El Dorado UHSD Solar PV Project

An El Dorado Union HSD, ARC Alternative & ENGIE Partnership

Community Meetings
Ponderosa High School 2-27-19

Today's Agenda

- Solar Program Goals
- Design Approach
- Individual Site Discussions
  - Schedule
  - Layouts
  - Tree Removal
  - Savings
- STEM Education Program
- Districtwide Program Summary

Program Pillars

- Generate substantial and sustained **general fund savings**
- **Modernize District's facilities** and campuses with advanced technology and energy efficient systems
- **Reduce the District's carbon footprint** while improving 21st century campuses for learning and achievement
- Empower the District's STEAM efforts through **project-based learning** opportunities for students
- Create **local green jobs**

Energy Design Considerations

- Solar Photovoltaics
  - Prioritize parking canopies and shade structures
  - Consider Principal, staff, and community feedback
  - Design to offset 62-93% of electricity load
  - Avoid hazards (e.g. baseballs, PG&E lines) and shading
  - Proximity to electric meter

Layout Styles

L-Structure Parking Canopy

T-Structure Parking Canopy

Ponderosa High School

- 822 kW of solar PV being installed
- Generating 1,338,889 kWh in year 1 = removing 201 cars from the road annually
- Offsetting 93% of electrical consumption
- Saving $3,649,188 over the 25 year life of the solar
- Providing shaded parking
- Removing 20 trees – parking lot expansion in progress (waiting on El Dorado County)
- Construction Start: 5/28/2019
- Estimated construction completion: 8/2/2019

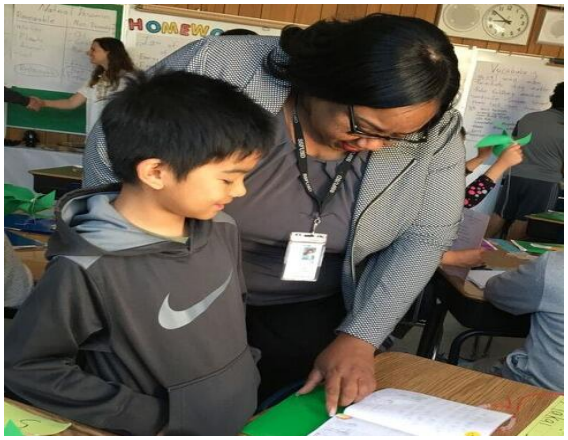
District Wide STEM Education

Making an educational impact!

Living Laboratories & Hands-On Learning Kits

Data Points from the PV installations will be imbedded into student and teacher facing dashboards.

Solar activity sets will be supplied for hands-on learning engagements giving students an opportunity to conduct relevant experiments.

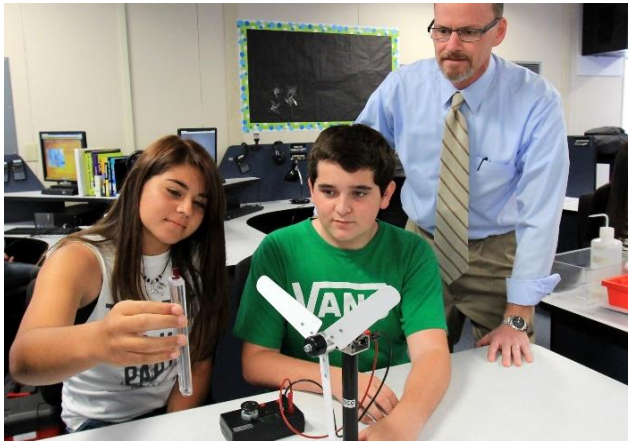


Creation of STEM Lessons

ENGIE will provide lesson plans and activities to support the District's science courses. The lessons will focus on energy, electricity, sustainability, and engineering.

Professional Development

ENGIE will work with teachers to provide professional development sessions to give teachers the tools to successfully deliver the developed STEM lessons and the living laboratories dashboard and hands-on learning kit activities.



Districtwide Total Program Savings Summary

- Total of 3,194 kW of Solar PV
- 4,784,870 kWh of energy produced = removing 718 cars from the road annually
- 77% offset of EDUHSD electrical consumption
- Generates a net benefit of $12,873,534 over the 25 year life of the program