency

+

Electrification

+

Renewable Energy

NET ZERO APPROACH

PASSIVE DESIGN

ORIENTATION

DIRECT GAIN: GLAZING

DIRECT GAIN: HEAT STORAGE

DOUBLE ROOF

EARTH SHELTERING

EAST/WEST SHADING

EVAPORATIVE COOLING TOWERS

FORM FOR COOLING

FORM FOR DAYLIGHTING

FORM FOR HEATING

GREEN ROOF

INDIRECT GAIN: SUNSPACE

INTERMEDIATE LIGHT SHELVES

NIGHT VENT COOLING

SHADING DEVICES

SIDE DAYLIGHTING

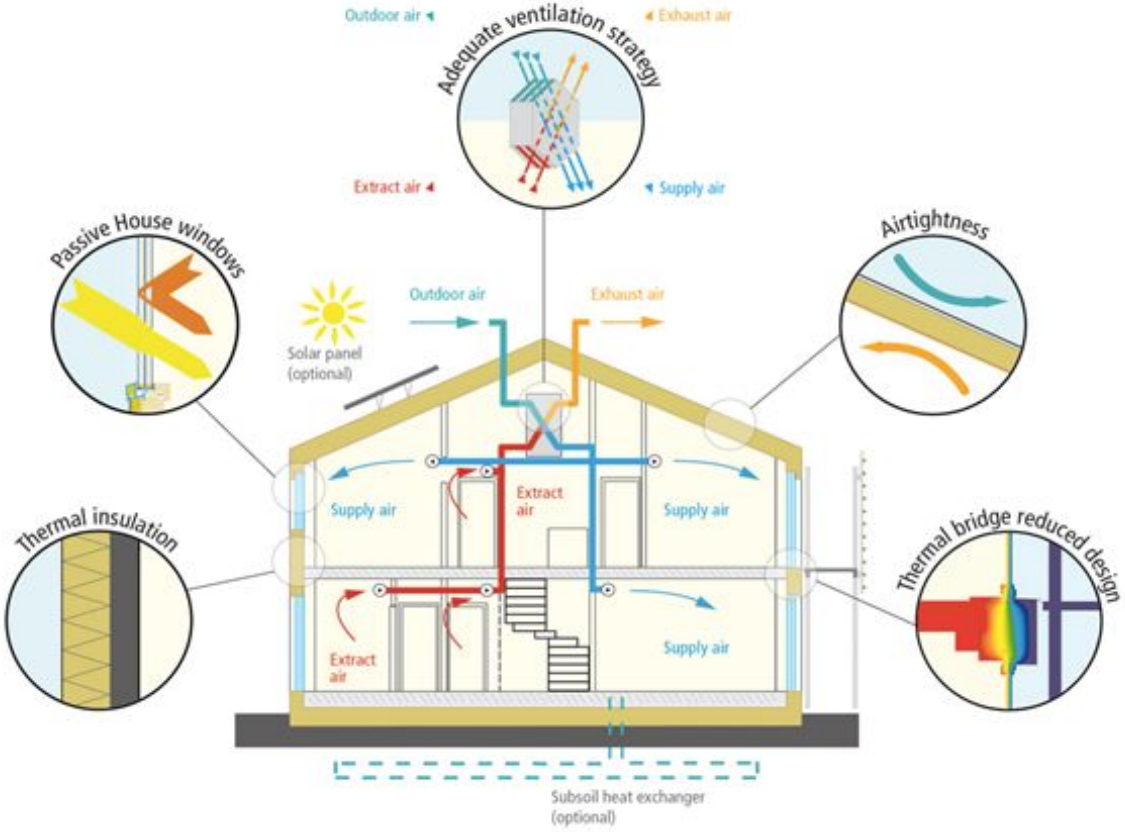

TowerPinkster
Architecture · Engineering · Interiors

HIGH PERFORMING ENVELOPE

Component	Code	Design
Roof	R-30	R-37
Exterior Walls	R-13.3	R-19
Windows	U-0.36	U-0.32 low-e

+ Insulated coiling doors

ENVELOPE



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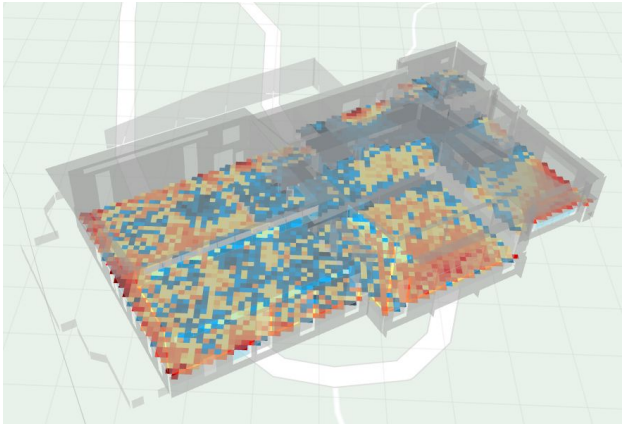
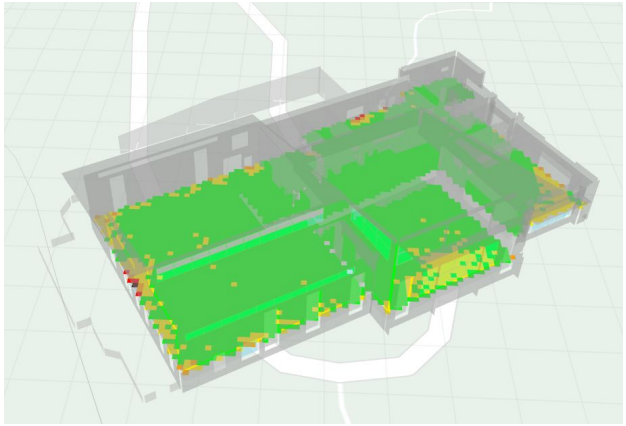
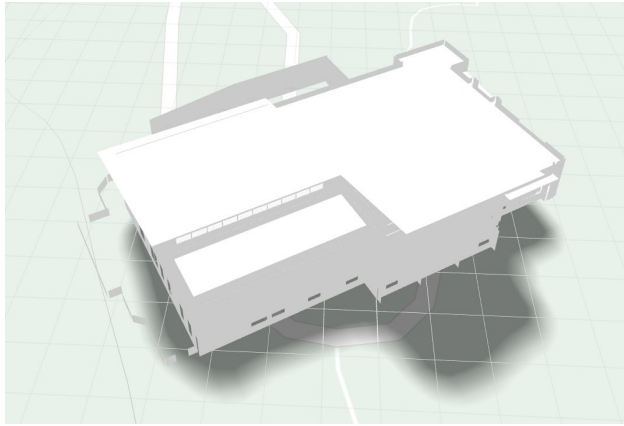






DAYLIGHT

Dispersed throughout floor plan to reduce lighting electric load.

GLARE

Minimized.

SHADING

Mid-June at 4:00 PM

RENEWABLES

PLANT SIDE CONFIGURATION

GEO
WELL FIELD

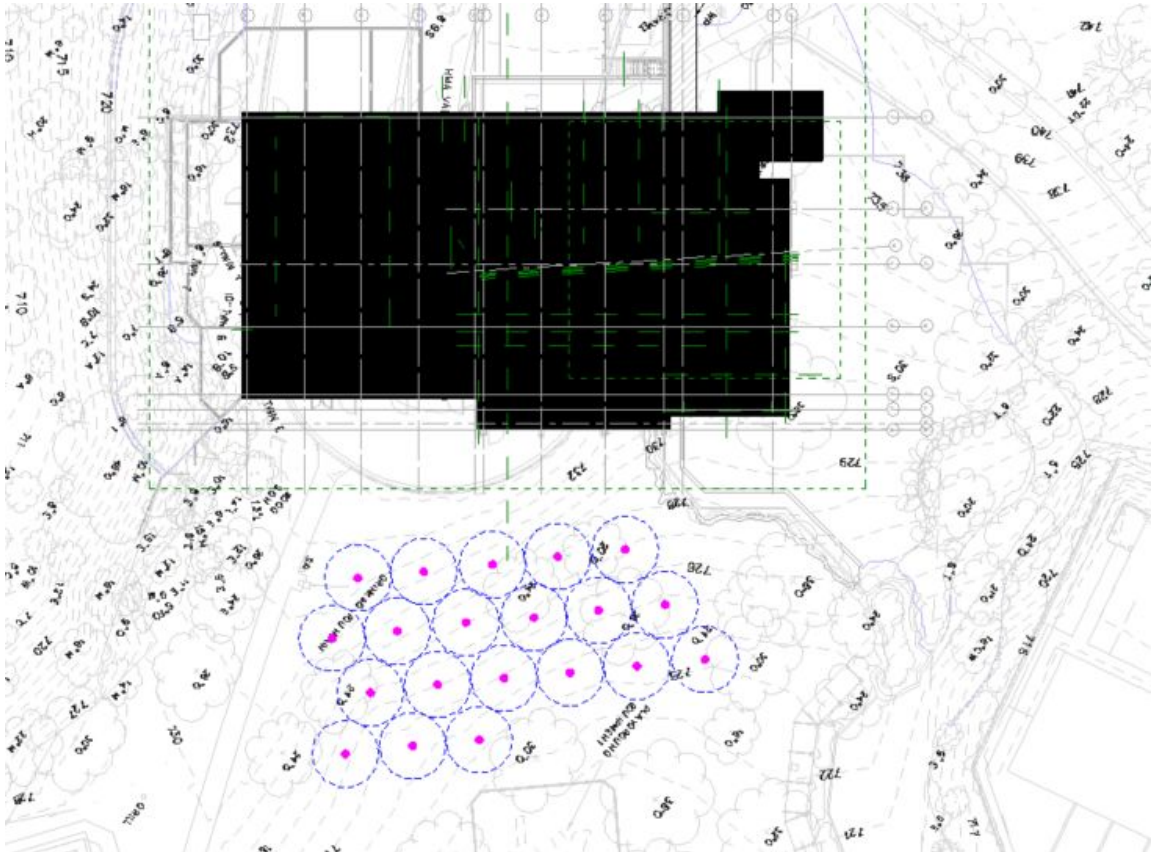
TO SNOWMELT
SYSTEM

TO RADIANT
FLOOR SYSTEM

HEAT PUMPS

GEOTHERMAL SYSTEMS

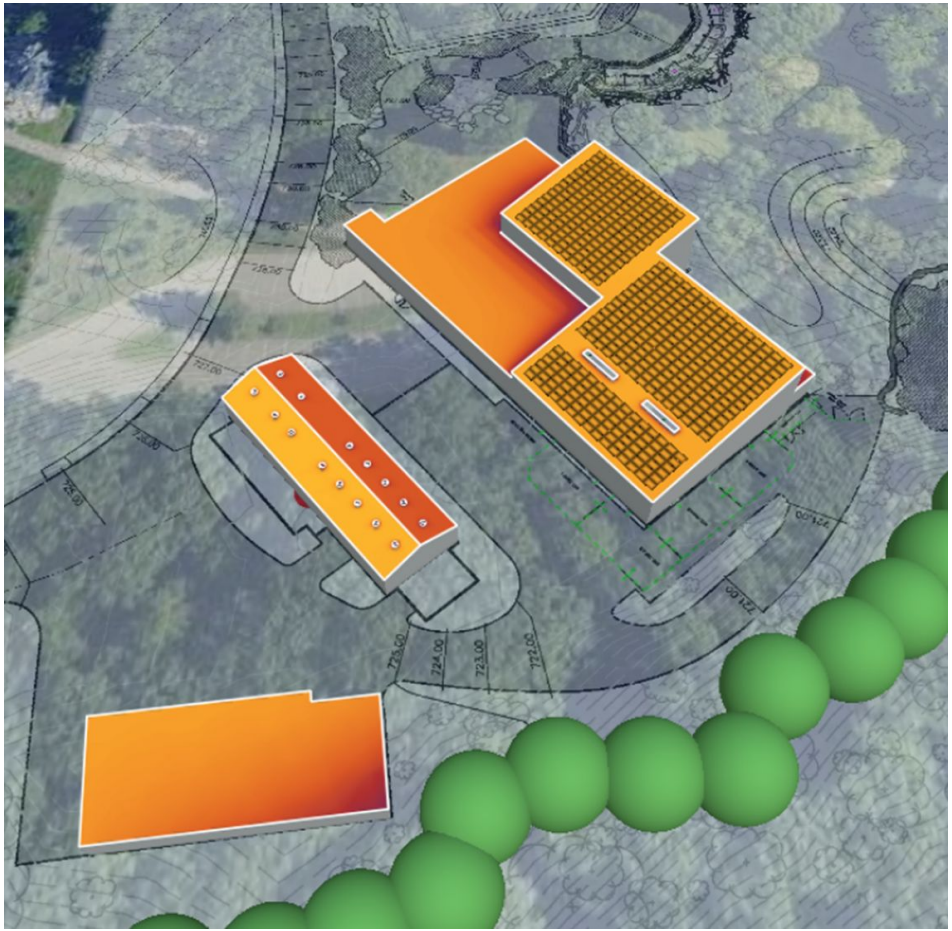
20 bores



SOLAR PV

Preliminary Sizing:

- 150 KW AC
- 225,000 KWH annual production
- Estimated $370,000 install cost
- 12.8 year payback
- $0.13/KWH rate assumed
- 1.5 MW potential from Butterworth



QUESTIONS TO ASK DESIGN TEAMS

1. Ask for Energy Model Reviews.
2. Are we meeting or exceeding code?
3. How do we measure performance once we begin operating the building?
4. What are future risks/challenges you see?
5. Are you experienced in performing energy audits?

OPPORTUNITIES FOR BUILDING OWNERS

- Data-Driven Design Process
- Measurable Data to compare against during operations
- Return on Investment that goes beyond upfront cost vs operations.
- Ability to reduce risk

THANK YOU!

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