

The Business of Utilities

APPA Institute for Facilities Management

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AIA
Continuing
Education
Provider

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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



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[Overview]

- Example of how utility companies make money
- Review a sample utility bill and tariff
- Discuss strategies to reduce utility expenses



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[Revenue]

- **Rate base** – amount invested in the “system” by utility company
- **Rate of return** – the percentage the utility company earns on the rate base



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[Expenses]

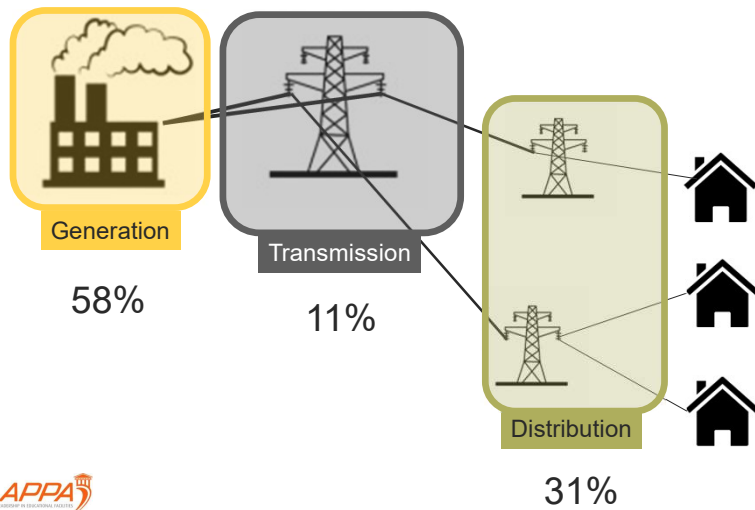
- **Variable expenses** – fuel, maintenance, chemicals, etc.
- **Fixed expenses** – debt service, rent, insurance, dues, etc.



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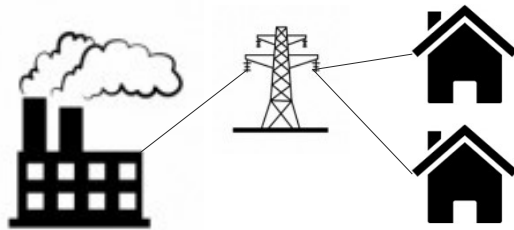
[Cost Breakdown]



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[APPA Electric Co.]



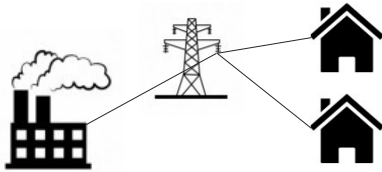
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[APPA Electric Co.]

Rate base: \$100M →

- 10% Rate of return: \$10M
- Variable expenses: \$7M
- Total Cost Recovery: \$17M



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[APPA Electric Bill]



Facilities Management
721 Main Street
Orlando, FL

| | |
|-------------------------------------|---------------------|
| Rate | 5A |
| Service Charge | \$4,000,000 |
| Demand Charge @ \$10/kW | \$6,000,000 |
| Energy Charge | |
| On-Peak Energy Charge @ \$0.09/kWh | \$4,000,000 |
| Off-Peak Energy Charge @ \$0.06/kWh | \$2,500,000 |
| Power Factor Charge | \$500,000 |
| Total | \$17,000,000 |

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[APPA Electric Bill]



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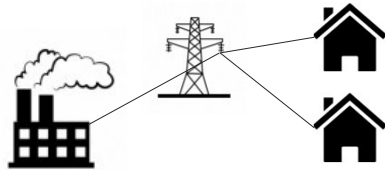
The Service and Demand Charges recover the fixed costs of providing service to this customer class

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[APPA Electric Co.]

Rate base: \$100M



- 10% Rate of return: \$10M
- Variable expenses: \$7M
- Total Cost Recovery: \$17M

Customer Bills

- Fixed revenue: \$10M



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[APPA Electric Bill]



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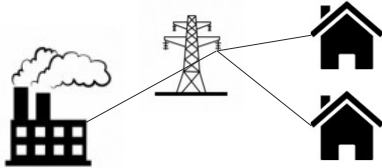
Energy and Power Factor Charges recover the variable costs – the cost to make the power

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[Ideal Rate Structure]

Rate base: \$100M



- 10% Rate of return: \$10M
- Variable expenses: \$7M
- Total Cost Recovery: \$17M

Customer Bills

- Fixed revenue: \$10M
- Variable revenue: \$7M
- **Total Revenue: \$17M**

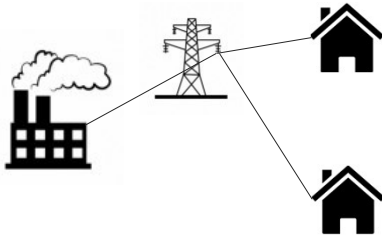
- Revenue: \$17M
- Operating expenses: (\$7M)
- Interest expense: (\$4M)
- **Company Profit: \$6M**



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[Typical Rate Structure]

Rate base: \$100M



- 10% Rate of return: \$10M
- Variable expenses: \$7M
- Total Cost Recovery: \$17M

Customers Bills

- Fixed revenue: **\$7M**
- Variable revenue: **\$10M**
- **Total Revenue: \$17M**

- Revenue: \$17M
- Operating expenses: (\$7M)
- Interest expense: (\$4M)
- **Company Profit: \$6M**

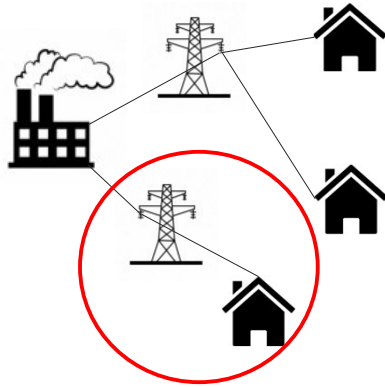


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[New Customer]

Rate base: **\$120M**



- 10% Rate of return: **\$12M**
- Variable expenses: **\$10M**
- Total Cost Recovery: **\$22M**

Customers Bills

- Fixed revenue: **\$10M**
- Variable revenue: **\$12M**
- **Total Revenue: \$22M**

- Revenue: \$22M
- Operating expenses: (\$10M)
- Interest expense: (\$5M)
- **Company Profit: \$7M**

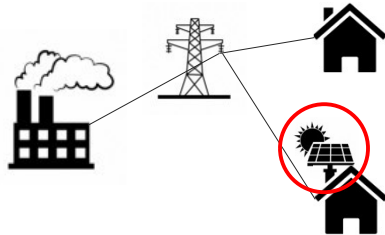


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[Customer Adds Renewables]

Rate base: **\$100M**



- 10% Rate of return: **\$10M**
- Variable expenses: **\$5M**
- Total Cost Recovery: **\$15M**

Customers Bills

- Fixed revenue: **\$7M**
- Variable revenue: **\$6M**
- **Total Revenue: \$13M**

- Revenue: \$13M
- Operating expenses: (\$5M)
- Interest expense: (\$4M)
- **Company Profit: \$4M**



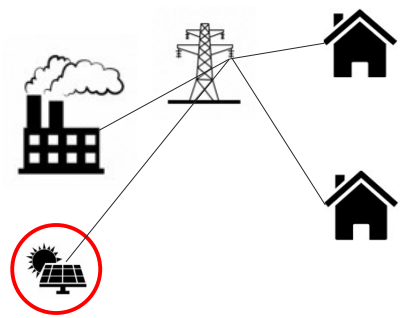
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[Company Adds Renewables]

Rate base: **\$120M** →

- 10% Rate of return: **\$12M**
- Variable expenses: **\$6M**
- Total Cost Recovery: **\$18M**



Customers Bills

- Fixed revenue: **\$7M**
- Variable revenue: **\$11M**
- **Total Revenue: \$19M**

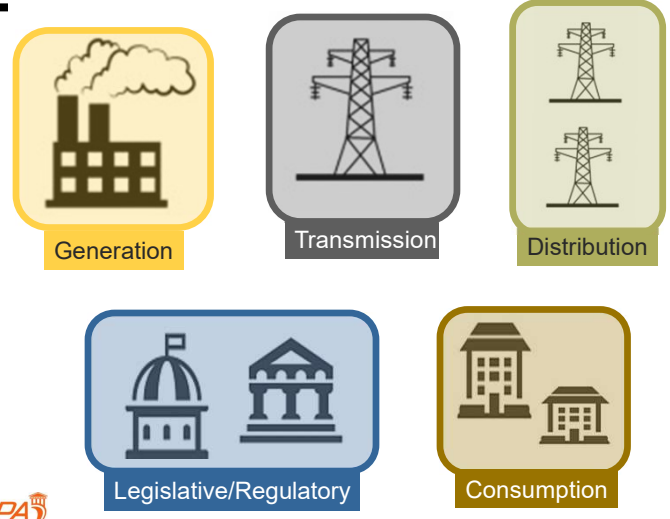
- Revenue: **\$19M**
- Operating expenses: **(\$6M)**
- Interest expense: **(\$5M)**
- **Company Profit: \$8M**



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[Opportunities]



Generation Transmission Distribution

Legislative/Regulatory Consumption



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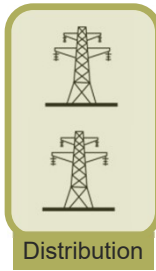
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[Opportunities - DIY]



Generation

- Electricity - Cogeneration
- Electricity – Solar
- Water – University owned well



Distribution

- Electricity
- Water



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[Opportunities]



Legislative/Regulatory

- Monitor and shape new laws
- Participate in the regulatory arena
- Join a “large-user” group to share these costs



Consumption

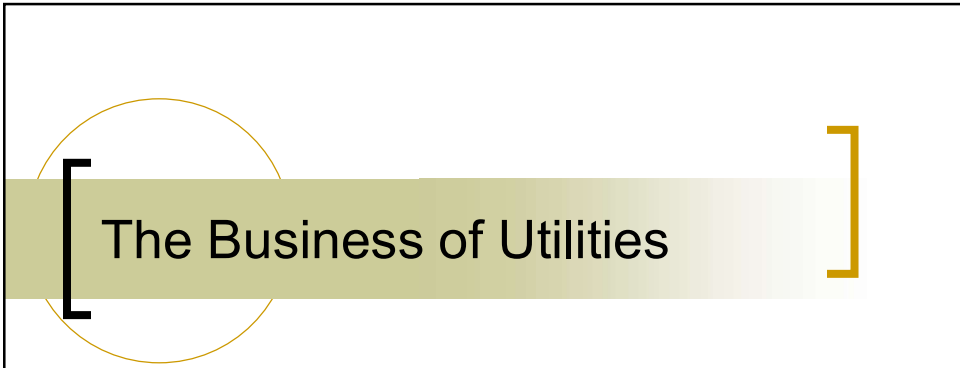
Demonstrate Savings

- Maintenance and operations?
- Design and Construction?
- Administration and Management?
- UEM?




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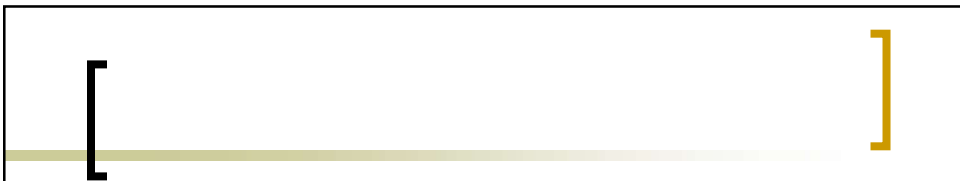
The Business of Utilities

Questions, Comments, Observations
Sign-in Sheet & Evaluations





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