

# Part V - Regulatory Mechanisms: Aligning Utility Opportunity for Profitability with the Public Interest

Carl Linvill, Principal

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# The Utility Opportunity for Profitability is Central

- The Investor Owned Utility has a fiduciary responsibility to protect its investors' interest
- Regulation affects the opportunity to be profitable
- How can you make the resource future you want a profitable opportunity for the utility?

# Regulators are Charged with Protecting the Public Interest

- Regulators are charged with protecting the public interest
- If the citizenry want an opportunity to have more solar energy then that becomes part of the public interest
- What regulatory mechanisms can you support that align the public interest with a utility opportunity for profitability?

# Some Common Misunderstandings

- Reduced sales does not necessarily imply reduced profitability
- Increased opportunity for customer and third party investment does not necessarily imply reduced opportunity for profitability

# Reduced Sales Does Not Imply Reduced Profitability

- Rate design affects utility sales
- DERs (DG/DR/EE/Storage) affect sales
- Reduced sales reduces revenues
- Reduced revenues does not necessarily reduce utility net income

# Increased Customer and Third Party Investment Does Not Imply Reduced Net Income

- Customer investment in DERs affects utility investment and revenues
- Third party investments affect utility investments
- Affected investment does not imply reduced net income

# One Bottom Line: The Future You May Want Likely Affects Sales and May Affect the Utility Opportunity for Profitability

- A level playing field for customer side, utility side, and grid scale resources
- Pricing that reflects locational and temporal cost and value
- An ability to invest in solar/DER directly
- Shift the supply curve out with private investment and private resources (reducing costs for all)

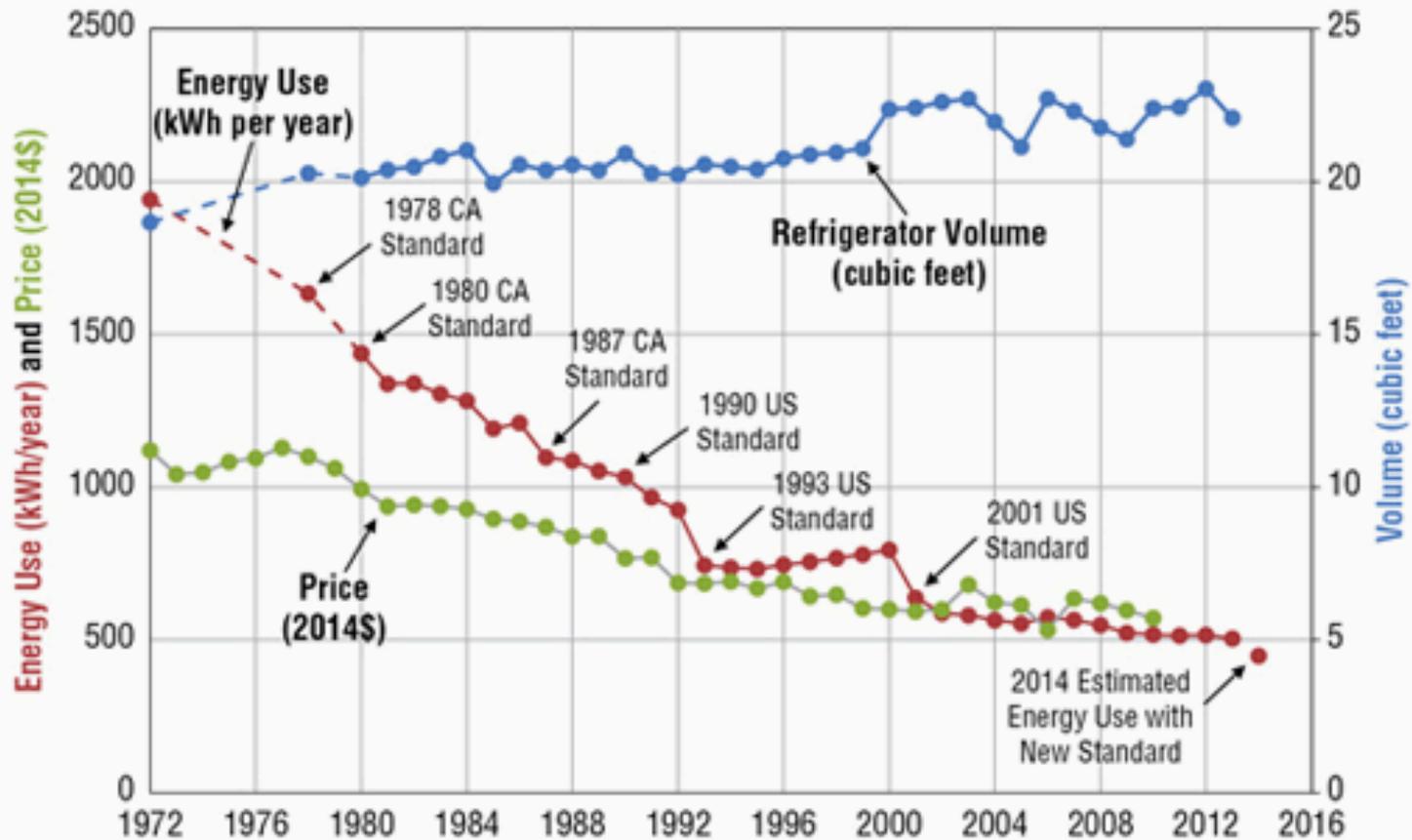
# How Changes in Sales Affect Earnings: It's Significant

% Change in Sales	Revenue Change		Impact on Earnings		
	Pre-tax	After-tax	Net Earnings	% Change	Actual ROE
5.00%	\$9,047,538	\$5,880,900	\$15,780,900	59.40%	17.53%
4.00%	\$7,238,031	\$4,704,720	\$14,604,720	47.52%	16.23%
3.00%	\$5,428,523	\$3,528,540	\$13,428,540	35.64%	14.92%
2.00%	\$3,619,015	\$2,352,360	\$12,252,360	23.76%	13.61%
<b>1.00%</b>	\$1,809,508	\$1,176,180	\$11,076,180	<b>11.88%</b>	12.31%
0.00%	\$0	\$0	\$9,900,000	<b>0.00%</b>	11.00%
<b>-1.00%</b>	-\$1,809,508	-\$1,176,180	\$8,723,820	<b>-11.88%</b>	9.69%
<b>-2.00%</b>	-\$3,619,015	-\$2,352,360	\$7,547,640	<b>-23.76%</b>	8.39%
<b>-3.00%</b>	-\$5,428,523	-\$3,528,540	\$6,371,460	<b>-35.64%</b>	7.08%
<b>-4.00%</b>	-\$7,238,031	-\$4,704,720	\$5,195,280	<b>-47.52%</b>	5.77%
<b>-5.00%</b>	-\$9,047,538	-\$5,880,900	\$4,019,100	<b>-59.40%</b>	4.47%

# Two Examples

- Desirable codes, standards and energy efficiency promote the public interest but affect utility sales and MAY affect the opportunity for profitability
- Desirable rate design may align the cost of demand side resources with supply side resources but affect utility sales and MAY affect the opportunity for profitability

# The Role of Appliance Standards



**Figure 2.2. New Refrigerator Energy Use, Volume, and Price Trends**



# Three Guiding Principles for Smart Rate Design

- A customer should be able to connect to the grid for no more than the cost of connecting to the grid.
- Customers should pay for power supply and grid services based on how much they use and when they use it.
- Customers supplying power to the grid should receive full and fair compensation – no more and no less.

# A Well-Designed TOU Rate

<b>Rate Element</b>	<b>Amount</b>
<b>Costs to Connect to the Grid</b>	
Billing and Collection	\$4.00/month
Transformer Demand Charge	\$1.00/kVA/month
<b>Power Supply and Distribution (both directions)</b>	
Off-Peak	\$.07/kWh
Mid-Peak	\$.10/kWh
On-Peak	\$.15/kWh
Critical Periods	\$.75/kWh

How Can the Future You Want ...  
**BE THE MOST PROFITABLE ONE?**

# Net Income $\neq$ Revenue

- Take care to keep each straight
  - Decoupling focuses on getting revenue right
    - Without decoupling, revenue depends on sales
  - Net income is an input to the revenue requirement based on rate base
  - Net income is an outcome after a year's worth of revenues and costs are toted
  - The rational utility cares most about net income

# Some Tools for Making Good DER Policy a Profitable Opportunity for the Utility

- Decoupling mitigates lost revenues from lost sales
- Some utility investment opportunities emerge
  - Capital intensive investments
  - Shared investment opportunities
  - Physical infrastructure needs
  - Information infrastructure needs
- Performance compensation streams may help
  - Shared savings (operations & procurement)
  - Accessibility (time to interconnect, etc.)
  - Others?

# Shifting from 3 Year Thinking is Hard

- Regulators and the Utility have to shift from 3 year thinking to 10+ year thinking
- Regulators have to be responsive to all consumers (public interest is broad)
- Utilities have to be responsive to shareholders and internal stakeholders

# Possible Discussion Topics

1. How do we build collaborative communication?
2. How do we build shared goals, 3, 5 and 10 years out?
3. What are regulatory support mechanisms that provide private opportunity and utility investment opportunity?
4. What regulatory support mechanisms replace the reward for increased sales with a reward for progress toward shared goals?

## About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power sector. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

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Ken Colburn, [kcolburn@raponline.org](mailto:kcolburn@raponline.org)

Carl Linvill, [clinvill@raponline.org](mailto:clinvill@raponline.org)

David Littell, [dlittell@raponline.org](mailto:dlittell@raponline.org)

Richard Sedano, [rsedano@raponline.org](mailto:rsedano@raponline.org)



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