



Privately-Delivered Energy Efficiency: Performance Contracting

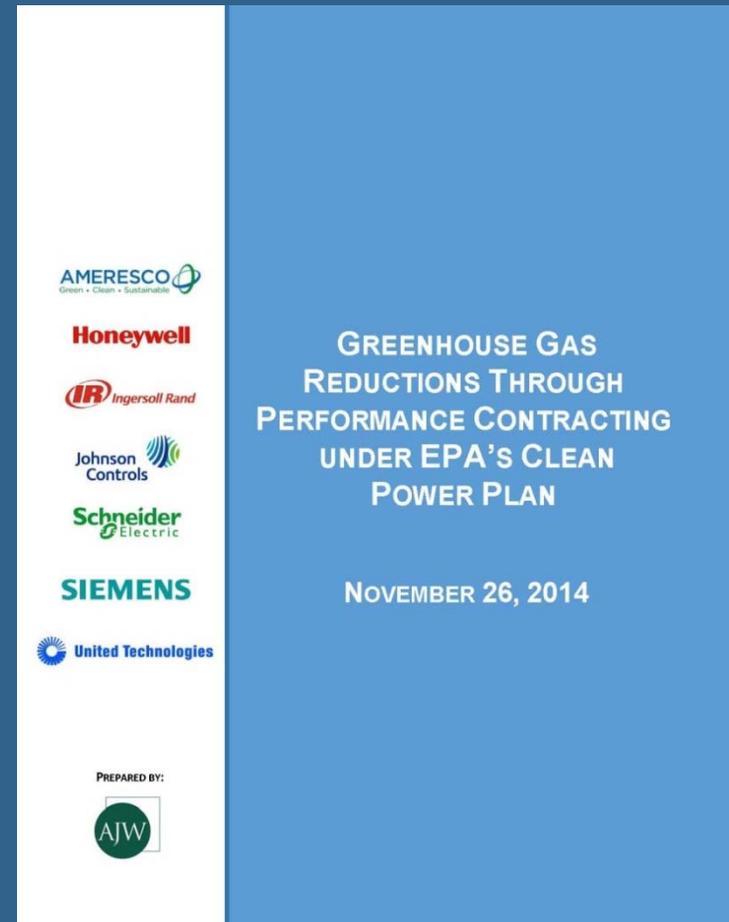
ACEEE-CEE Market Transformation Symposium
EPA's Clean Power Plan: Pathways for Energy Efficiency
in State Compliance Plans

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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
- Privately-delivered energy efficiency—Performance Contracting—should be a compliance mechanism
- Submitted comments to the EPA on role of performance contracting under CPP



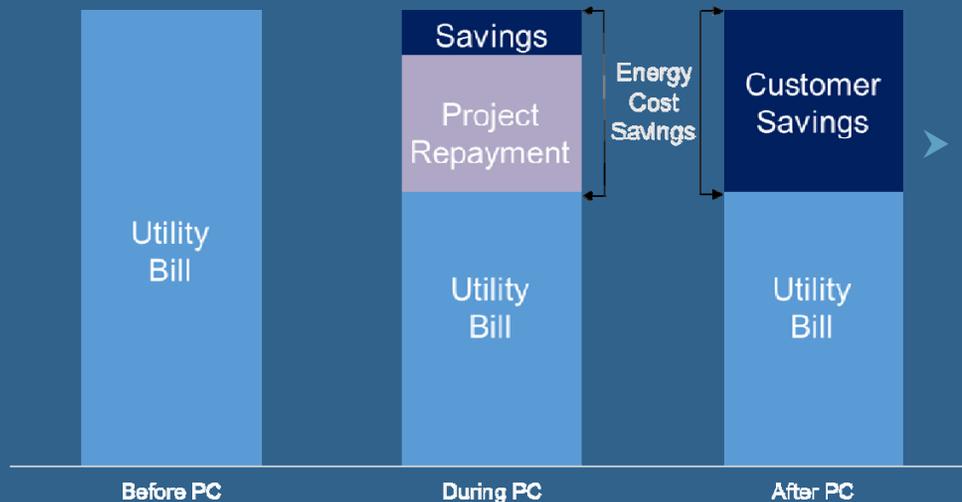
Performance Contracting

- 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

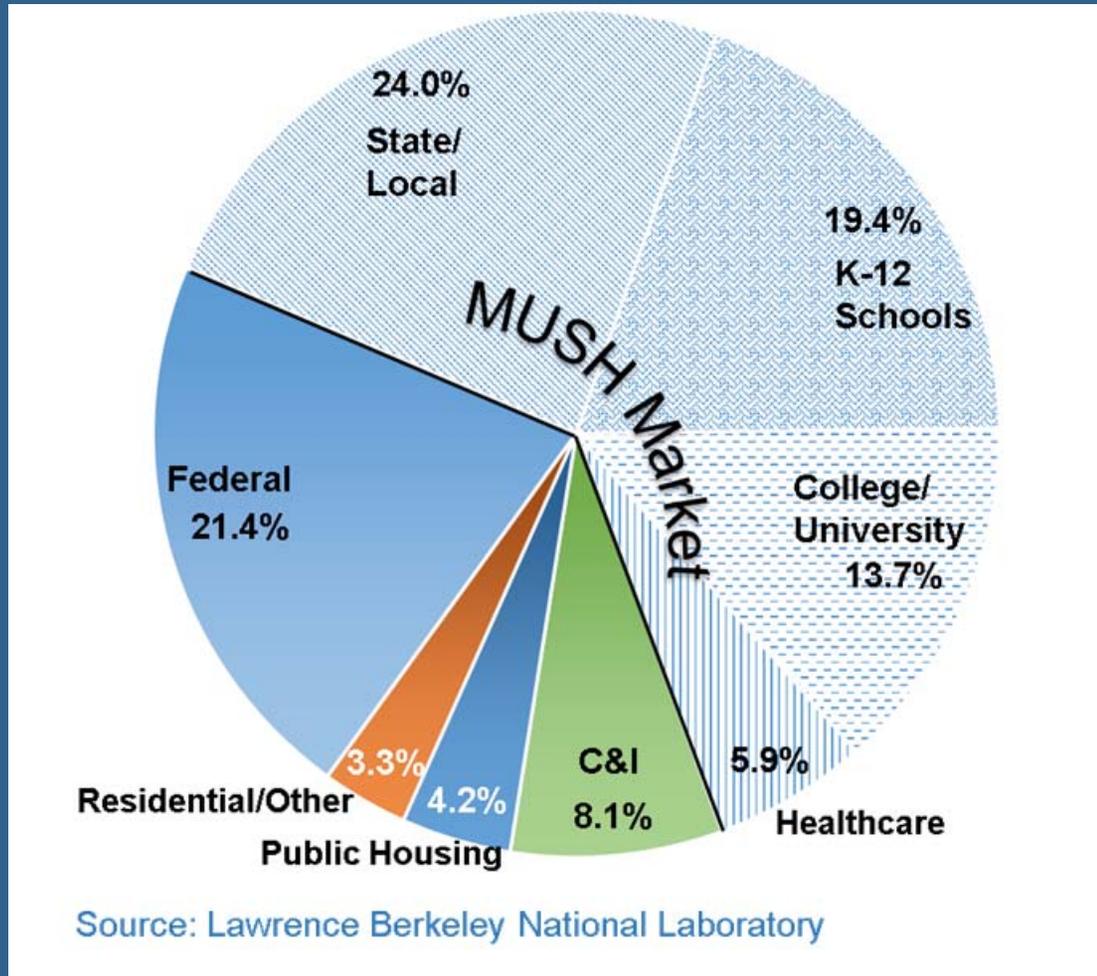


How Performance Contracting Works

- 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

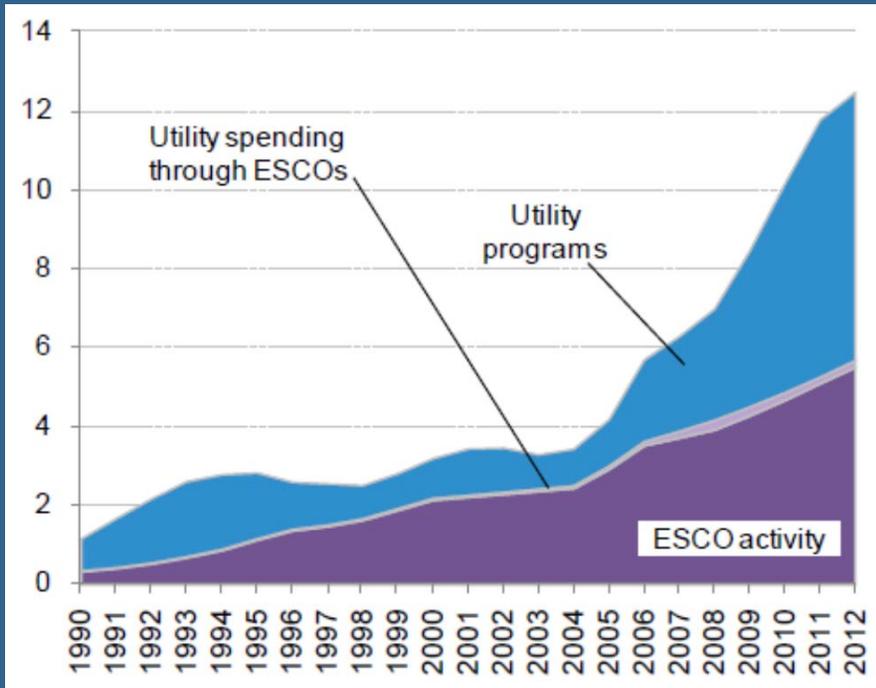


Where Performance Contracts Occur



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



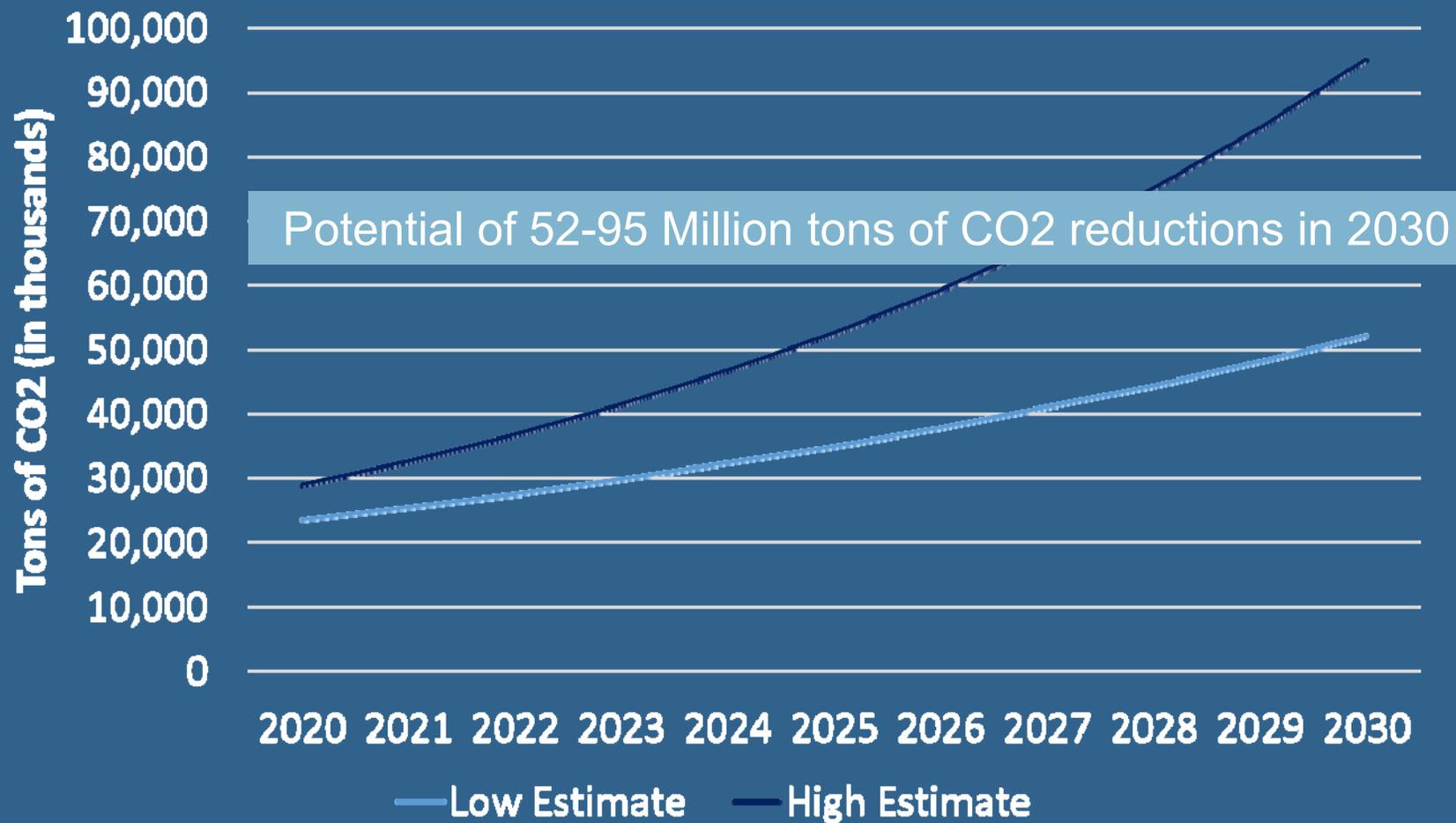
PC Can Support State Plans

- Program-ready energy efficiency option for state plans
- Provides a highly-predictable and credible source of CO2 reductions
- Provides long-term persistent electricity savings
 - PC electricity savings can reoccur annually through 2020-2030
 - PC Program can complement other energy efficiency programs and policies (supports robust EE program)
- Performance Contracting is:
 - Measurable
 - Enforceable
 - Quantifiable
 - Verifiable



Significant Potential

Potential CO2 Reduction from PC Projects



Projecting PC Contribution to Plan

- State can utilize State Energy Office, other agency or third-party to develop reasonable and conservative estimate of PC projects based on size and building type(s)
- States could provide this information to Utility-Run program
 - Would support ability to mitigate double counting
- High-level of predictability for future year reductions based on long-term nature of PC project contracts
 - Energy Service Companies design projects through Investment Grade Audits which provides predictability of electricity savings on annual basis
 - Provides visibility of future electricity savings well before construction commences (12-24 month lead time)
 - Annual electricity savings determined and contractually guaranteed



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



Summary

- Performance Contracting is consistent with the Clean Air Act and the Clean Power Plan
- Adds flexibility and can lower the costs of state implementation activities
 - Supports local jobs and leverages existing private market
- Most states only need to create an aggregation/registry activity to utilize GHG reductions from PC projects for CPP
- Encourage state air officials to familiarize themselves with performance contracting in state
- Encourage state energy officials to support increased utilization of performance contracting to have bigger contribution impact for compliance



Thank You & Questions

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