CCA Rate Design

Traditional Utility Approaches Applied to CCAs

September, 2018

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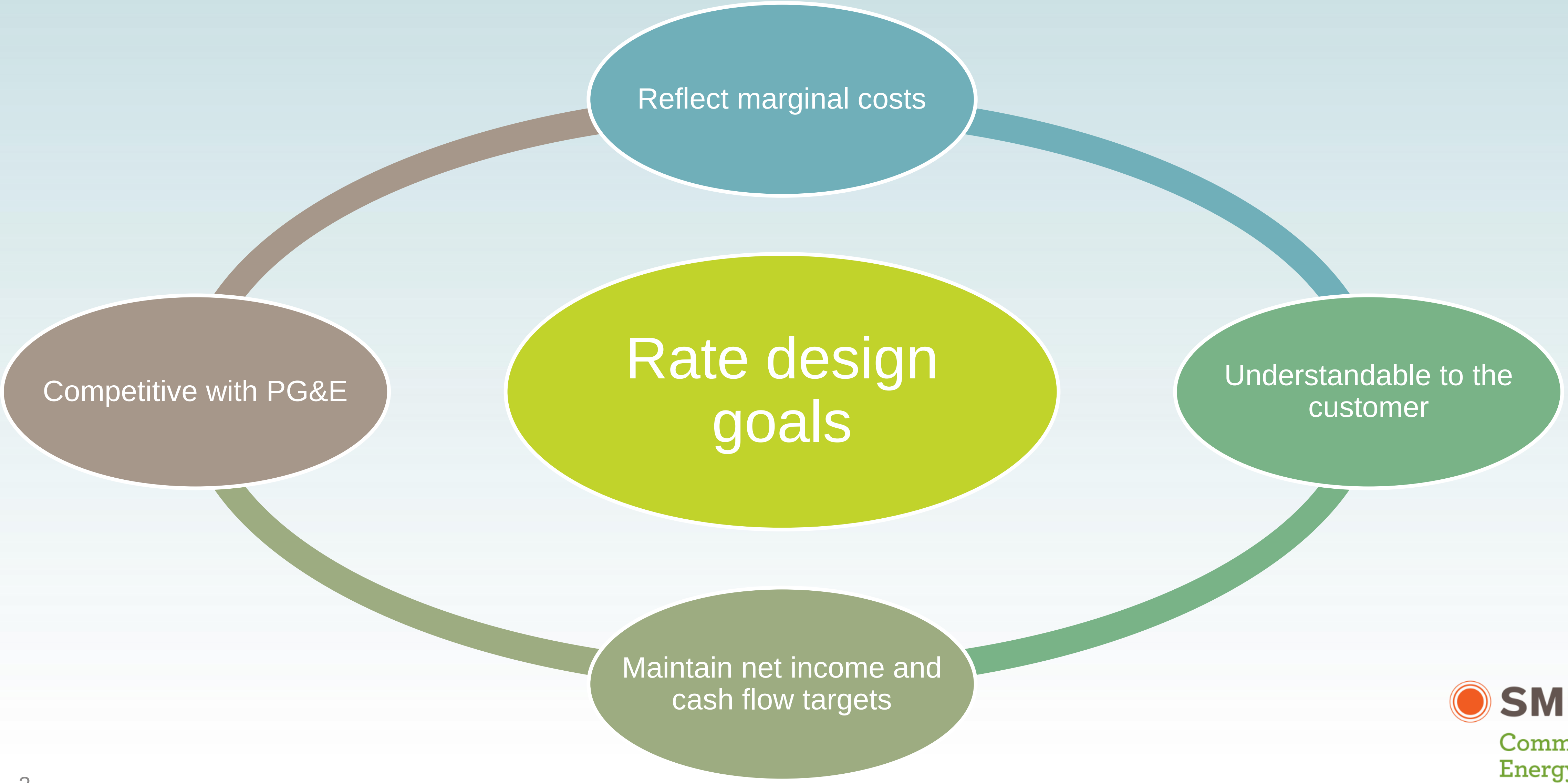
SMUD Background

- Not-for profit, community-owned
- 6th largest community-owned electric service provider in the nation
- Serves 1.5 million people in Sacramento County (and small portion of Placer County)
- Governed by 7-member elected Board

Sample Rate Design Goals



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Traditional Marginal Cost Approach

Costs

- Commodity
  - kWh
    - TOU
  - Capacity
  - Gas
- Equipment
- Staffing

Revenues

- Residential
  - Summer
    - TOU
  - Winter
    - TOU
- Commercial
  - Summer
    - Demand
      - TOU
    - kWh
      - TOU
  - Winter
    - Demand
      - TOU
    - kWh
      - TOU

- Marginal Cost Analysis assigns each cost category to a cost driver, and splits those cost drivers across customer groupings and SKUs.

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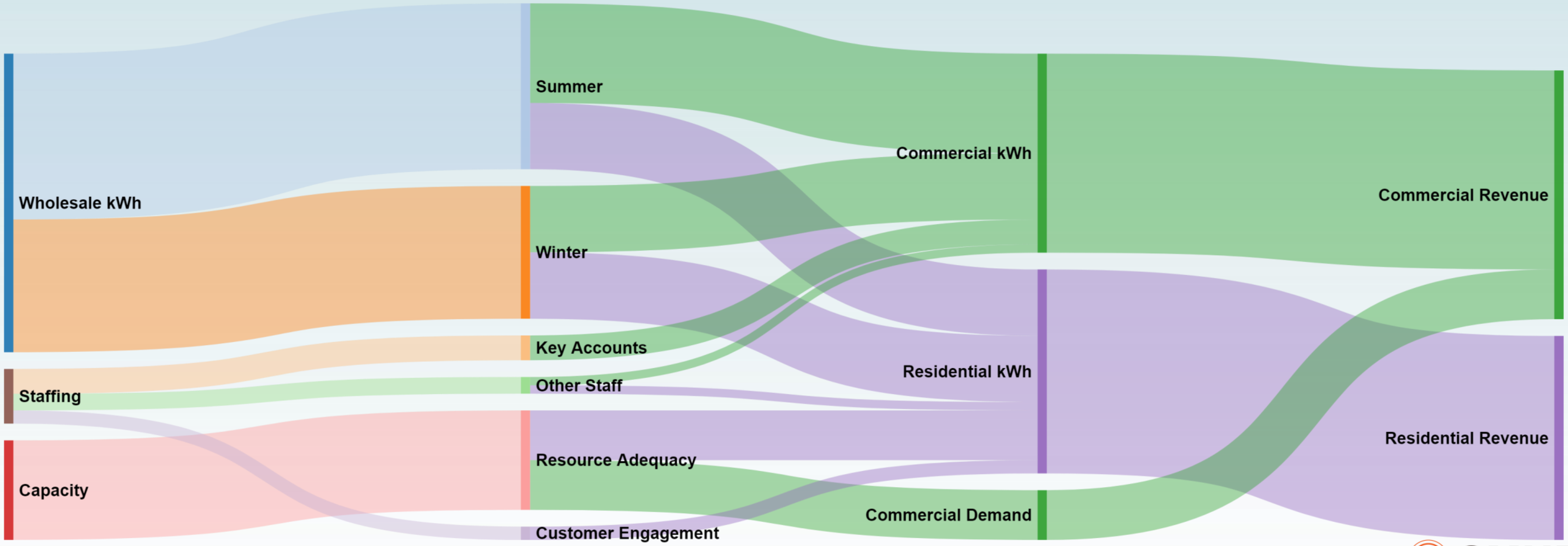
Applicability to CCAs

A simplified cost allocation model may look like this:



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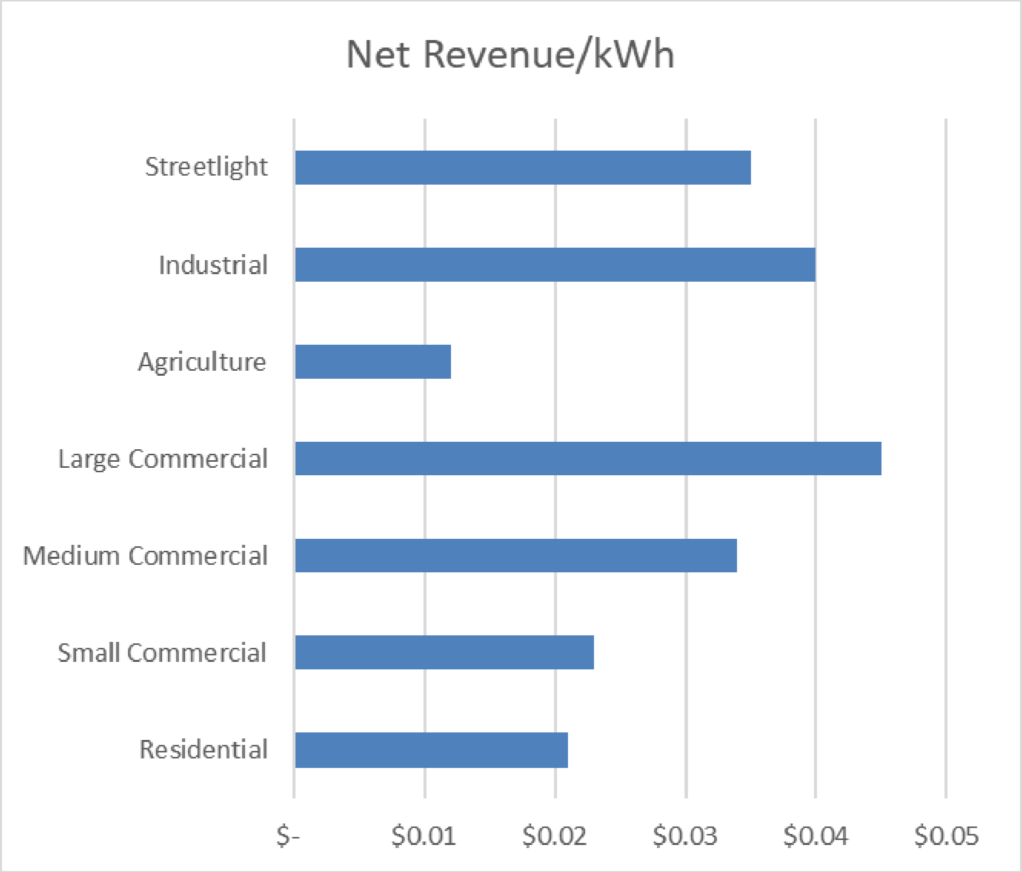
Marginal Revenue by Rate Class



- Calculating **marginal revenue by season** and time period may show areas where rates are not fully matching customer load shapes
- Calculating the **marginal revenue by rate class** or rate may identify specific groups of customers that are relatively less beneficial to serve.
- Calculating **marginal revenue by customer** may lead to discovery of unpriced cost drivers

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Using IOU Rates – Pros and Cons

Pros	Cons
Incorporates IOU’s analysis of marginal costs	IOU Rates are based on load shapes for the system average, not your specific customers
Customer categories and billing determinants already defined	PCIA is deducted from the rates on a flat basis, with no seasonality or TOU component.
Rate comparison is simple	Rate structure reflects IOU’s prioritization of simplicity and accuracy

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Challenges for CCAs

- General Challenge with Marginal Cost based pricing:
  - Shifting total costs around various customers does not improve the overall average rate unless customers change behavior.
  - Aligning rates with marginal costs can decrease CCA exposure to load forecast variance, but can increase burden on customer to understand and manage bill

- CCA-Specific Challenges:
  - Customer buckets are defined by IOU
    - Is the load shape within a rate consistent?
    - Are load shapes across rates varied?
  - Billing Determinants are defined by IOU
    - Difficult to define different time periods (Both technical and customer communication)
    - PCIA as percentage of total PG&E cost is high for off-peak periods

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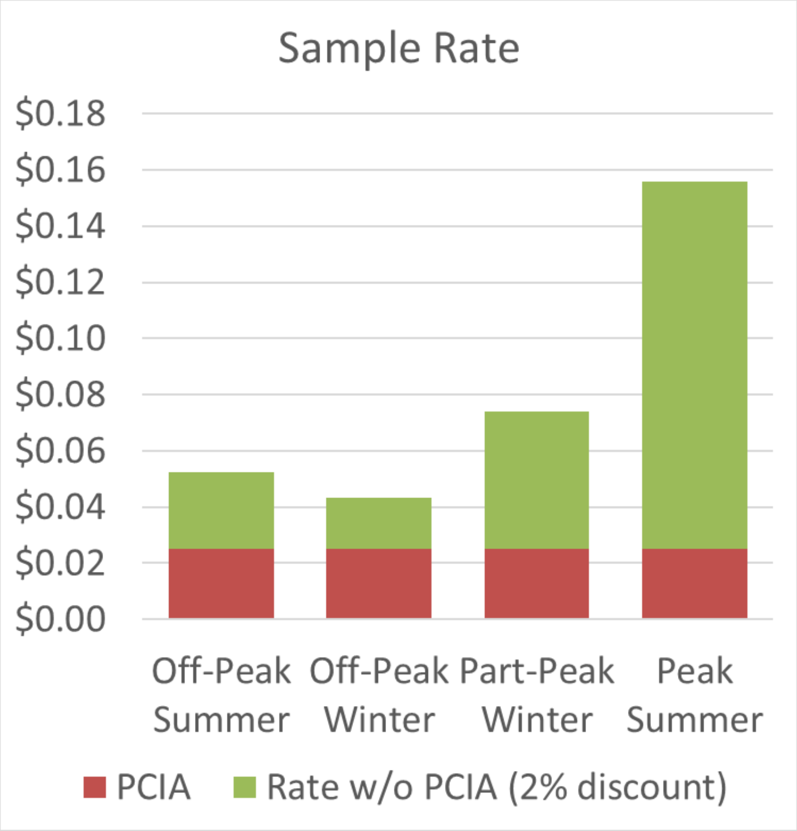
Challenges for CCAs

Flat PCIA distorts alignment of marginal revenue



No Fixed Charge

Several costs are incurred regardless of load. In fact, move-in/move-out and NEM are likely to have lower load, and higher costs:

- Staffing
- Power Procurement
- Regulatory
- Marketing
- Call Center
- Billing

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Opportunities for CCAs

- Set prices based on **local load shapes** and **local customer behavior**
- Communicate and **educate customers** on prices to **drive customer behavior**
- For some segments, manage their bill through **simplifying** their **rates**
- Build rates as a discount from PG&E, but **vary where the discount applies** to match marginal cost
- Design **critical peak pricing** or other alternatives that better match Resource Adequacy costs
- **Partner rate changes with DER** offerings to maximize the value of both

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Next Steps

- Define your rate goals
- Run marginal revenue analyses
- Identify available levers
- Develop Rate Roadmap and Communication Plan
- Implement
- Monitor and Refine

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Questions?

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