Rate Development Illustrations

Example A: Projected Operating Costs of a Service Center - Comparison of Consumption and Output Approaches:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>$120,000</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>18,000</td>
</tr>
<tr>
<td>Supplies</td>
<td>25,000</td>
</tr>
<tr>
<td>Materials</td>
<td>60,000</td>
</tr>
<tr>
<td>Communications</td>
<td>5,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>15,000</td>
</tr>
<tr>
<td>Net carry forward (Surplus/Deficit)</td>
<td>(10,000)</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$233,000</td>
</tr>
</tbody>
</table>

Service Center Operating Budget:

(1) Assume this service center could be either a machine shop or a mass spectrometer facility.

(2) Each service center and recharge operation must have a separate, distinct account.

CONSUMPTION METHOD:

Machine Shop

Forecasted Machinist Hours:

40 Hours/Week x 52 Weeks = 2,080 Hours/Year

# of Machinists: 2 x 2,080 = 4,160 Total Hours

Down time (Employee leave, etc.) = 1,520 Hours

Billable Hours = 2,640 Hours

Consumption Rate = $233,000 Total Costs = $88.26/ Hour

OUTPUT METHOD:

Mass Spectrometer Facility

Estimated Output:

Total Samples Analyzed = 1,500

Unit Cost Rate = $233,000 Total Costs = $155/Sample

Note: It is important for the activity base chosen to relate directly to what drives the costs. For example, establishing a sample rate based on hourly use would not accurately distribute the operating costs. These costs directly relate to the number of samples analyzed.
## Rate Development Illustrations with Departmental Subsidy

### Projected Operating Costs of a Service Center - Comparison of Consumption and Output Approaches

<table>
<thead>
<tr>
<th></th>
<th>Service Center Operating Budget</th>
<th>Subsidy Account(1)</th>
<th>Service Center Account(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>$120,000</td>
<td>$120,000</td>
<td></td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>18,000</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>25,000</td>
<td>$ 25,000</td>
<td>$ 60,000</td>
</tr>
<tr>
<td>Materials</td>
<td>60,000</td>
<td>5,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Communications</td>
<td>5,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>15,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net carry forward (Surplus/Deficit)(3)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Costs</td>
<td>$243,000</td>
<td>$138,000</td>
<td>$105,000</td>
</tr>
</tbody>
</table>

(1) Assume this service center could be either a machine shop or a mass spectrometer facility.
(2) Each service center and recharge operation must have a separate, distinct account together with a corresponding subsidy account.
(3) Prior year surplus of recharges must be applied to reduce the prior year subsidy account.

### CONSUMPTION METHOD:

**Machine Shop**

- **Forecasted Machinist Hours:**
  - 40 Hours/Week x 52 Weeks = 2,080 Hours/Year
  - # of Machinists: 2 x 2,080 = 4,160 Total Hours
  - Down time (employee leave, etc.) = 1,520 Hours
  - Billable Hours = 2,640 Hours
  - **Consumption Rate = $105,000 Total Costs = 2,640 Billable Hours = $39.77/Hour**

### OUTPUT METHOD:

**Mass Spectrometer Facility**

- **Estimated Output:**
  - Total Samples Analyzed = 1,500
  - **Unit Cost Rate = $105,000 Total Costs = $70/Sample**

**Note:** It is important for the activity base chosen to relate directly to what drives the costs. For example, establishing a sample rate based on hourly use would not accurately distribute the operating costs. These costs directly relate to the number of samples analyzed.
Rate Development Illustrations (Cont'd)

Example B: User Fee Calculation for Providing Services

1. Projected Operating Cost

   Salaries (5 technicians)  $200,000
   Salaries (support staff)  
   Fringe Benefits          51,300
   Communications           2,800
   Training and Development (travel)  2,000
   Repairs and Maintenance  4,350
   Supplies                 6,500
   Equipment Depreciation   6,345
   Prior Year Operating Surplus (1,000)

   Total Cost                $299,295

2. Projected Units of Activity

   40 hours per week times 52 weeks  2,080
   Minus holiday hours (14 days x 8 hrs/day) (112)
   Minus average annual leave (40 hrs/wk x 4 wks) (160)
   Minus average sick leave (6 x 8 hrs/day) (48)
   Hours worked per year            1,760
   Minus mandatory breaks (1,760/8 = 220 days x .5 hrs) (110)
   Minus down time (meetings, training, etc.) (avg. 1.5 hrs/work day = 220 x 1.5) (330)

   Total Average Available Hours per Technician 1,320

   1,320 x 5 technicians = 6,600 total hours for the facility (units of activity)

3. Calculate User Fee

   \[
   \text{User Fee} = \frac{\text{Total Cost}}{\text{Units of Activity}} = \frac{\$299,295}{6,600} = \$45.35 \text{ per hour}
   \]
Rate Development Illustrations (Cont’d)

Example C: User Fee Calculation for Providing Goods

The following is an example of the user fee calculation for a pint of acid for which the cost (i.e. the actual purchase price) to the Service Center is $10.00.

2. **Projected Operating Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>$25,000</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>5,625</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>1,000</td>
</tr>
<tr>
<td>Facilities Expense (paid by the operation or facility)</td>
<td>2,000</td>
</tr>
<tr>
<td>Net Carry Forward (Surplus)</td>
<td>(500)</td>
</tr>
</tbody>
</table>

   Total Operating Costs $34,125

3. **Projected Total Supplies/Materials Costs**  
   **For Services Expected to be Rendered**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals</td>
<td>$100,000</td>
</tr>
<tr>
<td>Supplies</td>
<td>50,000</td>
</tr>
<tr>
<td>Glassware</td>
<td>31,250</td>
</tr>
</tbody>
</table>

   Total Supplies/Materials Costs $181,250

4. **Calculate Mark-Up Rate**

   \[
   \text{Mark-Up Rate} = \frac{\text{Operating Costs}}{\text{Supplies/Materials Costs}} = \frac{34,125}{181,250} = .1883
   \]

5. **Calculate User Fee**

   \[
   \text{Mark-Up Amount} = \text{Cost-Item Provided} \times \text{Mark-Up Rate} = 10.00 \times .1883 = 1.88
   \]

   \[
   \text{User Fee} = \text{Cost-Item Provided} + \text{Mark-Up Amount} = 10.00 + 1.88 = 11.88
   \]
Rate Development Illustrations (Cont'd)

Example D: User Fee Calculation that Includes Depreciation

1. Calculate Depreciation

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Asset Item Number</th>
<th>Acquisition Cost</th>
<th>Acquisition Date</th>
<th>Useful Life</th>
<th>FY 99 Amount to be Recovered in Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copier A</td>
<td>345678</td>
<td>12,000</td>
<td>8/30/95</td>
<td>5 Years</td>
<td>2,400</td>
</tr>
<tr>
<td>Copier B</td>
<td>123456</td>
<td>5,000</td>
<td>10/24/90</td>
<td>5 Years</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$17,000</td>
<td></td>
<td></td>
<td>2,400*</td>
</tr>
</tbody>
</table>

2. Calculate Operating Cost and Estimate Units of Activity

Salaries                                           $20,000
Fringe Benefits                                    4,500
Repairs and Maintenance                            10,500
Supplies                                           15,500
Equipment Depreciation*                             2,400

Total Cost                                          $52,900

Estimated number of copies per year (units of activity) 500,000

3. Calculate User Fee

\[
\text{Operating Cost} = 52,900 \\
\text{User Fee} = \frac{\text{Units of Activity}}{500,000} = \frac{500,000}{500,000} = 0.11
\]