RATE DESIGN - STEAM/HOT WATER

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Rate Setting

- Overview of UVA Commodities
- Calculating Revenue
- Identifying Expenses
- Types of Rate Structures
### UVA Metered Commodities

<table>
<thead>
<tr>
<th>Energy</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>Water</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>Sewer</td>
</tr>
<tr>
<td>Coal</td>
<td></td>
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<tr>
<td>LPG</td>
<td></td>
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<tr>
<td>Oil</td>
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</tbody>
</table>

### Generated On-Site

<table>
<thead>
<tr>
<th>Chilled Water</th>
<th>Steam / Heating Hot Water</th>
<th>Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Trash</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recycling</td>
</tr>
</tbody>
</table>
Revenues: Units Sold

Plant Production – Losses = Building Meters

Production Meters

Distribution Losses

Building Meters
(Steam: 75-78% of the original fossil fuel)
Expenses

Utility Rates need to consider a number of expenses incurred in the generation and distribution processes

- Fuel/Thermal Efficiency of systems
- Non-Fuel Operating expenses (e.g., electricity, water, sewer, trash, storm water)
- Plant Labor
- Materials, Tools, & Equipment
- Capitalization & Growth
- Energy efficiency, carbon, and/or renewable tax
- Overhead (e.g., Safety, HR, Sustainability, Finance, IT, etc.)

- Distribution System Labor
- Operation and Maintenance
- Capitalization & Growth
Types of Rate Structures

- **Fixed**
  The amount billed is based on a fixed rate per unit of commodity ($/MMBtu).

- **Variable**
  The amount billed varies based on season or other factor.

- **Incremental**
  The amount billed varies based on level of consumption.

- **Fuel Cost Adjustment**
  Costs above or below the budget are passed onto the customer.
Rate Structures

- Demand Component

Future Load Durations HW & 1 Steam Boiler Operation