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# Training Center Petaluma Campus



# Petaluma Facilities

- 829 Acres total
- ~ 300+ Acres developed
- ~ 863,000 sf total facilities
  - Built from 1943 through 2003
- 127 housing units
- ~ 200,000+ sf in training facilities

## Personnel

- 334 active duty
- 115 federal civilians
- 170 contractors

# Consumption

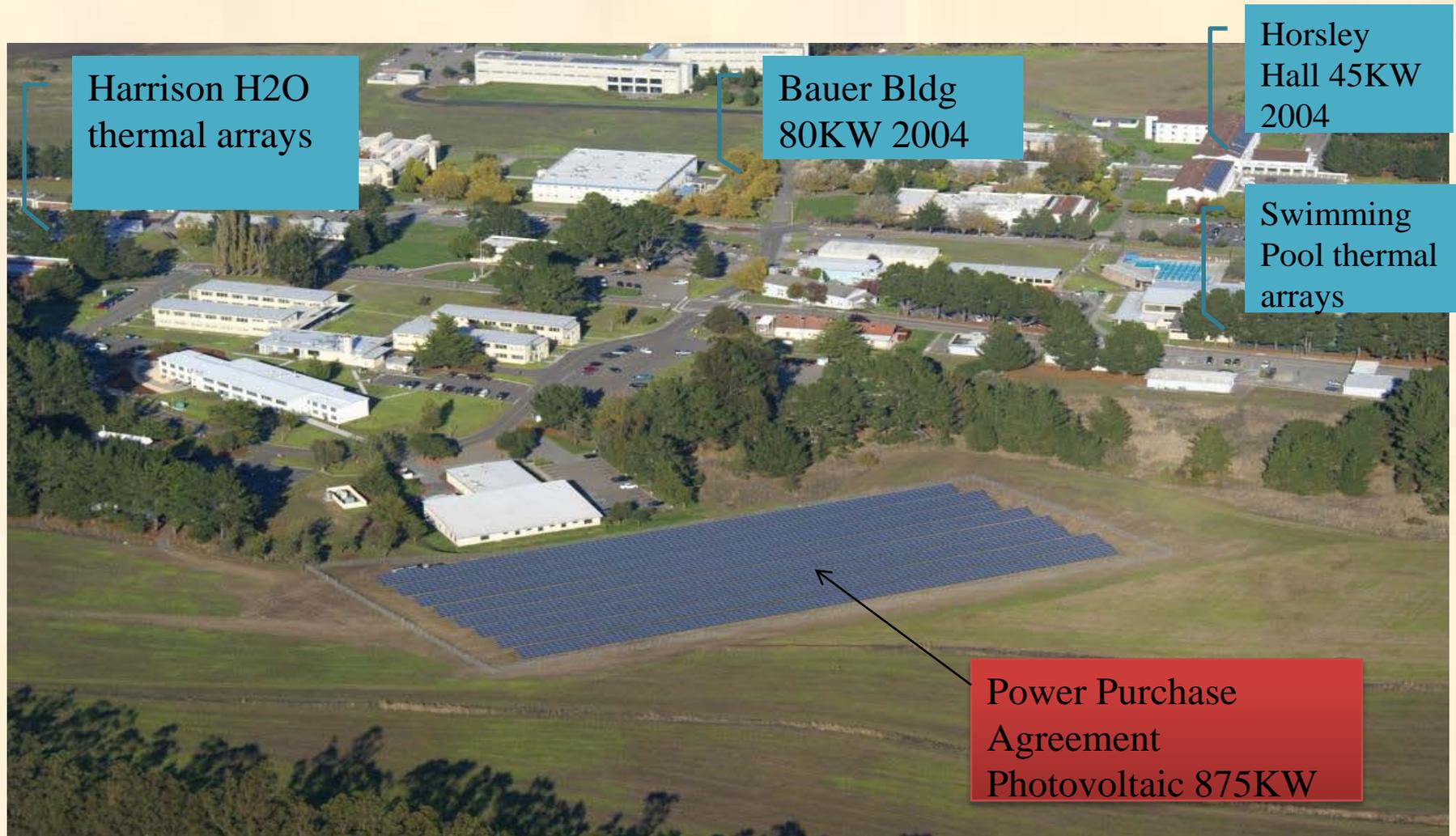
- Annual Usage ~ 9,500,000 kWh
- kWh costs range from:
  - \$0.077 – winter off-peak
  - \$0.154 – summer on-peak
  - “Average” total rate \$0.124
- TRACEN Petaluma spends \$1 Million per year on electricity

# Pre-existing Solar Arrays – 125 kW

- Roof top
- Funded directly by the Coast Guard
- Built in 2003



# Overview of all Petaluma solar



# Petaluma Solar PPA

- In August 2008, we issued the Coast Guard's first PPA Solicitation
- 875 kW
- Offered use of 5 acres of CG property
- Contractor to maintain ownership of PV array
- Contractor responsible for operations and maintenance over 25-year useful life

# Contract Issues

- Contractor owns PV array
- Contractor receives tax credit and California Solar initiative
- Contract is a one-year utility contract under FAR Part 41, with 24 follow-on option years exercisable by the Coast Guard
- Coast Guard buys electricity from contractor, priced per kWh

# RECs

- Required pricing from offeror's both with and without RECs.
- Ultimately the Coast Guard decided to keep the RECs.
- May be difficult to make project economically feasible without using the RECs to obtain a discount from your contractor
- Maintain flexibility as long as possible.

# Power Purchase Agreement

- In February 2009, PPA was awarded to Silray, Inc. of Palo Alto, California.
- Silray's PV array will provide approximately 875 kWh capacity, giving TRACEN Petaluma a total of 1MW of solar photovoltaic capacity.

# WIN-WIN

- PPA will save the Coast Guard an estimated \$1.5 million over the life of the contract
  - Savings as compared to alternative of purchasing electricity from local utility
- Helps Coast Guard meet EPCACT 2005 requirements for renewable energy
- Anticipated reduction of over 2,000,000 lbs of CO<sub>2</sub> greenhouse gas per year

# Power Purchase Array

- 5232 Panels
- 4 Inverters
- Fixed tilt
- 4 Acres
- 12,470 volt grid-tie



# Real Property Issues

- Irrevocable 25-year license/4 acre field (formerly under agricultural lease)
- Real property document is the “glue” that holds your PPA together.
- License, easement, right of way and lease are all potential options.
- DoD has statutory authority to enter long-term leases (10 U.S.C. 2667), however the Coast Guard is limited to five years for leases (14 U.S.C. 93(a)(13))

# Legal Aspects

- Must comply with State laws governing provision of electric utility service including State P.U.C. rulings (PL 100-202, 8093)
- Do initial research to ensure that PPAs are legal in your State
- GSA delegation for utility contracts is currently limited to 10-years for civilian (non-DoD) agencies
  - Legislative change to extend this to 20-30 years would be extremely helpful

# Legal Aspects – continued:

- Strategic choice to give up the least possible property rights
- Area of rapid legislative change
- Maintain flexibility to take advantage of any new Federal/State programs

# July 2009, Construction in Progress



# Lessons Learned During Source Selection

- Financial analysis is critical
- The Coast Guard worked with a financial analyst to calculate offerors' evaluated prices and to support fair and reasonable determination
- Developing an IGE covering services 25 years into the future was complex given the rapidly changing marketplace
- Educate your contractor community regarding the need for them to investigate financing options as early as possible

# October 2009, Construction Completed



# Interconnection Agreement

- You're not done yet!
- Contractor will be required by local utility provider to enter an agreement before connecting to their electrical grid
- In California, PG&E required the Coast Guard to be a party to the interconnection agreement because we are the utility customer of record
- Complicated process. Form contracts for this purpose are not well-suited to multi-party agreements & governmental interests

# Aerial View of Completed Project



# Issues for the Future

- Expect PPA vehicle to evolve for several years
- Work with contractor community to investigate financing concerns and balance risk
- Balance risk in an appropriate and reasonable manner with an eye to cost-effectiveness
- Consider seeking State regulatory change to make PPA a more viable option

