

**AGENDA**  
**UNIVERSITY OF SOUTHERN INDIANA**  
**Board of Trustees Finance Committee**  
**September 30, 1996**

**I. APPROVAL OF THE PERFORMANCE CONTRACTING PROPOSAL AND FINANCING PLAN**

**II. APPROVAL OF THE SALE OF STUDENT HOUSING REFUNDING BONDS**

**III. DISCUSSION OF THE BID OPENING FOR THE 1996-97 STUDENT HOUSING CONSTRUCTION PROJECT**

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## PROPOSAL OVERVIEW

Energy Systems Group Inc. (ESGi) and Johnson Controls, Inc. have been invited by the University of Southern Indiana to evaluate campus energy needs and propose facility upgrades. The evaluation was to have three primary objectives:

1. Address specific projects or problem areas provided by the University.
2. Identify other areas of opportunity for facility upgrades that pay for themselves.
3. Design a long range utilities plan in conjunction with existing campus master plan for growth.

Together we delivered a detailed 3-Phase Proposal to the University for consideration on February 07, 1996. The proposed retrofits for the individual buildings were developed by Johnson Controls, Inc. and ESGi developed the central distribution system and the Physical Plant. This document finalizes the first phase.

The Scope of this Proposal includes upgrades that will beneficially affect the campus' electrical power, lighting, heating, and cooling. The proposed upgrades to the Physical Plant and the other building improvements enhance the University's existing assets. The result is the first step towards a thermally balanced, integrated utilities system which will deliver services at the lowest operation and maintenance budget levels while accruing savings during daily production. Some of the benefits to the University include:

- Total energy savings over 180,000/yr.
- Lower utilities cost at the Apartments
- Over 2,000 tons of additional cooling capacity through thermal storage
- Lighting retrofits in three buildings
- Attic insulation for the Apartments
- Lower Maintenance and operations cost
- Expandable utilities infrastructure

This project optimizes the campus central utilities plant. Modernization is the foundation of our proposed integrated utilities system and integral to any long range Master Plan. These changes, along with the other proposed improvements, form a utility infrastructure that will meet today's operating needs and tomorrow's growth needs.



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Daniel W. Sanders, Energy Systems Group



# Energy Systems Group

Building Upgrades That Pay For Themselves

**Energy Systems Group Inc.**  
101 Plaza East Blvd., Suite 320, Evansville, Indiana 47715-2804

812.471.5000  
812.475.2544Fax

**Proposal No.** 960030

**Date** September 23, 1996

*By and between:*

**ENERGY SYSTEMS GROUP INC.** and **CUSTOMER:** University of Southern Indiana  
a subsidiary of SIGCORP 8600 University Boulevard  
101 Plaza East Blvd., Suite 320 Evansville, IN 47712  
Evansville, IN 47715

***Building Upgrades will be provided at the following location(s):***

USI Campus, Evansville, IN

ESGi shall perform energy retrofits described in this proposal dated 9/23/96 and in accordance with the Terms and Conditions on the attached pages:

**BUILDING UPGRADES TO BE PROVIDED:**

- 1) Chilled water thermal storage system for Physical Plant
- 2) HVAC electric motor replacement at Science Center, Orr Center, Admin Building, Library, University Center and Tech Building.
- 3) Lighting retrofit at the Science Center, Admin Building and University Center
- 4) Attic insulation at 32 student apartment buildings
- 5) Electric meter consolidation for 407 student apartments

**PRICE:** \$2,122,318.00 to be paid to ESGi per the attached schedule on page 3. This project is being financed for USI via two Installment Payment Notes with a Nominal Annual Rate of 5.680% yielding an Effective Annual Rate of 5.761% held in equal amounts by Old National Bank and Citizens National Bank. Under the terms of these notes, USI will make twenty semi-annual payments of \$138,466.71, which shall begin May 01, 1997 with the final payment due November 01, 2006.

***This proposal is effective through*** November 15, 1996

This proposal and the pages accompanying it shall become a contract upon signature below, in space titled "Approved for Energy Systems Group Inc." No waiver, change, or modification of any terms or conditions to this agreement shall be binding on Energy Systems Group Inc. unless made in writing and signed by an officer or authorized director of Energy Systems Group Inc.

**Energy Systems Group Inc.**

By:

Daniel W. Sanders

Title: Account Executive

Approved for Energy Systems Group Inc.

By:

Jim Adams

Title: President

**Customer**

**University of Southern Indiana**

By

Title:

Date

**CONSTRUCTION PROGRESS PAYMENT SCHEDULE**

November 01, 1996	\$212,232.00
January 02, 1997	\$530,580.00
February 03, 1997	\$530,580.00
April 01, 1997	\$530,580.00
May 01, 1997	\$318,346.00
Total	\$2,122,318.00

Funds for the construction payments are coming from the installment payment notes provided by Old National Bank and Citizens National Bank. The final payment, due on May 01, 1997 is contingent upon ESGi's completion of its work

## **OPERATIONAL AND DEFERRED MAINTENANCE SAVINGS**

### **Thermal Storage**

Savings associated with the elimination of the Preventive Maintenance contract for the existing 1000 ton chiller.

**Annual Savings = \$12,000 / year**

Associated savings of the reduced life cycle cost per year of the 400 and 763 ton chillers currently on site. The thermal storage will reduce run time hours of the existing chillers, resulting in a life extension.

**Annual Savings = \$2,600 / year**

Deferred Maintenance Savings by eliminating the need to replace the 1,000 ton chiller is as follows:

\$297,000	1000 ton chiller
60,000	Piping, Pumps, Valves, Insulation & Controls
17,850	5% Engineering, including P.E stamped drawings
<u>35,700</u>	10% General Contractor fee. includes bonds and permits

$\$410,550 \div 10 \text{ year life of agreement} = \$41,055$

**Annual Savings = \$41,055 / year**

Chemical savings due to elimination of 1000 ton cooling tower use.

**Annual Savings = \$3,000 / year**

### **Meter Consolidation**

Accounting labor savings associated with the reduction of SIGECO bills from 440 to 32. The formula used is as follows:

$2 \text{ min./bill} \div 60 \text{ min./hr.} \times 12 \text{ mo./yr.} \times \$12/\text{hr.} = \$4.80/\text{bill}$   
 $(440 - 32) \text{ bills eliminated} \times \$4.80 \text{ per bill} = \$1,958$

**Annual Savings = \$1,958 / year**

## OPERATIONAL AND DEFERRED MAINTENANCE SAVINGS

### Lighting Systems

Savings associated with mass re-lamping at one time in Phase One, and again after 5 years. Since the life expectancy of new T-8 lamps is 20,000 burn-hours and the campus lamps burn an average of 4000 hours per year, we'd expect to replace  $(4,000 \div 20,000) = 1/5$  of all lamps every year for five years. JCI will re-lamp in 5 years and credit the entire calculation again. The actual savings calculation is as follows:

$(\text{Cost to re-lamp in Phase One} + \text{Cost to re-lamp in 5 years}) \div 10 \text{ years}$

Science Center	Savings = \$1801.84
Administration Building	Savings = \$1564.47
University Center	Savings = \$1780.43

**Annual Savings = \$5,147 / year**

Savings associated with de-lamping -- removing existing lamps and *not* replacing them with new T-8 lamps. Calculated as follows:

$(\# \text{ lamps being removed} \times \$3.25 \text{ each}) \times 2 \text{ saved replacements} \div 10 \text{ years}$   
 (\$3.25 = materials and assumed 5 minutes labor to change each lamp).

1346 lamps at the Science Center	Savings = \$874.90
252 lamps at the Administration Building	Savings = \$163.80
268 lamps at the University Center	Savings = \$174.20

**Annual Savings = \$1,213 / year**

Savings associated with existing ballasts being removed and/or replaced with new electronic ballasts. Calculated as follows:

$(\# \text{ ballasts being removed} \times \$25.50 \text{ each}) \div \text{Approx. 10 years}$   
 (\$25.50 = materials and assumed 30 minutes labor to change each ballast).

1932 @Science Center	Savings = \$4,926.60
1355 @Administration Building	Savings = \$3,455.25
584 @University Center	Savings = \$1,489.20

**Annual Savings = \$9,871 / year**

## OPERATIONAL AND DEFERRED MAINTENANCE SAVINGS

### Ballast Disposal

Cost to dispose of ballasts containing Polychlorinated Biphenyl (PCB) through an EPA-approved procedure (in accordance with State and Federal environmental laws and regulations), divided by 10 years.

Science Center	Savings = \$2273.71
Administration Building	Savings = \$1446.86
University Center	Savings = \$ 967.43

**Annual Savings = \$4,688 / year**

### High-efficiency Motor Replacement

Deferred Maintenance Savings associated with not having to change several motors on campus in the next ten years. Since the life expectancy of high-efficiency motors is 100,000 run-hours and the campus motors run an average of 5,000 hours per year, the average motor on campus is good for  $(100,000 \div 5,000) = 20$  years. During the ten-year duration of this contract, we'd expect to see half the motors on campus being replaced. Since the 7 largest motors on campus are being replaced at this time, half of them will *not* need to be replaced during the next ten years, or  $7 \div 2 = 3.5$  motors (say 3). The savings are calculated for three motors as follows:

Cost to replace motor  $\div$  10 years

Science Center (200 HP)	Savings = \$3866.86
University Library (125 HP)	Savings = \$1971.71
Technology Building (100 HP)	Savings = \$1939.71

**Annual Savings = \$7,778 / year**

**Total Annual Savings = \$ 89,310**

**RESOLUTION OF THE FINANCE COMMITTEE  
OF THE UNIVERSITY OF SOUTHERN INDIANA  
BOARD OF TRUSTEES  
RE: BUILDING FACILITY UPGRADES**

WHEREAS, the Board of Trustees (the "Board") of the University of Southern Indiana (the "University") has heretofore determined that a necessity exists to engage in certain energy related building and system upgrades; and

WHEREAS, the Board has previously delegated to this Finance Committee (the "Committee") the authority to solicit proposals for such building and system upgrades as well as proposals for the financing of the same; and

WHEREAS, this Committee has solicited such proposals and desires to select a proposal for further action, subject to such necessary reviews as may be required from the State of Indiana and its administrative agencies; and

WHEREAS, the substantially final form of the most favorable proposal, in the view of the Finance Committee, from Energy Systems Group and Johnson Controls is attached hereto as Exhibit A (the "Proposal"); and

WHEREAS, the Proposal describes the project as certain building upgrades including:

1. Chilled water thermal storage system for Physical Plant,
2. HVAC electric motor replacement at Science Center, Orr Center, Administration Building, Library, University Center and Tech Building,
3. Light retrofit at the Science Center, Administration Building and University Center,
4. Attic insulation at 32 student apartments, and
5. Electric meter consolidation for 407 student apartments all for an estimated price of \$2,122,318 (collectively, the "Project"); and

WHEREAS, the Proposal contains a plan of financing of the Project involving tax-exempt notes to be issued to Old National Bank in Evansville and Citizens National Bank of Evansville on the terms described in the Proposal.

NOW, THEREFORE, BE IT RESOLVED by this Finance Committee as follows:

1. The Committee hereby accepts the Proposal in substantially final form and authorizes the Treasurer of the University to seek such further approvals as may be required



from the State of Indiana and its administrative agencies for the Project and the financing of the Project as set forth in the Proposal; and

2. The Committee hereby authorizes the Treasurer to cause to be prepared a loan agreement or agreements and promissory notes setting forth the terms of the financing described in the Proposal; provided that the maximum rate payable on the note or notes shall not exceed 7% per annum, the term shall not exceed 10 years and the maximum amount of the notes shall not exceed \$2,200,000, inclusive of costs; and

3. The Treasurer is authorized to execute and deliver (and the Secretary of the University is authorized to attest, where necessary) the notes, loan agreements and such agreements as may be necessary and appropriate in connection with the Proposal, consistent with the parameters described above and after obtaining required approvals.

Dated this 30th day of September, 1996.

432402.1

**The attached outline lists the documents related to the Student Housing Revenue Refunding Bonds, Series 1996. These documents are currently being amended. If you wish to see the complete packet of documents distributed at the September 30, 1996, meeting of the Finance committee, contact the Advancement Office.**

**UNIVERSITY OF SOUTHERN INDIANA**  
**STUDENT HOUSING REVENUE REFUNDING BONDS,**  
**SERIES 1996**  
**\$12,200,000 AGGREGATE PRINCIPAL AMOUNT**

**I. BASIC ITEMS:**

- 1.1 Bond Purchase Agreement dated September 24, 1996, between The National City Bank of Evansville, Old National Bank in Evansville, Citizens National Bank of Evansville, Indiana and NBD Bank, N.A. (the "Bond Purchasers") and the University of Southern Indiana, as Issuer ("USI")
- 1.2 Proof of Publication of Notice of Bond Issue.
- 1.3 Lawyer's Title Insurance Corporation Commitment for Title Insurance, Number \_\_\_\_\_ and Policy Number \_\_\_\_\_.
- 1.4 Eighth Supplemental Trust Indenture dated as of October 11, 1996, between USI and The National City Bank of Evansville, as Trustee (the "Trustee").
- 1.5 Affidavit of Recording of the Trust Indenture with Recorder of Vanderburgh County, Indiana.
- 1.6 UCC Financing Statements (Affidavits of recording and documents attached).
- 1.7 Investment Letters of the Bond Purchasers dated October 11, 1996.
- 1.8 Series 1996 Bonds numbered R-27, R-28, R-29, and R-30 (Specimen).
- 1.9 Canceled Refunded Bonds
- 1.10 Canceled Notes; UCC Termination Statements; Release of Indentures and Loan Agreements

**II. ITEMS FURNISHED BY USI:**

- 2.1 Certified Resolutions of the Board of Directors of USI
- 2.2 Tax Representations Certificate.
- 2.3 Arbitrage Certificate.
- 2.4 Reporting Requirement Certificate.
- 2.5 Information Return for Tax-Exempt Governmental Obligations, IRS Form 8038-G, and proof of mailing.
- 2.6 Environmental Questionnaire.

**III. ITEMS FURNISHED BY THE TRUSTEE:**

- 3.1 Authentication and Signature Identification Certificate Of Trustee.

**IV. LEGAL OPINIONS AND RELATED MATTERS:**

- 4.1 Receipts for Bonds.
- 4.2 Opinion of Kahn, Dees, Donovan & Kahn, Bond Counsel.