Developing Recharge Rates

Celia Maddox
January 31, 2012
Agenda

1. Overview
2. Identify Lines of Business
3. Develop Cost Pools
4. Depreciation, Inventory and Subsidies
5. Determine Equitable Means of Distribution
6. Create Rates
7. Review and Test Rates
8. “Special” Rates
9. Case Studies
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Rates are the means by which the costs of providing goods or services are equitably charged to the users of the goods or services with a high degree of accuracy.

- Customers are only obligated to pay their fair share of the cost of the goods or services.
- Rates cannot disadvantage any customer or any group of customers.
- Rates are always cost based.
• Rates are prospective.
• Well developed rates lead to balances close to zero; poorly developed rates lead to balances significantly out of tolerance.
• Different services offered with the same unit or department may have separate recharge rates (separate rates for each class of goods or services).
Developing Recharge Rates

Overview

• Rate structures that work best are simple and are reflective of the business
  • Manageable
  • Scalable
  • Justifiable
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Developing Recharge Rates

Identify Lines of Business

• Talk with the service providers
  • Determine what the goods or services will be.
  • Determine how the goods or services will be requested and provided.
  • Determine who the customers are likely to be.
Identify Lines of Business

- Example: Machine Shop that makes satellite parts, also performs unique fabrications.
  - What questions might be asked to determine this recharge unit’s lines of business?
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Identify Lines of Business

- Some possible questions to ask:
  - Do you provide the same satellite parts over and over?
  - Does each satellite part take about the same amount of material and labor?
  - For unique parts, is the effort spent making different in each case?
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Identify Lines of Business

- Example: Analytical Facility. The facility has a number of different machines that perform a variety of analyses.
  - What questions might be asked to determine this recharge unit’s lines of business?
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Identify Lines of Business

- Some possible questions to ask:
  - Who performs the analyses? Unit staff or is it self-service?
  - Are all machines used in a single analysis? Or, are all machines used individually?
  - Does the unit provide supplies to run each machine or do users bring their own? Does each run of the machine require the same amount of supplies?
  - Do machines require calibration? If so, how often?
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Identify Lines of Business

- Example: Computer Support. The unit employs a number of programmers and desktop support specialist.
  - What questions might be asked to determine this recharge unit’s lines of business?
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Identify Lines of Business

- Some possible questions to ask:
  - What type of computer support is provided?
  - Does the unit maintain desktops to a standard?
  - Does the unit provide ad hoc computer programming?
  - Does the unit maintain servers to a standard?
  - Does the unit perform A/V support?
Example: Consulting. The unit employs a number of consultants to help departments with organizational issues.

What questions might be asked to determine this recharge unit’s lines of business?
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Identify Lines of Business

- Some possible questions to ask:
  - Does the unit provide all consulting in-house or does it contract with third parties?
  - Are there distinct areas of consulting? If so, how are they managed within the organization?
  - Do all consultants have an equal chance of working on any project?
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Cost Pool Development

Basic Rate Formula:

Recharge Rate = \frac{\text{Estimated Cost of Providing Goods or Service}^*}{\text{Estimated Number of Service Units to be Provided}}

*Costs may need to be adjusted to include allowable surpluses and deficits from prior years or subsidies
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Cost Pool Development

- For each line of business what are the total costs of providing that service regardless of how those costs are currently funded?
  - Technical, Productive Costs
    - The people and materials that actually perform the work
  - Depreciation
    - Based on a capital plan
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Cost Pool Development

• For each line of business what are the **total** costs of providing that service regardless of how those costs are currently funded? (con’t)

  • Infrastructure Costs
    • Supervision & Management
    • Supplies related to operating the unit (communications, office supplies, tools etc)
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Cost Pool Development

- For each line of business what are the **total** costs of providing that service regardless of how those costs are currently funded? (con’t)
  - Administrative Costs
    - Specifically identified personnel
  - Other Costs
    - Allowable surpluses/deficits from prior period operations
    - Shrinkage
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Cost Pool Development

- Be sure to recognize the offsets to the unit’s total costs
  - Rebates & Incentive Payments
  - Trade-ins

- Special type of offset
  - Subsidies
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Cost Pool Development

- **Costs need to be reasonable**
  - Is the cost generally recognized as necessary for the operation?
  - Costs must be treated consistently, direct v. indirect.

- **Costs need to be allocable**
  - If allocating a cost to a recharge unit, must be able to assign a cost, or a group of costs, to the recharge pool in reasonable and realistic proportion, that demonstrates the benefit provided.

- **Costs need to be identifiable**
  - A cost which can be identified specifically with a recharge product or service.

- **Costs must be allowable**
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Shared Costs

- Because shared costs may not be identifiable to specific lines of business they can be assigned to lines of business through an allocation process.
  - Most often seen with overhead or administrative costs.
  - Make sure you have a solid basis for the distribution of these costs.
    - Examples: HR costs over FTE; billing costs over number of jobs/invoices; facility costs over square footage.
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Depreciation

- Depreciation is the allocation of a capital asset’s cost over its useful life.
  - Capital asset is defined as having a useful life of one year or greater and an acquisition cost of $5,000 or greater.
  - Assures customers pay for only their fair share of capital costs.
  - Use a depreciation schedule to identify depreciable assets and to calculate periodic depreciation expense.
• Schedules prepared for a rate calculation forecast depreciation expense.
  • Schedules used in rate calculation can include anticipated purchases.
  • But, should be adjusted for previous years’ actual expense to avoid over-depreciating.
  • Best practice is to start depreciation in the month of acquisition, but can employ a “half year” convention.
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Depreciation

• All equipment used in the recharge center except:
  • Equipment is funded by the federal government,
  • Equipment is funded by an incomplete, private contract or grant,
  • Equipment is identified as cost sharing to a federal research project.
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Depreciation

- List of all eligible capital assets identifying:
  - Property number
  - Purchase date
  - Value
  - Salvage value
  - Useful life
    - UCOP useful life tables
    - Actual experience

- Calculate periodic charge
DEPRECIATION SCHEDULE

<table>
<thead>
<tr>
<th>Equipment Item*</th>
<th>Date of Purchase (mm/dd/yy)</th>
<th>Initial Cost of Equipment</th>
<th>Salvage Value</th>
<th>Percentage Recharge Usage</th>
<th>Amount to be Depreciated</th>
<th>Useful Life (Months)</th>
<th>Number of Months Depreciated Prior Year(s)</th>
<th>Number of Months Depreciated FYXX</th>
<th>Number of Months Depreciated FYXX</th>
<th>Number of Months Depreciated FYXX</th>
<th>Number of Months Depreciated FYXX</th>
<th>Prior Year(s) Accum. Depreciation</th>
<th>FYXX Amount Depreciated</th>
<th>FYXX Amount Depreciated</th>
<th>FYXX Amount Depreciated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lathe</td>
<td>95-125962</td>
<td>32,000</td>
<td>2,000</td>
<td>100%</td>
<td>30,000</td>
<td>120</td>
<td>30</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>7,500</td>
<td>3,150</td>
<td>3,150</td>
<td>3,150</td>
</tr>
<tr>
<td>Lathe</td>
<td>97-152560</td>
<td>35,500</td>
<td>2,000</td>
<td>100%</td>
<td>35,500</td>
<td>120</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>3,150</td>
<td>3,150</td>
<td>3,150</td>
<td>3,150</td>
</tr>
</tbody>
</table>

TOTALS

$65,500 $4,000 $61,500 $10,650 $6,150 $6,150 $6,150

* Do not delete equipment from depreciation schedule until it has been either replaced or salvaged.
An asset used in the recharge operation has never been depreciated. It has a useful life of 5 years and is currently 3 years old. Can I claim 3 years of depreciation this year and 1 year each for the next 2 years to “catch up”?

Will a deficit that results from depreciation “catch up” be an allowable deficit for future rate calculations? Yes.
An asset that I’ve included in recharge rates is now obsolete. It had 2 more years left on its useful life. Do I keep including the asset on my depreciation schedule until it is fully depreciated?

No. Record the loss as an expense to the recharge operation and remove the asset from future depreciation schedules. Any deficit the loss creates in the operations fund can be included in future rates.
I am leasing a piece of equipment. How do account for the lease payments and depreciation?

Is it a capital lease or an operational lease?

If operational, charge payments to operations fund and do not include the asset on any depreciation schedule.

If a capital lease where UC takes title, include on depreciation schedule and charge lease payments to reserve (or other non-federal) fund.

Lease payments that are about equal to the depreciation that could be claimed can be charged directly to operations fund and excluded from the depreciation schedule.
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Depreciation

- I want to purchase replacement equipment that costs less than $5,000. Do I depreciate the purchase?
  - Since the item no longer qualified as “equipment”, purchase on recharge operational funds as you would any operational cost—no need to depreciate.
Inventory

- Inventory is defined as products for resale or the raw materials to be used in the production of goods. Finished or partially finished products can also be considered inventory.
- Rates that have an inventory component must account for any allowable losses or shrinkage.
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Inventory

For inventory shrinkage calculation:

- Perform a physical count of all goods.
- Value inventory at average cost (not replacement cost).
- Compare inventory to actual sales to determine loss, then value the loss.
  - “Normal” shrinkage included in rates. “Abnormal” shrinkage must be written off and possibly excluded from rates.
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Inventory

Shrinkage calculation:
- Beginning inventory count: 25
- Number of erasers purchased: 50
  - Number of erasers available for sale 75
- Ending inventory count: 10
  - Number of erasers removed from inventory 65
- Actual number of erasers sold: 55
  - Difference 10

10 erasers lost at an average cost of $1.00/ea = a shrinkage cost of $10.00.
Subsidies

- Subsidies are a special type of cost offset.
  - Be sure subsidies are included as a line item in the rate development.
  - Once a subsidy is included in a rate development, all campus and affiliate users of the service are afforded the benefit of the subsidy.
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Determine Equitable Means of Distribution

Basic Rate Formula:

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\]

*Costs may need to be adjusted to include allowable surpluses and deficits from prior years or subsidies
Developing Recharge Rates

Determine Equitable Means of Distribution

- What are the cost drivers? How will goods or services be provided?
  - Time → productive hour standard
  - Goods produced/jobs performed → number of units produced
  - Resale of purchased items → volume of purchases
  - Machine time → machine hours or “runs”
Developing Recharge Rates
Determine Equitable Means of Distribution

• What are the cost drivers? How will goods or services be provided?
  • Time → productive hour standard
    • Determine the productive personnel.
    • Identify “downtime”.
    • Examine exempt employees impact on productive hour standard.
    • Examine productive personnel with administrative responsibilities.
    • Productive hour standard is an average over all productive personnel.
    • Productive hour standard is based on 1.0 FTE.
    • Account for furlough through downtime or in reduced salary costs, but not both!
SAMPLE RATE CALCULATION - SHOP SERVICES

HOURLY LABOR RATE CALCULATION -

Productive Hour Calculation

Yearly Standard

Total working hours for the year 2088 hours 2088

Standard deductions (hours)

<table>
<thead>
<tr>
<th>Description</th>
<th>Hours</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holidays</td>
<td>13 days = 104 hours</td>
<td>104</td>
</tr>
<tr>
<td>Vacation leave (averaged for entire group of employees)</td>
<td>18 days = 144 hours</td>
<td>136</td>
</tr>
<tr>
<td>Sick leave (averaged for entire group of employees)</td>
<td>12 days = 96 hours</td>
<td>80</td>
</tr>
<tr>
<td>Other administrative time off (meetings, travel, training, etc.)</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Furlough</td>
<td>86</td>
<td></td>
</tr>
</tbody>
</table>

Subtotal 606

Other time deductions (Non-productive time unique to the cost center, e.g. training, set-up and close-down)

240

Subtotal 240

Total deductions 846

Productive Hour Standard

(2088 hours less total deductions)

1242
Developing Recharge Rates
Determine Equitable Means of Distribution

• What are the cost drivers? How will goods or services be provided?
  • Goods produced/jobs performed $\rightarrow$ number of units produced
    • Account for prototypes.
    • Account for defective units.
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Determine Equitable Means of Distribution

- What are the cost drivers? How will goods or services be provided?
  - Machine time ➔ machine hours or “runs”
    - Are all “runs” about the same?
    - Are there classes of type of “runs”?
    - Are all runs different?
    - Has downtime for maintenance been included?
    - What are the hours of operation for the machine?
    - Account for calibration of machines
A fair and equitable cost distribution may lead to other pricing arrangements:

- Volume Discounts
- Suites of Services
- Time of Day
- Overtime Rates
- Expedited Rates
- Rates for non-campus, non-affiliate users
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Other Pricing Considerations

• Overtime Rates and Expedited Rates
  • Remember, all rates must be cost based!
  • Are overtime or expedited costs part of the normal business operation or are they exceptional?
    • If normal, consider include the costs in the standard rate.
    • If exceptional, must develop a special rate(s) based upon the exceptional costs, and be sure to examine possible impacts to the standard rate.
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### SAMPLE RATE CALCULATION - SHOP SERVICES

#### HOURLY LABOR RATE CALCULATION -

**PROJECTED GENERAL OPERATING COSTS**

<table>
<thead>
<tr>
<th>Salaries and Benefits</th>
<th>Salary</th>
<th>Benefits Rate</th>
<th>Benefits Cost</th>
<th>Total Annual Cost</th>
<th>% of Total Costs</th>
<th>% of Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supervisory Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Mechanical Shop</td>
<td>3 mo @ 15% @ 5,000 per month</td>
<td>$2,250</td>
<td>25.0%</td>
<td>$562.50</td>
<td>5.0%</td>
<td></td>
</tr>
<tr>
<td>Super Mechanical Shop</td>
<td>9 mo @ 15% @ 5,200 per month</td>
<td>$7,020</td>
<td>23.0%</td>
<td>$1,610</td>
<td>5.30%</td>
<td></td>
</tr>
<tr>
<td><strong>Support Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Asst II</td>
<td>6 mo @ 10% @ 2,502 per month</td>
<td>$1,501</td>
<td>23.0%</td>
<td>$345</td>
<td>1.78%</td>
<td>6.02%</td>
</tr>
<tr>
<td>Purchasing Asst II</td>
<td>6 mo @ 10% @ 2,617 per month</td>
<td>$1,670</td>
<td>23.0%</td>
<td>$381</td>
<td>1.78%</td>
<td>8.02%</td>
</tr>
<tr>
<td><strong>Productive Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>3 mo @ 100% @ 4,116 per month</td>
<td>$12,345</td>
<td>23.0%</td>
<td>$2,839</td>
<td>23.06%</td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>9 mo @ 100% @ 4,312 per month</td>
<td>$38,808</td>
<td>23.0%</td>
<td>$8,926</td>
<td>82,916</td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>3 mo @ 100% @ 3,268 per month</td>
<td>$9,795</td>
<td>23.0%</td>
<td>$2,246</td>
<td>23.47%</td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>9 mo @ 100% @ 3,412 per month</td>
<td>$34,708</td>
<td>23.0%</td>
<td>$7,083</td>
<td>49,702</td>
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</tr>
<tr>
<td>Jr Development Engr</td>
<td>3 mo @ 75% @ 3,268 per month</td>
<td>$7,218</td>
<td>23.0%</td>
<td>$1,660</td>
<td>7.31%</td>
<td>91.97%</td>
</tr>
<tr>
<td>Jr Development Engr</td>
<td>9 mo @ 75% @ 3,365 per month</td>
<td>$22,648</td>
<td>23.0%</td>
<td>$5,298</td>
<td>26,733</td>
<td></td>
</tr>
<tr>
<td><strong>Total Salaries and Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$133,831</td>
<td></td>
<td>$30,762</td>
<td>$164,613</td>
<td>77.59%</td>
<td></td>
</tr>
<tr>
<td><strong>Supplies &amp; Expense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General costs not attributable to a specific service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$6,000</td>
<td>2.83%</td>
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<tr>
<td><strong>Equipment Depreciation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General equipment not attributable to a specific service, from Depreciation Table</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$6,533</td>
<td>3.08%</td>
</tr>
<tr>
<td><strong>Subsidy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Must be a subsidy that lowers the rate for all UC customers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Adjustment for Previous Years’ Operations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deduct Surplus or Add Deficit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$35,000</td>
<td>16.50%</td>
</tr>
<tr>
<td><strong>TOTAL PROJECTED OPERATING COSTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>$212,146</td>
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</tr>
</tbody>
</table>

**TOTAL PRODUCTIVE HOURS**

- Total FTE of Productive Personnel: 2.75
- Productive Hours per FTE: 1394
- Total Productive Hours: 3,580

**HOURLY RATE**

Operating Costs divided by (Productive Hours times FTE)
### SAMPLE RATE CALCULATION - STOREROOM

**MARK-UP ON STOCK ITEMS**

**PROJECTED OPERATING COSTS**

<table>
<thead>
<tr>
<th>Staff Salaries</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Storekeeper (2)</strong></td>
<td><strong>24 mos @ 100% @ 2,150 per month</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store Salaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Storekeeper (2)</strong></td>
<td><strong>24 mos @ 100% @ 2,150 per month</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Salaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td><strong>23.00% of staff salaries</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supplies &amp; Expense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General operating expenses (Telephones, office supplies, postage, forms, computer supplies, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equipment Depreciation</strong></td>
<td><strong>2,931</strong></td>
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<td></td>
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</tr>
<tr>
<td>(From Depreciation Table)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shrinkage (Breakage or Theft)</strong></td>
<td><strong>55,000</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL PROJECTED OPERATING COSTS</strong></td>
<td><strong>$107,035</strong></td>
<td></td>
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<tr>
<td><strong>ADJUSTMENT FOR PRIOR YEARS’ OPERATIONS</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deduct Surplus or Add Deficit</td>
<td><strong>$75,000</strong></td>
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<tr>
<td><strong>TOTAL COSTS TO RECOVER</strong></td>
<td><strong>$111,535</strong></td>
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</tr>
<tr>
<td><strong>PROJECTED COST OF MATERIALS TO BE RESOLD</strong></td>
<td><strong>$45,000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Stock Purchases</td>
<td><strong>1,100,000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shrinkage</td>
<td><strong>(5,000)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Inventory Credit</td>
<td><strong>(200,000)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Including value of projected carryforward inventory*

**MARK-UP CALCULATION**

(Operating Costs divided by Cost of Materials to be Resold) **13.20%**
Developing Recharge Rates

Create Rates

- Rounding rates is acceptable, as long as it is reasonable.
- Multiple lines of business often translate into multiple rates for a recharge center.
  - Avoid double counting costs.
  - Account for surpluses or deficits along each rate.
  - Avoid the appearance of one rate subsidizing another.
Developing Recharge Rates

Create Rates

- Packaged or Bundled Rates
  - Are allowed provided they are costed properly, are reasonable and justifiable.
  - Be careful! Can make sense, but may cause a direct costing problem for your customers. e.g., memberships or subscriptions

- Be sure to examine rationale behind the creation of any rate type.
Agenda

1. Overview
2. Identify Lines of Business
3. Develop Cost Pools
4. Depreciation, Inventory and Subsidies
5. Determine Equitable Means of Distribution
6. Create Rates
7. Review and Test Rates
8. “Special” Rates
9. Case Studies
For each rate, examine the ratio of direct costs to infrastructure costs. Assure that their relationship is logical and supported for the type of goods or services provided.
## SAMPLE RATE CALCULATION - SHOP SERVICES

### HOURLY LABOR RATE CALCULATION -

#### PROJECTED GENERAL OPERATING COSTS

<table>
<thead>
<tr>
<th>Salaries and Benefits</th>
<th>Salary</th>
<th>Benefits Rate</th>
<th>Benefits Cost</th>
<th>Total Annual Cost</th>
<th>% of Total Costs</th>
<th>% of Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supervisory Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Mechanical Shop</td>
<td>3 mos @ 15% @ $5,000 per month</td>
<td>$2,250</td>
<td>23.0%</td>
<td>$518</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Mechanical Shop</td>
<td>6 mos @ 15% @ $5,200 per month</td>
<td>$7,020</td>
<td>23.0%</td>
<td>$1,615</td>
<td>$11,403</td>
<td>5.38%</td>
</tr>
<tr>
<td><strong>Support Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Asst II</td>
<td>5 mos @ 10% @ $2,502 per month</td>
<td>$1,501</td>
<td>23.0%</td>
<td>$345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Asst II</td>
<td>6 mos @ 10% @ $2,617 per month</td>
<td>$1,670</td>
<td>23.0%</td>
<td>$381</td>
<td>$3,777</td>
<td>1.78%</td>
</tr>
<tr>
<td><strong>Productive Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>3 mos @ 100% @ $4,116 per month</td>
<td>$12,345</td>
<td>23.0%</td>
<td>$2,830</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dev Technician V</td>
<td>6 mos @ 100% @ $4,312 per month</td>
<td>$63,808</td>
<td>23.0%</td>
<td>$14,696</td>
<td>$82,918</td>
<td>25.86%</td>
</tr>
<tr>
<td>Dev Technician IV</td>
<td>3 mos @ 100% @ $3,755 per month</td>
<td>$9,795</td>
<td>23.0%</td>
<td>$2,246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dev Technician IV</td>
<td>6 mos @ 100% @ $3,412 per month</td>
<td>$50,708</td>
<td>23.0%</td>
<td>$1,163</td>
<td>$49,792</td>
<td>23.47%</td>
</tr>
<tr>
<td>Jr Development Engr</td>
<td>3 mos @ 75% @ $3,208 per month</td>
<td>$7,218</td>
<td>23.0%</td>
<td>$1,680</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jr Development Engr</td>
<td>6 mos @ 75% @ $3,365 per month</td>
<td>$22,046</td>
<td>23.0%</td>
<td>$5,208</td>
<td>$28,733</td>
<td>17.31%</td>
</tr>
<tr>
<td><strong>Total Salaries and Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$133,831</td>
<td>$30,792</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$164,613</td>
<td></td>
</tr>
</tbody>
</table>

### Supplies & Expense

General costs not attributable to a specific service (Telephones, office supplies, postage, forms, computer supplies, training costs etc.)

- **$6,000**
  - 2.83%

### Equipment Depreciation

General equipment not attributable to a specific service. From Depreciation Table

- **$6,533**
  - 3.08%

### Subsidy

Must be a subsidy that lowers the rate for all UC customers.

- **$0**

### Adjustment for Previous Years' Operations

Deduct Surplus or Add Deficit

- **$35,000**
  - 16.50%

### TOTAL PROJECTED OPERATING COSTS

- **$212,146**

### TOTAL PRODUCTIVE HOURS

Total FTE of Productive Personnel

- **2.75**

Productive Hours per FTE

- **1394**

### HOURLY RATE

Operating Costs divided by (Productive Hours times FTE)

- **$59.16**
<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
<th>Rate</th>
<th>Fee</th>
<th>% of Total</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salaries and Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisory Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Mechanical Shop</td>
<td>6 mos @ 65% @ 5000 per month</td>
<td>$17,500</td>
<td>23.0%</td>
<td>$4,025</td>
<td>17.31%</td>
</tr>
<tr>
<td>Support Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Asst II</td>
<td>3 mos @ 75% @ 2,052 per month</td>
<td>$1,077</td>
<td>23.0%</td>
<td>$243</td>
<td>4.35%</td>
</tr>
<tr>
<td>HR Asst II</td>
<td>9 mos @ 15% @ 2,217 per month</td>
<td>$3,533</td>
<td>23.0%</td>
<td>$813</td>
<td>2.61%</td>
</tr>
<tr>
<td>Productive Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dev Technician IV</td>
<td>3 mos @ 100% @ 4,115 per month</td>
<td>$12,345</td>
<td>23.0%</td>
<td>$2,764</td>
<td>51.34%</td>
</tr>
<tr>
<td>Total Salaries and Benefits</td>
<td></td>
<td></td>
<td></td>
<td>$134,950</td>
<td>75.61%</td>
</tr>
<tr>
<td>Supplies &amp; Expense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General costs not attributable to a specific service (Telephones, office supplies, postage, forms, computer supplies, training costs etc.)</td>
<td>$12,000</td>
<td>5.47%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Depreciation</td>
<td></td>
<td></td>
<td></td>
<td>$6,533</td>
<td>2.88%</td>
</tr>
<tr>
<td>Subsidy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Must be a subsidy that lowers the rate for all UC customers.</td>
<td>$35,000</td>
<td>15.94%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL PROJECTED OPERATING COSTS</td>
<td></td>
<td></td>
<td></td>
<td>$210,522</td>
<td></td>
</tr>
<tr>
<td>TOTAL PRODUCTIVE HOURS</td>
<td>Total FTE of Productive Personnel</td>
<td>2.00</td>
<td>1104</td>
<td>2,608</td>
<td></td>
</tr>
<tr>
<td>HOURLY RATE</td>
<td>Operating Costs divided by (Productive Hours times FTE)</td>
<td>$84.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Developing Recharge Rates

Review of Rates

• Compare to previous year’s rates. Do the changes make sense? How would you explain the changes to your customers?
• Compare the rate structure to how services are delivered. Will your customers understand what they are paying for?
• Compare costs to last year’s costs. Are there areas of great discrepancy?
• Does the assignment of depreciation costs to each rate make sense?
Developing Recharge Rates

Review of Rates

- If you have developed a mark-up rate, does the charge reasonably relate to the benefit received?
  - More expensive items draw more of the unit’s infrastructure costs—is this reasonable?
- How do the rates compare to rates of other units with similar services (both internal and external)?
- How are subsidies handled?
Developing Recharge Rates

Review of Rates

• Assure that the percent productivity makes sense for the type of goods or services provided.
  • How are “free” services represented?
• What is the expected customer base? What is the proportion of campus customers to non-campus customers? Does the unit need to consider UBIT & sales tax complications?
Developing Recharge Rates

Test the Rates

- Multiply the expected volume times the calculated rate for each line of business. Will the resulting figure cover your anticipated costs? Is the resulting figure close to what you actually expect to generate in revenue?
  - If so, the rate seems appropriate.
  - If not, go back to the assumptions you’ve made about the costs and the cost drivers to see where adjustments are necessary.
Developing Recharge Rates

Test the Rates

• Compare shrinkage to sales. Is the ratio within tolerable limits?
  • If so, the rate seems appropriate.
  • If not, are there other areas that need to be evaluated?
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Developing Recharge Rates

Rates for Non-Campus Customers

- Special consideration for non-campus, non-affiliate customers:
  - Remove all subsidies from rate.
  - Consider including federally unallowable costs in rate.
  - Apply surcharge.
  - Can include administrative full costing assessment for affiliate users.
Developing Recharge Rates

Rates for Non-Campus Customers

• Rates for the same goods or services for non-campus, non-affiliate customers are never lower than rates for campus customers for the same goods or services.
  • Avoid the appearance of competing with commercial entities.
  • Avoid the appearance of a state funded entity subsidizing commercial enterprises.
Developing Recharge Rates
Rates for Affiliate Customers

- Affiliate customers are afforded the same pricing structure as campus customers.
  - I House
  - Alumni House
  - National Labs (e.g., LBNL)
  - Other UC Campuses
  - Faculty Clubs
  - ASUC Auxiliary
  - MSRI
  - Officially recognized student groups

http://students.berkeley.edu/osl/studentgroups/public/index.asp
Mark up base rates to cover administrative full costing (AFC) assessment.
- Currently 7%.
- Mark up slightly more than current AFC rate.
- AFC assessment is NOT an allowable recharge cost (represents campus indirect costs). Thus, proper accounting is essential.
Agenda

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Case Studies

- Part I
- Part II
- Part III
Developing Recharge Rates

In Summary

- Spend a lot of time developing rates. They are the key to everything!
- Beware of subsidies! Once a subsidy is included in the rate all campus customers are afforded the benefit of the subsidy.
- Rates for non-campus customers are never lower than rates for campus customers for the same goods or services.
Developing Recharge Rates

In Summary

• Small changes in the denominator (productive hours, no. of jobs or customers) often lead to big changes in rates.

• Look 3-4 years out. Make sure the recharge model is sustainable.

• Build a capital plan. What is the capital plan’s impact on rates?
Developing Recharge Rates

In Summary

• Don’t back in to rates-leads to unconscious subsidies and potentially unrecoverable surpluses/losses.
• Include surpluses and deficits from previous period’s operations in rates even if balances are within tolerance.
• Include depreciation, not asset acquisition costs.
• Over time, vacation accrual should be close to zero.
Developing Recharge Rates

In Summary

• Evaluate rates often, especially when there has been a change in the business model, costs or customers.

• Examine the motives for a change in rates. Assure that changes do not compromise the equity or precision of the cost distribution.
Forms & Templates

• Self Certification Checklist form
  http://controller.berkeley.edu/recharge/Forms/RateChangeSelfCert.xls

• Hourly rate template
  http://controller.berkeley.edu/recharge/Forms/HourlyRateSample.xls

• Mark-up template
  http://controller.berkeley.edu/recharge/Forms/MarkupSample.xls

• Per-item template
  http://controller.berkeley.edu/recharge/Forms/PerItemRateSample.xls
Resources

- All recharge related correspondence: recharge@berkeley.edu

- Forms and administrative questions
  Lisa Lozano: llozano@berkeley.edu, 3-6336

- Recharge policy & procedures questions
  Celia Maddox: cmaddox@berkeley.edu, 3-1159
Resources

- Recharge Web Site (has committee member list)
  http://controller.berkeley.edu/recharge/index.htm
- Recharge Policy Document
  http://controller.berkeley.edu/recharge/Policies/Rechargepolicy.pdf
- Business & Finance Bulletin A-47
  http://www.ucop.edu/ucophome/policies/bfb/a47.html
- Business & Finance Bulletin A-56
  http://www.ucop.edu/ucophome/policies/bfb/a56.html
- OMB Circular A-21
  http://www.whitehouse.gov/OMB/circulars/a021/a021_2004.html
Resources

- Administrative Full Costing Policy
  http://campuspol.chance.berkeley.edu/policies/adminfullcosting.pdf
- Contract & Grant Manual
  http://www.ucop.edu/raohome
- Recharge Billing Policies & Procedures
  http://controller.berkeley.edu/recharge/Policies/billingpolicy.htm
- Official Student Groups
  http://students.berkeley.edu/osl/studentgroups/public/index.asp