

BADGER ZERO

INITIATIVE · SOLAR-PLUS-STORAGE DESIGN

Drexel's College of Engineering team competed against universities nationwide in the **U.S. Department of Energy Solar District Cup** — a collegiate design challenge where teams take on the role of real-world solar developers. We designed, modeled, and financially analyzed a **1.52 MW distributed solar-plus-storage system** for UW–Madison's western campus corridor.

1.52

MW DC

Total PV · 7 Sites

50.3%

OFFSET

Campus Energy Offset

~\$1.5M

NPV

20-yr Net Savings

1,011 kWh LFP Battery Storage

1,972 MWh/yr Generated

787 tCO₂/yr Avoided

Zero Grid Export

2nd Place

DIVISION FINISH

U.S. DOE Solar District Cup

Collegiate Design Competition

Class of 2025–2026

ABOUT THE COMPETITION

Teams from accredited U.S. universities compete as solar developers — designing real systems for real campuses, judged by industry professionals.

OUR DELIVERABLES

- PV system design across 7 rooftops
- Battery storage sizing & strategy
- Grid interconnection analysis
- 20-year PPA financial model
- Permitting & development plan

THE TEAM

Alex Van Vooren · Awad Abdeljalil · Brady Chase · William Herrera · Le Phu Nguyen

Faculty Advisor: Prof. Peter Clelland

