

Solar Power Purchase Agreements for Schools

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Agenda

- What is a Solar PPA?
- Financing Options
- Benefits of Solar PPAs to Schools
- Challenges of Solar PPAs to Schools
- Case Studies



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What is a solar PPA?

- A long-term agreement to buy power from a company that builds a solar energy facility on your site
- The company owns, operates, and maintains the system – you buy the solar energy produced
- Terms are usually 15 or 20 years
- Energy rates are predictable



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Financing Options

- **Solar PPA:** buy power, not a power plant
- **Buying a solar facility:** own system outright but requires up front capital, equipment, design, and installation expertise, and long-term system maintenance
- **Leasing a solar facility:** allows little or no upfront capital, pay monthly, but requires equipment, design, and installation expertise along with long-term system maintenance



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Financing Option Comparison

	BUYING	LEASE	SOLAR PPA
Upfront Capital?	None	Little or none	None
Performance Risk?	Yes	Yes	None
System Expertise Required?	Yes	Yes	None
Maintenance Required?	Yes	Yes	None
Purchase Required?	Yes	Yes – with option to re-lease	None



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Benefits of a Solar PPA for Schools

- No upfront capital required
- No additional operations or maintenance expense to the district
- Ideal time of use profiles to maximize net metering benefit
- Savings realized in first year



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Benefits, continued

- Can have system removed for free at end of term or renewed for discount to utility
- Have the ability to switch to solar-friendly tariff
- Added educational value at no cost
- Excellent energy rate hedge opportunity (3-4.5 % PPA escalation vs. 36-year CAGR of California commercial utility electricity: 6%)



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Challenges of sPPAs for Schools

- Complexity of a 20-year contract
- Spatial constraints
- Finding a provider that has proven track record of installation with your system type and similar projects



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SPP Case Study: UC San Diego

- System size: 1.2 MW
- Ground tracking array
- 20 year term
- 1,785,759 kWh estimated annual output
- Completion date: December 2008



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SPP Case Study: Point Loma Nazarene U

- System size: 488.888 kW (total)
- Fixed rooftop array
- 20 year term
- 704,980 kWh estimated annual output
- Completion date:



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SPP Case Study: CalTech

- System size: 238.68 kW
- Raised fixed array
- 15 year term
- 341699 kWh estimated annual output
- Completion date: December 2008



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SPP Case Study: Lagunitas School

- System size: 57.00 kW
- Ground mounted fixed array
- 15 year term
- 86,000 kWh estimated annual output
- Completion date: August 2008



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SPP Case Study: York School

- 37 kW DC system size
- Fixed rooftop array
- 15 year term
- 53,171 kW estimated annual output
- Completion date:



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