

UCI SMART IAC Updates

Chelsea Choudhary
CalPlug Workshop

ccchoudh@uci.edu
04/22/2024



**Industrial
Assessment
Center**
U.S. DEPARTMENT OF ENERGY

UCI SMART Industrial
Assessment Center

CSUN

CALIFORNIA
STATE UNIVERSITY
NORTHRIIDGE

Cypress  College

UCI SMART IAC

Sustainable Manufacturing Alliance for Research and Training
Industrial Assessment Center



UCI SMART IAC Energy Assessments

- Tour facility, brainstorm ideas, collect data → develop report
- Energy efficiency, waste reduction, and productivity enhancements
- Energy efficiency techniques: lighting, air compressors, motors, furnaces, ovens, boilers, HVAC, chillers, water treatment systems, renewables, and much more!
- Bringing SMART into our IAC: smart manufacturing, cybersecurity, life-cycle analysis, fuel switching, etc.

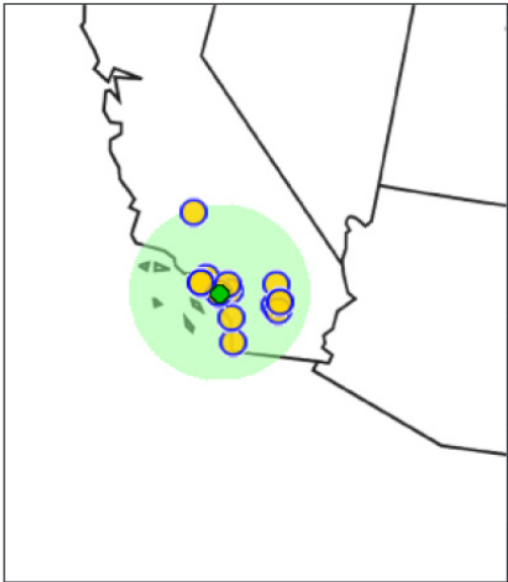
IAC Website Snapshot



University of California, Irvine

Student Research Award Winner: 2022

The University of California, Irvine Industrial Assessment Center (CI-IAC) provides **free energy, productivity, and waste assessments** to small and medium-sized industrial facilities through funding provided by the US Department of Energy.



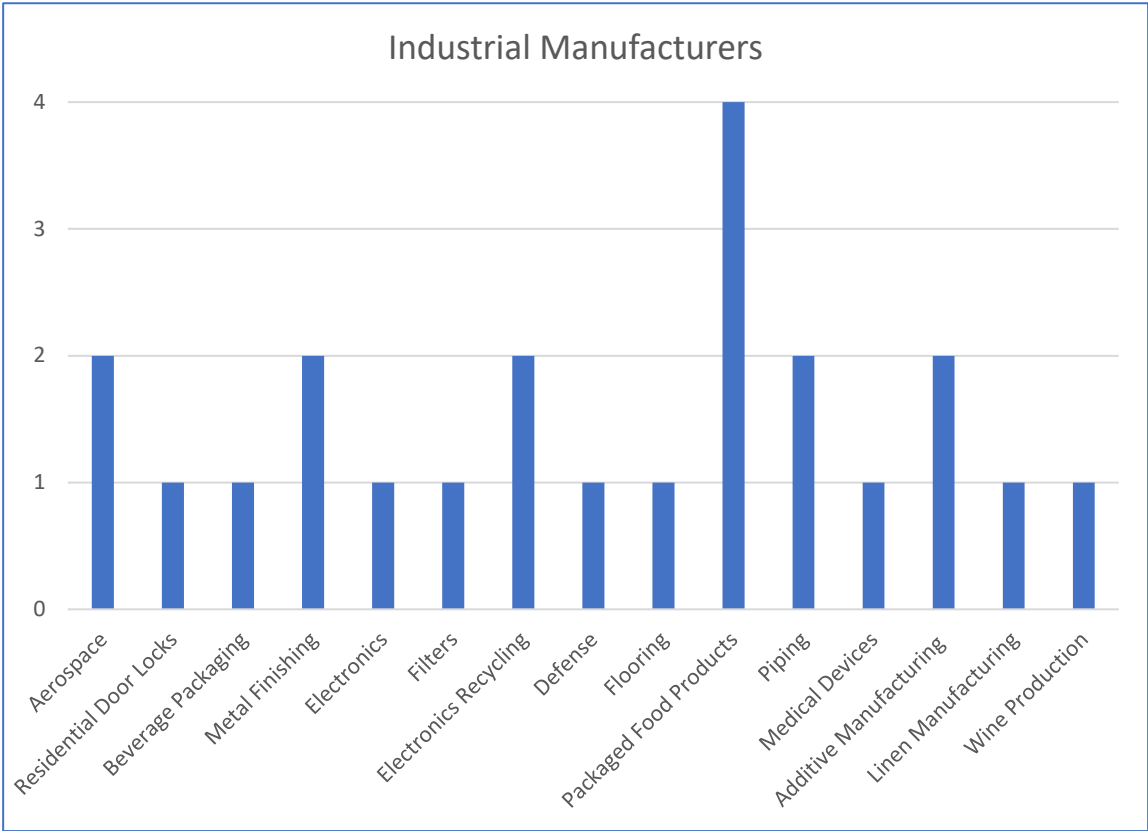
24	Assessments
187	Recommendations
0.21	Tbtu Energy Saving*
\$3.61	million Cost Savings*
39	Students Trained

**Recommended Savings*

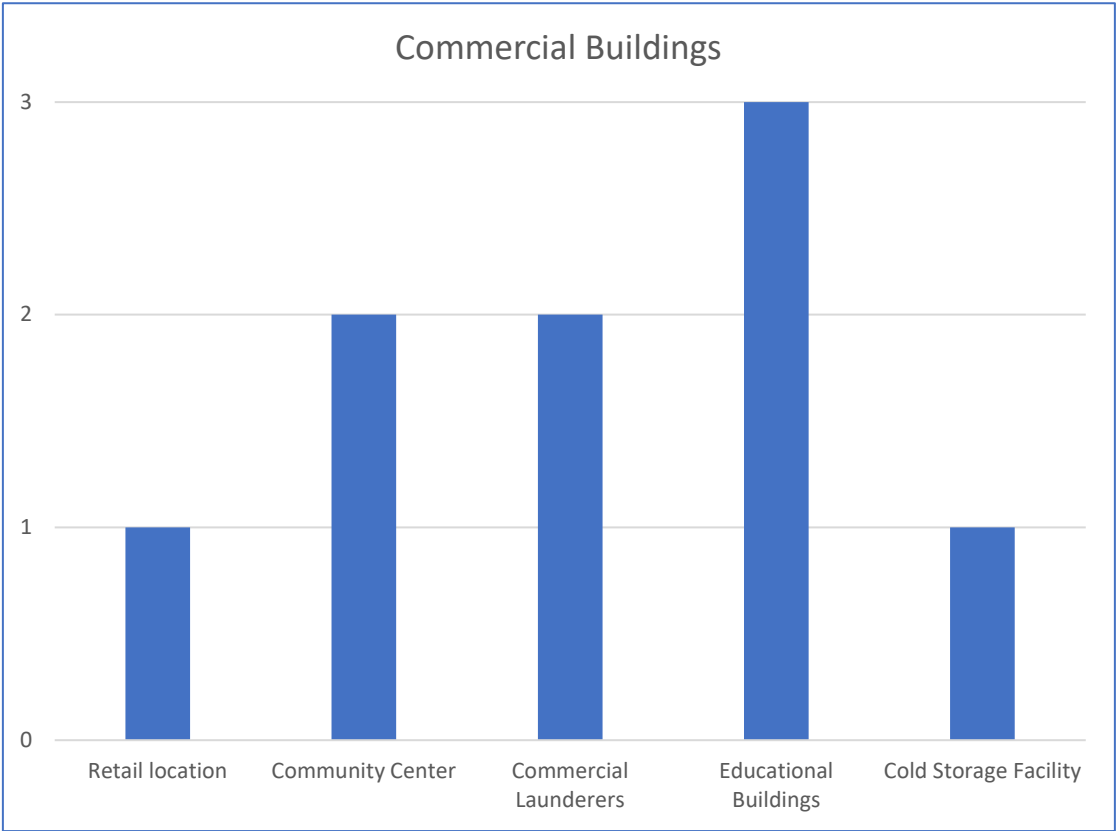
*as of 04/18/2024
<https://iac.university/center/CI>

Energy Assessments Performed

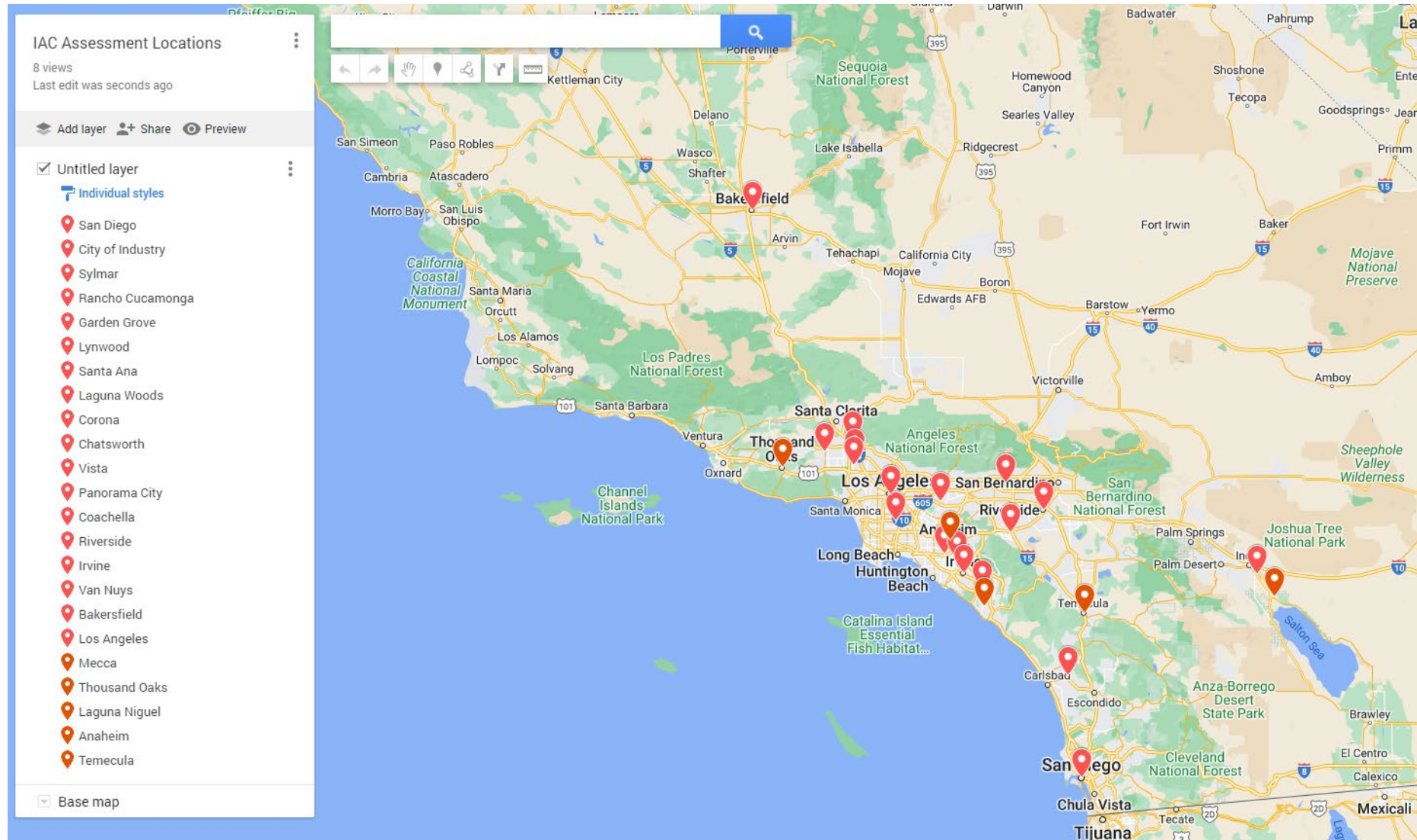
23 industrial energy assessments



9 commercial energy assessments



Energy Assessments Performed



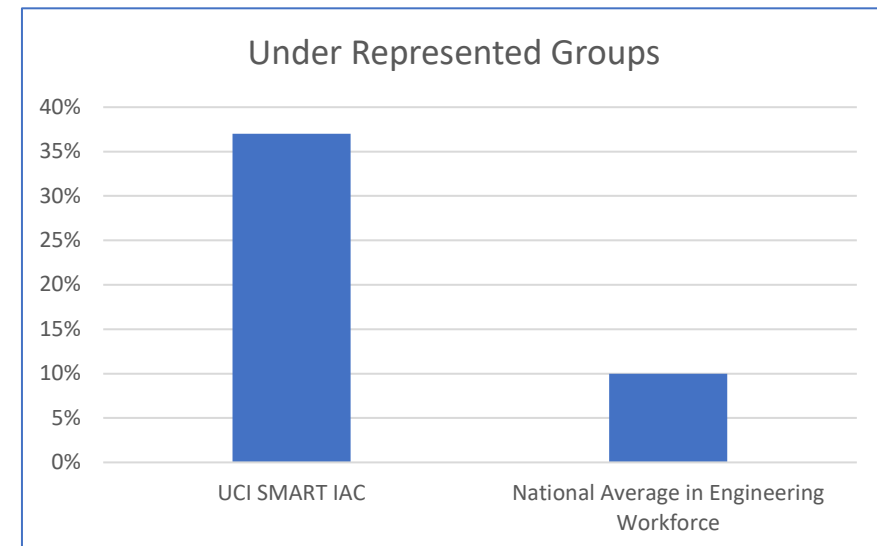
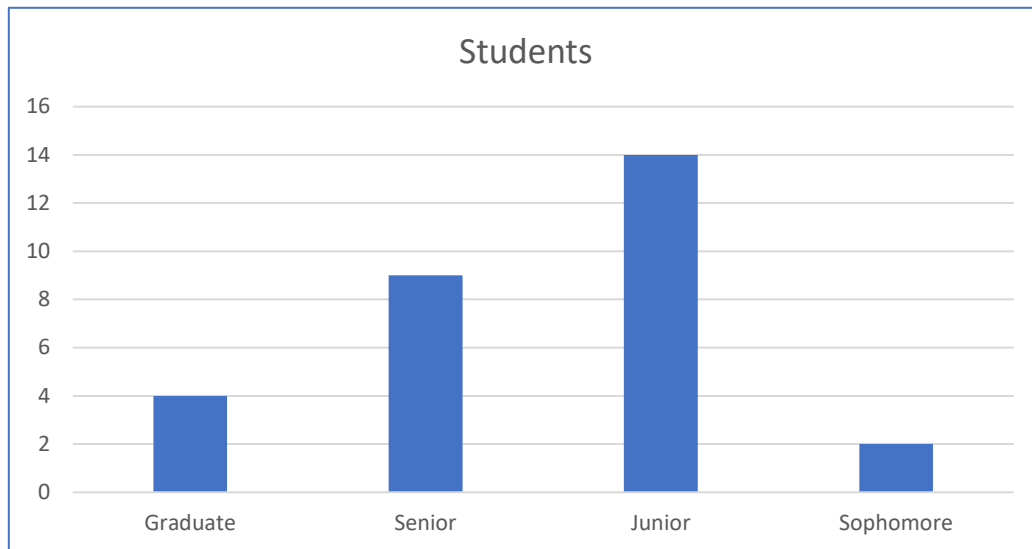
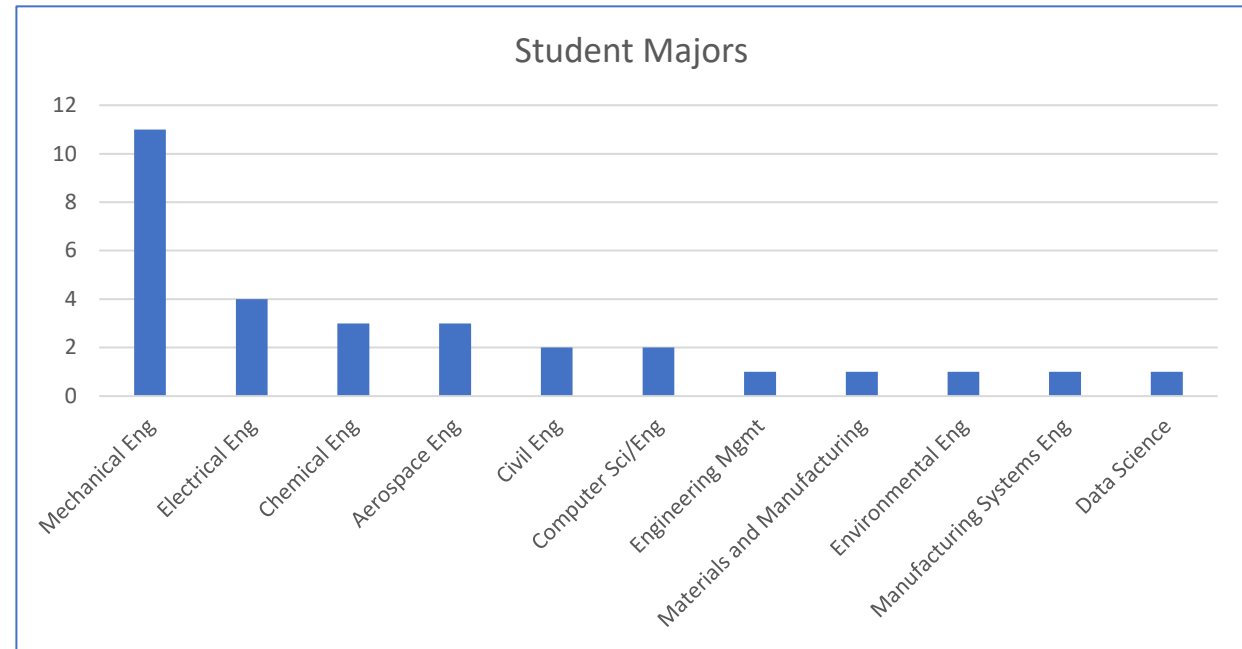
DOE Implementation Grants

- DOE is offering grants of up to \$300,000 with one-to-one matching from the client to help implement recommendations from IAC assessments
- Supporting projects that are meant to improve energy and material efficiency, enhance cybersecurity, increase productivity, deploy smart and advanced manufacturing technologies, and reduce waste and pollution at SMM facilities
- Encouraging our clients to apply, giving grant program updates to eligible clients, and **providing technical assistance** with application submissions

To learn more about the IAC Implementation Grant program – including FAQs – and to apply, visit: <https://www.energywerx.org/opportunities/iacimplementationgrants>

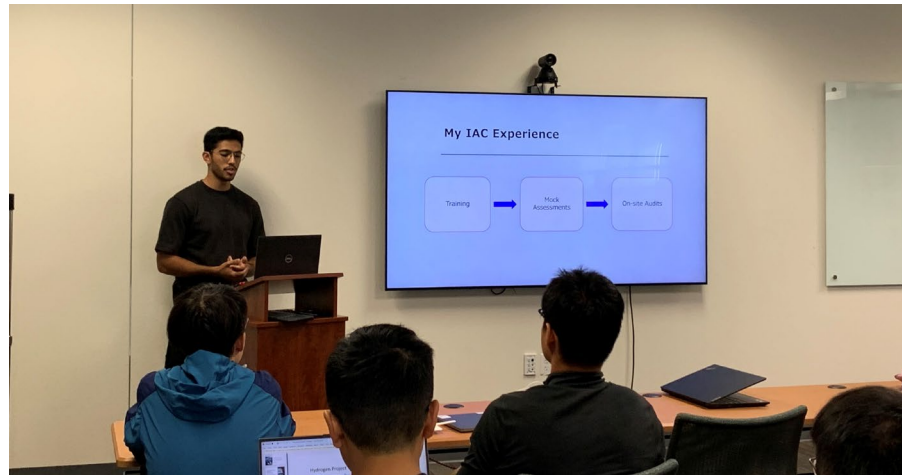
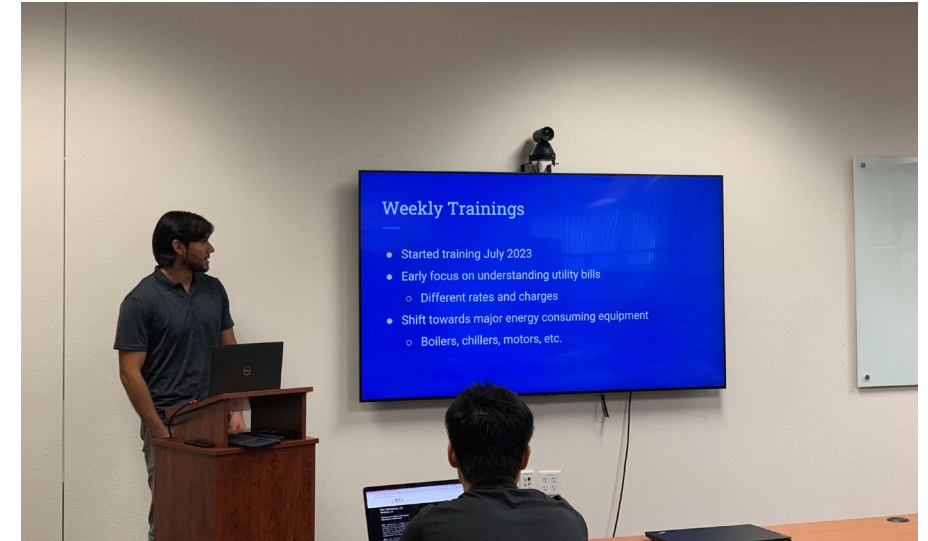
Student Team

- UCI: 24 Students
- CSUN: 5 Students
- Cypress: 1 Student



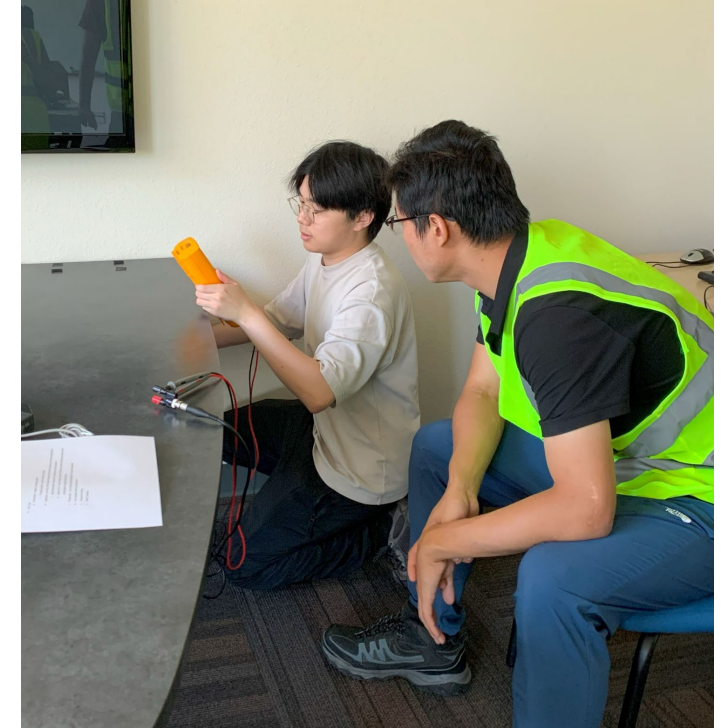
Training at UCI

- Energy focused training sessions
- 40 training topics and growing
- Staff led training
- Student led training



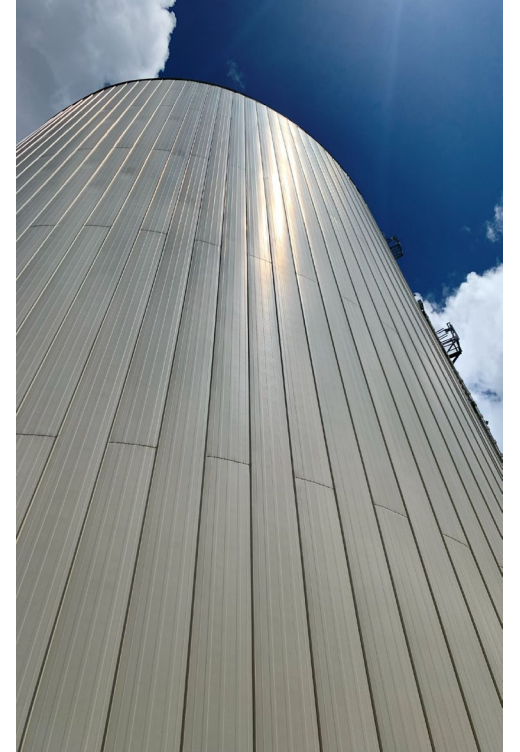
Training – Mock Assessment

- Calit2 Building
- Identify energy saving opportunities
- Practice using equipment – hands-on training



Training – UCI Central Plant

- Students get to see a large-scale energy generation system
- We see where our campus energy comes from!



Training – IAC Chats

- Speakers from industry are invited to come talk to our IAC students
- Students have a chance to ask questions and gain valuable advice



2024 IAC CHATS
The Speakers

 Eric Van Popplen PARPRO Technologies 01/17/24	 Zackary Welch Georg Fischer 02/21/24	 Sandy Kolby Bentley Mills 03/13/24
 Graziella Siciliano Berkeley Labs 04/17/24	 Rod Borup Los Alamos National Laboratory 05/15/24	

UCI SMART Industrial Assessment Center

Student Testimonial

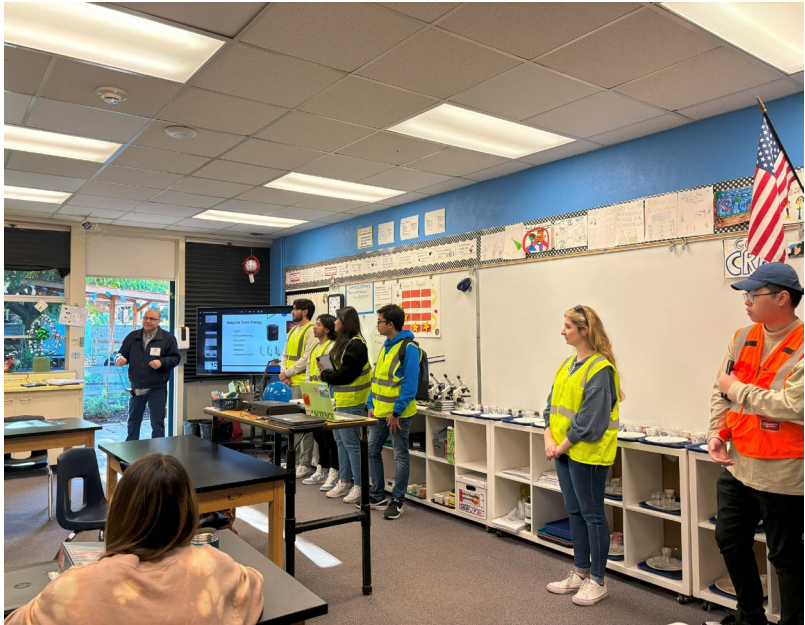
- John Pham
 - Senior
 - Chemical Engineering
 - NREL Intern
 - Graduate school



Student Testimonial

- Lorena Martinez Aguilar
 - Junior
 - Chemical Engineering
 - Social Media and Outreach Lead





Questions?

