ComEd Energy Efficiency Program

CPAS – Considerations & Challenges

Lessons from 2018, Outlook to 2019+

November 20, 2019

ComEd
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CPAS Considerations in Planning Process

Income Eligible Spend

>10MW Exemption

1. **CPAS** – Lifetime savings (vs. first year savings) is now key
2. **WAML** – Portfolio-level savings persistence for amortization schedule
3. **AAIG** – Annual incremental savings
4. **ROE –** EE spend (investment) is now rate based (equity) with rate-of-return (ROE)
5. **Therms** – Gas (and other fuel) savings can be counted as kWh

Public Sector Spend

3rd Party Programs

Voltage Optimization

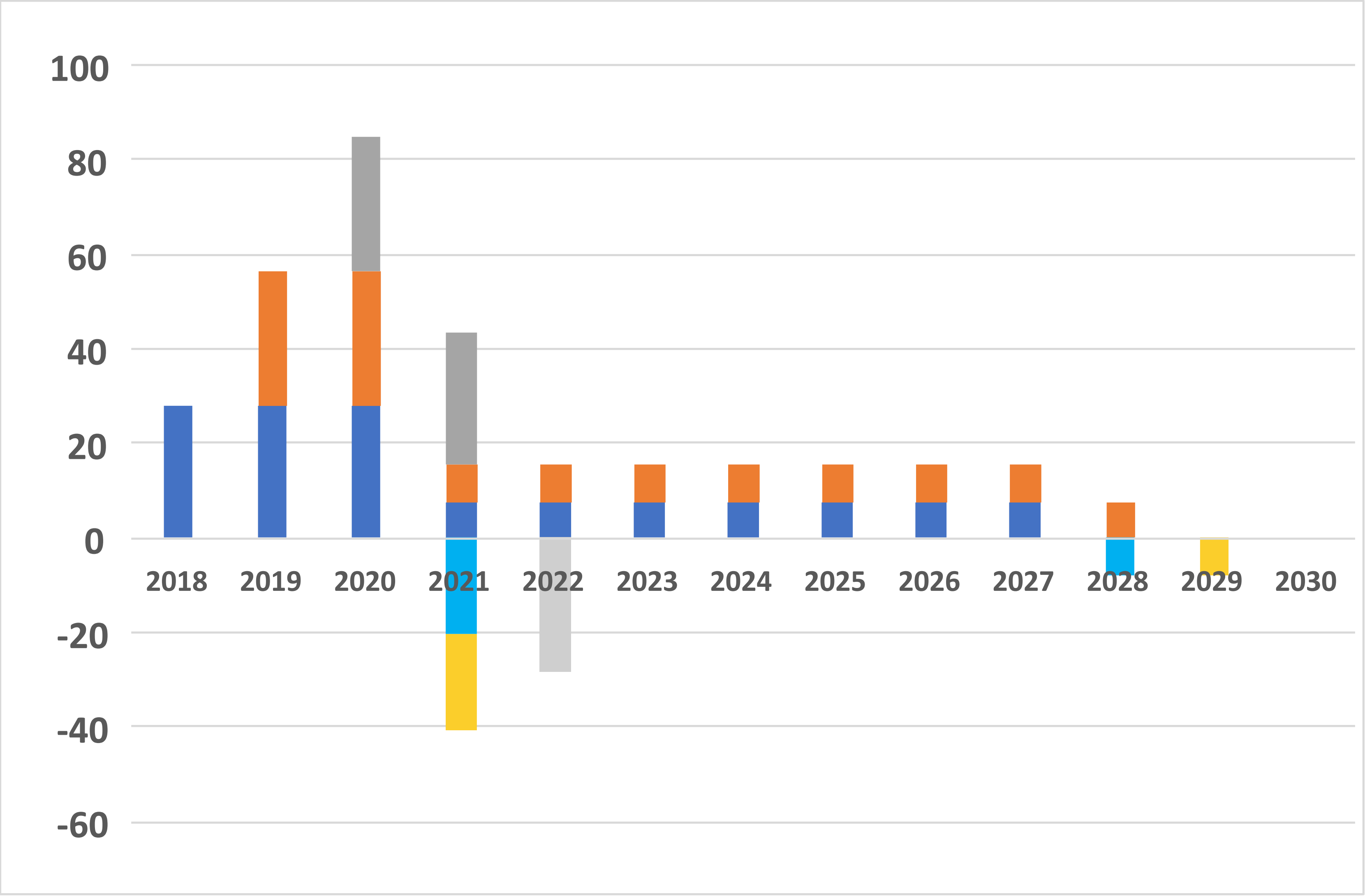
CPAS Considerations in Planning Process

- FEJA requires us to ask new questions:
  - How long do the savings persist?
  - What are the expired savings?
  - Can we acquire free, long measure-life therms?
  - Can we improve programs to make savings more persistent and to avoid expired savings?
  - Can we improve programs to be more cost-effective (in terms of TRC and lifetime cost per kWh)?
  - Can we find new measures that will improve the cost-effectiveness of the portfolio?

CPAS Considerations in Planning Process

- Where do expired savings come from?
  - Any measure reaching the end of its life before or in 2030
  - Any measure reducing savings level during its lifetime, resulting from:
    - Hybrid baselines
    - Early replacements (T-12’s)
    - Lighting measures with EISA-affected baseline
    - Deemed savings degradation (Behavioral)
    - Other measures with variable savings streams (Street Lights, CHP)

Residential Omni LED Savings (CPAS & Expired Savings)



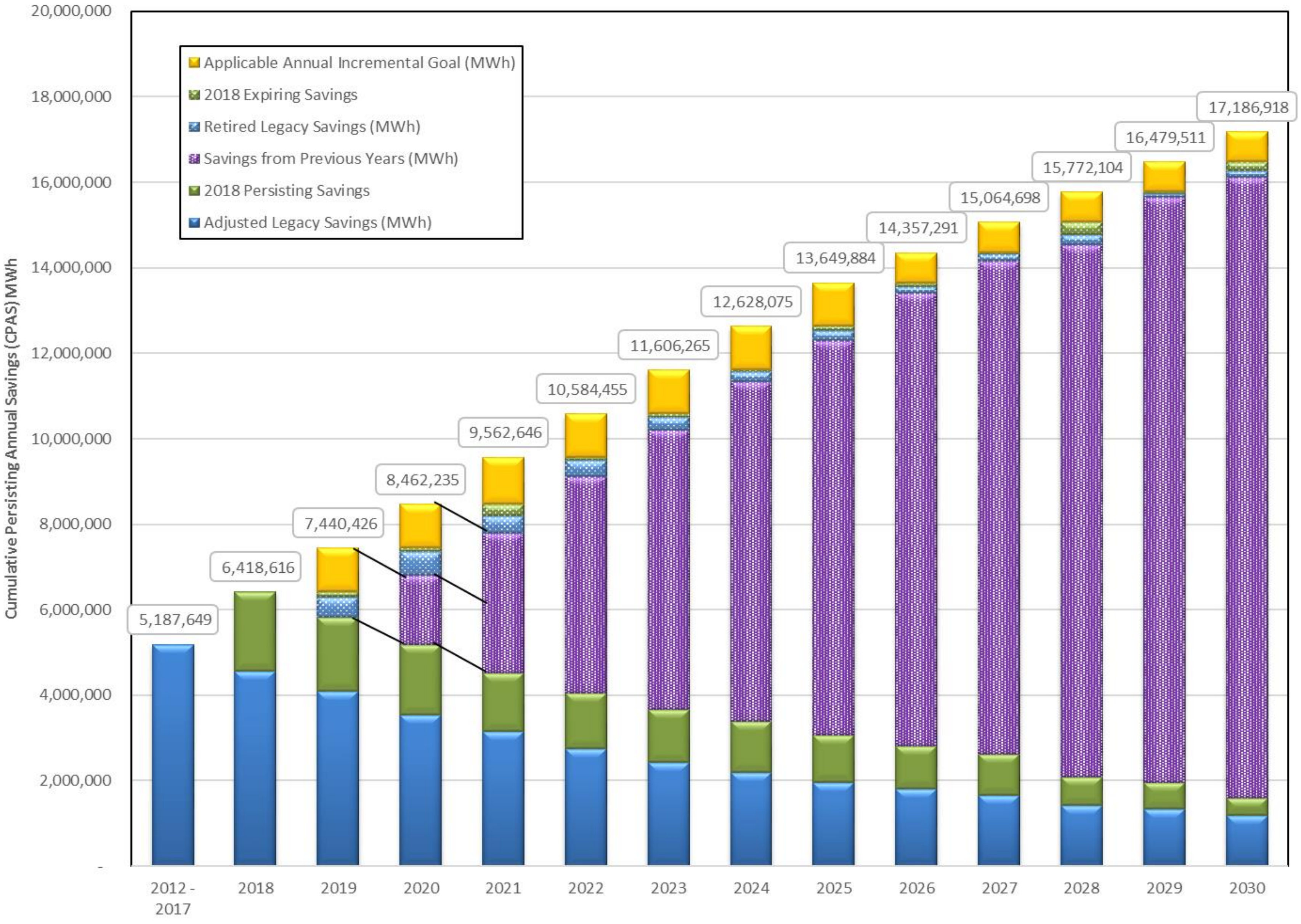
CPAS Considerations in Planning Process

- Without consideration of any other factors or goals, those questions lead us to:
  - Prioritize long-life measures, with “minimum” measure life changing as we approach 2030 (WAML aside, 11-year ML is sufficient for 2020 measures to avoid expired savings through 2030)
  - Prioritize cost-effective measures with lower lifetime cost per kWh and 1.00+ TRC
  - Limit expired savings by avoiding short-life measures and measures with midlife adjustments from baseline shifts, degradation, etc.

Other Priorities for Next Plan

- Comprehensive evaluation of new program opportunities (e.g., water, electrification, smart homes, connected commercial lighting, new channels, renewables, codes, market effects)
- Well-researched and logical upstream strategy
- Portfolio 2022-25 savings consistent with 2019 “best-in-class” potential study
- Productive R&D pipeline with strong evidence it’s a critical long-term component of the EE portfolio

CPAS & AAIG with 2018 Results



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Utility Challenges in Meeting Aggressive CPAS Goals

- Many of the lowest cost measures are no longer viable in new CPAS framework (e.g., lighting, HER)
- Meeting CPAS goals while balancing competing policy objectives:
  - Serving IE customers and meeting IE spend goals:
    - ComEd wants to prioritize serving these customers, but as our most expensive programs must consider future spend levels
    - EISA-shortened measure lives of bulbs hurt ability to meet goals, but these measures are still valuable to IE customers
    - Claiming other fuel savings from IE programs is prioritized regardless of measure lives

Utility Challenges in Meeting Aggressive CPAS Goals

- Meeting CPAS goals while balancing competing policy objectives (continued):
  - Responding to baseline shifts, net-to-gross, and market adjustments
    - Ever-changing TRM assumptions and baseline discussions – need to reconsider process
  - Third party programs
  - Public sector spend
  - >10 MW exemption