

Utility Data Collection Service

Federal-Utility Partnership Working Group

4 May 2006

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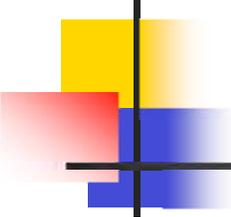
David Dykes, Industrial Segment Mgr, Federal, GPC





Topics

- Background
- Commodities Metered
- Data Collection
- Cost
- Results



Background

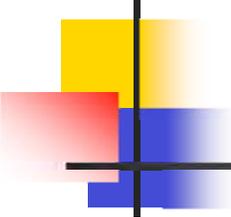


- Robins AFB (RAFB) needed to:
 - Control electricity usage and considered Demand Control
 - Track and bill base tenants for energy usage
- Metering Project Originated in 1993
 - \$\$ requirements limited interest
 - Developed criteria for available \$\$
- Energy Policy Act 2005:
 - All facilities sub-metered by 2012
 - \$\$ no longer restricts metering project

Metering Criteria prior to EPACK 2005



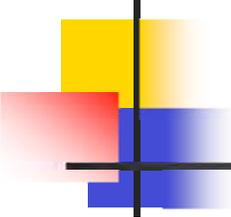
- All New Construction – (per Air Force Instructions)
- “Big Users” - Reimbursable Customers
 - Including Category C Services
- All Other Reimbursable Customers
 - Medical; DRMO; AAFES; Commissary
- Housing – to be privatized
- High Profile Customers
 - Non-reimbursable



Metering Criteria after EPACT 2005



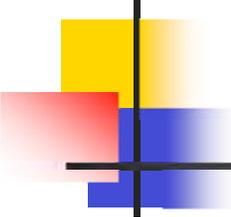
- Continued with Criteria set prior to EPACT 2005
- Added all remaining facilities
 - Sq Ft > 2,000 metered first
 - Added Water/Sewage meters to list



Commodities Metered



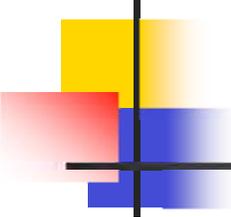
- Power (before EPACT 2005)
 - Electricity – 87% complete
 - Gas – 55% complete
 - Steam – original meters not maintained; projected start of FY07 for new sub-meters
- Water & Sewage (added after EPACT 2005)
 - Plants/pump stations metered; sub-meter of facilities projected start of FY10



Data Collection



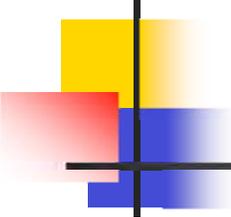
- All meters are advanced meters
- Data is recorded on local data recorders
- 97% Recorders are interrogated on a schedule controlled by RAFB using EnerLink®
- Recorders are interrogated through existing telephone lines, Smart Modems
- System originally installed for Demand Management purpose



Data Collection (Continued)



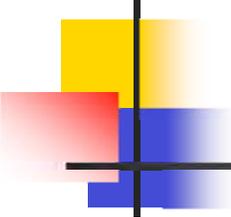
- Nearly 10 years of electric data on some facilities
- As data became available, “non-team player” list was developed
- Buildings of similar size, shifts, and work had vastly different load profiles
- GPC and RAFB team conducted audits
- Findings indicate not all buildings turning off equipment after duty hours



Data Collection (Continued)



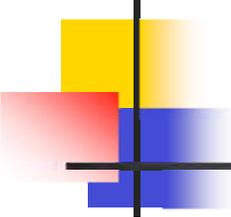
- Emphasis shifted from Demand Control to elimination of kWh waste
- Electric rate rewarded reducing consumption
- Initially, energy usage elevated to agenda item quarterly at CC's staff meetings



Cost



- Metering system installation began in 1993 and is still on-going
- Total cost to date - \$1.8 million
- RAFB's system is currently in its 18th phase
- System currently paid for with "year end money" and Interruptible Service Credits
- RAFB pays a fixed monthly service fee that includes full maintenance, including equipment replacement



Meter vs. Formula

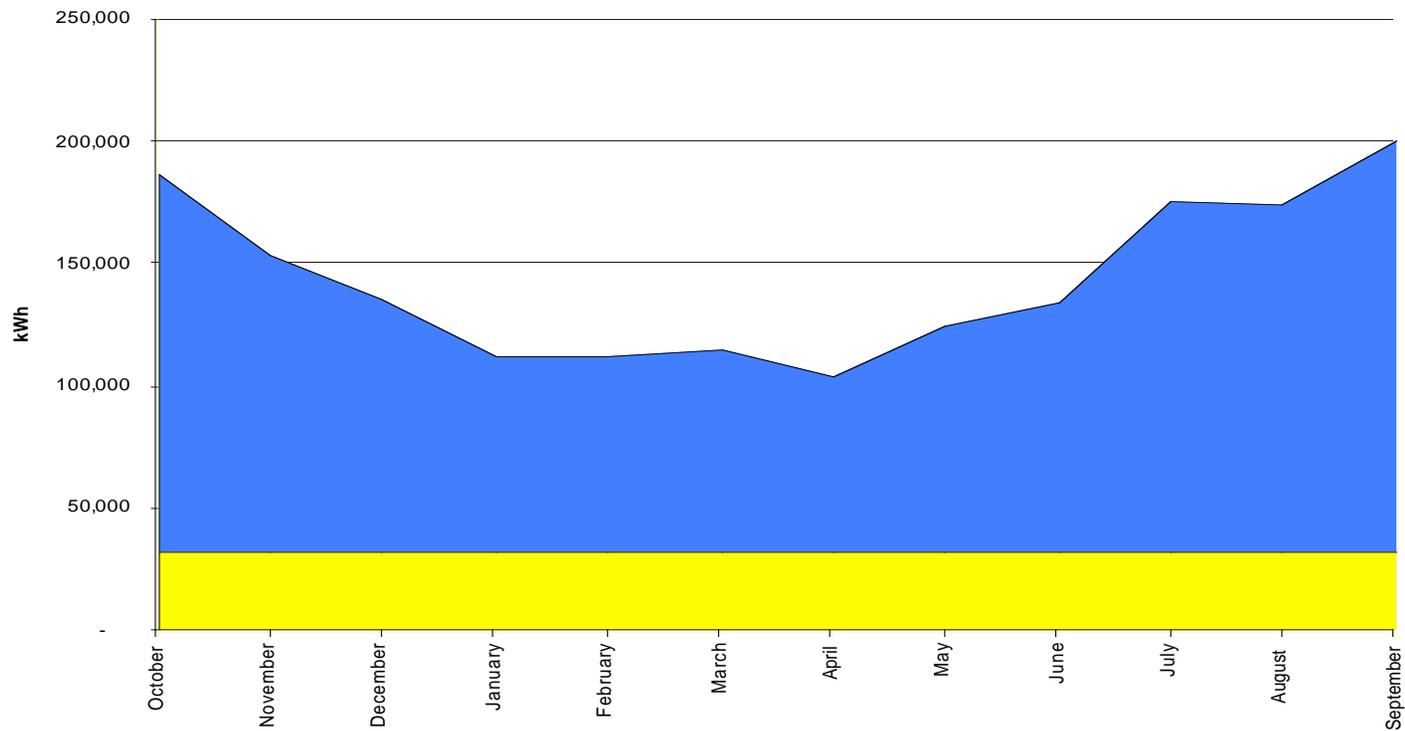


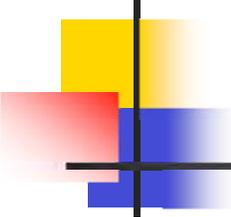
- Building 1555 – Electricity
 - Home to 78 CEG/CC; 78 CES
 - Approximately 90,000 square feet
 - Administrative space (50,000 sq ft)
 - Shop space (13,000 sq ft)
 - Warehouse space (27,000 sq ft)

Meter vs. Formula (continued)



Bldg 1555 - Electricity





Results



- Meters primarily identified energy usage/waste
- Meters lead to more timely and accurate cost allocation of base tenants
- RAFB estimated in 1995, meters save \$750,000 annually
- Gas meters added in 2004
- Must have a person responsible for interpreting data and alerting facility managers
- Energy conservation/awareness must be supported by management

Robins AFB

Metering Future



- Where does RAFB go from here?
 - EnerLink® replacement
 - New Energy Projects developed from meter data analysis
 - Meet the Energy Policy Act of 2005 metering requirements