

Comments on the Straw Proposal

On behalf of the California Water Association

PRESENTED TO

CPUC Workshop
Balanced Rates Rulemaking (R.) 11-11-008

PRESENTED BY

Ahmad Faruqui, Ph. D.

October 13, 2015



THE **Brattle** GROUP

The Bonbright principles of rate design

- **Economic efficiency**
- **Revenue recovery and stability**
- **Rate and bill stability**
- **Rate attributes: simplicity, understandability and acceptance**
- **Customer satisfaction**

There is a misalignment between rate structure and cost structure in current rates

Cost structure

- Fixed costs represent about 70% of total costs
- Variable costs represent about 30% of total costs

Rate structure

- Fixed charges represent about 30% of total revenues
- Variable charges represent about 70% of total revenues

This misalignment leads to economic inefficiency

A solution, consistent with the principle of gradualism, is to move toward a more balanced rate structure (shown in the following slides)

In the current rates, the volumetric charges often follow an inclining block structure

The overriding objective is the promotion of water conservation, pursuant to the Commission's Water Action Plan

However, for that objective to be fully achieved, customers need to understand and respond to tiered rates

- Academic research shows that most customers respond to average rates, whether for electricity or water (Ito, Koichiro. "How do consumers respond to nonlinear pricing: evidence from household water demand," unpublished paper, Stanford University, April 2013; Ito, Koichiro. "Do consumers respond to marginal or average price? Evidence from nonlinear electricity pricing," *American Economic Review*, 104(2), 2014.
- This lack of understanding is confirmed by the Hiner & Partners study in R.12-06-013 and D.15-07-001, the decision on electricity residential rate reform.

Illustrative current, straw and alternate rate designs

	Current	Straw	Alternate
Service Charge (\$/month)	18.00	48.00	30.00
Quantity Rates (\$/CCF/month)			
Tier 1	3.50	1.80	2.50
Tier 2	4.25	1.50	3.00
Tier 3	5.00	3.00	3.50

The straw proposal features some pretty drastic changes from the current rate design

	Straw	Alternate
Service Charge (\$/month)	167%	67%
Quantity Rates (\$/CCF/month)		
Tier 1	-49%	-29%
Tier 2	-65%	-29%
Tier 3	-40%	-30%

Distributional impact of the straw proposal, assuming no price response

The straw proposal will result in major changes in bills for many customers

- Smaller users will see higher bills and some will see their bills doubling or tripling, creating a significant adverse reaction from customers
- Larger users will see lower bills

Price response will affect the state's water conservation goals

While there is a wide range of price elasticities, as summarized in Ito (2013), there is little doubt that customers do respond to price changes

The big unknown is whether customers respond to marginal or average prices

If individual customers respond to marginal prices

- They will raise their water usage in response to lower variable charges

If customers respond to average prices

- Those consumers who see a higher bill will conserve and those who see a lower bill will increase usage

What will be the impact of these proposals on conservation?

The CPUC has approved changes in residential rate design that would flatten the tiered rates for electricity

As the consultant for the three investor-owned utilities, I quantified the effects of the utility proposals (Faruqui, Ahmad. “The paradox of inclining block rates,” *Public Utilities Fortnightly*, August 2014).

The inclusion of a monthly service charge tended to decrease the incentive to conserve

The flattening of the tiered rates had the following effects

- The lowering of the prices in the outer tiers encouraged consumption
- The raising of the prices in the inner tiers encouraged conservation
- These countervailing influences tended to cancel out, leaving virtually unchanged the incentive to conserve

Conclusions

The alternate proposal will improve the alignment between cost structure and rate structure

- The straw proposal, by raising fixed charges and lowering volumetric charges, will have the perverse effect of working against the state's goal of water conservation
- It will also cause bills to rise abruptly for large numbers of small water customers and cause significant loss of customer satisfaction

These impacts need to be studied carefully and compared with those of the alternate proposal so as to optimize the trade-offs between cost-causation and gradualism, while preserving the incentive to conserve

- In order to do these studies, data will be needed on customer usage patterns and price elasticities

Presenter Information



AHMAD FARUQUI, PH.D.

Principal | San Francisco

Ahmad.Faruqui@brattle.com

+1.415.217.1026

+1.925.408.0149 (cell)

Ahmad Faruqui is an expert on tariff design, demand forecasting and conservation. He was a witness on behalf of the three investor-owned electric utilities in the CPUC's recent proceedings on residential rate design. He has consulted with more than 125 clients, including utilities, system operators, and regulatory commissions, in the US and in Australia, Canada, Egypt, Hong Kong, Jamaica, Philippines, Saudi Arabia and Thailand. He has filed testimony or appeared before state commissions, government agencies, or legislative bodies in Alberta (Canada), Arizona, Arkansas, California, District of Columbia, Illinois, Indiana, Kansas, Maryland, Michigan and Ontario (Canada). He has spoken at conferences in Australia, Bahrain, Brazil, Egypt, France, Germany, Ireland, Jamaica, and the United Kingdom. Dr. Faruqui's work has been cited in *Business Week*, *The Economist*, *Forbes*, *The New York Times*, *USA Today*, *The Wall Street Journal* and *Washington Post*. He has appeared on Fox News and National Public Radio and is the author, co-author or co-editor of four books and more than 150 articles on energy economics. He holds bachelors and masters degrees from the University of Karachi and masters and doctoral degrees from the University of California, Davis.

The views expressed in this presentation are strictly those of the presenter and do not necessarily state or reflect the views of The Brattle Group, Inc.