ZERO ENERGY SCHOOLS - the future is NOW...

WHY SHOULD I CARE?
WHAT'S IT GOING TO COST?

(and WHAT ARE THEY?)

Net Zero Energy Buildings
FACTORS DRIVING SCHOOLS to REDUCE THEIR ENERGY USE

LOCAL:  • Operational Costs
        • Difficulty in Budgeting for Energy
        • Preparation for Future Scarcity

NATIONAL:  • Energy Security

WORLD:  • Climate Change
        • Pollution (Extraction & Consumption)

Net Zero Energy Buildings
Components of Sustainability

FOSSIL FUEL ENERGY REDUCTION is only ONE COMPONENT of SUSTAINABILITY

- Sustainable Sites
- Indoor Air Quality
- Energy & Atmosphere
- Water Efficiency
- Materials and Resources

...but IT'S A BIG ONE!

Net Zero Energy Buildings
the **2030 Challenge**

...voluntary standard for building sector energy/fossil fuel reduction.

- Now: 50%
- 2010: 60%
- 2015: 70%
- 2020: 80%
- 2025: 90%
- 2030: [Carbon-Neutral](#)
WHAT IS A NET ZERO FOSSIL FUEL BUILDING?

Easy Answer: One that makes as much energy as it uses on an annual basis...
Creating NZEB

How do we create a **NZEB**?

**Typically:**
- **Conserve**
  Reduce building energy consumption.
- **Create**
  Use renewable energy to offset the remaining.

**Baseline - Conserve - Create = 0**

Net Zero Energy Buildings
Typical Paths To Net Zero...
CONSERVATION...

UPGRADE BUILDING COMPONENTS
(or add more of them)
SO THAT THEY CONSERVE ENERGY

Net Zero Energy Buildings
RENEWABLES

...or START WITH the MOST EXPENSIVE TYPE of STRATEGY
These methods are costly...

...the better the energy performance, the greater the cost.

...is there a more elegant way to reach net zero.
There is a growing movement to create buildings that are super energy efficient—by their nature—rather than creating them through additive processes.

...the result is net zero buildings at reduced cost.