

2019-2021 PLANNING UPDATE



► July 31, 2018

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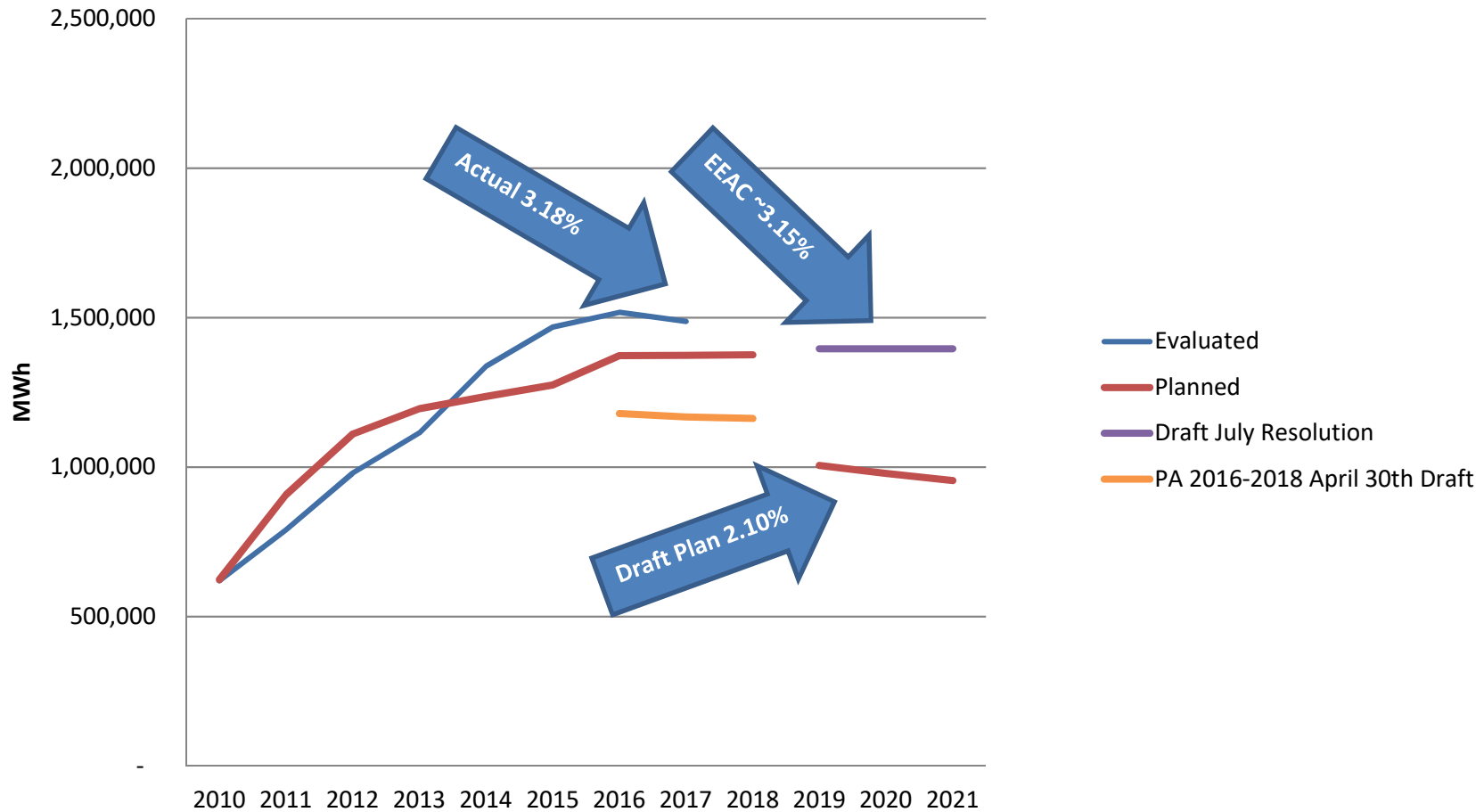
INTRODUCTION



- ▶ **PA Draft Plan includes significantly lower net savings goals and higher costs to achieve than have been achieved in recent years**
- ▶ **Consultant Team working with PAs to understand assumptions that account for lower saving and higher costs to achieve**
- ▶ **Consultant Team has updated analysis to reflect 2017 Plan-Year Report (PYR) evaluated results**
- ▶ **The following slides present an update on the “key drivers” identified by the Consultants and PAs**
- ▶ **Additional analysis and conversations are on-going**

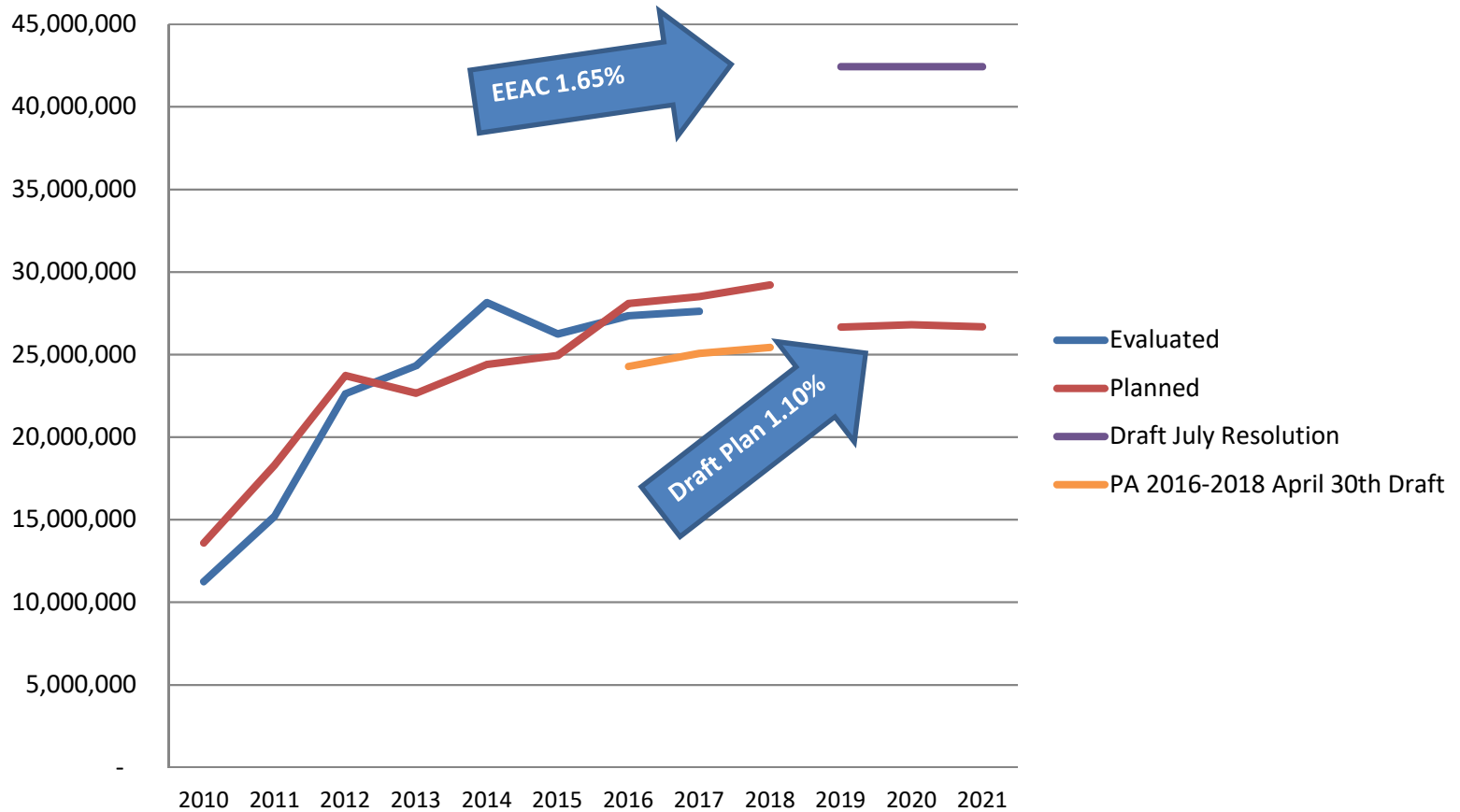
ANNUAL ELECTRIC SAVINGS

Portfolio Annual Electric Net Savings



ANNUAL GAS SAVINGS

Portfolio Annual Gas Net Savings



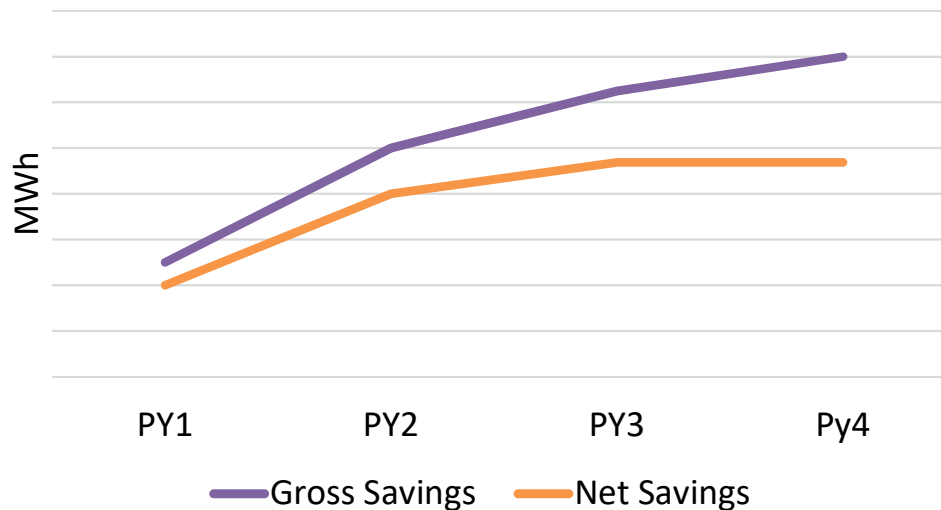
KEY DRIVERS PROCESS UPDATE

- ▶ **To date, the key drivers process has involved:**
 - Many meetings between the Consultants and PAs
 - Information exchange, including a large amount from the Consultants
- ▶ **Gap between the Consultant assessment of potential and PA Plan remains**
- ▶ **Key drivers process still underway**
- ▶ **PAs still need to come to internal agreement on many assumptions**
- ▶ **Moving forward, Consultants and PAs will focus on adjusted gross savings to simplify discussions**

EXAMPLE OF EM&V IMPACTS

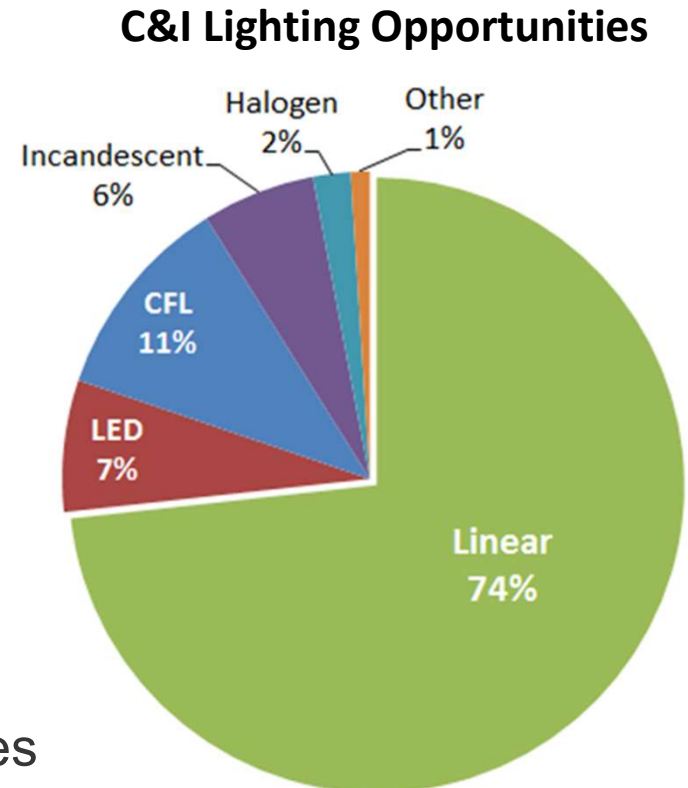
- ▶ The chart below (for illustrative purpose only) shows how increasing savings may be masked by EM&V headwinds
- ▶ For key driver discussions only, the Consultants and PAs will focus on adjusted gross savings in the 2019-2021 Plan

Example of EM&V Savings Impacts



C&I LIGHTING

- ▶ **Opportunity for greater C&I lightings savings**
- ▶ **EM&V has positive and negative impacts**
- ▶ **LEDS getting more efficient, but cost declines slowing**
- ▶ **Key drivers process update:**
 - PAs and Consultants have met twice on this topic
 - Process has and will:
 - Discuss market trends and opportunities
 - Look at potential data and historical savings
 - Work to reconcile the gap in projected savings



Interior Lighting Distribution
Figure 3-5 C&I Market Characterization Study

C&I HVAC

- ▶ **HVAC is the largest end use in existing C&I buildings**
- ▶ **Planned HVAC savings lower than past achievement**
- ▶ **Consultants see opportunities for higher HVAC savings**
- ▶ **Key drivers process update:**
 - PAs and Consultants have met twice on this topic
 - Consultants provided examples of projects and savings levels
 - Process has and will:
 - Discuss market trends and opportunities
 - Look at potential data and historical savings
 - Work to reconcile the gap in gross projected savings



C&I PROCESS

- ▶ **Process has been a significant source of savings**
- ▶ **Proposed expansion of the industrial initiative across all PAs should have a positive gross impact**
- ▶ **ISP and other baseline work may lead to reductions in savings going forward**
- ▶ **Key drivers process update:**
 - PAs and Consultants have met twice on this
 - Process has and will:
 - Discuss market trends and opportunities
 - Discuss the impact of initiative expansion
 - Work to reconcile the gap in gross projected savings



ACTIVE DEMAND MANAGEMENT

▶ **ADM savings in Draft Plan are low, with limited coverage of other opportunities**

- Summer only; no winter ADM
- Very limited storage

▶ **Key drivers process has and continues to:**

- Consider ADM impacts and separate ADM goal(s)
- Assess including storage
- Address winter and summer
- Determine strategic positioning and value, for which purposes
- Explore customer-facing program delivery with integrated EE and ADM

Planned Active Demand Management vs. Assessment of Potential			
	2019	2020	2021
PA April 30 Draft Plan	50 MW	83 MW	120 MW
Consultant Assessment of Potential*	Low Estimate		245 MW
	High Estimate		437 MW

*Low statewide estimate extrapolated using National Grid potential study only, which included lower res ADM and no storage. High estimate extrapolated using highest of National Grid C&I results and CLC study results for residential and storage.



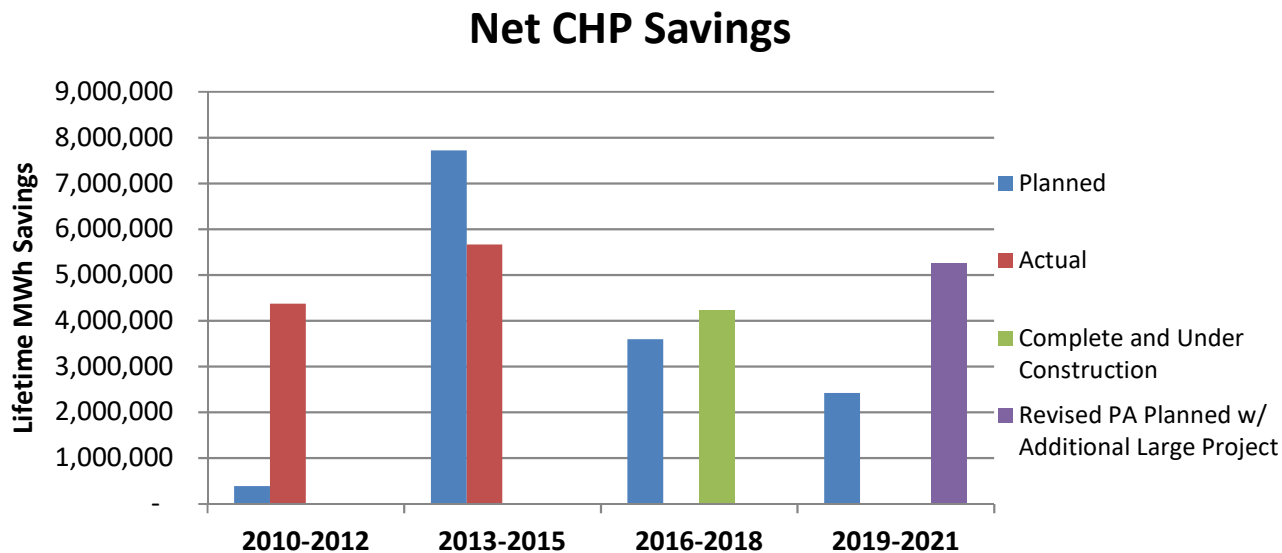
RESIDENTIAL RETAIL LIGHTING

- ▶ **Draft plan includes significant decrease in retail lighting contribution to lifetime residential savings**
 - 69% in 2017 (evaluated) vs. 30% for 2019-2021 plan
- ▶ **Planned unit numbers decrease more and faster than Consultants' assessment of potential in 2019**
 - PAs' draft: 6.5 million units in 2019
 - Consultants' assessment: 12.6 million units in 2019
 - 2017 evaluated results: 12.4 million units
- ▶ **Key drivers process update:**
 - PAs and Consultants met one time
 - Agreement that unit #s should be revisited and various planning values should be corrected/updated
 - Higher 2019 unit #s provided on 7/26; to be discussed
 - 2020 and 2021 numbers still forthcoming



CHP

- ▶ **Consultants agree with PAs on the following CHP net lifetime savings – 5,241,000 MWh**
 - Consultants reviewed the PA pipeline, agree with level of savings in draft plan
 - Consultants/PAs have estimated additional savings



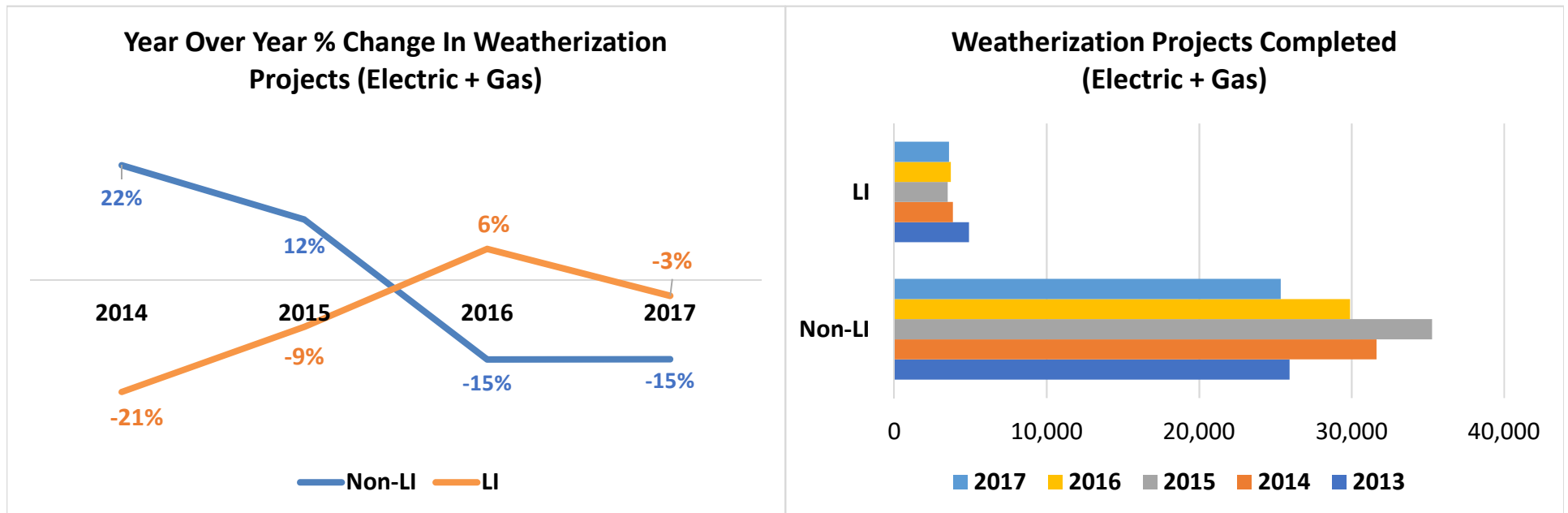
HEAT PUMPS – C&I AND RESIDENTIAL

- ▶ Heat pumps are a way to fuel switch to meet GWSA and EEAC priorities
- ▶ Assumptions in the draft plan vary amongst PAs in terms of volume and type of units
- ▶ Plan assumes minimal oil and propane savings from heat pumps
 - PAs plan to revise oil and propane heat pump savings assumptions in next version of the Plan
- ▶ Key drivers process update
 - PAs and Consultants have met once on this topic
 - Process has and will:
 - Examine planned unit numbers, including timing
 - Address PA differences
 - Assess TRC costs, program delivery methods, and incentives
 - Discuss likelihood of displacing oil and propane
 - Discuss Small Business/Turnkey measure opportunities



RESIDENTIAL PROGRAM REALIGNMENT

- Residential program innovations needed to maintain high savings and participation



Weatherization includes insulation and no-cost air sealing (HES only)

RESIDENTIAL PROGRAM REALIGNMENT

► Key drivers process update:

- Consultants and PAs have met three times on this topic
- Consultants confirmed w/ PAs that 2016-2018 planning assumptions primarily used to populate 2019-2021 planning values
 - Without 2019-2021 reflecting revised program design, Consultants and PAs not able to meaningfully discuss savings and costs
- Additional program implementation details provided by PAs and discussed at RMC week of 7/23. More will be forthcoming.
- PAs working on revising BCR model inputs



SMALL BUSINESS AND SMALL NONPROFITS

- ▶ **The Small Business initiative will no longer be tracked separately**
- ▶ **Key drivers process update:**
 - Consultants and PAs have met twice on this topic
 - Process has and will:
 - Establish a way to keep the EEAC informed of program engagement with small business and non-profits
 - Discuss market trends and opportunities
 - Examine the impact of evaluation changes
 - Discuss the opportunity to make heat pumps a Small Business/Turnkey measure



LOW INCOME

- ▶ **Low income program impacted by many of the same factors (e.g., declining lighting savings) as residential**
- ▶ **Draft plan doesn't provide details on program innovations**
- ▶ **Key drivers process update:**
 - Consultants and PAs have met once on this topic
 - PA differences have been identified
 - No new measures introduced into the April Draft Plan
 - Several new measures being considered for the next iteration
 - Savings/cost implications of greater alignment with res program, especially mixed income buildings, being considered
 - Participation levels and strategies to reach hard to reach low-income households must continue to be discussed



NEXT STEPS

- ▶ **Additional key driver topic meetings have been or are in the process of being scheduled**
- ▶ **Consultants and PAs will continue to work together to understand and adjust assumptions as necessary**
- ▶ **The key drivers process is expected to be complete by August 12 with a summary of where gaps were closed and where they may remain**



THANK YOU

Question?

▶ July 31, 2018

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