

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

A. Operating Procedures for Service Center Rate Development

Direct Questions to and Forward Completed Rate Material to:

Bruce Brownell

Manager - Research Accounting, (758-4212)

In most cases, three (3) rates should be established for each type of service provided. The lowest use rate (referred to in this document as the break-even rate) is the **internal/sponsored research** use charge. This rate should be charged to federal and other sponsored research activity, as well as internal departmental users. As described in detail below in “Instructions for Preparation of a Service Center Rate,” this rate should only include appropriate, allowable charges such as technician and other salaries necessary for operation or directly involved with providing service, benefits, materials, maintenance costs, expendable supplies, repairs, and other directly related indirect costs as described on page 4, section 3, paragraph 3.

The second use rate, for **liaison** activity (sponsored industrial indexes charged university overhead at 12.5%), should be based on the internal/sponsored use rate described above, plus some appropriate estimate of university and departmental indirect costs, such as facilities and administrative overhead, depreciation and replacement cost, and salaries + benefits of administrative staff who support the service center. Keep in mind that liaison activity is already charged for some university overhead with the 12.5% surcharge applied to all liaison index expense.

The highest use rate is the **external rate** and should be fully costed and industry competitive since no other overhead is charged to these users.

The internal/sponsored research use rate may be extended as a courtesy to any user, but no user should be charged less than the break-even rate unless the discount is to be funded from another source. All use of the facilities must be recorded and accounted for when computing the break-even rate.

Instructions for Preparation of a Service Center Rate

1. Identify all services provided. A separate rate should be calculated for each category of service, when there are different costs or different user populations for multiple services in a single index.
2. Determine direct costs specifically identifiable with Service Center operations, such as:
 - a. Salaries and benefits of technical and other staff directly involved with service
 - b. Materials needed for jobs

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

- c. Subcontracts and outside services to maintain equipment in operating order
 - d. Equipment lease or rental
 - e. Repairs and machine supplies
 - f. Other directly related expenses
3. Identify indirect costs incurred for multiple goods or services within the Service Center and determine if these costs should be included in the rate.

There are two types of indirect costs to be considered in the costing model: (1) directly related indirect costs essential to operations, but which may not be directly attributable to an individual job; and (2) university and departmental overhead.

Directly related indirect costs which should be included in the break-even rate include organizational technician time spent ordering supplies, summarizing log entries, completing time sheets, preparing billings, and other activities essential to service center operation. In some cases, a service center may be able to justify including other support time in the break-even rate calculation, if the nature of support is both material and essential to operation.

Federal Circular A-21 requires that all specialized Service Centers be fully burdened with university and departmental overhead. However, this is difficult to do, and in practice, a materiality test is usually applied in determining if service centers must be burdened with overhead. Service Centers with less than \$500,000 of annual billings do not generally have to be fully burdened.

If annual billings do not exceed \$500,000, it is Lehigh University policy to exclude the following university and departmental overhead indirect costs from the federal billing rate:

- a. Administrative and facilities overhead costs
- b. Depreciation and replacement cost
- c. Debt service
- d. Salaries and benefits of administrative staff not directly involved in providing the service, but who support the Service Center.

Note: Although the above itemized university and departmental overhead costs may not be included in the federal billing rate, they may be included in the liaison or external billing rate, if appropriate.

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

4. Identify and segregate unallowable costs specifically not allowed as rate components for federal billings, but which may be included in rates for liaison and external users.
 - a. Unallowable costs in OMB Circular A-21 (entertainment, bad debts, non-recruitment advertising, public relations, alcohol, etc.) must be excluded from rates.
 - b. Any factor for amounts to:
 - (1.) Repay principal or interest on loans.
 - (2.) Accumulate balances to fund inventories, receivable, or any other items requiring working capital.
 - (3.) Accumulate unallowable reserves.
5. Develop a reasonable method to **allocate** appropriate Service Center indirect costs to each service for both liaison and external user groups. Bear in mind that liaison users generally already pay 12.5% overhead on their activity. The liaison rate should reflect a discount over the fully costed external rate.
 - a. Allocations should be based on a causal and beneficial relationship.
 - b. Potential Allocation Bases include:
 - (1.) Effort
 - (2.) Usage (time)
 - (3.) Costs
 - (4.) Space - square footage
6. Accumulate or estimate **usage** for each service (such as number of units) to establish the distribution base. All usage must be included, regardless of whether discounts or free service is provided.
7. **Calculate** a cost-based rate for each service and user group (at Lehigh University, there are generally three user groups: Federal/Internal/Sponsored; Liaison; External).
 - a. Divide the total annual operating cost by the total estimated billing units to determine the billing rate per unit.
 - (1.) The billing unit for a Service Center that provides photocopies would be the number of copies.
 - (2.) The billing unit for a center which provides services would be the amount of hours of service.
8. Review Rates annually to adjust for **deficit or surplus balances**.
 - a. On an annual basis, actual revenues must be compared to the actual cost of providing

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

each service.

- b. Revenues that exceed the actual cost of service should not be used to subsidize other services of the same Service Center, unless user mix and the costs of maintenance are similar.
 - c. Total surplus or deficit variances should not exceed 60 days of operating costs.
 - d. Surplus or deficits which exceed this threshold should be used to adjust future billing rates or be credited back to users.
9. Determine the rate that will actually be charged.
- a. **Federal users must be charged no more than the cost-based rate.** Profits are allowed on external users.
 - b. Discounts provided to non-federal users must not be subsidized by federal users. The subsidy must be quantified and excluded from future period billing rate calculations.
10. Obtain **approval** of new rates and rate revisions from Research Accounting.

B. Establishing the Index and Ongoing Operation

1. To establish a maintenance index: Send an index-create form with appropriate signatures and/or a brief memo requesting an index number to Research Accounting at 526 Brodhead Avenue. Include the following information in the documentation:
 - (1) a description of the equipment to be covered;
 - (2) the name of the department or center responsible for the equipment;
 - (3) an estimate for the “use charge rate” for the first year with supporting documentation. (Generally, estimated yearly maintenance cost and hours of use are sufficient. The procedure for calculating an estimated cost-based use charge is covered in detail in “Instructions for Preparation of a Service Center Rate,” sections 1 thru 7, pages 3, 4, and 5 of this document);
 - (4) the name of the responsible person
 - (5) a backup index number to be used to fund any deficit;
 - (6) the asset inventory number if available; and
 - (7) the room number where the equipment is located.
2. A logbook or automated accounting system of use must be maintained at the site of your equipment for each piece of equipment having a “use charge”. **ALL use of the equipment must be recorded and accounted for.** In the case of department or personal use which is

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

supplied gratis, usage estimates must be imputed and applied to the rate calculation to ensure that federal dollars are not being used to support other activity. In the case of computing equipment, an automated accounting system is acceptable in lieu of a manually maintained logbook. The attached form, which may be used as the log, may also be used for submitting charges to Research Accounting for processing or attached to data collect batches for documentation. Financial managers or designees should reconcile activity monthly to ensure all utilization charges are processed.

3. When service centers routinely charge liaison indexes and/or external companies or institutions, a reserve index should be established for recording revenue in excess of the internal/sponsored rate. The request for creation of a reserve index should be submitted to Research Accounting with appropriate signatures of the financial manager, department chair or center director and dean.

It is important to differentiate between operating and reserve indexes.

- a. **Operating indexes** should be used to record all allowable direct operating expenses (as defined on page 3) and for deposit of break-even revenue from all sources. **Under no circumstances should operating indexes purchase new equipment.** Since only basic operating costs and break-even revenue for all users are recorded in the operating index, it is easy to verify if the internal/sponsored rate is really a break-even rate. That is why federal auditors are primarily interested in operating indexes to determine if federal funds are being used to subsidize other users. Under normal operating conditions, if a significant surplus occurs in the index, the rate may be too high; if the index goes into deficit, the rate may be too low.
- b. **Reserve indexes** should be used to record the portion of revenue in excess of the internal/sponsored rate. Examples to illustrate recording charges to users and revenue are contained on the following “Record Use Charges” section which follows. Federal auditors are generally not interested in reserve indexes, and index executives have more flexibility in spending from these indexes.

In addition to ensuring a source of funding for operating index deficits should they occur, the primary purpose of reserve indexes is to fund capital enhancements to existing equipment or purchase new equipment which will be of direct benefit to either the piece of equipment which was the source or the facility with which it is associated.

However, once a reserve has accumulated sufficient funds to ensure continuation of operations should any of the above mentioned be required, the financial manager, with approval from Research Accounting, may use funds for other related purposes. Reserve indexes should not be used for operating expenses which are allowable expenses for the operating index.

4. Record use charges at reasonable intervals, at least monthly, in the university accounting system.

LEHIGH UNIVERSITY
Operating Procedures for Scientific Equipment Service Centers

- a. One of two methods may be used for recording use charges in Banner: departmental data collect and journal entries processed by Research Accounting. Regardless of the method used, use charges should be recorded not less than monthly. Documentation to support departmental data collect should be sent to General Accounting in the Controller's Office. The attached form, signed by the financial manager, may be sent to Research Accounting for journal entry into FRS. June charges should be processed in a timely manner in order to be included before the fiscal year close.
- b. Charges to internal indexes should be processed using account code 77520, both for the charge and the credit to the service center account. When external revenue is received, it should be deposited with the Bursar using account code 50520.
- c. **Examples for recording use charges and revenue:**

Rate Schedule

Service Group	Internal/Sponsored	Liaison	External
Service Use Rates	\$50	\$75	\$100
Allocation Base	hours	hours	hours

Use Charge Schedule

Service Group	Usage	Charge Acct	Credit Acct	Amount	Total Use Charge
Sponsored	10 hrs	Sponsored	Operating	\$500	\$500
Liaison	10 hrs	Liaison	Operating Reserve	\$500 \$250	\$750
External	10 hrs	External	Operating Reserve	\$500 \$500	\$1,000

5. Reviewing Indexes.

- a. When a new maintenance index is established, a "use charge" is estimated. It is difficult to establish this rate because there is no previous history of the use of such equipment. Since the use charge is based on the best data available at the time, the initial rate may be too high or too low. Accordingly, new indexes will be reviewed

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

after a period of six months with Research Accounting to determine if the estimated original rate is appropriate.

- b. The financial manager or designee should review the balance in the index monthly. Under ideal circumstances, the balance should be zero after allowance is made for special replacement parts, special service requirements, etc. that may be required within the operating cycle. Surplus and deficit amounts should be analyzed to determine if the current rate is appropriate. Research Accounting can provide guidance. The financial manager may wish to form a User's Committee to review the operation of the facility or the equipment.
- c. Research Accounting will also review the balances in each maintenance index biennially. If the maintenance index has a surplus or deficit balance greater than \$5,000, Research Accounting may request a meeting to discuss the balance.

When analyzing the balance, attention will be given not only to the surplus or deficit balance, but to the trend of each index. Generally, as long as the trend is favorable, if a deficit balance is not greater than \$5,000, no action is needed. It should be noted that there are many reasons why the rate should not be changed because of a deficit, e.g., the maintenance contract was just paid; a piece of equipment not on the service contract was just serviced; an expensive replacement part was just purchased, etc.

If a surplus balance greater than \$5,000 exists, inquiries will be made to determine if it is appropriate to reduce the use charge, keeping in mind that for many indexes, a large surplus is needed to defray expensive service contracts, expensive replacement parts, etc. The goal is to establish a "use charge" that provides for yearly maintenance requirements of the equipment and also provides a surplus, when appropriate, for the purchase of expensive replacement parts or maintenance procedures/contracts.

- d. Financial managers with indexes in deficit will receive a notification of deficit letter every other month from the Controller's Office.

Note that other than for short periods of time, due to operating cycles, service centers cannot operate at a deficit. The University does not wish to deny any person with a legitimate need the use of our centralized and sophisticated facilities, but all usage must be within budgetary or funding constraints.

6. It is likely that a member of the Internal Auditor's Office will visit you to review, as a federal auditor might, your records and procedures. The purpose of such a visit is to verify that operation of our scientific equipment service centers will pass federal audit standards. This visit will give you assurance that your procedures are in compliance with federal and internal regulations.
7. Notify Research Accounting when use charges are revised and forward the new rate schedule

LEHIGH UNIVERSITY

Operating Procedures for Scientific Equipment Service Centers

for review.

8. Document Retention. **Document activities** and **maintain** records for 3 years to support expenditures, billings and transfers. These records include:
 - a. Documentation on how the rate was calculated
 - b. Published rate schedule
 - c. Usage statistics supporting utilization or level of activity
 - d. Effort reporting records for staff used to allocate time to multiple services
 - e. Billing records

If you need assistance in developing use charge rates or have any questions regarding this policy, please call or contact Bruce Brownell, Manager - Research Accounting, at extension 8-4212 or network id rbb1.