



Energy Services Coalition (ESC) Nevada Chapter

*Local Public Sector
ESPC Training*

August 10, 2017

Why do ESPC Projects Generate Happy Customers?



- **Repurposes existing expenditures and invests in your own facilities**
 - Using Guaranteed Operational Savings to Pay for Facilities Improvements
- **Uses low cost tax exempt financing – no need to use precious capital**
 - Financing ESPC Projects in Nevada
- **Utilizes objective, expert technical guidance to help ensure you have a successful project**
 - The Owner's Representative Role in ESPC

Challenges Many Facilities Personnel Face



- ✓ Competing budget priorities
- ✓ Maintenance problems or comfort complaints
- ✓ Limited technological expertise
- ✓ Demands on staff time inhibit launching new projects

Goal: replace equipment and modernize your facilities in spite of all of the above

Energy Savings Performance Contracting (ESPC)



Projects pay for themselves out of savings!

Energy/Operational Savings are guaranteed...

Capital and Operation Improvements are implemented

Savings accumulate over time...

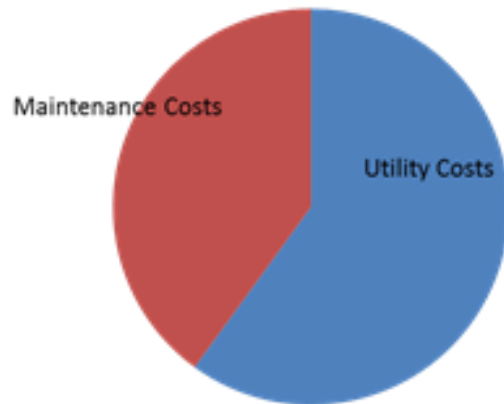
Upgrade your facilities without dipping into your capital budget.

How does annual cash flow work?

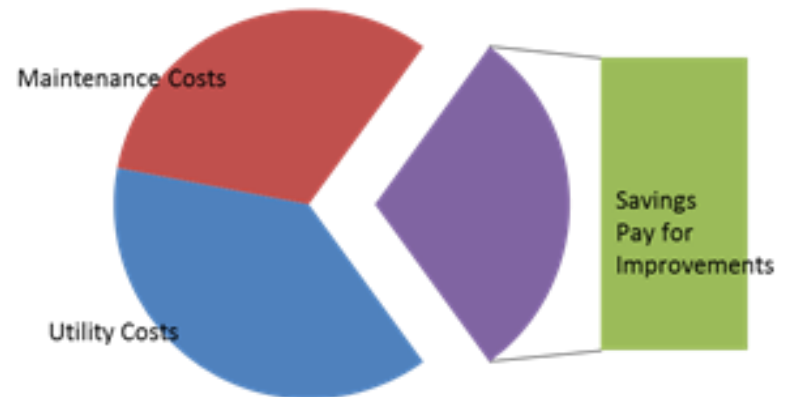


Each year money in your budget is freed-up to pay for equipment!

ANNUAL BUDGET
Before Improvements



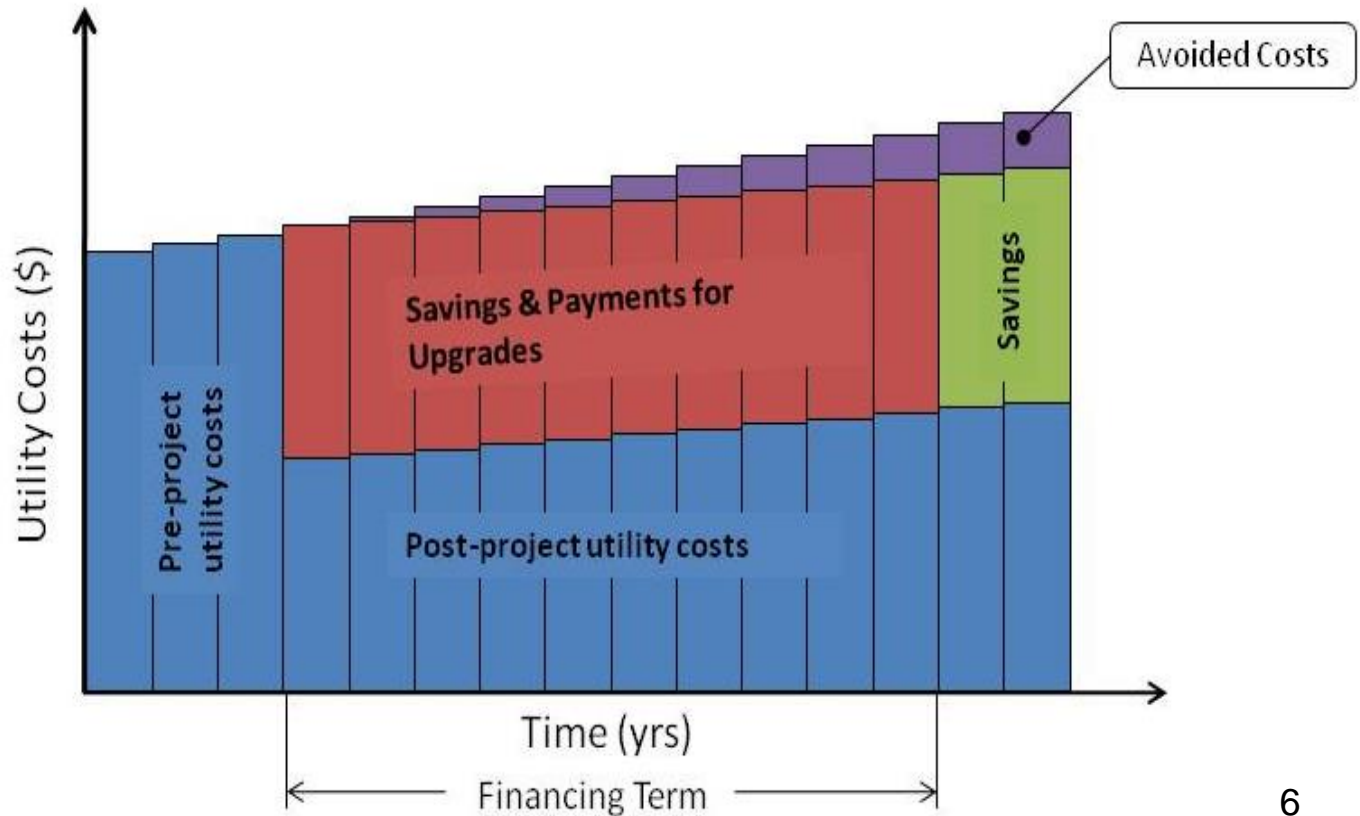
ANNUAL BUDGET
After Improvements



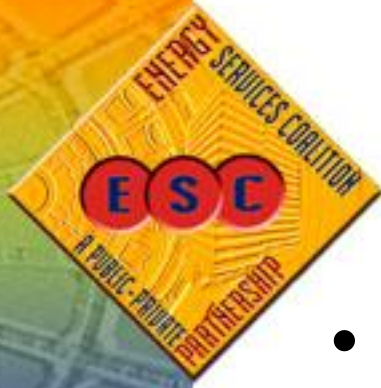
Cash flow over time



The long-term view



Steps to Implementing an Energy Saving Performance Contract (ESPC)



- Contract with an Energy Service Company (ESCO)
 - State PWB has pre-qualified list that State Agencies must choose from
 - Local Government can choose any qualified ESCO
- ESCO brings in a team of specialists to evaluate ECMs

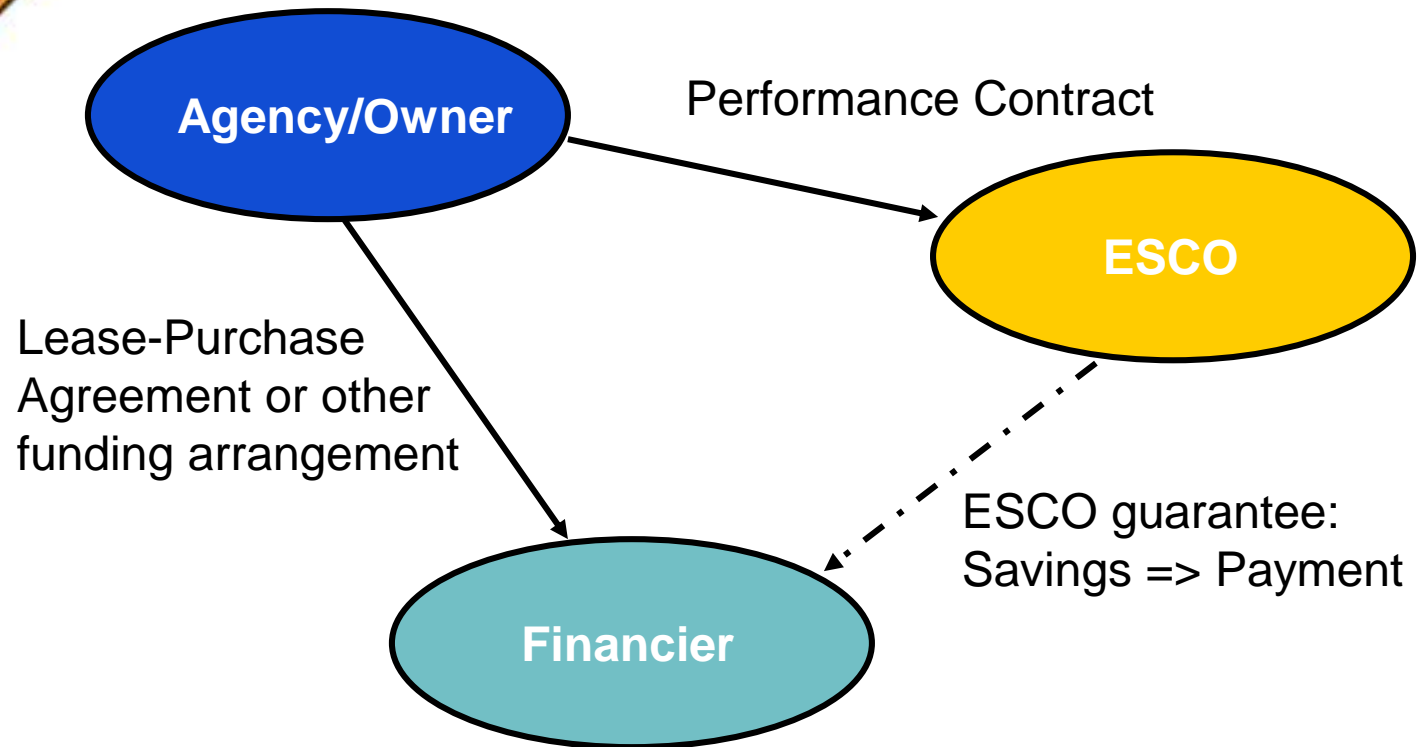
The ESCO Partner



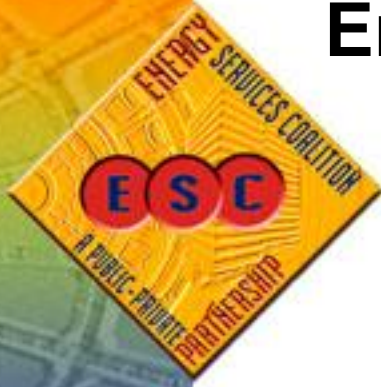
A qualified ESCO combines multiple disciplines into a turnkey approach:

- Identifies and evaluate project opportunities
- Helps arrange financing and other funding sources
- Designs installs, commissions and manage s projects
- Measures and verifies savings
- Trains staff, provides ongoing maintenance services
- Guarantees savings will cover all costs

2 Contractual Agreements Secured by the ESCO Guarantee



Energy Performance Contract Scope



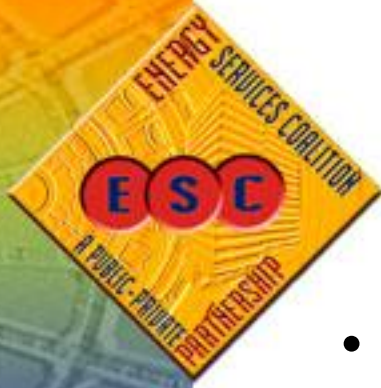
- Energy
- Water
- Operational, utility, maintenance costs
- And beyond (telephone, vehicles and other infrastructure improvements)

Energy Performance Contract Scope



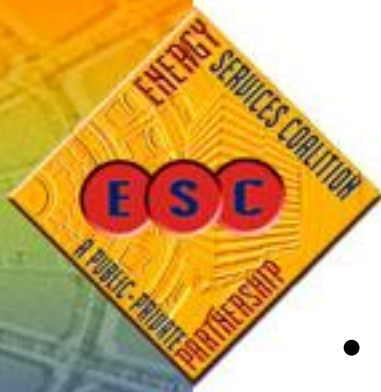
- Lighting equipment replacements
- Building automation system upgrades
- HVAC system improvements
- Boiler replacements
- Plant improvements
- Renewable energy systems
- Landscape irrigation
- Plumbing fixture replacements
- Commissioning
- Utility rate adjustments
- Solar energy systems
- LED traffic and street lighting systems

Nevada ESPC Financing



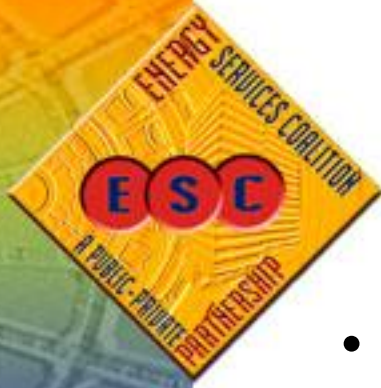
- Financing is separate from the ESPC contract
- Most common financing mechanism in Nevada - Installment Purchase Agreement (“*IPA*”)
- Approvals required:
 - Public Hearing
 - Governing Body Approval (School Board, City Council, etc.)
 - Nevada Department of Taxation
 - Debt Management Commission (financing terms over 10 years)

Nevada ESPC Financing



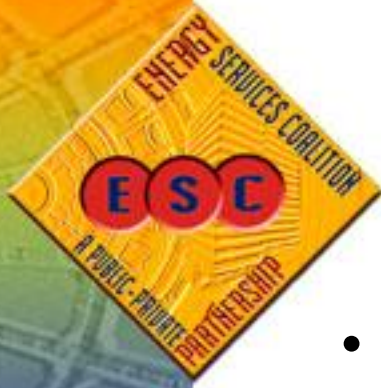
- IPA – 2 party agreement between the governmental entity and an institutional investor (typically, a bank)
- Funds deposited into escrow at closing, disbursed to the ESCO during the installation period
 - No funds disbursed to ESCO without approval of the governmental entity
- Tax-exempt interest rate set shortly before closing and fixed for the term of the financing (typically 15 – 20 years)

Nevada ESPC Financing



- IPA payments begin after the installation period – options include:
 - Level annual payments
 - Payments tied to savings/cashflow (for example, escalated to match future expected energy costs)
- Payments are subject to annual appropriation by the governing body – IPA subject to termination at the end of each fiscal year (not considered “debt”)
- IPA secured by a lien on the energy conservation measures

Nevada ESPC Financing

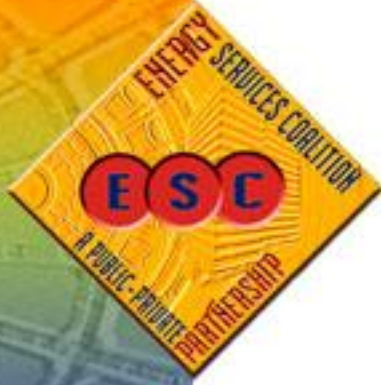


- Parties typically involved in the IPA process:
 - Local government (governing body, administration, finance, facilities, etc.)
 - Bond counsel (legal)
 - Financial advisor – fiduciary to the local government
 - Institutional investor
 - Placement agent – represents the institutional investor
 - Escrow Agent



The Owner's Representative Role in ESPC

History of Owner's Rep Role



1998

- USDOE/NREL hires several former DOE Lab Energy Managers as Project Facilitators
 - Agencies had option of utilizing PFs, but <50% used PFs

2000-2003

- Several audits uncover some deficiencies in ESPC projects.
 - Found that contracts with PFs had higher success rate
 - Savings were achieved, and persisted over time

2004-2005

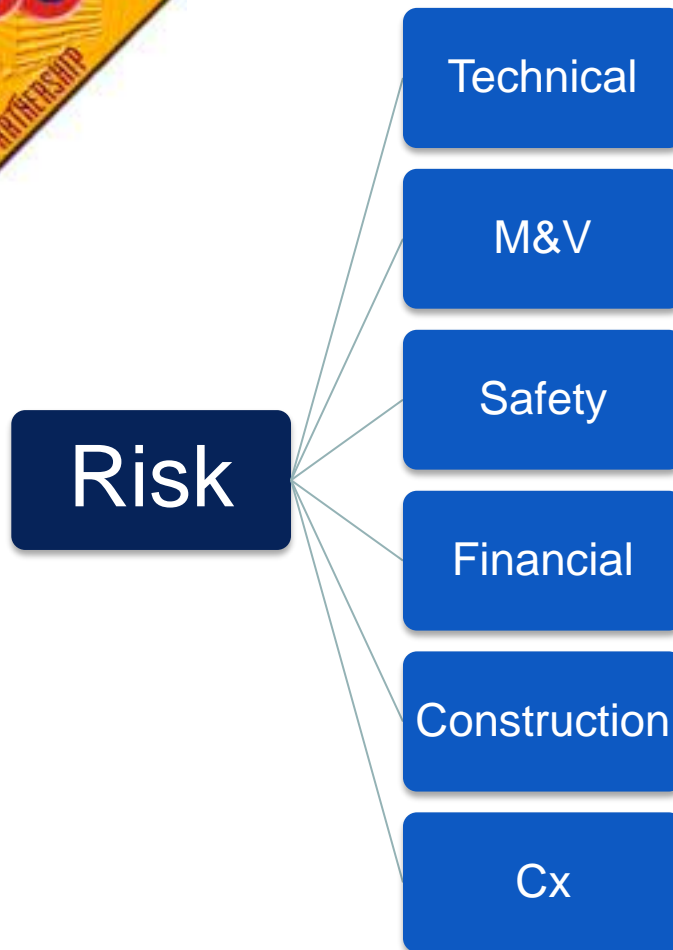
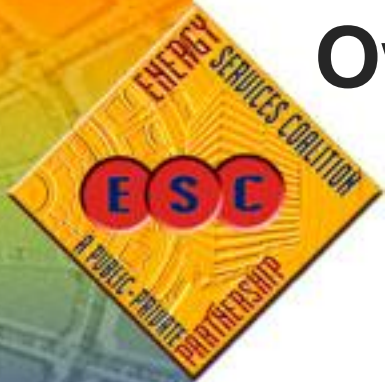
- DOE hired more PFs, required all User Agencies to use PFs if they wanted to use DOE contract
- DOE pays for PF tasks through ESCO selection
- ***States start requiring “Third Party” review of ESPCs***
- ***NRS 332 and NRS 333 require use of Third Party to different extents***

What is ESPC Owner's Representative?



- The Agency's "Independent" advocate in technical, contractual, and financial aspects of ESPC project
- Assist Agencies throughout project identification, pre-qualification, ESCO selection, FGOA, ESA, implementation, "performance period" M&V review
- Qualifications
 - Should be very experienced in EE/ESPC, not a "dabbler"
 - Preferably a PE and/or CEM on staff
 - Should not be doing work for ESCOs and Agencies
- Should be hired by RFQ, then negotiate fees
 - "You get what you pay for" syndrome using low bid RFP
- Fees paid by Agency to avoid conflict of interest
- Project financing will reimburse Agency for costs at ¹⁸ESA

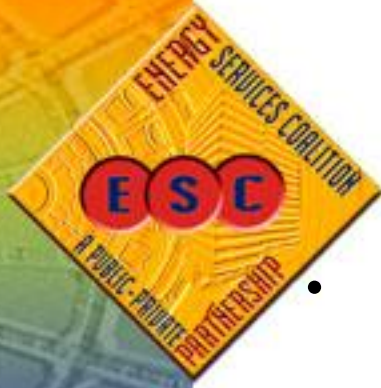
Owner's Reps help mitigate risk



Risk Mitigation

- Team-based approach
- Process-focused, details, details, details (Documentation driven)
- 1st Priority - Maintain health, safety, and integrity of spaces
- Robust M&V plan is sole determinant for achievement of ROI
- Technical & EPC process Expertise enables effective vetting of proposed FGOA measures, costs & contract

Assist in Building the Project Team and ESCO RFP



- Educate **ALL** stakeholders, especially VETO holders
- Use State RFQ/RFP provided by NVGOE to meet Legislation, include “Lessons Learned”
- Review technical data for inclusion in RFP Appendix (e.g., bills, plans, previous reports, O&M wish list, etc.)
- Socialize RFP across “cylinders of excellence” within Agency
- Review Final RFP, assist with issuance to ESCOs
- Attend RFP Pre-bid meeting and answer questions

Assist in review of ESCO responses & selection



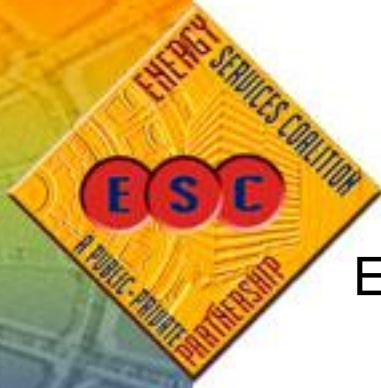
- Review the ESCOs' proposals, including the preparation and submission of comments. Read every page!
- Meet with Selection Committee to explain expectations of the Proposal Review. They must understand selection criteria! Use math, it prevents protests.
- Provide both Qualitative (Cliff's notes) and Quantitative (Just the numbers, M'am) evaluation sheets to help the busy Agency staff make an informed decision.
- Assist Agency with establishing a shortlist of firms to interview. **Consultant does not score, only educate**

Facilitate FGOA (IGA) Development



- Schedule FGOA kickoff meeting, manage expectations, milestones. Discuss 30/60/90% FGOA Submissions (like SD/DD/CD)
 - 30% = Accurate Baseline; energy use analysis
 - 60% = ECM Scope and rough pricing/savings
 - 90% = Draft FGOA, detailed “open book” pricing/savings
- Monitor FGOA progress w/regular meetings.
 - Discuss technical merit of ECMs as they are developed, require ESCO prepare ECM matrix
 - Facilitate M&V discussions early in FGOA development; ensure Baseline M&V activities occur
 - Enable incremental decision making during FGOA; Will help ensure the final IGA contains ECMs Agency desires

Finalize FGOA and Execute ESA



Evaluate ESCO's FGOA for:

Responsive to RFP and Amendments

- Technical feasibility, appropriate technologies
- Sound Baseline and reasonable energy and cost savings
- Appropriate M&V strategies (IPMVP compliance)
- Escalation rates, commissioning, etc.
- O&M and other ancillary cost savings
- Reasonable design & construction costs, markups (compare to RFP)
- Cash flows are accurate

Assist “Champion” with Intra-Agency approvals

Assist in finalizing ESA Schedules prior to “Board”

approvals

Development of the M&V Plan

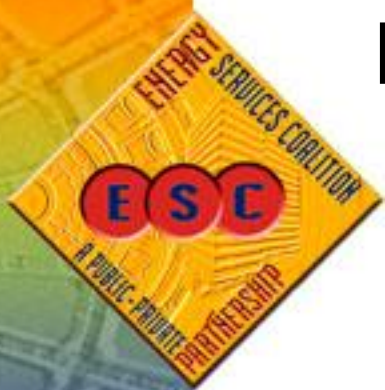


- ESCO understand bldg. ops.?
 - Metering?
 - Baseline comfort?
- 30% FGOA

- 60% FGOA
- ECM Specific M&V options
 - Savings calc. methods?

- Pre-installation M&V activities
 - Trending?
 - Monitoring?
- 90% FGOA

- Particular focus on M&V Plan development “**M&V**” is a **process** not something that happens at the end of construction. O.R. interaction from beginning to end
- Need **robust baseline development** and **detailed documentation** to provide necessary confidence for M&V options/methods > credible ECMs and savings calcs



Design, Construction, C_x, and M&V Assistance

- Review ESCO designs, equipment specifications, installation plans for compliance with IGA proposal and Agency requirements (Ensure forward and backward checking)
- Review commissioning, O&M, training
Plans → Execution → Report
- Ensure measurement and verification guidelines are met
- Review Annual M&V reports, ensure GOE gets data
- Process must be **Win/Win for Agency & ESCO** or everyone loses

Hiring a Third Party Consultant



- State agencies can hire one of three pre-qualified consultants off existing blanket contract, without need for RFQ.
 - Gail Burchett – NV Purchasing
gburchett@admin.nv.gov
(775) 684-0172
- Local government can use an RFQ, or just “joinder” on State contract.



The Nevada Governor's Office of Energy (NVGOE) provides Technical and Financial Assistance



Governor's
OFFICE OF ENERGY

- State Agency Utility consumption and cost [benchmarking](#)
- Performance Contract Audit Assistance Program (PCAAP)

PCAAP



- The Nevada Governor's Office of Energy (GOE) started [PCAAP](#) to accelerate PC.
- Nevada Government Entities (Counties, Cities, School Districts, State Colleges, State Universities, State of Nevada Agencies)
- ***Up to 100% cost reimbursement*** for a Financial-Grade Operational Audit. Must submit:
 - Official invoice for the cost of the FGOA and
 - Letter requesting invoice payment and
 - Final Application Tracking Data and
 - Copy of the 100% completed FGOA and
 - Copy of the fully executed Performance Contract

Case Studies



- City of Henderson
- Douglas County School District

Misperceptions



- ESPC is more expensive than other procurement methods
- Paybacks are too long
- ESPC guarantees aren't real
 - Feedback is too late to act upon
 - Load creep absorbs savings
- ESPC companies take control of my business and operations
- ESPC procurement process is lengthy

Thank you for your time...

QUESTIONS?



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