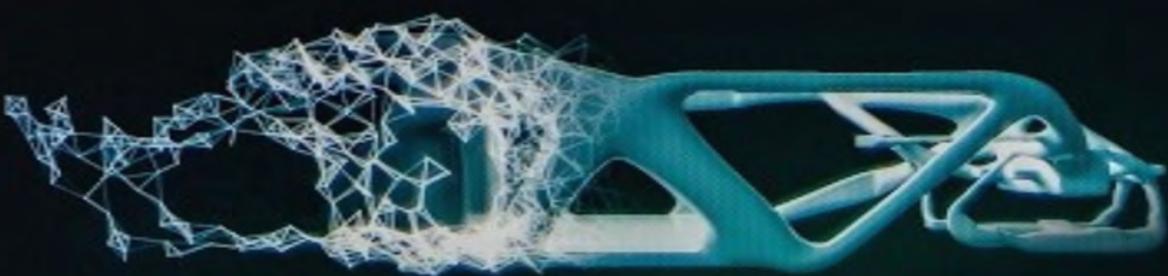
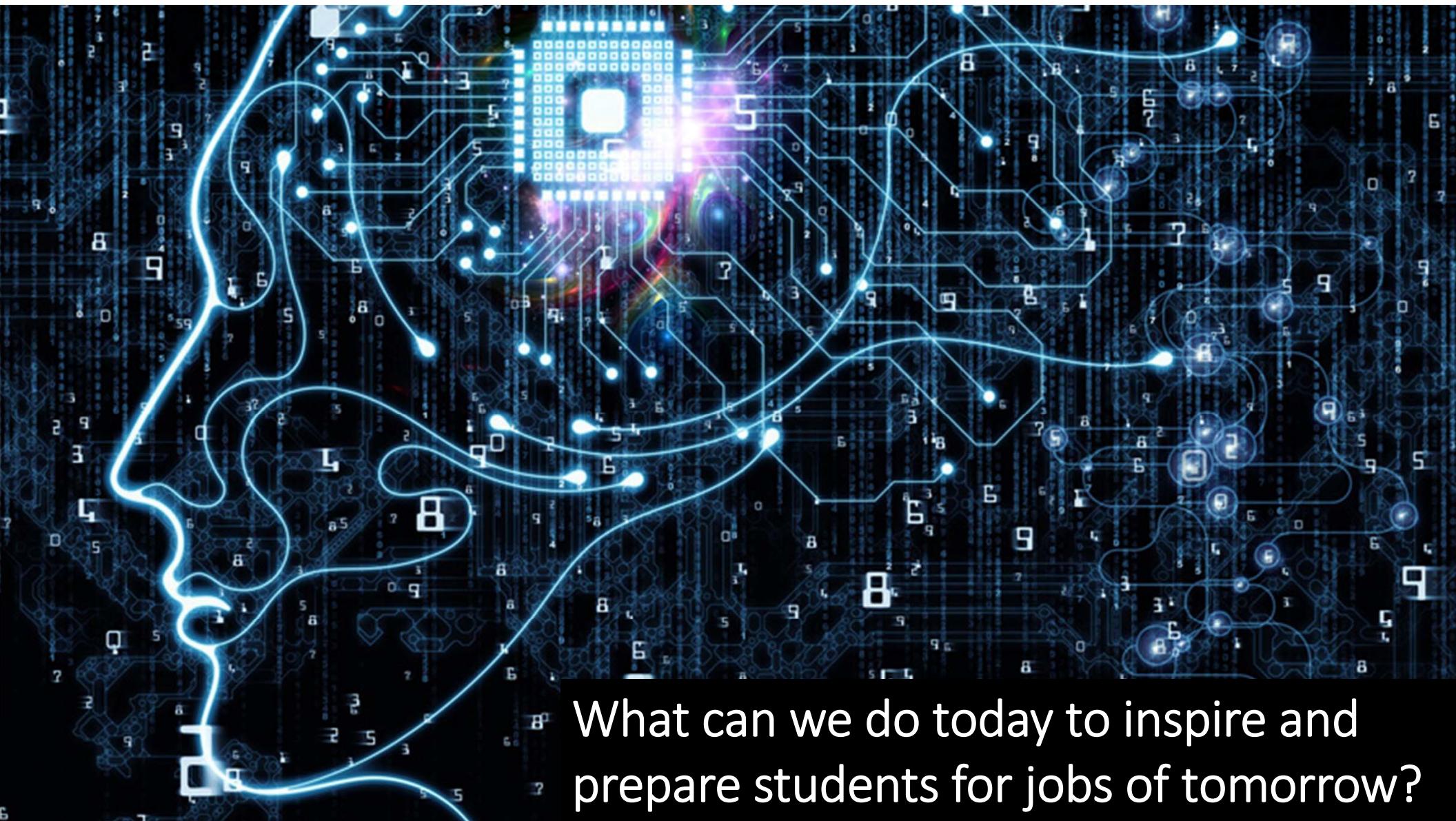


Charles Xie

Artificial Intelligence and Engineering Education

What does the future of engineering look like?





What can we do today to inspire and
prepare students for jobs of tomorrow?

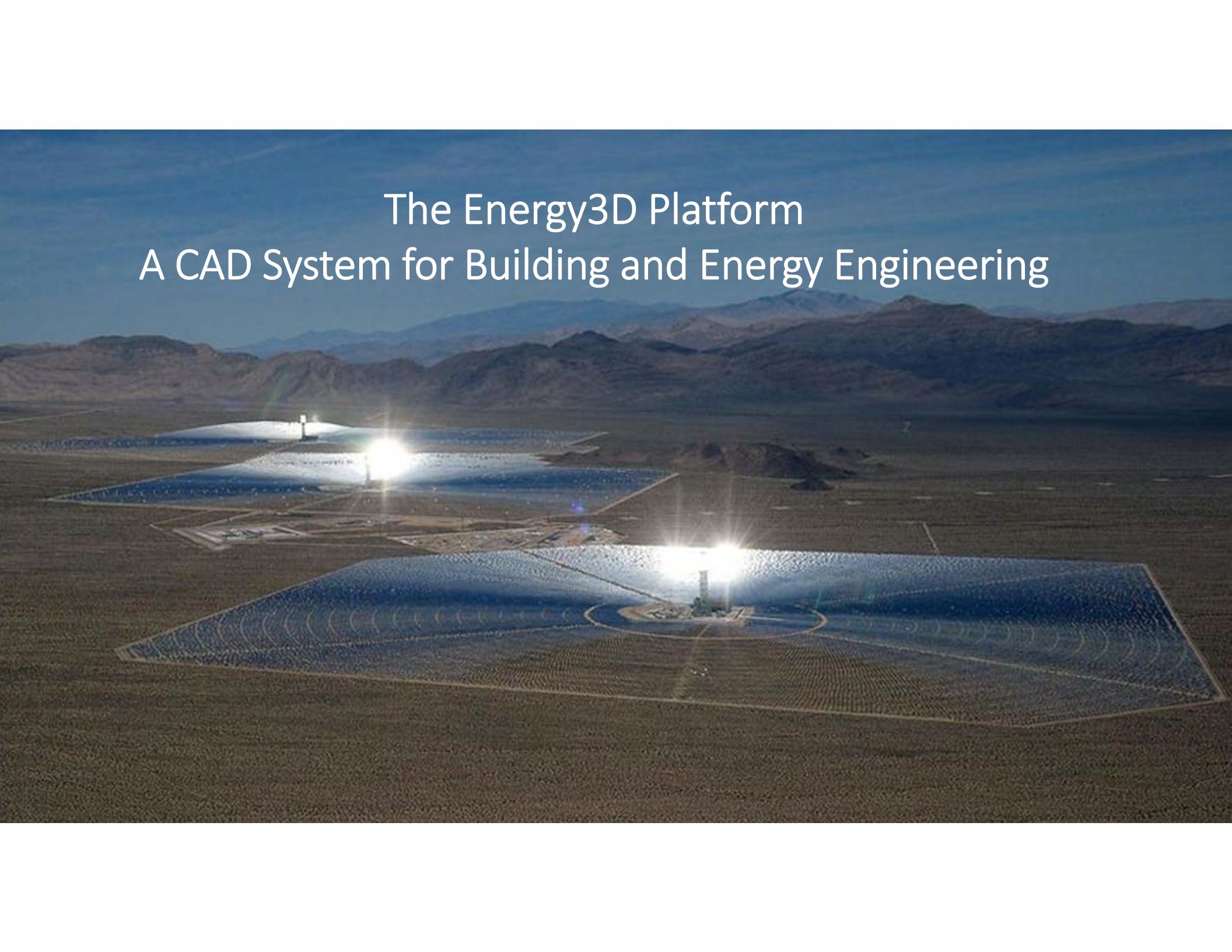


We have something for you.

R&D on AI as an educational tool for:

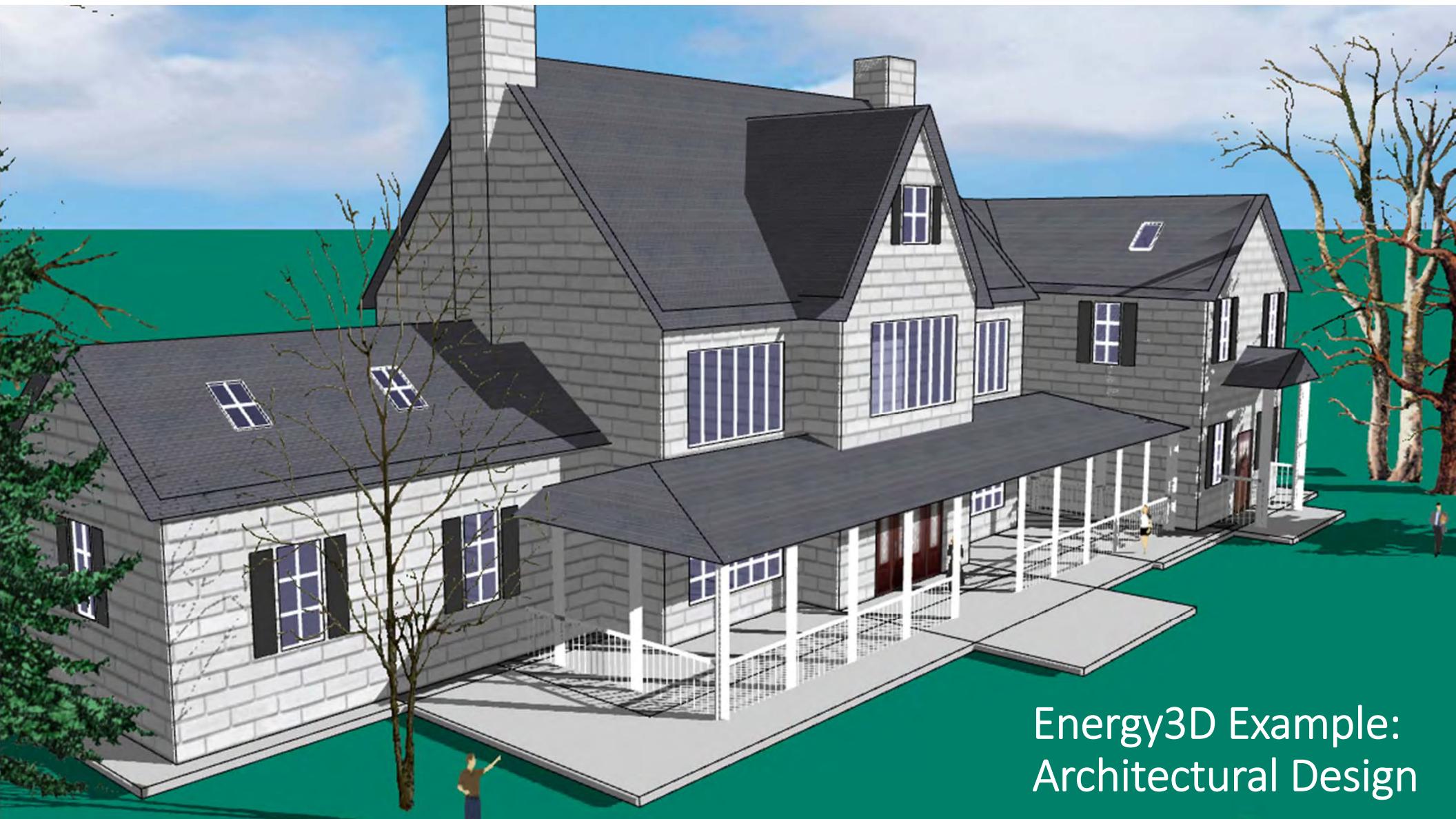
- Cognitive augmentation
- Creativity enhancement
- Automatic assessment
- ...



The background image shows a vast, flat desert landscape under a clear blue sky. In the distance, a range of mountains is visible. In the foreground, there is a massive solar power facility consisting of numerous rectangular solar panels arranged in a grid. Two prominent central towers are illuminated from within, casting bright, intense light upwards and outwards, creating a lens flare effect. The overall scene conveys a sense of industrial scale and renewable energy generation.

The Energy3D Platform

A CAD System for Building and Energy Engineering



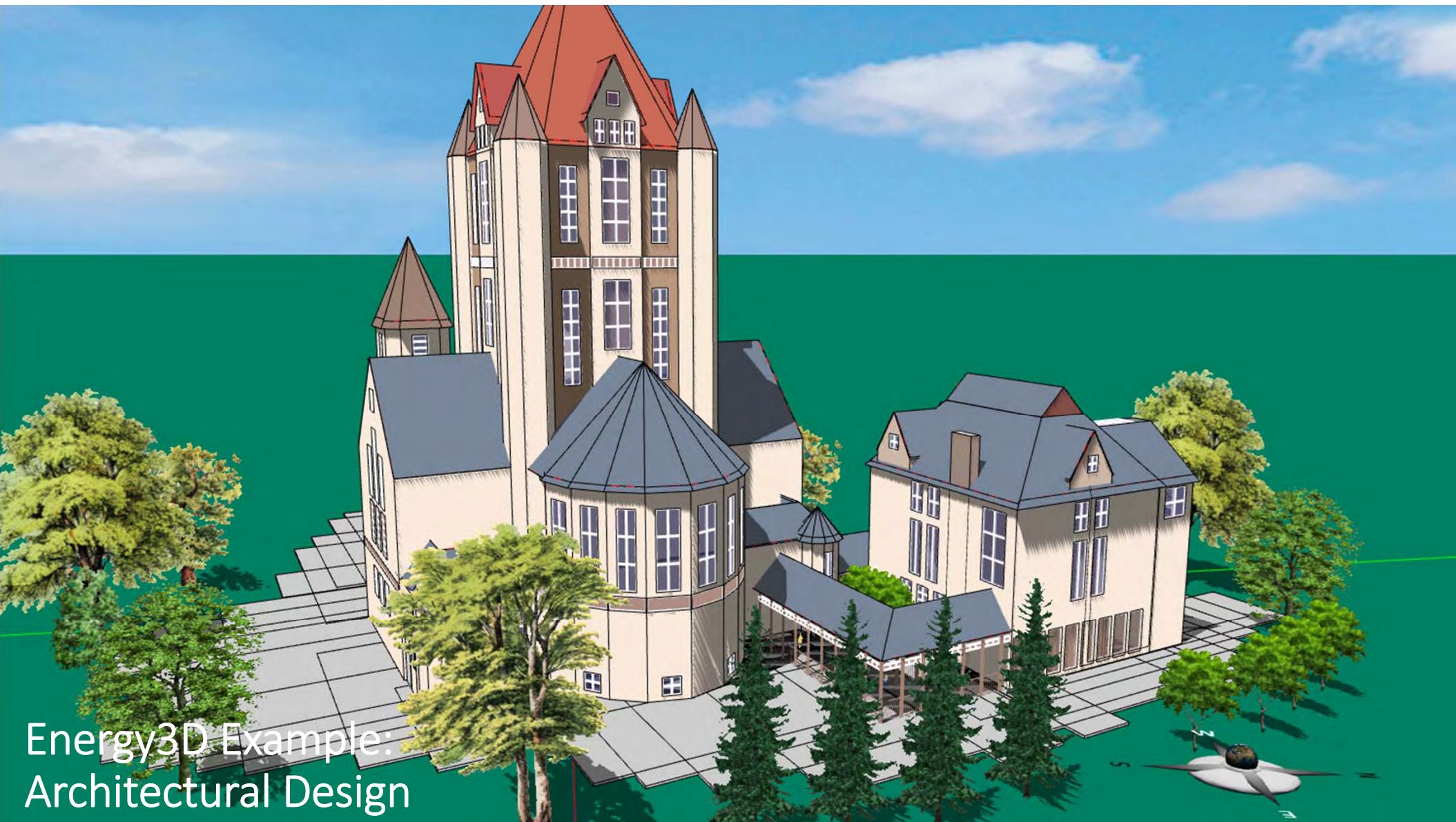
Energy3D Example:
Architectural Design



Energy3D Example:
Architectural Design



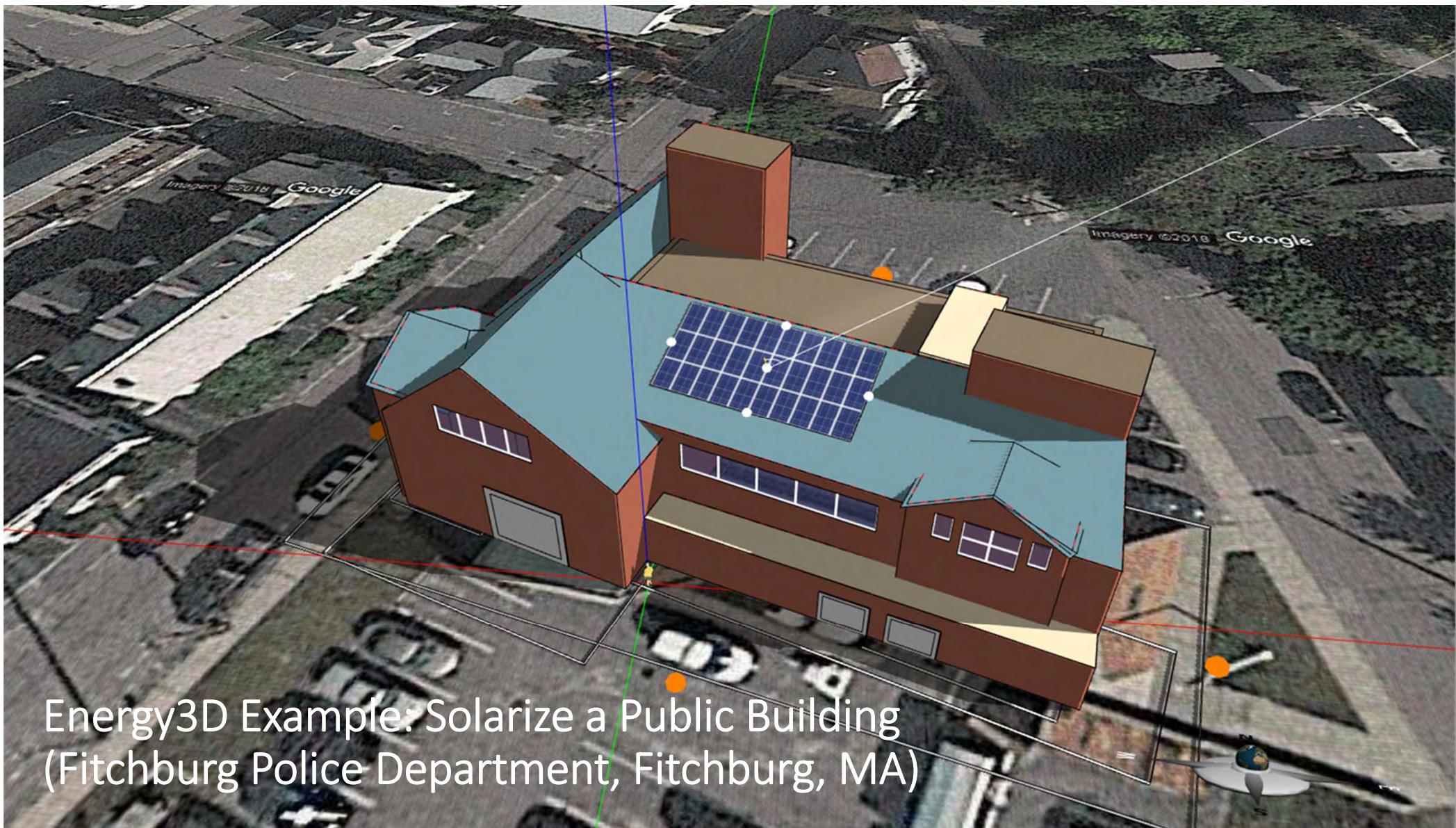
Energy3D Example:
Architectural Design



Energy3D Example:
Architectural Design



Energy3D Example: Solarize Your Home
(Braintree, MA)



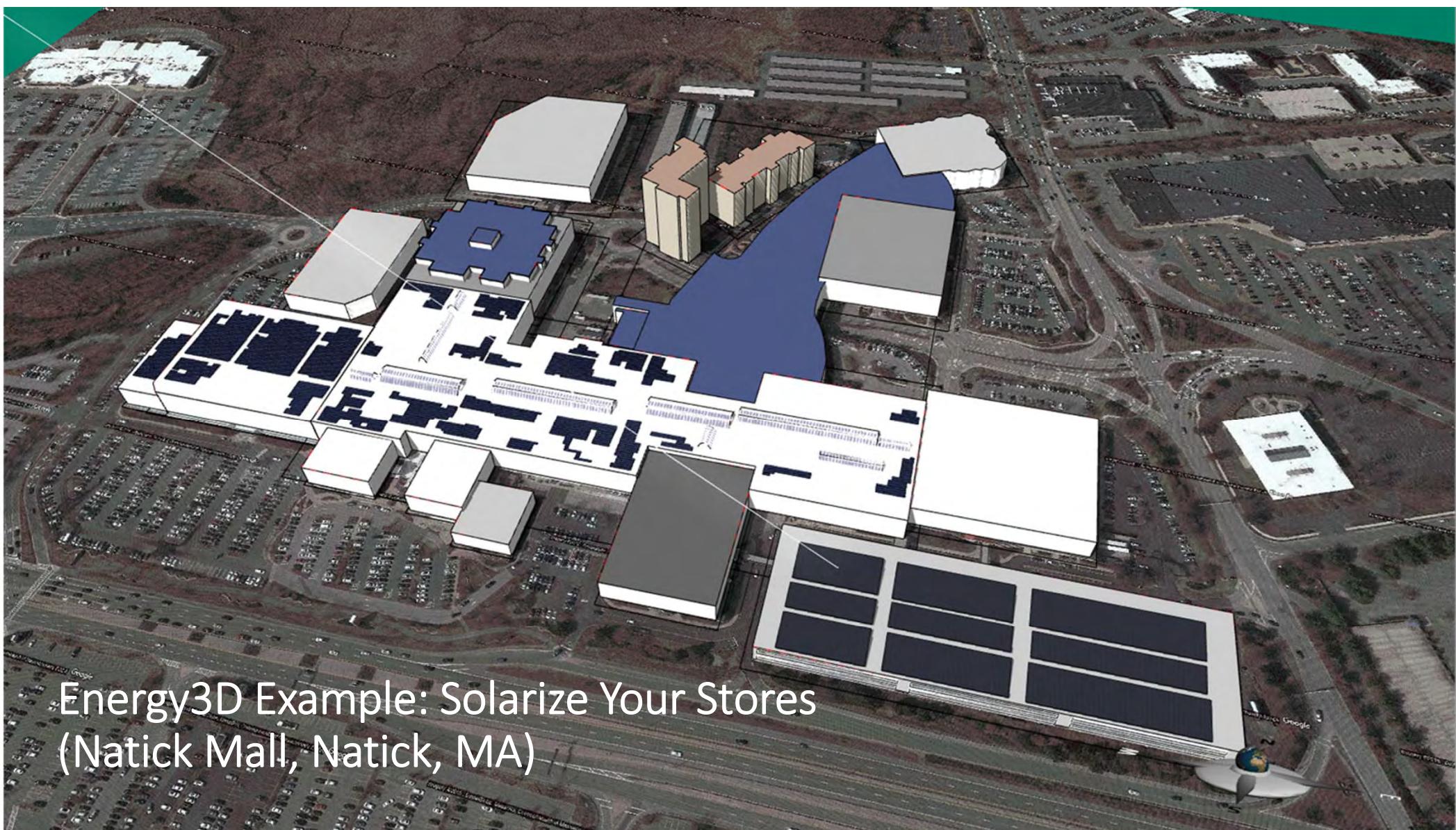
Energy3D Example: Solarize a Public Building
(Fitchburg Police Department, Fitchburg, MA)



Energy3D Example: Solarize a Parking Garage
(Spelman College, Atlanta, GA)



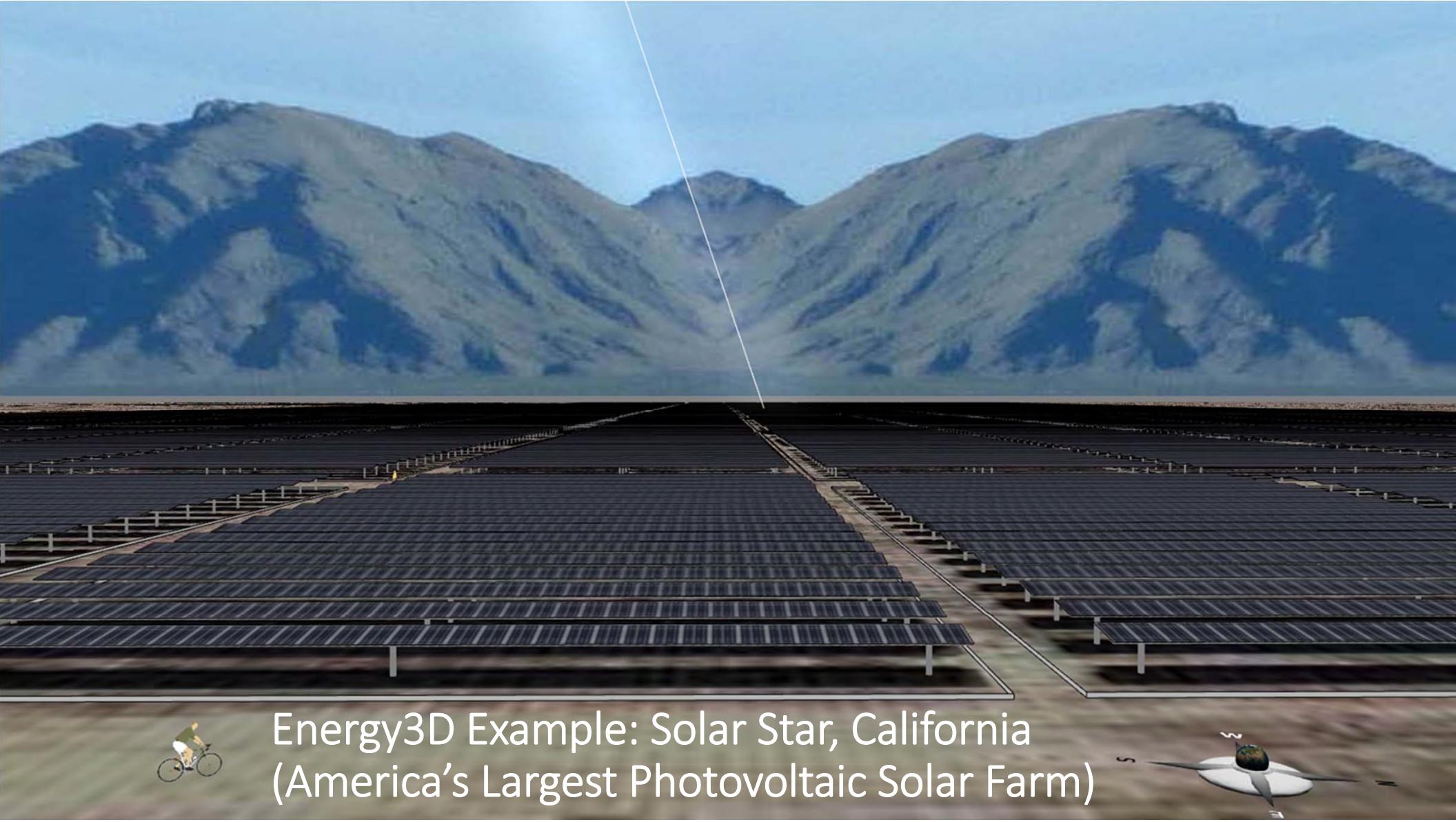
Energy3D Example: Solarize Your School
(Malden Catholic High School, Malden, MA)



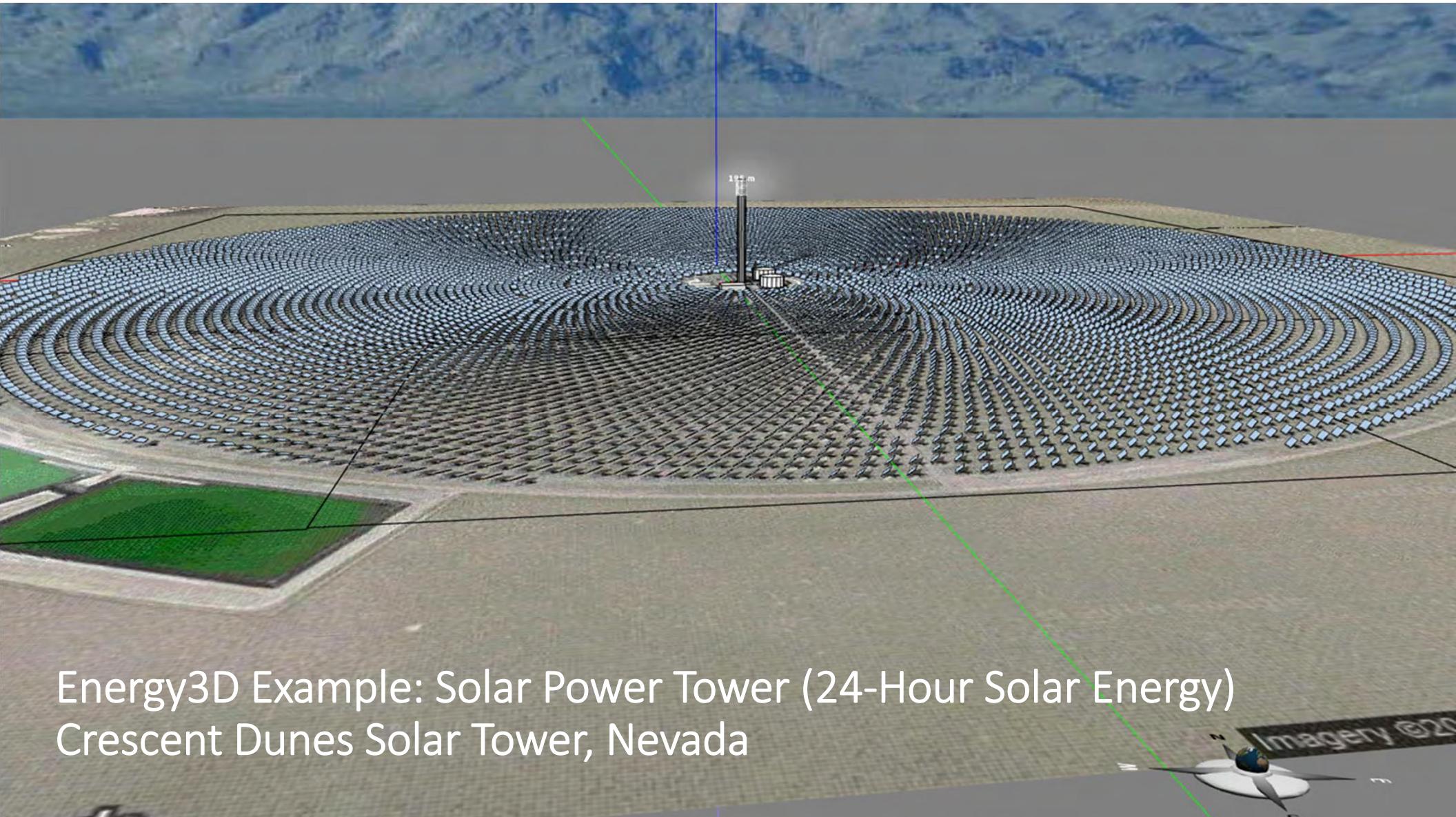
Energy3D Example: Solarize Your Stores
(Natick Mall, Natick, MA)



Energy3D Example: Advertisement-Integrated Photovoltaics
(Orlando, FL)



Energy3D Example: Solar Star, California
(America's Largest Photovoltaic Solar Farm)



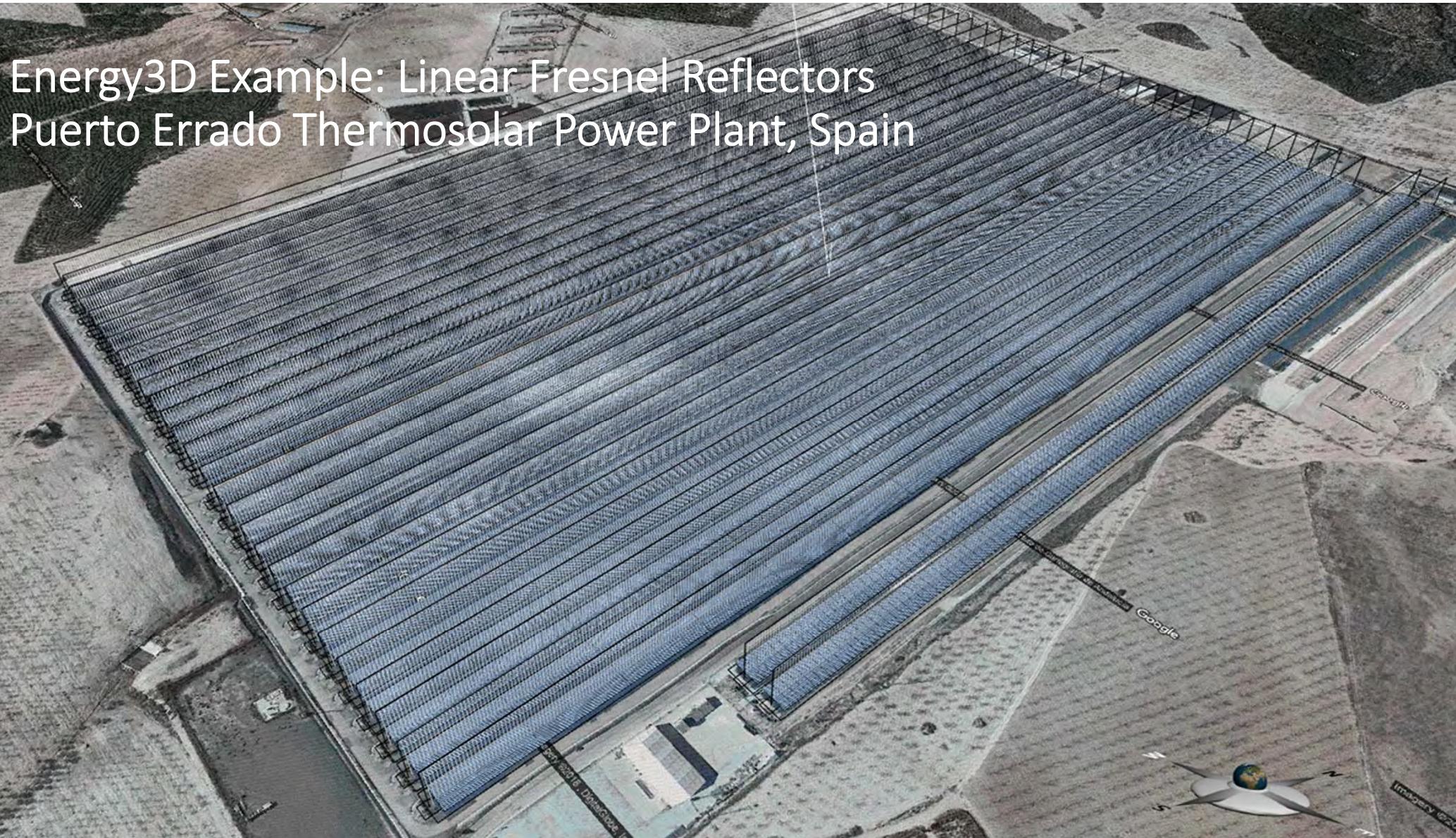
Energy3D Example: Solar Power Tower (24-Hour Solar Energy)
Crescent Dunes Solar Tower, Nevada



Energy3D Example: Parabolic Troughs
Solar Energy Generating Systems VIII, California

Energy3D Example: Linear Fresnel Reflectors

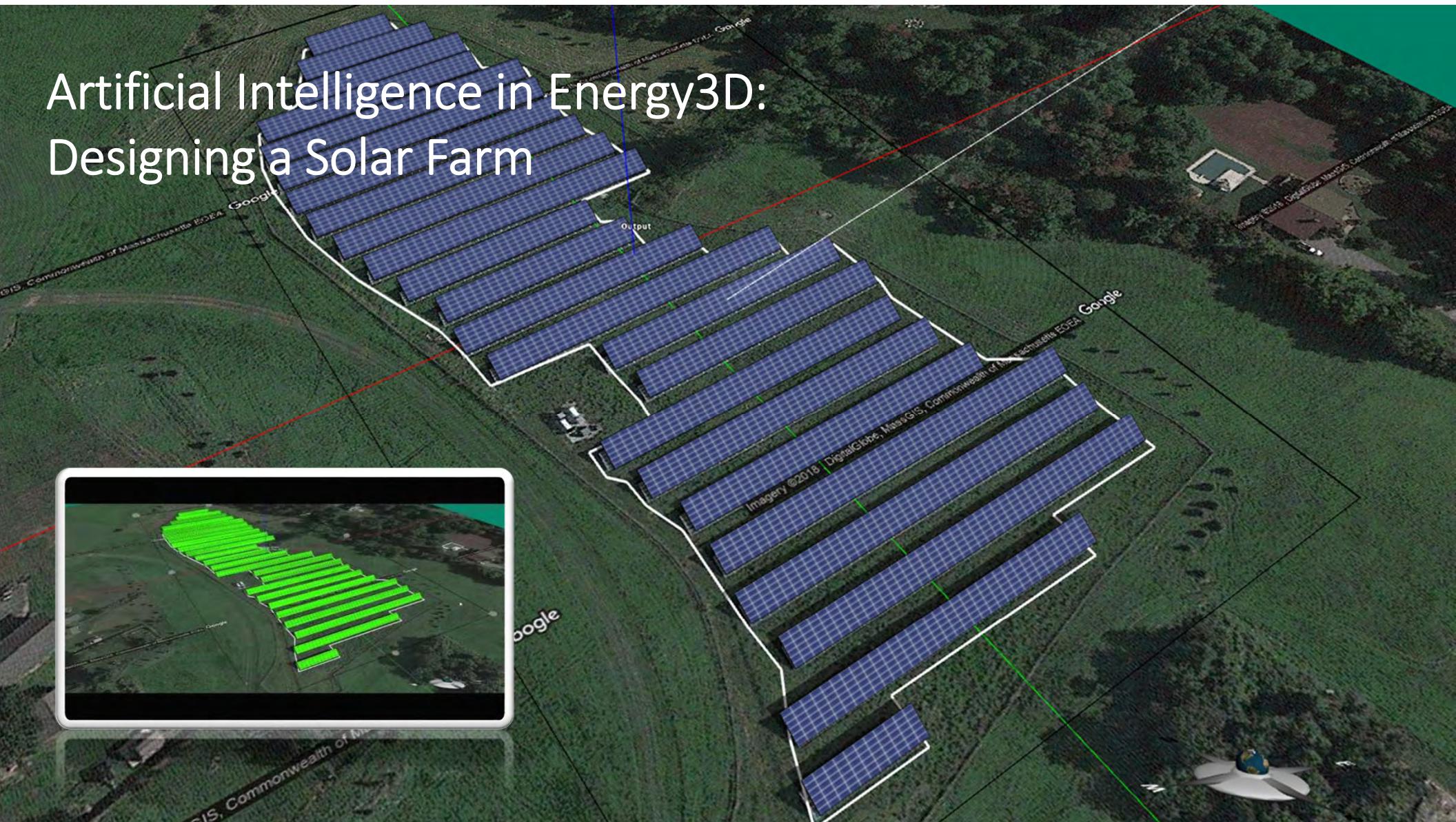
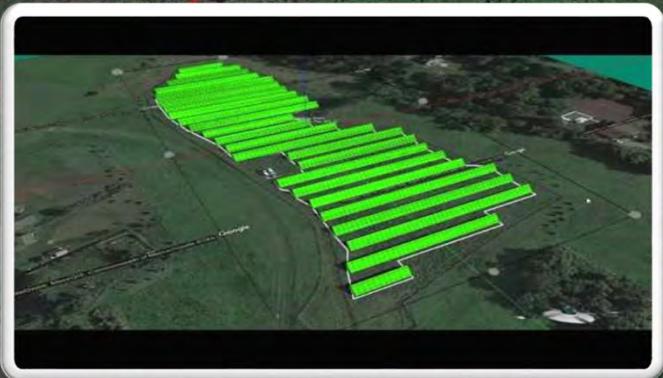
Puerto Errado Thermosolar Power Plant, Spain



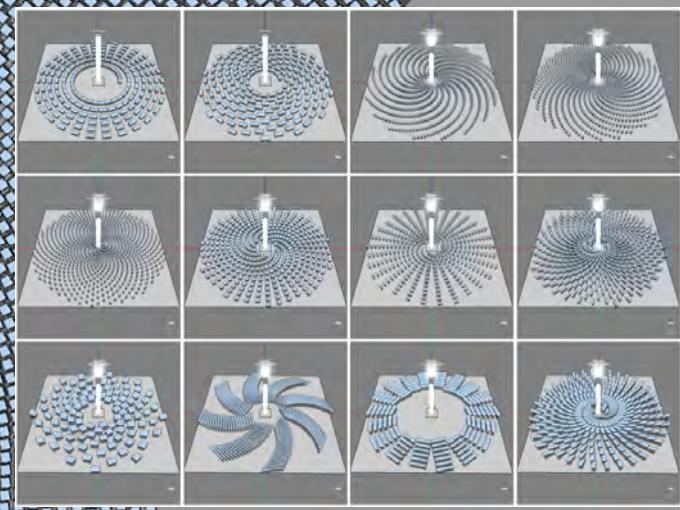
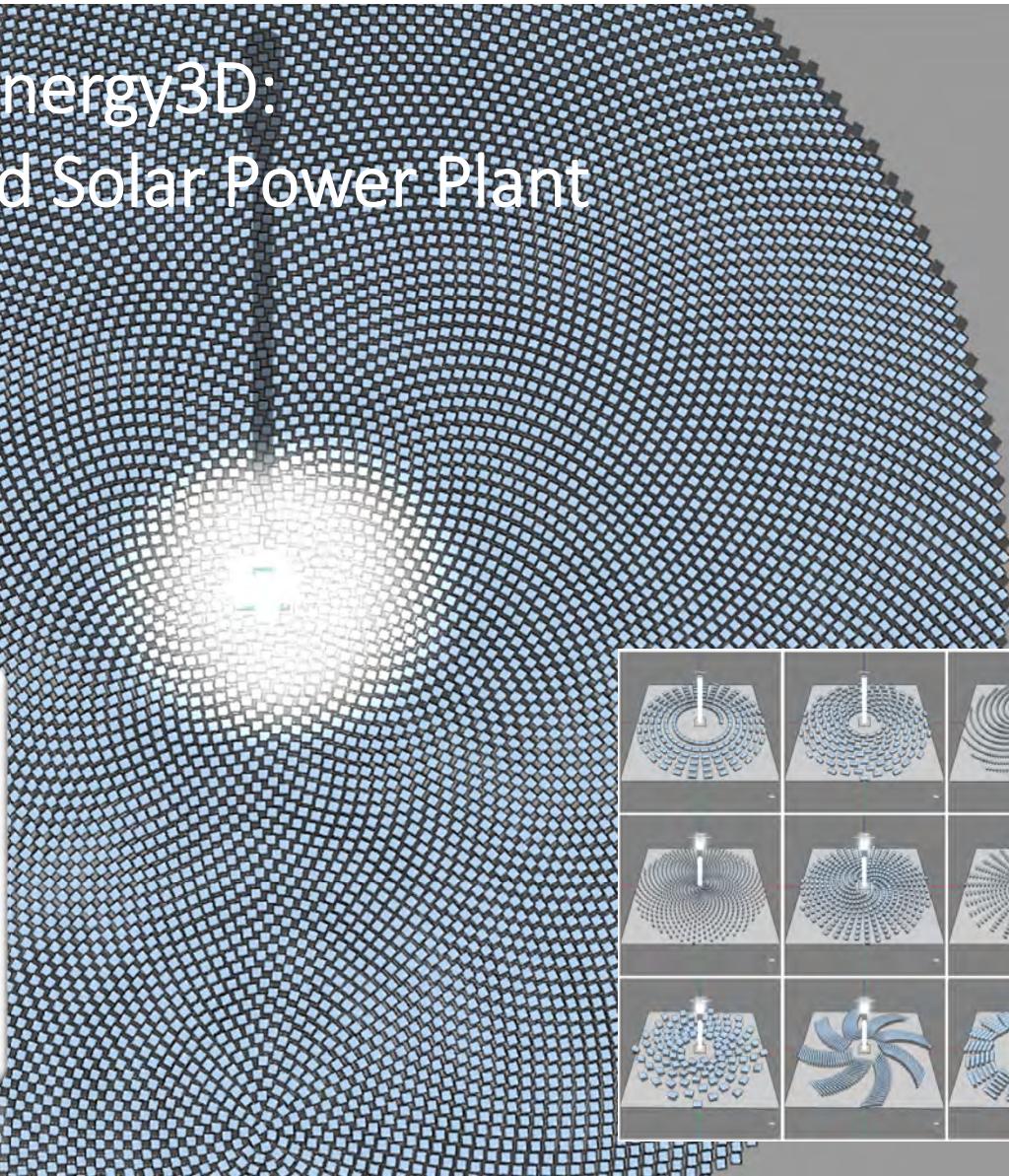
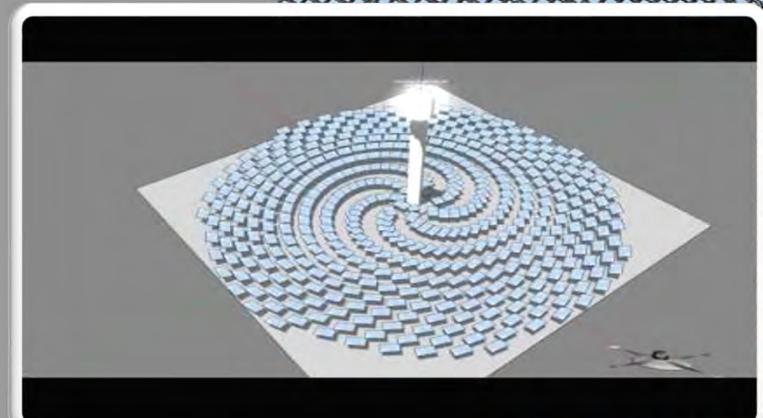


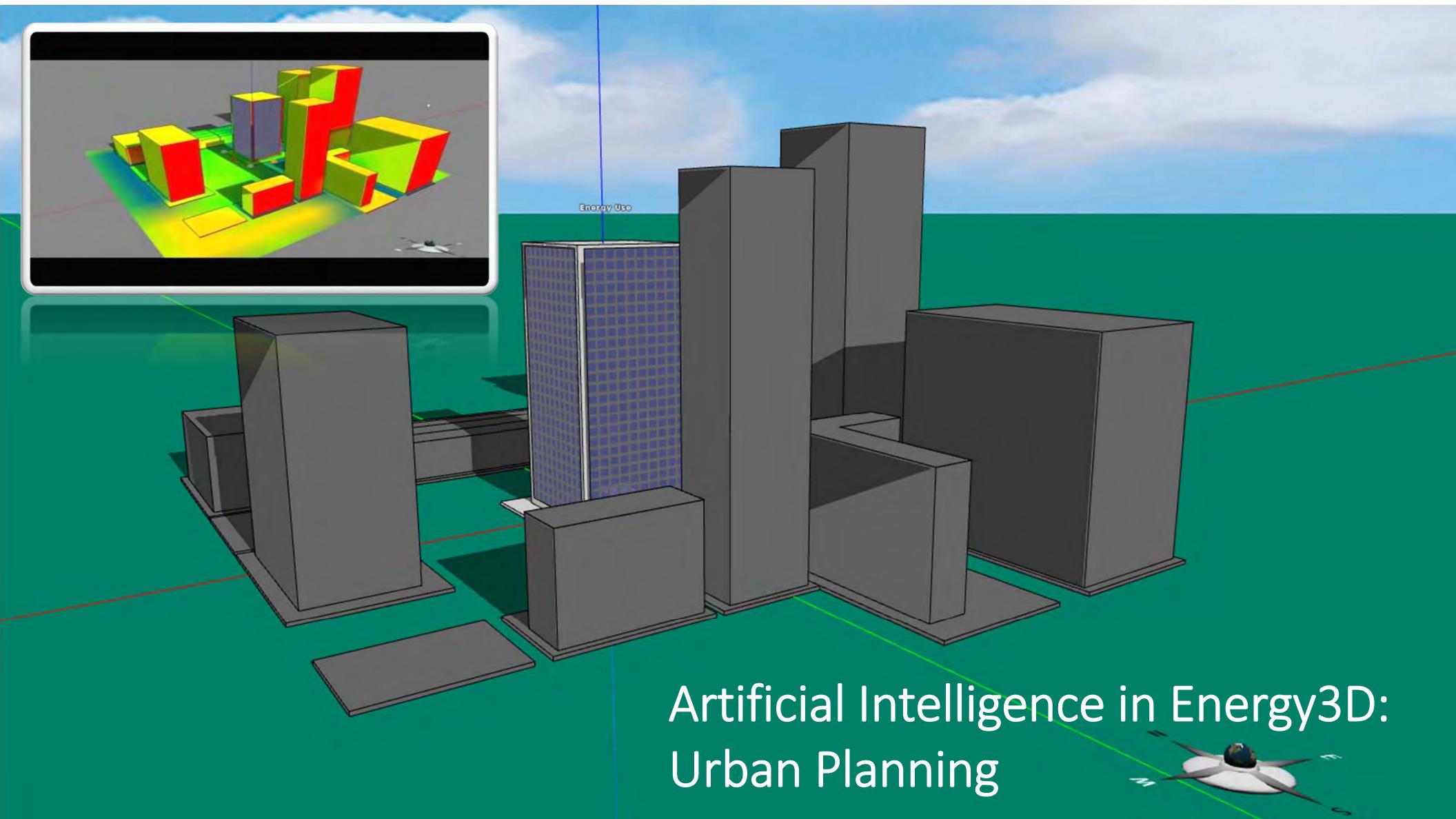
Energy3D Example: Parabolic Dish Arrays
Tooele Army Depot, Utah

Artificial Intelligence in Energy3D: Designing a Solar Farm

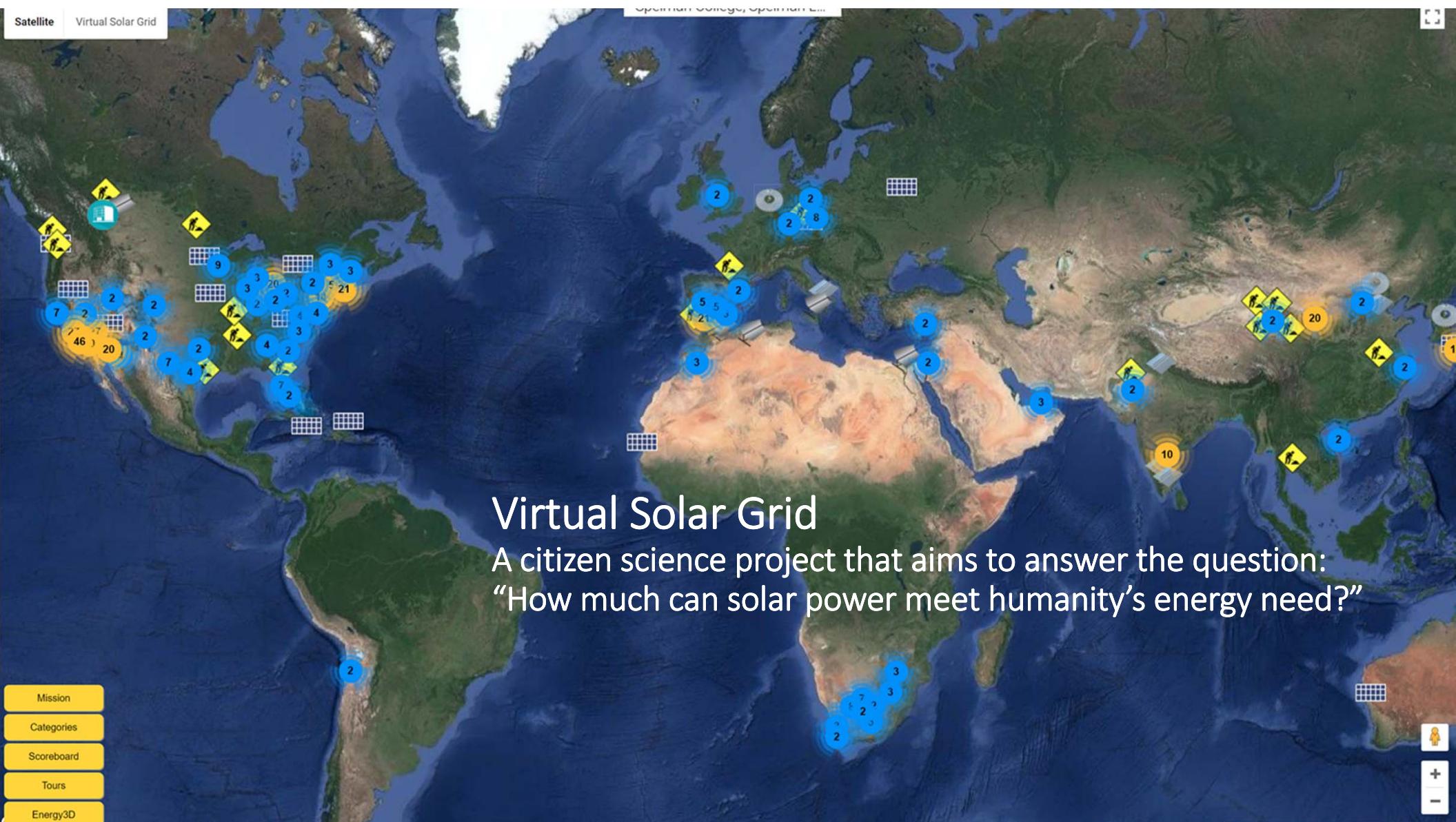


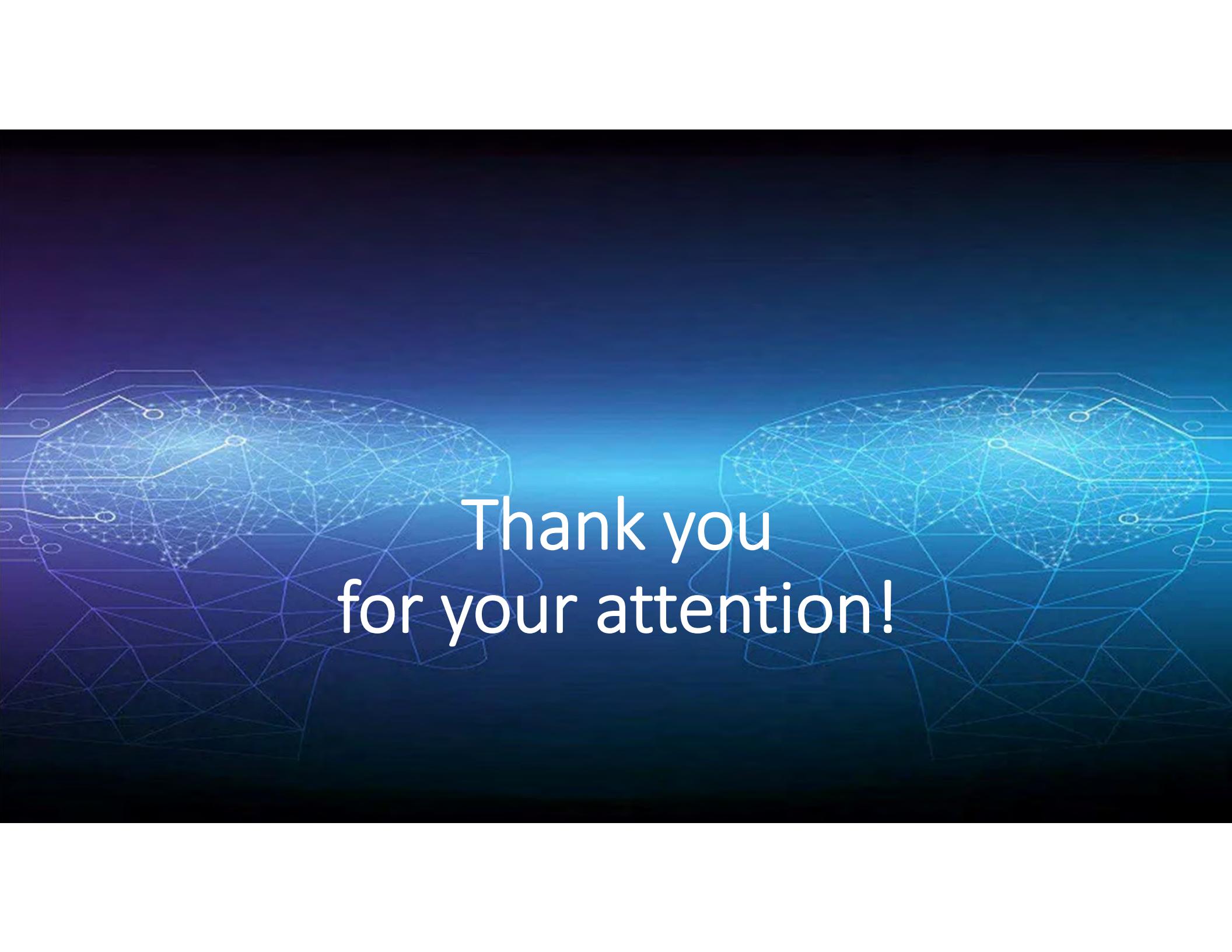
Artificial Intelligence in Energy3D: Designing a Concentrated Solar Power Plant





Artificial Intelligence in Energy3D:
Urban Planning





Thank you
for your attention!