

# Energy Performance Contracting Funding

**SWATeam Recommendation  
(Energy004)**



**Facilities & Services**

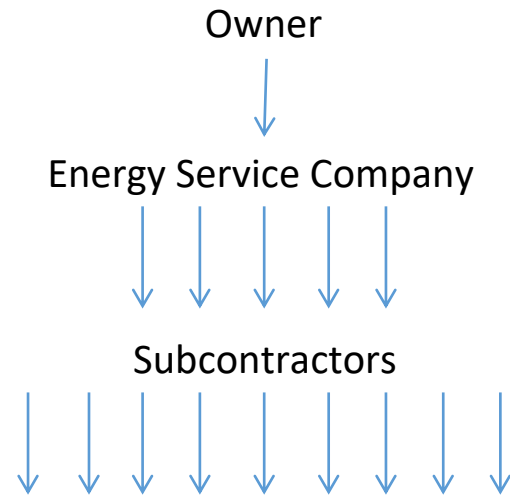
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# What is an Energy Performance Contract (EPC)?

- Design/Build Project with a Performance Guarantee
- Audit + Engineering + Construction + Commissioning + O&M + Measurement/Guarantee
- Project Risk Transferred to Energy Services Company (ESCO)
- 20 Year Payback Maximum

## Project Delivery Benefits

- **Guaranteed Utility / Energy Savings**
- Address Deferred Maintenance
- Aligned Goals
- Guaranteed Maximum Price
- Contract Structure / Single Point of Contact
- Bidding Process

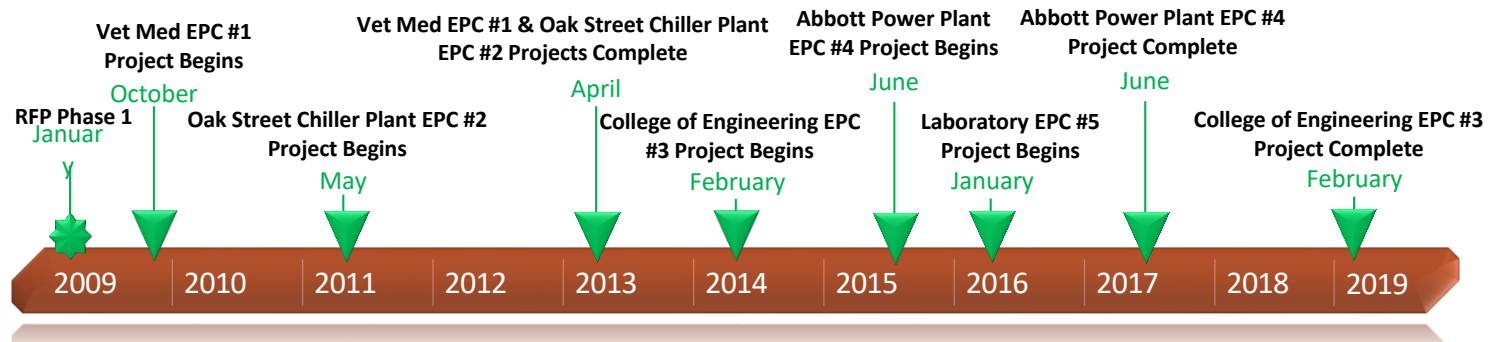


# History at UIUC

- **Total Completed: \$75M**
- **Guaranteed Savings to Date: \$40M**
- Buildings Completed: 11 (4 Projects)
- Estimated Deferred Maintenance Reduction: \$40M

## Range of Scope

- AHU Replacement
- New BAS Controls
- Energy Recovery Strategies
- Large Tonnage Chiller Installation
- Roof / Window Replacements
- Clean Room Installation
- Laboratory Controls Installation
- Fume Hood Replacement
- Building Envelope
- Process Water
- Cooling Tower Installation
- Lighting Retrofits



**Customer Focus • Diversity • Environmental Stewardship • Innovation • Operational Excellence**

# Performance: College of Veterinary Medicine

- Annual Average Reductions
  - Chilled Water: 21%
  - Electric: 11%
  - Steam: 38%
  - Water/Sanitary: 50%
  - **\$1M+ Annual Savings**
  - **55K+ Annual mmBTU Savings**
- Project Benefits
  - Est. Deferred Maintenance Reduction: \$25M
  - Indoor Air Quality Improvement
  - Improved Lighting Quality
  - Reliable & Automated Mechanical Systems
  - Improved Occupant Comfort



**Vet Med Basic Sciences Building**



Trust • Respect • Accountability • Integrity • Teamwork • Safety • Perseverance

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**Veterinary Teaching Hospital**



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**Clinical Skills Learning Center**



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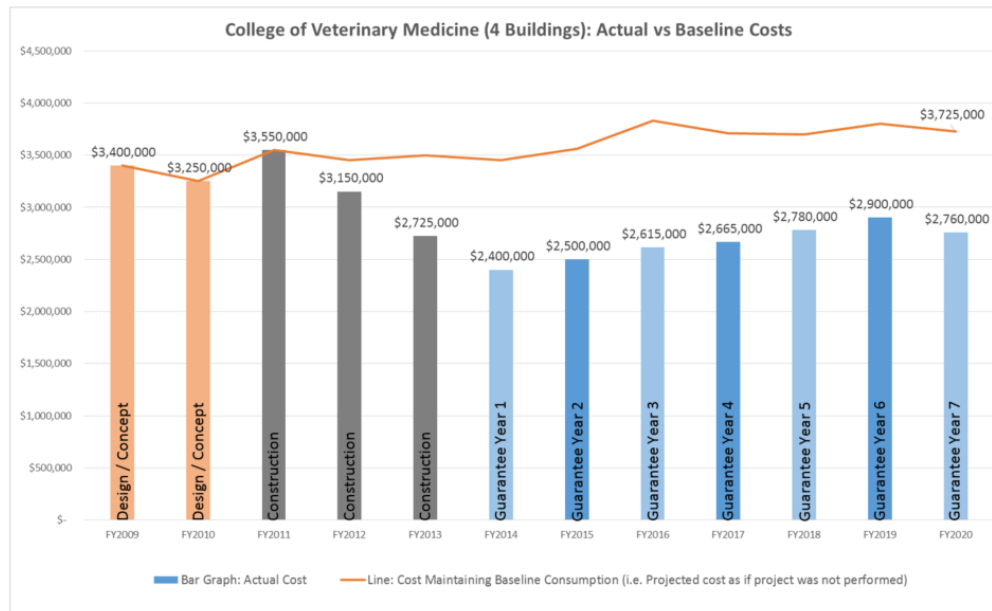
**Vet Med Chiller Plant**



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# Performance: College of Engineering

- Annual Average Reductions
  - Chilled Water: 38%
  - Electric: 9%
  - Steam: 41%
  - Water/Sanitary: 90%
  - **\$2.1M+ Annual Savings**
  - **95K+ Annual mmBTU Savings**
- Project Benefits
  - Est. Deferred Maintenance Reduction: \$15M
  - Significant Water Consumption Reduction
  - Indoor Air Quality Improvement
  - Many New Fume Hoods
  - Reliable & Automated Mechanical Systems



**Seitz Materials Research Laboratory**



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Loomis Laboratory of Physics



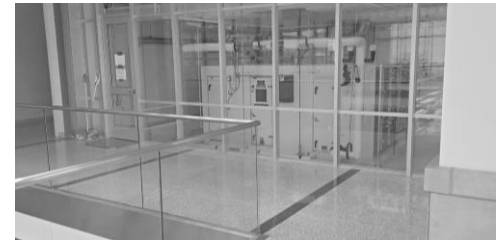
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**Superconductivity Center**



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**Engineering Sciences Building**

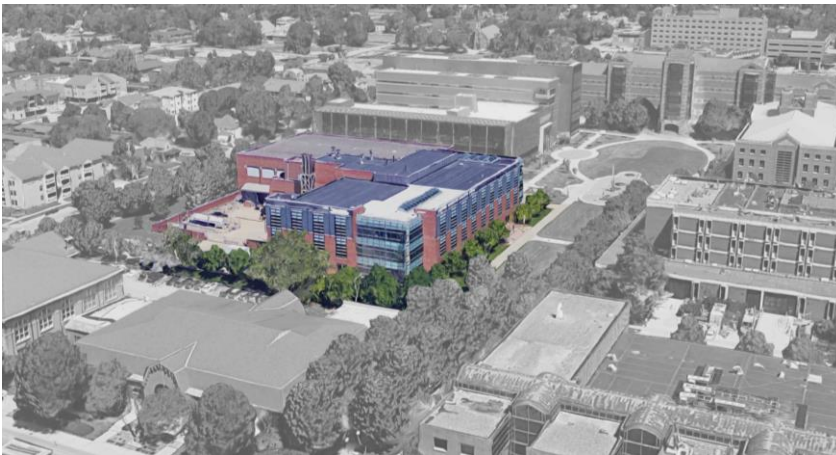


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**Micro & Nanotechnology Laboratory**

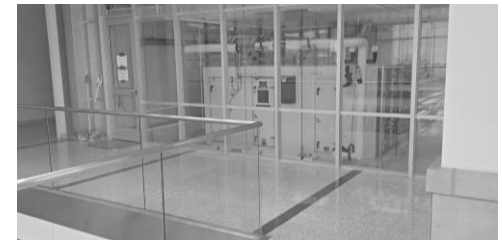
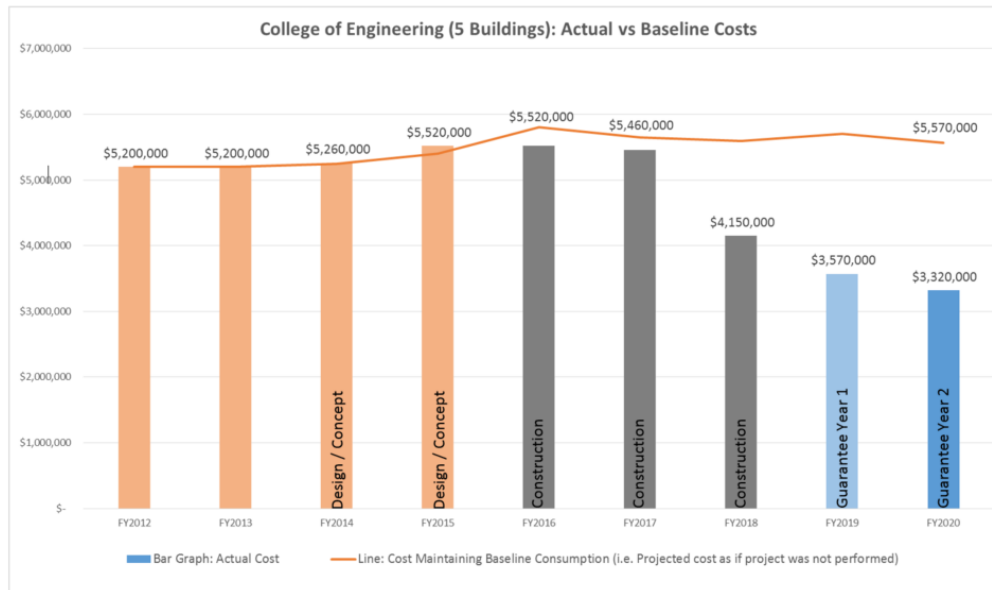


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## Current Project: Laboratory Facilities

- Total Project Value: \$33.6M
- Number of Buildings Affected: 6
- Annual Guaranteed Savings: \$2M per year
- Estimated Deferred Maintenance Reduction: \$27M

## Funding

- Utilities & Energy Services: \$16M
- Provost / Deferred Maintenance: \$12.7M
- Department: \$4.9M



*Chemical & Life Sciences Lab*



*Roger Adams Lab*



*Beckman Institute*



*Forbes Natural History Building*



*Illinois Sustainable Technology Center*



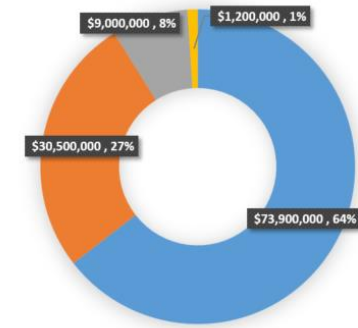
*Natural Resources Studies Annex*



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# Overall Funding Status

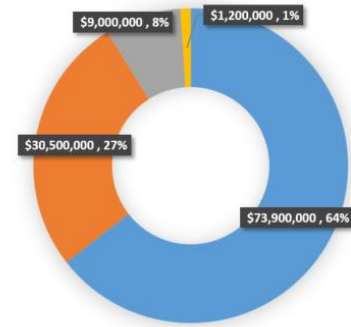
- Total Funds Committed to Program (All 5 Projects): \$110.5M
  - Utilities & Energy Services (Including Borrowed Funds): \$73.9M
  - Provost / Deferred Maintenance: \$30.5M
  - Department: \$9M
  - Grants: \$1.2M
- Remaining Funds for Future Projects: \$4M



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## THIS IS NOT ENOUGH

*Future Planned Projects Estimated Total: \$95M*

*Deferred Maintenance Backlog Pushing \$800M*



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# Future EPC Plans



**Facilities & Services**

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# Large Scale EPC Projects

- Next Laboratory Facilities Project
  - Estimated Project Cost: \$40M
  - Number of Buildings Affected: 7
  - Projected Annual Savings: \$1.5M
  - Target Schedule Spring 2021 – Summer 2024

- Future Laboratory Facilities Project
  - Estimated Project Cost: \$33M
  - Number of Buildings Affected: 3
  - Projected Annual Savings: \$1.1M
  - Target Schedule: Spring 2024 – Summer 2027

- Included Buildings
  - Animal Sciences Laboratory
  - Turner Hall
  - Madigan Laboratory
  - Institute For Genomic Biology
  - ACES Library
  - National Soybean Research Center
  - Plant Sciences Laboratory

- Included Buildings
  - Burrill Hall
  - Medical Sciences Building
  - Morrill Hall



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# Small Scale EPC Projects

- Multiple Individual Building Projects
  - Estimated Project Cost: \$22.7M
  - Number of Buildings Affected: 13
  - Projected Annual Savings: \$1.3M



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**Thank You**



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