

Rate Design and the Customer Charge

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Missouri

Office of the Public Counsel

Fighting for Fair Utility Rates

- Consumer advocate office established in 1975
- Electric, Natural Gas, Telephone, Water, Sewer
- 4 attorneys
- 4 accountants
- 2 staff
- 1 economist



Rate Design

Part I

A brief history of the
structure of electric prices

- Early Years (1880s – 1910s)
 - Experimentation and debate
 - Even time-of-use, capacity based (4-C)
- 1910 – 1970
 - Monopoly Standardization
 - Declining Costs
 - Load Growth
 - Rate Design a non-issue

Public Utility Regulatory Policies Act PURPA (1978)

- 1970s to today...
- PURPA's stated goals were to encourage conservation, resource efficiency, and equitable rates.
- Driven by industry economics from declining to increasing costs as well as emerging societal and environmental concerns.

PURPA ratemaking standards

- 1.) basing rates on costs of service by class
- 2.) eliminating declining block rates
- 3.) introducing time of day
- 4.) introducing seasonal rates
- 5.) introducing interruptible rates
- 6.) offering customers cost-effective load management techniques

History of electric rates

1900s to 1970s

1970s to present

Industry Trends

declining costs
environment not emphasized
supply-side planning

increasing costs
environment emphasized
conservation, DSM, IRP

Pricing Philosophy

average cost basis
volumetric
ratcheted demand
declining block energy

marginal cost basis
time-of-use
coincident demand
increasing block energy

Rate Design

Part II

“Ratemaking”

Typical rate case with level-headed interest groups

Pandyland.net



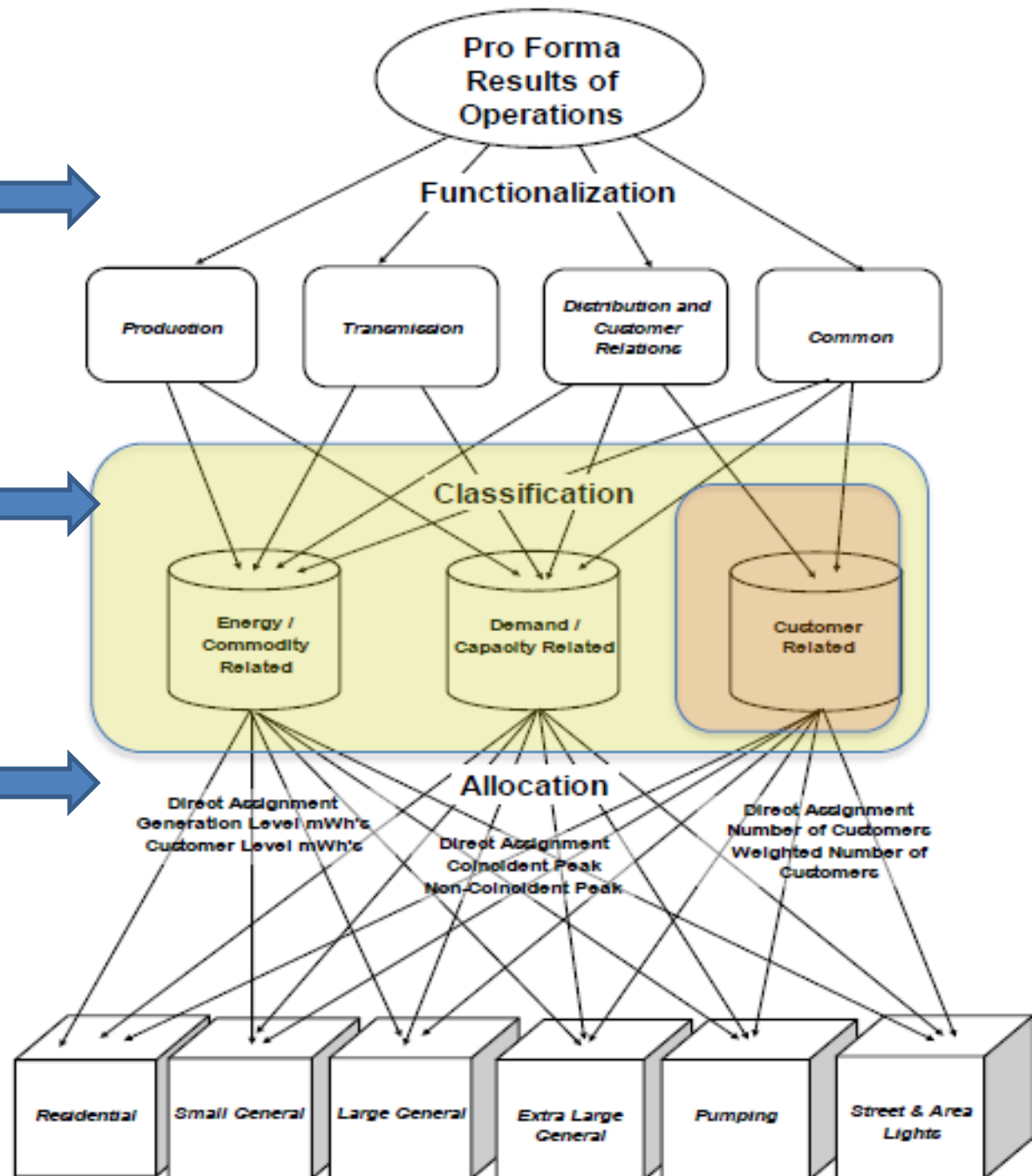
A Class Cost of Service Study

ELECTRIC COST OF SERVICE STUDY FLOWCHART

Functionalization

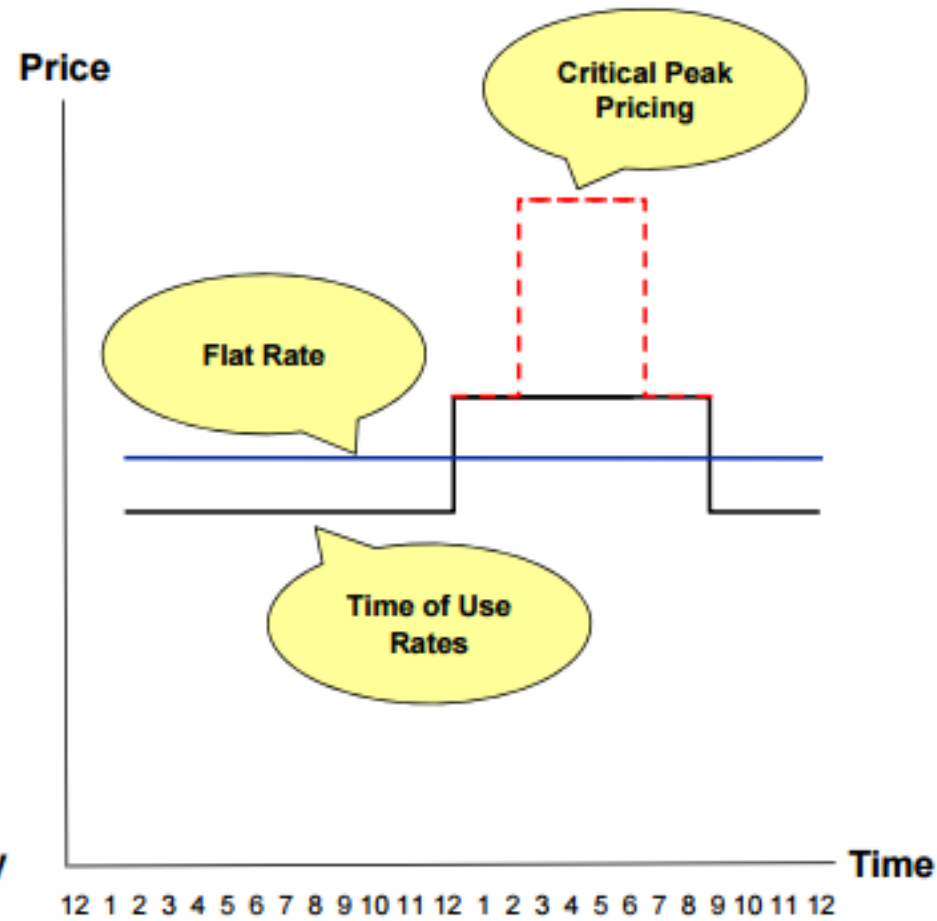
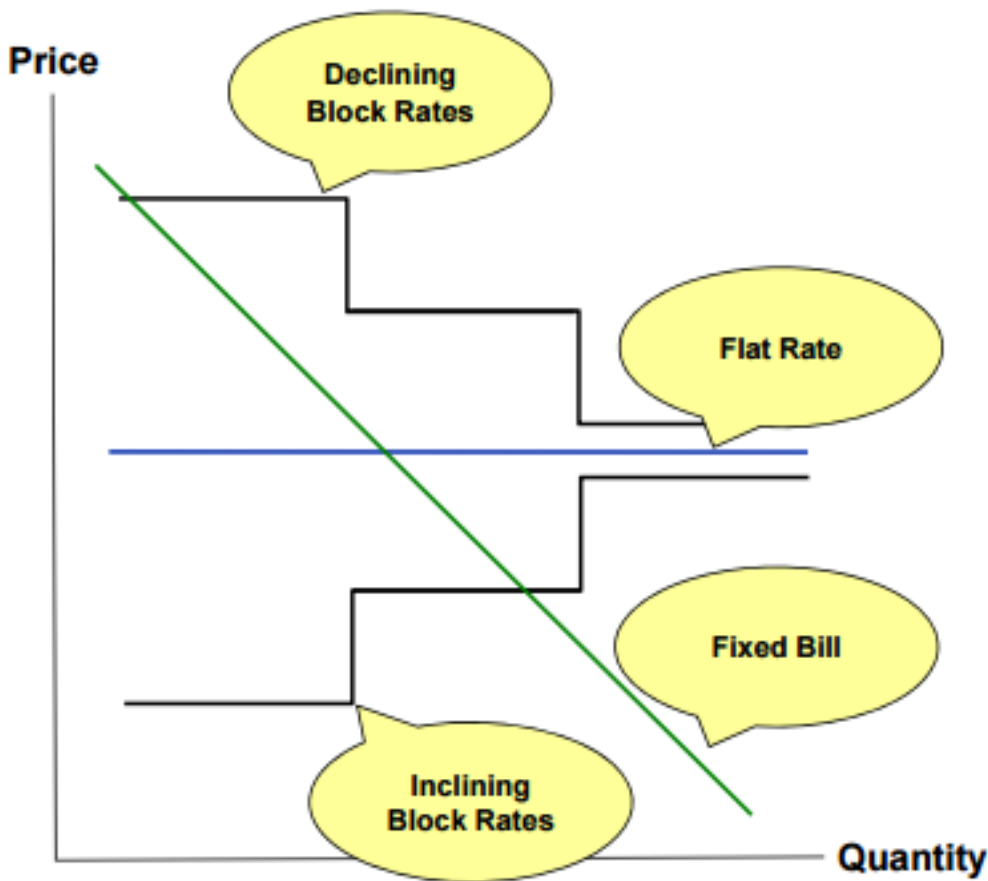
Classification

Allocation



Rate Designs

A few typical rate (pricing) structures



Do you know your rate design?

NET MONTHLY BILL

Rate

Off-Peak Season

20.14¢ per KWH for the first 30 KWH
12.92¢ per KWH for the next 70 KWH
12.24¢ per KWH for the next 200 KWH
11.09¢ per KWH for the next 300 KWH
10.40¢ per KWH for all over 600 KWH, except when customer has in use
Qualifying Electric Space Heating, the charge shall be:

4.35¢ per KWH for all over 600 KWH or, except when customer has in use
Qualifying Electric Space Heating and Electric Water Heating, the
charge shall be:

4.35¢ per KWH for all over 900 KWH

On-Peak Season

20.14¢ per KWH for the first 30 KWH
12.92¢ per KWH for the next 70 KWH
12.24¢ per KWH for all over 100 KWH

Minimum Monthly Bill

The Rate Charge, but not less than \$4.14. For customers with space heating equipment,
the Rate Charge, but not less than \$12.09.

The recent Independence Rate Design Study

Many parts, but...

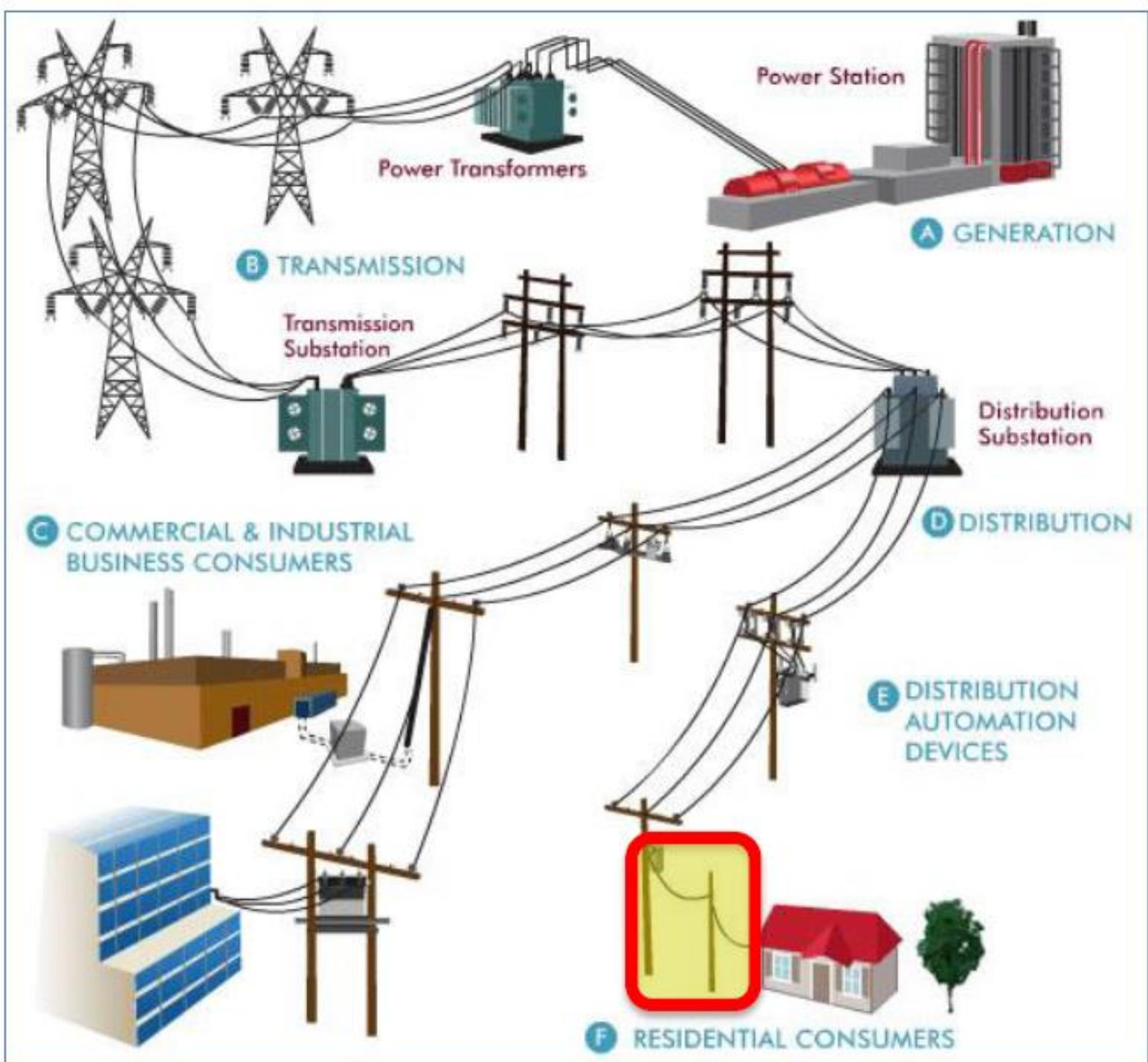
The report also recommends phasing in a \$14.50-a-month customer charge to replace the current minimum bill.

It says that is needed to recover fixed costs and “prevent customer subsidization issues,” especially for those who might install renewable energy systems at their homes and businesses.

The report says big customers currently pay more than their true share of costs, benefiting residential customers and others.

What is a customer charge?

- A flat fee covers the administrative costs of doing business, such as billing, postage, and building rent costs.
- Charge will (and should) vary by type of utility
 - Investor-owned
 - Rural Co-operative
 - Municipal

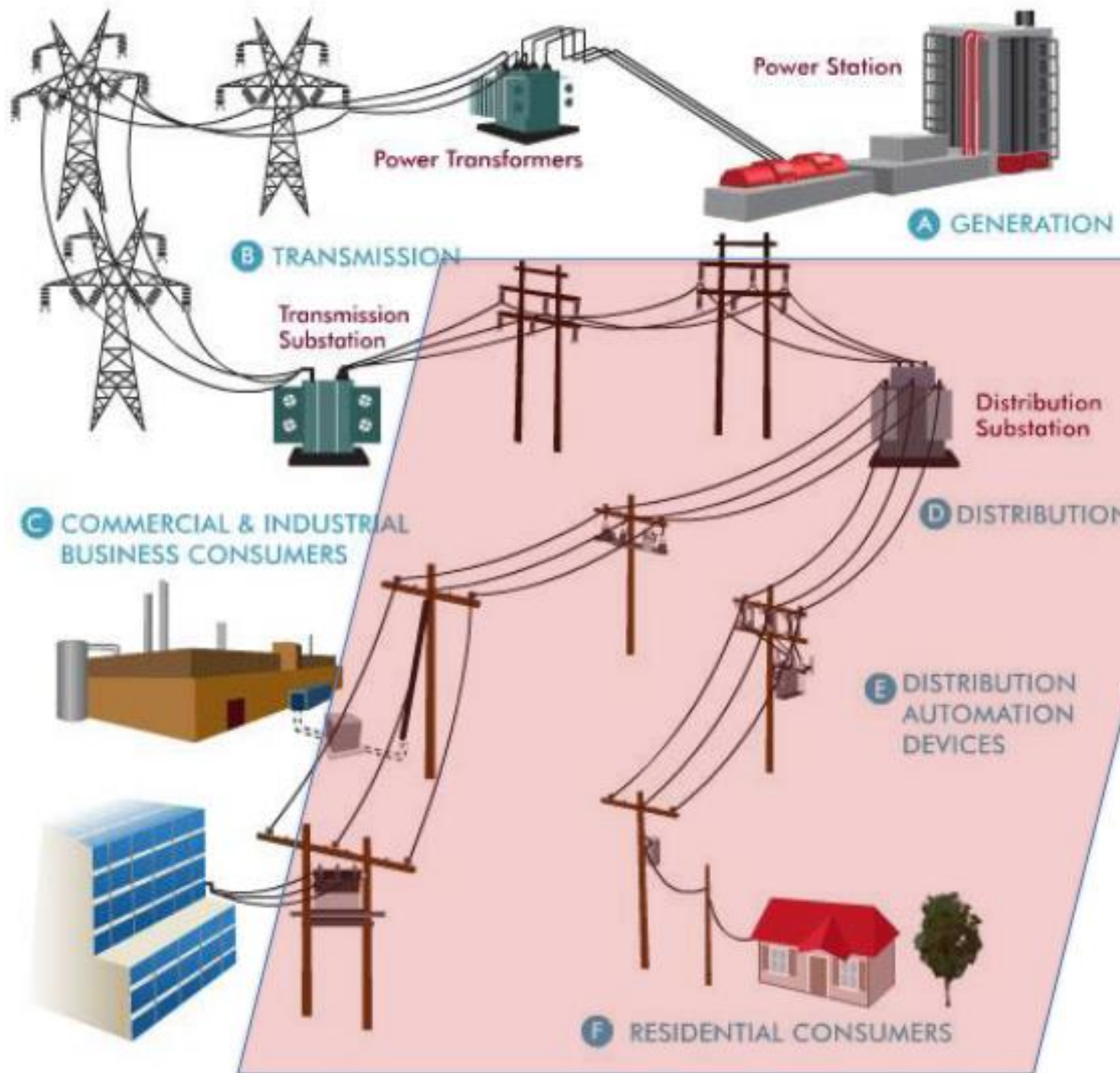


Traditional Principles behind the customer charge

- A customer should be able to connect to the grid for no more than the cost of connecting to the grid.
- This should reflect only those costs to the system that the addition of the customer adds:
 - Billing and metering, poles and wire

How does a study get to \$14.50?

- A 250% increase from the minimum bill.
- You allocate costs differently.



What is the effect?

Example of Fixed Charge Effect

Rate Design		Typical Rate	SFV Rate	Difference
Customer Charge		\$7.00	\$57.00	
Energy Charge		\$0.10	\$0.05	
Customer Bills	kWh/month			
Average Customer	1000	\$107.00	\$107.00	0%
Apartment Dweller	500	\$57.00	\$82.00	44%
Extra-Large Residence	2500	\$257.00	\$182.00	-29%

Who is negatively impacted?

- Low-income customers
- Fixed-income customers
- Apartment dwellers
- Small general service customers (seasonal)
- Energy-efficient customers
- Self-generating customers (rooftop solar)

Who is positively impacted?

- High-usage customers
- Utility *

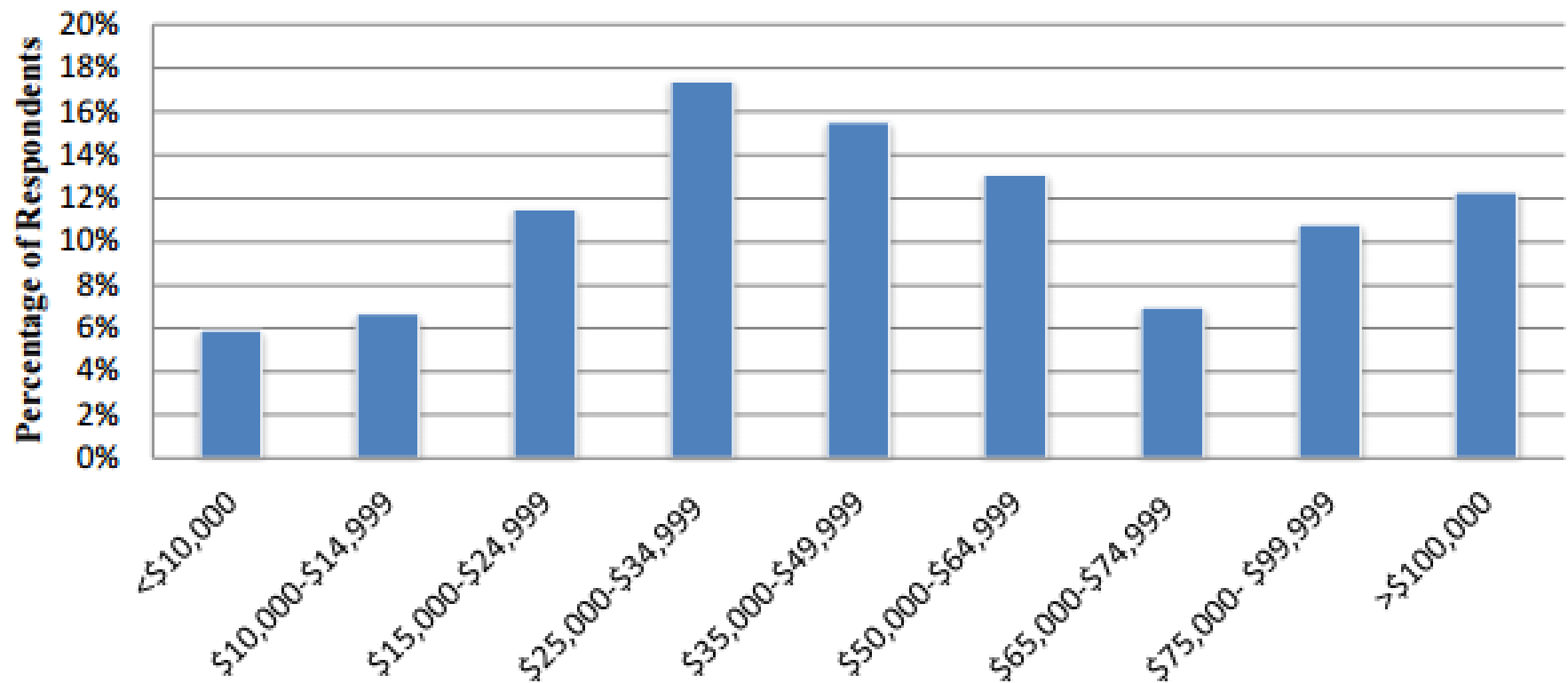
Fixed versus Variable Charges

	Advantage	Disadvantage
High fixed charges Low variable charges	Provides revenue stability	Discourages conservation
High variable charge Low fixed charges	Encourages conservation	Revenue instability

Is this the best outcome for
ratepayers/taxpayers?

A matter of perspective

Figure 3: During the past 12 months, what was the total combined income of all members of your household before taxes?



DATA SOURCE: IHD 2013 Community Health Survey

Table 4: Independence Socioeconomics

	Independence	Jackson County	Missouri	USA
Housing units in multi-unit structures, 2008-2012	21.4%	25.5%	19.7%	25.9%
Median value of owner-occupied housing units, 2008-2012	\$105,100	\$128,400	\$138,400	\$181,400
Persons per household, 2008-2012	2.43	2.45	2.46	2.61
Per capita money income in past 12 months (2012 dollars), 2008-2012	\$23,238	\$25,965	\$25,546	\$28,051
Median household income, 2008-2012	\$44,847	\$47,023	\$47,333	\$53,046
Persons below poverty level, 2008-2012	16.1%	17.0%	15.0%	14.9%
Unemployed, Civilian Labor Force	7%		6%	

DATA SOURCE: U.S. Census Bureau

Missouri's low-income families:
Spend 14% of their annual income on utility bills,
whereas middle and higher income families pay 3-6%.

Table 5: KCPL economic tracker of serviced counties¹⁸

County	Population	Jobs Recovered	Unemployment Rate Recovered	GDP Recovered	Home Prices Recovered
Carroll	9,127	No	No	No	No
Cass	100,641	No	No	No	No
Chariton	7,628	No	No	No	No
Clay	230,473	Yes	No	Yes	No
Howard	10,257	No	No	No	Yes
Jackson	679,996	No	No	No	No
Johnson	54,572	No	No	No	No
Lafayette	32,943	No	No	No	No
Livingston	14,871	No	No	No	No
Pettis	42,205	No	No	No	No
Platte	93,310	Yes	No	Yes	No
Randolph	24,940	No	No	No	No
Saline	23,252	No	No	No	No
Total Counties	13	2	0	2	1
Total Population (within counties)	1,324,215	2 out of 13 7.05%	0 out of 13 0.00%	2 out of 13 7.05%	1 out of 13 0.77%

What about national trends?

- The Edison Electric Institute “DEATH SPIRAL”
- Wisconsin falls
- Everybody else
- In Missouri:
 - Ameren Missouri no increase
 - Empire Missouri no increase
- KCPL requested shift from \$9.00 to \$25.00
 - Received a 32% increase to \$11.88
 - Does not tell the whole story

The Elevator Pitch





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