Energy Performance Contracting (EPC)
What is EPC?

Sometimes used interchangably with the term “ESCO” meaning Energy Service Company.

- **Energy Performance Contracting:**
  - Construction program that provides all of the necessary services and materials required to implement a large-scale, comprehensive energy conservation project.
  - EPCs are unique in that the contract usually carries with it a guarantee from the contractor of a guaranteed level of energy savings.
  - EPC is specifically identified in Illinois Law as a means to hire a single contractor to design and build a project, as opposed to design-bid-build delivery methods.
  - EPC’s must have a payback of 20 years or less according to the statute.
What is EPC?

ECMs have different costs, paybacks and priorities.

• **Energy Performance Contracting:**
  
  ○ Consists of one or more “ECMs” or Energy Conservation Measures.
  
  ○ ECM’s are sub-projects that give decision-makers a menu from which to choose depending on budget, payback and priority.

    ▪ **Example:** Some ECM’s for a building:

      ○ LED Lighting for Hallways and Common Areas. (3 – years)
      
      ○ Replace HVAC with more efficient unit. (5-6 years)
      
      ○ Replace single-pane windows with double-pane energy efficient windows. (20 – 30 years)
What is EPC?
Payback essentially funds the project over time.

Energy Performance Contracting:
- Since ECM’s have the potential to reduce or avoid energy costs, the payback associated with the project typically provides cash flow to finance the project.
- Again, contractor guarantees cost avoidance.
- Statutory Required to have a payback of 20 years or less.
EPC – A Simple Example

• You want to install solar panels on your house to avoid future electricity costs and supplement your bill.
• Cost of contract: $25,000
• Contractor guarantees you an annual savings of $1,750 per year in electricity savings.
• You have to borrow the money to finance the project.
• Using this simple model, can you afford to borrow the $25,000 from a bank to finance the project?
• Answer is yes. At $1,750/year, you would pay back your loan in less than 15 years and keep the savings going forward.
• Multiple Buildings in Program Plan EPC 003 – Engineering Campus
• ECM’s have varying paybacks, and some parts of the projects may have no payback (Roofs, Duct work, etc.)
• Budget Estimate for Program Projects ~ $128 M
• Overall Funding to Date ~ $70 M
  o Utility Budget ~ $40 M “Internal Loan” (repay over 10 yrs.)
  o UA Reserve ~ $29 M (5 years FY 15—FY 19)
  o AFMFA ~ $1 M (@ Loomis Lab)
• Potential Additional Funding
  o Auxiliaries / Departmental
  o Deferred Maintenance
  o Potential Energy Grants
  o Campus Funds
  o 3rd Party Financing (Identify Debt Responsibility)
EPC– Funding Options

• How to Get to Recommended Project Cost of $45 M

  ○ Scenario #1
    - Provide Add’l Campus or College Funds ~ $12.5 M (AHU Repl)
    - Impact: Relieves UA Reserve and Internal Loan Deficits
      - Allows Funds to be Utilized for Future EPC Projects

  ○ Scenario #2
    - Escalate all UA Reserves to Reach ~ $41.0 M
    - Impact: No UA Reserve Funds Available for Future EPC Projects
      - Internal Loans May need to be Utilized to Execute Future EPC Projects
      - Includes Expanded Ventilation Strategy Priority Options 1, 2, 3, but May Not Include Expanded Ventilation Scope for MNTL and Supercon; Additional Scope Reductions May be Necessary
EPC Project #3 – Funding Options

• How to Get to Recommended Project Cost of $45 M

  o Scenario #3
    ▪ Borrow Funds to Execute Necessary Replacement Work
    ▪ Impact: Loan has to be Repaid

  o Scenario #4
    ▪ Limit Project to $32.4M
    ▪ Impact: May Not Resolve Facilities’ Needs
      ▪ Expanded Ventilation Strategies may not be executed at ESB, MNTL, or Supercon. Expanded Ventilation Strategies could be pursued at Seitz MRL and Loomis Lab, but approximately $2M in cuts will be necessary to get under $32.4M. Detailed scope evaluation will continue for partial building Expanded Ventilation options.

  o A Combination of the Above Scenarios Could be an Option
Summary

- Simply stated, energy conservation projects can be funded by leveraging future energy cost savings and/or cost avoidance.

- Real world complications arise as non-energy conservation projects are added to relieve DM backlog and funding sources dry up.

- In our fixed budget world, what happens if energy prices increase? Answer is that the potential for a cash payback becomes elusive.

- Budget cuts jeopardize our flexibility to fund EPC projects.