The Regulatory Assistance Project – Experience, Direct Assistance and Training

DOE Innovation Fellows Gathering

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Experience:
About RAP & Carl

• The Regulatory Assistance Project (RAP) is an independent, non-partisan, NGO dedicated to accelerating the transition to a clean, reliable efficient energy future.

• Carl is a Principal with RAP & lives in Davis, CA
  • Focused on market design, pricing and resource planning
  • Former PUC Commissioner and Energy/Economic Advisor to Governor Guinn (NV)
  • Served on EIM Governing Body (Member & Chair)
  • PhD Economics (Carolina), BA Math (UC Davis)
Selected Linvill publications since 2013

- GEB Capabilities for Equity and Resilience Value, Presented at the CEC IEPR Workshop on GEB Value, October 5, 2021
- California’s Outages Are a Teachable Moment, Linvill, September 10, 2020.
- What is Capacity and How it is Acquired, Linvill and Shipley, December 2019, RAP Presentation to the Oregon stakeholders in a DER capacity proceeding.
- Reliability and Roles, Linvill, May 2019. Presentation to the NARUC Electricity Committee.
- Steel-for-fuel, data-for-fuel, and other good ideas for asset retirement, Linvill and O’Reilly, March 18 2019, Utility Dive.
- Enabling Third-Party Aggregation of Distributed Energy Resources, Migden-Ostrander, Shenot, Linvill, et al., August 2018. RAP report prepared for the Arkansas PSC.
Direct Assistance

• We don’t accept any $ from any utility, third party or advocate that intervenes at Commissions so we don’t present any potential conflict

• We listen well

• We educate when asked

• We convene, facilitate, mediate and train

• We are available for questions at no cost

• We are available for deeper engagements but require dedicated funding to engage
Here is TOC for first 60 pages, Altogether this is a 350 page document
Simplified rate-making process

Determine revenue requirement

Net rate base
(Plant in service – depreciation reserve)

Rate of return

Depreciation expense
(Plant in service x depreciation rate)

Operating expense
(Fuel + purchased power + labor + labor overheads + supplies + services + income taxes)

Other taxes

= $ millions

Allocate costs among customer classes

Design retail rates
RAP has described how technological change and the emergence of DERs affect residential rate design. And RAP’s **Lead Article** in Ahmad’s EJ Special Issue On Rate Design in October 2018 provides Non-Residential Rate Design guidance.
Rate design should make the choices the customer makes to optimize their own bill consistent with the choices they would make to minimize system costs.
Non-Res Problems & Solutions

Problem #1: Most non-residential rates do not align customer rates with system costs

Solution #1: Non-Coincident Peak (NCP) Demand Charges should be lower

Problem #2: Technological change and the emergence of DERs (including ZEVs) make improvement necessary

Solution #2: Time-of-Use Rate Design reflects system costs better than non-coincident (NCP) and coincident peak (CP) demand charges
Electric Cost Allocation for a New Era

A Manual

By Jim Lazar, Paul Chernick and William Marcus
Edited by Mark LeBel
Traditional Embedded Cost of Service Study (ECOSS) Process
Modern Embedded Cost of Service Study Process

- Revenue requirement
  - Functionalization
    - Generation
    - Transmission
    - Distribution
    - Billing, customer service, and A&G costs

- Time assignment
  - Peak hours
  - Intermediate hours
  - All hours, including off-peak

- Allocation
  - Site infrastructure, billing and collection
  - Residential
  - Commercial
  - Industrial
  - Street lighting
I. Data Can Be (Needs to Be) Better

- Equitable building electrification
- Load flexibility and grid interactive buildings
- Rate design
- Energy Efficiency Policy and Programs
- Building codes, performance standards
- Gas utility network extension policies