


**Solar Finance  
PPA 101**

**Your path to solar.  
Accelerated.**








March 15-17, 2010 | Sacramento Convention Center


## Tioga Energy -- About Us

- Renewable energy project developer, operator and owner
- The SurePath Solar PPA
- Solar Projects –
  - Commercial & Industrial
  - Distributed Generation Utility
- San Mateo, CA, New York, NY and Toronto, Canada

- Name rooted in Native American word for path
- Launch June 2007
- 2008 – first projects built

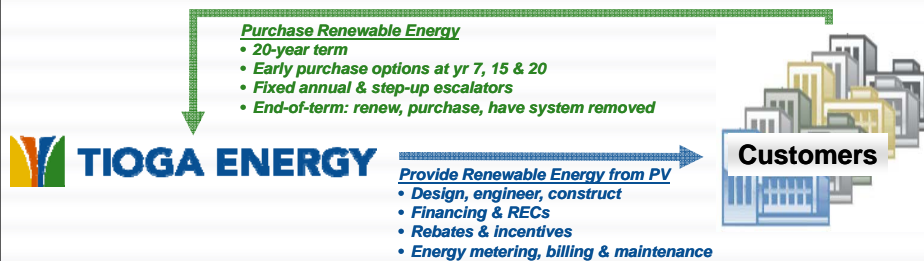
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## A Brief History of PPAs

- 1978 PURPA (Public Utility Regulatory Policies Act)
  - Meant to promote renewable energy
  - Created market for non-utility electric power producers
    - Drove construction of cogen plants
- ~2002/2003 Solar Commercial and Industrial (C&I) retail PPAs pioneered
- 2007 – CA CSI program launches first wave of significant adoption
- 2008 – ~75% of non residential solar installations in US are completed using a PPA structure



## The Solar PPA Solution



### Benefits

- Price stability, affordability, hedge
- Environmental benefits— e.g. LEED

### Without risks

- No large capital outlay
- No need to become a “solar project expert”
- No performance risk
- No distractions

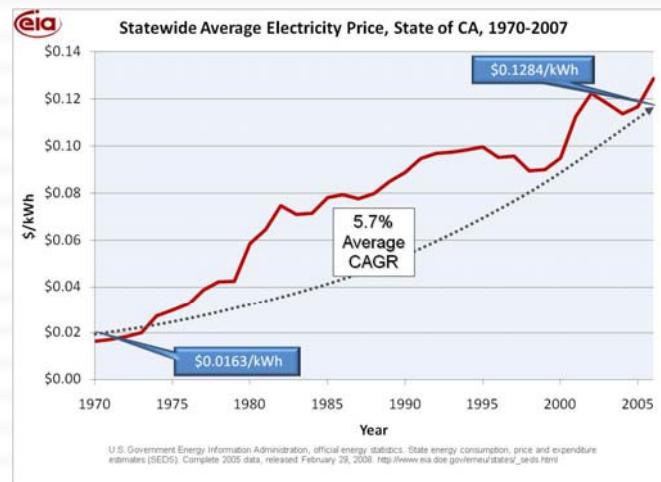


## Ideal Solar PPA Host Profile

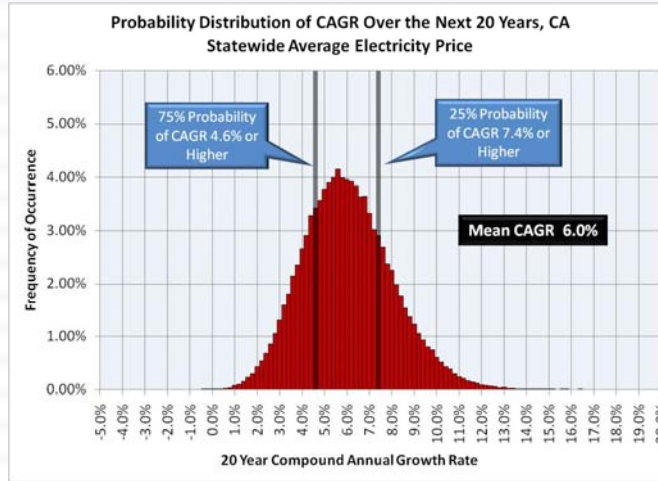
- Credit
  - Investment grade credit (BBB- or better)
  - 3 years **audited** financial statements
- Geography
  - Access to incentives - **CA, NJ, HI, MA, CT, AZ, MD, PA, OR,** etc.
- Facilities
  - Host controls facility for PPA term (15+ years)
  - Available space (25,000 ft<sup>2</sup> min.)
  - Available Load (150,000 kWh/yr min.)
  - Minimum improvements required
  - Multiple facilities ideal
- Electric Rates
  - Time of Use
  - Commercial (vs. industrial) usage

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## California Historical Rate Trend



## What will happen to rates in the future?



## Illustrative Rate Increases – PG&E


Pacific Gas & Electric Tariff	2009 - 2010	2008 - 2009
A6	14.2%	6.1%
A10	12.0%	3.9%
A10 TOU	10.9%	4.2%
E19	11.6%	3.5%

Year over year percent increase in the solar production weighted energy component of rate before net metering.

## Illustrative Rate Increases – SMUD


January 1, 2011	March 1, 2010	September 1, 2009
+ 2.25%	+5.5%	+5.5%

Rate increase in all Tariff structures per June 2009 SMUD BOD directive.


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## DG Solar – Californian View

SGIP Incentives Early Adopters Few Providers	CA CSI program High Incentives Panel Shortages Sales Gold Rush	Reality of Glass on the Roof ITC Cliff Looms Party in San Diego	Financial Darkness ARRA and 1603 Grant Panel prices plummet	<ul style="list-style-type: none"> <li>Sustainable Growth</li> <li>Rational Deals</li> <li>Satisfied Customers</li> </ul>
<b>2006</b> Early Days	<b>2007</b> California Gold Rush	<b>2008</b> The Year of Cliffs	<b>2009</b> Financial Darkness	


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## Final Thoughts

1. Financing agreement realities
2. Credible, proven and professional partners and suppliers
3. Balanced and fair agreements
4. Realistic view of economics



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