

Submitted: July 25, 2007

Approved: September 4, 2007

**Recommendation #12: Process for directly charging primary resource units for utility expense**

**Issue number: E-43, E-44, E-46, E-47, E-48, E-49**

***Background***

Historically, utility expenses for General University buildings have been funded by the General Fund and managed centrally by the Division of Business and Finance. All of the daily utility production at the ISU utility plant is consumed by the university. Facilities Planning and Management has historical utility consumption for metered buildings on their website.

Utility services are also purchased from various utility companies for some university buildings. ISU Utilities pays the invoices associated with these purchased utilities on behalf of the occupants of the building.

The Budget Model Review and Implementation Committee recommended that the primary resource units be directly charged for the utilities consumed within the space they occupy.

Plans are in place to have meters installed for electricity, steam and chilled water in most General University buildings by the end of fiscal year 2008 in order to accomplish a goal of having 80% of the utility expense accounted for through utility meters. However, because of the costs for installing utility meters, not all buildings will have meters for electricity, steam and chilled water utilities.

***Recommendation***

Recommend that the primary resource units be directly charged for the utilities consumed within the space they occupy starting in fiscal year 2009. Utility rates will be established at the end of each calendar year and are fixed throughout the following fiscal year. Facilities Planning and Management will generate invoices on a monthly basis for metered electricity, steam and chilled water. This is consistent with Facility Planning and Management's current billing practices for metered utilities to auxiliary units.

***Metered Buildings***

For buildings that are fully metered, Facilities Planning and Management will generate a utility bill for actual utility consumption. For buildings that have multiple occupants, the bill will be pro-rated based on the net assignable square footage assigned to each occupant for that building.

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Spaces within a building that provide services/resources for the benefit of the occupants such as circulation space, stairwells, restrooms, custodial closets and mechanical/electrical rooms, are excluded from the net assignable square footage for purposes of pro-rating utility charges.

Purchased Utilities

ISU Utilities will continue to pay the invoices associated with these purchased utilities on behalf of the occupants of the building and then, in turn, will bill the cost of the utilities to the occupant(s) of the building.

Non-Metered Buildings

Not all buildings will have meters in place for electricity, steam and chilled water utilities. Therefore, the non-metered utilities will be determined by the difference between the utilities produced by the utility plant and the utilities consumed in metered buildings. These non-metered utilities will be pooled into three separate utility pools – steam, electricity and chilled water. Each of these pools will be distributed to units that occupy non-metered buildings for that utility. The distribution will be based on the unit's proportion of total non-metered net assignable square feet for that utility.

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**Illustration of how utility expenses would be distributed for buildings that are occupied by multiple resource units**

Carver Hall is occupied by five primary resource units. The net assignable square feet for each unit is as follows:

| <b>DEPARTMENT NAME</b>                       | <b>NASF</b> | <b>PRIMARY RESOURCE UNIT</b>                |
|--|-------------|---|
| Admissions                                   | 1,150       | Division of Student Affairs                 |
| Ames Laboratory of US Dept. of Energy        | 30          | Office of Research and Economic Development |
| English                                      | 6,380       | College of Liberal Arts and Sciences        |
| Liberal Arts and Sciences Administration     | 4,370       | College of Liberal Arts and Sciences        |
| Mathematics                                  | 21,840      | College of Liberal Arts and Sciences        |
| Program for Women in Science and Engineering | 1,665       | Office of the Provost                       |
| Psychology                                   | 445         | College of Liberal Arts and Sciences        |
| General Classrooms                           | 28,390      | Office of the Provost                       |
| Telecommunications                           | 1,925       | Information Technology Services             |

Therefore the actual utility bill for Carver Hall would be split:

|   |         |
|---|---------|
| College of Liberal Arts and Sciences        | 49.91%  |
| Office of Research and Economic Development | 0.05 %  |
| Division of Student Affairs                 | 1.74 %  |
| Office of the Provost                       | 45.40 % |
| Information Technology Services             | 2.90 %  |

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**Illustration of how non-metered utility costs will be distributed**

|                                  | <b>Electricity</b> |     | <b>Steam</b>  |     | <b>Chilled Water</b> |
|----------------------------------|--------------------|-----|---------------|-----|----------------------|
| ISU Utility production           | 5,000,000          | Kwh | 90,000        | lbs | 500,000 tons         |
| Metered consumption              | 4,000,000          | Kwh | 75,000        | lbs | 350,000 tons         |
| <b>Non-Metered Utility Pools</b> | <b>1,000,000</b>   |     | <b>15,000</b> |     | <b>150,000</b>       |

**NON-METERED BUILDINGS**

|                       |               |         |               |         |               |         |
|-----------------------|---------------|---------|---------------|---------|---------------|---------|
| College A             | 17,000        | sq. ft. | 35,000        | sq. ft. | 25,000        | sq. ft. |
| College B             | 12,000        | sq. ft. | 22,000        | sq. ft. | 15,000        | sq. ft. |
| College C             | 8,000         | sq. ft. | 15,000        | sq. ft. | 12,000        | sq. ft. |
| Administrative Unit A | 4,000         | sq. ft. | 9,000         | sq. ft. | 5,000         | sq. ft. |
| Administrative Unit B | 2,000         | sq. ft. | 7,000         | sq. ft. | 5,000         | sq. ft. |
| <b>TOTAL</b>          | <b>43,000</b> | sq. ft. | <b>88,000</b> | sq. ft. | <b>62,000</b> | sq. ft. |

**PERCENTAGE OF NON-METERED SPACE**

|                       |             |  |             |  |             |
|-----------------------|-------------|--|-------------|--|-------------|
| College A             | 39.5%       |  | 39.8%       |  | 40.3%       |
| College B             | 27.9%       |  | 25.0%       |  | 24.2%       |
| College C             | 18.6%       |  | 17.0%       |  | 19.4%       |
| Administrative Unit A | 9.3%        |  | 10.2%       |  | 8.1%        |
| Administrative Unit B | 4.7%        |  | 8.0%        |  | 8.1%        |
| <b>TOTAL</b>          | <b>100%</b> |  | <b>100%</b> |  | <b>100%</b> |

**NON-METERED UTILITY DISTRIBUTION**

|                       |                  |     |               |     |                |      |
|-----------------------|------------------|-----|---------------|-----|----------------|------|
| College A             | 395,349          | Kwh | 5,966         | lbs | 60,484         | tons |
| College B             | 279,070          | Kwh | 3,750         | lbs | 36,290         | tons |
| College C             | 186,047          | Kwh | 2,557         | lbs | 29,032         | tons |
| Administrative Unit A | 93,023           | Kwh | 1,534         | lbs | 12,097         | tons |
| Administrative Unit B | 46,512           | Kwh | 1,193         | lbs | 12,097         | tons |
| <b>TOTAL</b>          | <b>1,000,000</b> |     | <b>15,000</b> |     | <b>150,000</b> |      |

|              |    |      |      |    |       |     |    |      |      |
|--------------|----|------|------|----|-------|-----|----|------|------|
| Utility Rate | \$ | 0.09 | /Kwh | \$ | 11.50 | /lb | \$ | 0.15 | /ton |
|--------------|----|------|------|----|-------|-----|----|------|------|

**NON-METERED UTILITY COST DISTRIBUTION**

|                       |           |               |  |           |                |  |           |               |
|-----------------------|-----------|---------------|--|-----------|----------------|--|-----------|---------------|
| College A             | \$        | 35,581        |  | \$        | 68,608         |  | \$        | 9,073         |
| College B             | \$        | 25,116        |  | \$        | 43,125         |  | \$        | 5,444         |
| College C             | \$        | 16,744        |  | \$        | 29,403         |  | \$        | 4,355         |
| Administrative Unit A | \$        | 8,372         |  | \$        | 17,642         |  | \$        | 1,815         |
| Administrative Unit B | \$        | 4,186         |  | \$        | 13,722         |  | \$        | 1,815         |
| <b>TOTAL</b>          | <b>\$</b> | <b>90,000</b> |  | <b>\$</b> | <b>172,500</b> |  | <b>\$</b> | <b>22,500</b> |