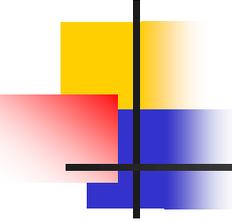


# Electric Customer Charges – Arguments, Issues, and Alliances

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Presentation to  
NASUCA Conference  
June 2, 2014



# JBS Energy, Inc.

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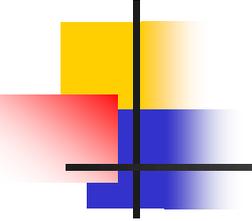
- Consulting firm serving consumers, environmentalists, government agencies, and renewable energy producers since 1984
- Economic analysis of utility operations, plans, and rate design
- Manufacture and sell Aquacalc (handheld computer for surface water measurement)
- To get this presentation, my earlier presentation or Roger Colton's draft rules, e-mail [bill@jbsenergy.com](mailto:bill@jbsenergy.com)

# Rate Design Can Be Controversial

**IT IS UNLAWFUL TO CARRY A HANDGUN OR  
OTHER FIREARMS ON THE PREMISES OF THE  
PUBLIC UTILITY COMMISSION OF TEXAS**



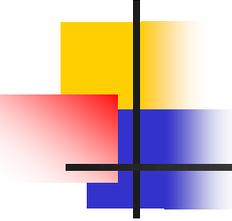
**ESTA PROHIBIDO POR LA LEY CARGAR  
REVOLVERES, PISTOLAS Y OTRAS ARMAS  
DE FUEGO EN CUALQUIER ÁREA DE LA  
COMISIÓN PÚBLICA DE UTILIDADES DE TEXAS**



# Back to Basics: Cost Allocation Drives Rate Design

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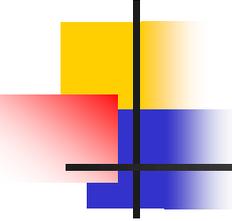
- Customer Classification of Poles, Wires, and Transformers
  - Many Utilities Use “Minimum System” and Propose 40-70% Customer-Related Common distribution plant.
  - Problems with Minimum System
    - Distance does not equal customer cost
    - Example of two towns vs. a town and an industrial customer
    - Minimum system can carry significant amounts of demand.



## A number of states reject customer classification of poles and wires

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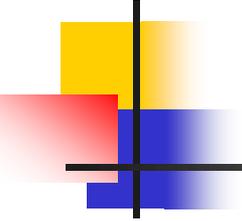
- A number of commissions treat common distribution costs as 100% Demand-Related
- Not just “radical or liberal” states.
- Examples are California, Washington, Maryland, Arkansas, Texas, and Iowa



# Some customer classification methods are worse than others

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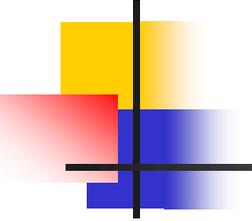
- Minimum system is generally worse than other methods:
  - zero intercept (which yields 20-30% customer in many cases and supports zero in others).
  - Minimum Connect (urban dense footage – usually less than half the system)
  - Facilities subject to line extension only (Nevada)
  - Making sure the number of residential customers per transformer is right.



# Other Cost Allocation Issues

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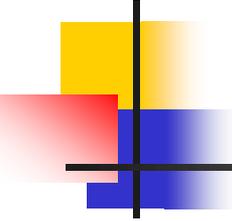
- Meters and Services – clearly customer-related but often over-allocated to residential
- Energy Efficiency Isn't a Customer Cost !!!
- Major Account Representatives – serve large customers, charged to small ones (usually not large dollars, but shows strong bias)
- Other Operating Revenues – largely paid by residential for customer functions but often spread to everyone



# One size does not fit all – even within a customer class

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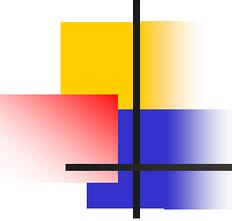
- Apartments have lower customer and demand costs than single-family homes – shorter services, more customers per transformer, better load factors.
- Single-phase small business customers have lower customer costs than larger three-phase customers who require far more complex equipment.



# Should we care about cost of serving customers within a class?

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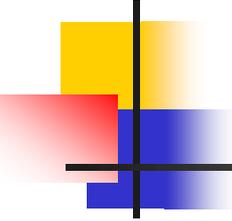
- “Not much.” (HERESY!)
- Other important principles – universal service and supporting energy efficiency override intra-class cost reflection for small customers.
- Markets are not perfect, and lower customer charges respond to the real world imperfections.



# Economic Theory vs. the Real World: Market Barriers to Efficiency

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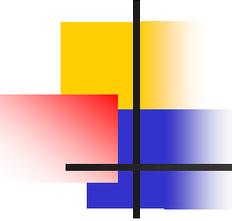
- Significant market barriers to conservation mean academic and utility concerns about “too much conservation” with low customer charges are unreasonable.
  - Split incentives
  - Time in dwelling vs. measure life
  - Unpriced externalities
  - Lost opportunities
  - Lack of capital and information



# Fixed Charges and Efficiency

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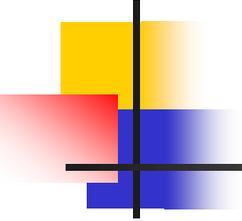
- Discourage Investments in Efficiency
  - Reduce Cost-Effectiveness of Efficiency and increases payback
  - Driving with one foot on the gas and the other on the brake wastes energy and money.
- Can encourage inefficient use of electricity instead of gas.



# Universal Service - Customer Charges Harm Low-Income Customers

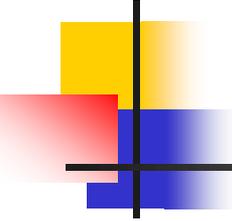
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- On average low-income customers use less electricity than higher income customers
  - EIA and BLS data, California and Nevada studies show low-income use less electricity.



# BLS Data: Energy Spending by Income

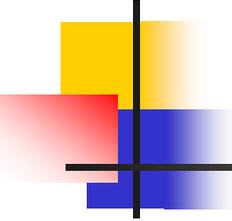
	National			Southern Region	
	Gas	Electricity		Gas	Electricity
<b>All Consumers</b>	359	1,388		227	1,693
<b>Less than \$5,000</b>	180	825		137	1,160
<b>\$5,000 to \$9,999</b>	178	902		117	1,215
<b>\$10,000 to \$14,999</b>	204	954		141	1,283
<b>\$15,000 to \$19,999</b>	243	1,101		186	1,382
<b>\$20,000 to \$29,999</b>	261	1,192		160	1,485
<b>\$30,000 to \$39,999</b>	305	1,295		178	1,578
<b>\$40,000 to \$49,999</b>	351	1,367		188	1,713
<b>\$50,000 to \$69,999</b>	344	1,417		201	1,791
<b>\$70,000 and more</b>	518	1,749		361	2,104
<b>\$70,000 to \$79,999</b>	421	1,538			
<b>\$80,000 to \$99,999</b>	435	1,580			
<b>\$100,000 and more</b>	586	1,891			
<b>\$100,000 to \$119,999</b>	491	1,722			
<b>\$120,000 to \$149,999</b>	553	1,787			
<b>\$150,000 and more</b>	685	2,103			



# Straight Fixed-Variable – Robin Hood In Reverse

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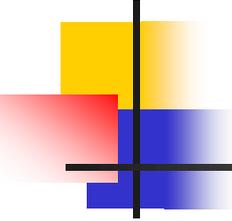
- Customer Charges on Steroids – Without ANY Cost Basis
- All distribution costs are not customer costs and all residential customers don't have the same customer costs.
- Subsidizes higher income homeowners at the expense of low-income apartment dwellers.
- Throws conservation even further under the bus.



# What About Solar?

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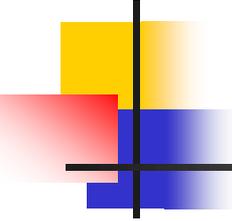
- In most of the country, net metering currently gives utilities more value than rate savings, like energy efficiency does.
- Don't let the tail wag the dog. If solar is really an issue, deal with solar, don't raise customer charges at the expense of grandmothers in apartments.
  - Minimum bills payable monthly
  - Bi-directional distribution rates
- If there is even a disease at all, the cure of fixed charges is worse than the disease.



# Service Establishment Charges

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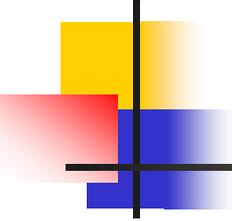
- Utilities claim they need to recover costs from those who cause them.
- Very Regressive – renters move more often than homeowners. Probability of moving increases with income. (census data)
- Extra money required from tenants at time of moving when money is short.
- Sometimes new tenant is punished with a charge because old tenant turned off service.
- Advanced Meters reduce this cost drastically.



# Building Alliances

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- We're not alone opposing higher customer charges and straight fixed-variable rates.
- Other Consumers (AARP, Consumer Federation, etc.)
- Solar advocates
- Most environmentalists
- Low income advocates
- Some Commission Staffs



# Conclusions

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- Cost Allocation drives rate design, but should not be the only principle.
- Identifiable differences in cost within classes make a good argument against high customer charges.
- Balance principles of Universal Service and Supporting Conservation with reflecting cost.
- Straight Fixed Variable Is “Robin Hood in Reverse.”
- Service establishment charges are regressive.
- Build consumer alliances with low-income, environmental and solar interests.