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Retail Rate and Cost Issues with Renewable Development

May 22, 2012

Some Rate Design Observations

- Rate design is where cost-based allocated revenues, forecast billing determinants, and policy considerations are combined to develop retail rate levels.
- Historical metering infrastructure dictated less precise rate designs (e.g. energy only rates for residential and small commercial customers).
- Additionally, we must account for regulatory and legislative requirements and considerations.
 - The combined effect of SB 695, the state's conservation goals, and "affordability" are examples of where rate designs deviate from their cost basis.
 - Dynamic pricing is now facilitated by state-wide "smart" meter deployment.

Where we are Today –

Compounded Affordability Concerns Distort the Market at Both Ends

	400-800	576,106	566	\$65	11.6
	> 800	203,661	1,083	\$153	14.1
NON-CARE	All	2,646,284	594	\$106	17.9
	< 400	943,221	251	\$34	13.7
	400-800	1,121,262	575	\$92	16.1
	> 800	581,801	1,188	\$250	21.0

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- The AB1X/SB695 induced rate gaps are large and will continue to grow

Large
compounded
subsidies.

Bypass of inflated
retail rates
subsidizes D-Gen
business models.

Residential Solar Accounts

– Average Monthly Usage Before and After PV Installation

Tier Level	Pre-Solar Avg. Usage (kWh)	Post-Solar Avg. Usage (kWh)	Displaced Energy (kWh)	Rate (¢/kWh)
Tier 1	349	252	97	12.5
Tier 2	98	56	42	14.8
Tier 3	203	97	106	22.9
Tier 4	214	76	138	26.4
Tier 5	310	98	213	29.9
Total	1,174	579	596	23.9

Usage Distribution			
Tier Level	Pre-Solar	Post-Solar	PV Generation Distribution
Tier 1	30%	43%	16%
Tier 2	8%	10%	7%
Tier 3	17%	17%	18%
Tier 4	18%	13%	23%
Tier 5	26%	17%	36%
Total	100%	100%	100%

Weighted average of PV generation distribution and tiered rate levels provides an average retail benefit of \$0.24/kWh.

Average residential retail rate (all rate components) is \$0.16/kWh.

Notes:

Accounts with PV system installed between Jan 2010 and Apr 2010.

Accounts with at least 120 days of billing data pre- and post-solar.

Pre-Solar: Jan 2009 - Dec 2009

Post-Solar: Jul 2010 - Jun 2011

1,676 total accounts

Rate Design and Renewable Energy Subsidies

- SCE's Net Energy Metering subsidies total almost \$50M/year at current rate levels and a little over 1% of system peak, the generally accepted definition of "aggregate customer peak demand".
- At the current NEM cap of 5%, this subsidy grows to nearly \$250M/year.
- This level of subsidization doubles again if "aggregate customer peak demand" is re-defined as the sum of individual customers' peak demands.

SCE Dynamic Pricing Deployment

Customer Group	SCE 2012 GRC Phase 2 (as filed)
Residential	Tiered Rate Structure (4 tiers) Default Peak Time Rebate Opt-in CPP, Opt-in TOU (2-tiered), Opt-in RTP <i>*Effective January 2013</i>
Small C&I <i>(< 20 kW)</i>	Mandatory TOU Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP <i>*Transition beginning in 2013</i>
Medium C&I <i>(20 to 200 kW)</i>	Mandatory TOU Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP <i>*Transition beginning in 2013</i>
Large C&I <i>(> 200 kW)</i>	Default CPP Mandatory TOU, Opt-in RTP <i>*Effective October 2009</i>
Small / Medium Agricultural <i>(< 200 kW)</i>	Mandatory TOU Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP <i>*Transition beginning in 2013</i>
Large Agriculture <i>(> 200 kW)</i>	Default CPP Mandatory TOU, Opt-in RTP <i>*Effective October 2009</i>