CADMUS APEX ANALYTICS







Agenda

Review Goals of Presentation

Multifamily History/Background

Research Objectives

Research Tasks

Key Findings

Recommendations





Goals of Presentation

Briefing on Multifamily research activities and lessons learned over the past few years

Visibility into what's been done so far for the program

Consolidation of 2015-2018 research activities with some key outcomes

Help address questions about research





Cadmus Evaluation

Historical Multifamily Activities

- 2012, added prescriptive & custom measures.
- 2014, launched Multifamily Energy Savers pilot (MES).
- 2016, integrated MES pilot into overarching Multifamily program.
- **2017**, introduced:
 - Air Infiltration Reduction (AIR) Weatherization Demonstration Project
 - New construction measures
 - Walkthrough audits with clipboard audit reports
 - Co-branded Ongoing Customer Satisfaction Survey (OCSS) to joint CE / DTE Energy tenants
- 2018, expanded program:
 - Nest e-Pilot
 - Additional AIR Weatherization Demonstration Projects





Residential MF Electric Savings

C&I MF additional 3,418,807 kWh (~39% of residential)







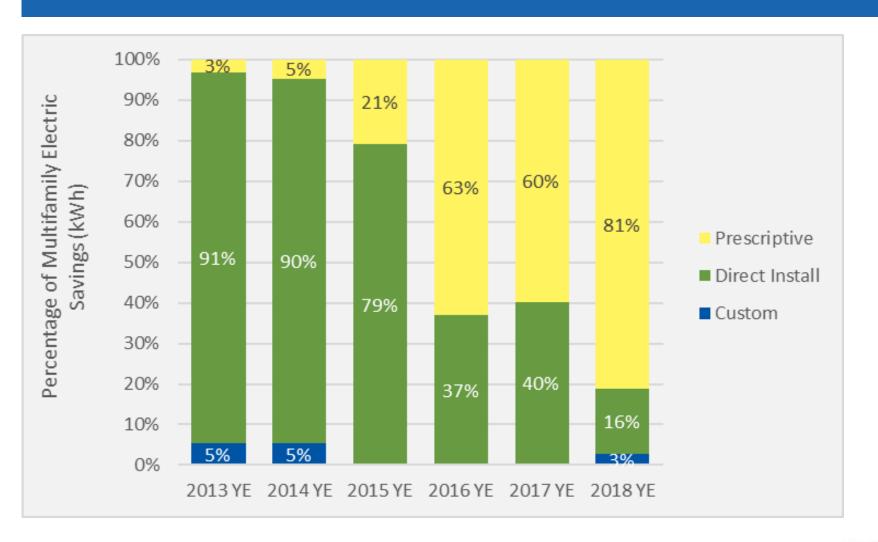
Residential MF Gas Savings

C&I MF additional 31,541 MCF (18% of residential)



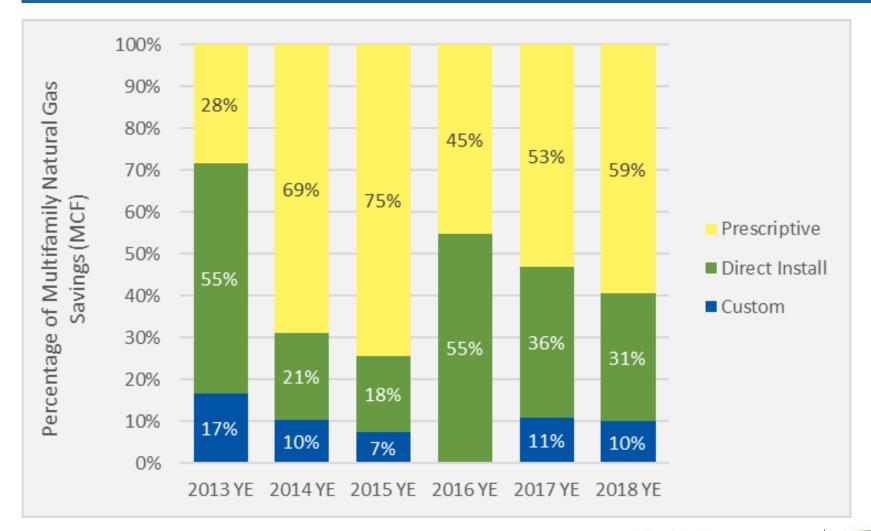


Historical Component Savings





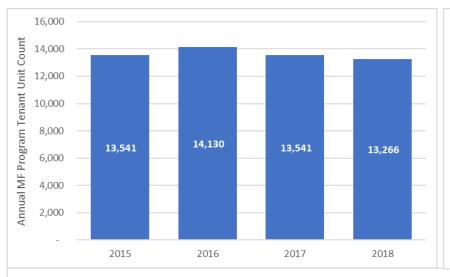
Historical Component Savings

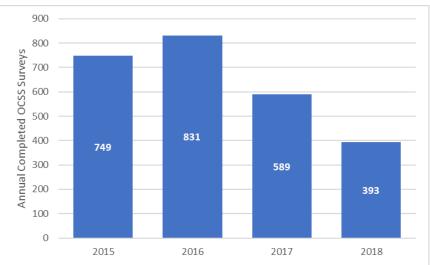


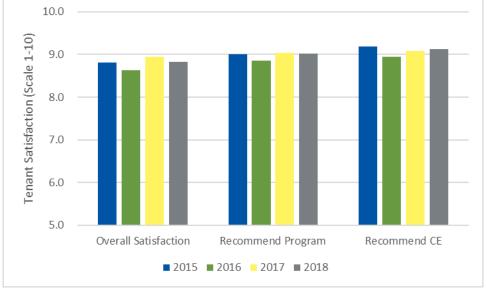


Tracking Tenant Satisfaction

Total units, completed OCSS surveys, and satisfaction scores













Research Objectives





Objectives

2015

Validate Installations

PMO Experience 2016

Tenant Experience

PMO Experience

Identify baselines

Assess HIM MEMD

Validate Consumption

Assess WB Pilot

2017

Tenant Experience

PMO Experience

Identify innovative programs

Marketing NEBs

Assess program documentation

2018

Tenant experience





Research Tasks





2015-2018 Research Tasks

2015

Onsite / Field Visits

PMO Interviews 2016

Tenant OCSS

PMO Interviews

Early replacement

MEMD Savings Review

Consumption Assessment

Whole Building Pilot Assessment

2017

Tenant OCSS

PMO OCSS

Benchmark

Research NEBs

Clipboard and manual review

2018

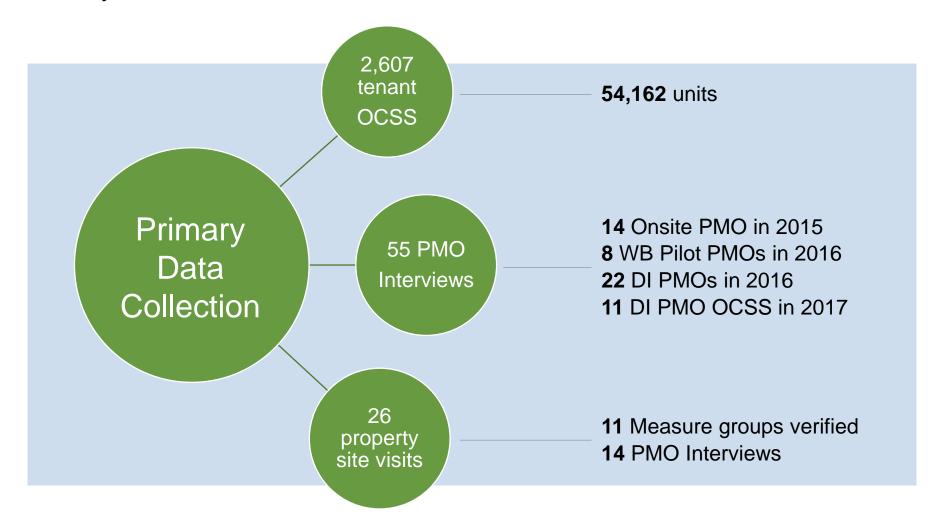
Tenant OCSS





2015-2018 Research Tasks

Primary Data Collection

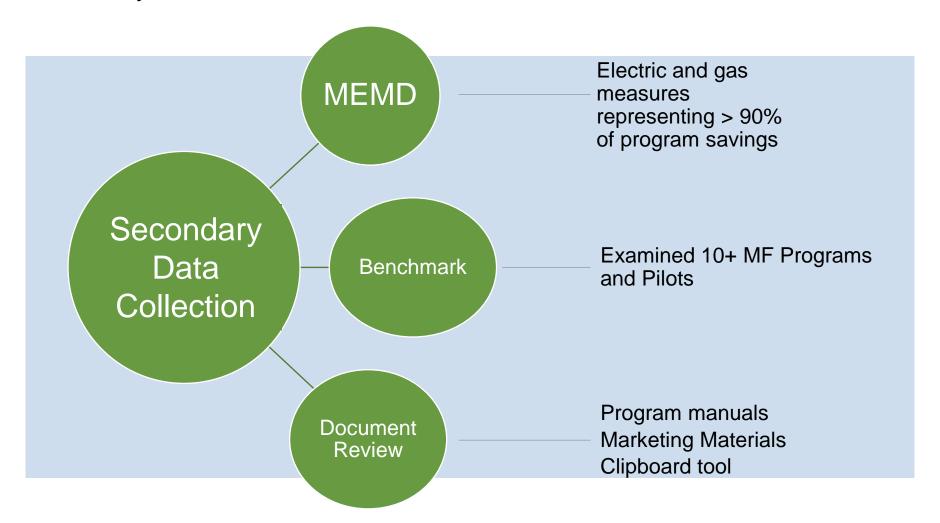






2015-2018 Research Tasks

Secondary Data Collection







Key Findings





Overview

Findings from Onsite Visits and PMO Interviews

In-Service Rates

 Most common area prescriptive measures had high ISR; issues with early failure for a large portion of the LED Type-A replacement bulbs

PMO Satisfaction

 High participant satisfaction with the program and the installed equipment

PMO Concerns

 Some PMOs reported concern about achieving savings and had not yet seen a reduction in their utility bills, and with early failures of lighting measures and kitchen aerators





Overview

Findings from PMO Interviews

PMO Satisfaction

- Primary motivators: energy and cost savings, zero-cost, ease of participation
- PMOs who paid utilities are more likely to participate in whole building audits
- Non-energy benefits play a significant role

PMO Concerns

- Primary barriers: budget limitations and ownership approval
- Reduced participation challenges
- Increase ease of entry and participation





Overview

Findings from PMO Interviews, MEMD Review, and Consumption Analysis

Pilot Integration

- Audit reports play important role, must be robust
- Benefits for Wegowise and Portal, but not used
- Concierge service well received, but confusion remained

Consumption

- Billing analysis not possible without whole building usage
- Pilot showed reasonable (though flawed reporting) savings (~10% across elec & gas)



Overview

Findings from Tenant & PMO OCSS, and Program Documentation Review

Tenant Satisfaction

- 2017 > 2016 satisfaction
- Affected by equipment, presence during installation, satisfaction w/ technician, and receiving advanced notification

PMO Satisfaction

- Showed high satisfaction, but low number of responses.
- Motivated to save energy and lower O&M costs, yet struggle with financial and time constraints

Program Manuals

 Program manuals follow best practice, comprehensive, and continually updated





Overview

Findings from Secondary Research

Clipboard Tool

 The 2017 clipboard report layout and content improvement over 2014-2016 Energy Savers Pilot audit report

NEBs

 NEBs are a key motivator for customers to participate in the program

Innovative Design

- Program includes innovative design ideas and best practices.
- Enhance program w/ stronger trade ally engagement, property benchmarking, and strategic marketing





Overview

Findings from Tenant OCSS

High Satisfaction

 Tenants continued to be highly satisfied with the equipment and services provided by the program

Consistent Drivers

 Drivers of tenant satisfaction remained consistent with the factors identified in 2017

Evaluation Insight

 Strategic evolution has resulted in new opportunities and additional savings, yet the residential evaluation lacks the insight to provide holistic program feedback





Recommendations





Recommendation

Adopt the proposed installation rates for LED Type-A replacement bulbs, showerheads, handheld showerheads, and bathroom aerators

Actions

- Consumers Energy incorporated in-service rates into MEMD savings assumptions
- Identified new LED and aerator models with Franklin Energy (implementation contractor) to address issue





Recommendations

The implementation contractor should develop an audit report template for review and approval by Consumers Energy in advance of providing to program participants.

Consumers Energy should continue outreach to existing and previous participants, including those who only received direct install measures, as these can yield future savings.

Consumers Energy should use the walk-through direct install to identify those buildings that may feature high savings opportunities and that have management teams who may be willing to pursue deeper retrofits.

Actions

Franklin Energy provided new "clipboard" audit report for vetting before release.

Consumers Energy maintains SalesForce project management to conduct continued outreach. Energy advisors and program marketing strategies target previous participants.

Consumers Energy continually references the participant database, extracts those who received DI equipment and completed projects, and then assesses what can be done next. The new clipboard report also provides this information.

Recommendations

Focus on metrics driving satisfaction: equipment, tenant presence during the installation, receipt of advance notification, and technician satisfaction:

- Develop communication procedures with PMOs to encourage tenant presence during installation.
- Work closely with installation technicians to provide advance notification of visits.

Marketing materials and audit reports (e.g. the clipboard report) directed at key decision makers should include reduced O&M costs as a key benefit of participation

Actions

Technicians provide notification fliers in tenant mailboxes 10 days in advance of a scheduled visit. Staff also call tenants five days in advance of visits, and again the morning of the visits

An estimate of reduced operation and maintenance costs is now included in the clipboard reports

Recommendations

To increase tenant OCSS response rates, consider ways to increase participant awareness of the survey. This could include adding an online version of the survey in addition to the current hard-copy survey, attaching the survey to the outside of the information folder, or having the program technicians inform all tenants of the drawing for a \$100 Meijer or Amazon gift card for completing the survey

Actions

Consumers Energy is still considering this for PY2019 (as of Q2 2019), ongoing discussions will determine whether this is implemented.









Thank You / Discussion