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Overview of Existing and Proposed Rates Offered by California Investor- Owned Utilities

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Energy Division**

**June 10, 2008
CEC Workshop on Rate Design,
Incentives, and Market Integration**





Energy Action Plan Prioritizes Dynamic Rates

The EAP II identifies several areas of joint CEC and CPUC coordination, including that of Demand Response. Two joint goals as stated in the EAP II are:

- **Identifying and adopting new programs, and revising current programs as necessary to achieve a five percent demand response goal by 2007, and making dynamic pricing tariffs available for all customers.**
- **Educating Californians about the time-variant sensitivity of energy use and opportunities to take advantage of dynamic pricing tariffs and other demand response programs.**

The 2008 Energy Action Plan Update also addresses the need to “develop understandable and transparent dynamic pricing tariffs” and notes that residential customers’ rates have “no time dimension to their prices that would encourage reducing usage at peak times when electricity is the most expensive.” (*EAP Update, pages 10-11*)





CPUC Decisions Have Encouraged Dynamic Rates

- **Order on Default Critical Peak Pricing (CPP) for Large Customers, A.05-01-016, et al.**
 - "All bundled customers should receive price signals, regardless of their load shape or size, that indicate when power is more expensive to procure." *Conclusion of Law (COL) 6, D.05-04-053 (April 21, 2005)*
- **Final Order on Dynamic Pricing and Demand Response Rulemaking, R.02-06-001**
 - "Each utility, as part of its next comprehensive rate design proceeding application following development and final implementation of an hourly day-ahead market price by the California Independent System Operator, shall submit a real time pricing tariff for its largest customers as part of its tariff offerings." *Ordering Paragraph (O.P.) 3, D.05-11-009 (Nov. 18, 2005)*
 - "Each utility, as part of its next comprehensive rate design proceeding application, shall also include proposals for critical peak pricing (CPP), time of use (TOU) and inverted rate tariffs (with an appropriate hedge) for small commercial and residential customers, as well as CPP and TOU tariffs for customers over 200 kilowatt in monthly demand." *O.P. 4, D.05-11-009 (Nov. 18, 2005)*





CPUC Decisions Have Encouraged Dynamic Rates (cont.)

- **Order Addressing Default CPP for 2007 for Large Customers, A.05-01-016, *et al.***
 - "We should implement critical peak pricing tariffs in a manner that educates customers about the opportunity to reduce their bills and demand during critical peak periods." *COL 2, D.06-05-038 (May 25, 2006)*
 - "In their next filed rate design proceeding, each utility shall propose rates to place all eligible customers, new and existing, over 200 kilowatts on a critical peak pricing tariff as their default rate or other appropriate proceeding if directed by the Commission." *O.P. 2, D.06-05-038 (May 25, 2006)*
- **Order Adopting PG&E AMI Deployment, A.05-06-028**
 - "A voluntary critical peak pricing rate design does not violate Water Code Sec. 80110, provided that the customer receives adequate notice that by signing up for the program the customer waives certain otherwise applicable statutory protections contained in Sec. 80110." *COL 10, D.06-07-027 (July 20, 2006)*





Rate Type Applicability Varies by Customer Class

Commercial and Industrial (including Agricultural):

- TOU
 - Mandatory for >200 kW demand (>20 kW SDG&E)
 - Voluntary (opt-in) for most other C&I customers
- CPP
 - Default (opt-out) for >20 kW demand: SDG&E
 - Voluntary (opt-in) for PG&E and SCE C&I customers
 - Default (opt-out) *proposed* for >200 kW: SCE (2009 GRC)

Residential:

- Multi-tiered increasing block: default
- TOU: voluntary
- CPP: voluntary (PG&E)
- Peak-time Rebate (PTR): default for residential and small commercial (adopted for SDG&E, proposed by PG&E and SCE)





CPP Rates Have Dynamic Features

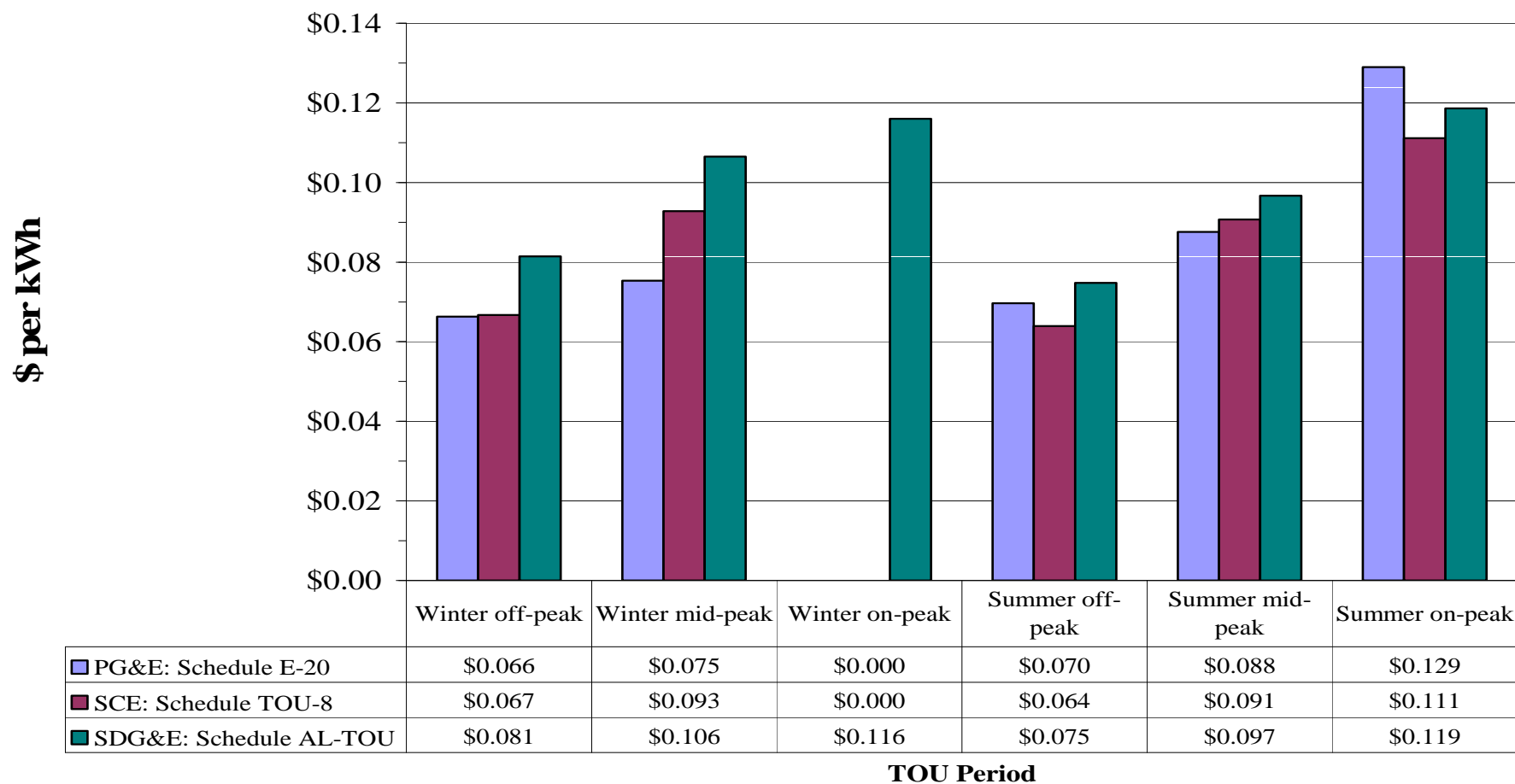
SDG&E's Default Commercial / Industrial CPP Schedule:

- Critical Peak rates take effect when current conditions warrant:
 - Variable number of days, up to 18 days per year
 - May 1 through September 30
 - Non-holiday weekdays or Saturdays
 - During peak period hours; 11 am to 6 pm
- Trigger conditions:
 - When forecasted temperature is $\geq 84^{\circ}$ and prior day's load reaches 3,837 MW by 2:30 pm
 - Or as warranted by extreme conditions such as
 - Special alerts by CAISO
 - Local utility emergency
- Customers are notified:
 - By 3 pm the preceding day
 - Via e-mail, text message, or pager
 - Notice also posted on utility's website



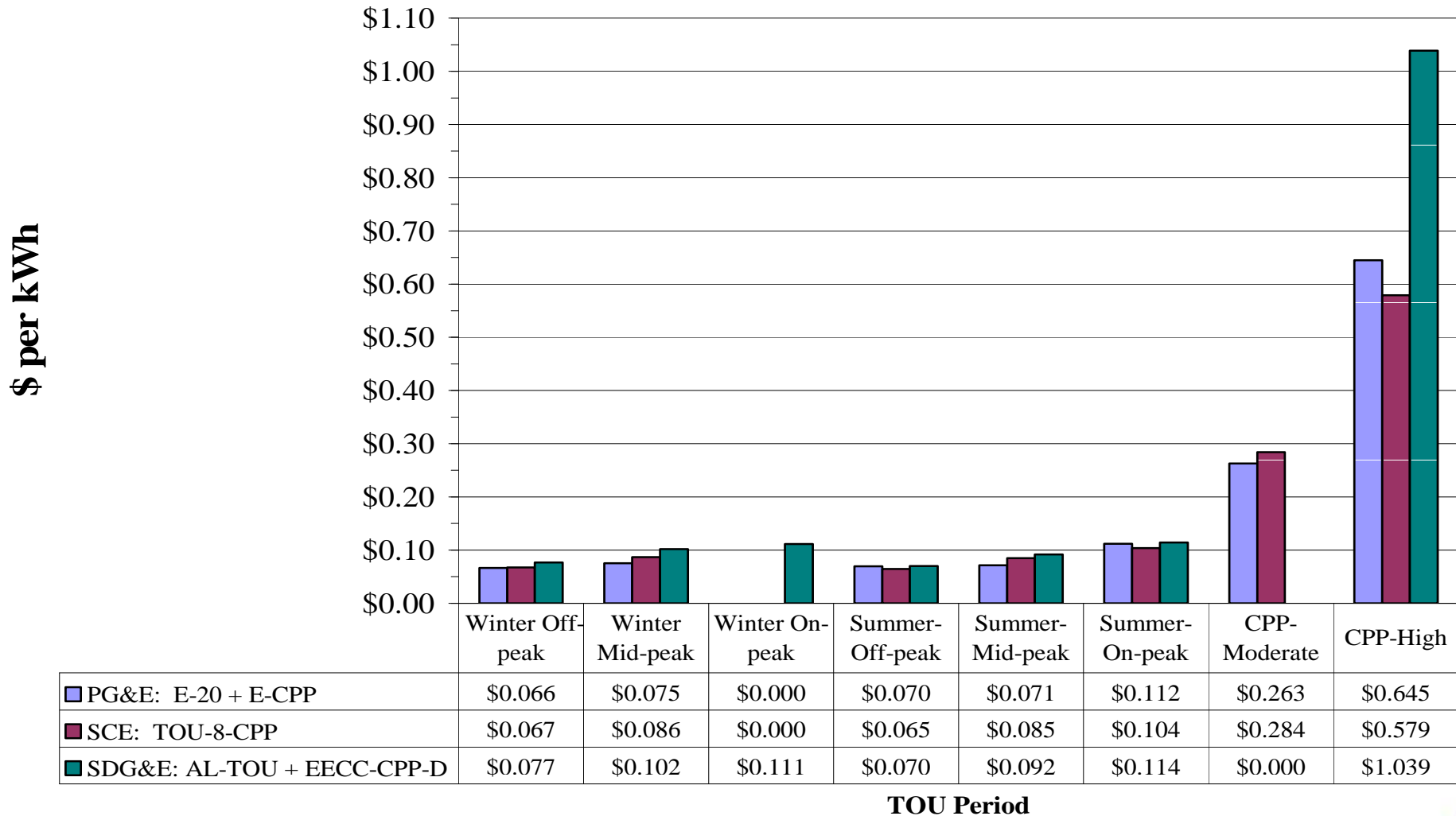


Industrial TOU – Energy Rates





Industrial CPP – Energy Rates



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Demand Charges Reflect Recovery of Investment in Capacity

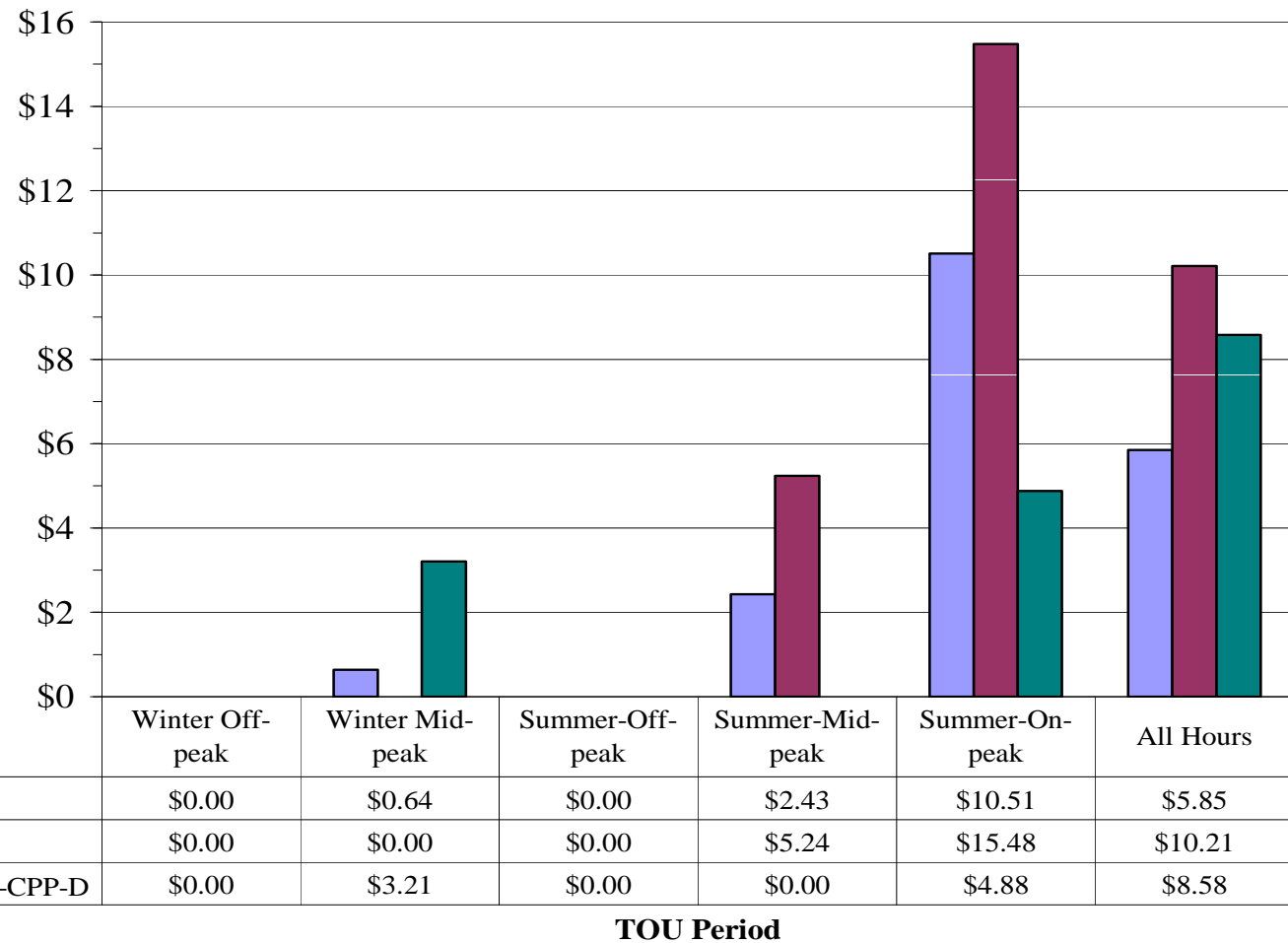
- Demand charges are collected through and reflect the fixed cost of an electric system's capacity design, measured by a customer's kW demand on system capacity.
- All three IOUs implement demand charges to reflect generation, transmission and/or distribution system-related costs related to capacity needs.
- Depending on company-specific capacity needs and TOU-related costs, IOUs implement demand charges measuring summer "on-" and "part-peak", winter "part-peak", and day-long "non-coincident" demand.
- The next slide compares some of each IOU's existing demand charges.





Industrial CPP – Demand Charges

\$ Per kW Max. Demand





Policies Concerning Residential Rates

AB 1X constrains the ability of the CPUC to modify residential rates so that they have a time variable dimension.

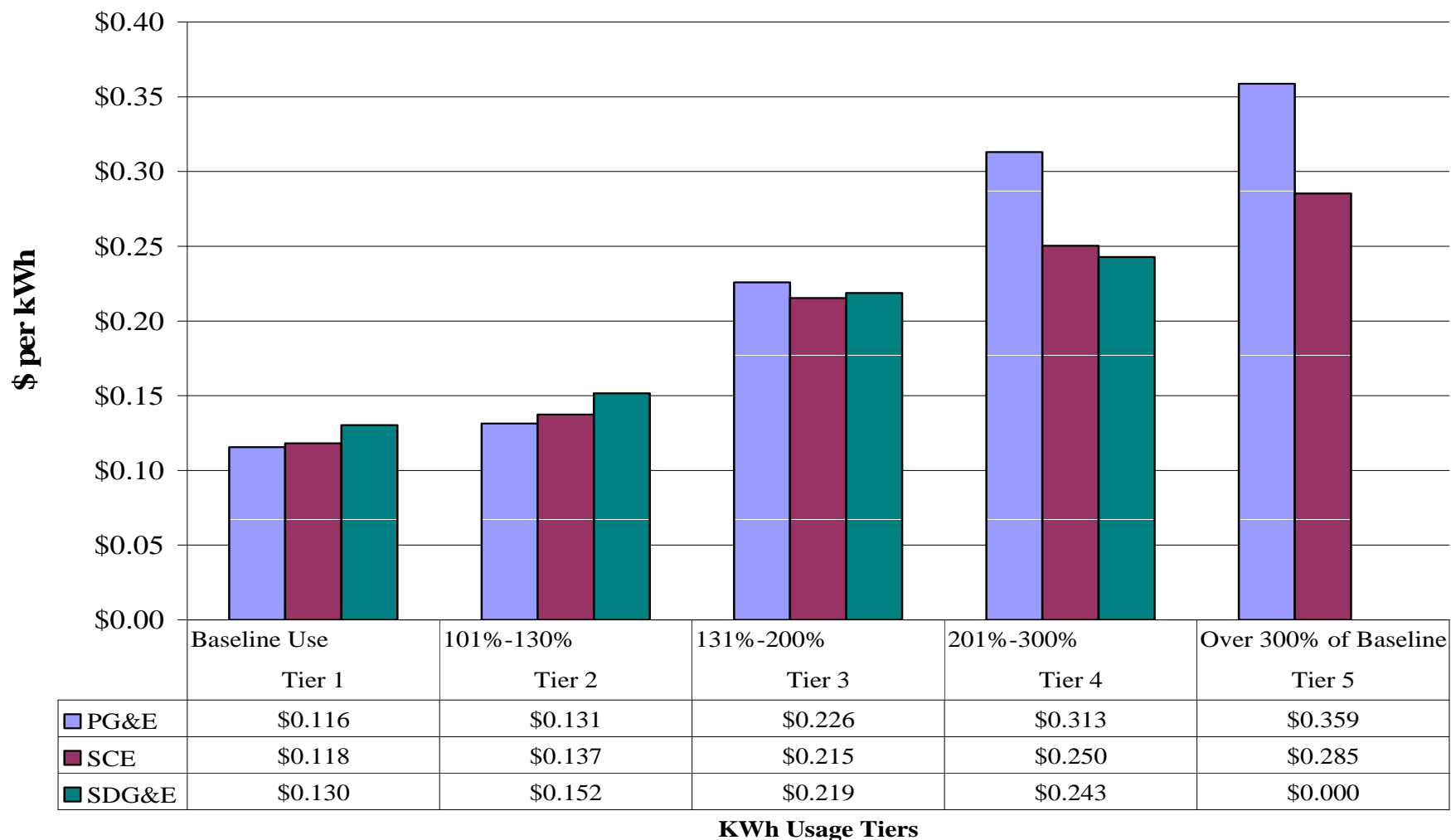
- “In no case shall the commission increase the electricity charges in effect for residential customers for existing baseline quantities or usage by those customers of up to 130 percent of existing baseline quantities, until such time as the (Department of Water Resources) has recovered the costs of power it has procured for the electrical corporation's retail end use customers ...”(California Water Code Section 80110)**

PU Code Sections 739(c) and 739.7 require the CPUC to establish baseline rates and at least two tiers of rates in an increasing block rate structure.





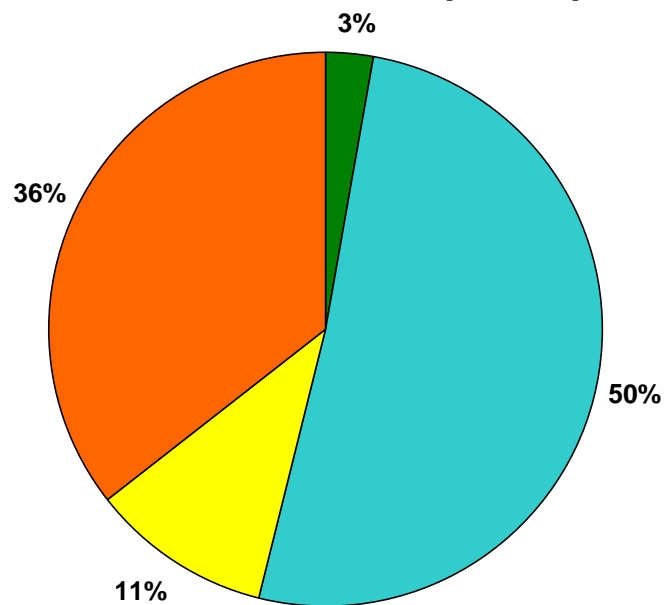
Residential Tiered Rates



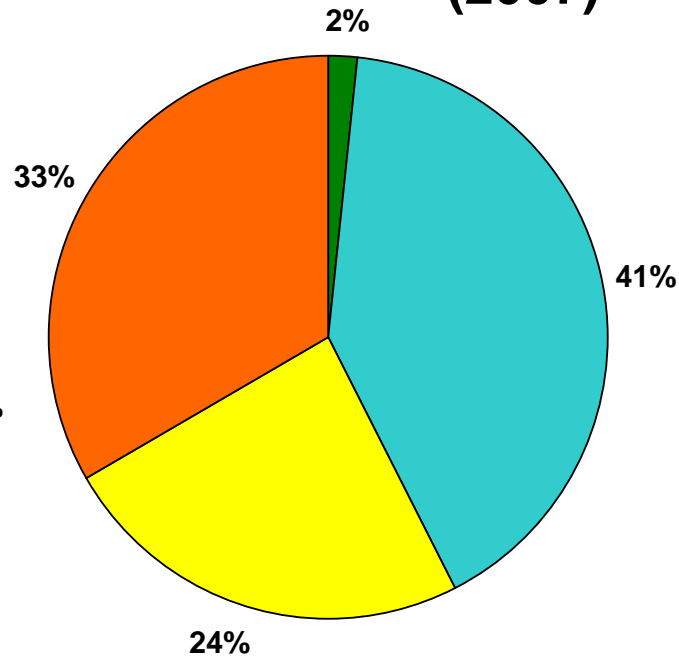


MWh Sales by Rate Type

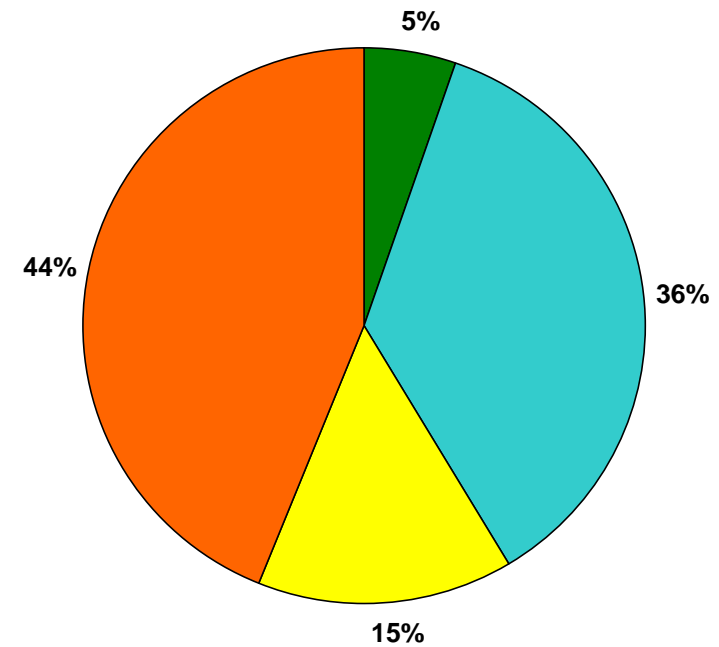
PG&E (2006)



SCE (2007)



SDG&E (2007)



■ Dynamic ■ TOU ■ Non-TOU ■ Res-tiered





Percent of Customer Accounts by Class and Rate Type

	PG&E	SCE	SDG&E
Residential			
CPP	0.0%	0.0%	--
TOU	1.8%	0.1%	0.1%
Non-TOU	--	0.0%	0.2%
Residential Tiered	98.2%	99.9%	99.7%
Commercial			
CPP	0.1%	0.0%	0.0%
TOU	18.6%	3.8%	13.7%
Non-TOU	81.2%	96.2%	86.3%
Industrial			
CPP	3.8%	2.7%	39.9%
TOU	96.2%	97.3%	60.1%

