



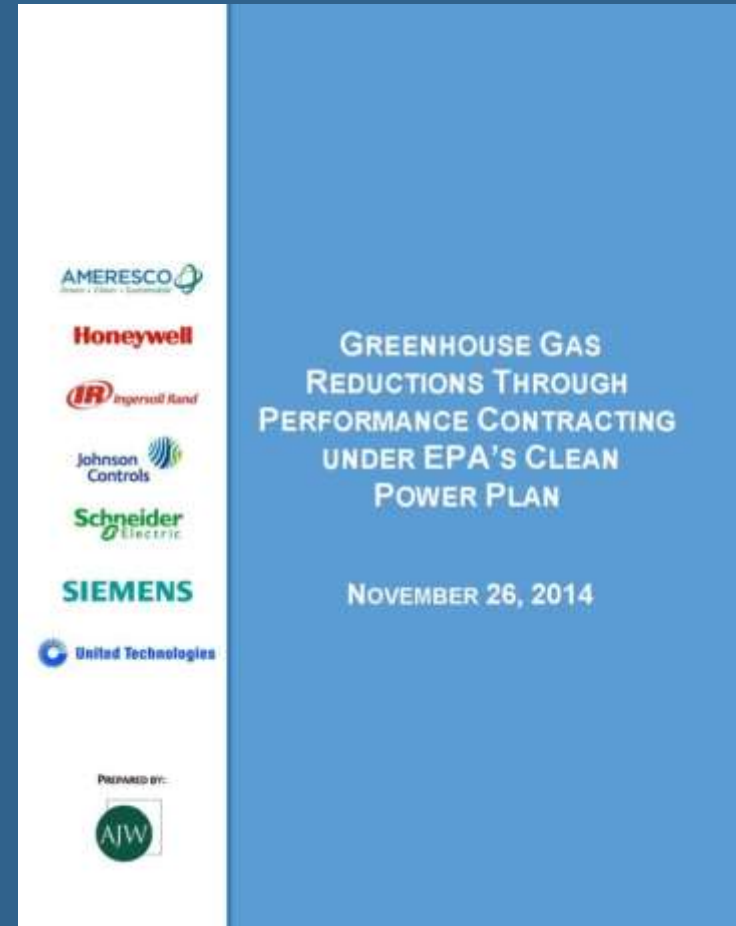
Privately-Delivered Energy Efficiency: Performance Contracting

NASEO 2015 Energy Policy Outlook Conference
February 5, 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
- Privately-delivered energy efficiency—Performance Contracting—should be a compliance mechanism
- Submitted comments to the EPA on role of performance contracting under CPP

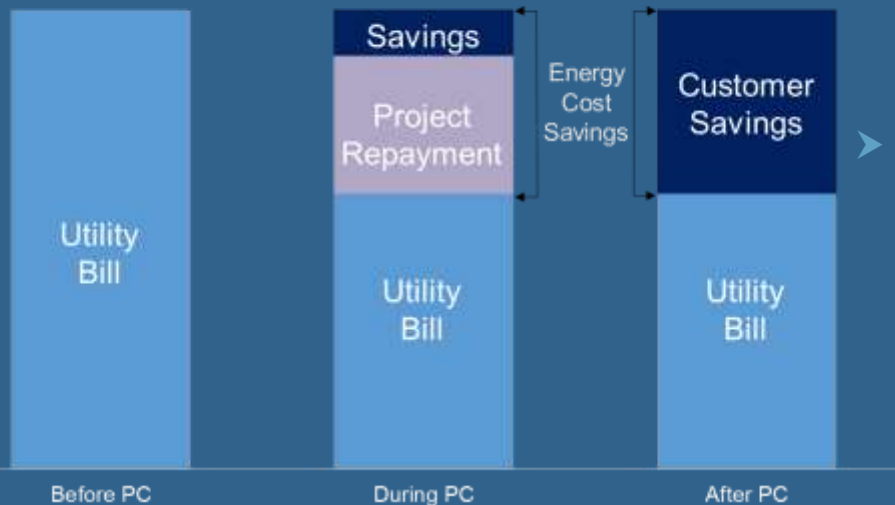


Performance Contracting

- 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



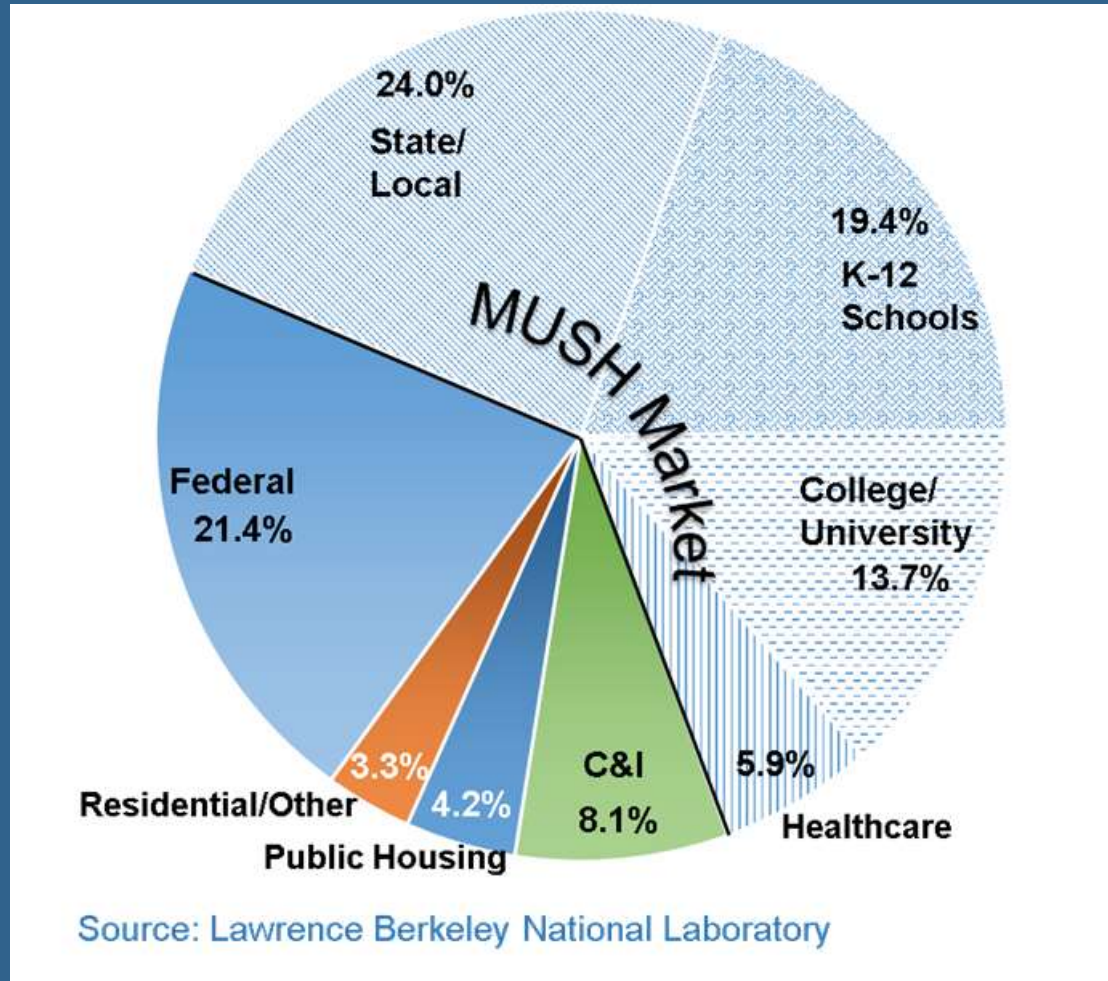
How Performance Contracting Works



- 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

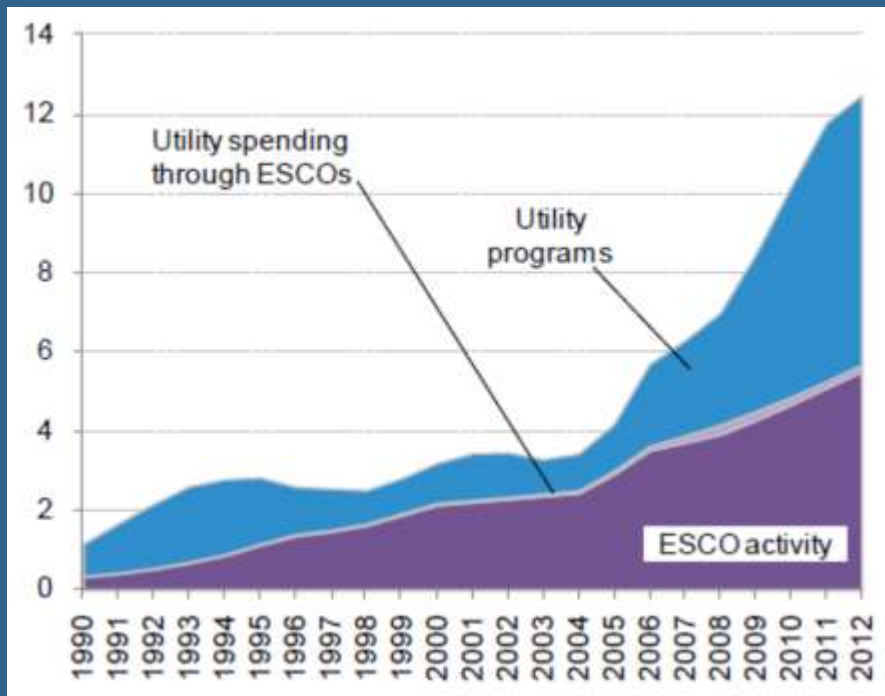


Where Performance Contracts Occur



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



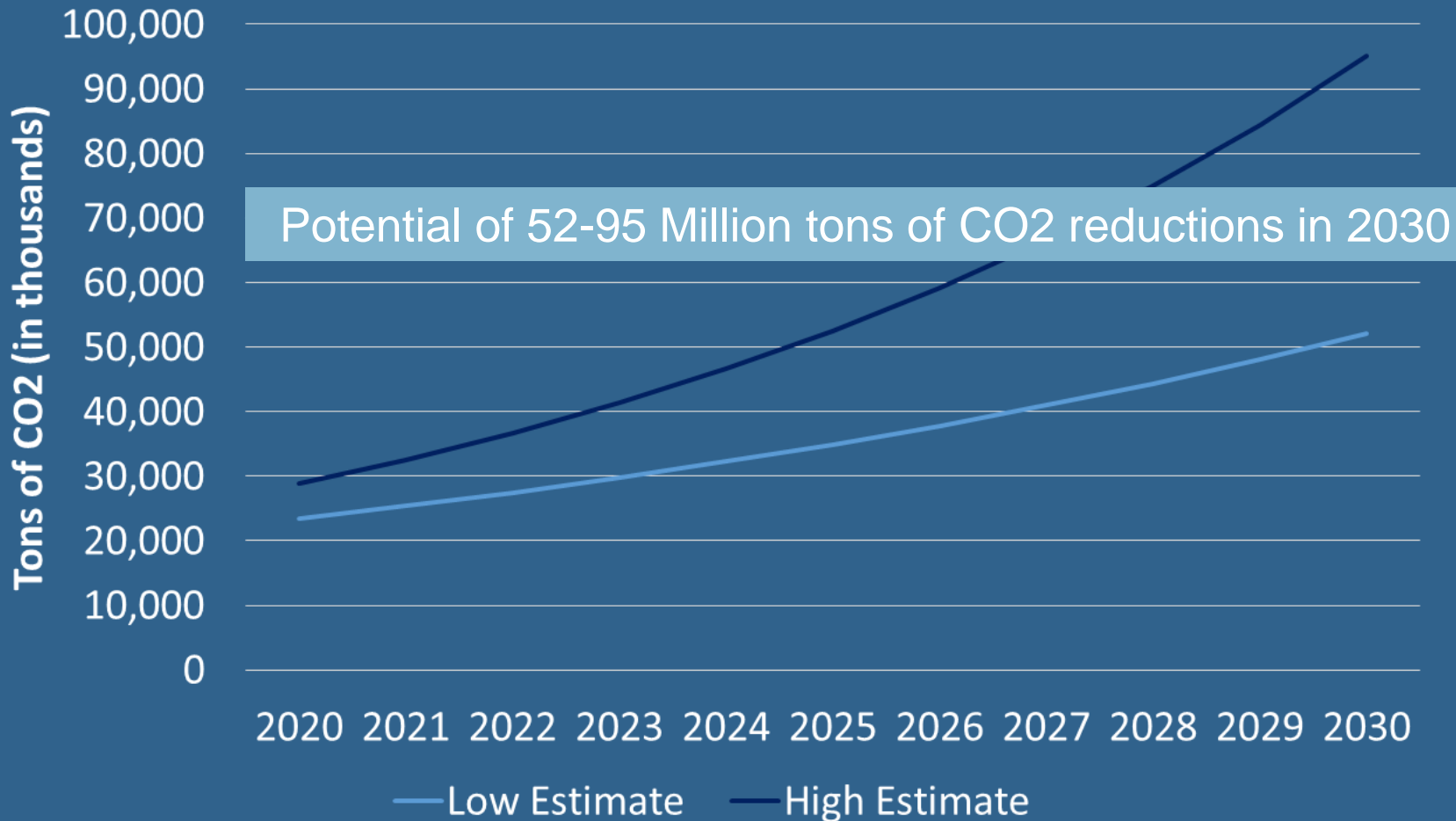
PC Can Support State Plans

- 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

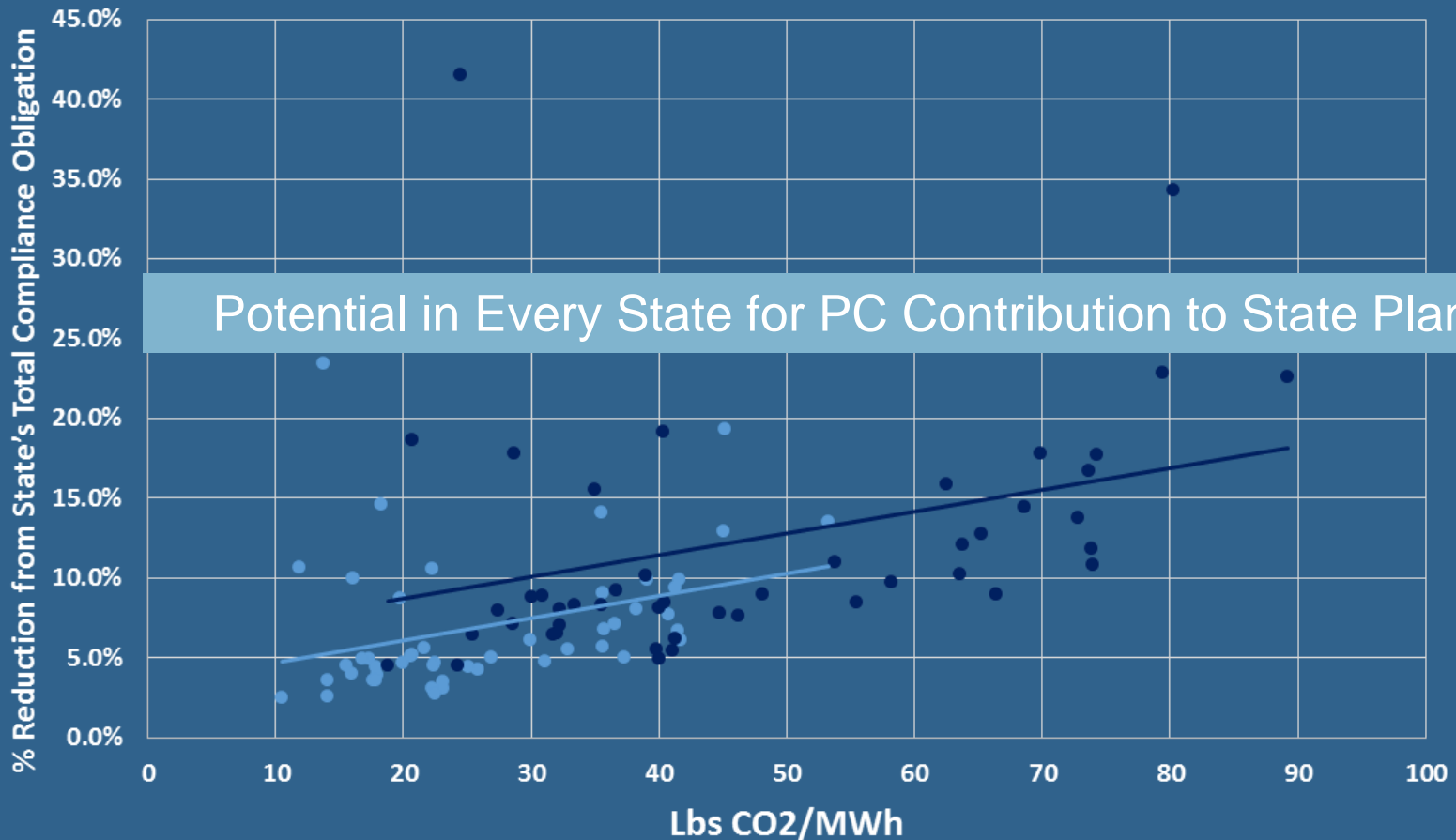


Significant Potential

Potential CO2 Reduction from PC Projects



PC Contribution to 49 State Goals



- Low Estimate
- High Estimate
- Linear (Low Estimate)
- Linear (High Estimate)



Potential Average Contribution

| PC Contribution to State 111(d) Compliance Obligations | | | | |
|---|--|-------|---|------|
| Aggregated Data from Groupings of Select States | Average PC Contribution (in 2030) to State's Total Reduction Obligation from 2012 Levels | | Average 2030 Reduction in State's Carbon Intensity (Lbs CO ₂ /MWh) | |
| | LOW | HIGH | LOW | HIGH |
| 3 States with High Overall Reduction Obligation (AZ, GA, SC) | 3.1% | 5.5% | 23 | 41 |
| 3 States with Low Overall Reduction Obligation (HI, IN, KY) | 14.3% | 25.0% | 46 | 80 |
| 3 States with Low Numeric Final Goal (CA, CT, MS) | 7.6% | 13.5% | 17 | 31 |
| National Average | 7.1% | 12.5% | 27 | 48 |

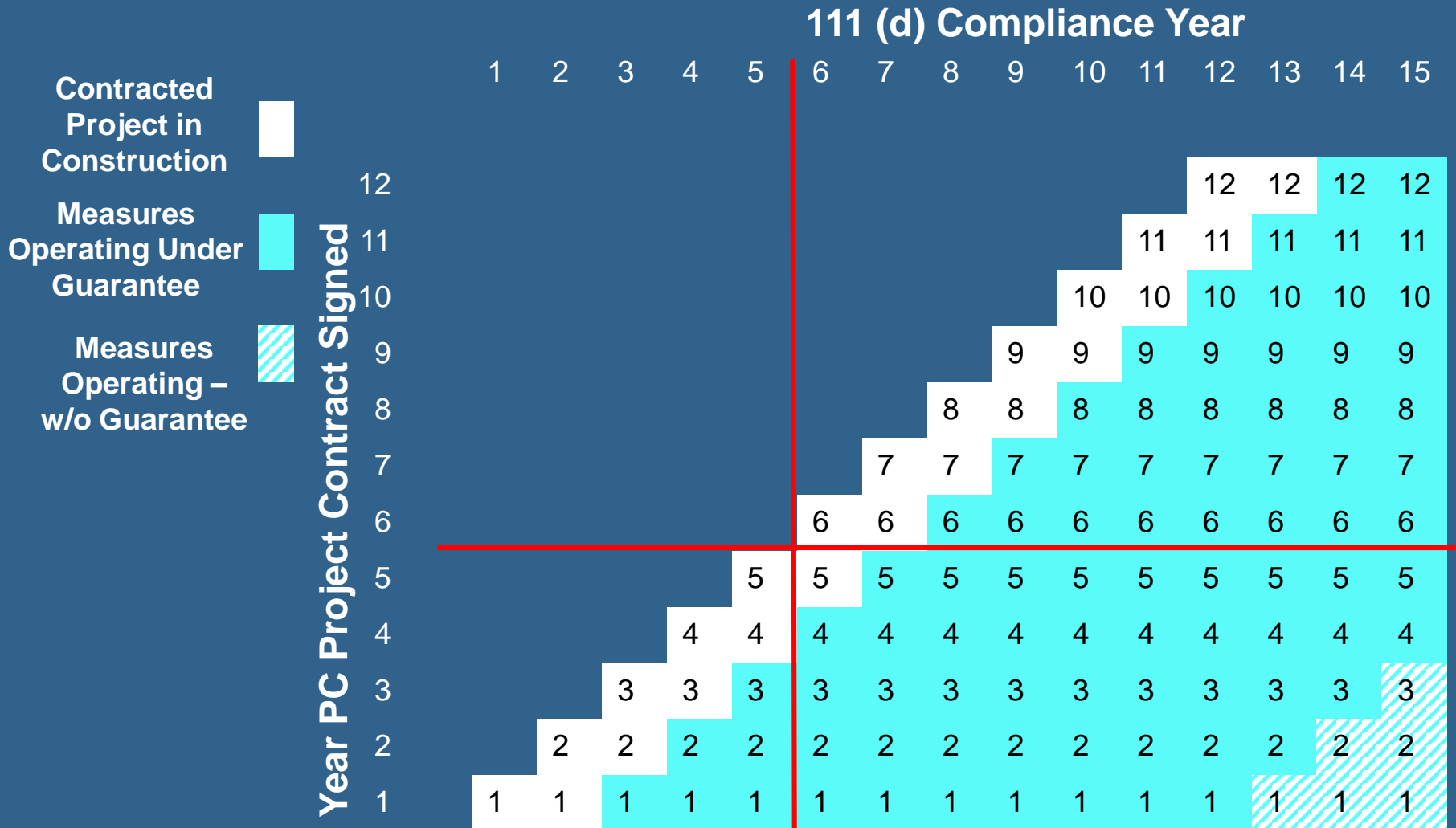


Projecting PC Contribution to Plan

- 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



Predictability from PC Project Pipeline



PC Supports Flexibility

| Example: Georgia | State 111(d) Final Goal | State 111(d) Compliance Rate without PC | State 111(d) Compliance Rate with Low- Case PC | State 111(d) Compliance Rate with High-Case PC |
|--|----------------------------|---|---|---|
| Utilize BSER Baseline Levels | 834 | 834 | 811 | 792 |
| BSER Baseline, except RE at 90% of BSER levels | 834 | 842 | 819 | 800 |
| BSER Baseline, except RE & EE at 90% of BSER levels | 834 | 851 | 829 | 812 |



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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