

ESPC use for buildings at multiple locations

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GSA Region 7

Defining Success

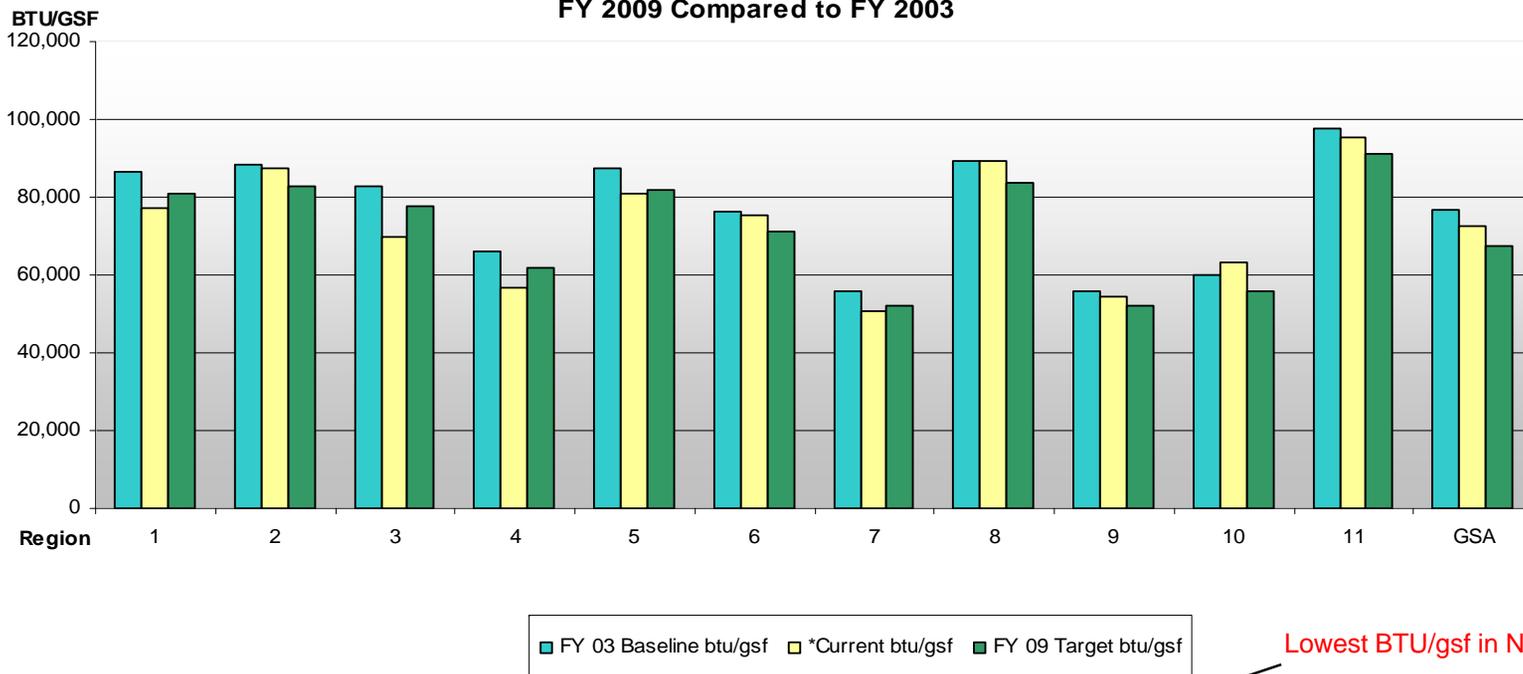
- What does success look like
- At age 4 success is Not piddling in your pants.
- At age 12 success is Having friends.
- At age 17 success is... . Having a driver's license.
- At age 35 success is. Having money.
- At age 50 success is Having money.
- At age 70 success is Having a driver's license.
- At age 75 success is Having friends.
- At age 80 success is Not piddling in your pants.

What does success look like?

- Consider the objectives you want your ESPC contract to accomplish.
- These may include the following:
 1. Improve building equip and performance
 2. Reduce utility and maintenance costs
 3. Obtain new equipment
 4. Secure renewable energy supplies

GSA ENERGY PERFORMANCE

Energy Independence and Security Act of 2007
FY 2009 Compared to FY 2003



Lowest BTU/gsf in Nation

Region	1	2	3	4	5	6	7	8	9	10	11	GSA
*Current btu/gsf	77,327	87,484	69,933	56,952	81,102	75,366	50,567	89,211	54,250	63,410	95,386	72,419
FY 03 Baseline btu/gsf	86,638	88,386	82,934	66,080	87,643	76,123	55,855	89,474	55,997	59,853	97,495	76,822
% Change	-10.7%	-1.0%	-15.7%	-13.8%	-7.5%	-1.0%	-9.5%	-0.3%	-3.1%	5.9%	-2.2%	-5.7%
FY 09 Target btu/gsf	80,759	82,561	77,469	61,724	81,957	71,107	52,174	83,580	52,306	55,914	91,320	67,637

Exceeds FY09 Target Reduction by -3.1%

We Feel that our low energy consumption per square foot is a result of blanketing the entire region with ESPCs between 2000 and 2004. These are detailed on a later slide. The energy reduction since FY03 is largely due to having a complete advanced metering system and a full-time contract analyst position monitoring it.

Group your buildings

- Do this logically –think through the process. This will help do the following things:
 1. Avoid ESPC contractors “cherry picking” just the easy and profitable energy conservation measures, and avoiding the rest. (Avoid- Just all lighting projects)
 2. Make the contractor take “the good” and “the bad” so needy projects can be cross-subsidized. (Lighting payback helps pay for longer payback chiller upgrades)
 3. Minimize the contractors mobilization and travel time spent to visit and work the sites.

Consider Geographic nexus

- Group buildings together by proximity to each other to facilitate the work.
- You are not limited to this if you have some other business considerations you are acting upon.
- You may wish to “group” based on type of work to be accomplished. (Solar, roofs, HVAC, etc.). I don't recommend this. The ESPC contractor is supposed to identify the type of work that is needed. (They are the expert). Don't put the cart before the horse.
- But -each situation is unique and has its own requirements
- You may wish to group based on types of controls systems installed, if controls is a large part of the work.

Grouping -Continued

- Mix of buildings some with good savings some with more complex, technologically risky and less favorable paybacks.
- This keeps buildings needing work from being bypassed.
- Geographical grouping also allows for the more efficient capture of rebates and financial incentives from local utilities and jurisdictions.
- Why not use GIS? Think ahead.

Things to look out for

- Make sure the work is coordinated with those operating the building. These folks know what the buildings needs and what its problems are. Don't overlook their contributions.
- Make sure the ESPC contractor has considered all possible ECMs. (Some contractors come from industry backgrounds such as “lighting”, or “controls” and just want to sell you what they know, or are familiar with) Make them justify the ECMs they did not recommend. Use life cycle costing to do this. Expand the thinking on ECMs.

Issues -continued

- ESPC contractors will underestimate or under represent the potential for savings. They do this so if they err they will not have to write a check for the shortfall. A balance must be struck.
- Remember it is a performance contract with a guarantee.
- Make them explain the statistical confidence factors they used to arrive at the numbers they provide, and measure for realism.

Issues continued

- Trust but verify.
- Obtain independent equipment cost estimates. Use GSA schedule pricing where advantageous.
- Make sure that no cost/low cost measures are included in the audit report.
- There may be a problem of the contractor not recommending “all potential measures”. How does one evaluate what has not been proposed but possibly should have been.

- I think this ECM was proposed to us once



Working with ESPC Contractors

- Contractors have lots of expertise use it.
- Don't follow or accept recommendations blindly.
- Ask questions until you understand it.
- Negotiate what is fair and reasonable for both parties.
- Provide data and information useful to make the project a success, coordinate and communicate.
- Use a team approach to contract and proposal review.
- Preliminary Audits are scoping tools only.

continued

- The investment grade audit puts the government on the hook to pay for work done in the audit stage. There is no free lunch.
- Review ECMs “item by item” and obtain maximum energy and cost savings for the mix of ECMs ultimately selected.
- It is not enough to just put in new equipment- people have to know how to operate it- Provide training.

Continued

- A word about the value of advanced metering, and the value of monitoring operation of buildings.
- Baselines and M&V
- The problem of renewables and Power Purchase Agreements
- How the financial benefits and numbers work.

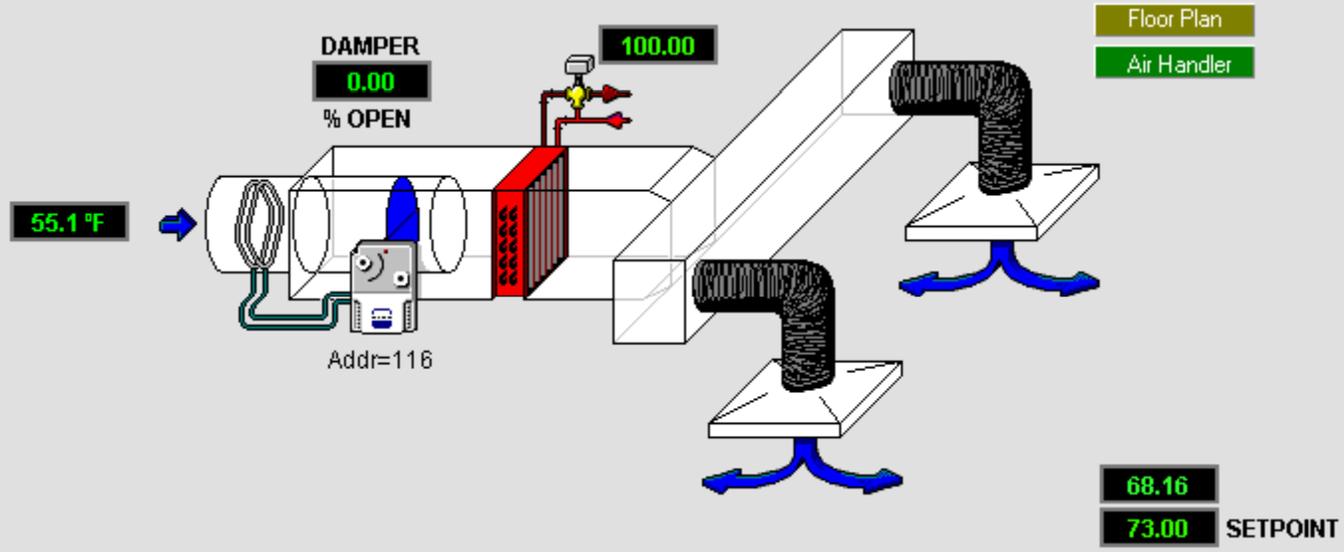


03/31/09 : 12:00 PM

- Federal Courthouse
- AHUs
 - Floorplans
 - Basement
 - First Floor
 - Second Floor
 - Third Floor
 - Fourth Floor
 - Fifth Floor
- Water Systems
- Schedules

Rooms 225A & 225B

VAV 6-20



Current Status		Setpoints		Setpoint Control	
Air Flow (CFM)	170.00	Zone (°F)	68.18	Minimum Flow (CFM)	170.00
Flow SP (CFM)	170.00	Cooling SP (°F)	73.00	Maximum Flow (CFM)	585.00
Pressure (in. WC)	0.03	Occupied Mode	OCC.	Reheat Flow (CFM)	170.00
Box Status	Heating				
				Controlling Setpoint	Local
				Remote Setpoint (°F)	78.00 °F

Everything old is new again

- Day lighting
- Building orientation
- Courtyards
- Natural ventilation and operable windows
- But –technology can help.
- LED lights and automated lighting controls
- On site distributed power.

Continuing our theme of success

- What I tell my Grandkids



Thank You for listening.

- Questions?