

Applied Solutions' Technical Advisory Council holds periodic online collaborative webinars to leverage the expertise of local government staff to support the design, development and implementation of energy, water and transportation public projects. Each webinar is captured in a case study format and shared with all Applied Solutions members at www.appliedsolutions.org.

Applied Solutions Technical Advisory Council Case Study – Allegheny County Strategic Facilities Plan, October 18th, 2012

“In my job, I find that I consistently learn more from my counterparts and peers across the county than any other source. The panelists on the Applied Solutions Technical Advisory Council shared the sage perspective that is earned through real-world experience. It was solid, actionable, constructive input. Beforehand, I had privately wondered whether being the subject of a very public online discussion or our biggest sustainability challenges was putting myself into the proverbial hot seat. But the webinar and feedback was the best thing I have done this year to clarify my thinking about our strategy and actions moving forward.”

-Jeaneen Zappa, Allegheny County, PA

Jeaneen Zappa: Sustainability Manager, Allegheny County, PA

Eric Coffman: Senior Planner, Energy Programs, Department of Environmental Protection, Montgomery County, MD

Susanna Sutherland: Manager, Office of Sustainability, Knoxville, TN

Discussion Questions:

1. How are you evaluating building performance, and what approach would you recommend for a complete assessment?
2. How do you approach facilities review/audits?
3. What are lessons you learned in trying to lay out a plan and strategy for facilities asset management/upgrades?
4. How did you set your budget?
5. What is the most effective structure for facilities operations or what are challenges you have identified with various operations facilities structures?

Responses:

1. How are you evaluating building performance, and what approach would you recommend for a complete assessment?
 - Use a software package that lets you integrate easily.
 - Look at more full lifecycle fuels and fuel alternatives.
 - Do not just looking at the kilowatt hours, but also look at the comfort and needs of the building occupants.
 - Get data computerized, eliminate paperwork.
 - Knoxville uses:
 - CMMS- Computerized Maintenance Management System through the public building authority.
 - Tritium System, which tracks temperature control at all facilities- which is in direct response to their energy service performance contract measures.

- Utility Track Plus- in which the sustainability manger and staff track all dollars and carbon of all building usage, which then speaks to the portfolio manager.

2. How do you approach facilities review/audits?

- Level 1 physical assessment on all top accounts- good approach if you have all of the resources.
- Make sure you have the facility: uses, capital plans, lease structure and timeline, and any major maintenance projects lined up before you start allocating your audit resources, or even your ESCOs assessment resources.
- Use maintenance and a renovation cycle simultaneously to build efficiency when doing the overall renovation or when bringing up to codes.
- Occupant patterns or how occupants use the buildings or will use the building in the future.
- Approach the facilities review in 3 compartments, this applies if you have an external auditor or you are using in-house.
 - First: physical condition; Second: functional condition; Third: whole footprint - including utilities, and landscaping.
- Take inventory of plug loads and integrate your department's technologies, services and, IT people into that process.

3. What are lessons you learned in trying to lay out a plan and strategy for facilities asset management/upgrades?

- Today's plan usually ends up being re-done completely because things change.
- Make sure you are carefully aligning how the portfolio is going to look today and the vision for the portfolio in 10 and 20 years to make sure you are planning for the uses and the assets.
- Future proof things for new technology.
- Have a holistic lifestyle of not just a building, but a portfolio building to set up and maintain strategy.
- Upgrades come after the strategy; the focus is on the strategy.
- Over communication with building owner is key in facilities upgrades and planning for facilities.
- Communication with the press- let them know what the savings are on the backend.
- Educate the occupants. Even if you hire an ESCO.
- Keep an eye on your measurement and verification, especially if you have out sourced.
- Taking someone's word for it on the energy savings is never a good idea.
- Use your data to make your long-term plan, so when you have your audit results in front of you and you are figuring out how much you want to bond for- those strategies should come directly from facilities audits.

4. How did you set your budget?

- Do not set budgets or do upgrades until you have audit in hand. That will help you determine your strategy in a 1, a 5, or a 10 year increment.
- If you are using in-house or even if you're doing an out sourced audit, the staff time to do the audit and analyze the results should be factored in.

- Work directly with your finance department to find out what tolerance level they are going to have for allowing you to perform renovation maintenance and annual maintenance.
 - Feel out your finance department and your mayor and figure out who is going to back the comprehensive strategy.
 - Use operating budget as a baseline.
 - Use your capital budget for your long-term planning based on what comes back from your audit data.
 - Start with data and work through politics and use operating and capital budget.
 - Whether you have a formal office of management budget or just a department of finance or both its just about getting them to the table first- this is essential.
 - The key three principals to essential energy management in the realm of government and how it intersects with budget are:
 1. Reduce dependence on capital improvement budget-those funds should be reserved for long term modernization and deeper green retrofits where you can't just use ESCO services.
 2. Shift as much of the portfolio to performance based mechanisms as possible.
 3. Get budgeters thinking in terms of results based budgeting instead of just making the number match. Not only in the numbers are you going to see in retrofits today but also in the future and what costs you are going to receive in the future. This is not just a matter of energy savings; you have productivity in this and avoided future costs, maintenance savings.
5. What is the most effective structure for facilities operations or what are challenges you have identified with various operations facilities structures?
- Whoever is making decisions is the one that needs to be paying the utility bills.
 - Outsourcing your maintenance can make it difficult to reconnect what changes will be done on the building.
 - Have someone from each department: top, middle, and bottom, to represent the team.
 - Getting that team together on a monthly basis is key.
 - Contractors should always be the last one on your structure.
 - Departmentalize some of those utility costs- have back and forth from departments that ties in with behavior change.
 - Keep connections with people making changes with people who are actually using the facilities.
 - Use a team approach, and centralized resources.
 - Much of the saving opportunity is at the ground level in terms of how the buildings are operated, not just behavior, but their overall maintenance.
 - Have the people who are actually running the buildings trained, educated, and accountable for those day to day decisions.
 - Standardize training; make sure building operators know the systems.

Extra Questions:

-Should I use space utilization? Not just the occupant use pattern?

- Yes, absolutely.

-What is most effective in creating consistent behavior change?

- Create a challenge with a reward, employee appreciation, workshops with information, or a newsletter from the mayor or a periodic email blast.
- You can't win everyone.
- Education
- Break metrics down to what people in operation care about.
- Allow teams within facilities which are generally cross disciplinary to make proposals on how to reduce energy consumption and share the financial rewards.

-How do you approach prioritizing?

- Use a portfolio approach to energy consumption.
- Figure out what are your biggest buildings in terms of size, energy consumption, cost, and fuel distribution.
- Take all pieces to see where your target is- it will become clear with budgeters and other teams.
- Start with a spreadsheet and make a matrix and use quick color coding of priority.
- Use a policy and procedures manual for when different systems get looked at.
- Set up departments with someone to look at big picture.
- Don't make it complicated- whatever systems fit you best.

Comment from audience: It is important to include maintenance plans and procedures when you're deciding what measures you want to implement because maintenance practices significantly affect the net benefit measures over time.