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CC: Randy Gunn, Kevin Grabner, Rob Neumann, Navigant

From: Sharon Mullen, Charles Ampong, Navigant

Date: October 5, 2018; (First draft August 29, 2018); (Interim Revision, September 13, 2018)

Re: Net-to-Gross Research Results from GPY6 for the Gas Optimization Study Offering

Introduction

This memo presents our free ridership and spillover research results for the GPY6 Gas Optimization Study Offering (GOS) delivered by Peoples Gas (PGL) and North Shore Gas (NSG) using the Illinois TRM version 6.0 methodologies.¹ The net-to-gross (NTG) research was conducted by surveying GPY6 participants from PGL and NSG in July and August 2018. The focus of the research was to capture a representative sample of GOS participants. The participant free ridership and spillover results combined provide new findings to inform the program year 2019 NTG discussions in September 2018.

Table 1 below provides a summary of the participant free ridership and spillover research findings for the two different algorithm options included in the TRM NTG protocol. Overall, Navigant’s professional interviewer completed seven interviews from nine unique program contacts from the combined population of GPY6 PGL and NSG Gas Optimization Study participants.

Table 1. Participant Free Ridership and Spillover Results

NTG Option	Program Path	Participant Free Ridership, (Weighted)	Participant Spillover	Sample (n)	Relative Precision @90% CI
Option 1	Gas Optimization	0.14	0.05	7	4.8%
Option 2	Gas Optimization	0.15	0.05	7	5.4%

Source: Navigant analysis of program tracking data and survey response data for PGL and NSG GPY6 Gas Optimization Study participants.

Free Ridership and Spillover Research Data Collection

Navigant conducted the free ridership and spillover research following a self-report approach with program participants. The participant research involved a telephone survey with an attempted census of nine unique GPY6 participants. We achieved a response rate of 78 percent by count and 53 percent by savings across the program. The counts for the completed participant survey and sample design are outlined in Table 2.

¹ Illinois Statewide Technical Reference Manual for Energy Efficiency, Version 6.0, Volume 4: Cross-Cutting Measures and Attachments, effective January 1st, 2018.

Table 2. Free Ridership and Spillover Research Survey and Interview Disposition

Respondents	Unique Contacts	Target Completes	Actual Completes	Free Ridership Sample (n)	Percent Savings Represented
Participant Decision Makers	9	Census	7	7	53%

Source: GOS GPY6 Participant Survey responses.

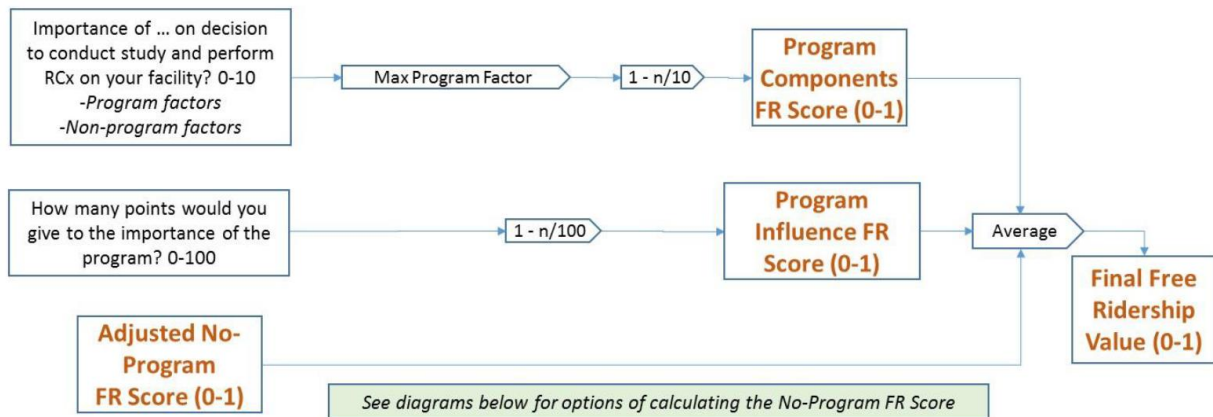
We took steps to deliver a high response rate, including having the utility issue an email announcing the survey and asking participants to respond, using an experienced professional interviewer, and telephoning and emailing the participants to schedule a convenient time to conduct the survey.

Free Ridership Estimates

The following diagrams describe the TRM participant free ridership algorithms for commercial and industrial study-based programs. Figure 1 shows an overview of the framework which allows for two options for computing score 3. These two variants are shown graphically in Figure 2 and Figure 3 below.

Figure 1 Study-Based Free Ridership Overview

$$\text{(Program Components FR Score + Program Influence FR Score + (No-Program FR Score * Timing Adjustment 1)) / 3}$$



Source: Illinois TRM Version 6, Volume 4. Cross-Cutting Measures and Attachments, final February 8, 2017, effective January 1st, 2018.

Figure 2. Study-Based Free Ridership – No-Program FR Score Option #1

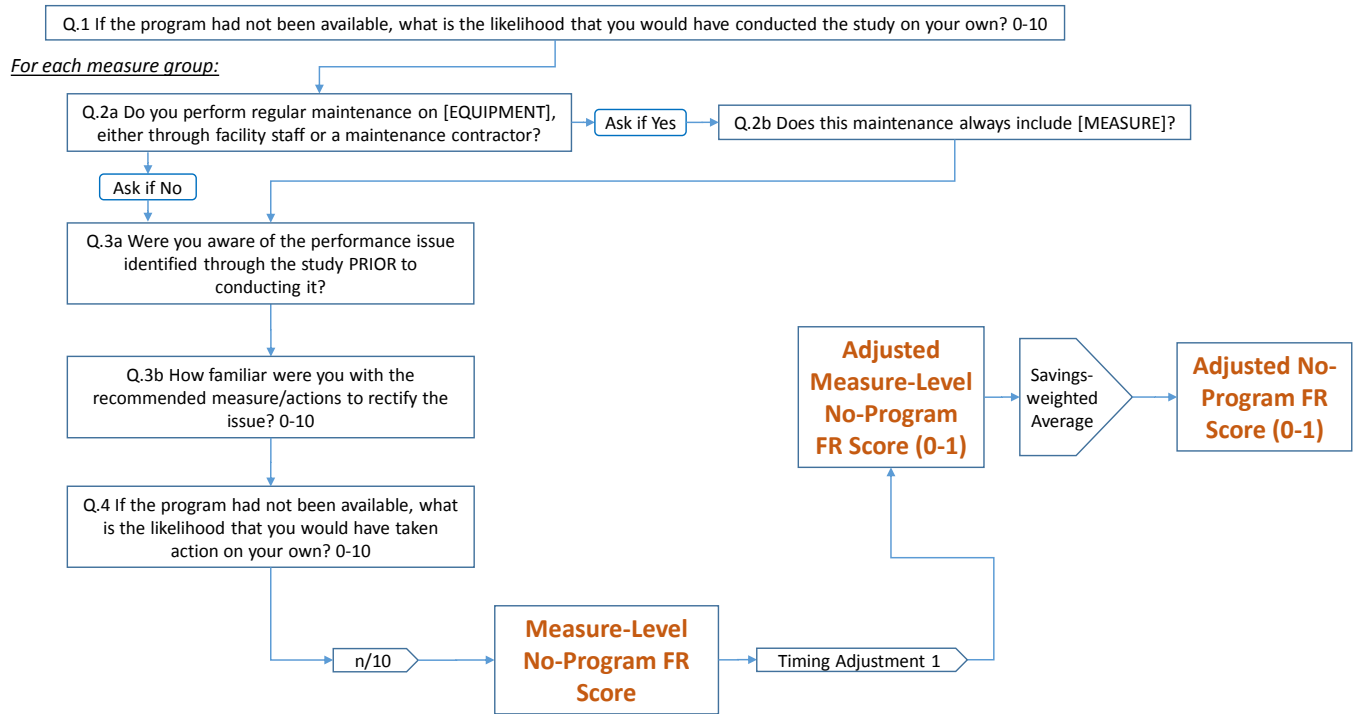
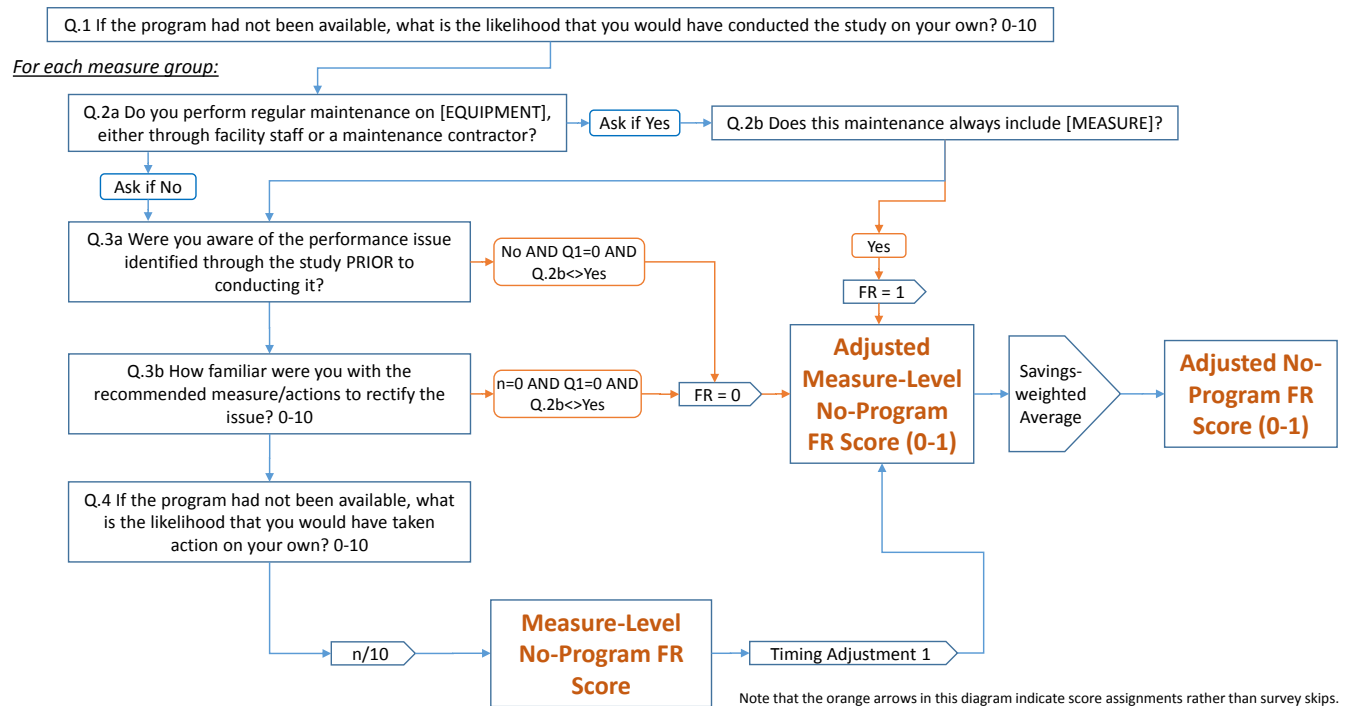


Figure 3. Study-Based Free Ridership – No Program FR Score Option #2



Navigant applied the algorithms indicated by the TRM version 6.0 to the data we collected from the GPY6 GOS participants. To achieve the Program Influence score, we expanded the program factor/non-program factor rating questions with follow up questions to determine if the GOS offering was influential when considering, for example, previous experience with similar studies, peer recommendations or trade organizations. We then prompted respondents with their three highest rated program factors when assigning points to the importance of the program and non-program factors when assigning points to the importance of non-program factors.

The TRM protocol requires the free ridership analysis to include an adjusted no-program free ridership score. This adjustment is determined by querying the decision maker about 1) the likelihood of conducting the study on their own had the program not been available and 2) how they addressed various implemented measures or actions prior to participating in the program. Results of our free ridership calculations using the two options are shown in Table 1.

Navigant recommends the results from Option #1 because that option yields a more balanced representation of free ridership in that it considers the full body of evidence regarding no-program behavior in computing the No-Program FR Score. In contrast, Option #2 goes straight to a FR value of 0 (NTGR of 1.0) solely based on the decisionmaker self-reported responses that their routine maintenance excludes the incented equipment. This option does not consider other no-program evidence when computing the No-Program FR score. This essentially ignores the effect of the other no-program actions for such answer combinations, which in our view is inappropriate. This option also violates the general principal in the TRM that the NTG value should not be dependent on a single question.

Participant Spillover

Navigant anticipated participant spillover due to the high involvement of program resources, technical advice, and interaction with multiple employees at these larger customers. Navigant asked the participants if they had implemented or installed additional energy saving measures to reduce consumption at their facility since participating in the GOS offering. Navigant included questions to identify spillover candidates and measures and the level of program influence, using examples paraphrased below:

- Since completing your project, have you adopted any additional energy efficient improvements that you did not receive a rebate for? What did you implement?
- How important was your experience in the Gas Optimization Study offering in your decision to make these additional changes? Please use a 0-10 scale, where 0 means 'not at all important', and 10 means 'extremely important'?

One of the seven participants interviewed reported their company was influenced by the GOS offering to implement an additional capital improvement project to save energy at their facility since participating in the program that did not receive a rebate. The respondent described the project as:

“Another one of the condensate projects. It started with the same logic as the GOS measure, but this one had a fairly quick payback. It was a heat exchanger project where we were heating up process with heat condensate. It was waste heat being wasted, now we are capturing it to pre-heat the process.”

Navigant estimated the savings for the additional project based on the similar measure in the GOS report for that participant. The spillover rate for the sample was calculated following the TRM protocol: the savings for spillover project divided by the program tracked savings for the sample. Navigant estimated participant spillover at 0.05.

NTG Results

The NTG research results for the GOS offering are summarized in Table 3.

Table 3. Summary of Free Ridership, Spillover and NTGR Research Results for the Gas Optimization Study Offering

Respondent	Free Ridership	Participant Spillover	Trade Ally Spillover	Non-participant Spillover	NTGR
Participant	0.14	0.05	NA	NA	0.91

NTGR = 1 – FR + PSO + TSO + NPSO

FR = Participant Free Ridership; PSO = Participant Spillover; TSO = Trade Ally Spillover; NPSO = Non-Participant Spillover

Source: Navigant analysis of data from telephone interviews conducted by Navigant with GPY6 GOS participants. Trade ally research was not conducted for this program year.

The Gas Optimization offering has three paths: building heating, process, and steam plant. Multi-family buildings participate through the building heating path. Multi-Family specific GOS FR and PSO values are preferred if available. The GPY6 population did not have multi-family participants, and the two building heating respondents in the sample of seven were not compelling as multi-family representatives, so Navigant used the overall program-level FR and PSO values for multi-family.

Free Ridership Component Scores

To estimate free ridership according to the TRM, the evaluation team followed the algorithm indicated by Figure 1. Table 4 below shows the average for each component score. The free ridership algorithm is applied to individual respondents, and then those respondent free ridership values are savings weighted for the final free ridership.

Table 4. Free Ridership Component

Respondent	Program Component FR Score	Program Influence FR Score	Adjusted No-Program Score #1 (Weighted):
Participant	0.03	0.26	0.09

NTG Comparison with Previous Research

Prior to the GPY6, the GOS offering has not had NTG research conducted with its participants. The NTG for the joint utility Retro-Commissioning program has served as a proxy value due to similarities in program design. The GOS NTG for GPY6 and 2018 was 1.02, based on NTG research with GPY1 Retro-Commissioning participants and service providers.

Appendix 1: Survey Instrument

<Peoples Gas/North Shore Gas> C&I Gas Optimization Program Participant Telephone Survey April 4, 2018, Version on July 6, 2018

Section	Topics	Questions
Background	Subject and Project background	B1-B4
Free Ridership Program Factors	Program Components and Program Influence Scores	FR1-FR3
	No Program Counterfactual and Timing Adjustment	FR4-FRML7
Spillover & Channeling	Incentive-eligible measures installed without applying for incentives	SO1-SO8
	Participation in additional programs; additional facilities participating	CH1-CH2B
Program Design	Strengths, barriers, building operator training	PD1-PD5A
Program Satisfaction	Program elements and overall	PS1-PS4
Firmographics	Ownership	F1-F2

Note: The survey questions will allow data collection to estimate free ridership and spillover for the gas utility program partners (Peoples Gas and North Shore Gas).

Sample Fields

NAVCID	NUM_LOOPS
PHONE	MEASURE1
CALLCENTER	MEASURE2
Peoples Gas/North Shore Gas	LCNC
CONTACTNAME	CI
FACILITY	
ADDRESS	
GOSTUDYFIRM	
STUDY_VALUE	
REBATE_VALUE	
STUDY_DATE	

Introduction

Hello, this is _____ from <CALLCENTER> calling on behalf of <Peoples Gas/North Shore Gas> regarding your company's participation in the Gas Optimization Program. May I please speak with <CONTACTNAME>?

Our records show that <FACILITY> participated in the <Peoples Gas/North Shore Gas> Energy Efficiency Gas Optimization Program. I am calling to conduct a follow-up study about your firm's experience. I was told you're the person most knowledgeable and most involved with the Gas Optimization process. Is this correct? [IF NOT, ASK TO BE TRANSFERRED TO DECISION MAKER OR SOMEONE FAMILIAR WITH THE BASIS FOR THE DECISION TO PARTICIPATE. RECORD NAME & NUMBER.]

[IF NEITHER DECISION MAKER OR SOMEONE FAMILIAR WITH THE BASIS FOR THE DECISION TO PARTICIPATE, TERMINATE AND CALL REFERRAL]

This survey will take about 20 minutes. To thank you for your time, we would like to send you a \$50 VISA gift card for completing this survey. Is now a good time? [If no, schedule call-back]

(IF NEEDED: Is it possible that someone else dealt with the Gas Optimization project?)

Gas Optimization Background

Qualifiers

I would like to ask you a few questions about your company's decision to perform Gas Optimization at your facility.

Q1 First, according to our records, you participated in the Gas Optimization Program run by <Peoples Gas/North Shore Gas>.

[IF NEEDED: The Program promotes energy efficiency improvements in facilities that are large consumers of natural gas. The program offers fully-funded technical assessments to identify and implement applicable, low-cost savings measures, and additional rebate opportunities to implement capital improvements identified in the optimization study.]

Do you recall participating in this Program?

1. Yes
2. No

98. (Don't know)

99. (Refused)

[ASK IF Q1=1]

Q2. Next, I'd like to confirm the following details. I understand that you optimized <FACILITY> at <ADDRESS>. The Gas Optimization study was completed by <GOSTUDYFIRM> and you implemented one or more recommended improvements, including <MEASURE1>, <MEASURE2>. Does that sound right?

1. Yes

2. No

00. Mostly correct (RECORD INCONSISTENCY)

98. (Don't know)

99. (Refused)

[ASK IF Q1=2,98,99 OR Q2=02,98,99]

INT70. (Thank respondent and ask if there is another person who might be familiar with the company's Gas Optimization experience.)

Name

Position

Phone

Email

Background

Interview Subject Background

B1. What is your role at <FACILITY>?

1. Owner

2. Building or Facilities Manager

3. Building or Facility Engineer

4. Other [Detail]

98. (Don't know)

99. (Refused)

Project Background

B2. Please tell me why you decided to optimize this facility? [INTERVIEWER NOTE: Probe for additional reasons beyond that first offered.]

00. (RECORD VERBATIM) _____

98. (Don't know)

99. (Refused)

B3. What, if anything, were the main factors that kept you from performing the Gas Optimization study and recommendations before this project? [PROGRAMMING NOTE: Multiple Response. Record first 4 responses. 98=Don't know, 99=Refused] [DO NOT READ.]

1. Was not aware of Gas Optimization Program services
2. The cost of having a Gas Optimization study and report prepared was too high
3. Had inadequate in-house expertise to perform a Gas Optimization study
4. Had insufficient in-house staffing to carry out recommendations made in Gas Optimization report
5. Not aware of qualified study providers
6. Lacked confidence in potential savings.
7. Lack of interest or support from company decision-makers.
8. Business conditions were not suitable.
9. Project payback was too long.
10. Other projects or job responsibilities took priority.
11. Project implementation costs were too high.
12. Lack of capital or access to financing.
13. Insufficient internal staffing to manage and advance projects.
00. (Other, specify)

98. (Don't know)

99. (Refused)

B4. How did you first hear about the Gas Optimization Program? [PROGRAMMING NOTE: Multiple Response. Record first 2 responses. 98=Don't know, 99=Refused] [DO NOT READ.]

1. Calling campaign by utility/implementer
2. Approached by Gas Optimization Study Provider
3. Trade Ally (TA) for another Energy Efficiency program
4. Franklin - the program implementer
5. Utility Account manager

6. Utility Website
7. Friend, colleague, or word of mouth
8. Contractor
9. Utility's marketing material – case studies, fact sheets, marketing video
10. Industry event or presentation
11. Utility's Energy Efficiency Program outreach staff
12. Email
13. E-Newsletters
00. (Other, specify)

98. (Don't know)

99. (Refused)

[<LCNC>= 1 when no-cost/low-cost recommendations were implemented without an additional rebate]

[<CI>= 1 when a capital improvement recommendation was implemented that earned additional rebates]

[<LCNCMEASURE1, LCNCMEASURE2, CI_MEASURE1, CI_MEASURE2> Will be a description of the low-cost/no-cost measures and/or capital improvement therm saving project(s) implemented in GPY6]

[A second measure loop will be asked only when second measure is large compared with first measure]

NTG Module

[Start of NTG. Start of measure loop if <NUM_LOOPS> is greater than 1.]

Free Ridership Program Factors

FR1. Now, I'm going to ask you to rate the importance of several factors that might have influenced your decision to implement <LCNC_MEASURE1 OR CI_MEASURE1>. Using a scale from 0 to 10, where 0 means 'not at all important' and 10 means 'extremely important,' how important in your decision to implement <LCNC_MEASURE1 OR CI_MEASURE1> at this time was... [FOR FR2A-N, RECORD 0 to 10; 96=Not Applicable; 98=Don't Know; 99=Refused]

Program Factors [ROTATE FR1A-F]

FR1A. The free Gas Optimization study, worth an estimated \$10,000

[IF CI=1] FR1B. The Gas Optimization program rebate, worth <REBATE_VALUE>

FR1C. The technical assistance from <GOSTUDYFIRM> to support recommendations

FR1D. A recommendation by an Energy Advisor from the Gas Optimization Program

FR1E. A recommendation from your <Peoples Gas/North Shore Gas> Account Manager

FR1F <Peoples Gas/North Shore Gas> marketing materials or other information from the utility

Other Factors [ROTATE FR1H-K, End with FR1M]

FR1H. Standard practice in your business

FR1I Corporate policy or sustainability guidelines

FR1J. Previous experience with gas optimization

FR1Ja [Ask if FR1J >7, Otherwise, Skip] Did you receive a free Gas Optimization study from <Peoples Gas/North Shore Gas> on your previous project?

1. Yes, we received a free study from <Peoples Gas/North Shore Gas>
2. No free study from <Peoples Gas/North Shore Gas>
98. Don't Know
99. Refused

[NOTE: FR1Ja=2 is a Non-Program Factor]

FR1K. A recommendation from a peer – either from inside or outside your organization

FR1Ka [Ask if FR1K >7, Otherwise, Skip] Did your peer specifically mention the Gas Optimization program from <Peoples Gas/North Shore Gas>?

1. Yes
2. No
98. Don't Know
99. Refused

[NOTE: FR1Ka=2 is a Non-Program Factor]

FR1L. A recommendation from your management

FR1La [Ask if FR1K >7, Otherwise, Skip] Did management specifically mention the Gas Optimization program from <Peoples Gas/North Shore Gas>?

1. Yes
2. No
98. Don't Know
99. Refused

[NOTE: FR1La=2 is a Non-Program Factor]

FR1M. Were there any other factors that we haven't discussed that were influential in your decision to implement <LCNC_MEASURE1 OR CI_MEASURE1>?

1. Yes (please describe:)
2. No
98. (Don't know)

99. (Refused)

FR1Ma [Ask if FR1M = 1, Otherwise, Skip] How would you rate the influence of that factor, using the same 0-10 scale? [RECORD 0 to 10; 98=Don't Know; 99=Refused.]

FR2. Thinking about this differently, I would like you to compare the importance of the PROGRAM with the importance of other factors in the decision to implement <LCNC_MEASURE1 OR CI_MEASURE1>.

If you were given a TOTAL of 100 points that reflect the importance in your decision to implement <LCNC_MEASURE1 OR CI_MEASURE1>, and you had to divide those 100 points between 1) the program, including technical services and rebates, and 2) any other factors not related to the program,

A. How many points would you give to the program? Program factors include [READ IN FIRST THREE HIGHEST FROM FR1A-F IF > 7]?

Count of Program factor points _____ [Record 0-100, 998=Don't know, 999=Refused]

B. And how many of those same 100 points would you give to the importance of other factors, such as [READ IN FIRST THREE HIGHEST FROM FR1H or FR1I if > 7, FR1J if >7 and FR1Ja=2, FR1K if >7 and FR1Ka=2, FR1L if >7 and FR1La=2]?

Count of Non-Program factor points _____ [Record 0-100, 998=Don't know, 999=Refused]

NOTE: Responses should sum to 100.]

[SKIP IF OTHERPTS=FR2B OR FR2A=998,999 OR FR2B=998,999]

INC1. The last question asked you to divide a TOTAL of 100 points between the program and other factors. You just noted that you would give <QFR2A> points to factors like [READ IN FIRST THREE HIGHEST FROM FR1A-F IF > 7]. Does that mean you would give <OTHERPTS> points to other factors such as [READ IN FR1H or FR1I if > 7, FR1J if FR1Ja=2, FR1K if FR1Ka=2,]?

1. Yes

2. No [SKIP TO FR3]

98. (Don't know)

99. (Refused)

If (FR2A is >70 AND all FR1A-F are <3) OR (FR2B is <30 AND any FR1H-K is >7), then ask:

FR3. Could you tell me more about the importance of these factors in your decision to implement <LCNC_MEASURE1 OR CI_MEASURE1>?

Free Ridership No-Program

Now we would like you to think about the action you would have taken if the Gas Optimization program and rebates had not been available.

FR4. If the program and rebates had not been available, what is the likelihood that you would have conducted a study of the same level of detail on your own? Please rate the likelihood on the 0-10 scale. [If necessary, “where 0 means not at all likely and 10 means extremely likely”] [SCALE 0-10, 98=Don’t Know, 99=Refused]

[ASK FRML1_1 through FRML4_1 only for < LCNC_MEASURE1 OR CI_MEASURE1>]

I’m going to ask you a few questions about the changes made through the program to your system.

FRML1_1. Prior to the Gas Optimization study, did you regularly perform maintenance on the equipment treated through the program, either with facility staff or a maintenance contractor?

- 1. Yes
- 2. No
- 98. (Don’t know)
- 99. (Refused)

[Ask If FRML1_1=1, Else Skip]

FRML2_1. Did your equipment or operation changes always include the treatments provided through the Gas Optimization program?

- 1. Yes
- 2. No
- 98. (Don’t know)
- 99. (Refused)

FRML3_1. Were you at all aware of the performance issues identified through the Gas Optimization study?

- 1. Yes
- 2. No

98. (Don't know)

99. (Refused)

FRML4_1. How familiar were you with the changes recommended through the Gas Optimization study? Please rate your familiarity on a scale of 0-10, where 0 means 'not at all familiar' and 10 means 'extremely familiar'.

[SCALE 0-10, 98=Don't Know, 99=Refused]

[IF LCNC =1, ASK FRML5A_1 and FRML6A_1]

FRML5A_1. Now, thinking about < LCNC_MEASURE1 >, how likely would you have been to implement the exact same recommended changes without the Gas Optimization Program? Please use a 0-10 scale, where 0 means 'not at all likely' and 10 means 'extremely likely'.

[SCALE 0-10, 98=Don't Know, 99=Refused]

FRML6A_1. If the Gas Optimization Program had not existed, and you had not received the information and assistance from the program, do you think it's likely that you would have done all, some, or none of the recommended changes without the program?

1. All

2. Some

3. None

98. (Don't know)

99. (Refused)

[Ask If FRML6A_1=1, 2 or 98, Else Skip]

FRML7A_1. And, if the Gas Optimization program and rebates did not exist, when would your own project have taken place? Would it have been at the same time, within 1 year, 1-2 years later, 2-3 years later, 3-4 years later? Again, this is if the Gas Optimization program and rebates did not exist.

1. At the same time

2. Within 1 year

3. 1-2 years later

4. 2-3 years later

5. 3-4 years later

98. (Don't know)

99. (Refused)

[IF CI =1, ASK FRML5B_1 and FRML6B_1]

FRML5B_1. Now, thinking about < CI_MEASURE1>, how likely would you have been to implement the exact same recommended change without the Gas Optimization Program and rebates? Please use a 0-10 scale, where 0 means 'not at all likely' and 10 means 'extremely likely'.

[SCALE 0-10, 98=Don't Know, 99=Refused]

FRML6B_1. If the Gas Optimization Program and rebates had not existed, and you had not received the information and assistance from the program, do you think it's likely that you would have done all, some, or none of the recommended changes without the program?

1. All
2. Some
3. None
98. (Don't know)
99. (Refused)

[Ask If FRML6B_1=1, 2 or 98, Else Skip]

FRML7B_1. And, if the Gas Optimization program and rebates did not exist, when would your own project have taken place? Would it have been at the same time, within 1 year, 1-2 years later, 2-3 years later, 3-4 years later? Again, this is if the Gas Optimization program and rebates did not exist.

6. At the same time
7. Within 1 year
8. 1-2 years later
9. 2-3 years later
10. 3-4 years later
98. (Don't know)
99. (Refused)

•

• [If <NUM_LOOPS> is greater than 1 BEGIN LOOP 2 at FR1 for MEASURE2. Inform participant that we would like to ask about a second large project they completed.]

• [SKIP to SO1 after MEASURE2]

•

-
- END OF NTG LOOP

-

Spillover & Channeling

- SO1. Since completing your Gas Optimization recommendations, have you made any additional energy efficient improvements that were not part of another utility program and did not receive an incentive?

1. Yes
2. No
98. (Don't know)
- 99 (Refused)

-

- [If SO1=1, Ask SO1_1, Else Skip to CH1]

- SO1_1. Was the project at a facility in Peoples Gas or North Shore Gas service territory?

1. Yes
2. No
98. (Don't know)
- 99 (Refused)

-

- [If SO1_1=1, Ask SO1A, Else Skip to CH1]

- SO1A. How important was your experience in the Gas Optimization program in your decision to make these additional changes? Please use a 0-10 scale, where 0 means 'not at all important,' and 10 means 'extremely important.'

- [SCALE 0-10, 96=Not Applicable, 98=Don't Know, 99=Refused]

- SO1B. Can you explain how your experience with Gas Optimization influenced your decision to make the additional improvements? [OPEN ENDED, 98=Don't know, 99=Refused]

-

- **Spillover Measure-Specific Questions, SO2-3**

- [Ask if SO1A >4, Else Skip to SO5]

SO2. What did you improve? [PROGRAMMING NOTE: Multiple Response. Record all responses. 98=Don't know, 99=Refused]

1. Steam Optimization
2. Building Heat Optimization
3. Process Heat Optimization

- 00. Other, please specify
- 98. Don't Know
- 99. Refused
-
- [ASK IF SO2=1]
- SO2A1. What did you do to improve the steam system? [OPEN END. 98=Don't know, 99=Refused]
- SO2A2. What impact did this have on your building's efficiency? [OPEN END. 98=Don't know, 99=Refused]
-
- [ASK IF SO2=02]
- SO2B1. What did you do to improve the building heating system? [OPEN END. 98=Don't know, 99=Refused]
- SO2A2. What impact did this have on your building's efficiency? [OPEN END. 98=Don't know, 99=Refused]
-
- [ASK IF SO2=03]
- SO2C1. What did you do to improve the process heating system? [OPEN END. 98=Don't know, 99=Refused]
- SO2C2. What equipment did you replace? [OPEN END. 97=Did not replace equipment 98=Don't know, 99=Refused]
- SO2C3. What was the efficiency level of the old equipment that you replaced? [OPEN END. 98=Don't know, 99=Refused]
- SO2C4. How many did you replace? [OPEN END. 98=Don't know, 99=Refused]
- SO2C5. What was the efficiency level of the new equipment? [OPEN END. 98=Don't know, 99=Refused]
-
- [ASK IF SO2=1, 2, 3 or 00]
- SO2D. If you had not participated in the Gas Optimization program, how likely is it that you still would have made these adjustments? Please use the 0-10 scale, where 0 means 'not at all likely', and 10 means 'extremely likely'.
- [SCALE 0-10, 96=Not Applicable, 98=Don't Know, 99=Refused]
-

SO5. Can you briefly explain why you decided to install the energy efficiency improvements on your own, rather than going through the Peoples Gas or North Shore Gas Energy Efficiency Program? [OPEN END. 98=Don't know, 99=Refused]

•

• SO1C Have you installed any other energy efficient improvements at facilities within Peoples Gas or North Shore Gas service territory that we haven't talked about?

• 1. Yes

• 2. No

98. (Don't know)

99. (Refused)

• [If SO1C=1, Ask SO1D, Else Skip to CH1]

• SO1D What did you install? [OPEN ENDED, 98=Don't know, 99=Refused]

•

• SO1E. How important was your experience in the Gas Optimization program in your decision to make these additional changes? Please use a 0-10 scale, where 0 means 'not at all important', and 10 means 'extremely important'

• [SCALE 0-10, 96=Not Applicable, 98=Don't Know, 99=Refused]

•

• [Ask if SO1E > 4, Else Skip to CH1]

• SO6 If you had not participated in the Gas Optimization program, how likely is it that you still would have made these adjustments? Please use the 0-10 scale, where 0 means 'not at all likely', and 10 means 'extremely likely'.

• [SCALE 0-10, 96=Not Applicable, 98=Don't Know, 99=Refused]

•

• SO7 How many <SO1D> did you install?

•

• SO8 Could you tell me more about them? What was their:

• SO8A Type [OPEN END. 98=Don't know, 99=Refused]

• SO8B Efficiency [OPEN END. 98=Don't know, 99=Refused]

• SO8C Size [OPEN END. 98=Don't know, 99=Refused]

- SO8D Other features [OPEN END. 98=Don't know, 99=Refused]

-

- **Channeling**

- CH1. Have you installed any improvements that were part of another <Peoples Gas/North Shore Gas> program since completing your Gas Optimization project?

1. Yes
2. No
98. (Don't know)
99. (Refused)

-

- [If CH1=1, Ask CH1A, Else Skip to CH2]

CH1A. If so, what did you install? [PROGRAMMING NOTE: Multiple Response. Record all responses. 98=Don't know, 99=Refused]

- 00. Please specify
- 98. Don't Know
- 99. Refused

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CH2. Has your participation in the Gas Optimization Program motivated you to consider participating in other <Peoples Gas/North Shore Gas> energy efficiency programs?

1. Yes
2. No
98. (Don't know)
99. (Refused)

[ASK IF CH2=1, Else Skip to CH2B]

CH2A. Which programs you are considering? [DO NOT READ. MULTIPLE RESPONSE, ACCEPT ALL ANSWERS]

1. Prescriptive
2. Custom
3. Multi-Family
00. Other, please specify

98. (Don't know)

99. (Refused)

[ASK IF CH2=2 OR 98, Else Skip to PD1]

• CH2B Could you tell me what barriers, if any, are keeping you from enrolling in the <CH2A> programs? [PROGRAMMING NOTE. Multiple Response. Record first 4 responses. 98=Don't know, 99=Refused] [DO NOT READ]

1. Timing within the budget year
2. Timing will disrupt our operations
3. Not convinced of the benefits
4. Not aware of qualified providers
5. Management is opposed
6. Cost/lack of financial resources
7. Lack of staff/personnel resources
00. Other, please specify

98. (Don't know)

99. (Refused)

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Process Module

Program Design

PD1. What do you see as the main strengths of the Gas Optimization Program? [PROGRAMMING NOTE. Multiple Response. Record first 4 responses. 98=Don't know, 99=Refused] [DO NOT READ.]

1. Helps reduce the company's energy bills
2. Saves energy
3. Free study
4. Availability of additional rebates
5. Improves the performance of equipment
6. Prolongs equipment life / service-ability
7. Trains facility staff on efficient building operations
8. Helps building staff learn about building
9. Turnkey operation
00. Other, please specify

98. (Don't know)

99. (Refused)

PD2. What do you think are the main barriers to participating in the program? [PROGRAMMING NOTE. Multiple Response. Record first 4 responses. 98=Don't know, 99=Refused] [Do not read.]

1. Paperwork too burdensome
2. Application too onerous
3. Incentives or free study not worth the effort or required financial commitment
4. Program is too complicated
5. Gas Optimization is too complicated
6. Staff did not understand the importance of Gas Optimization.
7. Staff's time commitment is too great
8. Timing is inconvenient to the business cycle
9. No barriers or concerns
00. (Other, please specify)

98. (Don't know)

99. (Refused)

PD3. What could the program do to encourage more enduring changes in your maintenance and operations?

[OPEN END. 98=Don't know, 99=Refused]

Program Satisfaction

PS1. Now I'd like to ask you to rate your satisfaction with various elements of the program on a scale of 0 to 10, where 0 is 'not at all satisfied' and 10 is 'extremely satisfied'. How would you rate your satisfaction with...? [SCALE 0-10; 96=not applicable, 98= Don't know, 99=Refused] [Rotate order] **[INTERVIEWER NOTE: Ask "Why did you rate it that way" for comments on any response <6]**

- A. The information provided in the Gas Optimization study
- B. The program administrator – Franklin Energy
- C. Your Gas Optimization Study Provider, <GOSTUDYFIRM>
- D. The Gas Optimization program overall
- E. Anticipated energy benefits
- F. Realized energy benefits
- G. Anticipated non-energy benefits, such as increased comfort or lowered maintenance costs
- H. Realized non-energy benefits
- I. <Peoples Gas/North Shore Gas> overall

PS2. Now I'd like to focus more deeply on your satisfaction with the program as you experienced it at your facility. Again, I welcome any comments, but need you to rate your satisfaction on a scale of 0 to 10, [IF NEEDED: where 0 is 'not at all satisfied' and 10 is 'extremely satisfied']. How would you rate your satisfaction with...? [SCALE 0-10; 96=not applicable, 98=Don't know, 99=Refused] [Rotate order] **[INTERVIEWER NOTE: Ask "Why did you rate it that way" for comments on any response <6]**

- A. The accuracy of the study, with respect to how your facility was described

- B. The accuracy of price estimates listed in the study to have the work done
- C. Any assistance in finding a contractor to perform the work recommended through the study
- D. Your ability to act on recommendations from the study
- E. The implementation steps completed by the service provider
- F. The study thoroughness or depth of the energy savings investigation
- G. The amount of low-cost savings identified
- H. The application process
- I. The number of required meetings
- J. The amount of your staff's time required
- K. The number of evaluation and measurement checks during and following your project
- L. Your ability, with current staff, to maintain the savings through the Study

PS3. I only have a few questions left. Based on your overall experience, what would you tell a friend or peer about the Gas Optimization program?

[OPEN END Record verbatim. 98=Don't know, 99=Refused]

PS3A Would you recommend the Gas Optimization program to your peers inside or outside of your organization?

- 1. Yes
- 2. No
- 3. Maybe
- 98. (Don't know)
- 99. (Refused)

PS4. How do you think this program could be improved? [PROGRAMMING NOTE. Multiple Response. Record first 4 responses. 98=Don't know, 99=Refused] [DO NOT READ.]

- 1. Greater publicity
- 2. Longer engagement with Study Provider to implement more measures
- 3. Key Account Executives provide more information
- 00. Other, please specify
- 96. No recommendations
- 98. (Don't know)
- 99. (Refused)

Firmographics

F1. Does your company own, rent or manage this facility?

1. Own
2. Rent
3. Manage
00. Other, please specify
98. (Don't know)
99. (Refused)

F2. Does your company own the HVAC equipment?

1. Own
2. Lease as part of the facility contract
00. Other, please specify
98. (Don't know)
99. (Refused)

Closing

C1. Those are all of the questions I have. Is there anything you would like to add, anything that I forgot to ask about?

C2. May we contact you if we have any additional questions or to clarify any of your answers?

1. Yes
2. No

C3. [Ask if C2 = 1, Else Skip] What is the best way to reach you? [Read back responses to confirm spelling or phone number]

1. Phone
2. Email
00. Other

[Ask if no Spillover Follow-Up]

C4 Would you like us to email a \$50 VISA electronic gift card, or mail you a traditional gift card?
[NOTE: we can make a donation in the respondent's name to the charity of their choice if they do not want the incentive.]

1. Email
2. Mail
3. Donate to a charity

[Ask if C4=1]

C4A What address should we email the gift card to?
1. [Email]

[Ask if C4=2, 3]

C4B What address should we mail the gift card to?
1. Street
2. City
3. State
4. Zip code

[State if there will be Spillover Follow-up]

C5 We will phone you on <SO1G1> at <SO1G2> with those few follow-up questions. The person who calls you back will ask you where you would like us to send your \$50 VISA gift card. [Follow-up will ask C4-C4B]

Thank you very much for your time today. The information you shared is very valuable!