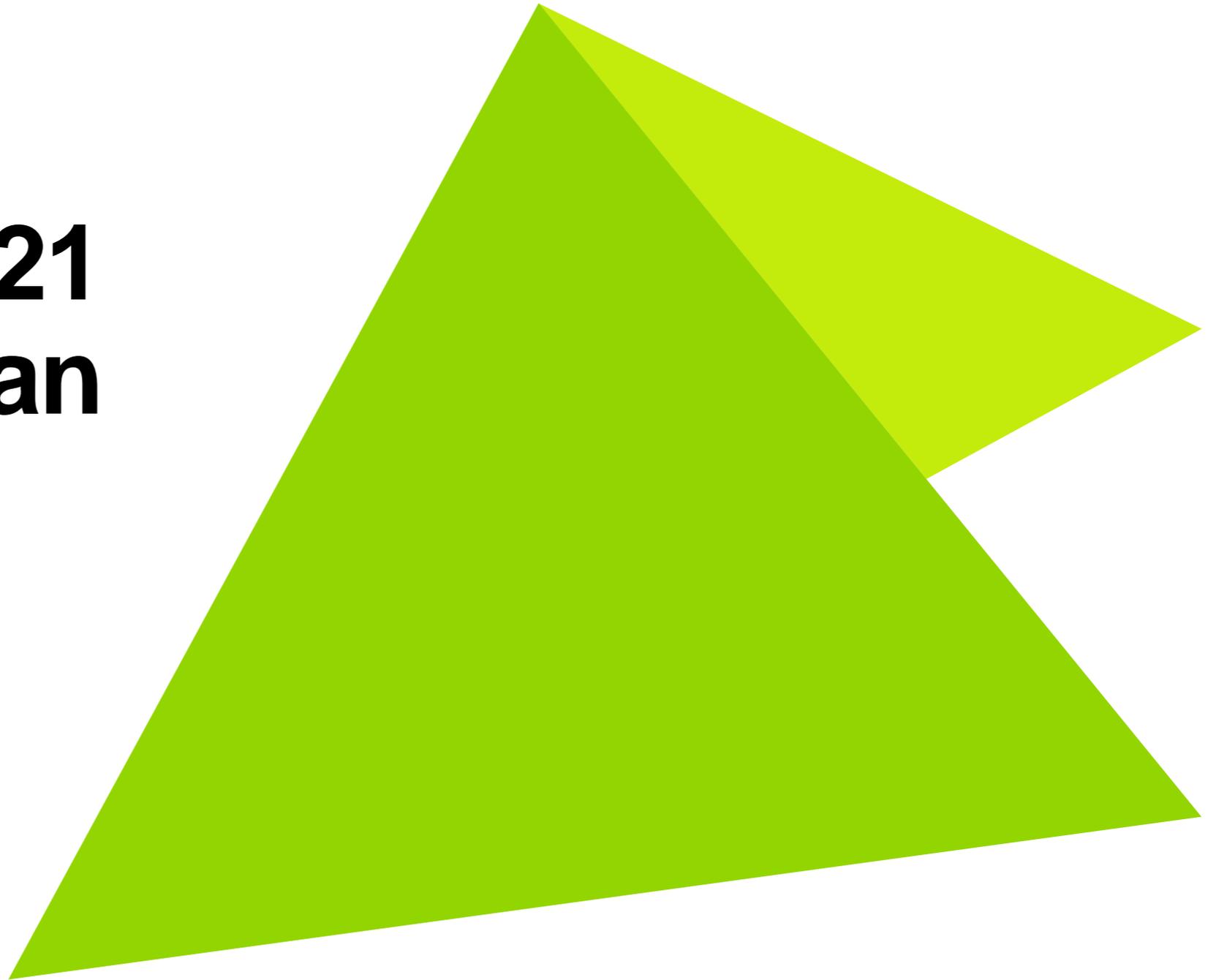




# ComEd CY2021 Evaluation Plan Overview

December 2, 2020

Prepared for ComEd and the  
Illinois Energy Efficiency  
Stakeholder Advisory Group



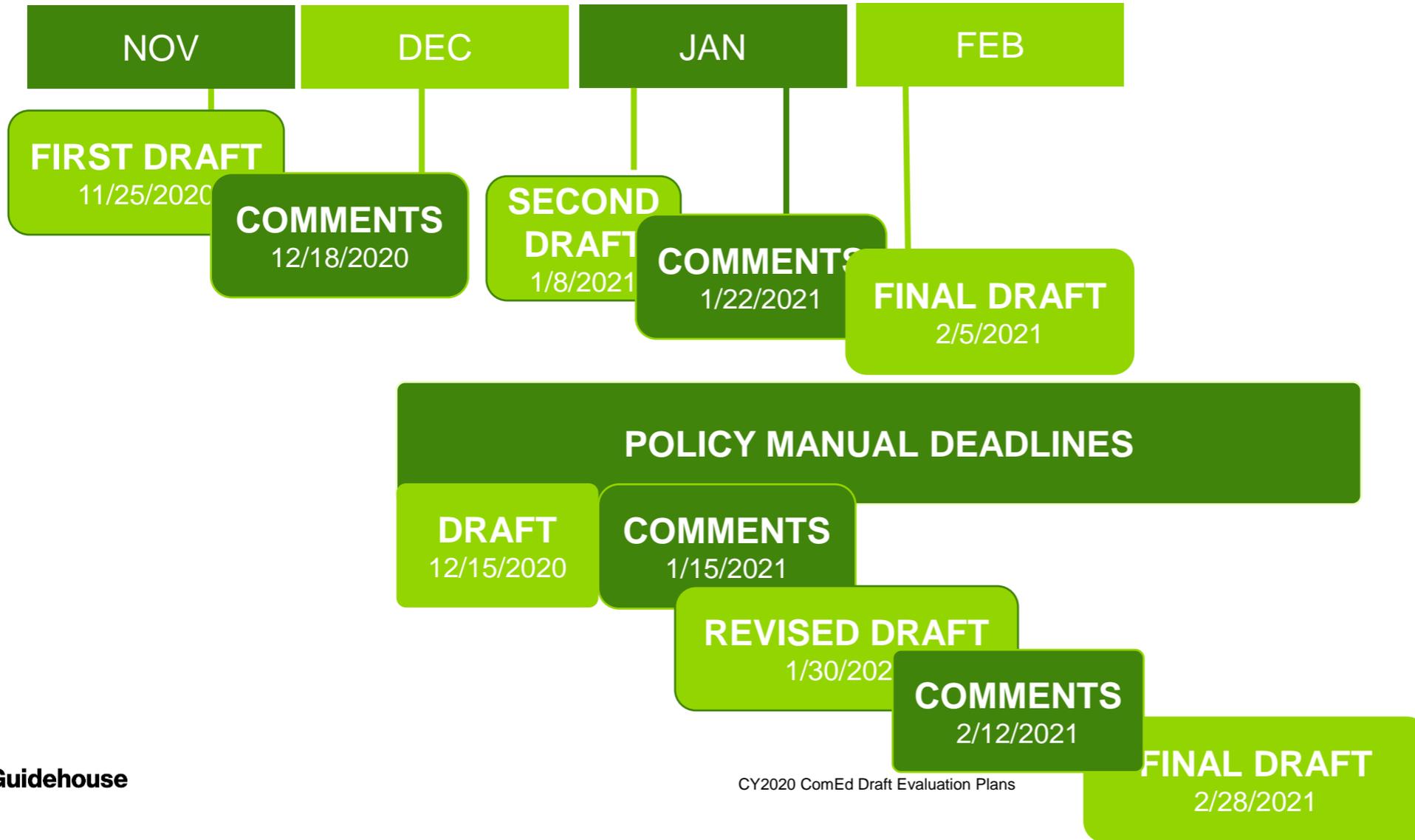
# AGENDA

1. Timeline Overview
2. Program- and Pilot-Level
  - Impact
  - NTG Analyses
  - Additional Research
  - Market Transformation Program Support
3. Portfolio-Level
  - Measure-specific TRM updates
  - Non-Energy Impacts
4. Budget Overview
5. Coordination Across Utilities

# Timeline Overview

# TIMELINE OVERVIEW

## Evaluation Planning Timeline



# TIMELINE OVERVIEW

## Evaluation Activities Timeline

Impact

- Waves of impact research Summer 2021
- Final data available January 29, 2022
- Final impact report and summary report due April 30, 2022

Net to Gross

- Memos delivered as research is completed
- Draft recommendations September 2021
- Final values October 1, 2021

Research

- Results presented as research is completed
- TRM, non-energy impacts, effective useful life and other studies are ongoing

# Program- and Pilot-Level

# PROGRAM- AND PILOT-LEVEL

**We will conduct impact evaluations by April 30, 2022 for:**

- 17 Business Programs
- 7 Income Eligible Programs
- 7 Residential Programs
- 9 Pilots (projected)
- Voltage Optimization

# PROGRAM- AND PILOT-LEVEL

## We will evaluate 17 business programs:

1. Agriculture
2. Business Telecomm
3. Retro-Commissioning (RCx)
4. Facility Assessments
5. Grocery
6. Incentives - Custom
7. Incentives - Standard
8. Industrial Systems
9. Instant Discounts
10. LED Street Lighting
11. Nonprofit Retrofits
12. Non-Residential New Construction
13. Public Buildings in Distressed Communities
14. Small Business Kits
15. Small Business
16. Strategic Energy Management
17. Virtual Commissioning (VCx)

# PROGRAM- AND PILOT-LEVEL

**We will evaluate 7 income eligible programs:**

1. Affordable Housing New Construction
2. Food Bank Distribution
3. Multi-Family Retrofits
4. Single Family Retrofits
5. Income Eligible Energy Savings Kits
6. Income Eligible Product Discounts
7. Public Housing Retrofits

# PROGRAM- AND PILOT-LEVEL

**We will evaluate 7 residential programs:**

1. Appliance Rebates
2. Elementary Energy Education
3. Lighting Discounts
4. Multi-Family Assessments
5. Residential Behavior
6. Residential HVAC
7. Single Family Assessment

**and Voltage Optimization.**

# PROGRAM- AND PILOT-LEVEL

**We will provide evaluation support for 9 Pilots:**

- Business**
  - 1. Commercial Food Service Equipment
  - 2. SEM Water Savings
  - 3. Very High Efficiency HVAC
  - 4. Water Infrastructure Leak Reduction
- Residential**
  - 5. Efficient Choice
  - 6. ENERGYSTAR Retail Products Platform
  - 7. Electric Homes New Construction
- All Sectors**
  - 8. Normalized Meter Energy Consumption – Pilot 1
  - 9. Normalized Meter Energy Consumption – Pilot 2

# PROGRAM- AND PILOT-LEVEL

**Our impact evaluations will use three approaches:**

1. TRM-based (majority of residential programs)
2. Custom and model-based (majority of business programs and pilots)
3. Regression-based

# PROGRAM- AND PILOT-LEVEL

We will conduct NTG analysis for the following programs and pilot:



# PROGRAM- AND PILOT-LEVEL

## We plan to conduct additional research for:

### Income Eligible

- **Single Family Retrofits:** Examine barriers to greater participation via focus groups and interviews with Community Based Organizations (including Manufactured Housing Communities) and other Income Qualified Advisory Group stakeholders.
- **Multi-family Retrofits:** Examine barriers to greater participation via focus groups and interviews with Community Based Organizations and other Income Qualified Advisory Group stakeholders.

### Pilots

- **Efficient Choice:** Explore whether visitors to the Efficient Choice website purchased efficient equipment after their visit by collecting proofs of purchase via a survey. The survey will also include customer satisfaction questions to assess participant experience with the website.
- **Normalized Meter Energy Consumption:** Support Pilot implementation contractors' use of AMI data to identify high-users in order to convert them to high-savers by participating in ComEd EE programs. Pilots may produce TRM work paper(s).

# PROGRAM- AND PILOT-LEVEL

## We will support Market Transformation Programs:

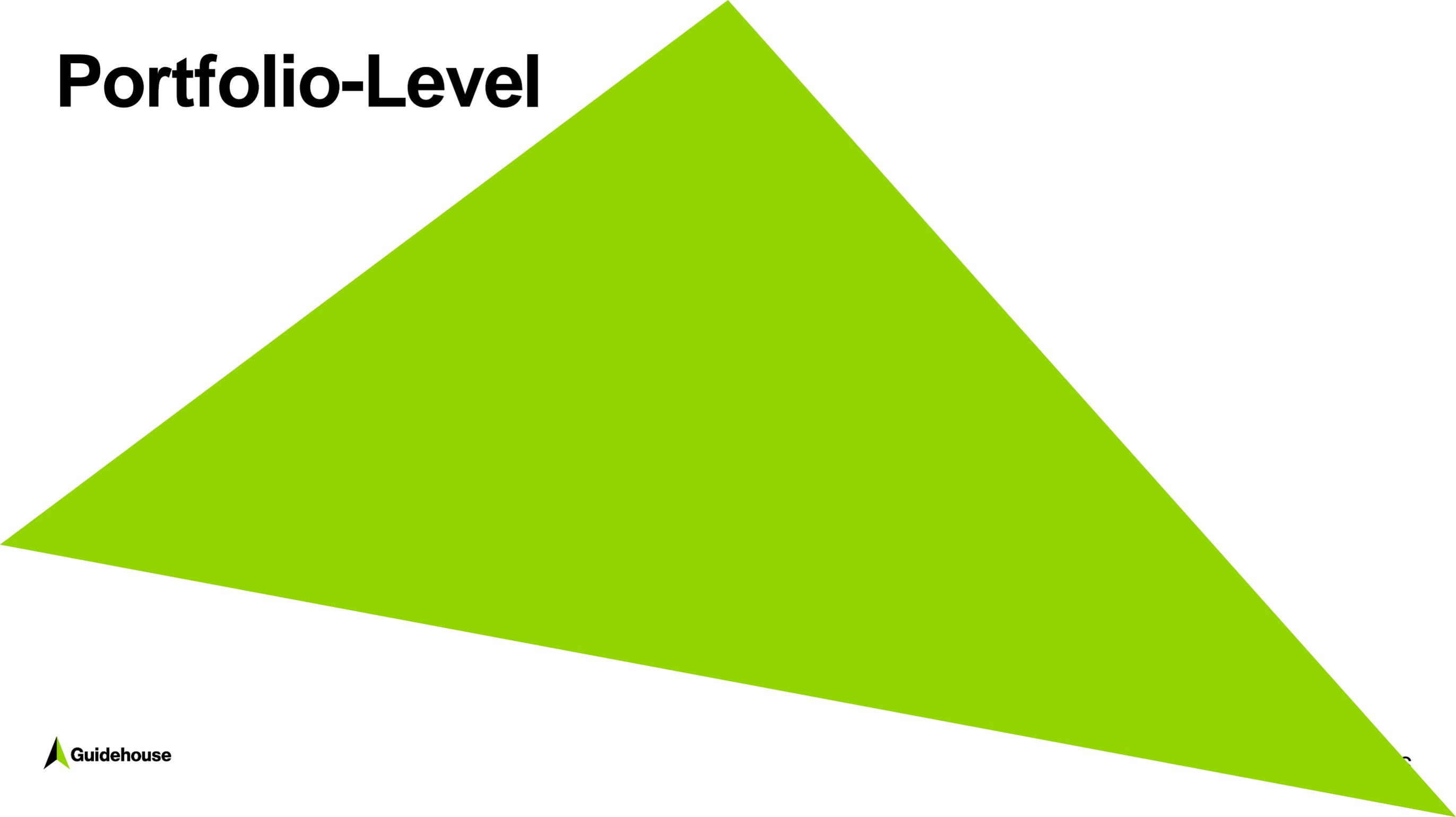
### ENERGY STAR Retail Products Platform

- We will use the “IL TRM Attachment C: Framework for Counting Market Transformation Savings in Illinois” to evaluate savings from sales of washing machines and refrigerators above the natural market baseline in ComEd’s territory.

### Building Operator Certifications

- We interviewed building operators who earned the certificate from MEEA in 2018 and 2019 to determine how the training impacted their behavior and potentially produced savings.

# Portfolio-Level



# PORTFOLIO-LEVEL

## Our portfolio level research includes:

1. TRM updates (including NTG updates via the NTG working group)
2. Effective useful life
3. Non-energy impacts
4. PJM

# PORTFOLIO-LEVEL

**In 2020, we conducted research to support several TRM updates:**

- **Small Commercial Thermostats** – primary research to update cooling savings factor
- **Residential Thermostats** – primary research to update cooling savings factor and ISR value
- **Tier 1 APS** – primary research to update ISR values
- **Home Energy Reports** – primary research to update persistence factor; secondary literature review and working group collaboration
- **LED Streetlighting & Lighting Controls** – secondary research to update EUL values
- **Voltage Optimization** – added measure to TRM
- **Dew Point Demand Controls** – added measure that appears in Standard Program verification

# PORTFOLIO-LEVEL

**We plan to conduct the following TRM update research this year:**

- **LED Bulbs and Fixtures** - Secondary research to update LED product wattage and lumen values and work with ODC to update cost values
- **Small Commercial Thermostats** - Update fan energy (Fe) assumption
- **Smart Sockets** - Update ISR using spillover surveys for the Small Business Kits Program; update controlled equipment using same survey; potential updates to hours open default assumptions



# PORTFOLIO-LEVEL

## Other potential research includes:

### Effective Useful Life

- **Compressed Air Leak Repair** – considering primary data collection following individual leaks over time to see how frequently they occur (\$\$)
- **Virtual Commissioning** – primary research on how ongoing follow up with customers to retain savings should be treated in terms of EUL (a SAG meeting on this topic will be scheduled in CY2021) (\$\$)

### Networked Lighting Controls

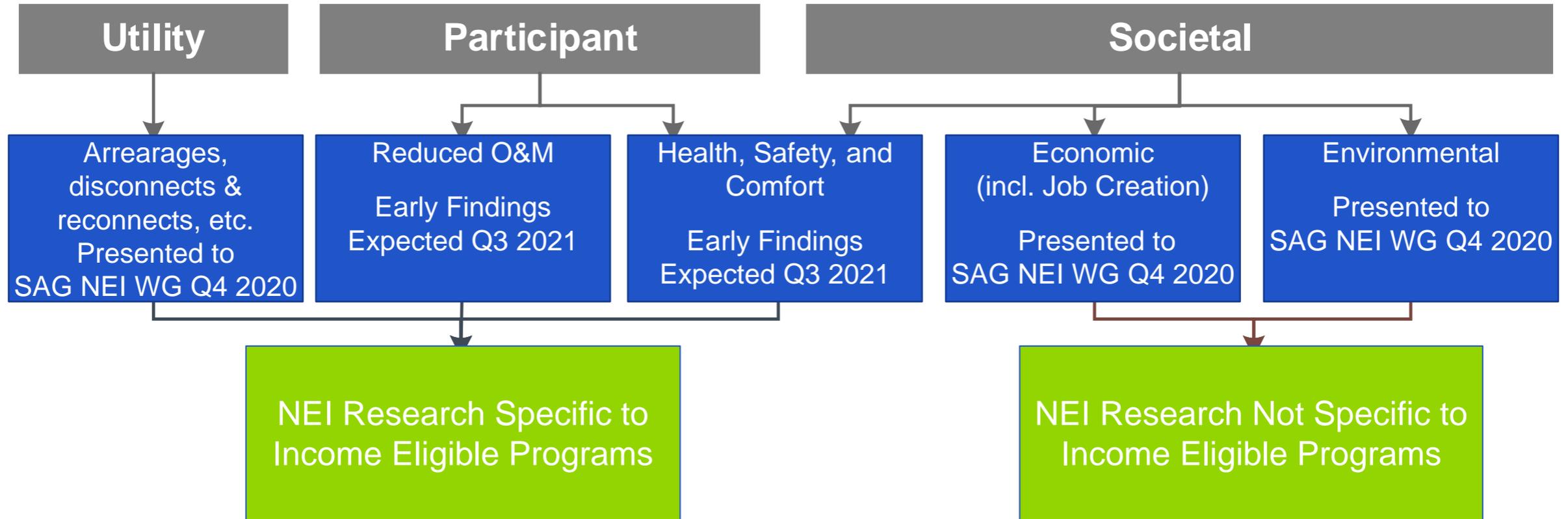
- Secondary review of studies available on networked lighting controls savings to assess reasonableness of TRM values and value of primary research (\$)
- Potential primary research using customer trend data to assess savings (\$\$)
- Potential primary data collection through metering to supplement research that could be done with trend data (\$\$\$)

### Compressed Air Measure Prioritization

- Review of Industrial Systems program data to identify opportunities from compressed air measures (\$)

# PORTFOLIO-LEVEL

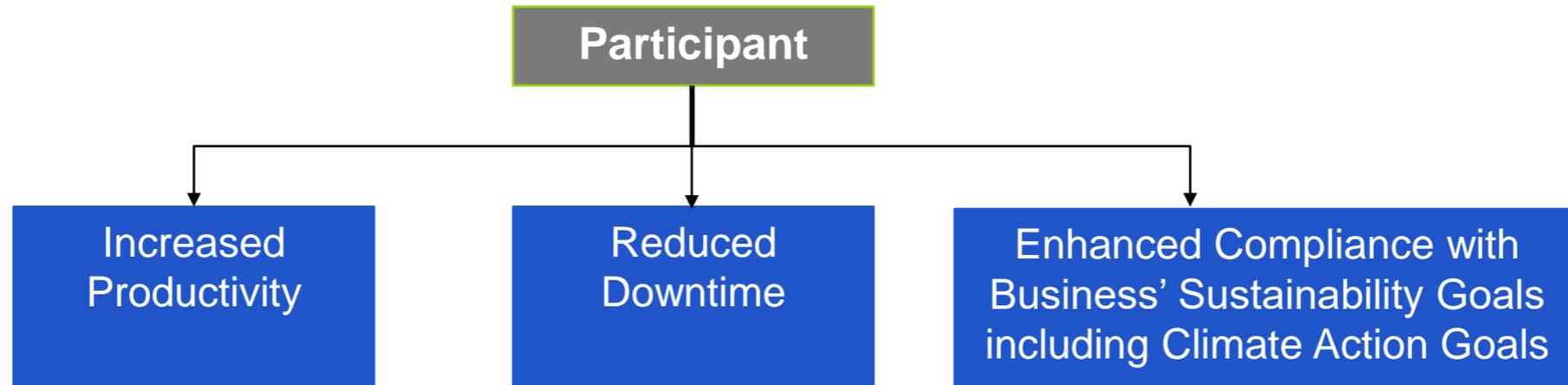
## CY2020 – CY2021 Non-energy impacts research:



**Monetized Societal NEIs Delivered to ComEd in October 2020 for Plan 6 Programs' Cost-Effectiveness Tests in accordance with FEJA**

# PORTFOLIO-LEVEL

**CY2021: Research potential non-energy impacts associated with four business programs\***

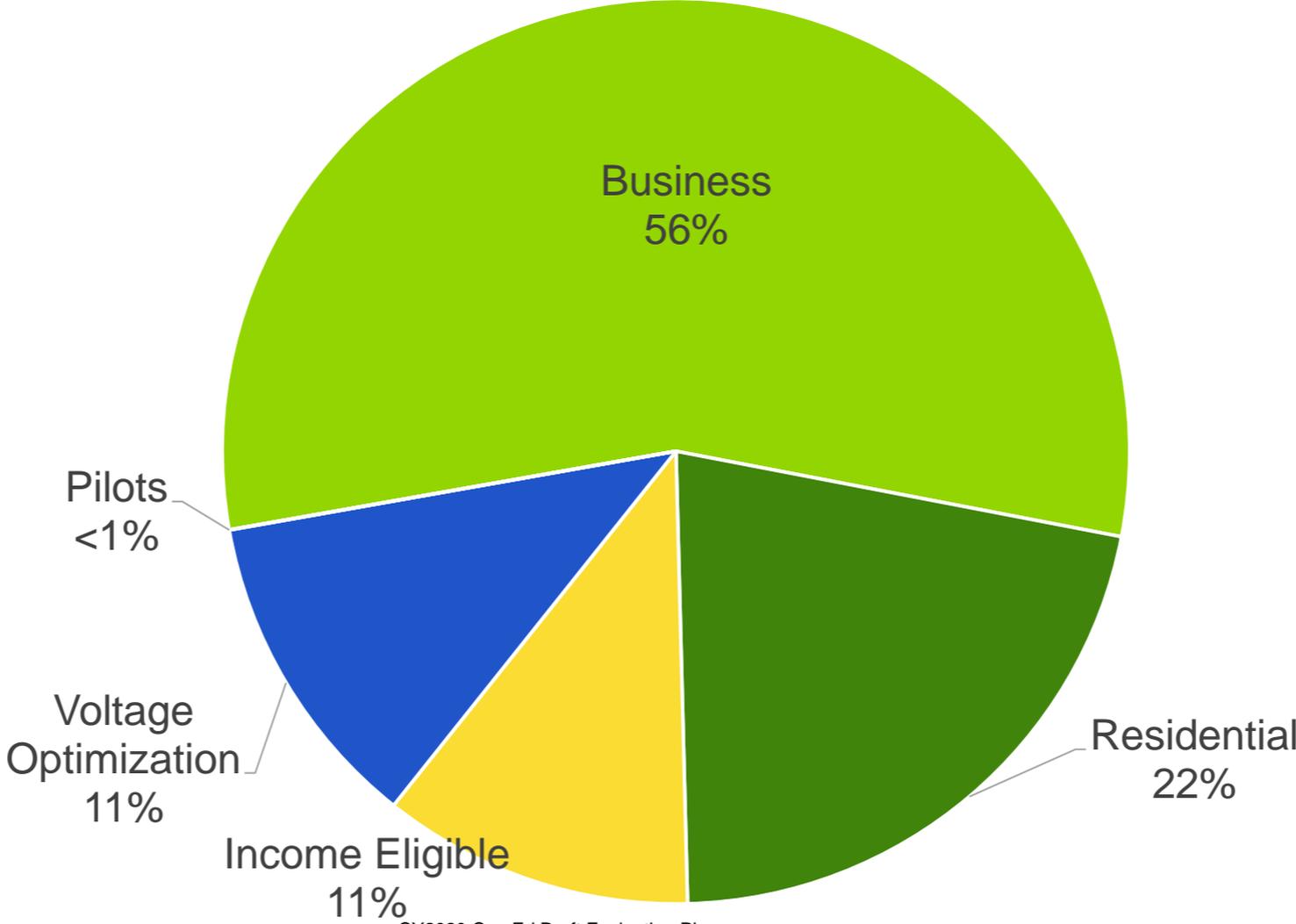


**\*Custom, Standard, Instant Discounts, and Small Business**

# Budget Overview

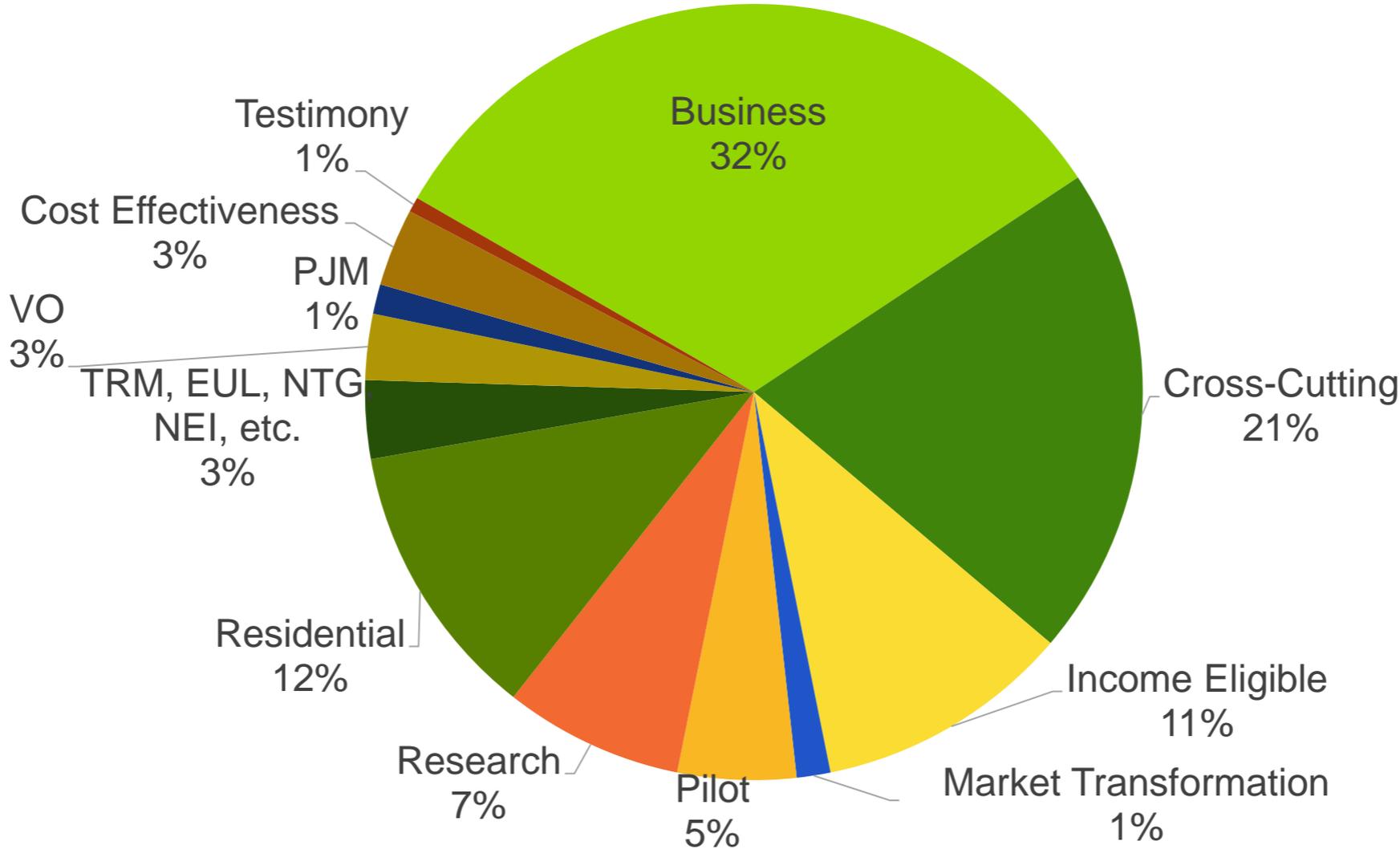
# BUDGET OVERVIEW

## CY2019 Net kWh by Sector



# BUDGET OVERVIEW

## Percent of Draft CY2020 Budget by Sector



# Coordination Across Utilities

# COORDINATION ACROSS UTILITIES

**We will collaborate on an ongoing basis with the other Illinois utility energy efficiency program evaluation teams.**

- Illinois evaluators coordinate on evaluation approaches for similar programs.
- Illinois evaluators currently hold a monthly evaluation coordination call to keep abreast of key issues
- Methodological coordination occurs regularly as part of SAG meetings on specific topics, including:
  - NTG Working Group
  - TRM Technical Advisory Committee (TAC)
  - Non-energy Impacts Working Group
  - Similar pilots launched by utilities
- Coordination also occurs on an ad-hoc basis on Illinois-wide key issues or program-specific issues that might impact multiple utility programs
- The Illinois evaluation teams collaborate on statewide research (e.g., non-energy impact research and the Efficient Choice website evaluation)

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