

Victor Valley College District Sustainability Program



The District leadership made a resource and financial commitment in 2010 to create a comprehensive sustainability program to reduce its dependency on utilities and reduce future expenditures.

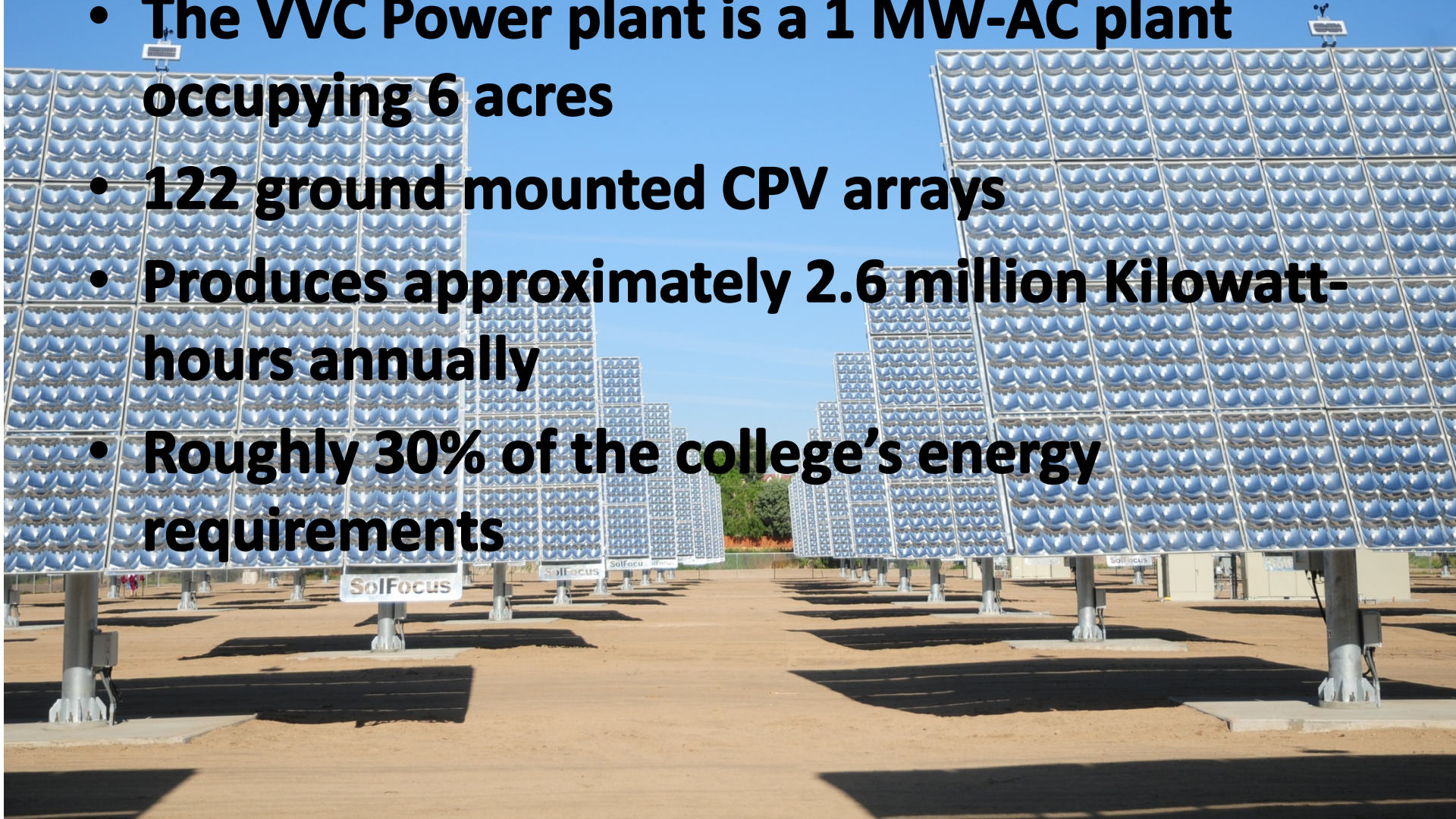


Overview

- One Megawatt CPV
 - 250 kW solar covered parking at VVC new Lead Gold Fire training/A.J./E.M.T. Facility
 - Two new solar covered parking structures -200 kW each
 - Campus Lighting Retrofit
 - Campus Energy management upgrade
 - Boiler replacements
 - Sustainable landscaping project
 - All new construction required to participate in S.C.E. savings by design
 - Plug load occupancy sensor and power management software installation
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One Megawatt CPV

- **The VVC Power plant is a 1 MW-AC plant occupying 6 acres**
- **122 ground mounted CPV arrays**
- **Produces approximately 2.6 million Kilowatt-hours annually**
- **Roughly 30% of the college's energy requirements**



One Megawatt CPV

Project cost: \$4.663 million

Annual kWh production 2,421,900

Electricity generated over 25 years: 54,755,952 kWh

Avoided electricity purchase (\$12,043,473)

CSI-performance base incentives (\$3,809,722)

Option R Tariff savings (\$3,762,041)

Total savings over 25 years: (\$20,162,796)

Estimated 5 year payback



Public Safety Training Center



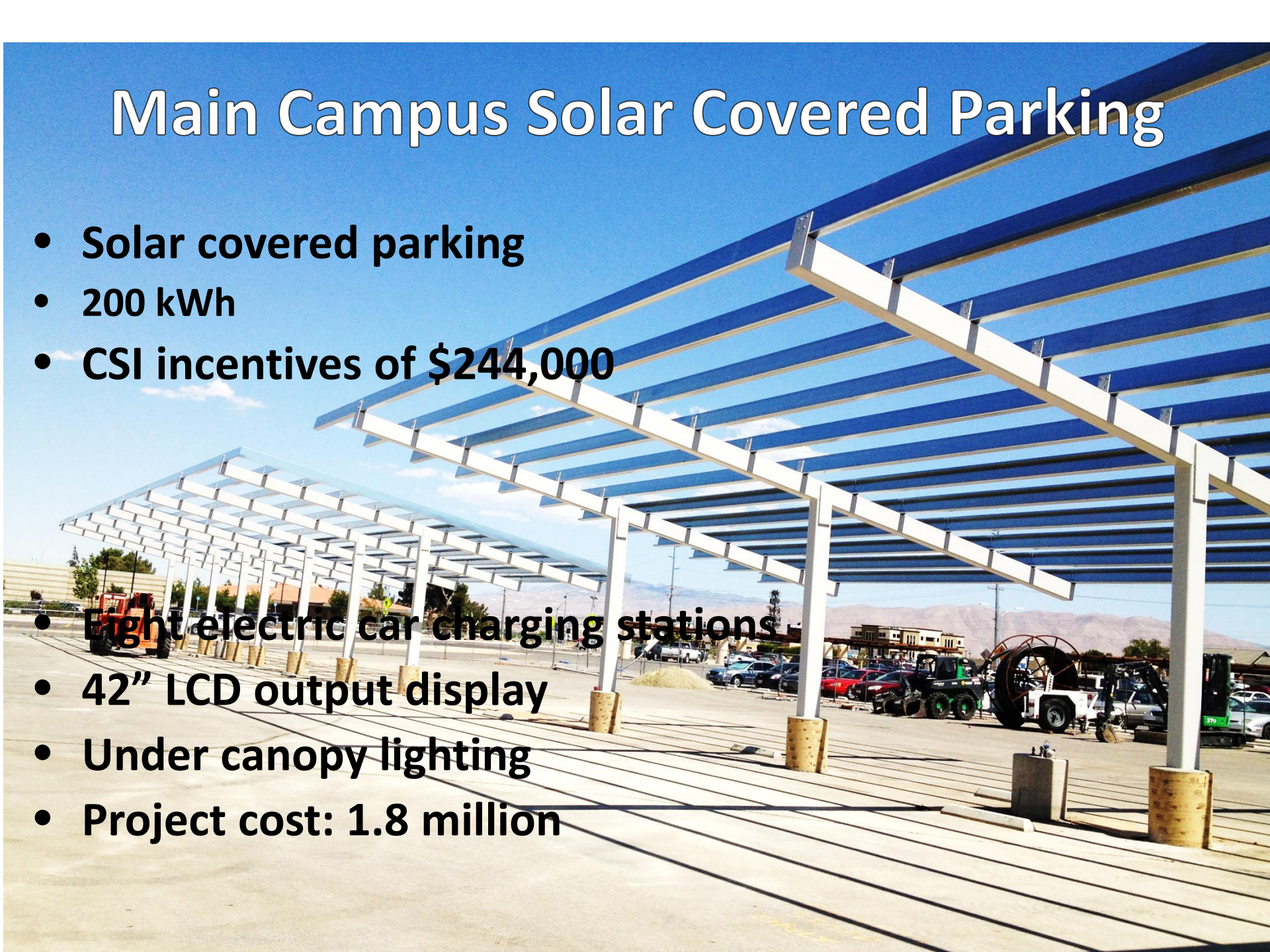
- Lead Gold Facility
- 250kWh solar covered parking
- Solar project cost: \$1,600,000
- Project cost \$31,268,000

Regional Public Safety Training Center



Main Campus Solar Covered Parking

- Solar covered parking
- 200 kWh
- CSI incentives of \$244,000
- Eight electric car charging stations
- 42" LCD output display
- Under canopy lighting
- Project cost: 1.8 million



Campus Lighting Retrofit



- Replace all exterior lighting with T-5 fluorescent technology
- Reduce energy consumption by over 50%
- Interior occupancy sensor installation

Energy Management System/Central Plant Tie In/Boiler Replacements

- **Installed new Web based E.M.S and completed Retro commissioning for more efficient operation of equipment**
- **Added additional building load to the Central Plant**
- **Completed boiler replacements in various buildings on campus**

Sustainable Landscaping





Sustainable Landscaping

- **The new landscape removes 26,367 sq. ft. of non functional turf which saves money!**
- Removing the turf saves 865,634 gallons of water a year. Every 1,000 square feet of turf uses 32,832 gallons of water per year.
- The District received a rebate for turf removal by the local Water District.
- This project will be the first step in a “Strategic Partnership” with the Mojave Water District for improvements to the campus that reduces water useage.
- The new landscape design requires substantially less labor to maintain.
- This project eliminates the use of harmful chemical fertilizer and herbicides required by the existing turf areas.
- Landscape green waste will be reduced as a result of the new landscape design thereby reducing waste to the landfill.



Program Results

- Reduced utility expenditures by \$600,000 annually that can be applied to Instruction
- Create Green jobs and educational opportunities for students
- Reduction in Greenhouse gas and other pollutants
- Reduced dependency on the utilities by lowering the overall demand



Thank You