

APRIL 2024

AILL: BEAN FEDERAL CENTER

Developing a whole-building approach to sustainable operations



Bean Federal Center
Indianapolis, IN
1.6 M ft² facility
72-acre campus
5,000 employees onsite

The Bean Center has a history of piloting innovative technologies, including a rooftop laboratory that demonstrated the effectiveness of photovoltaic (PV) systems under cloudy mid-western skies.

This legacy of testing emerging technology continues with the Applied Innovation Learning Lab (AILL), supported by the Inflation Reduction Act. The AILL team takes a whole-building approach to sustainable operations and recently collaborated with the National Renewable Energy Laboratory on a decarbonization study. The study lays the groundwork for the Bean Center's transition to a net-zero facility and has served as the basis of an Energy Savings Performance Contract and an application for a DOE AFFECT grant for energy storage.

Piloted Technologies at the Bean Federal Center AILL

ONGOING EVALUATION

Renewable, transportable EV charging station provided by Beam Global



- Reduces EVSE infrastructure costs and can be easily moved to match fleet needs
- No required construction permitting, associated trenching, switch gear upgrades, or interconnection agreements
- Can be independent or grid-tied

ONGOING EVALUATION

Single-axis sun tracker provided by Rocking Solar



- 30% fewer panels than a fixed-tilt system, reducing project labor, equipment costs, and ongoing maintenance
- Increases PV energy yield up to 45%
- Reduces or eliminates roof penetrations

Concurrently with this project, the AILL team is evaluating the efficiency of bi-facial solar panels from Heliene and taking a holistic approach to reduce the project's embodied carbon footprint by using recycled, reusable plastic pallets from PVpallet for panel transportation, eliminating single-use wooden pallets which are typically disposed of in the local landfill.



The Center for Emerging Building Technologies' three programs, Green Proving Ground (GPG), Pilot to Portfolio (P2P), and Applied Innovation Learning Lab (AILL), enable GSA to make sound investment decisions in next-generation building technologies based on their real-world performance.