



# 2024-2025 ComEd Evaluation Plan

Presentation to SAG

December 5, 2023

# Agenda

- Introduction
  - Evaluation Plan Schedule
  - The ComEd Portfolio
  - Budget
- Residential and Income Eligible (IE) Programs
- Business Programs
- Special Topics Research
  - Non-Energy Impacts
  - PJM
- Evaluation Approaches
  - Evaluation Coordination

# Introduction

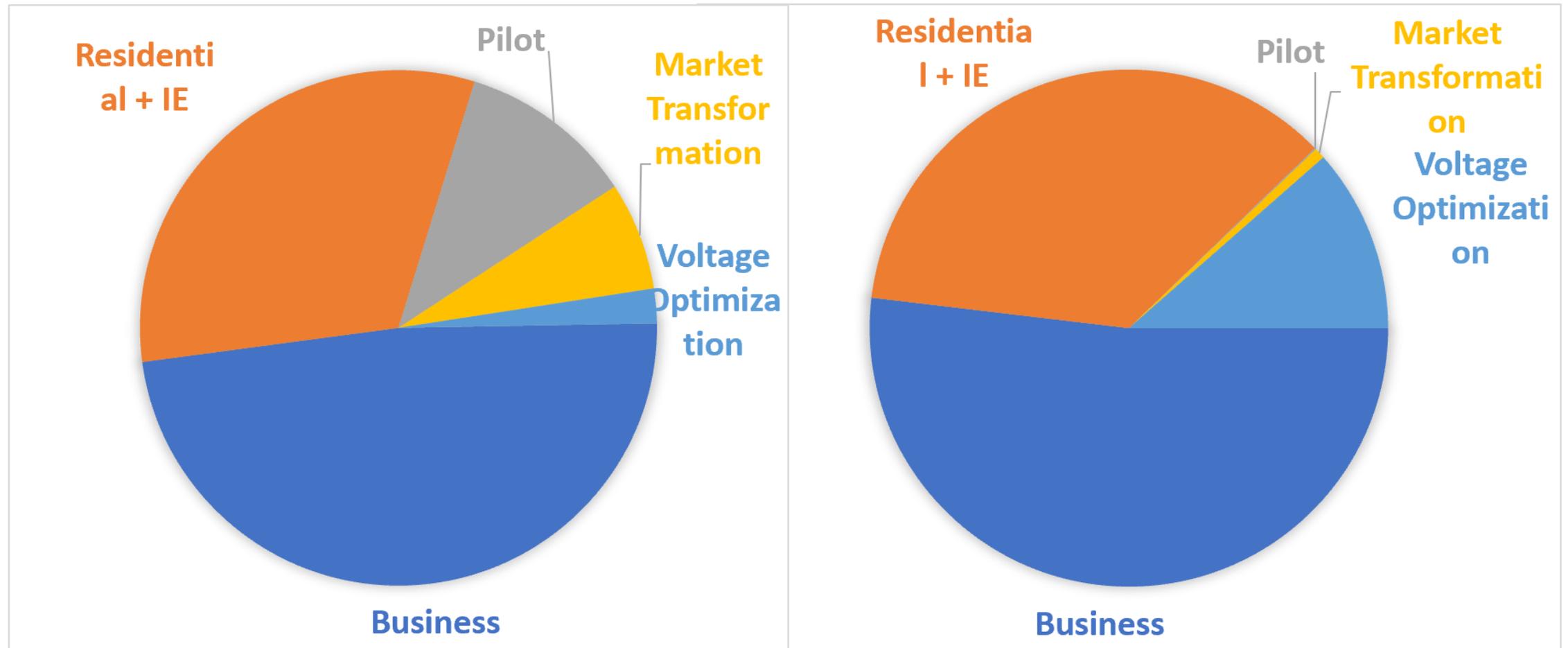
# Evaluation Plan Schedule

Step	Date
First Draft	November 14
Presentation to SAG	December 5
Second Draft	December 15
Comments Due	January 5
Final	January 12

# Evaluation Budget vs kWh Saved – 2024

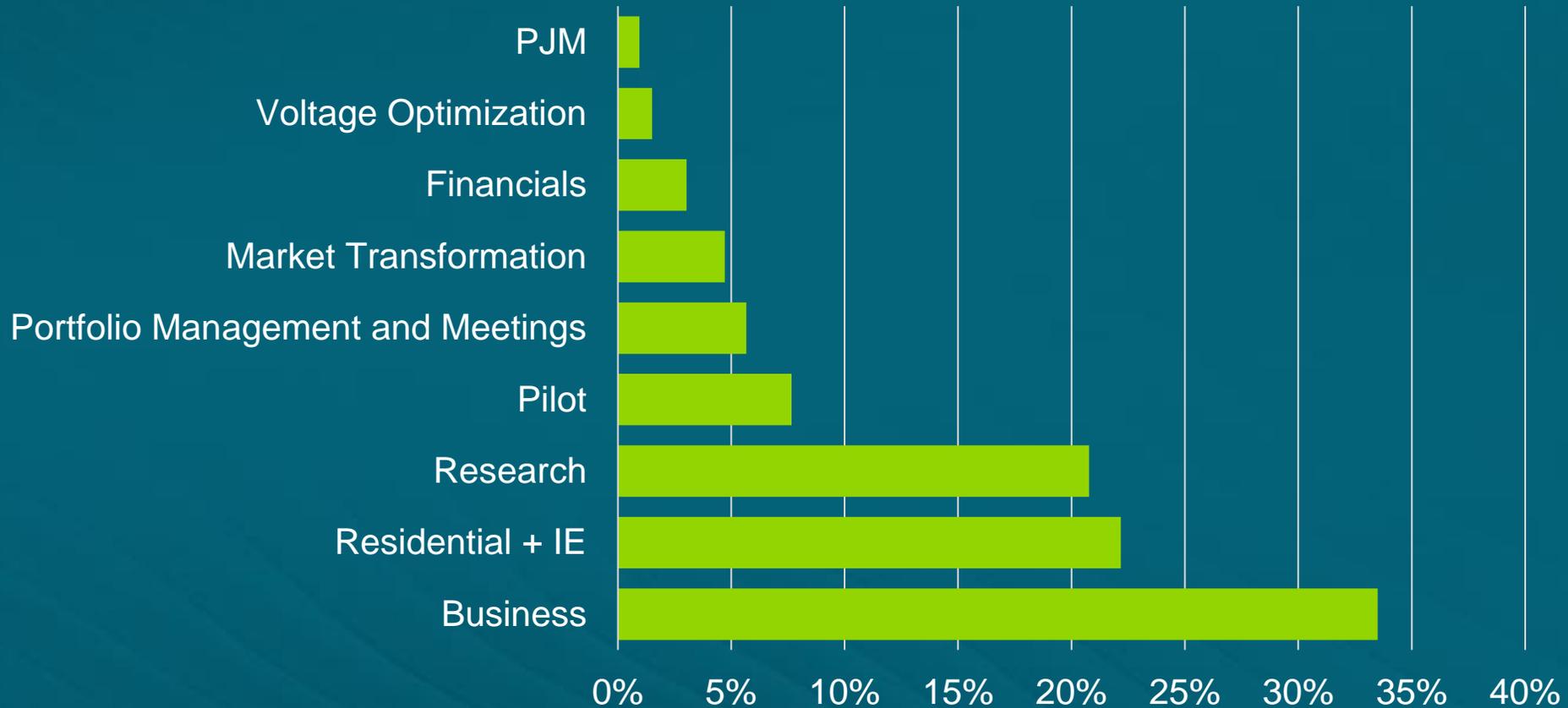
CY2024 Evaluation Budget (Programs only)

CY2022 Net kWh Saved



Source: Budget: 2024 Evaluation plan. kWh: 2022 Impact Report

# CY2024 Evaluation Budget



# Residential and IE Programs

# Structure of the Evaluation – Residential Sector Programs

Program Type	Plan 6 Program
Direct to Consumer	Single-Family Upgrades
	Multifamily Upgrades
	Behavior - Res/IE
Channels	Retail/Online
	Product Distribution
	New Construction – IE
	Electric Homes New Construction
	Contractor/Midstream Rebates

- Promoted broadly as the ComEd Energy Efficiency Program
- Income Qualified services are embedded into ComEd’s Plan 6 Residential program
- Evaluation reports differentiate between market rate and IE results

# Residential Sector Program Components

Income Eligible
Market Rate
Income Eligible and Market Rate
Additional compared to CY2023

Program Type	Program	Program Component
Direct to Consumer	Single-Family Upgrades	MR Single Family (HEA)
		IE Single Family (HEA)
		Single Family IE Retrofits (IHWAP)
		Single Family Whole Home Electrification ( <i>transition to SFU from pilot</i> )
	Multifamily Upgrades	MR Multifamily
		IE Multifamily
		IHWAP
		Public Housing
		MF Whole Home Electrification ( <i>transition to MFU from pilot</i> )
	SEM ( <i>New in CY2024</i> )	
Behavior - Res/IE	Home Energy Reports	
Channels	Retail/Online*	IE Retail Discounts
		Lighting Discounts
		ComEd Marketplace
		Appliance Rebates
	Product Distribution	School Kits
		IE Kits
		Food Bank LED
	New Construction - IE	Affordable Housing New Construction
	Electric Homes New Construction	Electric Homes New Construction ( <i>transition from pilot</i> )
	Contractor/Midstream Rebates	Contractor/Midstream Rebates

# Plan 6 Evaluation Structure – Residential Sector Programs

Program Type	Plan 6 Program	Impact Evaluations			
		CY2022	CY2023	CY2024	CY2025
Direct to Consumer	Single-Family Upgrades	✓	◇	✓	◇
	Multifamily Upgrades	✓	◇	✓	◇
	Behavior - Res/IE	✓	✓	✓	✓
Channels	Retail/Online	✓	✓	✓	✓
	Product Distribution	✓	✓	✓	✓
	New Construction – IE	✓	◇	✓	◇
	Electric Homes New Construction	✓	✓	✓	◇
	Contractor/Midstream Rebates	✓	◇	✓	◇

Additional compared to CY2023

◇ Prior year's realization rate applied at the measure and program component level.

# Residential and IE NTG Evaluation Draft Timeline

Program	Component	Net Savings Research Tasks	CY2022	CY2023	CY2024	CY2025
Contractor Midstream Rebates	N/A	Contractor Free Ridership Survey		✓		
Contractor Midstream Rebates	N/A	Contractor Spillover Survey		✓		
Multifamily Upgrades	MR Multifamily	Customer Free Ridership Survey		✓		
Multifamily Upgrades	MR Multifamily	Customer Spillover Survey		✓		
Retail/Online	Appliance Rebates	Customer Free Ridership Survey		✓		✓
Retail/Online	Appliance Rebates	Customer Spillover Survey		✓		✓
Retail/Online	ComEd Marketplace	Customer Free Ridership Survey		✓		✓
Retail/Online	ComEd Marketplace	Customer Spillover Survey		✓		✓
Single Family Upgrades	MR Single Family (HEA)	Customer Free Ridership Survey			✓	
Single Family Upgrades	MR Single Family (HEA)	Customer Spillover Survey			✓	
Electric Homes New Construction	N/A	Customer/Trade Ally Free Ridership Survey				✓

Note: Timeline reflects the **calendar year** that new recommendations will be presented to SAG.

# Residential Retail / Online Program: Measure Research

The CY2024 Retail/Online program evaluation includes a review of deemed TRM calculations and their associated parameter inputs values.

- There are cases where TRM based assumptions rely on outdated information from publicly available data when newer available data are available.
  - For example, the ENERGY STAR clothes washer deemed cycles / year is derived from 2009 Residential Energy Consumption Survey (RECS) data, however there are more recent 2015 and 20120 RECS data available.
- The evaluation team plans to survey limited time offer (LTO) appliance rebate participants to verify installations and determine whether separate in-service-rate values should be applied to LTO measures in future program years.

Measures relying on older RECS data:
Energy Star Clothes Washers
Energy Star Dishwashers
Advanced Thermostats
Low Flow Showerheads
LED Lamps

# Residential and IE Pilots and Market Transformation Programs

Pilots and MT Programs with <u>Expected Evaluated Savings in 2024</u>	Pilot	MT Program
ENERGY STAR Retail Products Platform		✓

Pilots and MT Programs with <u>Evaluation Support</u>	Pilot	MT Program
<b>All Sectors</b>		
Advanced Codes and Building Performance Standards		✓
<b>Residential and IE Sector</b>		
Market Transformation for Electric Homes New Construction		✓

Source: ComEd Emerging Technologies Team

# Business Programs

# Structure of the Evaluation – Business Programs

Program	Notes
<b>Small Business</b>	
<b>Incentives</b>	<ul style="list-style-type: none"><li>• Separate samples for Standard and Custom projects</li></ul>
<b>Targeted Systems</b>	<ul style="list-style-type: none"><li>• Separate samples for Retrocommissioning (RCx), Industrial Systems</li><li>• RCx is offered as a joint program</li></ul>
<b>Midstream/Upstream</b>	<ul style="list-style-type: none"><li>• CFSE is offered as a joint program</li></ul>
<b>Behavior Bus/Pub</b>	
<b>New Construction - Bus/Pub</b>	<ul style="list-style-type: none"><li>• Offered as a joint program</li></ul>

# Business Sector Program Components

Program	Program Components
Small Business	Small Business
Incentives	Standard
	Custom
Targeted Systems	RCx [includes Building Operator Certification (BOC)]
	Industrial Systems
	Virtual Commissioning (VCx)
Midstream/Upstream	Instant Discounts
	Commercial Food Service Equipment (CFSE)
Behavior Bus/Pub	Strategic Energy Management
New Construction - Bus/Pub	Non-Residential New Construction

# NTG Evaluation Draft Timeline – Business 1

Program	Component	Tasks	CY2022	CY2023	CY2024	CY2025
Midstream/Upstream	Instant Discounts	Net Savings Research – Customer Free Ridership Survey - Wave 1		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – Customer Free Ridership Survey - Wave 2		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – Customer Spillover Survey - Wave 1		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – Customer Spillover Survey - Wave 2		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – NTG Ratio Estimation		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – Trade Ally Free Ridership Survey		✓		✓
Midstream/Upstream	Instant Discounts	Net Savings Research – Trade Ally Spillover Survey		✓		✓
New Construction - Bus/Pub	Non-Residential New Construction	Net Savings Research - Customer Free Ridership Survey		✓		✓
Small Business	Small Business*	Net Savings Research – Customer Free Ridership Survey		✓		
Small Business	Small Business*	Net Savings Research – Customer Spillover Survey		✓		
Small Business	Small Business*	Net Savings Research – Trade Ally Free Ridership Survey		✓		
Small Business	Small Business*	Net Savings Research – Trade Ally Spillover Survey		✓		
Targeted Systems	RCx	Net Savings Research – Customer Free Ridership Survey			✓	
Targeted Systems	RCx	Net Savings Research – Customer Spillover Survey			✓	
Targeted Systems	RCx	Net Savings Research – EESP Free Ridership Survey			✓	
Targeted Systems	RCx	Net Savings Research – EESP Spillover Survey			✓	

\*Includes Small Business Kits

Note: The timeline reflects the **calendar year** that new recommendations will be presented to SAG.

# NTG Evaluation Draft Timeline – Business 2

Program	Component	Tasks	CY2022	CY2023	CY2024	CY2025
Incentives	Custom	Net Savings Research – Customer Free Ridership Survey	✓	✓	✓	✓
Incentives	Custom	Net Savings Research – Customer Spillover Survey	✓	✓	✓	✓
Incentives	Standard	Net Savings Research – Customer Free Ridership Survey			✓	
Incentives	Standard	Net Savings Research – Customer Spillover Survey			✓	
Incentives	Standard	Net Savings Research – Trade Ally Free Ridership Survey			✓	
Incentives	Standard	Net Savings Research – Trade Ally Spillover Survey			✓	
Targeted Systems	Industrial Systems	Net Savings Research – Customer Free Ridership Survey			✓	
Targeted Systems	Industrial Systems	Net Savings Research – Customer Spillover Survey			✓	
Midstream/Upstream	CFSE	Net Savings Research – Customer Free Ridership Survey				✓
Midstream/Upstream	CFSE	Net Savings Research – Customer Spillover Survey				✓

Note: The timeline reflects the **calendar year** that new recommendations will be presented to SAG.

# Business Pilots and Market Transformation Programs

Pilots and MT Programs with <u>Expected Savings in 2024</u>	Pilot	MT Program
Automated System Optimization	✓	
Advanced Refrigeration Controls *	✓	
Very High Efficiency HVAC Retrofit	✓	
Energy Management Systems for Small Business	✓	

Pilots and MT Programs with <u>Evaluation Support</u>	Pilot	MT Program
<b>All Sectors</b>		
Advanced Codes and Building Performance Standards		✓

\* Savings to be claimed through existing Targeted Systems program  
 Source: Discussions with ComEd's Emerging Technologies Team

# Business Research

## 1. Compressed Air Leak Repair Effective Useful Life (EUL) Research | Q4 2021–Q4 2024

- **Joint study between ComEd and Ameren Illinois**
- **Key Objective:** Determine the EUL for compressed air leak repairs with intent to update the TRM
- **Research Approach:** longitudinal study to examine air leak repair failure rates over the course of 30 months

## 2. Business Energy Analyzer (BEA) Savings Research | 2024

- **Key Objective:** Discuss evaluation methodologies to use for potentially claiming savings in future years from the BEA tool.

# Special Topics

# Non-Energy Impacts

- **Economic and Employment Impacts**

- Report produced annually by April 30 per CEJA
- Includes indirect and direct economic impacts and job-years
- Conducted since CY2018, methodology uses IMPLAN and program year cost and savings data

- **Societal Health Impacts**

- Analysis conducted annually to produce values for the TRC report due to ComEd and ICC by June 28
- Report on Societal NEIs produced annually in June
- Conducted since CY2020, methodology uses EPA tools AVERT and COBRA and portfolio savings data
- Analysis tools will be revised in accordance with AVERT and COBRA updates

- **Participant Impacts**

- Research underway with residents of single-family homes and multifamily buildings
- Research completed with building owners and property managers of multifamily buildings
- Monetized NEI results associated expected by Q2 2026
- Monetized NEI results associated with managing multifamily buildings expected by Q1 2025

# NTG Policy for Disadvantaged Areas: DACs

- DACs designation based on Illinois Solar for All “disadvantaged neighborhood” & entire area of municipalities where at least 50% of municipality is identified as income-eligible (“disadvantaged municipality”)
- Policy indicates implementation contractors & evaluators can use listed geographies (census tracts & municipal boundaries) or convert to zip code tabulation areas
- Implementation contractors & evaluators can use:
  - Established geographies (census tracts and municipal boundaries) *or*
  - Conversion to zip code tabulation areas (based on HUD established methodology)

## NTG Policy for Disadvantaged Areas: Proposed Application by Sector and Premise Location of Installed Measure

Sector / Scenario	Measure Installation within a DAC	Measure Installation outside a DAC	Measure Installation Unknown
<b>Residential Customers</b>			
Measure Supplied by Business within a DAC	NTG 1.0	NTG 1.0	NTG 1.0
Measure Supplied by Business outside a DAC	NTG 1.0	Deemed NTG	Deemed NTG
<b>C&amp;I Customers – Private Projects</b>			
Meeting Criteria of Eligibility	NTG 1.0	Deemed NTG	Deemed NTG
Measure Supplied by Business within a DAC AND Meeting Criteria of Eligibility <sup>†</sup>	NTG 1.0	NTG 1.0	NTG 1.0
Measures Supplied by Business outside a DAC AND Meeting Criteria of Eligibility <sup>†</sup> (End-Use Customer)	NTG 1.0	Deemed NTG	Deemed NTG
<b>C&amp;I Customers – Public Projects</b>			
Measure Supplied by Business within a DAC <sup>†</sup>	NTG 1.0	NTG 1.0	NTG 1.0
Measure Supplied by Business outside a DAC <sup>†</sup>	NTG 1.0	Deemed NTG	Deemed NTG
All Public Sector Customers	NTG 1.0	Deemed NTG	Deemed NTG

# Electrification

- Guidehouse and ComEd have been working together to clarify TRM and other Policy Manual 3.0 guidance related to fuel switch measures and interactive effects.
- ComEd expects many Residential/IE programs will have electrification measures.

# PJM

- **Objective:** Support ComEd's annual portfolio capacity resource reporting to PJM
- **Approach:**
  1. Compile the PJM-compliant peak demand reductions from ComEd's portfolio
  2. Transform the data to match PJM's reporting requirements
  3. Apply current year evaluation factors to the data
  4. For the auction, incorporate ComEd's participation projections
  5. Prepare the updated reports for PJM
- **Timing:**
  - Follow the PJM-defined schedules for capacity auctions and reporting
  - Typically, February to July on an annual basis

# Evaluation Approaches

**Summary of 2024-2025 Evaluation Activities  
and Timelines**

# Evaluation Activities Timeline Overview

## Impact

- Waves of impact research throughout the year
- Final program data available January 30 of each year
- Final impact report, economic and employment impacts, and summary report due April 30 of each year
- TRC report is due June 30 of each year

## Net to Gross

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

## Research

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

# Impact Evaluation Approaches

- Basic Approach
  - TRM-based (majority of residential programs)
  - Custom and model-based (majority of business programs and pilots)
  - Population-level consumption data analysis
- Components
  - Savings Calculator and Workpaper Review
  - Program Tracking Data Review
  - Survey, Phone, or Virtual Verification
  - Onsite Verification
  - Impact Analysis in Waves

# Evaluation Coordination

- **Guidehouse coordinates with the other utilities and their evaluation teams on an ongoing basis**
- **Electric-Gas Joint Program Evaluations**
  - Some jointly delivered programs are evaluated by a single-team
  - Evaluators calculate and report joint TRCs
    - Nicor Gas is selling kWh to ComEd. We coordinate to do some of the evaluation on the Nicor Gas side and some on the ComEd side.
- **Coordination on Process and TRM Research Studies**
  - TRM measure research considered on a case-by-case basis
  - Process research is done jointly when it is beneficial to do so
  - Statewide research (Compressed Air Repair EUL, Midstream Food Service NTG)
- **Coordination beyond specific programs occurs as follows**
  - SAG meetings, Illinois-wide issues
  - Illinois NTG Framework and Protocol Working Group
  - Illinois TRM Technical Advisory Committee
  - Evaluator coordination calls (monthly)

# Questions, Feedback



# Your Guides

**Charles Maglione**  
**Partner**

[cmaglione@guidehouse.com](mailto:cmaglione@guidehouse.com)

703-431-1983

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**Jeff Erickson**  
**Director**

[jeff.erickson@guidehouse.com](mailto:jeff.erickson@guidehouse.com)

608.616.4962

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**Adam Knickelbein**  
**Director**

[adam.knickelbein@guidehouse.com](mailto:adam.knickelbein@guidehouse.com)

303.493.5483

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**Anna McCreery**  
**Managing Consultant**

[amccreery@guidehouse.com](mailto:amccreery@guidehouse.com)

303.728.2523

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**Nishant Mehta**  
**Associate Director**

[nishant.mehta@guidehouse.com](mailto:nishant.mehta@guidehouse.com)

608.616.5823

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**Neil Curtis**  
**Associate Director**

[neil.curtis@guidehouse.com](mailto:neil.curtis@guidehouse.com)

802.526.5119

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**Christopher Frye**  
**Associate Director**

[cfrye@guidehouse.com](mailto:cfrye@guidehouse.com)

561-344-6319

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