

## Section 9. Appendices

The survey instruments are attached in the links below.

### 9.1 *Survey Instruments*

#### 9.1.1 **Joint Single Family Pilot Programs Telephone Survey**

**Joint Single Family Pilot Programs Survey  
Including:**

- **Single Family Retrofit Pilot Program Survey**
- **Single Family Direct Install Pilot Program Survey**
- **Single Family Air Sealing Pilot Program Survey**

Participant Survey Instrument  
PY3 Evaluation (June 1, 2010 – May 31, 2011)

**SAMPLE VARIABLES USED IN THE SURVEY INSTRUMENT**

ODCID

Customer\_NAME

*Contact name in tracking database*

PHONE

CQTY – CFL QUANTITY

PART\_DATE

*date of participation (ex. July 1, 2010)*

CFLAG

*flag if CFL was installed (0,1)*

AS\_FLAG

*flag if Air sealing was installed (0,1)*

AI\_FLAG

*flag if Attic Insulation was installed (0,1)*

INS\_FLAG

*flag if Floored Attic Insulation, Exterior Wall Insulation, Sloped Ceiling Insulation, Knee Wall Insulation, Crawl Space Insulation, Rim Joist Insulation was installed (0,1)*

DI\_FLAG

*flag if Duct Insulation was installed (0,1)*

DS\_FLAG

*flag if Duct Sealing was installed (0,1)*

DI\_ONLY

*flag if Direct Install Only Participant (0,1)*

INS\_TYPES\_INSTALLED

*Text for each insulation measure installed: Exterior Wall Insulation, Sloped Ceiling Insulation, Knee Wall Insulation, Crawl Space Insulation, Rim Joist Insulation*

SQFT – Square feet of home from tracking data

PTYPE – Participant Type (1=Retrofit Program, 2=Air Sealing Program, 3=Direct Install Program)

## **RETROFIT PROGRAM INTRODUCTION**

[ASK IF PTYPE=1, ELSE SKIP TO NEXT SECTION]

Hello, this is [INTERVIEWER'S NAME] from Opinion Dynamics calling on behalf of Nicor Gas and ComEd. This is not a sales call. We are contacting customers who have participated in Nicor Gas and ComEd's *Existing Home Retrofit Program*. May I please speak with [CUSTOMER\_NAME]? [If needed: This program provided educational information, incentives for installing insulation upgrades and free installation of energy efficient upgrades such as CFL light bulbs. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.]

Are you the person who was most familiar with the upgrades? (If not may I please speak with the person who was most familiar with the upgrades?)

CONTINUE WITH RIGHT PERSON: We are conducting a study to evaluate Nicor Gas and ComEd's *Existing Home Retrofit Program* and would like to include your opinions. This study is required by the Illinois Commerce Commission and will be used to verify the effectiveness of the program and to make improvements.

(IF NEEDED: It will take about 15 minutes)

## **AIR SEALING PROGRAM INTRODUCTION**

[ASK IF PTYPE=2, ELSE SKIP TO NEXT SECTION]

Hello, this is [INTERVIEWER'S NAME] from Opinion Dynamics calling on behalf of ComEd, People's Gas and the Chicagoland Natural Gas Savings program. This is not a sales call. We are contacting customers who have participated in ComEd and Peoples Gas Air Sealing Program. May I please speak with [CUSTOMER\_NAME]? [If needed: This program provided educational information, incentives for installing insulation upgrades and free installation of energy efficient upgrades such as CFL light bulbs. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.]

Are you the person who was most familiar with the upgrades? (If not may I please speak with the person who was most familiar with the upgrades?)

CONTINUE WITH RIGHT PERSON: We are conducting a study to evaluate Peoples Gas and ComEd's Air Sealing Program and would like to include your opinions. This study is required by the Illinois Commerce Commission and will be used to verify the effectiveness of the program and to make improvements.

(IF NEEDED: It will take about 15 minutes.)

## **DIRECT INSTALL PROGRAM INTRODUCTION**

[ASK IF PTYPE=3, ELSE SKIP TO NEXT SECTION]

Hello, this is [INTERVIEWER'S NAME] from Opinion Dynamics calling on behalf of ComEd, People's Gas and the Chicagoland Natural Gas Savings program,. This is not a sales call. We are contacting customers who have participated in ComEd and Peoples Gas' Direct Install Program. May I please speak with [CUSTOMER\_NAME]? [If needed: This program provided free installation of energy efficient upgrades such as CFL light bulbs and educational information. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.]

Are you the person who was most familiar with the upgrades? (If not may I please speak with the person who was most familiar with the upgrades?)

CONTINUE WITH RIGHT PERSON: We are conducting a study to evaluate ComEd and Peoples Gas' Direct Install Program and would like to include your opinions. This study is required by the Illinois Commerce Commission and will be used to verify the effectiveness of the program and to make improvements.

(IF NEEDED: It will take about 15 minutes.)

## **B. CELL PHONE SAFETY**

C1. Are you currently talking to me on a regular landline phone or a cell phone?

1. Regular landline phone
2. Cell phone
98. (Don't Know)
99. (Refused)

[ASK IF C1= 2]

C2. Are you currently in a place where you can talk safely and answer my questions?

1. Yes
2. (No, schedule a callback)
3. (No, do not call back)
8. (Don't know, schedule a callback)
9. (Refused, schedule a callback)

To start, we have several questions regarding the upgrades that were installed in your home. The answers to these questions are very important so that [INSERT IF PTYPE=1 "Nicor Gas and ComEd" IF PTYPE=2 "ComEd"; and IF PTYPE=3 "ComEd" can determine how much energy is being saved.]

## **C. CFL MEASURE VERIFICATION**

**[IF CFLAG=1 ASK, ELSE SKIP TO WMV1]**

CFLMV1. [Wording if CFL\_QTY=1] Our records show that [CFL\_QTY] CFL was installed during the [INSERT IF PTYPE=1 "Existing Home Retrofit Program"; IF PTYPE=2 "Air Sealing Program"; IF PTYPE=3 "Direct Install"] visit to your home. Is this correct?

[Wording if CFL\_QTY>1] Our records show that [CFL\_QTY] CFLs were installed during the [INSERT IF PTYPE=1 "Existing Home Retrofit Program"; IF PTYPE=2 "Air Sealing Program"; IF PTYPE=3 "Direct Install"] visit to your home. Is this correct?

1. Yes, quantity is correct
2. No, quantity is incorrect
98. (Don't know) [THANK AND TERMINATE]

99. (Refused) [THANK AND TERMINATE]

[ASK IF CFLMV1=2]

CFLMV2. How many CFLs were installed during the [INSERT IF PTYPE=1 “Existing Home Retrofit Program”; IF PTYPE=2 “Air Sealing Program”; IF PTYPE=3 “Direct Install”]? [Prompt for best guess.] [USE AS CFL\_QTY FOR REMAINDER OF SURVEY UNLESS DK OR REF THEN THANK AND TERMINATE]

- 0. [THANK AND TERMINATE]
- #. NUMERIC OPEN END up to 999
- 98. (Don't know) [THANK AND TERMINATE]
- 99. (Refused) [THANK AND TERMINATE]

CFLMV3. What rooms were the CFLs installed in?

- 1. (Bedroom)
- 2. (Dining room)
- 3. (Exterior)
- 4. (Family room/Sitting room)
- 5. (Hallway)
- 6. (Kitchen)
- 7. (Living room)
- 8. (Office/study)
- 9. (Porch/Mudroom/Unheated)
- 10. (Bathroom)
- 11. (Garage)
- 12. (Basement)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

CFLMV4. What type of light bulbs did the CFLs replace? (Select all that apply)

- 1. Halogen
- 2. Incandescent
- 3. CFL
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[ASK IF CFLMV4=3]

CFLMV5. How many CFLs were removed and replaced with other CFLs that you received from the program?

- #. NUMERIC OPEN END up to CFL\_QTY
- 98. (Don't know)
- 99. (Refused)

CFLMV6. [Wording if CFL\_QTY=1] Is the CFL you received from the program still installed in the original location?

[Wording if CFL\_QTY>1] Are all of CFLs you received from the program still installed in their original locations?

- 1. (Yes) [SKIP TO CFLMV19]
- 2. (No)
- 98. (Don't know) [SKIP TO CFLMV19]

99. (Refused) [SKIP TO CFLMV19]

[ASK IF CFLMV6 =2 AND CFL\_QTY=1]

CFLMV7. Which of the following best describes what happened to the CFL that was removed? (READ LIST AND RECORD ONE RESPONSE)

1. It is installed at some other location in your home
2. It was thrown away
3. It is in storage
4. It was sold or given away
00. (Other, specify)
98. (Don't know)
99. (Refused)

[ASK IF CFLMV7=1]

CFLMV7a. Which room in the house was the CFL bulb moved to? (SELECT ONE)

1. (Bedroom)
2. (Dining room)
3. (Exterior)
4. (Family room/Sitting room)
5. (Hallway)
6. (Kitchen)
7. (Living room)
8. (Office/study)
9. (Porch/Mudroom/Unheated)
10. (Bathroom)
11. (Garage)
12. (Basement)
00. (Other, specify)
98. (Don't know)
99. (Refused)

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV8. Now, I would like to understand what happened to the [insert CFL\_QTY] CFLs. First, how many CFLs are currently installed in their original location?

- #. NUMERIC OPEN END up to CFL\_QTY
98. (Don't know)
99. (Refused)

[CHECK IF CFLMV8=VERIFIED QUANTITY, THEN SKIP TO CFLMV19]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV9. How many are installed at some other location in your house?

- #. NUMERIC OPEN END up to CFL\_QTY
98. (Don't know)
99. (Refused)

[ASK IF CFLMV9>0 (BUT NOT DK/REF)]

CFLMV10. Which room(s) in the house were the program bulb(s) moved to? (MULTI CHOICE)

1. (Bedroom)
2. (Dining room)

- 3. (Exterior)
- 4. (Family room/Sitting room)
- 5. (Hallway)
- 6. (Kitchen)
- 7. (Living room)
- 8. (Office/study)
- 9. (Porch/Mudroom/Unheated)
- 10. (Bathroom)
- 11. (Garage)
- 12. (Basement)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[IF CFLMV9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV11. How many program bulbs have been thrown away?

- #. NUMERIC OPEN END up to CFL\_QTY
- 98. (Don't know)
- 99. (Refused)

[IF CFLMV11+9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV12. How many are in storage?

- #. NUMERIC OPEN END up to CFL\_QTY
- 98. (Don't know)
- 99. (Refused)

[IF CFLMV12+11+9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV13. How many were sold or given away?

- #. NUMERIC OPEN END up to CFL\_QTY
- 98. (Don't know)
- 99. (Refused)

[IF CFLMV8 OR CFLMV9 OR CFLMV11 OR CFLMV12 OR CFLMV13 = 98 or 99 THEN SKIP TO CFLMV15]

[CFL\_QTY check

IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13= CFL\_QTY

then proceed to CFLMV15.

ELSE IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13> CFL\_QTY

then read "I must have made a mistake, those quantities add up to more than were installed through the program. Let me read through the last few questions again" and skip back to CFLMV8

ELSE IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13< CFL\_QTY

then proceed to CFLMV14]

CFLMV14. What was done with the remaining [CFL\_QTY -( CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13)] CFLs?

- 00. OPEN END
- 98. (Don't know)
- 99. (Refused)

[ASK IF CFLMV13>0 (BUT NOT DK/REF) OR CFLMV7=4]

CFLMV15. [Wording if CFL\_QTY=1 OR CFLMV13=1] Is the CFL you sold or gave away located in ComEd's service territory?

[Wording if CFLMV13>1] Are all of the CFLs sold or given away located in ComEd's service territory?

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

[ASK IF CFLMV6=2]

CFLMV16. Why [were the CFLs/was the CFL] moved from [their/its] original location? (MULTIPLE RESPONSE)

- 1. (Equipment failed)
- 2. (Didn't work properly)
- 3. (Too bright or too dim)
- 4. (Didn't like the color)
- 5. (Didn't like the appearance/unattractive)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[ASK IF CFLMV6=2]

CFLMV17. What did you replace the CFL(s) with? (MULTIPLE RESPONSE)

- 1. (With a new CFL)
- 2. (With an incandescent bulb)
- 4. (Did not replace)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[ASK IF CFLMV7=3 OR CFLMV12>0 (BUT NOT DK/REF)]

CFLMV18. When do you think you will install the CFL(s) you put in storage? Would you say ...(READ ANSWER LIST)

- 1. Within the next 3 months
- 2. 3 to 6 months from now
- 3. 6 to 12 months from now
- 4. More than a year from now
- 5. Never
- 98. (Don't know)
- 99. (Refused)

CFLMV19. Have you installed any more CFLs since you received the ones through the program?

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



99. (Refused)

[ASK IF CFLMV19=1, ELSE SKIP TO CFLMV22]

CFLMV20. How many additional CFLs have you installed?

#. NUMERIC OPEN END up to 999

98. (Don't know)

99. (Refused)

CFLMV21. How influential was the program in encouraging you to install the additional CFL(s)? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential.

#. NUMERIC OPEN END from 0 to 10

98. (Don't know)

99. (Refused)

CFLMV22. Since receiving CFLs from the program, have you recommended CFLs to anyone else?

1. Yes

2. No

98. (Don't know)

99. (Refused)

CFLMV23. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

1. Already been thinking about installing CFLs?

2. Already begun collecting information about CFLs?

3. (Had not thought about installing CFLs before you first heard about the program)

4. (Other, specify)

98. (Don't know)

99. (Refused)

[SKIP IF CFLMV23=3]

CFLMV24. Just to be sure I understand, did you have specific plans to install CFLs before learning about the program?

1. Yes

2. No

98. (Don't know)

99. (Refused)

CFLMV25. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed CFLs if you had not received (it/them) through the program?

#. NUMERIC OPEN END from 0 to 10

98. (Don't know)

99. (Refused)

[IF (CFLMV24=2 OR CFLMV23=3) AND (CFLMV25<=3) THEN SKIP TO NEXT SECTION]

I'm going to read two statements about the CFLs you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

CFLMV26. There may have been several reasons for the installation of the CFLs, but the program was a critical factor in my decision to have the CFLs installed.

#. NUMERIC OPEN END from 0 to 10

- 98. (Don't know)
- 99. (Refused)

CFLMV27. I would have installed CFLs within a year of when I did, if I had not received (it/them) from the program.

- #. NUMERIC OPEN END from 0 to 10
- 98. (Don't know)
- 99. (Refused)

### Consistency Check & Resolution

[CFLCC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger CFLCC1 are:

- CFLMV25 (how likely is it that you would have installed the same item)
- CFLMV26 (program was a critical factor in my decision to install item)
- CFLMV27 (would have installed item within a year, without the program)

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 0,1,2 AND CFLMV27 = 8,9,10, ASK CFLCC1.  
INCONSISTENCY1='you would likely not have installed the CFLs without the program but that differs from when you said the program was not a critical factor and you would install the CFLs within a year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 8,9,10 AND CFLMV27 = 0,1,2, ASK CFLCC1.  
INCONSISTENCY1= 'you would likely have installed the CFLs without the program but that differs from your response that the program was a critical factor and you would not have installed the CFLs within the year without the program' }

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 0,1,2 AND CFLMV27 = 0,1,2, ASK CFLCC1.  
INCONSISTENCY1='the program was not a critical factor in your decision to install the CFLs but that differs from your response that you would not have installed the CFLs within the year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 8,9,10 AND CFLMV27 = 8,9,10, ASK CFLCC1.  
INCONSISTENCY1='the program was a critical factor in your decision to install the CFLs but that differs from your response that you would have installed CFLs within the year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 0,1,2 AND CFLMV27 = 0,1,2, ASK CFLCC1.  
INCONSISTENCY1= 'you would not have installed the CFLs within the year without the program but that differs from your response that the program was not a critical factor and you were likely to install the CFLs without the program' }

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 8,9,10 AND CFLMV27 =8,9,10, ASK CFLCC1.  
INCONSISTENCY1='you would have installed the CFLs within the year without the program but that differs from your response that you were not likely to install the CFLs and the program was a critical factor' }]

CFLCC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision to have the CFLs installed at the time you did? [OPEN END, DK, REF]

**[ASK SECTION IF PTYPE=1, ELSE SKIP TO X1]**

**W. WEATHERIZATION MEASURE VERIFICATION**

**[IF DI\_ONLY=0 ASK, ELSE SKIP TO X1]**

Our records show that the following upgrades were installed through the *Existing Home Retrofit Program*. Is this correct?

- WMV1. [if AS\_FLAG=1] Air Sealing
- WMV2a. [if AI\_FLAG=1] Attic Insulation
- WMV2b. [if INS\_FLAG=1 insert INS\_TYPES\_INSTALLED], *Exterior Wall Insulation, Sloped Ceiling Insulation, Knee Wall Insulation, Crawl Space Insulation, Rim Joist Insulation*
- WMV3. [if DI\_FLAG=1] Duct Insulation
- WMV4. [if DS\_FLAG=1] Duct Sealing

- 1. (Yes, upgrade was installed)
- 2. (No, upgrade was not installed)
- 00. [IF INS\_FLAG=1] (Some of these upgrades were installed) (NOTE TO INTERVIEWER: If necessary read "Which of these kinds of ceiling, wall, or crawl space insulation were actually installed?")
- 98. (Don't know)
- 99. (Refused)

**[ASK IF WMV2b =1 OR 00]**

WM5. Did you have any ceiling, wall, or crawl space insulation installed prior to participating in the program?

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

**[ASK IF WM5=1]**

WM6. How much of that insulation did you have installed prior to participating in the program? (respondent can answer in inches, r-value, type of insulation, etc)

- 00. OPENEND
- 98. (Don't know)
- 99. (Refused)

**[START LOOP -- Loop for 5 measures:**

**if WMV1=1 or 00 then MEASURE='Air Sealing'**

**if WMV2a=1 or 00 then MEASURE='Attic Insulation'**

**if WMV2b=1 or 00 then MEASURE='Ceiling, Wall, or Crawl Space Insulation'**

**if WMV3=1 or 00 then MEASURE='Duct Insulation'**

**if WMV4=1 or 00 then MEASURE='Duct Sealing']**

WM7. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

- 1. Already been thinking about installing [insert MEASURE]?
- 2. Already begun collecting information about [insert MEASURE]?
- 3. (Had not thought about installing [insert MEASURE] before you first heard about the program)
- 4. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[SKIP IF WM7=3]

WM8. Just to be sure I understand, did you have specific plans to install [insert MEASURE] before learning about the program?

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

WM9. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed [insert MEASURE] if you had not received (it/them) through the program?

- #. NUMERIC OPEN END from 0 to 10
98. (Don't know)
99. (Refused)

I'm going to read two statements about the [insert MEASURE] you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

WM10. There may have been several reasons for the installation of the [INSERT MEASURE], but the program was a critical factor in my decision to have the [insert MEASURE] installed.

- #. NUMERIC OPEN END from 0 to 10
98. (Don't know)
99. (Refused)

WM11. I would have installed [insert MEASURE] within a year of when I did, if I had not received (it/them) from the program.

- #. NUMERIC OPEN END from 0 to 10
98. (Don't know)
99. (Refused)

### **Consistency Check & Resolution**

[WMCC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger WMCC1 are:

- WMV9 (how likely is it that you would have installed the same item)
- WMV10 (program was a critical factor in my decision to install item)
- WMV11 (would have installed item within a year, without the program)

{ IF WMV9 = 0,1,2 AND WMV10 = 0,1, 2 AND WMV11 = 8, 9,10, ASK WMCC1.

INCONSISTENCY1='you would likely not have installed the [insert MEASURE] without the program but that differs from when you said the program was not a critical factor and you would install the [insert MEASURE] within a year' }

{ IF WMV9 = 8,9,10 AND WMV10 = 8, 9,10 AND WMV11 = 0,1,2, ASK WMCC1.

INCONSISTENCY1= 'you would likely have installed the [insert MEASURE] without the program but that differs from your response that the program was a critical factor and you would not have installed the [insert MEASURE] within the year' }

{ IF WMV9 = 0,1,2 AND WMV10 = 0,1,2 AND WMV11 = 0,1,2, ASK WMCC1.

INCONSISTENCY1='the program was not a critical factor in your decision to install the [insert

MEASURE] but that differs from your response that you would not have installed the [insert MEASURE] within the year' }

{ IF WMV9 = 8,9,10 AND WMV10 = 8,9,10 AND WMV11 = 8,9,10, ASK WMCC1.  
INCONSISTENCY1='the program was a critical factor in your decision to install the [insert MEASURE] but that differs from your response that you would have installed [insert MEASURE] within the year without the program' }

{ IF WMV9 = 8,9,10 AND WMV10 = 0,1,2 AND WMV11 = 0,1,2, ASK WMCC1.  
INCONSISTENCY1= 'you would not have installed the [insert MEASURE] within the year but that differs from your response that the program was not a critical factor and you were likely to install the [insert MEASURE] without the program' }

{ IF WMV9 = 0,1,2 AND WMV10 = 8,9,10 AND WMV11 = 8,9,10, ASK WMCC1.  
INCONSISTENCY1='you would have installed the [insert MEASURE] within the year but that differs from your response that you were not likely to install the [insert MEASURE] and the program was a critical factor' }}

WMCC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision install the [insert MEASURE] at the time you did? [OPEN END, DK, REF]

**[END LOOP]**

WM12. Have you added any additional weatherization upgrades since participating in the program?

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

[ASK IF WM12=1, ELSE SKIP TO WM17]

WM13. What have you installed?

00. OPENEND
98. (Don't know)
99. (Refused)

WM14. How many/much additional [insert MEASURE from WM13] have you installed?

00. OPENEND
98. (Don't know)
99. (Refused)

WM15. How influential was the program in encouraging you to install the additional [insert MEASURE from WM13]? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential.

- #. NUMERIC OPEN END from 0 to 10
98. (Don't know)
99. (Refused)

WM16. Since participating in the program, have you recommended [insert MEASURE WM13] to anyone else?

1. Yes

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

[ASK ALL]

WM17. Were there any other upgrades that were recommended to you as part of the *Existing Home Retrofit Program* that you didn't install?

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

[IF WM17=1]

WM18. What upgrades did you choose to not install?

- 00. OPENEND
- 98. (Don't know)
- 99. (Refused)

**[ASK SECTION IF PTYPE=1 ELSE SKIP TO SA1]**

**X. DIRECT INSTALL PART ONLY**

**[IF DI\_ONLY=1 ASK, ELSE SKIP TO SA1]**

X1. Our records show that you received a proposal from Nicor Gas and ComEd as part of the *Existing Home Retrofit Program* to install or repair some weatherization upgrades on your home. Do you remember receiving this proposal?

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

[ASK IF X1=1]

X2. Why didn't you follow through with the recommendations on the proposal?

- 00. OPENEND
- 98. (Don't know)
- 99. (Refused)

**[ASK IF PTYPE=1, 3, ELSE SKIP TO HC11]**

**P. PROCESS**

**Satisfaction**

SA1. On a scale of 0 to 10, where 0 is very dissatisfied and 10 is very satisfied, how would you rate your satisfaction with... [SCALE 0-10; 96=not applicable, 98=Don't know, 99=Refused][ROTATE]

- a. The time it took to schedule the [INSERT IF PTYPE=1 "*Existing Home Retrofit Program*" assessment; IF PTYPE=3 "*Direct Install*" appointment]?
- b. The representative that visited your home?
- c. [ASK IF CFLAG=1] The CFL bulbs installed through the program?

d. The [INSERT IF PTYPE=1 “Existing Home Retrofit Program”; IF PTYPE=3 “Direct Install”] overall?

[ASK IF ANY SA1<=4]

SA2. What are the reasons for your dissatisfaction with any aspect of the program? [OPEN END, DK, REF]

## Marketing and Outreach

P1. How did you *first* hear about [INSERT IF PTYPE=1 Nicor Gas and ComEd’s *Existing Home Retrofit Program*; and IF PTYPE=3 ComEd and Peoples *Gas Direct Install Program*?]

1. (Brochure/Flyer through Direct Mail)
2. (Internet)
3. (Customer called ComEd to ask about reducing energy bill)
4. (ComEd representative – other)
5. (Word-of-Mouth)
00. (Other, specify)
98. (Don’t know)
99. (Refused)

[SKIP IF P1=1]

P1a Do you recall receiving information about the program through the mail?

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

[ASK IF P1a=1 OR P1=1, ELSE SKIP TO P2b]

P2. Thinking about the materials you received through the mail, how useful were the materials in providing you information about the program? Would you say they were...

1. Very useful
2. Somewhat useful
3. Not very useful
4. Not at all useful
98. (Don’t know)
99. (Refused)

[ASK IF P2=3,4]

P2a. What would have made the materials more useful to you? [MULTIPLE RESPONSE]

1. (More detailed information)
2. (Where to get additional information)
00. (Other, specify)
98. (Don’t know)
99. (Refused)

[ASK IF PTYPE=1, ELSE SKIP TO P6]

P2b. How would you suggest Nicor Gas and ComEd try to reach out to their customers to get them to participate in this program? [DO NOT READ. ALLOW MULTIPLE RESPONSES]

1. (With representatives)
2. (With phone calls)
3. (Flyers/ads/mailings)

- 4. (Bill inserts)
- 5. (Homeowners association)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

P6. What do you see as the main benefits to participating in the *program*? [DO NOT READ]

- 1. (Having a lower energy bill)
- 2. (Receiving the program equipment)
- 3. (Receiving the energy survey recommendations)
- 00. (Other, specify)
- 98. (Don't know)
- 99. (Refused)

[ASK IF PTYPE=1, ELSE SKIP TO C1]

P7. How could the program be improved, if at all, from your perspective?

- 00. OPEN END
- 98. (Don't know)
- 99. (Refused)

### **CFL Process Questions**

**[ASK IF PTYPE=1, 3, ELSE SKIP TO HC11]**

Now I have a few questions about specifically about CFL bulbs.

C1. Do you recall receiving any information about CFLs from the program?

- 1. Yes
- 2. No
- 8. (Don't know)
- 9. (Refused)

[ASK if C1=1, ELSE SKIP TO C3]

C2. What did the information tell you about CFLs? [OPEN END]

- 1. (Save energy)
- 2. (Save money on utility bills)
- 3. (Good for the environment/ Are "green")
- 00. (Other, specify)
- 8. (Don't know)
- 9. (Refused)

[ASK IF CFLAG=0, ELSE SKIP TO C5]

C3. Our records show that the representative did not install any CFLs during the [INSERT IF PTYPE=1,2 "audit of"; IF PTYPE=3 "visit to"] your home. Is this correct?

- 1. Yes
- 2. No
- 8. (Don't know)
- 9. (Refused)

[ASK IF C3=1, ELSE SKIP TO C5]



C4. Why didn't the representative install any CFLs in your home? [OPEN END]

[SKIP IF (C3=1, 8 OR 9) OR (CFLMV21>7)]

C5. How, if at all, has participating in this program changed your views on CFLs? Would you say participating in the program...

1. has not changed your views at all.
2. has made you view CFLs more positively
3. has made you view CFLs more negatively
8. (Don't know)
9. (Refused)

[ASK if C5=3]

C6. What about CFLs do you find to be negative? [OPEN END]

00. (Other, specify)
8. (Don't know)
9. (Refused)

## **HC. HOME CHARACTERISTICS**

And I just have a few more questions for demographic purposes. These questions will also help us determine how much energy is being saved in your home.

[ASKIF PTYPE=1, ELSE SKIP TO HC11]

[ASK IF SQFT\_FL=1]

HC3. Our records show that your home has [insert SQFT] sqft of conditioned space. Is that correct? (NOTE TO INTERVIEWER: If necessary, "Conditioned space includes only those areas in your home that you heat or cool.")

1. (Yes)
00. (No, SPECIFY CORRECT SQFT)
98. (Don't know)
99. (Refused)

[ASK IF SQFT\_FL=2, ELSE SKIP TO HC11]

HC3a. What is the approximate square footage of the conditioned space in your home? (NOTE TO INTERVIEWER: If necessary, "Conditioned space includes only those areas in your home that you heat or cool.") [Numeric open end, 9999 max]

98. (Don't know)
99. (Refused)

[ASKIF PTYPE=1 ELSE SKIP TO HC11]

HC4. How many stories is your home?

- #. NUMERIC OPEN END up to 9
98. (Don't know)
99. (Refused)

[IF HC4>1 then ASK, ELSE SKIP TO HC8]

HC4a. How many of those stories are above ground?

- #. NUMERIC OPEN END up to 9
98. (Don't know)
99. (Refused)

HC8. Which of the following best describes the type of air conditioning equipment you use?

1. (Central Air Conditioning system)
2. (Central Heat Pump)
3. (Window or wall unit or room air conditioner)
4. (None or fans only)
98. (Don't know)
99. (Refused)

HC8a. If more than one, which is your main unit?

1. (Central Air Conditioning system)
2. (Central Heat Pump)
3. (Window or wall unit or room air conditioner)
4. (None or fans only)
98. (Don't know)
99. (Refused)

HC8b. How old is your air conditioner (in years)?

- #. NUMERIC OPEN END up to 99
98. (Don't know)
99. (Refused)

HC8d. Would you describe your main air conditioning unit as...Standard Efficiency or High Efficiency?

1. (Standard)
2. (High)
00. (Other, specify)
98. (Don't know)
99. (Refused)

HC8e. What is the SEER for your air conditioner? (Read if necessary, "The SEER value is a measure of your air conditioner's efficiency.")

- #. NUMERIC OPEN END up to 99
98. (Don't know)
99. (Refused)

HC9. What type of fuel does your water heater use?

1. (Electricity)
2. (Gas)
00. (Other, specify)
98. (Don't know)
99. (Refused)

**[ASK ALL]**

HC11. Do you own or rent your home?

1. Own
2. Rent/lease
00. (Other, specify)
98. (Don't know)
99. (Refused)

[ASK IF CFLAG=1]

HC16. Before participating in the program, approximately what percent of the screw-in light bulb sockets in your home were already equipped with CFL bulbs?

#. NUMERIC OPEN END up to 99

98. (Don't know)

99. (Refused)

## **CLOSING**

Those are all the questions I have. On behalf of [INSERT IF PTYPE=1 "Nicor Gas and ComEd"; IF PTYPE=2,3 "ComEd, People's Gas and the Chicagoland Natural Gas Savings program"] thank you very much for your time.

**9.1.2 Single Family All-Electric Home Program Telephone Survey**

**Single Family All Electric Home Performance Tune-Up Program**  
**Participant Survey Instrument**  
**PY3 Evaluation (June 1, 2010 – May 31, 2011)**

**SAMPLE VARIABLES USED IN THE SURVEY INSTRUMENT**

ODCID

Customer\_NAME

*Contact name in tracking database*

PHONE

*CQTY – CFL QUANTITY*

*AQTY – AERATOR QUANTITY*

*SQTY – SHOWERHEAD QUANTITY*

*PQTY – PIPE INSULATION INCHES*

CROOM1- CROOM6

*None*

*Bedroom*

*Dining room*

*Exterior= Exterior of the home*

*Family room/Sitting room = family room*

*Hallway*

*Kitchen*

*Living room*

*Office/Study = office*

*Porch/Mudroom/Unheated = porch*

*Bathroom Toilet = bathroom*

*Unlisted/Other = (do not ask about)*

*Work area/Shop = work area*

PART\_DATE

*date of participation (ex. July 1, 2010)*

WFLAG

*flag if Water Heater Was Set Back (0,1)*

CFLAG

*flag if CFL was installed (0,1)*

PFLAG

*flag if Pipe Insulation was installed (0,1)*

AFLAG

*flag if Kitchen or Faucet Aerator was installed (0,1)*

*KITCHEN AERATOR FLAG (KAFLAG)*

*Flag if Kitchen Aerator was installed (0,1)*

SFLAG

*flag if Low Flow Showerhead was installed (0,1)*

## **INTRODUCTION**

Hello, this is [INTERVIEWER'S NAME] from Opinion Dynamics calling on behalf of ComEd. This is not a sales call. We are contacting customers who have participated in ComEd's *Home Performance Tune-Up Program*. May I please speak with [CUSTOMER\_NAME]? [If needed: This program provided educational information and free installation of energy efficient upgrades such as CFL light bulbs. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.]

Are you the person who was most familiar with the upgrades? (If not may I please speak with the person who was most familiar with the upgrades?)

CONTINUE WITH RIGHT PERSON: We are conducting a study to evaluate ComEd's *Home Performance Tune-Up Program* and would like to include your opinions. This study is required by the Illinois Commerce Commission and will be used to verify the effectiveness of the program and to make improvements.

(IF NEEDED: It will take about 15 minutes.)

### **S. SCREENERS**

To start, we have several questions regarding the upgrades that were installed in your home. The answers to these questions are very important so that ComEd can determine how much energy is being saved.

S1. Our records show that during the visit to your home, a ComEd representative gave you the following upgrades. Please confirm that this is correct. Did you receive.... [1=YES, 2=NO, 8=DON'T KNOW, 9=REFUSED]

- a. [If CFL=1] Compact Fluorescent Light Bulbs
- b. [If AERATOR=1] Faucet Aerators
- c. [IF SHOWERHEAD =1] A low flow showerhead
- d. [IF PIPE=1] Pipe Wrap Insulation

[CONTINUE IF ANY S1a-d = 1, ELSE THANK AND TERMINATE]

Now I would like to ask you about the upgrades you received through the program.

**[ROTATE ORDER OF SECTIONS C, FA, SH AND PW]**

### **C. CFL MEASURE VERIFICATION**

**[ASK SECTION IF S1a =1]**

CFLMV1. [Wording if CFL\_QTY=1] Our records show that [CFL\_QTY] CFL was installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

[Wording if CFL\_QTY>1] Our records show that [CFL\_QTY] CFL(s) were installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

1. Yes, quantity is correct
2. No, quantity is incorrect
8. (Don't know) [SKIP TO NEXT SECTION]
9. (Refused) [SKIP TO NEXT SECTION]

[ASK IF CFLMV1=2]

CFLMV2. How many CFLs were installed during the *Home Performance Tune-Up*? [Prompt for best guess.] NUMERIC OPEN END up to 999, DK, REF] [USE AS CFL\_QTY FOR REMAINDER OF SURVEY UNLESS DK OR REF, **IF DK OR REF THEN SKIP TO NEXT SECTION**]

CFLMV3. Our records indicate that CFLs were installed in the [CFL\_ROOM\_1], [CFL\_ROOM\_2], [CFL\_ROOM\_3], [CFL\_ROOM\_4], [CFL\_ROOM\_5], and [CFL\_ROOM\_6]? [**DO NOT INSERT VARIABLE IF CFL\_ROOM\_1-CFL\_ROOM\_6 = UNLISTED/OTHER**]

Is this correct?

1. (Yes)
2. (No, specify)
8. (Don't know)
9. (Refused)

CFLMV4. What type of light bulbs did the CFLs replace? (Select all that apply)

1. Halogen
2. Incandescent
3. CFL
00. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF CFLMV4=3]

CFLMV5. How many CFLs were removed and replaced with other CFLs that you received from the program? [NUMERIC OPEN END up to CFL\_QTY (OR 12), DK, REF]

CFLMV6. [Wording if CFL\_QTY=1] Is the CFL you received from the program still installed in the original location?

[Wording if CFL\_QTY>1] Are all of CFLs you received from the program still installed in their original locations?

1. (Yes) [SKIP TO CFLMV19]
2. (No)
8. (Don't know) [SKIP TO CFLMV19]
9. (Refused) [SKIP TO CFLMV19]

[ASK IF CFLMV6 =2 AND CFL\_QTY=1]

CFLMV7. Which of the following best describes what happened to the CFL that was removed? (READ LIST AND RECORD ONE RESPONSE)

1. It is installed at some other location in your home
2. It was thrown away
3. It is in storage
4. It was sold or given away
00. (Other, specify)

8. (Don't know)
9. (Refused)

[ASK IF CFLMV7=1]

CFLMV7a. Which room in the house was the CFL bulb moved to? (SELECT ONE)

1. (Bedroom)
2. (Dining room)
3. (Exterior)
4. (Family room/Sitting room)
5. (Hallway)
6. (Kitchen)
7. (Living room)
8. (Office/study)
9. (Porch/Mudroom/Unheated)
10. (Bathroom)
11. (Garage)
12. (Basement)
00. (Other, specify)
98. (Don't know)
99. (Refused)

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV8. Now, I would like to understand what happened to the [insert CFL\_QTY] CFLs. First, how many CFLs are currently installed in their original location? [NUMERIC OPEN END up to CFL\_QTY, DK, REF]

[CHECK IF CFLMV8=VERIFIED QUANTITY, THEN SKIP TO CFLMV19]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV9. How many are installed at some other location in your house? [NUMERIC OPEN END up to CFL\_QTY, DK, REF]

[ASK IF CFLMV9>0 (BUT NOT DK/REF)]

CFLMV10. Which rooms in the house were the program bulbs moved to? (SELECT ALL THAT APPLY)

1. (Bedroom)
2. (Dining room)
3. (Exterior)
4. (Family room/Sitting room)
5. (Hallway)
6. (Kitchen)
7. (Living room)
8. (Office/study)
9. (Porch/Mudroom/Unheated)
10. (Bathroom)
11. (Garage)
12. (Basement)
00. (Other, specify)
98. (Don't know)
99. (Refused)



[IF CFLMV9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV11. How many program bulbs have been thrown away? [NUMERIC OPEN END up to CFL\_QTY, DK, REF]

[IF CFLMV11+9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV12. How many are in storage? [NUMERIC OPEN END up to CFL\_QTY, DK, REF]

[IF CFLMV12+11+9+8 = VERIFIED QUANTITY, THEN SKIP TO CFLMV16]

[ASK IF CFLMV6 =2 AND CFL\_QTY>1]

CFLMV13. How many were sold or given away? [NUMERIC OPEN END up to CFL\_QTY, DK, REF]

[IF CFLMV8 OR CFLMV9 OR CFLMV11 OR CFLMV12 OR CFLMV13 = 98 or 99 THEN SKIP TO CFLMV15]

[*CFL\_QTY check*

IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13= CFL\_QTY

then proceed to CFLMV15.

ELSE IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13> CFL\_QTY

then read "I must have made a mistake, those quantities add up to more than were installed through the program. Let me read through the last few questions again" and skip back to CFLMV8

ELSE IF CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13< CFL\_QTY

then proceed to CFLMV14]

CFLMV14. What was done with the remaining [CFL\_QTY –( CFLMV8+ CFLMV9+ CFLMV11+ CFLMV12+ CFLMV13) CFLs? [OPEN END, DK, REF]

[ASK IF CFLMV13>0 (BUT NOT DK/REF) OR CFLMV7=4]

CFLMV15. [Wording if CFL\_QTY=1 OR CFLMV13=1] Is the CFL you sold or gave away located in ComEd's service territory?

[Wording if CFLMV13>1] Are all of the CFLs sold or given away located in ComEd's service territory?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF CFLMV6=2]

CFLMV16. Why [were the CFLs/was the CFL] moved from [their/its] original location? (MULTIPLE RESPONSE UP TO 7 RESPONSES)

1. (Equipment failed)
2. (Didn't work properly)
3. (Wrong size – too small or too large)

4. (Low water flow)
5. (Didn't like the color)
6. (Didn't like the appearance/unattractive)
00. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF CFLMV6=2]

CFLMV17. What did you replace the CFL(s) with? (MULTIPLE RESPONSE)

1. (With a new CFL)
2. (With an incandescent bulb)
4. (Did not replace)
00. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF CFLMV7=3 OR CFLMV12>0 (BUT NOT DK/REF)]

CFLMV18. When do you think you will install the CFL(s) you put in storage? Would you say ... (READ ANSWER LIST)

1. Within the next 3 months
2. 3 to 6 months from now
3. 6 to 12 months from now
4. More than a year from now
5. Never
8. (Don't know)
9. (Refused)

CFLMV19. Have you installed any more CFLs since you received the ones through the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF CFLMV19=1, ELSE SKIP TO CFLMV22]

CFLMV20. How many additional CFLs have you installed? [NUMERIC OPEN END up to 999, DK, REF]

CFLMV21. How influential was the program in encouraging you to install the additional CFL(s)? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential. [0-10, DK, REF]

CFLMV22. Since receiving CFLs from the program, have you recommended CFLs to anyone else?

1. Yes
2. No
8. (Don't know)
9. (Refused)

CFLMV23. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

1. Already been thinking about installing CFLs?
2. Already begun collecting information about CFLs?

3. (Had not thought about installing CFLs before you first heard about the program)
4. (Other, specify)
8. (Don't know)
9. (Refused)

[SKIP IF CFLMV23=3]

CFLMV24. Just to be sure I understand, did you have specific plans to install CFLs before learning about the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

CFLMV25. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed CFLs if you had not received (it/them) through the program? [0-10, DK, REF]

[IF (CFLMV24=2 OR CFLMV23=3) AND (CFLMV25<=3) THEN SKIP TO NEXT SECTION]

I'm going to read two statements about the CFLs you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

CFLMV26. There may have been several reasons for the installation of the CFLs, but the program was a critical factor in my decision to have the CFLs installed. [0-10, DK, REF]

CFLMV27. I would have installed CFLs within a year of when I did even if I had not received (it/them) from the program. [0-10, DK, REF]

### **Consistency Check & Resolution**

[CFLCC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger CFLCC1 are:

- CFLMV25 (how likely is it that you would have installed the same item)
- CFLMV26 (program was a critical factor in my decision to install item)
- CFLMV27 (would have installed item within a year, without the program)

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 0,1,2 AND CFLMV27 = 8,9,10, ASK CFLCC1.

INCONSISTENCY1='you would likely not have installed the CFLs without the program but that differs from when you said the program was not a critical factor and you would install the CFLs within a year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 8,9,10 AND CFLMV27 = 0,1,2, ASK CFLCC1.

INCONSISTENCY1= 'you would likely have installed the CFLs without the program but that differs from your response that the program was a critical factor and you would not have installed the CFLs within the year without the program' }

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 0,1,2 AND CFLMV27 = 0,1,2, ASK CFLCC1.

INCONSISTENCY1='the program was not a critical factor in your decision to install the CFLs but that differs from your response that you would not have installed the CFLs within the year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 8,9,10 AND CFLMV27 = 8,9,10, ASK CFLCC1.  
INCONSISTENCY1='the program was a critical factor in your decision to install the CFLs but that differs from your response that you would have installed CFLs within the year without the program' }

{ IF CFLMV25 = 8,9,10 AND CFLMV26 = 0,1,2 AND CFLMV27 = 0,1,2, ASK CFLCC1.  
INCONSISTENCY1= 'you would not have installed the CFLs within the year without the program but that differs from your response that the program was not a critical factor and you were likely to install the CFLs without the program' }

{ IF CFLMV25 = 0,1,2 AND CFLMV26 = 8,9,10 AND CFLMV27 =8,9,10, ASK CFLCC1.  
INCONSISTENCY1='you would have installed the CFLs within the year without the program but that differs from your response that you were not likely to install the CFLs and the program was a critical factor' }}

CFLCC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision install the CFLs at the time you did? [OPEN END, DK, REF]

## **FA. FAUCET AERATOR MEASURE VERIFICATION**

### **[ASK SECTION IF S1b=1]**

AERMV1. [Wording if AER\_QTY=1] Our records show that [AER\_QTY] faucet aerator was installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

[Wording if AER\_QTY>1] Our records show that [AER\_QTY] faucet aerators were installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

1. Yes, quantity is correct
2. No, quantity is incorrect
8. (Don't know) [SKIP TO NEXT SECTION]
9. (Refused) [SKIP TO NEXT SECTION]

### **[ASK IF AERMV1=2]**

AERMV2. How many faucet aerators were installed? [Prompt for best guess.] [NUMERIC OPEN END up to 999, DK, REF] **[IF DK OR REF, SKIP TO NEXT SECTION]**[USE AS AER\_QTY FOR REMAINDER OF SURVEY]

AERMV3. [Wording if AER\_QTY=1] Is the faucet aerator still installed in the original location?

[Wording if AER\_QTY>1] Are all of faucet aerators still installed in their original locations?

1. (Yes) [SKIP TO AERMV8]
2. (No)
8. (Don't know) [SKIP TO AERMV8]
9. (Refused) [SKIP TO AERMV8]

### **[ASK IF AERMV3 =2 AND AER\_QTY=1]**

AERMV3a. Which of the following best describes what happened with the faucet aerator? (READ LIST AND RECORD ONE RESPONSE)

1. It is installed at some other location in your home
2. It was thrown away
3. It is in storage
4. It was sold or given away
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF AERMV3 =2 AND AER\_QTY>1]

Now, I would like to understand what happened to the [insert AER\_QTY] aerators. How many...

[SHOW ON SAME SCREEN]

AERMV3b. Are currently installed in their original location?

[CHECK IF AERMV3b =VERIFIED QUANTITY, THEN SKIP TO AERMV8]

AERMV3c. Are installed at some other location in your house?

[IF AERMV3b+c = VERIFIED QUANTITY, THEN SKIP TO AERMV5]

AERMV3d. Have been thrown away?

[IF AERMV3b+c+d= VERIFIED QUANTITY, THEN SKIP TO AERMV5]

AERMV3e. Are in storage?

[IF AERMV3b+c+d+e = VERIFIED QUANTITY, THEN SKIP TO AERMV5]

AERMV3f. Were sold or given away?

[NUMERIC OPEN END up to AER\_QTY, DK, REF]

[IF AERMV3b or AERMV3c or AERMV3d or AERMV3e or AERMV3f=98 OR 99 THEN SKIP TO AERMV4]

[MEAS\_QTY check

If  $AERMV3b+AERMV3c+AERMV3d+AERMV3e+AERMV3f = AER\_QTY$

then proceed to AERMV4.

Else if  $AERMV3b+AERMV3c+AERMV3d+AERMV3e+AERMV3f > AER\_QTY$

then read "I must have made a mistake, those quantities add up to more than were installed through the program. Let me read through the last few questions again" and skip back to AERMV3b

Else if  $AERMV3b+AERMV3c+AERMV3d+AERMV3e+AERMV3f < AER\_QTY$

then proceed to AERMV3g]

AERMV3g. What was done with the remaining [AER\_QTY –

(AERMV3b+AERMV3c+AERMV3d+AERMV3e+AERMV3f)] aerators? [OPEN END, DK, REF]

[ASK IF AERMV3f>0 (BUT NOT DK/REF) OR AERMV3a=4]

AERMV4. [Wording if AER\_QTY=1 OR AERMV3f=1] Is the aerator you sold or gave away located in ComEd's service territory?

[Wording if AERMV3f>1] Are all of the aerators you sold or gave away located in ComEd's service territory?

1. Yes

2. No
8. (Don't know)
9. (Refused)

[ASK IF AERMV3=2]

AERMV5. Why [was/were] the aerator(s) moved from [their/its] original locations? (MULTIPLE RESPONSE UP TO 7 RESPONSES) [WORDING CHANGE BASED ON AER\_QTY]

1. (Equipment failed)
2. (Didn't work properly)
3. (Wrong size – too small or too large)
4. (Low water flow)
5. (Didn't like the color)
6. (Didn't like the appearance/unattractive)
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF AERMV3=2]

AERMV6. What did you replace the aerator(s) with? (MULTIPLE RESPONSE)

1. With a new high efficiency aerator
2. With a less efficient aerator
3. Re-installed old equipment
4. Did not replace
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF AERMV3a=3 or AERMV3e>0 (BUT NOT DK/REF)]

AERMV7. When do you think you will install the aerator(s) that are in storage? Would you say ... (READ ANSWER LIST)

1. Within the next 3 months
2. 3 to 6 months from now
3. 6 to 12 months from now
4. More than a year from now
5. Never
8. (Don't know)
9. (Refused)

AERMV8. Have you installed any more faucet aerators since you received the ones through the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF AERMV8=1, ELSE SKIP TO AERMV11]

AERMV9. How many additional aerators have you installed? [NUMERIC OPEN END up to 999, DK, REF]

AERMV10. How influential was the program in encouraging you to install the additional aerator(s)? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential. [0-10, DK, REF]

AERMV11. Since receiving aerators through the program, have you recommended aerators to anyone else?

1. Yes
2. No
8. (Don't know)
9. (Refused)

AERMV12. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

1. Already been thinking about installing aerators?
2. Already begun collecting information about aerators?
3. (Had not thought about installing aerators before you first heard about the program)
4. (Other, specify)
8. (Don't know)
9. (Refused)

[SKIP IF AERMV12=3]

AERMV13. Just to be sure I understand, did you have specific plans to install aerators before learning about the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

AERMV14. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed the same aerator(s) if you had not received (it/them) through the program? [0-10, DK, REF]

[IF (AERMV13=2 or AERMV12=3) AND (AERMV14<=3) THEN SKIP TO NEXT SECTION]

I'm going to read two statements about the aerators you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

AERMV15. There may have been several reasons for the installation of the aerators, but the program was a critical factor in my decision to have the aerators installed. [0-10, DK, REF]

AERMV16. I would have installed aerators within a year of when I did even if I had not received (it/them) from the program. [0-10, DK, REF]

### **Consistency Check & Resolution**

[AERCC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger AERCC1 are:

- AERMV14 (how likely is it that you would have installed the same item)
- AERMV15 (program was a critical factor in my decision to install item)

- AERMV16 (would have installed item within a year, without the program)

{ IF AERMV14 = 0,1,2 AND AERMV15 = 0,1, 2 AND AERMV16 = 8, 9,10, ASK AERCC1.  
INCONSISTENCY1='you would likely not have installed the aerators without the program but that differs from when you said the program was not a critical factor and you would install the aerators within a year' }

{ IF AERMV14 = 8, 9,10 AND AERMV15 = 8, 9,10 AND AERMV16 = 0,1, 2, ASK AERCC1.  
INCONSISTENCY1= 'you would likely have installed the aerators without the program but that differs from your response that the program was a critical factor and you would not have installed the aerators within the year' }

{ IF AERMV14 = 0,1, 2 AND AERMV15 = 0,1, 2 AND AERMV16= 0,1, 2, ASK AERCC1.  
INCONSISTENCY1='the program was not a critical factor in your decision to install the aerators but that differs from your response that you would not have installed the aerators within the year' }

{ IF AERMV14 = 8, 9,10 AND AERMV15 = 8, 9,10 AND AERMV16 = 8, 9,10, ASK AERCC1.  
INCONSISTENCY1='the program was a critical factor in your decision to install the aerators but that differs from your response that you would have installed aerators within the year without the program' }

{ IF AERMV14 = 8, 9,10 AND AERMV15 = 0,1, 2 AND AERMV16 = 0,1, 2, ASK AERCC1.  
INCONSISTENCY1= 'you would not have installed the aerators within the year but that differs from your response that the program was not a critical factor and you were likely to install the aerators without the program' }

{ IF AERMV14 = 0,1, 2 AND AERMV15 = 8, 9,10 AND AERMV16 =8, 9,10, ASK AERCC1.  
INCONSISTENCY1='you would have installed the aerators within the year but that differs from your response that you were not likely to install the aerators and the program was a critical factor}]AERCC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision install the aerator(s) at the time you did? [OPEN END, DK, REF]

## **SH. SHOWERHEAD MEASURE VERIFICATION**

### **[ASK SECTION IF S1c=1]**

SHOWMV1. [Wording if SHOW\_QTY=1] Our records show that [SHOW\_QTY] showerhead was installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

[Wording if SHOW\_QTY>1] Our records show that [SHOW\_QTY] showerheads were installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

1. Yes, quantity is correct
2. No, quantity is incorrect
8. (Don't know) [SKIP TO NEXT SECTION]
9. (Refused) [SKIP TO NEXT SECTION]

### **[ASK IF SHOWMV1=2]**

SHOWMV2. How many showerheads were installed? [Probe for best estimate] [NUMERIC OPEN END up to 999, DK, REF] [IF DK OR REF, THEN SKIP TO NEXT SECTION] [USE AS SHOW\_QTY FOR REMAINDER OF SURVEY]



SHOWMV3. [Wording if SHOW\_QTY=1] Is the showerhead still installed in the original location?  
[Wording if SHOW\_QTY>1] Are all of these showerheads still installed in their original locations?

1. (Yes) [SKIP TO SMV10]
2. (No)
8. (Don't know) [SKIP TO SMV10]
9. (Refused) [SKIP TO SMV10]

[ASK IF SHOWMV3=2 AND SHOW\_QTY=1]

SHOWMV3a. Which of the following best describes what happened with the showerhead? (READ LIST AND RECORD ONE RESPONSE)

1. It is installed at some other location in your home
2. It was thrown away
3. It is in storage
4. It was sold or given away
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF SHOWMV3=2 AND SHOW\_QTY>1]

Now, I would like to understand what happened to the [insert SHOW\_QTY] showerheads. How many... [SHOW ALL ON SAME SCREEN]

SHOWMV4a. Are currently installed in their original location?

[CHECK IF SHOWMV4A =VERIFIED QUANTITY, THEN SKIP TO SHOWMV10]

SHOWMV4b. Are installed at some other location in your house?

[IF SHOWMVa+b = VERIFIED QUANTITY, THEN SKIP TO SHOWMV7]

SHOWMV4c. Have been thrown away?

[IF SHOWMVa+b+c = VERIFIED QUANTITY, THEN SKIP TO SHOWMV7]

SHOWMV4d. Are in storage?

[IF SHOWMVa+b+c+d = VERIFIED QUANTITY, THEN SKIP TO SHOWMV7]

SHOWMV4e. Were sold or given away?

[NUMERIC OPEN END up to SHOW\_QTY, DK, REF]

[IF SHOWMV4a OR SHOWMV4b OR SHOWMV4c OR SHOWMV4d OR SHOWMV4e=98 OR 99  
SKIP TO SHOWMV6]

[SHOW\_QTY check

IF SHOWMV4a+ SHOWMV4b+ SHOWMV4c+ SHOWMV4d+ SHOWMV4e= SHOW\_QTY  
then proceed to SHOWMV6.

ELSE IF SHOWMV4a+ SHOWMV4b+ SHOWMV4c+ SHOWMV4d+ SHOWMV4e >  
SHOW\_QTY

then read "I must have made a mistake, those quantities add up to more than were installed through the program. Let me read through the last few questions again" and skip back to SHOWMV4a

ELSE IF SHOWMV4a+ SHOWMV4b+ SHOWMV4c+ SHOWMV4d+ SHOWMV4e <  
SHOW\_QTY  
then proceed to SHOWMV5]

SHOWMV5. What were done with the remaining [SHOW\_QTY -( SHOWMV4a+ SHOWMV4b+  
SHOWMV4c+ SHOWMV4d+ SHOWMV4e)] showerheads? [OPEN END, DK, REF]

[ASK IF SHOWMV4e>0 (BUT NOT DK/REF) OR SHOWMV3a=4]

SHOWMV6. [Wording if SHOW\_QTY=1 OR SHOWMV4e=1] Is the showerhead you sold or gave  
away located in ComEd's service territory?

[Wording if SHOWMV4e>1] Are all of the showerheads you sold or gave away located in ComEd's  
service territory?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF SHOWMV3 = 2]

SHOWMV7. Why were the showerhead(s) moved from [its/their] original location? (MULTIPLE  
RESPONSE UP TO 7 RESPONSES)

1. (Equipment failed)
2. (Didn't work properly)
3. (Wrong size – too small or too large)
4. (Low water flow)
5. (Didn't like the color)
6. (Didn't like the appearance/unattractive)
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF SHOWMV3=2]

SHOWMV8. What did you replace the showerhead(s) you removed with? (MULTIPLE RESPONSE)

1. With a new high efficient shower head
2. With a less efficient showerhead
3. Re-installed old equipment
4. Did not replace
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF SHOWMV3a=3 OR SHOWMV4d>0 (BUT NOT DK/REF)]

SHOWMV9. When do you think you will install the showerhead(s) you put in storage? Would you  
say ...(READ ANSWER LIST)

1. Within the next 3 months
2. 3 to 6 months from now
3. 6 to 12 months from now
4. More than a year from now
5. Never
8. (Don't know)
9. (Refused)

SHOWMV10. Have you installed any more low-flow showerheads since you received the ones through the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF SHOWMV10=1, ELSE SKIP TO SHOWMV13]

SHOWMV11. How many additional showerheads have you installed? [NUMERIC OPEN END up to 999, DK, REF]

SHOWMV12. How influential was the program in encouraging you to install the additional showerheads? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential. [0-10, DK, REF]

SHOWMV13. Since receiving showerheads through the program, have you recommended low flow showerheads to anyone else?

1. Yes
2. No
8. (Don't know)
9. (Refused)

SHOWMV14. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

1. Already been thinking about installing low flow showerheads?
2. Already begun collecting information about low flow showerheads?
3. (Had not thought about installing low flow showerheads before you first heard about the program)
4. (Other, specify)
8. (Don't know)
9. (Refused)

[SKIP IF SHOWMV14=3]

SHOWMV15. Just to be sure I understand, did you have specific plans to install low flow showerheads before learning about the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

SHOWMV16. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed the same showerheads if you had not received (it/them) through the program? [0-10, DK, REF]

[IF (SHOWMV15=2 or SHOWMV14=3) AND (SHOWMV 16=<3) THEN SKIP TO NEXT SECTION]

I'm going to read two statements about the showerheads you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

SHOWMV17. There may have been several reasons for the installation of the low flow showerheads, but the program was a critical factor in my decision to have the showerheads installed. [0-10, DK, REF]

SHOWMV18. I would have installed low flow showerheads within a year of when I did even if I had not received (it/them) from the program. [0-10, DK, REF]

### **Consistency Check & Resolution**

[SHOWCC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger SHOWCC1 are:

- SHOWMV16 (how likely is it that you would have installed the same item)
- SHOWMV17 (program was a critical factor in my decision to install item)
- SHOWMV18 (would have installed item within a year, without the program)

{ IF SHOWMV16 = 0,1,2 AND SHOWMV17 = 0,1, 2 AND SHOWMV18 = 8, 9,10, ASK  
SHOWCC1. INCONSISTENCY1='you would likely not have installed the showerheads without the program but that differs from when you said the program was not a critical factor and you would install the showerheads within a year' }

{ IF SHOWMV16 = 8, 9,10 AND SHOWMV17 = 8, 9,10 AND SHOWMV18 = 0,1, 2, ASK  
SHOWCC1. INCONSISTENCY1= 'you would likely have installed the showerheads without the program but that differs from your response that the program was a critical factor and you would not have installed the showerheads within the year' }

{ IF SHOWMV16 = 0,1, 2 AND SHOWMV17 = 0,1, 2 AND SHOWMV18 = 0,1, 2, ASK  
SHOWCC1. INCONSISTENCY1='the program was not a critical factor in your decision to install the showerheads but that differs from your response that you would not have installed the showerheads within the year' }

{ IF SHOWMV16 = 8, 9,10 AND SHOWMV17 = 8, 9,10 AND SHOWMV18 = 8, 9,10, ASK  
SHOWCC1. INCONSISTENCY1='the program was a critical factor in your decision to install the showerheads but that differs from your response that you would have installed showerheads within the year without the program' }

{ IF SHOWMV16 = 8, 9,10 AND SHOWMV17 = 0,1, 2 AND SHOWMV18 = 0,1, 2, ASK  
SHOWCC1. INCONSISTENCY1= 'you would not have installed the showerheads within the year but that differs from your response that the program was not a critical factor and you were likely to install the showerheads without the program' }

{ IF SHOWMV16 = 0,1, 2 AND SHOWMV17 = 8, 9,10 AND SHOWMV18= 8, 9,10 ASK  
SHOWCC1. INCONSISTENCY1='you would have installed the showerheads within the year but that differs from your response that you were not likely to install the showerheads and the program was a critical factor' }

SHOWCC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision install the showerhead(s) at the time you did? [OPEN END, DK, REF]

### **PW. PIPE WRAP MEASURE VERIFICATION**

**[ASK SECTION IF S1d=1]**

PIMV1. [Wording if PI\_QTY=1] Our records show that [PI\_QTY] linear foot of pipe wrap insulation was installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

[Wording if PI\_QTY>1] Our records show that [PI\_QTY] linear feet of pipe wrap insulation were installed during the *Home Performance Tune-Up* visit to your home. Is this correct?

1. Yes quantity is correct
2. No, quantity is incorrect
8. (Don't know) SKIP TO NEXT SECTION
9. (Refused) SKIP TO NEXT SECTION

**[ASK IF PIMV1=2]**

PIMV2. How many linear feet of pipe wrap were installed during the *Home Performance Tune-Up*?

[Probe for best estimate] [NUMERIC OPEN END up to 999, DK, REF] [IF DK OR REF, SKIP TO NEXT SECTION]

PIMV3. Was the pipe insulation installed on bare pipes, or did it replace some existing insulation?

1. (Installed on bare pipes)
2. (Replaced existing insulation)
3. (Installed on top of existing insulation)
00. (Other, specify)
8. (Don't know)
9. (Refused)

PIMV3a. Is the pipe wrap still installed in the original location?

1. (Yes) [SKIP TO QPIMV7]
2. (No)
8. (Don't know) [SKIP TO QPIMV7]
9. (Refused) [SKIP TO QPIMV7]

**[ASK IF PIMV3a =2]**

PIMV3b. Which of the following best describes what happened with the pipe wrap? (READ LIST AND RECORD ONE RESPONSE)

1. It is installed at some other location in your home
2. It was thrown away
3. It is in storage
4. It was sold or given away
0. (Other, specify)
8. (Don't know)
9. (Refused)

**[ASK IF PIMV3b=4]**

PIMV3c. Is the pipe wrap located in ComEd's service territory?

1. (Yes)
2. (No)
8. (Don't know)
9. (Refused)

[ASK IF PIMV3a=2]

PIMV4. Why was the pipe wrap moved from its original location? (MULTIPLE RESPONSE UP TO 7 RESPONSES)

1. (Equipment failed)
2. (Didn't work properly)
3. (Wrong size – too small or too large)
4. (Low water flow)
5. (Didn't like the color)
6. (Didn't like the appearance/unattractive)
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF PIMV3a=2]

PIMV5. What did you replace the pipe wrap with? (MULTIPLE RESPONSE)

1. (Other pipe insulation)
2. (Did not replace)
0. (Other, specify)
8. (Don't know)
9. (Refused)

[ASK IF PIMV3b=3]

PIMV6. When do you think you will install the pipe wrap that you stored? Would you say ... (READ ANSWER LIST)

1. Within the next 3 months
2. 3 to 6 months from now
3. 6 to 12 months from now
4. More than a year from now
5. Never
8. (Don't know)
9. (Refused)

PIMV7. Have you installed any more pipe wrap since you received it through the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

[ASK IF PIMV7=1, ELSE SKIP TO PIMV10]

PIMV8. How many additional linear feet of pipe wrap have you installed? [NUMERIC OPEN END up to 999, DK, REF]

PIMV9. How influential was the program in encouraging you to install the additional pipe wrap? Please rate this on a 0-10 scale, where 0 means not at all influential and 10 means very influential. [0-10, DK, REF]

PIMV10. Since receiving pipe wrap through the program, have you recommended pipe wrap insulation to anyone else?

1. Yes
2. No

8. (Don't know)
9. (Refused)

PIMV11. At the time that you first heard about this program, had you...? (READ LIST UNTIL RESPONDENT SAYS NO)

1. Already been thinking about installing pipe wrap insulation?
2. Already begun collecting information about pipe wrap insulation?
3. (Had not thought about installing pipe wrap insulation before you first heard about the program)
4. (Other, specify)
8. (Don't know)
9. (Refused)

[SKIP IF PIMV11=3]

PIMV12. Just to be sure I understand, did you have specific plans to install pipe wrap insulation before learning about the program?

1. Yes
2. No
8. (Don't know)
9. (Refused)

PIMV13. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have installed the same pipe wrap insulation if you had not received it through the program? [0-10, DK, REF]

[IF (PIMV12=2 or PIMV11=3) AND (PIMV 13<=3) THEN SKIP TO NEXT SECTION]

I'm going to read two statements about the pipe wrap you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

PIMV14. There may have been several reasons for the installation of the pipe wrap, but the program was a critical factor in my decision to have the pipe wrap insulation installed. [0-10, DK, REF]

PIMV15. I would have installed pipe wrap insulation within a year of when I did even if I had not received it from the program. [0-10, DK, REF]

### **Consistency Check & Resolution**

[PICC1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger PICC1 are:

- PIMV13 (how likely is it that you would have installed the same item)
- PIMV14 (program was a critical factor in my decision to install item)
- PIMV15 (would have installed item within a year, without the program)

{ IF PIMV13 = 0,1,2 AND PIMV14 = 0,1, 2 AND PIMV15 = 8, 9,10, ASK PICC1.

INCONSISTENCY1='you would likely not have installed the Pipe insulation without the program but that differs from when you said the program was not a critical factor and you would install the Pipe insulation within a year' }

{ IF PIMV13 = 8, 9,10 AND PIMV14 = 8, 9,10 AND PIMV15 = 0,1, 2, ASK PICC1.  
INCONSISTENCY1= ‘you would likely have installed the Pipe insulation without the program but that differs from your response that the program was a critical factor and you would not have installed the Pipe insulation within the year’ }

{ IF PIMV13 = 0,1, 2 AND PIMV14 = 0,1, 2 AND PIMV15 = 0,1, 2, ASK PICC1.  
INCONSISTENCY1=‘the program was not a critical factor in your decision to install the Pipe insulation but that differs from your response that you would not have installed the Pipe insulation within the year’ }

{ IF PIMV13 = 8, 9,10 AND PIMV14 = 8, 9,10 AND PIMV15 = 8, 9,10, ASK PICC1.  
INCONSISTENCY1=‘the program was a critical factor in your decision to install the Pipe insulation but that differs from your response that you would have installed Pipe insulation within the year without the program’ }

{ IF PIMV13 = 8, 9,10 AND PIMV14 = 0,1, 2 AND PIMV15 = 0,1, 2, ASK PICC1.  
INCONSISTENCY1= ‘you would not have installed the Pipe insulation within the year but that differs from your response that the program was not a critical factor and you were likely to install the Pipe insulation without the program’ }

{ IF PIMV13 = 0,1, 2 AND PIMV14 = 8, 9,10 AND PIMV15 = 8, 9,10, ASK PICC1.  
INCONSISTENCY1=‘you would have installed the Pipe insulation within the year but that differs from your response that you were not likely to install the Pipe insulation and the program was a critical factor’ }

PICC1. Let me make sure I understand you. Earlier, you said [insert inconsistency1]. Please tell me in your own words what influence, if any, the program had on your decision install the pipe insulation at the time you did? [OPEN END, DK, REF]

## **TC. TEMPERATURE CHANGE VERIFICATION AND IMPACT**

[Ask if WH\_Turndown=1, Else SKIP TO AV1]

EE1. Our records indicate that the ComEd service representative turned down the temperature on your water heater; is this correct?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

[Ask if WH\_Turndown=1 AND EE1=1, ELSE SKIP TO AV1]

EE2. Have you or other members of your household changed the temperature setting since the ComEd representative turned the setting down?

1. Yes
2. No
8. (Don’t know)
9. (Refused)

[ASK IF WH\_ Turndown =1 AND EE2=1, ELSE SKIP TO AV1]

EE3. How did you change the setting?

1. Turned it back up
2. Turned it down further



- 00. (Other, specify)
- 8. (Don't know)
- 9. (Refused)

#### **AV. ENERGY SURVEY VERIFICATION AND IMPACT**

We're almost done with the survey; we only have about 5 minutes left for a few questions.

##### **[ASK ALL]**

AV1. Do you remember receiving a home survey with energy saving recommendations as part of this program (if needed: *ComEd's Home Performance Tune-Up Program*)?

- 1. Yes
- 2. No
- 8. (Don't know)
- 9. (Refused)

##### **[ASK IF AV1=1, ELSE SKIP TO OA1]**

AV2. What recommendations do you remember receiving from the ComEd representative that visited your home? [OPEN END, DK, REF]

##### **[SKIP TO OA1 IF AV2=DK OR REF]**

AV3. Have you implemented any of the recommendations?

- 1. Yes
- 2. No
- 8. (Don't know)
- 9. (Refused)

##### **[ASK IF AV3=1]**

AV4. Which recommendations have you implemented? [OPEN END, DK, REF]

AV5. Do you have plans to implement any of the recommendations in the future?

- 1. Yes
- 2. No
- 8. (Don't know)
- 9. (Refused)

##### **[ASK IF AV5=1]**

AV6. Which one(s)? [OPEN END, DK, REF]

#### **HC. HOME CHARACTERISTICS**

And I just have a few more questions for demographic purposes. These questions will also help us determine how much energy is being saved in your home.

HC1. Do you own or rent your home?

- 1. Own
- 2. Rent/lease
- 00. (Other, specify)
- 8. (Don't know)
- 9. (Refused)

HC2. How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower) [NUMERIC OPEN END up to 99, DK, REF]

[ASK IF S1c=1]

HC3. In total, how many showers are present in your home? [NUMERIC OPEN END up to 99, DK, REF]

[ASK IF KITCHEN AERATOR=1]

HC4. How many faucets are there in your *kitchen*? [NUMERIC OPEN END up to 99, DK, REF]

[ASK IF S1b=1]

HC5. Now thinking about your home's bathrooms, how many faucets are there, all together, in all of your home's *bathrooms*? [NUMERIC OPEN END up to 99, DK, REF]

[ASK IF S1a=1]

HC6. Before participating in the program, approximately what percent of the screw-in light bulb sockets in your home were already equipped with CFL bulbs? [NUMERIC OPEN END up to 99, DK, REF]

## **O. OCCUPANCY**

OC1. Including yourself, how many people currently live in your home in the following age ranges; ...less than 18 years old [NUMERIC OPEN END up to 99, DK, REF]

OC2. ...18-24 years old [NUMERIC OPEN END up to 99, DK, REF]

OC3. ...25-34 years old [NUMERIC OPEN END up to 99, DK, REF]

OC4. ...35-44 years old [NUMERIC OPEN END up to 99, DK, REF]

OC5. ...45-54 years old [NUMERIC OPEN END up to 99, DK, REF]

OC6. ...55-64 years old [NUMERIC OPEN END up to 99, DK, REF]

OC7. ...65 or older [NUMERIC OPEN END up to 99, DK, REF]

OC8. Has the number of people living in your house changed since [PART\_DATE]?

1. Yes, the number has increased
2. Yes, the number has decreased
3. No change
8. (Don't know)
9. (Refused)

[ASK IF OC8=1 or 2, ELSE SKIP TO CLOSING]

OC9. How many more or less people are currently living in your home versus [PART\_DATE]? [NUMERIC OPEN END up to 99, DK, REF]

OC10. In what month and year did the number of people in your household change? [ALLOW MULTIPLE RESPONSES, UP TO 3]

00. [RECORD MONTH/YEAR]
8. (Don't know)
9. (Refused)

## **CLOSING**

Those are all the questions I have. On behalf of ComEd, thank you very much for your time.

**9.1.3 Program Manager Interview Guide**

# In-Depth Interview Guide for Program Manager and Implementation Staff



## ComEd In-Depth Interview Guide for Program Manager, Implementation Staff: Joint Single Family Pilot Programs Final: 05-19-11

Respondent name:

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---

Respondent phone number:

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---

Respondent title:

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---

Company name:

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---

Date and time of interview:

---

---

Interviewer:

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### Introduction

“Thank you for taking the time to talk with me today. The Opinion Dynamics evaluation team is currently conducting a study for ComEd. We’d like to find out how the [INSERT Joint Single Family Retrofit Pilot, Joint Single Family Direct Install Pilot, or Joint Single Family Air Sealing Pilot] Program has been going.”

### Role in Program

1. First, could you tell me about your role in the program?
  - What are you responsible for?

- What have you been doing on a daily basis?
- Who do you normally interact with?

### **Typical Participant Experience**

2. Could you outline a typical participant experience, starting from when the customer hears about the program through to his or her last contact with the program?
  - How might the customer have heard about the program?
  - How many times might the customer interact with the program before deciding to participate?
  - What are typical customer concerns or motivations?
  - About how much time passes between the participant signs up and the audit takes place?
  - When does the participant last have contact with the program?

### **Program Marketing and Promotion**

3. Can you talk a little about how you marketed the program both in terms of the messaging and the marketing channels you used?
4. I noticed the program has participation goals of: [SF Retrofit Pilot Program - 2,000 audits and 600 retrofits (in PY3)/SF Direct Install Pilot Program – 6,000 homes (in PY3)/SF Air Sealing Pilot – 200 audits and 100 retrofits], has the program been able to reach its participation goals this year? Why/Why not?
5. Can you detail the ways that CFLs were marketed?
  - What messaging was used?
  - What CFL attributes were highlighted?

### **Barriers to Participation**

6. What have been the main barriers to participation for eligible ComEd customers?
7. How has the program attempted to overcome these challenges?
8. Have there been any barriers to the installation of CFLs in eligible ComEd customers' homes?
  - If so, please describe these barriers?
  - How has the program addressed these barriers?

## Customer Education

9. Could you describe the energy efficiency information the program provides to customers?

- Probe for:
  - Behavioral/Conservation
  - Other program opportunities, referrals
  - Other non-program measures

[Skip if Direct Install program]:

10. What is included in the [SF Retrofit Pilot Program – “Audit report and proposal” /SF Air Sealing Pilot – “Audit and Work Order”]?

- Probe for:
  - Energy savings
  - cost
  - payback period
  - referrals to other programs

[Ask All]:

11. Are participants' participation in other programs tracked? Is channeling recorded? If so where?

[Ask if Retrofit or Air Sealing program]:

12. Are recommendations made to the participants recorded in a database? If so, where?

## Customer Satisfaction

13. [Interviewer: acknowledge that we are assessing this on our own from upcoming participant surveys but want their perspective] From your perspective, how satisfied are the participants with the program overall?

14. From your perspective, how satisfied are the participants with the CFL portion of the program?

- How satisfied are they with the auditors who are installing the CFLs?
- How satisfied are they with the CFLs?

15. How do you know how satisfied they are?

### **Energy and Demand Savings**

16. I noticed the program has savings goals of: [SF Retrofit Pilot Program – 510 net MWh (in PY3)/SF Direct Install Pilot Program – 1,000 net MWh (in PY3)/SF Air Sealing Pilot – 102 net MWh], How do you think the program has performed in relation to this goal?

17. In regards to achieving energy savings, what is working well for the program?

- What program components are responsible for these savings?

18. In regards to achieving energy savings, where would you like to see the program improve?

- What are some program challenges?
- How is the program attempting to overcome those challenges?

### **Coordination**

19. How would you describe the coordination between ComED and [INSERT Nicor Gas (Joint Single Family Retrofit Pilot) OR Peoples Gas and Chicagoland Natural Gas Savings Program (Joint Single Family Direct Install Pilot or Joint Single Family Air Sealing Pilot)] in implementing the program?

- (If necessary) Why do you describe it that way?
- In what ways does the coordination support effective program implementation?
- In what ways should the coordination be improved?

### **Future/Planned Changes**

20. Will this program still be running in PY4 through PY6? If so, are there any changes planned for the current design?

### **Closing**

21. Is there anything that you are interested in finding out through the process evaluation?

22. Is there anything else that you think we should know based on our conversation today?

## 9.2 *Hot Water Heater Temperature Setback Impact Model*

The model used to estimate the impact from water heater temperature setback is described in this section. The model is designed to estimate the volume of household hot water usage. The energy consumed by the water heater is a function of the volume of water and the differential between the inlet and the supply water temperatures. Water heater energy consumption is modeled under a water heater supply temperature set point of 136° Fahrenheit, representing the pre-retrofit case, and 120° Fahrenheit, representing the post-retrofit case. The difference in water heater energy consumption under these two scenarios is the estimates impact from the temperature set-back.

The model requires information on low flow shower plumbing fixtures, shower and bath activity, appliance holdings and activity for clothes washers and dishwashers, water heater energy factor (EF), as well as inlet and supply water temperatures and occupancy. Behavioral data assumptions include showers per week, baths per week, clothes washes per week, dishwasher loads per week and the presence of low flow showerheads.

The values selected for model assumptions are primarily based on studies conducted in other service territories<sup>18</sup>. However, several key input assumptions are adjusted to be consistent with the Single Family Home Energy Performance participant population and related impact assumptions. Assumptions tailored to SFHEP program data include home occupancy, shower flow (GPM), minutes per shower, and showers per day (per person).

Although the energy required to meet hot water demand in the home varies significantly with the inlet water temperature, the *change* in energy due to a water heater temperature setback is unaffected by the inlet water temperature, as it does not change in the pre-and post-retrofit conditions. Annual impact for water heater temperature setback is shown below:

\_\_\_\_\_

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<sup>18</sup> Details regarding these studies and service territories may not be shared due to disclosure and other legal agreements.



Where,

$$\text{_____}$$

and,

$$EF^{19} = 0.9$$

$$\text{Btu/kWh} = 3,414$$

$$\text{_____}$$

The water temperature differential between inlet and outlet supply water, in conjunction with the mass of water supplied, defines the hot water load over a given time interval; shown below for one day. Hot water load is given by:

$$\text{_____}$$

Where,

$$\text{_____} \quad (\text{shower} + \text{bath} + \text{dishwasher} + \text{clothes\_washer} + \text{faucet\_flow} + \text{faucet\_fill})$$

$C_p$  = specific heat of water (8.33 Btu/Gallon·°F)

And,

$$\text{_____}$$

Where,

$$\text{_____}$$

$$\text{Persons} = 2.4$$

$$\text{Showers/day/person} = 1$$

$$\text{Minutes/shower} = 8$$

$$\text{GPM} = \text{gallons per minute} = 2.07^{20}$$

$$\text{Shower}_{\text{temp}} = 105^\circ \text{F}$$

$$\text{Supply}_{\text{temp}} = \text{water heater set point} = 136^\circ \text{F in pre-case or } 120^\circ \text{F in post-case}$$

$$\text{_____}$$

<sup>19</sup> EF=Energy Factor

<sup>20</sup> This is the low flow showerhead adjusted for the presence of un-retrofit fixtures in the sample.

$Inlet_{temp} = \text{incoming water temperature} = 65^{\circ} F^{21}$

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Where,

Baths/day = 0.17

Gallons/bath=50

---

Where,

Loads/day = 0.56

Gallons/load = 9

---

Where,

$Pr(CW) = \text{probability of having a clothes washer} = .91$

Loads/day=0.79

Gallons/load=9.4

---

Where,

Gallons/day = 8.6

$Faucet_{temp} = 94^{\circ} F$

---

Where,

Gallons/day = 10.2

$Fill_{temp} = 105^{\circ} F$

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<sup>21</sup> The impact from water heater temperature setback is neutral with respect to this parameter