



PEOPLES GAS AND NORTH SHORE GAS

2020 EVALUATION PLANS

PRESENTATION TO THE ILLINOIS SAG

November 13, 2019

AGENDA

Purpose: To provide SAG participants with an overview of the draft Peoples Gas (PGL) and North Shore Gas (NSG) evaluation work plan for 2020

1. Introduction to 2020 Evaluation Activities and Timeline

2. Program-Level Research

- Impact, Net-to-Gross (NTG), Process
- Pilots, Market Transformation
- Income Qualified

3. Portfolio-Level Research

- IL-TRM, Non-Energy Impacts (NEI), Effective Useful Life (EUL)

4. Evaluation Methods

5. Budget

6. Coordination

7. Q&A and Stakeholder Feedback

INTRODUCTION

- Completing GPY4 through GPY6 evaluation reporting
- 2018 – Currently working on summary reporting and TRC
- 2019 – Currently working on impact verification, NTG, process, and other research
- 2020 – Evaluation Plans
 - First Draft 11/22/2019
 - Policy manual:
 - First Draft by 12/15/2019
 - Comments 1/15/2020
 - Revised draft 1/30/2020
 - Comments 2/12/2020
 - Final 2/28/2020

2020 EVALUATION SUMMARY TIMELINE

○ Impacts

- ❑ Waves of 2019 impact research in 2019
- ❑ Final 2019 data available January 30th 2020
- ❑ Final 2019 Impact Reports due (Best Efforts) April 30th 2020
 - Final reports by June 2020
- ❑ 2019 TRC report produced in Q3 2020
- ❑ 2020 interim impact reviews begin mid-2020

○ Net-To-Gross (NTG)

- ❑ Memos as soon as research is done, before July 1, 2020
- ❑ Draft recommendations September 1, 2020
- ❑ Final values October 1, 2020

○ Process results presented near time of research

○ TRM, NEI, EUL, and other research studies are ongoing

2020 EVALUATION OVERVIEW

Program Offering	Impact	NTG	Process	Notes on NTG and Process
RESIDENTIAL				
Home Energy Rebate	✓	✓	✓	2019 participants
Home Energy Jumpstart	✓	✓	✓	2020 participants
Elementary Energy Education	✓		✓	2020 participants
Multi-Family Direct Install and Retrofits	✓			
Home Energy Reports	✓			
Income Qualified				
Single Family Retrofits	✓		✓	2019 IHWAP participants
Multi-Family Retrofits	✓		✓	2019 IEMS Property Owners/Managers
Weatherization Kits	✓		✓	2019 participants (kit recipients)
Public Housing	✓			
Affordable New Construction	✓			
Business and Public Sector				
Prescriptive Rebates	✓	✓	✓	2019 participants
Custom Rebates	✓	✓	✓	2020 Public Sector participants
Gas Optimization	✓	✓	✓	2020 participants (from redesigned program)
Retro-Commissioning	✓	✓	✓	2019 participants
Strategic Energy Management	✓			
Non-Residential New Construction	✓	✓	✓	2019 and 2020 participants
Small Business Direct Install and Retrofits	✓	✓	✓	2020 participants
Market Transformation	✓			

2020 EVALUATION ACTIVITIES AND TIMELINE – VERIFIED IMPACTS

Activity	Task	2020				2021			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Annual Impact Evaluation and Reporting	2019 Program-Level Impacts		★						
	2019 Portfolio Summary, TRC								
2020 Interim Impact Reporting	TRM-Based Programs								
	Custom Projects			Wave 1	Wave 2				
Annual Impact Evaluation and Reporting	2020 Program-Level Impacts					★			
	2020 Portfolio Summary, TRC								

Annual Impact Reporting

- Provide draft reports by March 15.
- Report estimated impacts by March 15 if draft reports are not available.
- ★ Best efforts are made to complete gas utility impact reports by April 30.
- After reports are final, complete portfolio summary reporting, including TRC analysis.
- Verify adjustments to energy savings goals have been performed accurately in Q4.

Interim Impact Reporting

- Begin interim analysis and reporting for TRM-based programs when data is ready – June/July to September
- Conduct custom project sampling and verification when there is a sufficient number of completed projects
 - Our preference is to sample projects prior to end of year
 - Core C&I and PS custom programs generally sampled Q3, Q4
 - Some programs sampled quarterly (RCx) or as a census when projects are complete (Small Bus custom, MF custom)

2020 EVALUATION ACTIVITIES AND TIMELINE – NTG AND PROCESS

Activity	Task	2019	2020			
		Q4	Q1	Q2	Q3	Q4
Net-to-Gross with Process, 2019 Participants	Home Energy Rebate					
	C&I and Public Sector Prescriptive					
	Joint Non-Res NC					
	Retro-Commissioning					
Process-Only, 2019 Participants	SF IHWAP Participants					
	IEMS Property Owner/Mgrs.					
Impact and Process, 2019 Participants	Weatherization Kits					
Net-to-Gross with Process, 2020 Participants	Home Energy Jumpstart					
	Small Business					
	Gas Optimization Participants					
	Joint Non-Res NC					
	Public Sector Custom					
Process-Only, 2020 Participants	Elem Energy Ed Teachers				TBD	

Net-to-Gross and Process	
	Survey Design and Sample Prep
	Fielding
	NTG Analysis and Reporting
	Process Analysis and Reporting

Pilots and Market Transformation

- We evaluate pilot and market transformation efforts when proposed or launched by PGL or NSG if savings will be claimed
 - These may include new offerings within existing programs or customer segments
 - Weatherization kits as mailers or leave behinds
 - Income Eligible MF rebates

- Evaluation activities may include impact, process, or NTG research
 - (Complete) Weatherization kit measures – Impacts and In-Service Rates
 - **(Active) Food Service – Secondary research on NTGs, review baseline development, impact evaluation**

2020 EVALUATION ACTIVITIES AND TIMELINE – INCOME QUALIFIED

Income Qualified Programs

- Gross impact evaluation
 - All programs
 - Interim
 - End-of-year

- Process evaluation
 - (Complete) – Affordable Housing New Construction developer survey
 - (Complete) – Single Family Chicago Bungalow Association Participating Customer Survey, Energy Efficiency Service Provider Interviews
 - (Complete) – Single Family IHWAP Community Action Agency focus groups and interviews
 - (Active) – **Single Family IHWAP participant survey**
 - (Active) – **IEMS property owner/manager survey**

PORTFOLIO RESEARCH ACTIVITIES

Activity	Status	2018	2019	2020	2021
Business and Public Sector Research					
Steam Traps – Background Research on Viability of Impact Study	Completed	2Q-4Q	1Q		
Steam Traps – Support TRM Algorithm Update for Condensate Recovery	Active		4Q	1Q	
Commercial EMS Billing Analysis	Active		4Q	1Q	
Non-Residential Pipe Insulation – Thermal Regain Factors	Active	4Q	1Q-4Q	1Q-2Q	
Small Business Thermostats – Savings Benchmarking	Active	4Q	1Q-4Q		
Space heating boiler tune-ups and process boiler tune-up default savings	Under Consideration				
Furnace and RTU tune-up project default savings	Under Consideration				
Building Automation Systems (BAS) Improvements TRM Measure	Under Consideration				

PORTFOLIO RESEARCH ACTIVITIES

Activity	Status	2018	2019	2020	2021
Residential and Income Eligible Research					
Kits In-Service Rate and Satisfaction Survey	Active				
Residential Advanced Thermostat Billing Analysis	Under Consideration				

Activity	Status	2018	2019	2020	2021
Other Research					
Participate in IL-TRM TAC Update Process	Active	Ongoing	Ongoing	Ongoing	Ongoing
Non-Energy Impacts (NEIs) Jobs Impact	Under Consideration		4Q	1Q-2Q	
Non-Energy Impacts (NEIs) Participate in Primary and Secondary Research	Under Consideration	Conducted on a case-by-case basis as opportunities for coordination with ComEd arise			

Gross Impact Evaluation Overview

- Estimate verified gross impacts annually on every program

- Four main gross impact methodologies:
 1. TRM-based measure verification
 2. Custom project engineering review and on-site verification
 3. Billing usage regression analysis
 - Randomized Control Trial (RCT) can be considered if the program or pilot was set up as a randomized control trial
 - Quasi-Experimental Design (QED) can be considered for research studies to update TRM impacts
 4. Calibrated simulation (calibrated to billing usage)

GROSS IMPACT METHODOLOGIES

Program Offering	TRM	Custom	RCT/QED	Notes
RESIDENTIAL				
Home Energy Rebate	✓			
Home Energy Jumpstart	✓			
Elementary Energy Education	✓			Survey data used for some TRM inputs
Multi-Family Direct Install and Retrofits	✓	✓		Custom verification for non-TRM measures
Home Energy Reports			✓	
Income Qualified				
Single Family Retrofits	✓			
Multi-Family Retrofits	✓	✓		Custom verification for non-TRM measures
Weatherization Kits	✓			
Public Housing	✓	✓		Custom verification for non-TRM measures
Affordable New Construction	✓	✓		Custom verification for non-TRM measures
Business and Public Sector				
Prescriptive Rebates	✓			
Custom Rebates, including CHP		✓		
Gas Optimization		✓		
Retro-Commissioning		✓		
Strategic Energy Management		✓		
Non-Residential New Construction		✓		
Small Business Direct Install and Retrofits	✓	✓		Custom verification for non-TRM measures
Market Transformation	✓	✓		Custom verification for non-TRM measures

Net-to-Gross Research

- **Conduct research once per four-year planning cycle**
 - Mature programs, stable markets, large samples

- **Conduct annual or biannually**
 - Small annual population of custom projects
 - Market or program is changing

- **Follow the TRM NTG protocols**
 - Billing regression may provide net savings
 - Conduct free ridership and spillover research, although research may be done separately

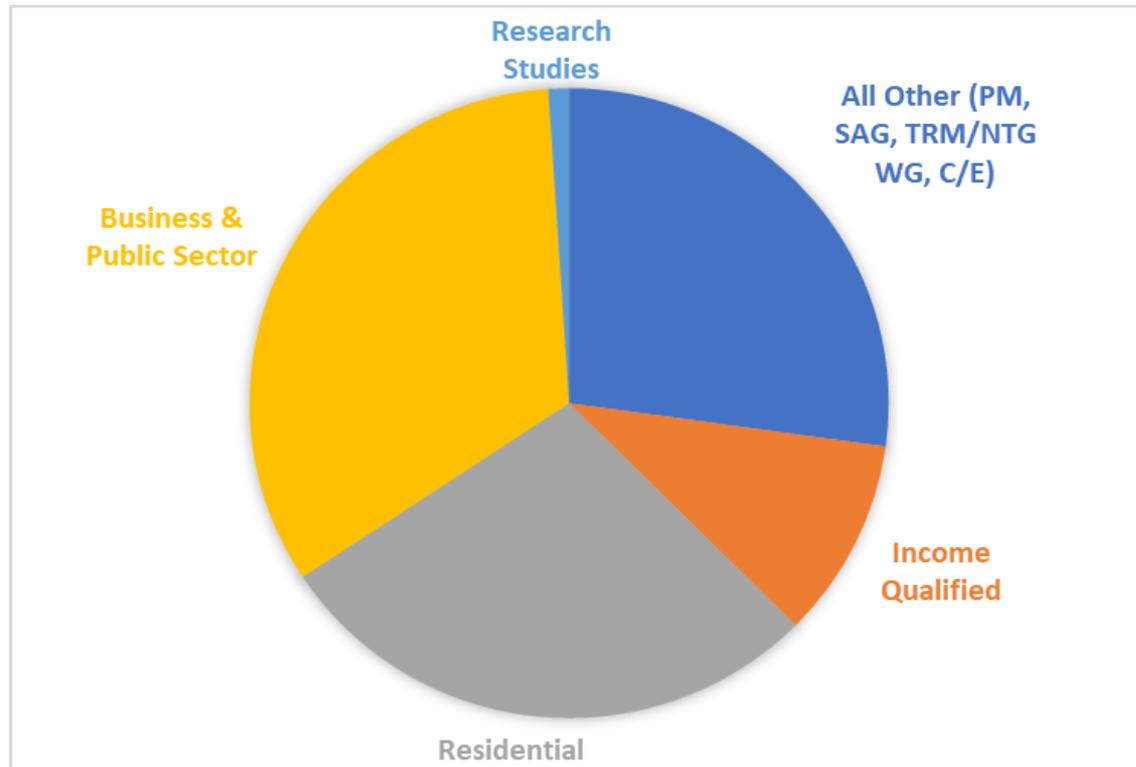
Prioritizing Resources

- Meet Requirements for Savings Verification and Reporting
- Program Contribution to Portfolio Net Savings
- Program Spending within Portfolio
- Program Maturity
- Program/Implementer Needs and Effectiveness
- SAG Input and ICC Orders
- High Impact Measures
- Savings Uncertainty

Budget for TRM Requests and Additional Research

- We participate in TRM TAC and conduct workpaper review
- We conduct secondary research and engineering analysis for TRM
- Primary TRM measure research will be considered, but funding is limited
- Can we leverage joint studies?

TO DATE, EVALUATION EXPENDITURES



Diverse spend 3% to date => Budget 8% for 2019

COORDINATION ACROSS UTILITIES

Navigant coordinates with the other utilities and their evaluation teams on an ongoing basis - this includes Ameren, ComEd, and Nicor Gas

Coordination beyond specific programs occurs as follows:

- ❑ SAG meetings on specific topics and issue management
- ❑ Via e-mail on Illinois-wide key issues or issues that are program specific and may impact multiple utility programs
- ❑ Illinois NTG Framework and Protocol Working Group
- ❑ Illinois TRM Technical Advisory Committee
- ❑ Coordination calls (monthly)

Gas/Electric Joint Program Evaluations (with ComEd evaluation team)

- ❑ Some evaluations are being done jointly (Non-Res NC, RCx, SEM, EEE, Income Qualified)
- ❑ Joint programs can be evaluated separately in some cases

Support Coordination on Research Studies

- ❑ TRM measure research considered on a case-by-case basis

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