

IREC Response to SDG&E Community Solar Proposals

Tom Beach, Crossborder Energy
Consultant to IREC
January 30, 2013

Shared Goals (see Slide 6)

- Expand the solar market
- Ratepayer indifference
- Long-term, durable program structure
- Program clarity for all stakeholders

SDG&E's Rate for STS Subscribers (from Slide 28)

Component	Monthly Cost
Standard Customer Bill	\$28.60
<i>Plus</i> PCIA	\$1.80
<i>Minus</i> Solar Value Adjustment	(\$1.20)
<i>Minus</i> Average Commodity Cost	(\$13.60)
Net Bill from SDG&E	\$15.60

- PCIA = Average Commodity Cost – Market Price Benchmark
- So, Net Bill = Standard Bill – (MPB + Solar Value Adjustment)
- MPB = \$59 / MWh; Solar Value Adjustment = \$6 / MWh
- **SDG&E Assumed Solar Avoided Cost = \$65 / MWh**

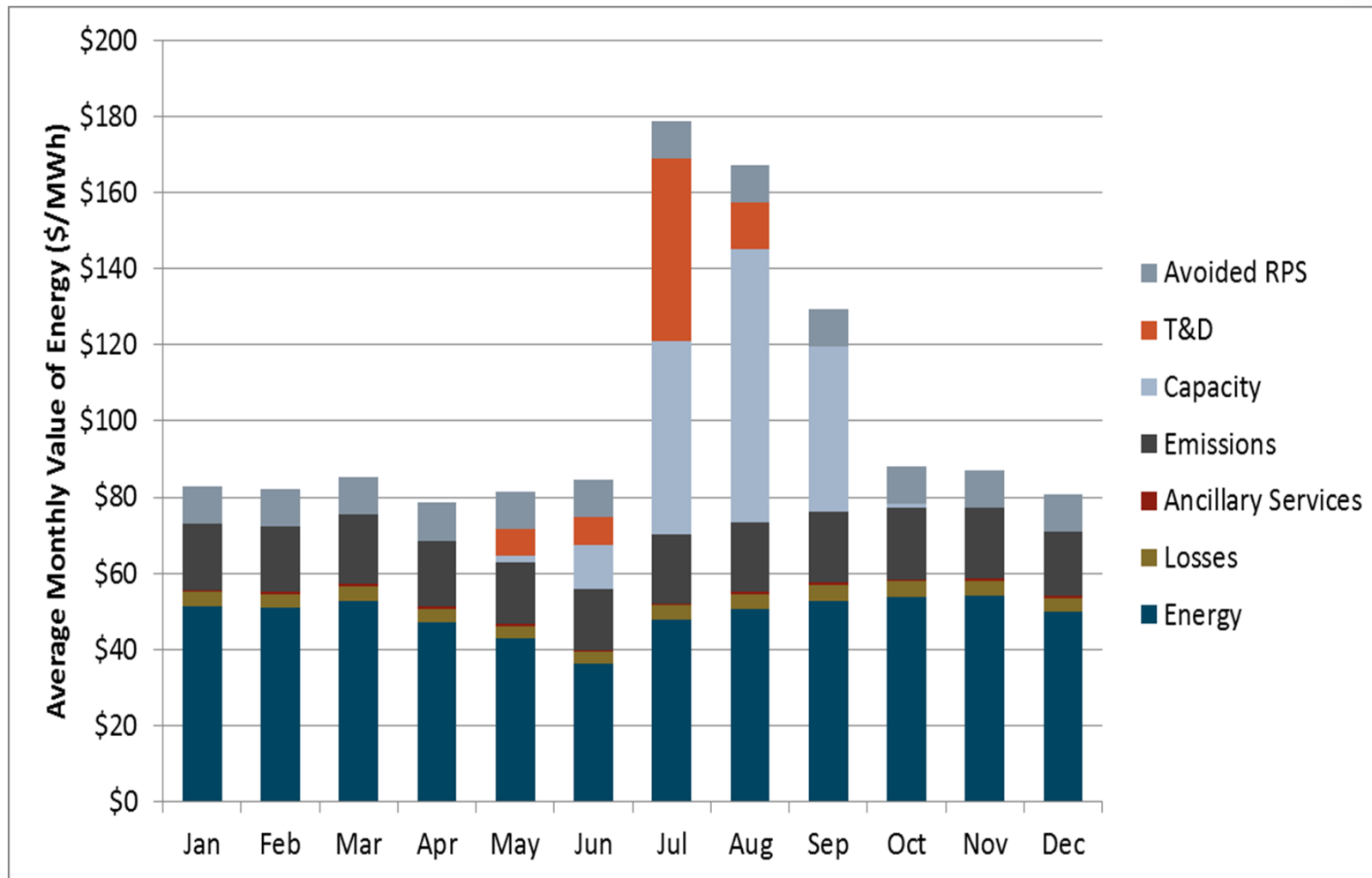
DG Avoided Cost Models

Feature	MPB + Solar Adjustments	E3 Model
CPUC Adopted?	Yes (SDG&E AL 2365-E-A)	Yes (D. 09-08-026 for DG)
Used for DG Avoided Costs?	No	Yes (2009 NEM, 2010 CSI)
Long- or Short-term?	Short (1-year)	Long (up to 25 years)
Granularity	Annual, with adjustments for solar profile	Hourly
Basis for Avoided Generation Costs	Energy: SP-15 forwards Capacity: existing CT running costs per CEC study	Capacity: CT fixed costs Energy: All-in CCGT costs less CT fixed costs
Avoided A/S Costs?	No	Yes
Avoided T&D Costs?	Line losses	Line losses plus marginal T&D capacity costs with hourly TDV allocation.
Avoided RPS Costs?	Yes	Yes
Assumed RPS % Avoided	12.3% for SDG&E in 2011	20% (2011) to 33% (2020)

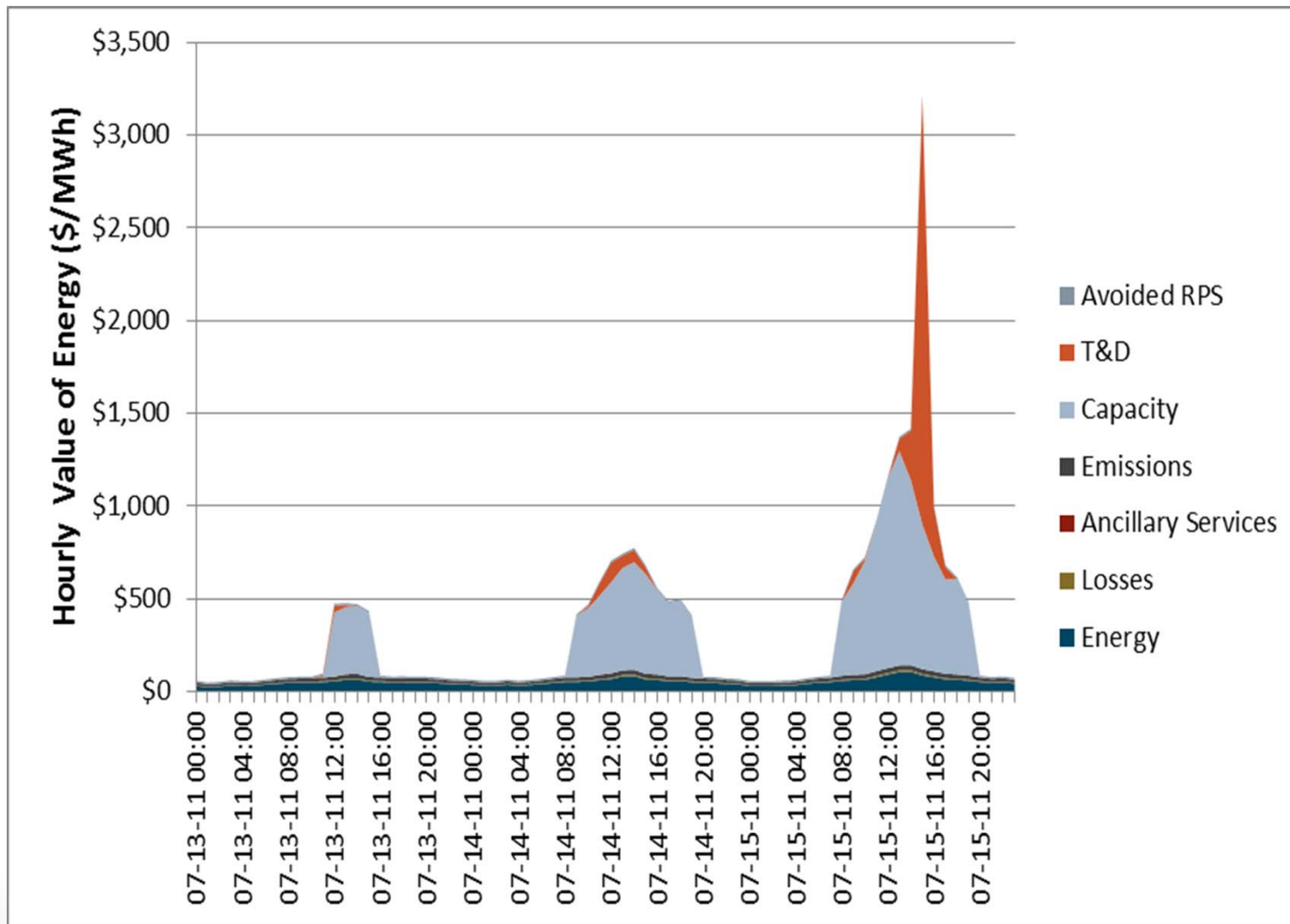
Exemplary Solar DG Avoided Costs (\$/MWh)

Feature	MPB (AL 2365-E-A)	E3 Model (CZ 7)
Cost Basis	Single year (2011)	20-year levelized (2011-30)
Energy (including GHG costs)	\$36.12	\$66.92
Capacity	\$12.43	\$15.16
RPS Premium	\$43.22	\$36.95
RPS %	12.3%	26.7%
Avoided Loss %	4.3%	4.0%
Avoided A/S Costs	--	\$0.49
Avoided T&D Capacity	--	\$6.33
TOTAL (Baseload)	\$56.19, per AL 2365-E-A	\$102.45
Solar Adjustments	\$5.60	\$45.69
TOTAL (Solar Profile)	\$61.79	\$148.14

E3 Model Avoided Costs



E3 Model Avoided Costs



Exemplary Solar DG Avoided Costs (2)

(\$/MWh)

Feature	MPB (AL 2365-E-A)	E3 Model (CZ 7)
Cost Basis	20-year levelized (2011-30)	20-year levelized (2011-30)
Energy (including GHG costs)	\$52.22	\$66.92 (\$74.79)
Capacity	\$15.54	\$15.16 (\$39.28)
RPS Premium	\$43.22	\$36.95 (\$36.95)
RPS %	26.7%	26.7%
Avoided Loss %	4.3%	4.0% (3.5%)
Avoided A/S Costs	--	\$0.49 (\$0.56)
Avoided T&D Capacity	--	\$6.33 (\$19.37)
TOTAL (Baseload)	\$85.83	\$102.45 (\$148.14)
Solar Adjustments	\$7.84	\$45.69
TOTAL (Solar Profile)	\$93.66	\$148.14

IREC Concerns

- MPB is not the right model to value solar avoided costs.
 - Short-term
 - Not granular enough to value a solar profile
 - No avoided T&D capacity value for well-sited solar facilities
 - Intended to value DA power, not DG
- How does SDG&E levelize the PCIA?