

Solar Power International conference and expo – trip report

October 27-29 2009 Anaheim California

AuSES Queensland Branch

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Outline

- Solar Power International 2009
 - Keynotes & CEO panel
 - Technology innovation
 - Finance innovation
 - North America Solar Incentives
 - Questions?
- p.s. How close are we to Grid Parity now?

Solar Power International 2009

- Conference
 - 6 simultaneous session streams
 - 24000+ attendees
- Expo
 - 900+ exhibitors
- Some messages
 - The US Solar industry feels it's time has come!
 - US Government at the highest levels is aware of RE challenge and opportunity.
 - The US industry wants to lead the world



Welcome to

SOLAR
POWER
INTERNATIONAL 09



Presented by
SEPA
SEIA

ANAHEIM CONVENTION CENTER



Keynotes & CEO panel

- Secretary of Labor – Hilda Solis
- New Mexico Governor – Bill Richardson
- President Obama launched 25MW PV for FPL during the conference
- Robert Kennedy Jr.
- Ed Begley Jr.
- CEOs: Utilities, SunEdison, BrightSource, Suntech, Sunpower, BP Solar etc.





Technology innovation

- Panels
 - Efficiency gains, thin film, aesthetics, new form factors
- Inverters
 - Per panel to large centralised
- Concentrating PV
 - Will it be commercial soon?
- Solar Thermal

Innovation in Panel efficiency



CdTe TECHNOLOGY

CIGS TECHNOLOGY

BEST NOT FIRST

12.3% EFFICIENCY
WORLD RECORD IN
MASS PRODUCTION

SL1-F

Thin films are still coming...

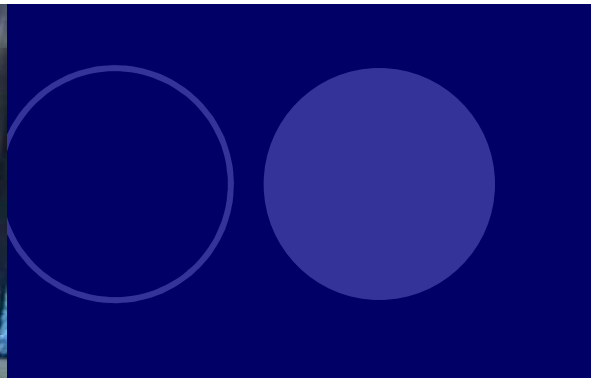


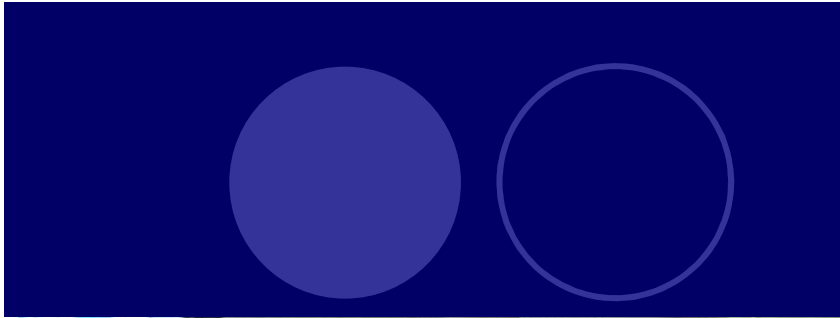
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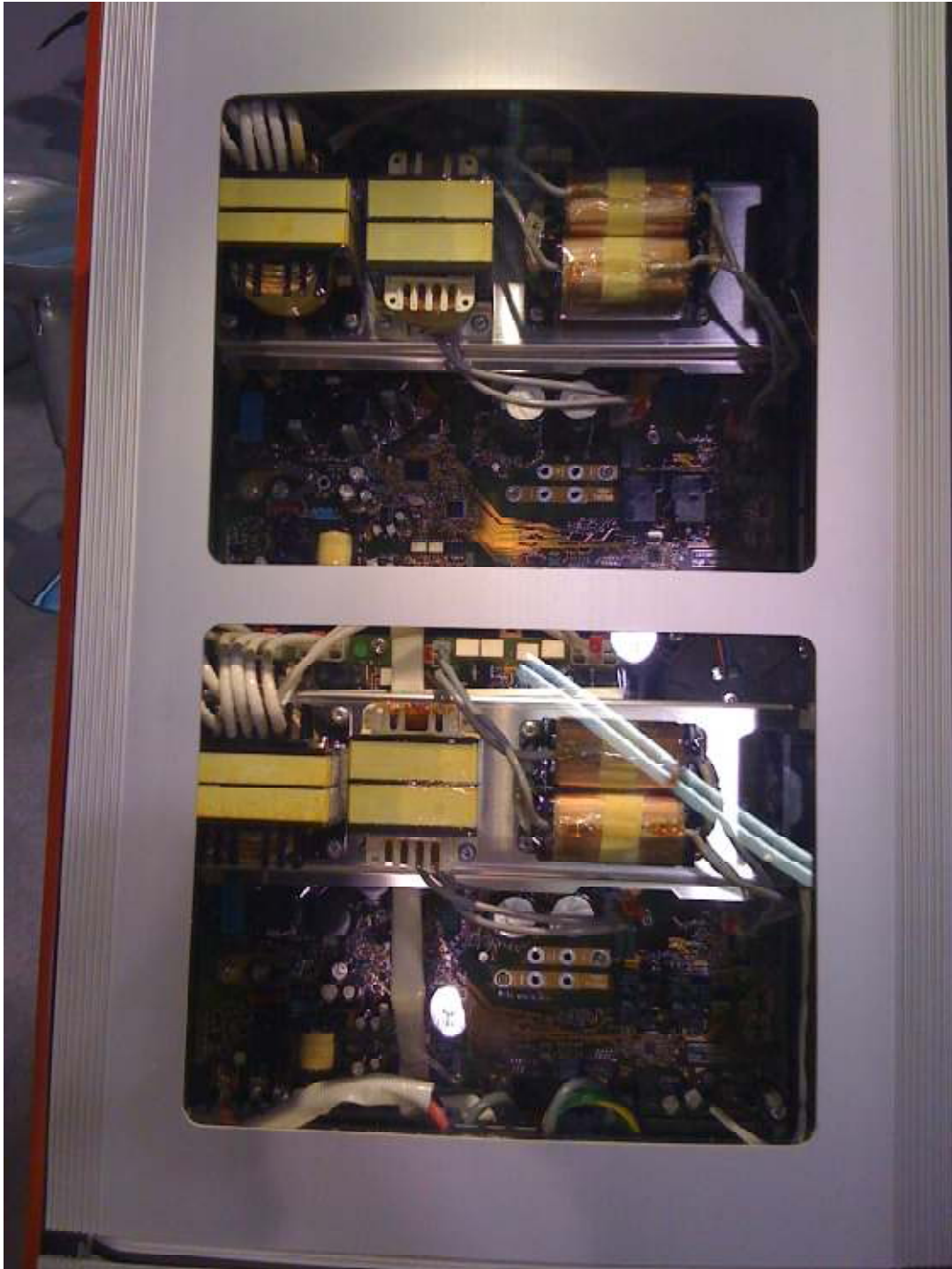
Aesthetics is becoming more important















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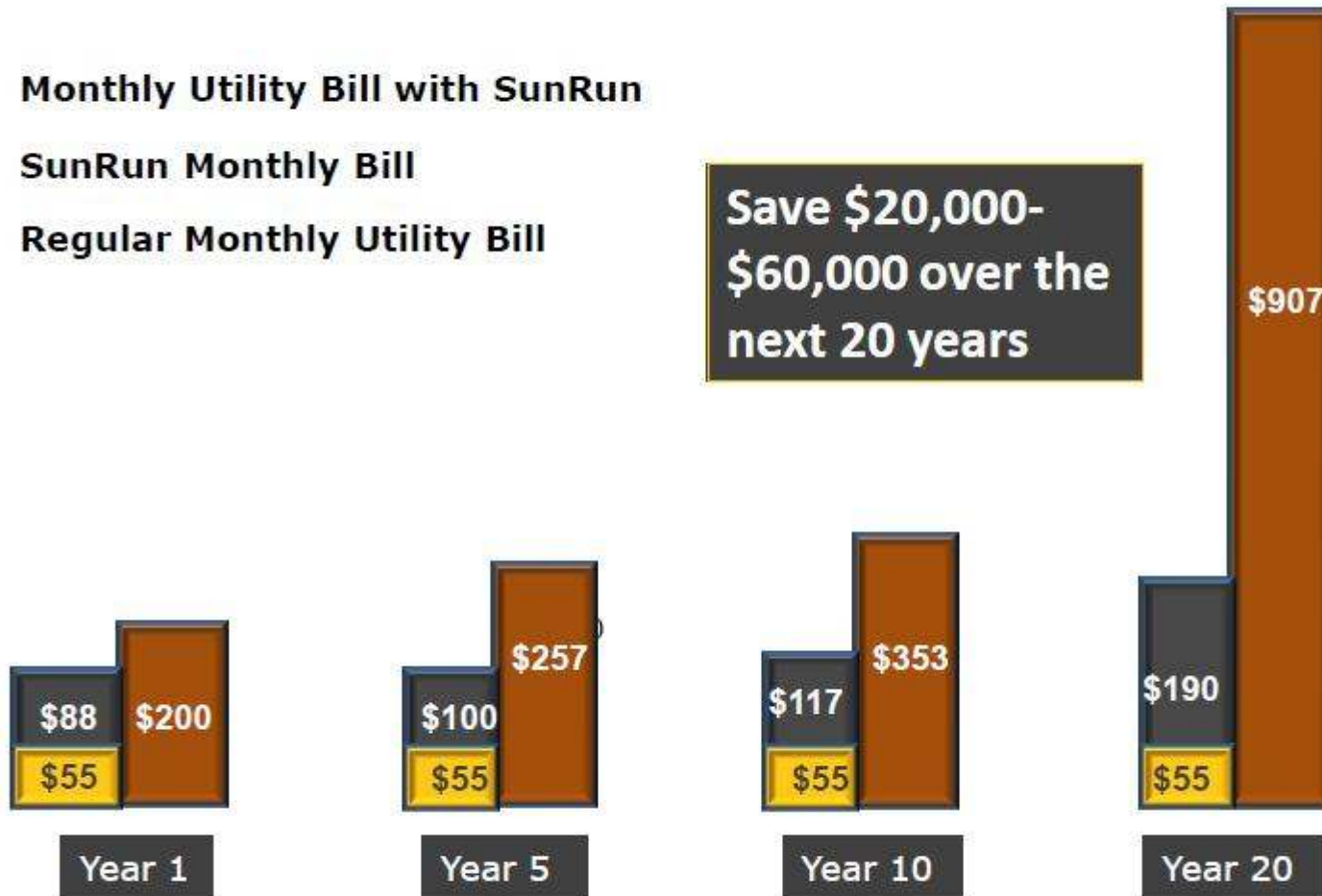
Finance Innovation

	Loan	Lease	PPA
System owner	Customer	Lessor	Investor
Term	<10 years	10 years	20 years
Pricing	Fixed/floating for term	Fixed for term	Fixed rate based on kWh produced
Federal & state incentives	Customer	Lessor	Investor
RECs & Carbon Credits	Customer	Customer	Investor
Insurance	Customer	Customer	Customer
Operations & Maintenance	Customer	Customer	Investor
Purchase Option	NA	Fixed 20% of purchase price	Fair market value

Customers get clean, green power for a low monthly fee

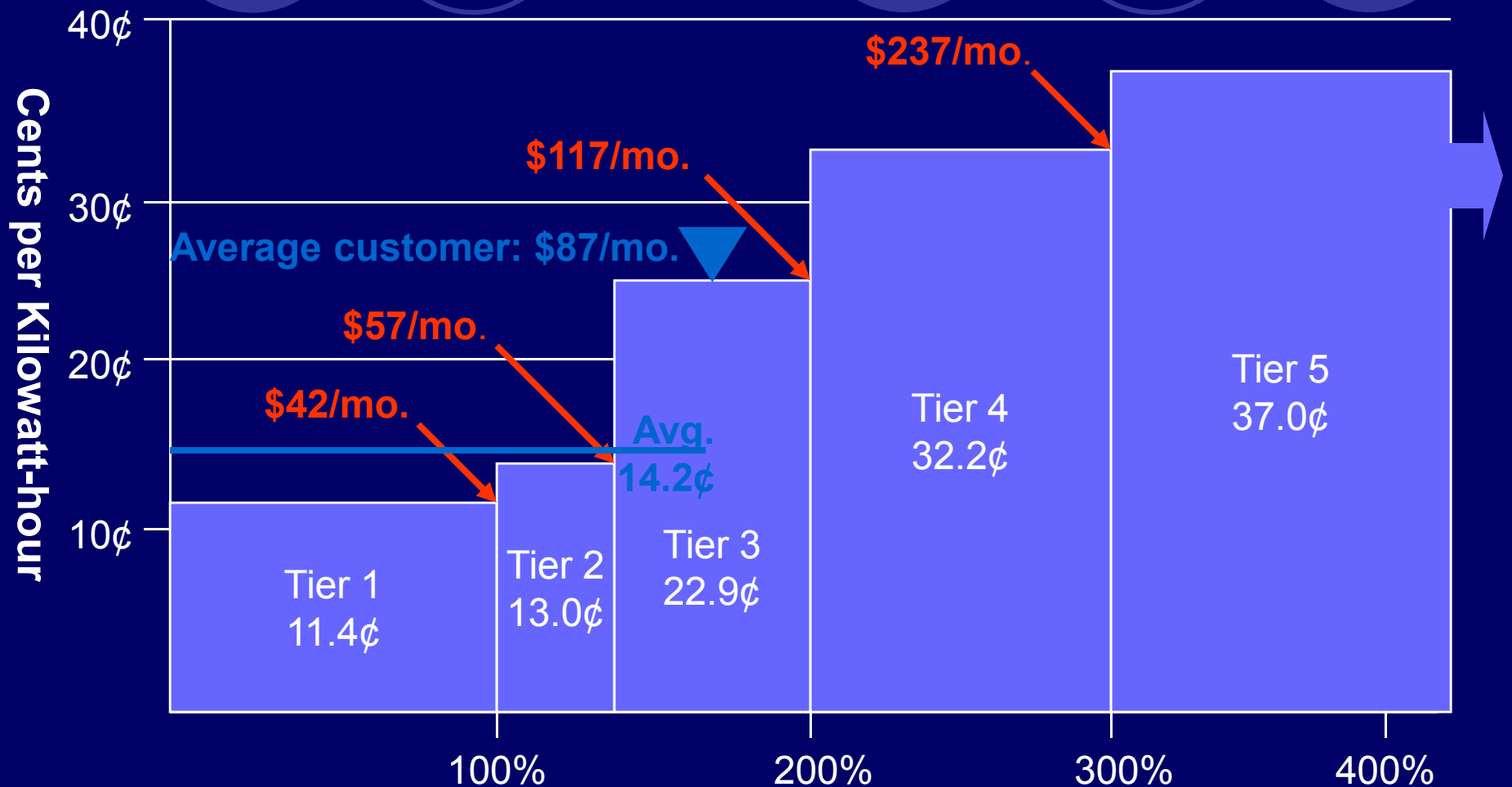
- Monthly Utility Bill with SunRun
- SunRun Monthly Bill
- Regular Monthly Utility Bill

Save \$20,000-
\$60,000 over the
next 20 years

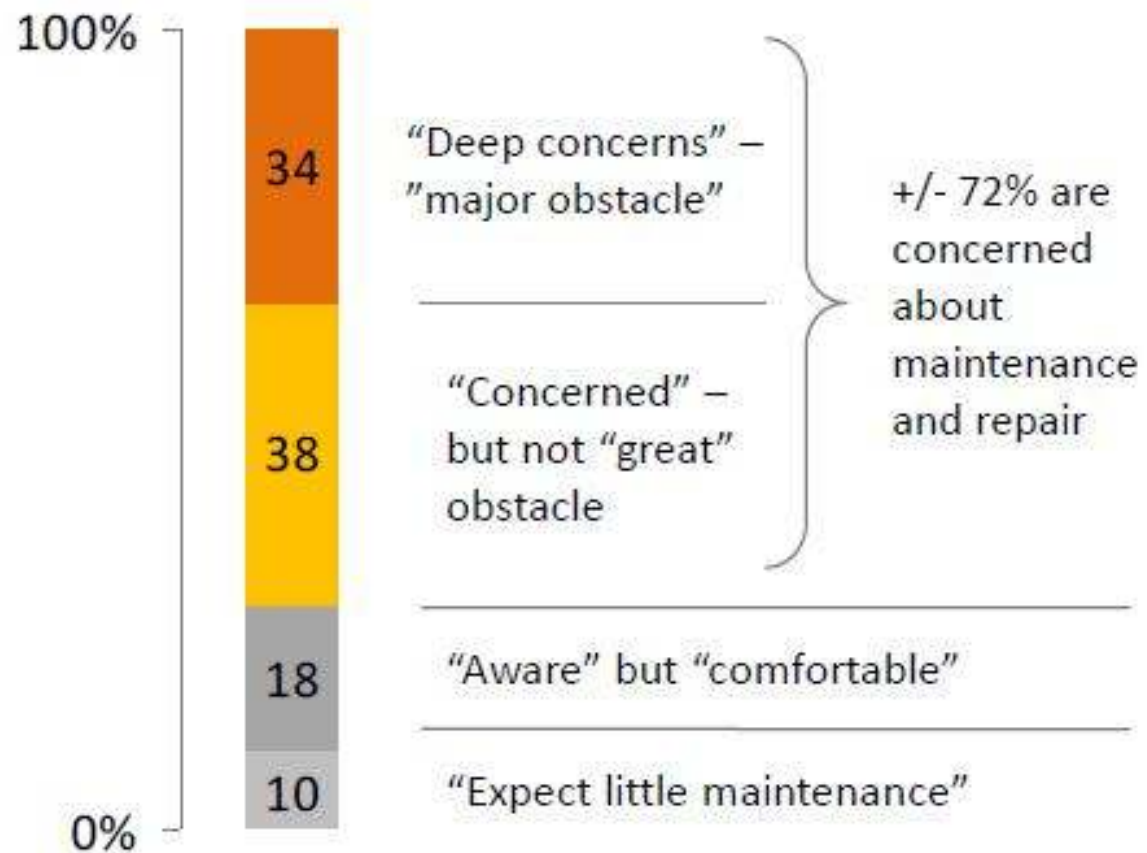


PG&E's Tiered Pricing

Standard E-1 Residential Rate Plan (May 2007)



People have maintenance concerns...



...which PPAs help resolve. 22

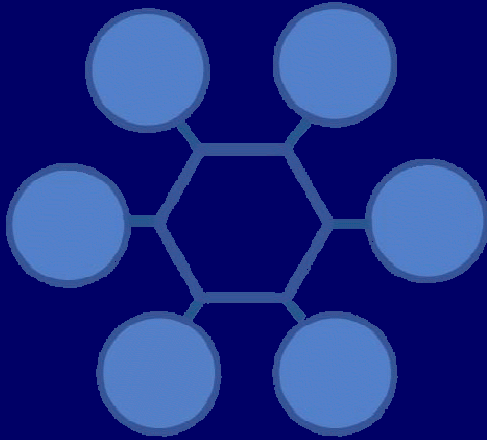
North America Solar Incentives

- Rebates – California Solar Incentive (CSI)
- Income Tax Credits – federal 30% ITC
- Feed in Tariffs (Gainesboro FL, Vermont, Ontario) – usually oversubscribed
- Local Government – extra payments on property taxes (Berkeley, Sonoma County, Boulder County – around 7% interest rate)
- Renewable Portfolio Standards (RPS) – Large Scale only



loc

Any Questions?



Local Power was able to attend
SPI 2009 due to:

Qantas Frequent Flyer Program ☺

Channel 10 Telstra Environment Award - April 2008

How close are we to Grid Parity now?

- May 2009 **unsubsidised** Local Power c/kWh
 - 3kW system – 26.6c/kWh
 - July 2009 - tariff 11 - residential is 18.84c/kWh
- April 2010 - 3kW PV system - 19.9c/kWh
 - Assumptions in model **haven't** changed
 - 3kW PV system fully installed
 - 4.2kWh / kW generation per day in Brisbane
 - then 1% panel performance degradation each year
 - PV component lifetime of 30 years (panels, rails, cables)
 - Inverter has 10 year life (extended warranty)
 - Replace inverter after year 10 & year 20
- July 2010 – tariff 11 very likely 20c+/kWh