Metering and Cost Recovery

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What can we use metered data for?

- Accurate Cost Recovery
- Building Profile/Baseline/Projection
- Building Performance Index
- Identify Energy Optimization Opportunities
- Evaluate Cost Avoidance for Projects
- Verify Cost Avoidance Achieved
- Raise Awareness and Provide Feedback to Occupants
- Data Source for Finance, Faculty and Students
Commodity Cost Calculation & Billing

Metered Consumption → Calculation → Invoice
- **Commodity Invoice**
  - Electricity
  - Chilled Water
  - Heating Hot Water
  - Steam
  - Domestic Hot Water
  - Domestic Cold Water
  - Waste Water Treatment
  - Solid Waste Disposal
  - Storm Drainage

Commodity Rate

FCOR Space Inventory Data
Key to Success – Cost Recovery

- **Consumption**
  - Accurate metering and trending
  - Data obtained in a timely manner (Digital Meters)

- **Commodity Rate**
  - Accurate Budget Projection and Planning
  - Accurate Campus Consumption Projection
  - Accurate Cost Allocation

- **Space Inventory Data**
  - Accurate Space Reporting

- **Accuracy, Communication and Understanding are the Keys to a Successful Program**
Flow of Commodities

- ELE
- NG
- DCW
- DHW
- STM
- CHW
- HHW
- ELE
- DCW
- ELE
- NG

- SS
- SW
- SD
Commodity Rate Calculation

Operating Expenses
- O&M
- Salaries
- Debt Service

Purchased Utilities
- Natural Gas
- Electricity

Adjustments

Calculation

Commodity Rates
- Electricity
- Chilled Water
- Heating Hot Water
- Steam
- Domestic Hot Water
- Domestic Cold Water
- Waste Water Treatment
- Solid Waste Disposal
- Storm Drainage

POP* Model

* Performance Optimization Program
## UES Rate Comparison

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>UNIT</th>
<th>FY11 RATE $ / UNIT</th>
<th>FY12 RATE $ / UNIT</th>
<th>FY13 RATE $ / UNIT</th>
<th>FY13 vs FY11 INCREASE or (DECREASE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>kWh</td>
<td>0.107</td>
<td>0.090</td>
<td>0.092</td>
<td>(0.015) (14)%</td>
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<tr>
<td>Chilled Water</td>
<td>mmBtu</td>
<td>13.601</td>
<td>12.682</td>
<td>13.136</td>
<td>(.465) (3)%</td>
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<tr>
<td>Heating Hot Water</td>
<td>mmBtu</td>
<td>17.219</td>
<td>15.630</td>
<td>14.961</td>
<td>(2.258) (13)%</td>
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<tr>
<td>Steam</td>
<td>mlb</td>
<td>18.573</td>
<td>16.943</td>
<td>15.900</td>
<td>(2.673) (14)%</td>
</tr>
<tr>
<td>Domestic Cold Water</td>
<td>mgal</td>
<td>1.576</td>
<td>1.563</td>
<td>1.660</td>
<td>0.084 5%</td>
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<tr>
<td>Domestic Hot Water</td>
<td>mgal</td>
<td>13.442</td>
<td>12.550</td>
<td>12.184</td>
<td>(1.258) (9)%</td>
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<tr>
<td>Waste Water Treatment</td>
<td>mgal</td>
<td>4.385</td>
<td>4.385</td>
<td>4.503</td>
<td>0.118 3%</td>
</tr>
<tr>
<td>Storm Drainage</td>
<td>msqft</td>
<td>6.539</td>
<td>4.817</td>
<td>1.897</td>
<td>(4.642) (71)%</td>
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<tr>
<td>Solid Waste &amp; Recycling</td>
<td>ton</td>
<td>108.61</td>
<td>130.30</td>
<td>127.62</td>
<td>19.01 18%</td>
</tr>
</tbody>
</table>
FY13 UES Customer Allocation

Utility Cost by Customer Category

Educational & General 57%

TAMUS & Agencies 16%

Auxiliaries 27%
Questions?