

MULTI-FAMILY PROGRAM IMPROVEMENT OPPORTUNITIES

2019-2021 Residential Planning Workshop #3

▶ December 5, 2017

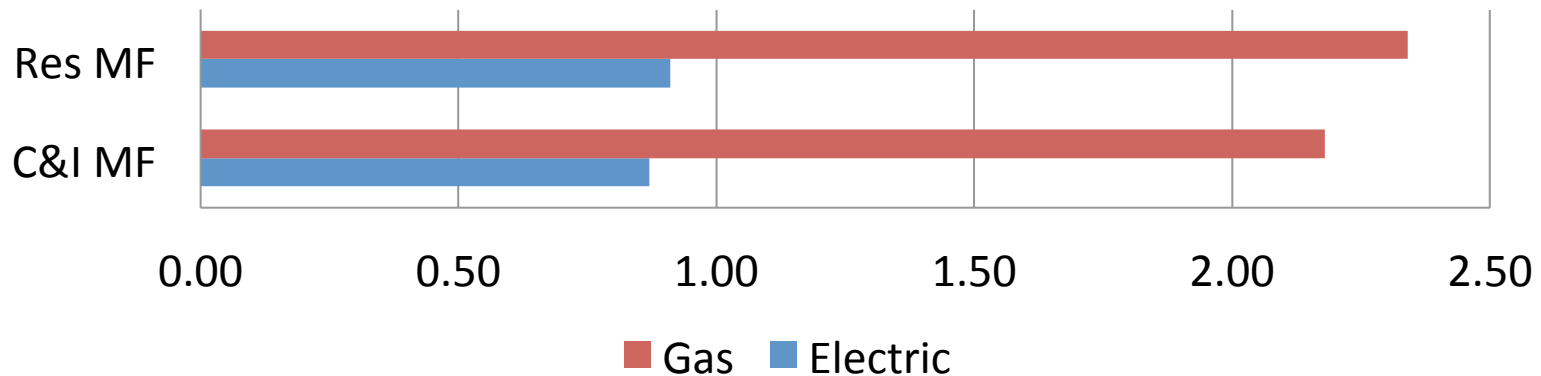
OVERVIEW



- ▶ The loss of claimable lighting savings is an opportunity to re-think multi-family retrofit approach
 - Lighting is already becoming less cost-effective and mid-course adjustments are temporary fixes
 - Need to begin thinking now about big picture, systemic changes to support the program in future market conditions
- ▶ Implementation challenges are largely symptomatic of policy and program level structural hindrances
 - Better alignment of initiatives, delivery channels, and cost-benefit testing with whole building approach
 - Whole building oriented incentive offers and delivery channels

BENEFIT COST RATIOS AFTER APPLYING EVALUATION ADJUSTMENT FACTORS

Market Rate MF Retrofit BCRs by Initiative
(2016 Evaluated, statewide)

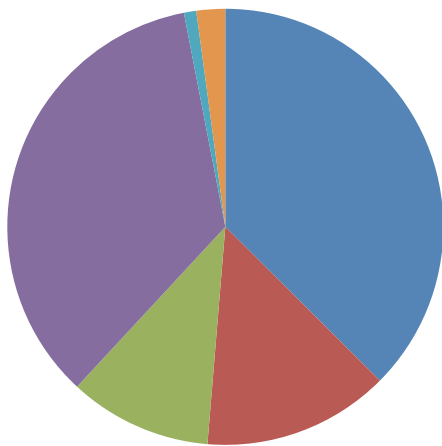


- Adjustments to predicted and claimed savings directly impact benefit cost ratios (BCRs)
- Lower Hours of Use and In-Service Rates for lighting drive BCRs below 1.0 for electric alone
- BCRs will be driven lower as baselines increase and market transformation progresses

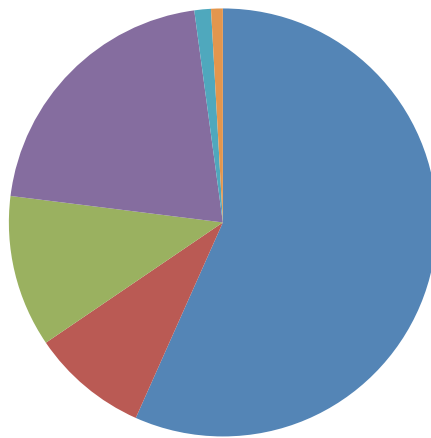
C&I AND RESIDENTIAL MULTI-FAMILY RETROFIT: DISTRIBUTION OF SAVINGS BY END USE (2016 STATEWIDE)

Gas + Electric Savings by End Use (MMBtu)

Annual Savings



Lifetime Savings



- Envelope
- Hot Water
- HVAC
- Lighting
- Refrigeration
- Products

Savings is primarily derived from lighting and envelope improvements

% Savings from Lighting

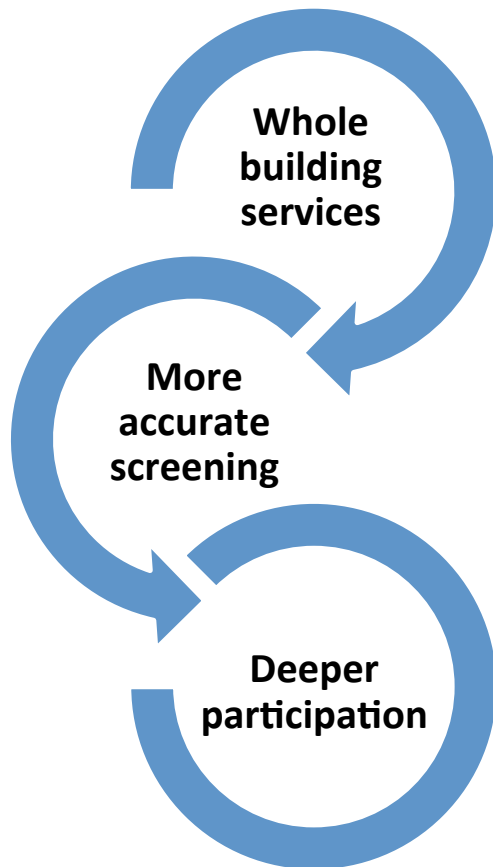
	Annual	Lifetime
Electric	74%	64%
Electric + Gas	34%	21%

OPPORTUNITIES



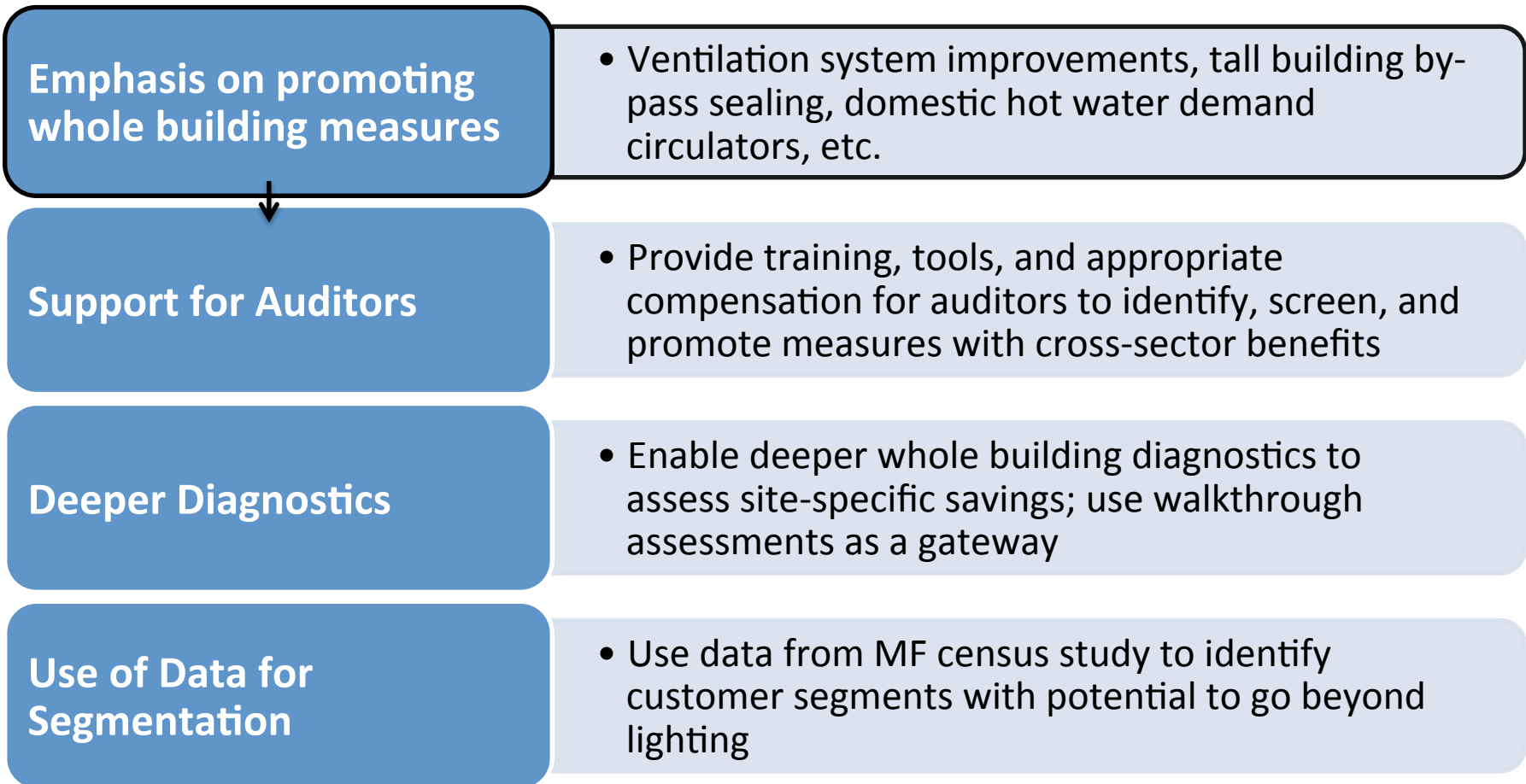
FRAMEWORK SUPPORTING WHOLE BUILDING APPROACHES

- ▶ Enable a BCR screening approach that includes cross-sector and multi-fuel impacts:



- Re-focus program efforts on providing whole building services rather than meeting individual sector/fuel goals
- Enable more accurate whole building measures screening impacting both residential and C&I metered accounts
- Facilitate a sales process oriented toward the property owner’s value proposition to encourage deeper participation
- DPU approval may be required for an alternative screening approach

WHOLE BUILDING MEASURES



IMPROVED FACILITY TRACKING

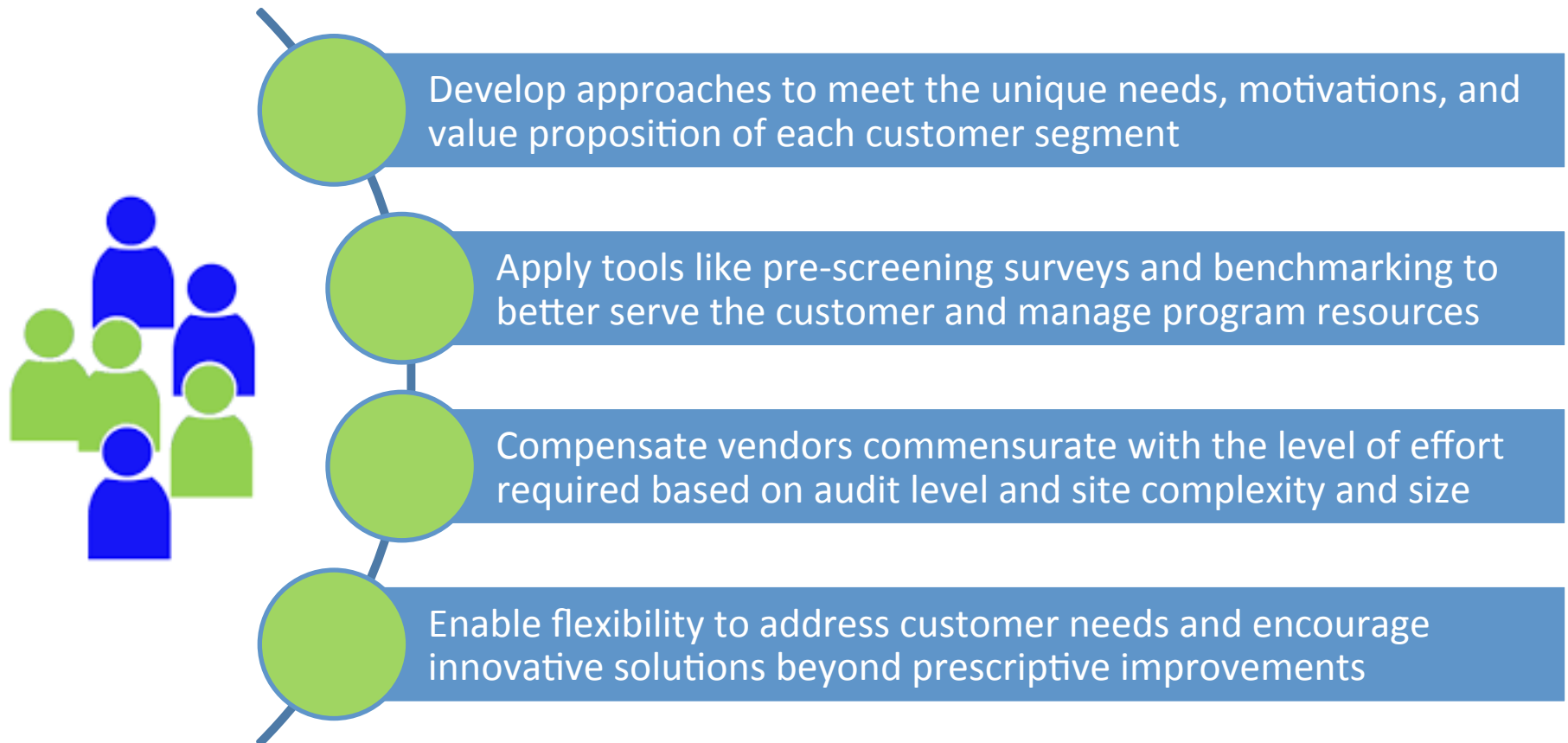


- ▶ Apply unique site identifiers to standardize and uniformly track and count multi-family projects at the dwelling, building, and facility levels
 - Participation rates, level of retrofit comprehensiveness and depth of savings achieved
 - Participation patterns by initiative and measure type
 - Effectiveness of cross-initiative hand-offs and address attrition points

- ▶ Other opportunities:
 - Use of normalized savings metrics and benchmarking, supporting
 - Prioritization of measures and projects for customers, and
 - Resource management for the program
 - Additional energy savings

CUSTOMIZABLE LEVELS OF SERVICE, AUDITS, AND SALES TOOLS

► Further develop audit options for differing customer segments



RECOMMENDATIONS



- ▶ Establish a multi-family retrofit program framework that seamlessly integrates residential and commercial metered savings opportunities into whole building solutions and increases uptake of whole building measures
- ▶ Enable program tracking by building/facility to support improved customer service and both single path (i.e. comprehensive single transaction) and incremental paths to whole building improvements
- ▶ Provide customizable levels of service appropriate to varying customer and building types