



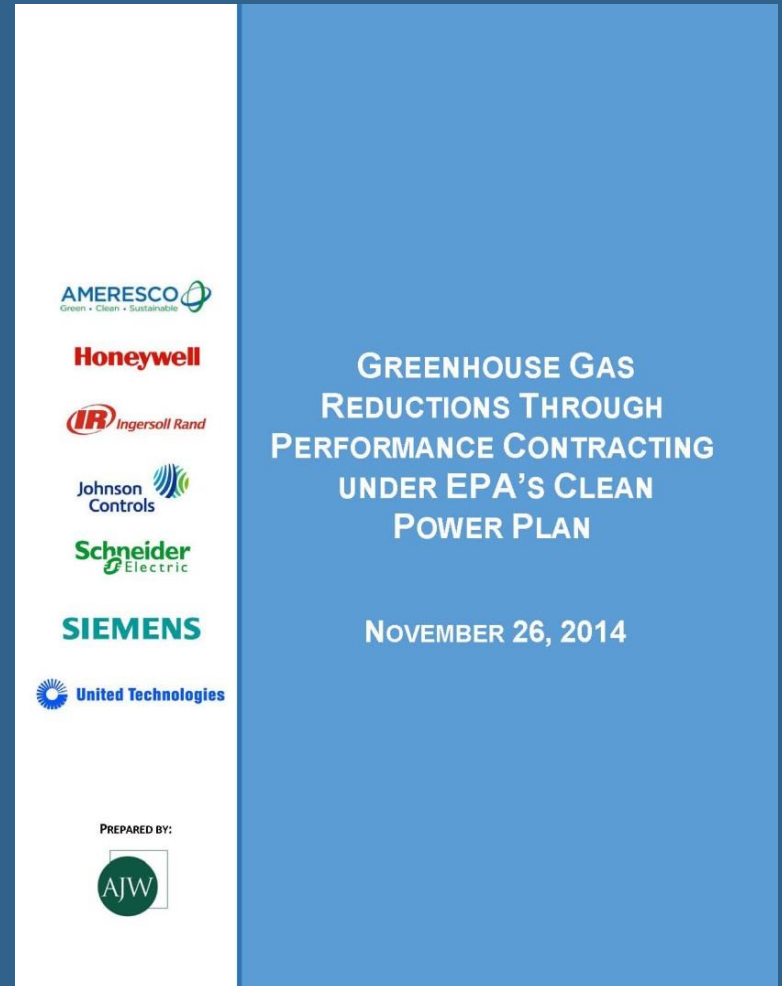
Energy Savings Performance Contracting in 111(d) Compliance

Efficiency Cities Network – Cities and 111(d)
17 March 2015

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ESCO Working Group

- Extensive expertise delivering project-based energy efficiency
 - An Energy Service Company (ESCO) specializes in performance-based contracting for energy savings
- Energy efficiency is a cost-effective emissions reduction strategy
- Third-party delivered energy efficiency—Performance Contracting—should be an acceptable compliance mechanism
- ESCO working group submitted comments to the EPA on 111(d)
 - Link to ESCO Comments to EPA:
<http://ajw-inc.com/pc/>



Performance Contracting

- Well-established mechanism in the U.S. for delivering energy efficiency, implemented by the private sector
 - States have legislation that may address and/or support performance contracting activity and majority of states have active markets
- Performance-based energy efficiency projects funded through private capital—energy savings (\$) repay investment over time
 - Projects occur in public and private sector buildings and facilities
 - Projects save energy while providing for facility renewal often addressing deferred maintenance
 - Can provide multiple-benefits beyond CPP compliance
- Projects have contractual agreements with the private sector that guarantee energy savings
 - Measurement and Verification (M&V) to verify project electricity savings, can be quantified into CO₂ reductions



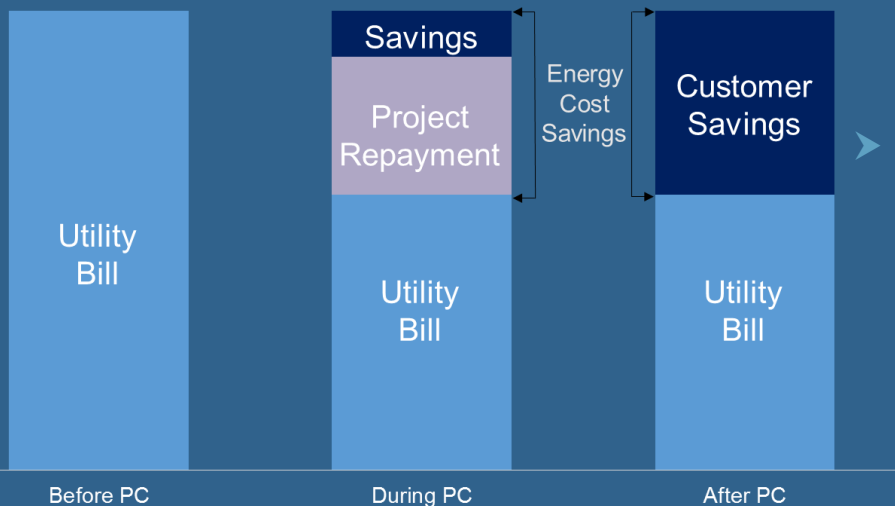
How Performance Contracting Works

- Realigns utility expenses towards improvements which save energy
 - Bundles multiple solutions (lighting, HVAC, controls, building envelope, renewables, etc.)

- Typical project energy reduction ranges between 15% to 30%

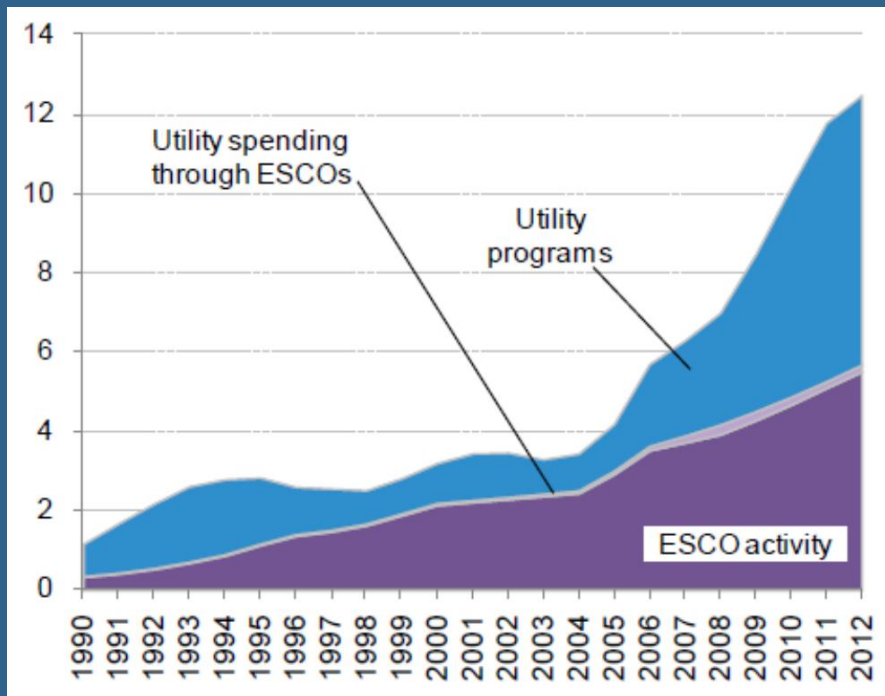
- Contract term typically ranges between 10 to 17 years
- Typical per project investment can range from \$1M to \$45M+

- Budget-neutral approach
 - Cost savings sufficient to repay project cost



Private Sector Investment

Investment in energy efficiency through ESCOs and utility programs, categorized by program, 1993-2012, (\$bn)



Source: Bloomberg New Energy Finance, "Sustainable Energy in America Factbook"

- \$7B+ U.S. investment annually through financing which is repaid through energy cost savings
 - Projected to grow to \$10 billion to \$15 billion annually by 2020
 - Scalable for 111(d) compliance
- Does not rely on state or utility investment
- Can incorporate other program incentives, rebates and credits



SIP Compliance Example

- City of Shreveport, Louisiana, Energy Savings Performance Contract utilized for State Implementation Plan
- Shreveport's Early Action Compact (EAC) submission to USEPA for the 8-Hour Ozone Standard under the National Ambient Air Quality (NAAQ) Standards
- 20-year Performance Contract for 33 Municipal Buildings - Energy Savings of 9,121,335 kWh/Yr
 - Energy savings contractually guaranteed by Energy Service Company with annual true-up to ensure savings
 - Measurement & Verification (M&V) consistent with *EPA Roadmap for Incorporating EERE Policies and Programs Into State and Tribal Implementation Plans*
- Demonstrates State and Federal enforceability to utilize performance contract within SIP



City of Shreveport Project Details

- Scope of Improvements
 - Lighting Systems
 - Mechanical Systems
 - Control Systems
 - Water Conservation
- Measurement & Verification
 - Retrofit Isolation (pre-retrofit/post-retrofit/annual sampled inspections)
 - Whole Building (utility bill/meter-based analysis)
 - Reporting
 - Monthly Tracking
 - Quarterly Reporting
 - Annual Reconciliation



PC Contribution Scale

Potential CO2 Reduction from PC Projects

