

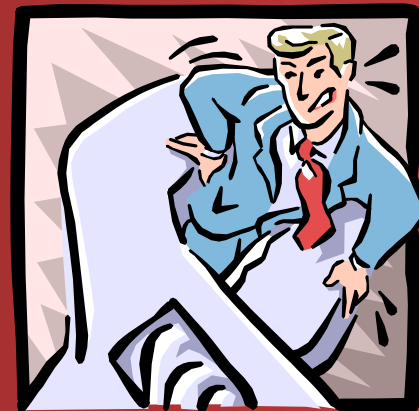
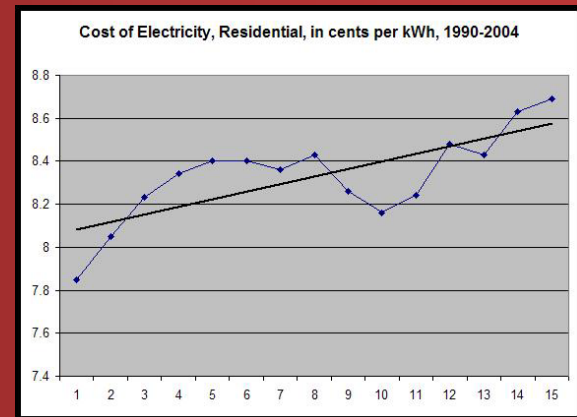
# Getting the Most from Performance Contracting

Presented by  
Wayne Robertson, PE  
Energy Ace, Inc.



# Energy Issues

- Energy Costs Rising
- At the same time, budgets are being cut
- A squeeze on operating expenses
- But also a squeeze on capital funds, making it difficult to improve system efficiencies



# Third Party Financing to the Rescue

- Investments in energy efficiency are among the best an Owner can make
- Lighting projects for example often have a 2-3 yr payback (33%-50% ROI)
- However, if Owner has limited capital funds he can't make the investment and reap the benefits.
- If he is willing to share the benefits, there are others who will make that investment for him.
- Types – leasing, Foundation projects, low-interest State Energy Office loans, Performance Contracting



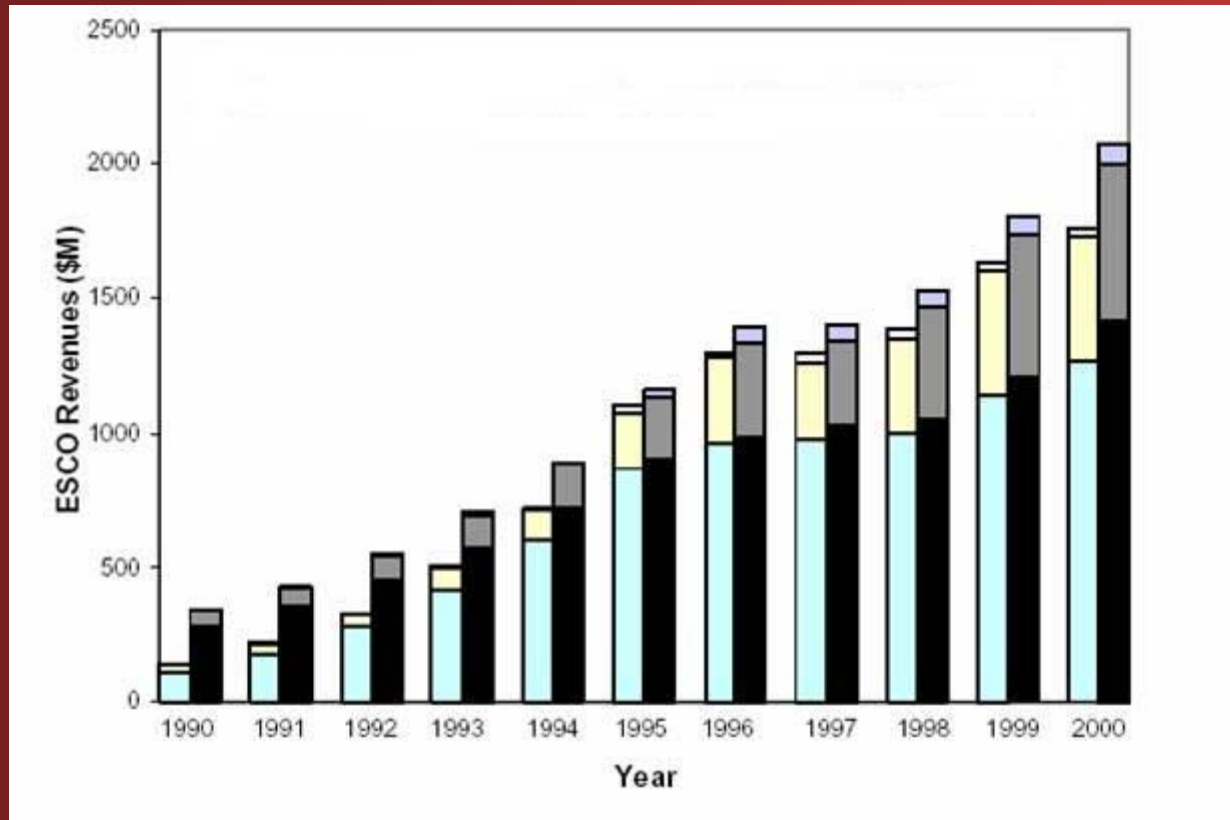
# What is Performance Contracting?

- An agreement to provide energy retrofit projects to an Owner with the costs repaid from savings.
- The Contractor (ESCO) provides energy analysis, design & construction, guarantees the savings, arranges financing and provides O&M, training and program administration.

# PC in SC

- Widely used in K-12
- Used by some private Colleges & Universities
- Now Getting Started in State facilities in SC and NC
- Nationally, PC widely used in Federal projects

# Performance Contracting Growth



# 8 Components of Performance Contracting

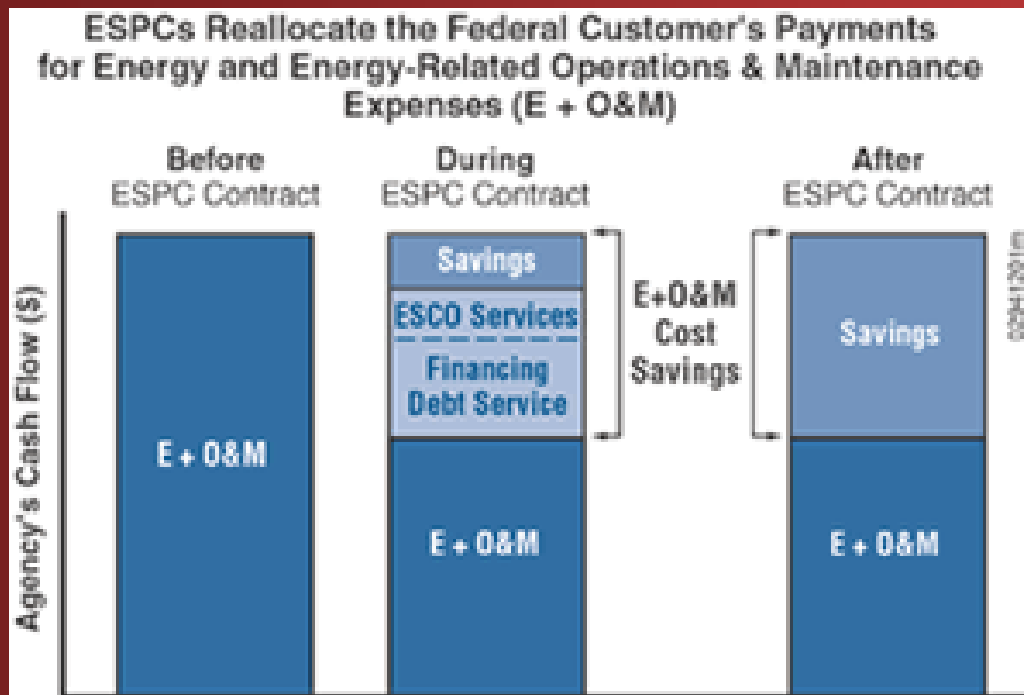
1. Energy Study – to identify opportunities
2. Engineering & Design of Projects
3. Financing
4. Construction & Installation
5. Training
6. Operate/maintain – to assure continuance of savings
7. Administer – to monitor utility bills & savings
8. Guarantee of Savings



# Performance Contracting Flow Chart



# The Essence of PC



# Common PC Projects

1. Lighting usually #1
2. Controls Retrofits
3. VFD and Motor Replacements
4. HVAC Upgrades

These usually have good paybacks,  
especially lighting

# Common PC Projects

- Good payback projects are often used to help pay for long payback projects
- Examples: Lighting with a 5 yr payback offsets HVAC project with > 10 yr payback or even non-payback projects like new roofs or security systems

# Benefits of Performance Contracting

- Excellent solution if you have facility retrofit needs but limited funds
- Turnkey Design/Build Program
  - Energy Analysis
  - Design & Engineering, Construction
  - Ongoing O&M Services
  - Training
- Guaranteed Savings
- Modest Upfront Costs
- Other Needs (comfort, code, IAQ, modernization) can be addressed

# Disadvantages of PC

- Loss of Control of Projects
- Loss of Control of Costs
- Hidden or High Costs
- Need for Specialized Technical Knowledge to assure equity

# Recipe for Successful Performance Contracting



# Main Ingredients

1. Appropriate M&V Plan
2. Proper Baseline
3. Reasonable Handling of Adjustments to Baseline
4. Energy Conservation Measures that are practical and workable
5. Savings Projections that are realistic, achievable and verifiable
6. Fair Contract

# Measurement & Verification

## Three Factors to Consider

1. Cost and Savings Magnitude
2. Technology-specific requirements
3. Risk allocation between buyer and seller

# IPMVP

The International Performance Measurement & Verification Protocol is the generally accepted guideline

- It describes savings determination techniques
- It advocates disclosure of data and analysis so that an independent party can verify savings determined by another

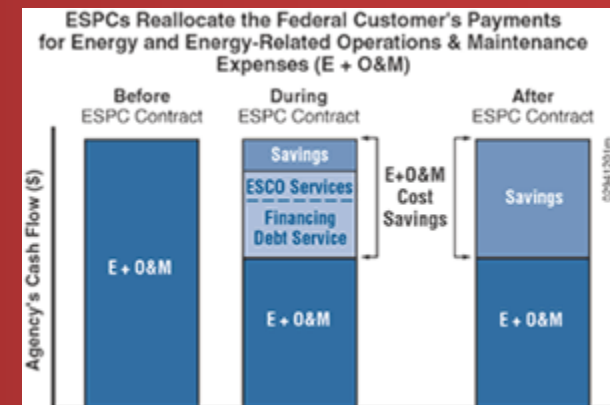
# Four M&V Options

- A. Partially Measured Retrofit Isolation
- B. Retrofit Isolation
- C. Whole Facility
- D. Calibrated Simulation

Stipulated Savings, by itself, is not allowed. In Option A, some but not all parameters may be stipulated.

# What Really Happens

- Much has been written about M&V
- M&V is not free
- With the Savings Guarantee M&V is required and usually also a Maintenance Agreement
- Often, after the first few years, Owner is satisfied with savings projections and drops all three



# Main Ingredients (Again)

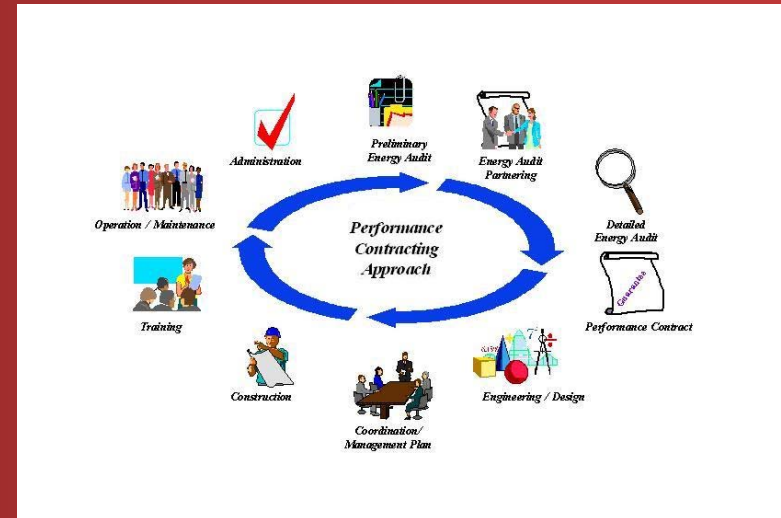
1. Appropriate M&V Plan
2. Proper Baseline
3. Reasonable Handling of Adjustments to Baseline
4. Energy Conservation Measures that are practical and workable
5. Savings Projections that are realistic, achievable and verifiable
6. Fair Contract

# When M&V Is Dropped

- PC essentially converts to a construction project that is financed
- Ingredients 4, 5 & 6 become the most important
- A good contract is critical
- A source of good contracts is [www.escperform.org](http://www.escperform.org)

# Getting to a Good Contract

- Thorough Technical Review of Energy Audits
- Nail down escalation assumptions
- Realistic Costs
- Decide if Avoided Costs are Real for you
- Be sure to consider new costs associated with new equipment



# Summary

- The Perfect Performance Contract delivers one-stop shopping for a complete energy program
- To Make Yours as Perfect as Possible
  1. Use a Competitive Procurement
  2. Include Checks and Balances in the contract
  3. Use a Schedule of Values
  4. Use a contract developed by a neutral party
  5. Closely review savings projections
  6. Be sure O&M savings are realistic and achievable
  7. Treat it like any other construction contract
  8. Have Experts on your side of the table to help all this come true

# More Information

- Receive our free Energy Ace Newsletter
- Many Energy Tips on our website, [www.energyace.com](http://www.energyace.com)
- PC Information at [www.escperform.org](http://www.escperform.org) and [www.naesco.org](http://www.naesco.org)
- This presentation will be posted to our website



