

A bald eagle is shown in flight, wings spread wide, flying from the left side of the frame towards the right. The background features a vast mountain range with rolling hills and valleys. The sky is filled with dramatic, colorful clouds in shades of blue, purple, and pink, suggesting a sunset or sunrise. The overall scene is majestic and serene.

Associated Valley Industries  
November 17, 2017

**Strata<sup>★</sup>G**  
*A Significant Company*



THE UNIVERSITY of  
TENNESSEE **UT**

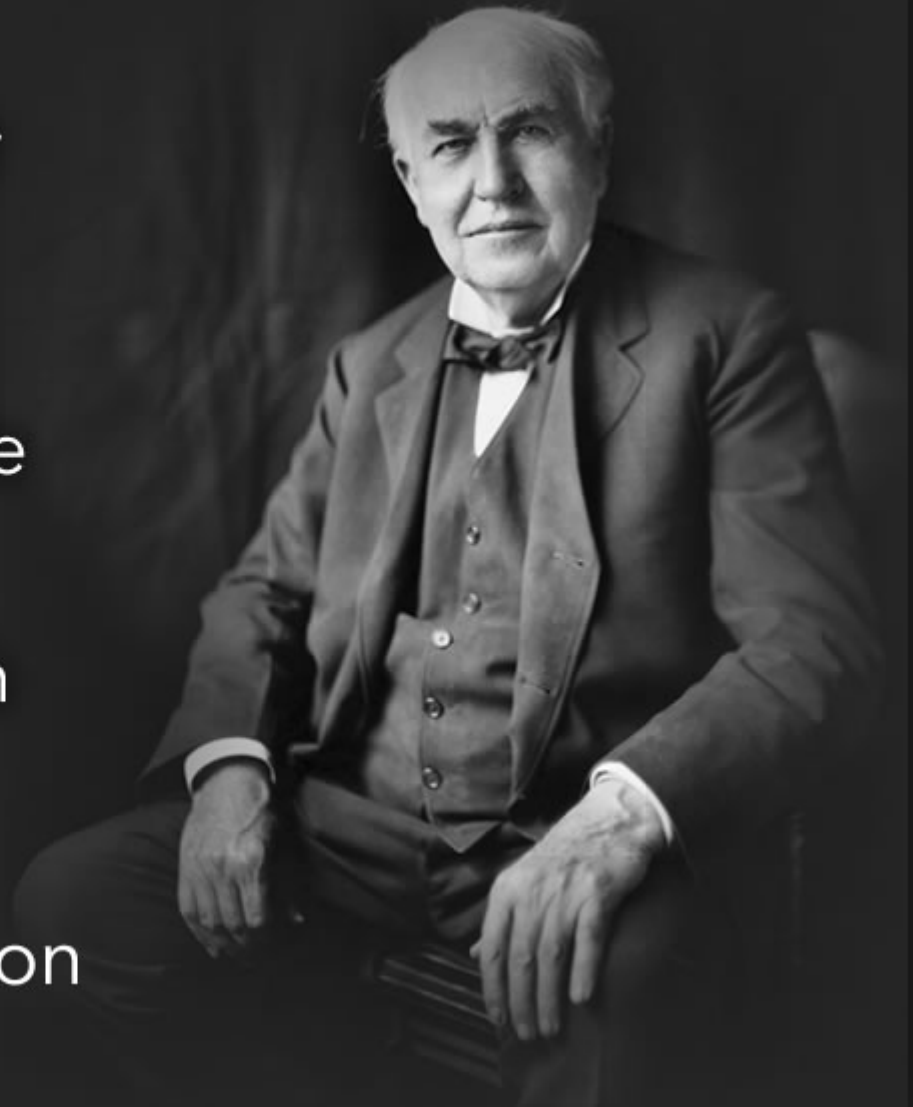
*Owned and operated by the University of Tennessee*

WEST TENNESSEE  
**SOLAR**  
**FARM**

"I'd put my money  
on the sun and solar  
energy. What a  
source of power!

I hope we don't have  
to wait until oil and  
coal run out before  
we tackle that. I wish  
I had more years  
left."

~Thomas Edison





# **Why Solar?**

**The sun imparts  
enough energy on the  
earth in 1 hour to  
power the entire  
planet for a year.**



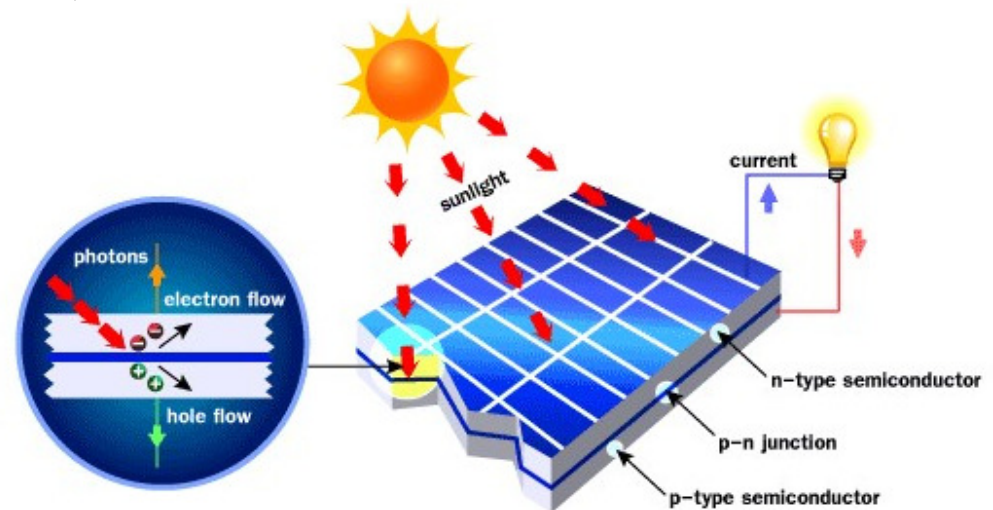
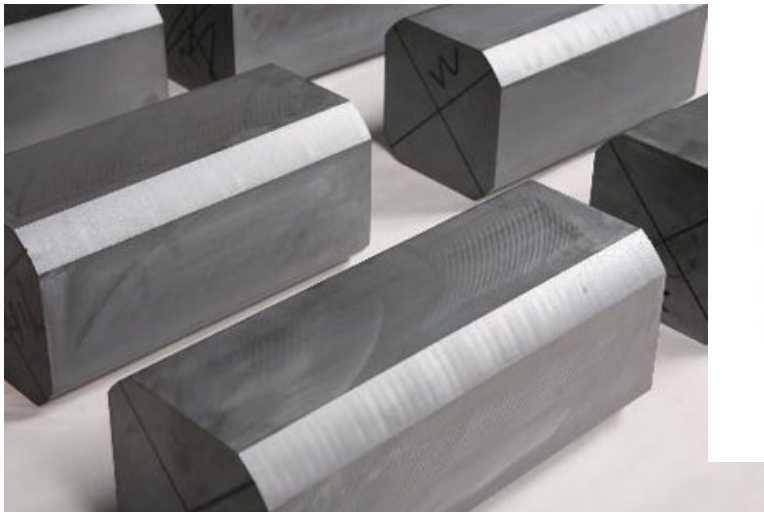
# Basic Types of Solar

- Thermal Solar
- Concentrated Solar
- Photovoltaic Solar



# How Does a Photovoltaic Solar Panel Work?

- Panels consist of solar cells – Thin slices of Si
- Photons bombard the face of the cell
- Electrons are excited and move across a +/- junction, creating electrical current
- Current flows to the grid



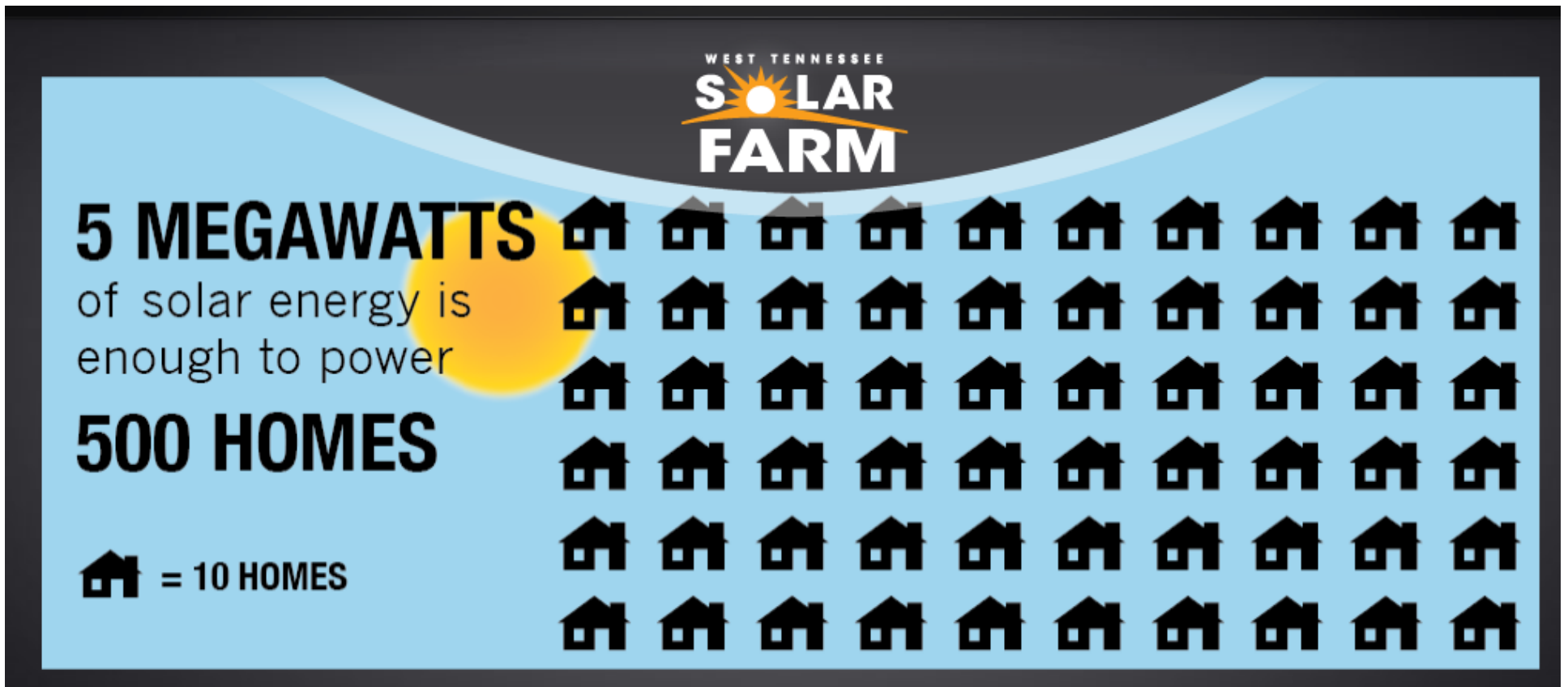
# Details of the Farm

- Located ½ way between Jackson & Memphis along I-40
- 200- Acre Property
- Built in 2011-12 (Ribbon Cutting April 2012)
- 9 miles of high voltage transmission line
- 5 MW of Photovoltaic Panels (wired for 10 MW)
- Funded by a DOE ARRA grant



# Putting 5 MW in Perspective

Average home uses about 1500 kWh a month





# Key Players

- UT
- Signal Energy
- State of TN – ECD
- Chickasaw Electric Coop
- TVA
- Haywood County Mayor – Franklin Smith



SIGNAL ENERGY  
CONSTRUCTORS



# What are the main components?

- Piles (2,301)
- Racking (767)
- Solar Panels (21,434)
- Switchgear and breakers
- Combiner boxes
- DAS
- Inverters
- Transformers





# Piles



# TDOT Education & Info Center

## Phase 1

- Site prep/grading,
- West Bound Exit
- Parking areas

## Phase 2

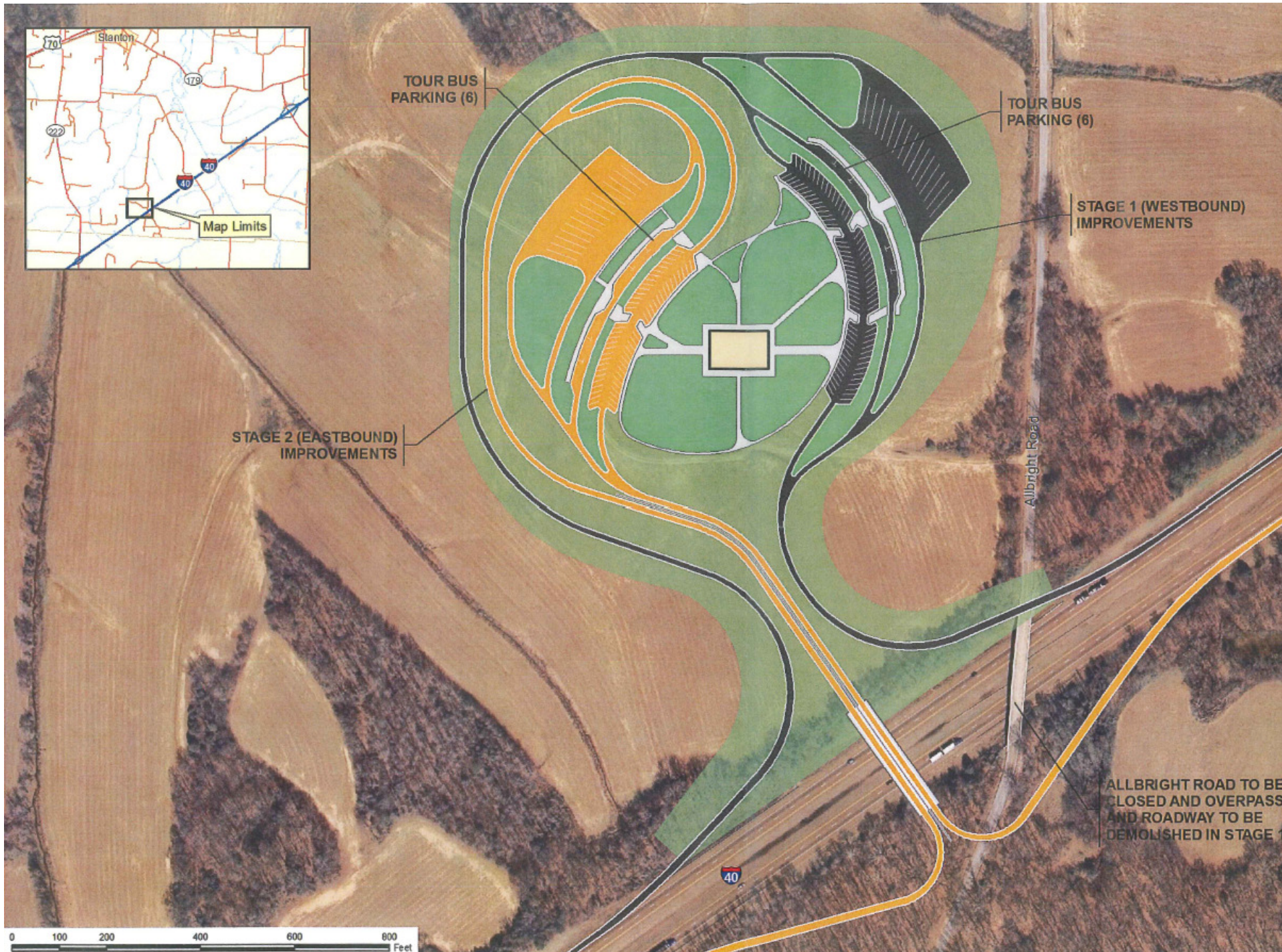
- Building
- Spectrum Exhibit Installation



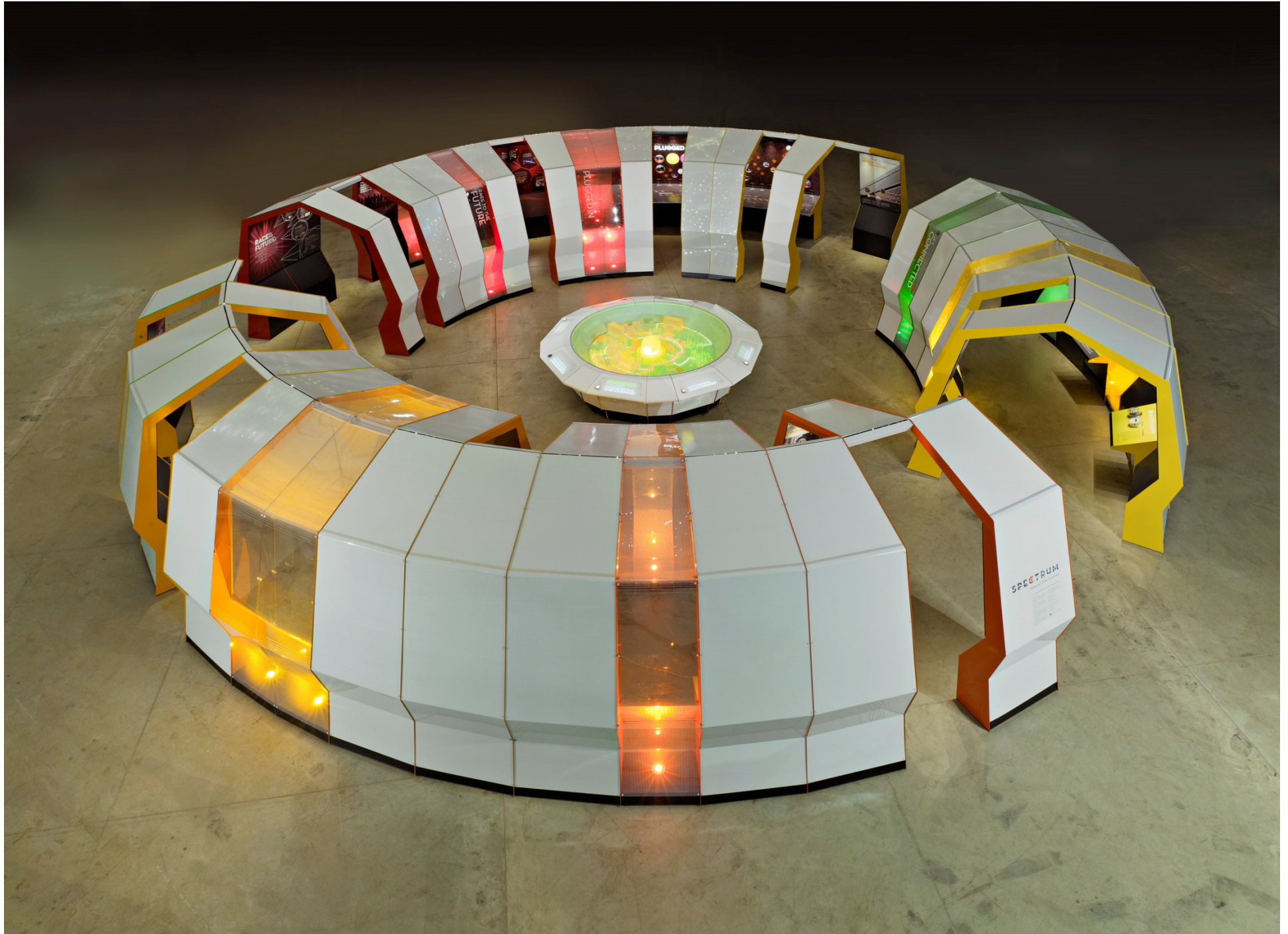
















WEST TENNESSEE  
**SOLAR FARM**





# Thank you!

We appreciate the opportunity to speak with you. We will provide additional information upon request.

Elliott Barnett, Vice President

2027 Castaic Lane  
Knoxville, TN 37932

Phone: (865) 805-8960

Website: [StrataG.org](http://StrataG.org)

Email: [ebarnett@stratag.org](mailto:ebarnett@stratag.org)

**Strata<sup>★</sup>G**  
*A Significant Company*®