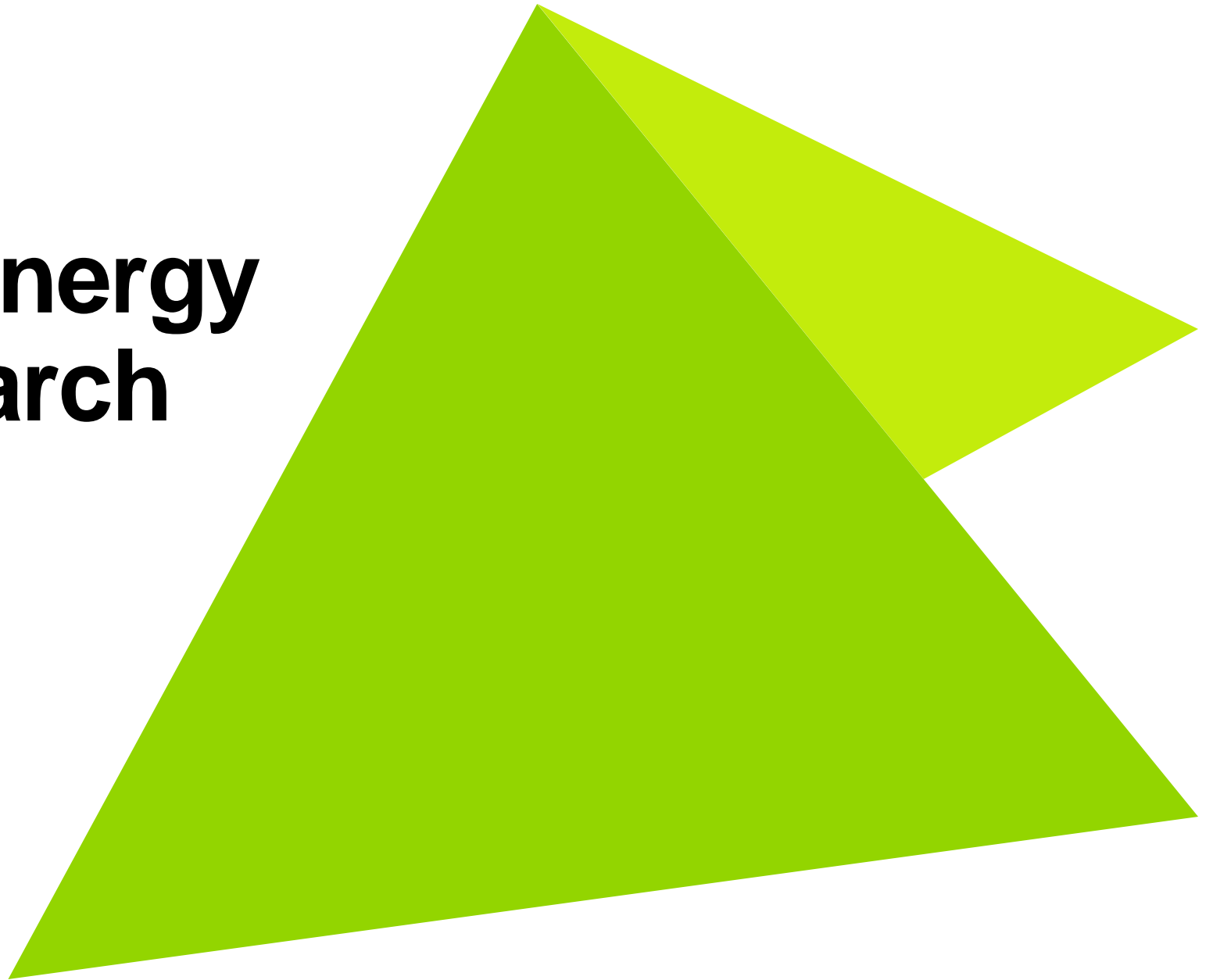




# ComEd Non-Energy Impacts Research Update

IL SAG NEI Working Group  
December 8, 2020



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# OVERVIEW – TYPES OF NEIS AND RESEARCH STATUS



Societal: reduced public citizens' health impacts from reduced emissions from fossil-fuel generation



Utility: reduced utility costs from reduced carrying costs of arrearages, disconnections, reconnections, etc.



Participant: benefits accruing to participants i.e., reduced household members' health impacts like asthma and thermal stress due to air sealing and weatherization, and HVAC improvements

# Societal NEI Research and Analysis



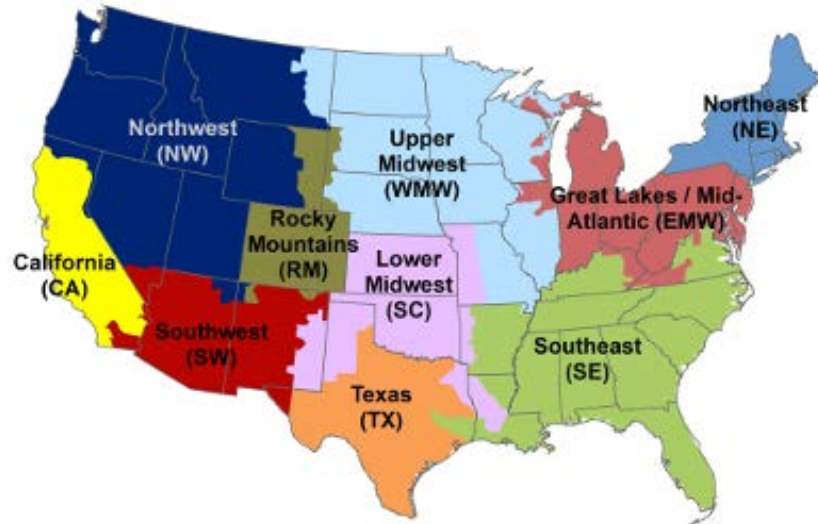
# Societal NEI Research and Analysis



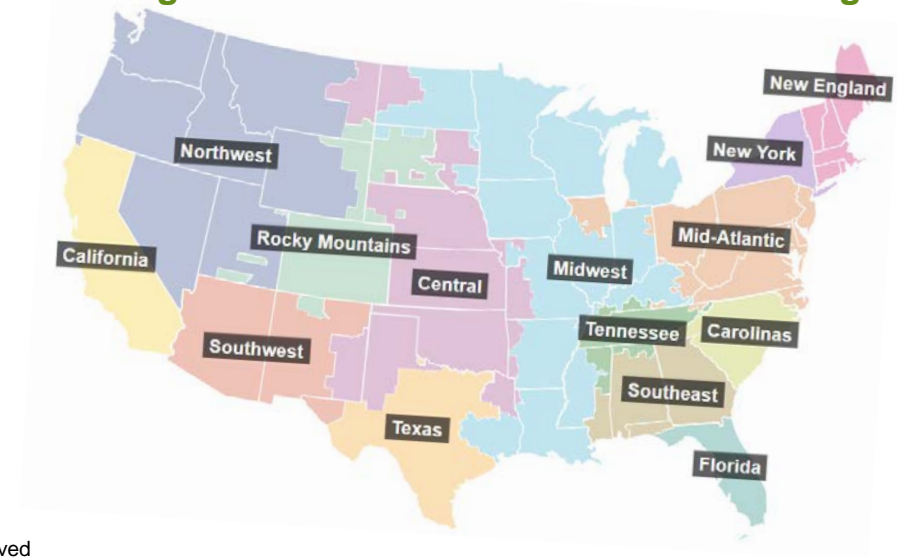
Guidehouse finalized analysis of Societal NEIs for ComEd & gas utilities, submitted final reports to gas utilities in October and will submit to ComEd in December (forthcoming).

- Guidehouse updated ComEd Societal NEI values for 2022-2025 programs in November in accordance with EPA's updates to regional electric generation baseline files (used in AVERT) through 2019.
- EPA also adjusted the Great Lakes/Mid-Atlantic region's geographic area which now corresponds more closely with PJM territory.
- **Result:** Societal NEI estimates decreased by 15 to 22 percent, depending on the implementation year.

2018 Regional Electric Generation Baseline Regions



2019 Regional Electric Generation Baseline Regions



# Societal NEI Research and Analysis



Guidehouse estimates of Societal NEIs range from \$431 million for CY2025 programs to \$550 million for CY2022 programs.

Implementation Year	CY2019 Verified Net Lifetime Savings (kWh)	\$ Total Health Benefits	\$ Total Health Benefits per kWh
<b>CY2022</b>	15,561,383,503	\$550,205,004	\$0.0354
<b>CY2023</b>		\$498,598,504	\$0.0320
<b>CY2024</b>		\$464,217,916	\$0.0298
<b>CY2025</b>		\$431,787,025	\$0.0277

- The table above presents the total estimated health benefits from CY2022-2025 implementation of CY2019 programs.
- Guidehouse will provide ComEd with program-level and annual portfolio-level health benefits tables, with specific recommendations surrounding how to use each table to inform program planning.

# Societal NEIs' influence on Total Resource Cost Test Values



To illustrate the Societal NEIs' influence on TRCs, Guidehouse produced TRC values for a Business program and a Residential program – without and with Societal NEIs values.

Program	TRCs without Societal NEIs	TRCs with Societal NEIs
Small Business	2.04	3.96
Multi-Family Assessments	1.13	2.13

# Societal NEIs' influence on Total Resource Cost Test Values



To illustrate the Societal NEIs' influence on Income Eligible Programs' TRCs, Guidehouse produced TRC values for four income eligible programs – without and with Societal NEI values.

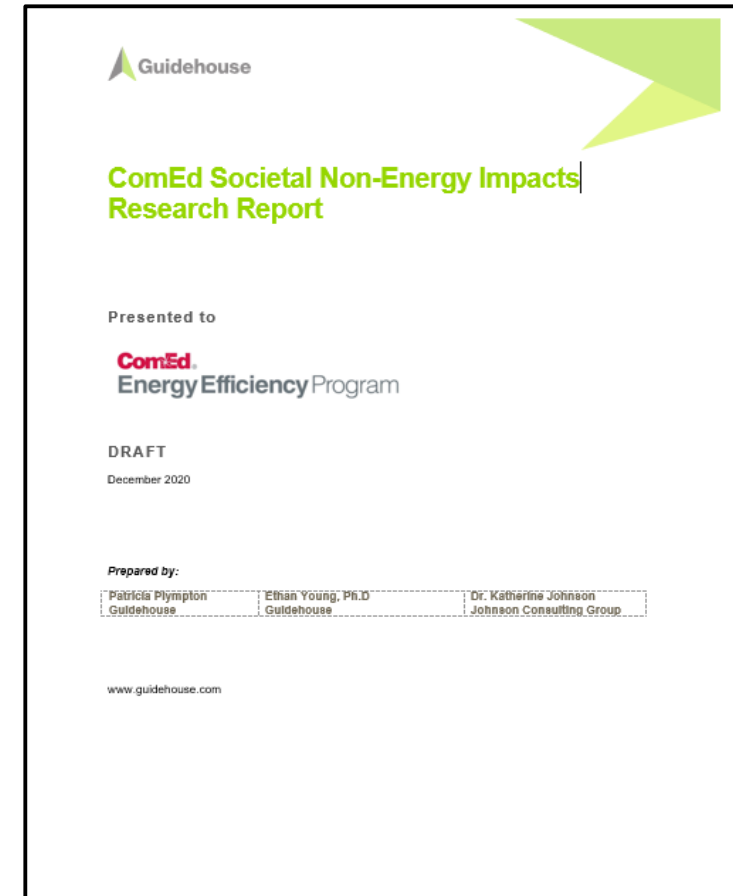
Program	TRCs without Societal NEIs	TRCs with Societal NEIs
Multi-Family Retrofits (Elevate Energy)	0.36	0.50
Multi-Family Retrofits (IHWAP)	0.43	0.50
Single Family Retrofits (CBA)	0.33	0.42
Single Family Retrofits (IHWAP)	0.29	0.46



# Societal NEI Research and Analysis– forthcoming report



- Guidehouse’s forthcoming “ComEd Societal Non-Energy Impacts Research Report” will provide details on methodologies and results.
- Posted on SAG website in December with 15-business day comment period.
- Final revised version to be posted on SAG website.



# Utility NEI Research and Analysis



# Utility NEI Research and Analysis



Guidehouse analyzed data for participants and non-participants in four ComEd income eligible multi-family and single family programs to explore NEIs that accrue to ComEd such as:

- Reduced carrying costs on arrearages
- Reduced customer calls and collections
- Reduced disconnects and reconnects
- Reduced participation in payment plans and bill assistance programs
- Reduced late payments

We also analyzed reductions to customers' annual bills.

# Utility NEI Research and Analysis



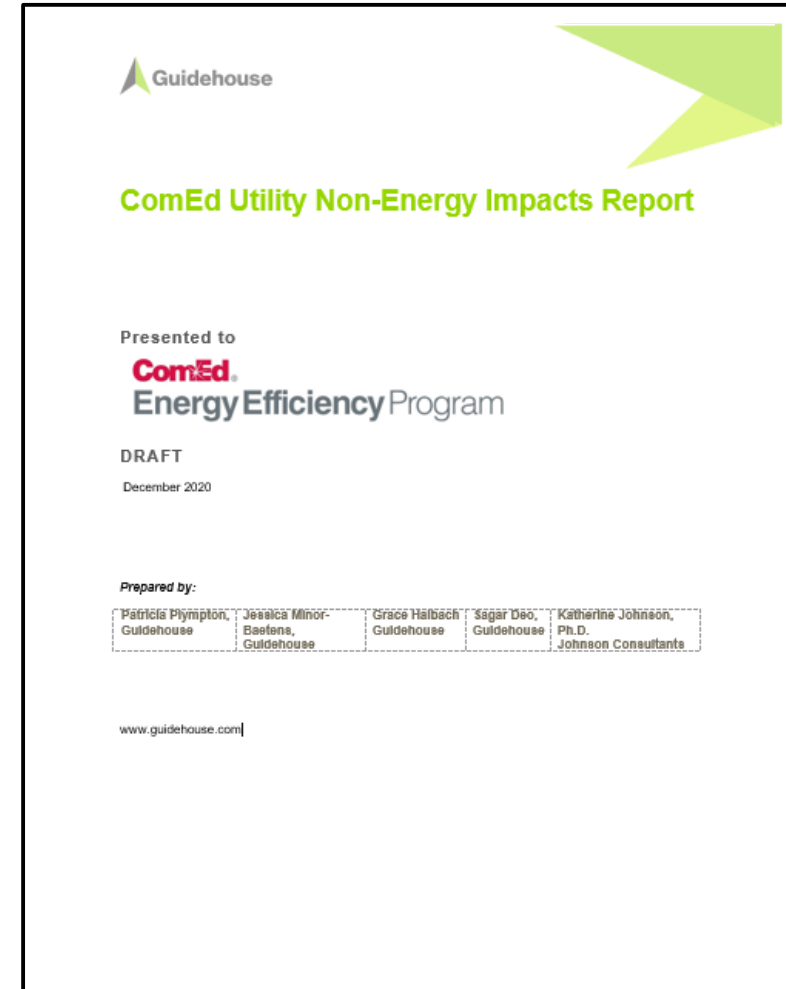
- The analyses did not yield many statistically significant results. Of the 24 metrics calculated for four income eligible programs, only 6 showed significant results. Of those 6, only 4 were monetizable.
- Some results were inconclusive likely because of “noise” in the data.

Guidehouse does not recommend that ComEd use utility NEIs in their programs' cost-effectiveness tests.

# Utility NEI Research and Analysis – forthcoming report



- Guidehouse’s forthcoming “ComEd Utility Non-Energy Impacts Research Report” will provide details on methodologies and results.
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- Final revised version to be posted on SAG website.



# Participant NEI Research Updates

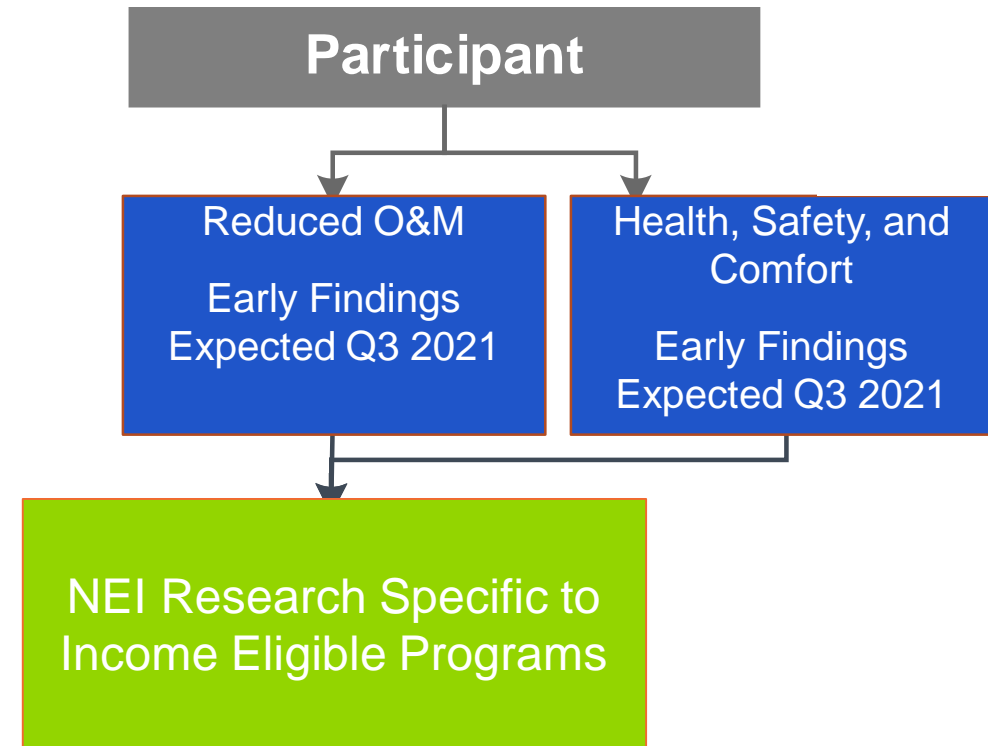


# 2021-2022 ComEd Participant NEI Research



## Income Eligible Programs

- Multi-Family Retrofits – Elevate
- Multi-Family Retrofits – IHWAP
- Single Family Retrofits - Chicago Bungalow Association
- Single Family Retrofits – IHWAP
- Public Housing Energy Savings



# 2021-2022 ComEd Participant NEI Research

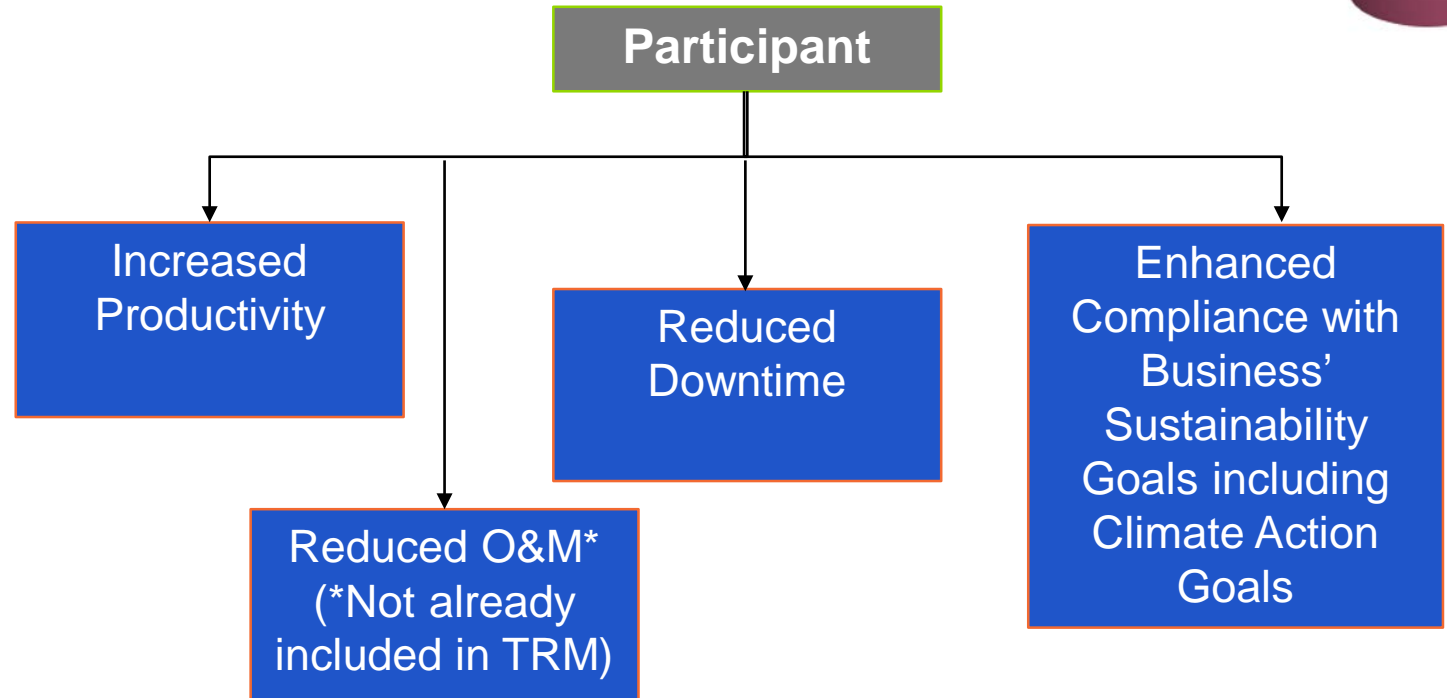


## Business Programs

- Custom
- Standard
- Instant Discounts
- Small Business

## Other Business Programs Under Consideration

- Agriculture
- Grocery
- Industrial
- Small Business Kits
- Public Buildings in Distressed Communities





# NEIs associated with Business Programs' Measures

## Lighting Measures

- Increased productivity
- Reduced downtime
- Reduced errors
- Improved employee morale
- Increased safety
- Increased revenues

## Compressed Air Measures

- Increased productivity
- Reduced downtime
- Increased safety
- Increased revenues

## HVAC

- Increased thermal comfort
- Increased revenues

## Refrigeration

- Reduced material movement costs
- Reduced product spoilage
- Reduced administrative costs
- Reduced waste disposal
- Increased revenues

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