

Department of Energy and Environment

Evaluation, Measurement, and Verification
of Energy Efficiency and Renewable Energy
Programs in the District of Columbia

FY14 Annual Evaluation Report
Volume II—Appendices

Final Draft—September 30, 2015





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ACRONYMS

AC	Air conditioner
Btu	British thermal unit
C&I	Commercial and institutional
CAT	Custom application tool
CATI	Computer assisted telephone interview
CBE	Certified business enterprise
CF	Coincidence factor
CEI	Comprehensive efficiency improvements
CFL	Compact fluorescent lamp
CLEER	Commercial lighting energy efficient replacement
DI	Direct install
DC SEU	District of Columbia Sustainable Energy Utility
DOEE	Department of Energy and Environment
DHW	Domestic hot water
EC	Energy consultant
ECM	Energy conservation measure
EFI	Energy Federation Incorporated
EFLH	Equivalent full load hours
E&B	Ebert and Baumann Consulting Engineers
EM&V	Evaluation, measurement, and verification
FAQ	Frequently asked question
FY	Fiscal year
Gpm	Gallons per minute
GWh	Gigawatt hour
HERO	Home energy reporting online
HPwES	Home Performance with ENERGY STAR®
HVAC	Heating ventilation and air conditioning
ICDI	Implementation contractor direct install
KITT	Knowledge information transfer tool
kW	Kilowatt
kWh	Kilowatt hour
LED	Light emitting diode
LI	Low-income
LIMF	Low-income multifamily
mcf	1,000 cubic feet
MF	Multifamily



MMBtu	1 million British thermal unit
M&V	Measurement and verification
N	Population
n	Sample
NREL	National Renewable Energy Laboratory
NTG	Net-to-gross
PJM	Pennsylvania New Jersey Maryland
PMDI	Property manager direct install
PV	Photovoltaic
PY	Plan year
QA/QC	Quality assurance/quality control
QS	Quick start
RFP	Request for proposal
RPM	Reliability pricing model
REIP	Renewable Energy Incentive Program
RR	Realization rate
SFQS	Single family quick start
SOME	So others might eat
SR	Standard rebates
SREC	Solar renewable energy certificate
SRI	Standard rebate initiative
TRM	Technical reference manual
Tt	Tetra Tech
VEIC	Vermont Energy Investment Corporation
VFD	Variable frequency drive



APPENDIX A: NET-TO-GROSS LIMITED SURVEY BATTERY AND FLOWCHARTS

This appendix summarizes the survey questions used for the limited free-ridership and spillover used to estimate the extent of free-ridership and participant spillover. Particularly for the free-ridership questions, the skip patterns (which are dependent upon the response to one or more questions) are complex. To simplify discussion of the questions, we have only shown the questions and not the potential response categories or skip patterns.

A.1 SUMMARY OF THE SURVEY QUESTIONS

In order to estimate free-ridership and spillover, the participant survey battery contains three key sections.

- Intention questions
- Influence questions
- Participant spillover questions.

A.2 INTENTION QUESTIONS

The limited free-ridership battery begins the intention questions or asking the respondent how the project would have differed if the respondent had not received program assistance. There are several dimensions used to rate the intention to install new equipment, how the size of the project would changed and if the business would have paid the additional funds. Since questions for the commercial and residential surveys are similar, only the intention questions for the commercial sector are presented below. (Complete residential survey questions can be found in APPENDIX C:).

LFR1 Which of the following is most likely what would have happened if you had not received [the program assistance] from DC SEU? Would you have...[READ LIST]

- 1 Cancelled or postponed the project
- 2 Reduced project size, scope or efficiency level of the project
- 3 Not changed
- 4 I'm not sure

LFR2 [ASK IF LFR1 = 2] Would you have reduced the size, scope or efficiency of the project a small amount, a moderate amount, or a large amount?

- 1 A small amount
- 2 A moderate amount
- 3 A large amount
- D I'm not sure



LFR3 [ASK IF LFR1 = 3]

Would you have paid the entire cost of the project in the absence of the financial incentive you received from DC SEU?

- 1 Yes
- 2 No
- D Unsure

A.3 INFLUENCE QUESTIONS

The instrument also included questions that assess how much influence the program had on the decision to do the project. Respondents were asked to rate different program aspects on a scale of 1 to 5 with 1 being not at all influential and 5 being extremely influential. The influence score is equal to the maximum influence rating for any program aspect. Questions for commercial participants are presented first.

LFR4 On a scale of 1 to 5, where 1 is 'not at all influential' and 5 is 'extremely influential,' please tell me how influential each of the following aspects were in your decision to implement the project. How influential was...

[NOTE: Include "Not applicable" option]

- A** The incentive or rebate offered by DC SEU.
- B** [IF P6J>5, SKIP] The technical assistance received from DC SEU staff.
- C** The recommendation from the installation contractor you worked with
- D** Previous experience implementing projects through DC SEU

Residential participants were asked similar rating questions, along with a couple additional questions:

LFR4 I am going to read you a list of aspects of the **[PROGRAM]**. On a scale of 1-5, where 1 is 'not at all influential' and 5 is 'extremely influential,' please tell me how influential each of these program aspects were in your decision to **[IF TRACK = "7107PV" OR TRACK = "7420HPES" OR TRACK = "7401FHLB": complete the project; IF TRACK = "7710APPL": purchase the [MEAS]]**. How influential was...

[NOTE: Include "Not applicable" option]

- AA** The incentive, or rebate, or equipment offered through the **[PROGRAM]**.
- CC** **[IF TRACK = "7107PV", SKIP]** Assistance or information you received from DC SEU program staff
- DD** **[IF TRACK <> "7420HPES" AND TRACK <> "7401FHLB", SKIP]** Information provided during the home energy audit
- EE** **[IF TRACK <> "7420HPES" AND TRACK <> "7401FHLB" AND TRACK <> "7107PV", SKIP]** The recommendation from the retailer/contractor you worked with
- FF** **[IF TRACK <> "7710APPL", SKIP]** Information or a recommendation from the retailer where you purchased the **[MEAS]**

GG [IF TRACK <> "7107PV", SKIP] Advertising about the **[PROGRAM]**
BB [IF HHE3=1 OR HHE4=1] Your prior experience with the DC SEU or programs

The scoring calculates two scores: an intention score and an influence score. The intention score represents how much the project would have changed in absence of the program. The influence score is the percentage of influence the program had on the customer's project. These scores are then summed and multiplied by .01 to get the raw free-ridership score. Table A-1 details these calculations.

Table A-1. Intention and Influence Scores

Score	Responses	Result
Intention Score (FR_int)	If project would have been cancelled (LFR1 = postponed/cancelled)	FR_int = 0
	If project would have been reduced in size, scope or efficiency (LFR1 = reduced size, scope or efficiency)	Large amount: FR_int = 12.5 Moderate amount: FR_int = 25 Small amount: FR_int = 37.5
	If project would not have changed (LFR1 = no change)	Would have paid entire cost: FR_int = 50 Would not have paid entire cost: FR_int = 25
Influence Score (FR_infl)	Rating of program aspect on scale from 1 (not at all influential) to 5 (extremely influential)	FR_infl = highest rated aspect 1 (not at all influential), FR_infl = 50 2, FR_infl = 37.5 3, FR_infl = 25 4, FR_infl = 12.5 5 (extremely influential), FR_infl = 0
Initial Free-ridership Score	<i>The percent of the rebated savings that would have occurred without the program.</i>	$(FR_int + FR_infl) * .01$



Figure A-1. Free-ridership Flowchart for Limited NTG Battery (Commercial)

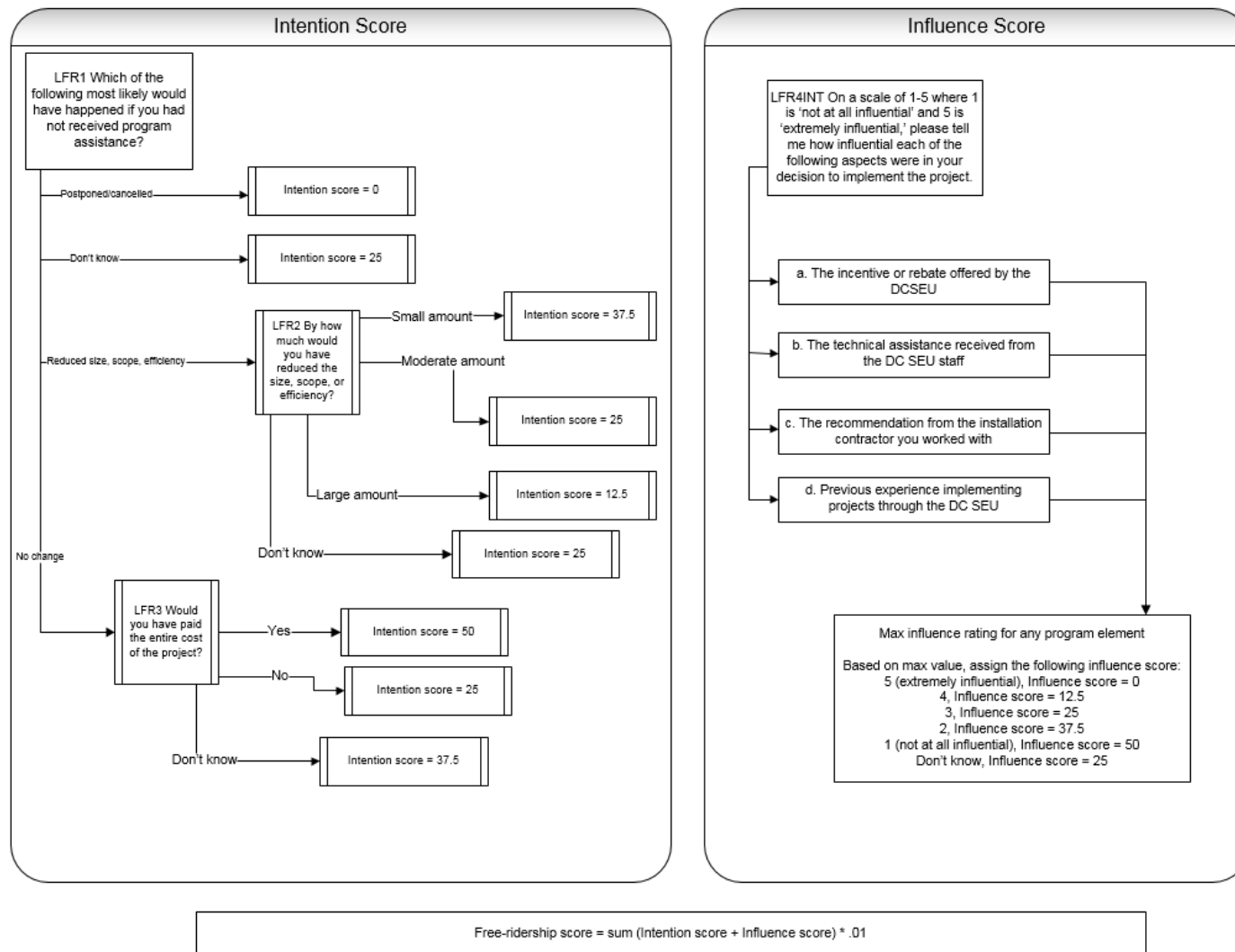
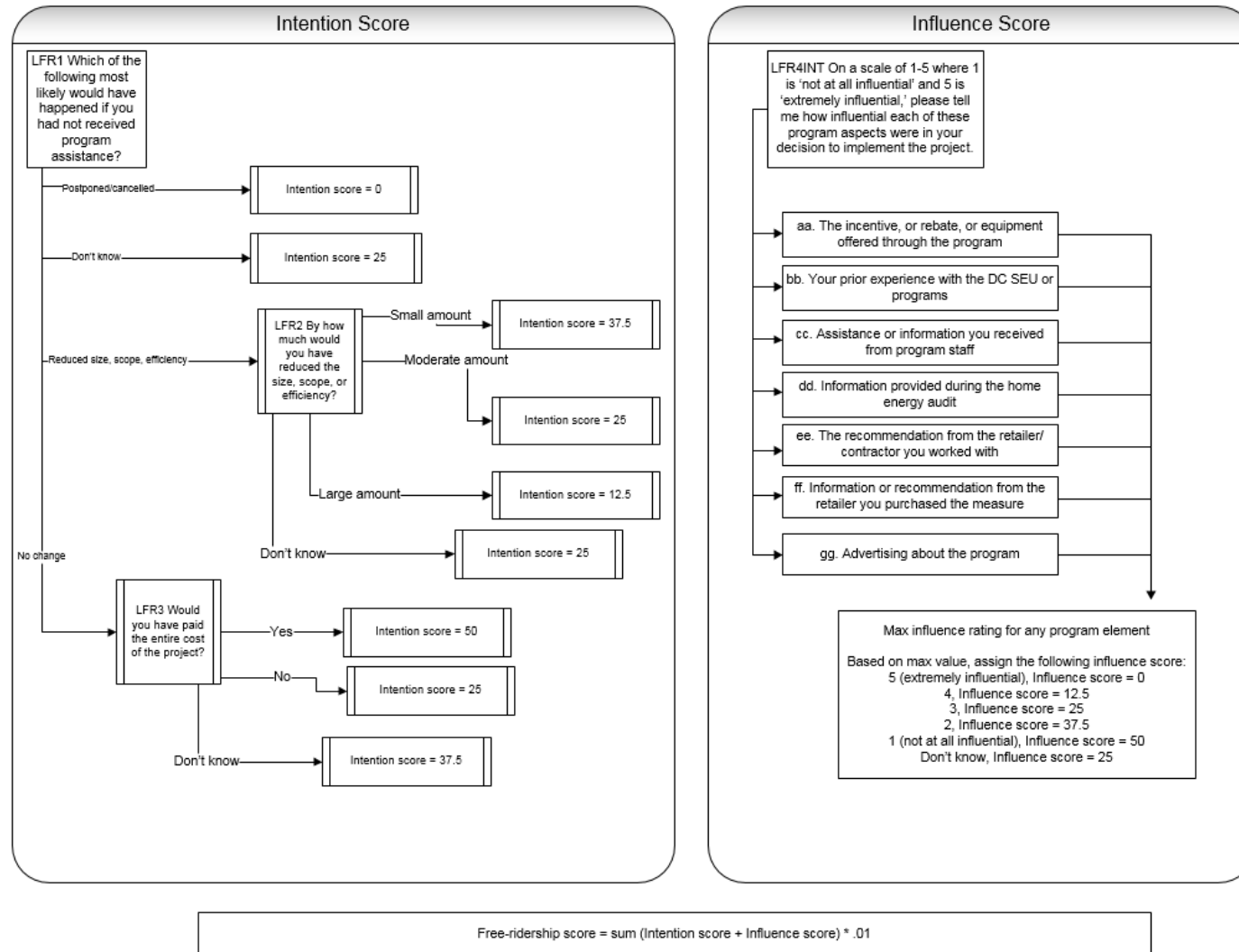




Figure A-2. Free-ridership Flowchart for Limited NTG Battery (Residential)





A.4 PARTICIPANT SPILLOVER

The spillover estimates are computed based on how much additional energy efficient equipment the participant installed outside the program that were, in fact, influenced by the program. This spillover includes both “like” spillover, where the exact same equipment was installed and “unlike” or equipment different from what was installed through the program was purchased. Spillover questions for the commercial sector are presented first:

S5 Since you implemented the DC SEU project, has your company purchased, installed, or implemented any other type of energy efficiency equipment **on your own**, that is without DC SEU assistance?

- 1 Yes
- 2 No [SKIP TO E1]
- D I’m not sure [SKIP TO E1]

S6a What equipment did you install?

[RECORD VERBATIM RESPONSE]

S6b What amount or quantity did you install?

(Probe for quantity for each type of equipment from S6a, indicate X=#, Y=#)

[RECORD VERBATIM RESPONSE]

S6c What was the size or capacity of the equipment you installed?

[IF NEEDED, PROBE: What type of equipment did you install?]

[RECORD VERBATIM RESPONSE]

S6d Was this efficiency level of the equipment you installed?

[IF NEEDED, PROBE: What was the ES rating, SEER/EER, was it more efficient than standard code...]

[RECORD VERBATIM RESPONSE]

S7a Would this project have qualified for DC SEU assistance?

- 1 Yes
- 2 Yes, implemented through DC SEU [SKIP TO E1]
- 3 No [SKIP TO E1]
- D I’m not sure

S7b Did a recommendation by the contractor, engineer, or designer who you worked with under the DC SEU project influence your decision to implement some of this equipment on your own?



- 1 Yes
- 2 No
- D I'm not sure
- R Refused

S7c Did your experience with any energy efficient projects implemented through the DC SEU influence your decision to implement some of this equipment on your own?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

S7e On a scale of 1 to 5, where 1 is "no influence at all" and 5 is "a great deal of influence", how much influence did the DC SEU assistance have on your decision to install this equipment without an incentive?

— [1 TO 5]

8 I'm not sure

S8a Why didn't you implement this project through the DC SEU?

[DO NOT READ; SELECT ALL THAT APPLY]

- 1 Too much paperwork
- 2 Cost savings not worth the effort of applying
- 3 Takes too long for approval
- 4 The equipment would not qualify
- 5 Vendor does not participate in initiative
- 6 Outside eligible service territory
- 7 No time - needed equipment immediately
- 8 Thought the initiative ended
- 9 Didn't know the equipment qualified under another initiative
- 10 Just didn't think of it
- 11 Unable to get rebate--unsure why
- 12 Other [SPECIFY]
- D I'm not sure

S8b [IF S8a = EQUIPMENT WOULD NOT QUALIFY (IF S8a = 4)] Why wouldn't the project qualify?

[RECORD VERBATIM RESPONSE]



The following questions from the residential survey, in conjunction with the measure specific savings values, are used to estimate possible spillover savings:

TSP2 Since participating in the program, have you installed any other energy efficient products or equipment, or made any energy efficiency improvements for which you did NOT receive a program rebate?

- 1 Yes
- 2 No [SKIP TO RF1]
- D I'm not sure [SKIP TO RF1]

TSP2T What type of other energy efficient improvements, products, or equipment did you install or receive?

[RECORD DESCRIPTION OF EACH ADDITIONAL INSTALLED MEASURE]

For any equipment identified in TSP2T, the respondent is asked how many of them or how much was installed. Spillover savings are calculated as the measure-specific savings identified by the TRM1 multiplied by the influence the program had on the purchase. The following questions were used for these calculations.

TSP2M How many / much [TSP2T] have you installed?

- ___ [ENTER QUANTITY]
- 88 I'm not sure
- 99 Refused

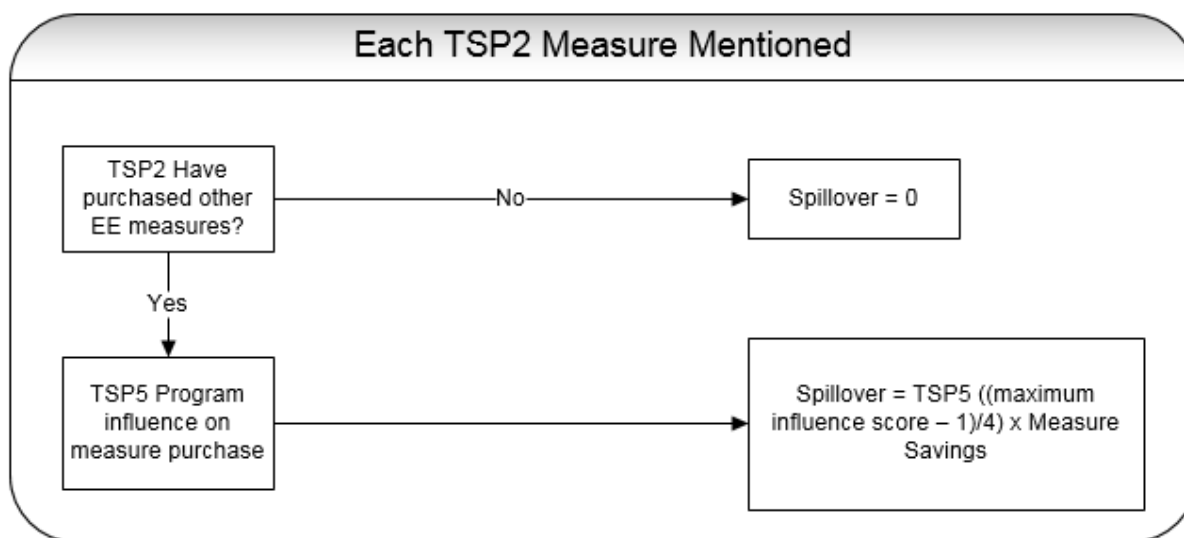
TSP5 On a scale of 1 to 5, with 1 meaning "not at all influential" and 5 meaning "extremely influential", how influential were each of the following on your decision to install or purchase the additional equipment, product, or improvements? (Rotate)

- A** Information about energy savings from DC SEU advertising or staff, retailers, or contractors.
- B** Your satisfaction with the program financial assistance, equipment, or services
- C** Your experience with the DC SEU program made you want to do more to save energy

___ [RECORD INFLUENCE 1 TO 5]

¹ Some types of equipment reported by respondents are not included in the DC SEU TRM. Savings estimates for these equipment were taken from the Mid-Atlantic, Pennsylvania, and Michigan TRMs, adjusting for weather where appropriate.

Figure A-3. Spillover Flowchart for Limited NTG Battery





APPENDIX B: RESIDENTIAL HOUSEHOLD PARTICIPANT PRE-NOTIFICATION LETTER

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment



[DATE]

[ID: xxxx]

[NAME
ADDRESS LINE 1
ADDRESS LINE 2]

Dear [NAME],

The District Department of the Environment (DDOE) has hired Tetra Tech, a professional evaluation and research firm, to evaluate the District of Columbia Sustainable Energy Utility (DC SEU) energy efficiency programs. The purpose of this evaluation effort is to understand how these programs are operating and to verify equipment installations.

Within the next few weeks, you may receive a telephone call from Tetra Tech to ask you a short series of questions about the energy efficiency equipment you received as part of a DCSEU energy efficiency program and the factors that influence your decisions when considering energy-related purchases.

If you have any questions about the purpose of the study or its use, please feel free to contact Lance Loncke at (202) 671-3306. If you would like to call Tetra Tech to schedule an interview at your convenience, feel free to call (800) 454-5070. In either case, please refer to your ID number at the top right corner of this letter.

Thank you in advance for your help with this important study.

Sincerely,

Lance Loncke, Ph.D.
Associate Director, DDOE



1200 First St. NE, 5th Floor, Washington, DC 20002 | Tel: (202) 535-2600 | web:ddoe.dc.gov





APPENDIX C: RESIDENTIAL HOUSEHOLD PARTICIPANT SURVEY INSTRUMENT

FY14 Residential and Low Income Initiatives (Tracks 7107PV, 7401FHLB, 7420HPES, 7710APPL) Household Participant Survey Instrument

The participant survey is intended for households (HH) that participated in the DC SEU residential and low income tracks (programs). The overarching research objectives are:

1. HH awareness
2. Installation verification
3. HH experience
4. The influence of the DC SEU staff, contractors, and/or incentives
5. Persistence and Rebound Effects
6. Future plans
7. Participation in DDOE energy saving initiatives

Researchable Topics

1. The HHs' awareness.
 - a. How did HHs hear about the program?
 - b. [Appliances] DC SEU signage
 - c. Has HH visited the DC SEU website?
2. Equipment installation verification
 - a. Installation verification
 - b. [Refrigerators] Appliance replacement
3. HH experience
 - a. How does the HH view their experience with the initiative? (include online rebate form)
 - b. Has the HH participated in other DC SEU offerings?
 - c. Has the HH participated in other DC SEU offerings in prior years?
 - d. Adoption of energy savings behaviors
4. DC SEU Influence
 - a. (FR) If aware, how influential was the DC SEU in the decision to purchase energy saving equipment/have a home energy audit conducted and energy savings equipment installed/complete upgrades to home to make more energy efficient?
 - b. (FR) How influential was the incentive in the decision...
 - c. (FR) How influential was the contractor/sales person in the decision...?
 - d. (FR) For those who have participated in multiple years, how influential was past participation in the decision...?
 - e. (SO) Have HH implemented other energy savings measures (equipment, processes, behaviors) outside of the DC SEU project (s)? If yes, how influential was the DC SEU experience?
5. Participation in DDOE energy saving initiatives
 - a. Has the HH participated in the DDOE Energy Assistance and Weatherization program?
 - b. Has the HH participated in DDOE Energy Workshops?
 - c. Has the HH received an energy efficiency kit from the DDOE?



- d. Has the HH participated in the DDOE EnergySmart DC Solar Initiatives?
6. Demographics

Variable List

The survey instrument contains a number of areas where sample information needs to be filled in to customize the survey for a particular program. The following list describes the 'fills' contained in this instrument and the nature of that information.

<CONTACT>	Respondent name
<DATE>	Date (approximate) of participation
<CFLQTY>	Number of CFLs installed through HPWES or FHLB
<TRACK>	Program code

Track	Sample program name
7107PV	Solar Photo Voltaic
7401FHLB	Federal Home Loan Bank / Income Qualified
7420HPES	Home Performance with ENERGY STAR®
7710APPL	Energy Efficient Appliances (Retail Efficient Appliances) Energy Efficient Heating & Cooling equipment

<PROGRAM>	Program
1	Solar Photo Voltaic
2	Federal Home Loan Bank
3	Home Performance with ENERGY STAR®
4	Energy Efficient Appliances (Retail Efficient Appliances)

Track	Sample program name	Show statement
7107PV	Solar Photo Voltaic	Solar Photovoltaic rooftop panel program
7401FHLB	Federal Home Loan Bank	DC SEU home audit and weatherization program
7420HPES	Home Performance with ENERGY STAR®	DC SEU home audit and weatherization program
7710APPL	Energy Efficient Appliances (Retail Efficient Appliances)	DC SEU appliance and heating and cooling equipment rebate program

<INTERVIEWER>	Interviewer Name
<MEAS1...>	Measures 1-10

Measure	Show statement
Building Shell	Home insulation project and air sealing
Heating	Heating project
Lighting	Energy efficient light bulbs
Water Heating	Water heating equipment



Other HVAC	HVAC project
Solar PV	Rooftop solar panels
Refrigerator	Refrigerator
Clothes Washer	Clothes Washer
Dehumidifier	Dehumidifier

<ALLASST>

Generic description of assistance received through program

Code	Sample program name	ALLASST
7107PV	Solar Photo Voltaic	Received free equipment and installation of rooftop solar panels and other equipment costing around \$10,000
7401FHLB	Federal Home Loan Bank	Received a home energy assessment and energy saving equipment, such as CFL light bulbs, and financial assistance for comprehensive home upgrades
7420HPES	Home Performance with ENERGY STAR®	Received a home energy assessment and energy saving equipment, such as CFL light bulbs, and financial incentives for comprehensive home upgrades
7710APPL	Energy Efficient Appliances (Retail Efficient Appliances)	Received a rebate from the DC SEU for a new energy efficient appliance or heating and cooling equipment

NOTE: For all questions, “I’M NOT SURE” and “REFUSED” will be coded if offered as a response. Interviewers will probe as needed to minimize the amount of missing data.

For any case where the interview terminates early, respondent doesn’t recall measures, measures are not installed, or the contact no longer works at the company, and we cannot locate a knowledgeable respondent, the case will be further examined to determine if additional contact information is available if insufficient sample remains.

Researchable Topics and Survey Question Mapping Matrix

Survey Section	Topic	Questions
1. HH awareness	a. Are HH aware of the DC SEU?	A1
	b. Has HH visited the DC SEU website?	DDOE5-DDOE6a
2. Equipment installation and replacement	a. Verification of HPwES and FHLB measures	N1A-N19 PV1-PV3
	b. [Refrigerators] Appliance replacement	RF1-RF6
3. HH experience	a. How does the HH view their experience with the initiative? (include online rebate form)	HHE1-HHE2
	b. Has the HH participated in other DC SEU offerings?	HHE4



Survey Section	Topic	Questions
	c. Has the HH participated in other DC SEU offerings in prior years?	HHE3
4. Adoption of energy savings behaviors	a. [HPwES] Recall of energy savings info from energy audit	B1-B2
	b. Energy usage behaviors changed	B3-B4
5. DC SEU Influence	a. (FR) How influential was the DC SEU assistance or info	LFR4
	b. (FR) How influential was the incentive	LFR4
	c. (FR) How influential was the contractor/sales person	LFR4
	d. (FR) For those who have participated in other programs or years, how influential was that experience	LFR4
	e. (SO) Have HH implemented other energy savings measures? If yes, how influential was...	LS1-LS8B TSP2-TSP5
6. Participation in DDOE energy saving initiatives	a. Has the HH participated in the DDOE Energy Assistance and Weatherization program?	DDOE1
	b. Has the HH participated in DDOE Energy Workshops?	DDOE2
	c. Has the HH received an energy efficiency kit from the DDOE?	DDOE3
	d. Has the HH participated in the DDOE EnergySmart DC Solar Initiatives?	DDOE4
7. Demographics	a. various	D1-D13

Introduction

I1 Hello, my name is _____, and I'm calling from Tetra Tech on behalf of the Department of Energy and Environment. We have been asked to evaluate the DC SEU's energy efficiency programs.

May I please speak with **[CONTACT]**?

1 Yes

2 No [ATTEMPT TO CONVERT, MENTION ADVANCE LETTER, PROBE FOR APPROPRIATE RESPONDENT]

[INTERVIEWER: YOU ARE CALLING TO CONTINUE A PARTIALLY COMPLETED INTERVIEW]

Hello, my name is _____, and I'm calling from Tetra Tech on behalf of the Department of Energy and Environment. I'm calling to complete the interview we started earlier. For quality assurance and training purposes, this call will be recorded.



1 Continue

- I2** We are calling today to conduct a telephone survey on the experience you had with the **[PROGRAM]**. This survey should take about 15 minutes of your time. Before we start, I would like to inform you that for quality control purposes, this call will be recorded and monitored.

1 Continue

- I3** [Who is DC SEU? The District of Columbia Sustainable Energy Utility (DC SEU) helps District residents, businesses, and institutions save energy and money through energy efficiency and renewable energy programs.]

[Why are you conducting this survey: Studies like this will help DC SEU better understand your needs, which helps them in their design of energy efficiency programs.]

[For Appliance & Heating and Cooling rebate customers, clarify that this survey is different than the one they received directly from the DC SEU via email or mail in early December.]

[Timing: This survey should take about 15-20 minutes. *IF NOT A GOOD TIME, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070.*]

[Sales concern: This is not a sales call; we would simply like to learn about your household's experiences with the DC SEU Program. Your responses will be kept confidential. If you would like to talk with someone from DC SEU to verify this survey, please feel free to contact **[DDOECONT]**.]

1 Continue

Identification of Decision-Maker

CELL1 Have I reached you on your cell phone?

- 1 Yes
2 No [SKIP TO C1]

CELL2 Then I would just like to confirm that you are in a location where it is safe to talk to you on your cell phone [NOTE: We want to be sure the respondent is not talking on their cell phone while driving a car.]

- 1 Yes, it is okay to continue conversation
2 No [SCHEDULE A TIME TO CALLBACK AND TERMINATE]



C1 Our records indicate that your household **[ALLASST]** around **[DATE]**. Do you recall this?

- 1 Yes [SKIP TO C4]
- 2 No [SKIP TO C2]
- 3 Respondent says they did not receive equipment or assistance
- D I'm not sure [SKIP TO C2]
- R Refused [SKIP TO C2]

C1A You are indicating you had not **[ALLASST]** around **[DATE]**. Is this correct?

- 1 Yes [THANK AND TERMINATE]
- 2 No
- D I'm not sure
- R Refused

C1B Have you **[ALLASST]**?

- 1 Yes
- 2 No [THANK AND TERMINATE]
- D I'm not sure
- R Refused [THANK AND TERMINATE]

C2 Is there someone else available who might be more familiar with this **[IF TRACK = "7710APPL": purchase; IF TRACK = "7107PV" OR "7401FHLB" OR "7420HPES": project]**?

- 1 Yes [SKIP TO C1]
- 2 No [TERMINATE]
- D I'm not sure [TERMINATE]
- R Refused [TERMINATE]

C4 Were you one of the primary decision-makers when deciding to implement this project through the **[PROGRAM]**?

- 1 Yes
- 2 No [SKIP TO C2]
- D I'm not sure [SKIP TO C2]
- R Refused [SKIP TO C2]



Awareness (DM only)

A1 How did you hear about the **[PROGRAM]**? Did you hear about it from...? (READ LIST; SELECT ALL THAT APPLY)

- 1 A contractor
- 2 A retail store employee
- 3 Signs in store indicating DC SEU Rebate available for qualifying appliances
- 4 A DC SEU mailing or email
- 5 The DC SEU website
- 6 A colleague
- 7 A newspaper, or radio
- 8 Something else **[SPECIFY]**
- 9 Don't know

Installation Verification – Home Performance with Energy Star

[IF [TRACK]<> “7420HPES” AND “7401FHLB”, SKIP TO N18]

HPINT As part of your participation in the **[PROGRAM]**, a contractor visited your place of residence to conduct an assessment of your home's energy efficiency. As part of the visit, the contractor may have installed some direct savings energy efficiency equipment such as light bulbs and water saving devices.

[IF SHELL = 1 OR OTHHVAC = 1 OR HEATING = 1] In addition, you may have installed additional equipment or made additional improvements to your home with the assistance of the program.

[If LIGHTING = 1 or WATHEAT = 1] First, I would like to ask a few questions about the equipment that was installed in your home.

- 1 Continue

N1A **[IF LIGHTING <>1, SKIP TO WS1]** According to our records, you received **[CFLQTY]** CFLs during the visit by the contractor. Is this correct?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

N1B **[IF N1A <>2 AND N1A<>D AND N1A<>R, SKIP]** How many CFLs did you receive?

- ___ **[RECORD RESPONSE]** **[IF N1B = 0 SKIP TO WS1]**
- 88 I'm not sure **[SKIP TO WS1]**
- 99 Refused **[SKIP TO WS1]**



N1 Did the contractor install these new light bulbs directly into light fixtures or did they leave them with you? **[DO NOT READ LIST – CHOOSE APPROPRIATE ANSWER BASED ON RESPONSE]**

- 1 The new light bulbs were installed by the contractor directly in the light fixture [SKIP TO N5]
- 2 The contractor left behind all of the new lights for me to install [SKIP TO N4]
- 3 Some light bulbs were left behind and some were installed directly
- 4 Did not receive new light bulbs [SKIP TO WS1]
- D I'm not sure [SKIP TO WS1]
- R Refused [SKIP TO WS1]

N3 **[IF N1<>3, SKIP]** Of the **[IF N1A=1: [[CFLQTY], IF N1A <>1: N1B]** total energy-saving light bulbs you received, do you remember how many bulbs the contractor left behind for you to install?

[IF NEEDED: Your best estimate is fine]

- ___ [RECORD NUMBER OF BULBS]
- 88 I'm not sure
- 99 Refused

N4 **[IF N3=88 OR N3=99, SKIP]** Of the bulbs left behind, how many have you installed so far?

[IF NEEDED: Your best estimate is fine]

- ___ [RECORD NUMBER INSTALLED]
- 88 I'm not sure
- 99 Refused

N5 **[IF N1 = 2 AND N4 = 0, SKIP TO WS1]** Have you taken out any of the light bulbs that were installed either by you or the contractor?

- 1 Yes
- 2 No [SKIP TO WS1]
- D I'm not sure [SKIP TO WS1]
- R Refused [SKIP TO WS1]

N6 How many light bulbs did you remove?



___ [RECORD NUMBER REMOVED]

88 I'm not sure

99 Refused

N7 When you removed the light bulb [IF N6>1:(s)], did you replace [N6=1: "it"/IF N6>1: "them"] with another energy-efficient light bulb or a regular light bulb?

1 Energy-saving light bulb (CFL or LED)

2 Regular light bulb (incandescent)

3 Other [SPECIFY]

4 Did not replace (delamped)

D I'm not sure

R Refused

WS1 [IF WATHEAT<>1, SKIP TO N18] Which water saving measures did you receive through the program: low flow showerheads or faucet aerators?

1 Faucet aerators

2 Low flow showerheads [SKIP TO N13A]

3 Both

4 Neither [SKIP TO N18]

D I'm not sure [SKIP TO N18]

R Refused [SKIP TO N18]

N7A How many faucet aerators did you receive as part of the contractor visit?

___ [RECORD RESPONSE]

88 I'm not sure [SKIP TO N13A]

99 Refused [SKIP TO N13A]

N8 Did the contractor install the aerator(s) directly onto your faucet(s) or did they leave them with you? [DO NOT READ LIST – CHOOSE APPROPRIATE ANSWER BASED ON RESPONSE] [PROBE: If respondent says contractor left behind the aerators for him/her to install, ask if "some" were left behind or "all" were left behind.]

1 The new aerator(s) were installed by the contractor directly onto the faucet(s) [SKIP TO N11]

2 The contractor left behind all the new aerator(s) for me to install [SKIP TO N10]

3 Some aerators were left behind and some were installed directly.

4 Did not receive new aerators [SKIP TO N13A]

D I'm not sure [SKIP TO N13A]

R Refused [SKIP TO N13A]



N9 Do you remember how many aerators they left behind for you to install?

[IF NEEDED: Your best estimate is fine]

___ [RECORD NUMBER LEFT BEHIND]

88 I'm not sure

99 Refused

N10 [IF N9=88 OR N9=99, SKIP] Of the aerators left behind, how many have you installed so far?

[IF NEEDED: Your best estimate is fine]

___ [RECORD NUMBER INSTALLED]

88 I'm not sure

99 Refused

N11 [IF N8 = 2 AND N10 = 0, SKIP TO N13A] Have you removed any of the aerators that were installed by either you or the contractor?

1 Yes

2 No [SKIP TO N12A]

D I'm not sure [SKIP TO N12A]

R Refused [SKIP TO N12A]

N12 How many aerators did you remove?

___ [RECORD NUMBER REMOVED]

88 I'm not sure

99 Refused

N12A [IF N11 = 1 AND (N7A-N9+N10-N12) <= 0, SKIP TO N13A] How many of the aerators that are still installed are on bathroom faucets?

___ [RECORD NUMBER INSTALLED]

88 I'm not sure

99 Refused

N12B How many of the aerators that are still installed are on kitchen or other faucets?

___ [RECORD NUMBER INSTALLED]

88 I'm not sure

99 Refused



N13A [IF WS1<>2 OR WS1<>3, SKIP N18] How many low-flow showerheads did you receive as part of the contractor visit?

- ___ [RECORD RESPONSE]
 88 I'm not sure [SKIP TO N18]
 99 Refused [SKIP TO N18]

N13 Did the contractor install the showerhead(s) directly onto your shower(s) or did they leave them with you? [DO NOT READ LIST – CHOOSE APPROPRIATE ANSWER BASED ON RESPONSE]

- 1 The new showerhead(s) were installed by the contractor directly onto the shower(s). [SKIP TO N16]
 2 The contractor left behind all the new showerhead(s) for me to install. [SKIP TO N15]
 3 Some showerheads were left behind and some were installed directly.
 4 Did not receive new showerheads. [SKIP TO N18]
 D I'm not sure [SKIP TO N18]
 R Refused [SKIP TO N18]

N14 Do you remember how many showerheads they left behind for you to install?

[IF NEEDED: Your best estimate is fine]

- ___ [RECORD NUMBER LEFT BEHIND]
 88 I'm not sure
 99 Refused

N15 [N14=88 OR N14=99, SKIP] Of the showerheads left behind, how many have you installed so far?

[IF NEEDED: Your best estimate is fine]

- ___ [RECORD NUMBER INSTALLED]
 88 I'm not sure
 99 Refused

N16 [IF N13 = 2 AND N15 = 0, SKIP TO N18] Have you removed any of the showerheads that were installed by either you or the contractor?



- 1 Yes
- 2 No [SKIP TO N18]
- D I'm not sure [SKIP TO N18]
- R Refused [SKIP TO N18]

N17 How many showerheads did you remove?

- ___ [RECORD NUMBER REMOVED]
- 88 I'm not sure
- 99 Refused

Installation Verification – Rebated Measures

[IF [TRACK] <> "7710APPL" SKIP TO NEXT SECTION]

N18 Is the [MEAS] you received a rebate for currently installed?

- 1 Yes [SKIP TO NEXT SECTION]
- 2 No [SKIP TO NEXT SECTION]
- D I'm not sure [SKIP TO NEXT SECTION]
- R Refused [SKIP TO NEXT SECTION]

N18A Was the [MEAS] ever installed?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

N19 [IF N18 <> 2 AND N18A <> 1, SKIP] Approximately when did you remove the [MEAS]?

[RECORD MONTH (MM) and YEAR (YYYY) measure was removed.]

- ___ MONTH ___ YEAR
- 8888 I'm not sure
- 9999 Refused

N20 [IF N18A <> 1, SKIP] Why was the [MEAS] removed? [RECORD VERBATIM]

Installation Verification – Solar PV

[IF [TRACK] <> "7107PV" SKIP TO NEXT SECTION]



PV1 Our records show that you **[ALLASST]** through the DC SEU **[PROGRAM]**.
Is the electric solar panel system currently installed?

- 1 Yes
- 2 No [SKIP TO PV3]
- D I'm not sure
- R Refused

PV2 Is the electric solar panel system currently operating, or working?

- 1 Yes [SKIP TO NEXT SECTION]
- 2 No
- D I'm not sure [SKIP TO NEXT SECTION]
- R Refused [SKIP TO NEXT SECTION]

PV2a Why do you say that the electric solar panel system is not currently operating?
[RECORD VERBATIM]

PV3 Approximately when did you remove the **[MEAS]**?

[RECORD MONTH (MM) and YEAR (YYYY) measure was removed.]

- ____ MONTH ____ YEAR
- 7777 Installed, but not operating
 - 8888 I'm not sure
 - 9999 Refused

HH Experience

HHE0 On a scale of 1 to 5, with 1 being not at all satisfied and 5 being very satisfied, please rate your experience with...

- 1 Continue

HHE1 On a scale of 1 to 5, with 1 being not at all satisfied and 5 being very satisfied, please rate your experience with **[ROTATE LIST]**:

- A** **[IF TRACK <> 7107PV]** The information available about the program on the DC SEU website
- B** **[IF TRACK <> 7710APPL]** The contractor performing the work
- C** **[IF TRACK <> 7107PV]** The amount of the incentive received
- D** **[IF TRACK = 7710APPL]** The online rebate application experience
- E** **[IF TRACK <> 7107PV]** The time it took to receive your rebate



- F** [IF TRACK <> 7107PV] The energy savings from the energy efficiency equipment
G [IF TRACK = 7107PV] The energy savings from the solar panel system

HHE2 [IF HHE1 < 3] Can you tell me why you rated [COMPONENT] a [SCORE]? [RECORD VERBATIM]

HHE3 [IF TRACK = 7710APPL] Have you participated in this [PROGRAM] before?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

HHE4 Have you participated in other DC SEU programs?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

Adoption of energy saving behaviors

B1 [IF [TRACK]="7420HPES" OR "7401FHLB"] Do you recall receiving information on how to save energy in your home when you had your home energy audit done?

- 1 Yes
- 2 No [SKIP TO FRINT]
- D I'm not sure [SKIP TO FRINT]

B2 [IF [TRACK]="7420HPES" OR "7401FHLB"] What energy saving recommendations do you recall? (Record verbatim)

B3 [IF [TRACK]="7420HPES" OR "7401FHLB"] Have you adopted any of the energy saving recommendations?

- 1 Yes
- 2 No [SKIP TO FRINT]
- D I'm not sure [SKIP TO FRINT]

B3A [IF [TRACK]="7420HPES" OR "7401FHLB"] What energy saving recommendations have you adopted? (Record verbatim)



- B4** [IF [TRACK]<>"7420HPES" OR "7401FHLB"] How have you changed your energy usage behaviors since participating in the [PROGRAM]? (Record verbatim)

Free-Ridership

FRINT For the next series of questions, I would like you to think about what you would have done if the [PROGRAM] had not been available.

LFR1 Which of the following most likely would have happened if you had NOT [ALLASST] through the [PROGRAM]? Would you have...

- 1 [IF TRACK= "7107PV"] Done nothing (not installed any equipment)
[IF TRACK <> "7107PV" and TRACK<> "7710APPL"] Cancelled or postponed completion of the home improvement project or projects longer than one year
[IF TRACK= "7710APPL"] Not purchased a [MEAS]
- 2 [IF TRACK<> "7710APPL"] Reduced project size, scope or efficiency level of the project or
[IF TRACK = "7710APPL"] Purchased a [MEAS] of lower efficiency or
- 3 [IF TRACK <> "7710APPL"] Implemented the same project within one year, regardless of the financial assistance or equipment you received through the [PROGRAM]
[IF TRACK = "7710APPL"] purchased the exact same [MEAS], regardless of the rebate you received through the [PROGRAM]

LFR2 [IF LFR1<>2, SKIP]

[IF TRACK <> "7710APPL"] Would you have reduced the size, scope or efficiency of the project a small amount, a moderate amount, or a large amount?

[IF TRACK = "7710APPL"] Would the [MEAS] you purchased have been slightly less efficient, moderately less efficient or much less efficient?

- 1 A small amount [IF TRACK = "7710APPL"] Slightly less efficient
- 2 A moderate amount [IF TRACK = "7710APPL"] Moderately less efficient
- 3 A large amount [IF TRACK = "7710APPL"] Much less efficient
- D I'm not sure
- R Refused

LFR3 [IF LFR1<>3, SKIP]

[IF TRACK = "7401FHLB or 7420 HPES"] Would you have paid the entire cost of the project in the absence of the financial assistance or equipment you received through the [PROGRAM]?



[IF TRACK = "7710APPL"] Would you have paid the entire cost of the [MEAS] if you had not received a rebate through the [PROGRAM]?

[IF TRACK = "7107PV"] Would you have paid for the installation of the same solar rooftop panel equipment even if you had to pay the full cost of the equipment and installation, around \$10,000?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

LFR4 I am going to read you a list of aspects of the [PROGRAM]. On a scale of 1-5, where 1 is 'not at all influential' and 5 is 'extremely influential,' please tell me how influential each of these program aspects were in your decision to [IF TRACK = "7107PV" OR TRACK = "7420HPES" OR TRACK = "7401FHLB": complete the project; IF TRACK = "7710APPL": purchase the [MEAS]]. How influential was...

[NOTE: Include "Not applicable" option]

- AA** The incentive, or rebate, or equipment offered through the [PROGRAM].
- CC** [IF TRACK = "7107PV", SKIP] Assistance or information you received from DC SEU program staff
- DD** [IF TRACK <> "7420HPES" AND TRACK <> "7401FHLB", SKIP] Information provided during the home energy audit
- EE** [IF TRACK <> "7420HPES" AND TRACK <> "7401FHLB" AND TRACK <> "7107PV", SKIP] The recommendation from the retailer/contractor you worked with
- FF** [IF TRACK <> "7710APPL", SKIP] Information or a recommendation from the retailer where you purchased the [MEAS]
- GG** [IF TRACK <> "7107PV", SKIP] Advertising about the [PROGRAM]
- BB** [IF HHE3=1 OR HHE4=1] Your prior experience with the DC SEU or programs

Lighting Spillover

LS1 Since participating in the [PROGRAM], have you purchased any energy efficient lighting, such as compact florescent light bulbs or LEDs?

- 1 Yes
- 2 No [SKIP TO TSP2]
- D I'm not sure [SKIP TO TSP2]
- R Refused [SKIP TO TSP2]



LS2 Which type of lighting did you buy, compact florescent lighting or LEDs? [SELECT ALL THAT APPLY]

[IF NECESSARY: Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket.

[IF NECESSARY: LEDs, also known as a light emitting diode bulb, have regular screw bases that fit into most sockets. They are not battery-operated LEDs, holiday lights, or decorative strands and do not need special attachments to work in regular sockets.

- | | | |
|---|--------------|------------------------|
| 1 | CFLs | [CFLFLAG=1] |
| 2 | LEDs | [LEDFLAG=1] |
| 3 | Both | [CFLFLAG=1, LEDFLAG=1] |
| D | I'm not sure | [SKIP TO TSP2] |
| R | Refused | [SKIP TO TSP2] |

[ASK IF CFLFLAG=1 OR LEDFLAG=1]

IF CFLFLAG=1 BULBTYPE = "CFLs"

IF LEDFLAG=1 BULBTYPE = "LEDs"

[REPEAT LS3 – LS7 FOR EACH BULB TYPE INSTALLED]

LS3 How many [BULBTYPE] did you purchase? [For LEDs: Do not include any battery-operated LEDs, holiday lights, or decorative strands that need special attachments to work in regular sockets.]

- | | |
|-----|-----------------------------|
| ___ | [ENTER RESPONSE] |
| 88 | I'm not sure [SKIP TO TSP2] |
| 99 | Refused [SKIP TO TSP2] |

LS4 Are all of these bulbs currently installed?

- | | | |
|---|--------------|---------------|
| 1 | Yes | [SKIP TO LS6] |
| 2 | No | |
| D | I'm not sure | [SKIP TO LS6] |
| R | Refused | [SKIP TO LS6] |



LS5 How many of those **[BULBTYPE]** are currently installed?

- [ENTER RESPONSE]
88 I'm not sure [SKIP TO LS7]
99 Refused [SKIP TO LS7]

LS6 Were these bulbs installed in your home or in a business?

- 1 Home
2 Business
3 Both
D I'm not sure
R Refused

LS7 Were these bulbs discounted in any way?

- 1 Yes
2 No
D I'm not sure
R Refused

LS8 Did you purchase these bulbs at stores inside the District or outside of the District?

- 1 Inside the District [SKIP TO LS8B]
2 Outside the District [SKIP TO LS8B]
3 Both
D I'm not sure [SKIP TO LS8B]
R Refused [SKIP TO LS8B]

LS8A Please estimate the percentage of bulbs purchased inside the District and outside the District. **[IF NEEDED: Your best estimate is fine.]**

- Record percentage inside the District
— Record percentage outside the District
88 I'm not sure
99 Refused



LS8B On a scale of 1 to 5, with 1 meaning "not at all influential" and 5 meaning "extremely influential", how influential were each of the following on your decision to purchase the energy efficient light bulbs? **(ROTATE)**

- A** Information about energy savings from DC SEU advertising or staff, retailers, or contractors.
- B** Your satisfaction with the program financial assistance, equipment, or services
- C** Your experience with the DC SEU program made you want to do more to save energy

___ [RECORD INFLUENCE 1 TO 5]

Spillover - Other

TSP2 Since participating in the program, have you installed any other energy efficient products or equipment, or made any energy efficiency improvements for which you did NOT receive a program rebate?

- 1 Yes
- 2 No [SKIP TO RF1]
- D I'm not sure [SKIP TO RF1]

TSP2T What type of other energy efficient improvements, products, or equipment did you install or receive?

[Record description of each additional installed measure]

TSP2M How many / much **[TSP2T]** have you installed?

- ___ [ENTER QUANTITY]
- 88 I'm not sure
- 99 Refused

TSP5 On a scale of 1 to 5, with 1 meaning "not at all influential" and 5 meaning "extremely influential", how influential were each of the following on your decision to install or purchase the additional equipment, product, or improvements? **(Rotate)**

- A** Information about energy savings from DC SEU advertising or staff, retailers, or contractors.
- B** Your satisfaction with the program financial assistance, equipment, or services
- C** Your experience with the DC SEU program made you want to do more to save energy

___ [RECORD INFLUENCE 1 TO 5]



Refrigerator Specific Questions

RF1 [IF REFRIG=0, SKIP TO DDOE1] Is the refrigerator you received a program rebate for being used as your main refrigerator, or is it a secondary or spare unit?

- 1 Main
- 2 Secondary or Spare
- D I'm not sure
- R Refused

RF2 Did the refrigerator you purchase replace an existing refrigerator?

- 1 Yes
- 2 No [SKIP TO DDOE1]
- D I'm not sure [SKIP TO DDOE1]
- R Refused [SKIP TO DDOE1]

RF2A [IF RF2 <>1, SKIP TO DDOE1] Would you say that the refrigerator you replaced was less than five years old, 5 to 10 years old, or more than ten years old?

- 1 Less than 5 years
- 2 5-10 years
- 3 More than 10 years
- D I'm not sure
- R Refused

RF3 [IF RF2 <>1, SKIP] Was the refrigerator you replaced a high efficiency model?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

RF4 [IF RF3 <>1, SKIP] How do you know that your old refrigerator was high efficiency?

[OPEN-ENDED, RECORD RESPONSE VERBATIM]



RF5 [IF RF2 <>1, SKIP] Was the old refrigerator in good, fair, poor, or non-working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 4 Non-working
- D I'm not sure
- R Refused

RF6 [IF RF2 <>1, SKIP] What did you do with your old refrigerator? [READ LIST]

- 1 Sold it
- 2 Gave it away
- 3 Had it removed by the store where you purchased your refrigerator
- 4 Took it to a dump or recycling center
- 5 Hired someone to haul it away
- 6 Other [SPECIFY]
- D I'm not sure
- R Refused

Participation in DDOE Energy Saving Initiatives

DDOE1 Have you participated in the DDOE Energy Assistance and Weatherization program? This program provides technical and financial assistance to help income-qualified residents reduce their energy bills by making their homes more energy efficient.

- 1 Yes
- 2 No
- D I'm not sure

DDOE2 Have you participated in any DDOE Energy Workshops? These workshops are free and teach consumers low-cost, do-it-yourself methods on how to install energy saving measures.

- 1 Yes
- 2 No
- D I'm not sure



DDOE3 Have you received an energy efficiency kit from the DDOE? This kit includes items such as caulk and a caulk gun, plastic storm windows, compact fluorescent bulbs, and weatherstripping for doors and windows.

- 1 Yes
- 2 No
- D I'm not sure

DDOE4 Have you participated in the DDOE EnergySmart DC Solar Initiative?

- 1 Yes
- 2 No
- D I'm not sure

DDOE5 Have you visited the DC SEU website? (if asked, [www.DC SEU.com](http://www.DCSEU.com))

- 1 Yes
- 2 No [SKIP TO D0]
- D I'm not sure [SKIP TO D0]

DDOE6 Were you able to find what you were looking for?

- 1 Yes [SKIP TO D0]
- 2 No
- D I'm not sure

DDOE6a What were you looking for that you did not find? (Record verbatim)

Demographics

D0 I just have a few more questions to understand your household better.

D1 Do you own your home or do you rent?

- 1 Own
- 2 Rent
- 3 Occupied without owning/renting
- D I'm not sure
- R Refused



- D2** What type of home do you live in?
- 1 Single Family detached
 - 2 Detached Duplex or Triplex
 - 3 Attached, including town houses and condominiums
 - 4 Apartments
 - 5 Other [SPECIFY]
 - D I'm not sure
 - R Refused
- D3** In which decade was your home built? Was it...
- 1 In the 1930s or before
 - 2 In the 1940s
 - 3 1950s
 - 4 1960s
 - 5 1970s
 - 6 1980s
 - 7 1990s
 - 8 2000s
 - 9 2010s
 - D I'm not sure
 - R Refused
- D4** Not including unfinished basements or crawlspace, which of the following best describes the square footage of your home? [READ LIST UNTIL A RESPONSE IS PROVIDED]
- 1 Less than 1,000 square feet
 - 2 1,000 to 1,500 square feet
 - 3 1,501 to 2,000 square feet
 - 4 2,001 to 3,000 square feet
 - 5 More than 3,000 square feet
 - D I'm not sure
 - R Refused
- D4a** Do you plan to move away from the DC area within the next 12 months?
- 1 Yes
 - 2 No
 - D I'm not sure
 - R Refused



D5 How many people live in your household year-round?

___ [RECORD NUMBER OF PEOPLE]

88 I'm not sure

99 Refused

D5A Do you or any members of your family work from home?

1 Yes

2 No

D I'm not sure

R Refused

D6 What type of fuel does your water heater use?

[IF "Gas", PROBE: Is that natural gas or propane gas?]

1 Natural gas

2 Electricity

3 Propane

4 Wood/pellets

5 Other [SPECIFY]

D I'm not sure

R Refused

D7 What type of fuel does your clothes dryer use?

[IF "Gas", PROBE: Is that natural gas or propane gas?]

1 No clothes dryer

2 Natural gas

3 Electricity

4 Propane

5 Wood/pellets

D I'm not sure

R Refused



D8 What is the highest level of education that you have completed so far? Please stop me when I get to the right category.

- 1 Less than Ninth Grade
- 2 Ninth to Twelfth Grade, No Diploma
- 3 High School Graduate (includes GED)
- 4 Some College, No Degree
- 5 Associates Degree
- 6 Bachelor's Degree
- 7 Graduate or Professional Degree
- R Prefer not to answer

D9 Which of the following categories best describes your age?

- 1 Under 20
- 2 20 to 29
- 3 30 to 39
- 4 40 to 49
- 5 50 to 64
- 6 65 or over
- R Prefer not to answer

D11 Which of the following best describes your household's total income in 2014? Please stop me when I get to the right category.

- 1 Less than \$23,340
- 2 Between \$23,340 and \$31,459
- 3 Between \$31,460 and \$39,579
- 4 Between \$39,580 and \$47,669
- 5 Between \$47,670 and \$55,819
- 6 Between \$55,820 and \$63,939
- 7 Between \$63,940 and \$72,059
- 8 Between \$72,060 and \$80,179
- 9 \$81,180 to \$99,999
- 10 \$100,000 to \$125,000
- 11 More than \$125,000
- D I'm not sure
- R Refused

D13 For accuracy for analysis and reporting, will you please confirm your gender?

- 1 Female
- 2 Male
- 3 Refused



END Those are all the questions I have for you. I'd like to thank you for your time with this important evaluation.

1 Continue



APPENDIX D: RESIDENTIAL HOUSEHOLD PARTICIPANT SURVEY RESPONSE RATE

Table D-1. Residential Participant Survey Response/Cooperation Rate, by Program Track

	7107PV	7401 FHLB/ 7420PHES	7710APPL	Total
Starting Sample	95	78	416	589
Ineligible (did not participate)	0	0	0	0
Ineligible - Duplicate	1	0	0	1
Adjusted Sample	94	78	416	588
Bad number	7	7	65	79
Refusal	3	5	67	75
Partial	1	1	1	3
Language Barrier - Spanish	0	0	4	4
Language Barrier - Other	0	1	2	3
Other final disposition	3	22	111	136
Active	45	0	73	118
Complete	35	42	93	170
Cooperation Rate	40%	59%	26%	33%
Response Rate	37%	54%	22%	29%

APPENDIX E: COMMERCIAL AND INSTITUTIONAL PARTICIPANT PRE-NOTIFICATION LETTER

GOVERNMENT OF THE DISTRICT OF COLUMBIA
District Department of the Environment



December 12, 2014

ID: «CaseID»

«CONTACT»
«COMPANY»
«ADD1»
«ADD2»

Dear «First»,

The District Department of the Environment (DDOE) has hired Tetra Tech, a professional evaluation and research firm, to evaluate the District of Columbia Sustainable Energy Utility (DC SEU) energy efficiency programs. The purpose of this evaluation effort is to understand how these programs are operating and to verify equipment installations.

Within the next few weeks, you may receive a telephone call from Tetra Tech to ask you about the energy efficiency equipment you received as part of a DC SEU energy efficiency program and the factors that influence your decisions when considering energy-related purchases and projects.

If you have any questions about the purpose of the study or its use, please feel free to contact Lance Loncke at (202) 671-3306. If you would like to call Tetra Tech to schedule an interview at your convenience, feel free to call (800) 454-5070. In either case, please refer to your ID number at the top right corner of this letter.

Thank you in advance for your help with this important study.

Sincerely,

Lance Loncke, Ph.D.
Associate Director, DDOE



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APPENDIX F: COMMERCIAL AND INSTITUTIONAL PARTICIPANT SURVEY INSTRUMENT

FY14 C&I Initiatives
(Tracks 7511CIRX, 7512MTV, 7520CUST, 7520MARO, 7520NEWC)
Participant Survey Instrument - this instrument is for not intended for multiples

The participant survey is intended for participants in the DC SEU commercial and institutional (C&I) tracks (programs). *There are two overarching research objectives that may warrant interviews with separate participating company staff.*

8. **Participant experience through the program:** we must speak with the person who interacted directly with the DC SEU staff (DC SEU project coordinator); this is usually a facility manager or engineer for larger commercial or institutional participants or a business owner for smaller participants.
9. **The influence of the DC SEU staff and/or incentives:** we must speak with the person who was responsible for the decision to participate in the DC SEU tracks; this may not be a facility manager or engineer and could be the property manager or business owner.

C&I participants do not participate in a “program”; that is, they are not aware of the track names or descriptions. They work directly with DC SEU staff to develop and identify projects and associated incentives.

The DC SEU is particularly interested in how participants view their staff as their objective is to be viewed as a “trusted energy advisor”.

Researchable Topics

7. The participants’ perception of the DC SEU and DC SEU staff.
 - a. How did they learn about DC SEU and offerings?
 - b. Are DC SEU staff viewed as trusted energy advisors?
8. Participant experience
 - a. How does the participant view their experience with the DC SEU and the project?
 - b. For those who have participated in multiple years, has their experience changed year over year? If so, how?
9. Economic Transfer
 - a. Realize savings/economic benefit
 - b. Use of economic benefit
10. DC SEU Influence
 - a. (FR) How influential was the DC SEU staff in the decision to go forward with the FY14 project?
 - b. (FR) How influential was the DC SEU incentive in the decision to go forward?
 - c. (FR) For those who have participated in multiple years, how influential was past participation in the decision to go forward with the FY14 project(s)?
 - d. (SO) Have participants implemented other energy savings measures (equipment, processes, behaviors) outside of the DC SEU project (s)? If yes, how influential was the DC SEU experience?
11. Future Plans
 - a. What future energy efficiency improvement plans do participants have?



- b. Do these participants consider DC SEU offerings in their longer-range improvement plans?
 - c. How could DC SEU change to meet future needs?
12. Firmographics
- a. Main business activity
 - b. Operation schedule
 - c. Facility square footage
 - d. Number of employees are facility

The list of survey modules follows:

1. Introduction: critical to identify decision maker and DC SEU project coordinator
2. Trusted Energy Advisor
3. Experiences with the DC SEU
4. DC SEU Influence
 - a. Free-ridership
 - b. Spillover
5. Firmographics (including Operation Schedule)

CASEID	Unique case identifier
PROJID	Project ID
TITLE	Project Title
ADDRESS	Service address
CITY	Service city
STATE	Service state
ZIP	Service zip code
DATE	Installation date
CONAME	Company name
COMPADD	Company address
FIRSTNAME	First name of respondent
LASTNAME	Last name of respondent
AltID1	Alternative contact #1 ID
AltName1	Alternative contact #1
AltID2	Alternative contact #2 ID
AltName2	Alternative contact #2
AltID3	Alternative contact #3 ID
AltName3	Alternative contact #3
MAILADD	Mailing address
MailCity	Mailing city
MAILST	Mailing state
MailZip	Mailing zip code
PHONENUMBER	Respondent phone number
Phone2	Alternative phone number
Role	Decision-maker (DM), Project coordinator (PC), Both



Researchable Topics and Survey Question Mapping Matrix

Survey Section	Topic	Questions
8. DC SEU Trusted Energy Advisor Role	a. How did they learn about DC SEU?	P1-P2
	b. DC SEU staff viewed as trusted energy advisor	PP2, PP3a-d, PP4, PP5
9. Participant experience	a. View of experience	E2a-k, E3, E1a, E4, E4a
	b. [multiple year participant] experience year over year	supplemental question for sample subset
10. Economic transfer	a. Realize savings/economic benefit	E6
	b. Use of economic benefit	E6a-b
11. DC SEU Influence	a. (FR) DC SEU staff	LFR4c
	b. (FR) DC SEU incentive	LFR4a
	c. (FR) [multiple year participants] past participation	LFR4g
	d. (SO) other energy savings measures	S1a-S8b
12. Future Plans	a. future EE improvement plans	FF1
	b. consider DC SEU in longer-range plans	FF2
	c. DC SEU change to meet future needs	FF3, FF4
13. Firmographics	b. Main business activity	F1
	c. Operation schedule	OH1-OH4b
	d. Facility square footage	F9
	e. Number of employees are facility	F3
	f. Own, lease, manage facility	F10

Introduction

C1a Hello, my name is [interviewer name], and I'm calling on behalf of the Department of Energy and Environment or DDOE. May I speak with [named respondent]?

- 1 Yes
- 2 No *[If named respondent is not available: ask for another person who is familiar with the business's participation in the initiative.]*



C2a I'm with Tetra Tech, a survey research firm hired by the DDOE. We're speaking with businesses that received equipment, financial incentives, or technical assistance for the installation of energy efficient equipment offered through the District of Columbia Sustainable Energy Utility or DC SEU including:

[LIST MEASURES]

You may have received the energy efficient equipment around [date]. Do you recall receiving financial incentives or technical assistance from DC SEU for this equipment?

- 1 Yes [SKIP TO X1]
- 2 No
- D I'm not sure
- R Refused [THANK AND TERMINATE]

C4 [IF C2a=2 or DK] Is it possible that someone else in your business would be familiar with the energy efficient equipment, financial incentive, or technical assistance you received?

- 1 Yes
- 2 No [THANK AND TERMINATE]
- D I'm not sure [THANK AND TERMINATE]
- R Refused [THANK AND TERMINATE]

C5a May I please speak with that person?

- 1 Yes [BEGIN THE SURVEY AGAIN (C2) WITH NEW R]
- 2 No [THANK AND TERMINATE]
- D I'm not sure [THANK AND TERMINATE]
- R Refused [THANK AND TERMINATE]

X1 Are you employed by the company that received the new equipment, are you employed by a developer or property management firm, or are you a contractor who provides design and/or installation services?

[INTERVIEWER NOTE: CODE UNPAID MEMBERS OF AN ADVISORY BOARD OR COMMITTEE AS EMPLOYEES]

- 1 Work directly for company/Employee/Volunteer [SKIP to C6dm]
- 2 Work for developer/property management firm [SKIP to C6dm]
- 3 Vendor/Contractor



X2 Could you please tell me who you worked with at the company that received the new equipment on the [MEAS] project?

[RECORD NAME and PHONE NUMBER]

[GREENSHEET FOR CONTACT CHANGE] [TERMINATE]

C6dm Are you the person most knowledgeable about the decision to complete the energy efficiency project through the DC SEU?

- 1 Yes
- 2 No
- R Refused

C6pc Are you the person who worked directly with the DC SEU and the project contractors to complete the project?

- 1 Yes
- 2 No
- R Refused

C6B [ASK IF C6dm=2 or R] We would like to speak with the person at the business who was most knowledgeable about the decision to install energy efficiency equipment through DC SEU. Is there someone else we should speak with?

[Decision makers will be interviewed first, with a possible follow up with the project coordinator]

- 1 Yes, person available [SKIP TO C6E]
- 2 Yes, person not available
- 3 No [THANK AND TERMINATE]

C6C [ASK IF C6B=2] Who should we contact?

[PROBE: IF MORE THAN ONE DECISION MAKER, ASK R WHO WAS RESPONSIBLE FOR MAKING THE ULTIMATE DECISION]

[RECORD VERBATIM]

And what is the best number to reach them at?

[RECORD VERBATIM]

[SKIP TO first Project Coordinator question – P1]



C6BB [ASK IF C6pc=2 or R] We would also like to speak with the person at the business who worked directly with the DC SEU and the project contractors to complete the project. Who should we contact?

[Decision makers will be interviewed first, with a possible follow up with the project coordinator]

[RECORD VERBATIM]

C6DD And what is the best number to reach them at?

[PHONE FORMAT]

C6E Who else within your company or outside your company was involved in the **decision-making** process of whether or not to participate?

[DO NOT READ; SELECT ONE]

- 1 No one else
- 2 President/CEO
- 3 Board of Directors
- 4 Facilities Manager
- 5 Other senior leaders
- 6 Owner
- 7 Other [SPECIFY]
- D I'm not sure

C6F [IF C6E<>1] Who was ultimately responsible for making the decision of whether or not to install this energy efficient equipment?

[DO NOT READ; SELECT ONE]

- 1 I was / Respondent
- 2 President/CEO
- 3 Board of Directors
- 4 Facilities Manager
- 5 Other senior leaders
- 6 Owner
- 7 Other [SPECIFY]
- D I'm not sure

CELL1 Have I reached you on your cell phone?

- 1 Yes
- 2 No [SKIP TO INTRO1]

CELL2 Then I would just like to confirm that you are in a location where it is safe to talk to you on your cell phone [NOTE: We want to be sure the respondent is not talking on their cell phone while driving a car.]



- 1 Yes, it is okay to continue conversation
- 2 No [SCHEDULE A TIME TO CALLBACK AND TERMINATE]

INTRO Great, thank you. First, I'd like to assure you that I'm not selling anything; I'd just like to ask your opinion about your experience. You should have received a letter a couple of weeks ago explaining the purpose of this call. Your responses will be kept confidential. For quality and training purposes this call will be recorded.

[ONLY READ BELOW SCREEN INFORMATION IF NECESSARY]

(Who is DC SEU: The District of Columbia Sustainable Energy Utility (DC SEU) helps District residents, businesses, and institutions save energy and money through energy efficiency and renewable energy initiatives.)

(Why are you conducting this survey: Studies like this will help DC SEU better understand your needs and improve the design of energy efficiency initiatives.)

(Timing: This survey should take about 15-20 minutes. *IF NOT A GOOD TIME, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070.*)

(Sales concern: This is not a sales call; we would simply like to learn about your business's experiences with the DC SEU Initiative. Your responses will be kept confidential. If you would like to talk with someone from DC SEU to verify this survey, please feel free to contact Lance Loncke at (202) 671-3306.)

C8 When considering whether or not to invest in energy efficiency upgrades, business owners consider many trade-offs. Please tell me how much influence each of the following factors may have on your future decisions to invest in energy efficient upgrades. If any of the statements do not apply to your business, please let me know.

On a scale of 1 to 5 where 1 is "no influence" and 5 is "a great deal of influence," what is the level of influence of ...

[ROTATE STATEMENTS]

- a. The availability of capital after operating expenses
- b. Other priority equipment or capital investments
- c. The availability of financing options
- d. Incentive dollars available
- e. Your uncertainty about occupancy in the current space
- f. Your understanding energy efficient options or opportunities
- g. The benefits of energy efficient equipment
- h. The amount of staff time to apply for and manage the project
- i. The availability of qualified contractors for energy efficiency installation and service



C8x. Is there anything else that impacts your decision on whether to invest in energy efficient equipment?

[RECORD VERBATIM]

Awareness (DM only ASK IF C6DM=1)

A1 How did you hear about the equipment, financial incentive, or technical assistance available through DC SEU? Did you hear about it from...? (READ LIST; SELECT ALL THAT APPLY)

- 1 A contractor
- 2 A retail store employee
- 3 A DC SEU mailing or email
- 4 The DC SEU website
- 5 DC SEU staff or Energy Advisor
- 6 A home show, conference, trade show, or fair
- 7 A colleague or industry peer
- 8 A newspaper, radio, or television ad
- 9 Something else (SPECIFY)

A2 [IF CIRX or MTV and A1<>1, 2] Did the contractor or retailer where you purchased the [LIST MEASURE TYPES]

equipment mention that you could receive a DC SEU rebate if you purchased energy efficient equipment?

[IF CUST/MARO and A1<>1] Did the contractor you worked with to implement the [LIST MEASURE TYPES]

equipment mention that you could receive a DC SEU custom incentive for the energy efficient equipment?

- 1 Yes
- 2 No
- D I'm not sure

A3 [IF A2=1 or A1 = 1] Did you know about the DC SEU (CIRX/MTV "rebate" or CUST/MARO "custom incentive") before it was mentioned to you by the contractor?

- 1 Yes
- 2 No
- D I'm not sure



A4 (IF A1 <> 4) Have you ever visited the DC SEU website to look for information on DC SEU financial or technical assistance for an energy efficiency project?

- 1 Yes
- 2 No [SKIP TO A7]
- D I'm not sure [SKIP TO A7]

A5 (IF A1=4 or A4=1) On a scale of 1 to 5, where 1 is 'not at all useful' and 5 is 'extremely useful,' how useful did you find the information on the website?

___ [RECORD RESPONSE]

- 7 Not applicable
- 8 I'm not sure
- 9 Refused

A6 How could the DC SEU make the website information more useful?

[RECORD VERBATIM]

A7 How many other projects have you completed with assistance from the DC SEU?

___ [RECORD RESPONSE] [IF 0, Skip to P1]

- 7 Not applicable
- 8 I'm not sure
- 9 Refused

A8 In what year was your first project with the DC SEU?

___ [RECORD RESPONSE]

- 7 Not applicable
- 8 I'm not sure
- 9 Refused

A9 How has your experience with the DC SEU changed over the span of time that you have worked with them?

[RECORD VERBATIM]



Participant Experience (Both)

- P1 Did you work with an Energy Advisor from the DC SEU at any point during the planning or implementation of your project?
- 1 Yes
 - 2 No (skip to P3)
 - D I'm not sure (skip to P3)
- P2 Would you describe the interaction with the DC SEU Energy Advisor as not at all helpful, not very helpful, somewhat helpful, or extremely helpful?
- 1 Not at all helpful
 - 2 Not very helpful
 - 3 Somewhat helpful
 - 4 Extremely helpful
 - D I'm not sure
- P2a Why do you say that?
- [RECORD VERBATIM]
- P3 I'm going to read you a few statements about your experience implementing energy efficiency projects with assistance from DC SEU. There are no right or wrong answers; we just want your honest opinion. [NA will be an option]
- Our experience implementing energy efficient projects through the DC SEU
- P3a. Has made our company less likely, somewhat likely, or very likely to consider energy efficient equipment in the future
- P3b. Has made our company less likely, somewhat likely, or very likely to install energy efficient equipment in the future
- P3c. Has given us less confidence, about the same, or more confidence in the financial benefits of energy efficient equipment
- P3d. Has given us a less confidence, about the same, or more confidence in the nonfinancial benefits of energy efficient equipment (such as improved comfort, better lighting, increased productivity, etc)
- P4 Would you contact DC SEU for assistance with future projects?
- 1 Yes
 - 2 No [Why not?]
 - D Not sure



P5 Have you recommended the DC SEU to others?

- 1 Yes
- 2 No [If not, would you in the future?]
- D Not sure

P6_INT I am going to read a list to you. Please rate your level of satisfaction for each item using a scale of 1 to 5, where 1 is 'not at all satisfied' and 5 is 'extremely satisfied,' How satisfied were you with...?

[READ AND ROTATE LIST; RECORD 1 TO 5 FOR EACH]

___ [RECORD RESPONSE]

- 7 Not applicable
- 8 I'm not sure
- 9 Refused

- P6A Your experience overall [do not rotate – always first]
- P6B The type of eligible equipment
- P6C The rebate amount or financial incentive [IF DM=1]
- P6D The application process [IF DM=1]
- P6E The preapproval process, if applicable [IF DM=1]
- P6F The amount of time it took to receive the rebate or financial incentive [IF DM=1]
- P6G The assistance from the contractor who installed your equipment, if applicable [IF PC=1]
- P6H The performance of the new equipment
- P6I The information about DC SEU energy efficiency offerings
- P6J The technical assistance you received from the DC SEU, if applicable

P7 [For each item in P6 rated <4] You gave a rating of [FILL with P6 rating] for [insert P6 item]. Why was that?

[OPEN ENDED RESPONSES]

P8 I'll read a list of people who may have been involved in completing your application for your most recent DC SEU project. For each one, please tell me if they were involved or not.

[READ LIST, SELECT ALL THAT APPLY]

- 1 DC SEU Energy Advisor
- 2 DC SEU call center staff
- 3 DC SEU Account Manager
- 4 DC SEU Project Intake Coordinator or PIC
- 5 Other DC SEU Staff
- 6 Installation contractor or retailer
- 7 Yourself
- 8 Someone else at your company
- 9 Other [SPECIFY]



10 I'm not sure

P8x Did you fill out a brief intake form, a custom application, or an excel spreadsheet to apply for the DC SEU financial incentive?

- 1 Intake form
- 2 Custom application
- 3 Excel spreadsheet application

P9 [IF P8x=3 and P8=7] How would you rate the functionality of the application spreadsheet on a scale of 1-5, where 1 is 'very difficult to use' and 5 is 'very easy to use?'

- [RECORD RESPONSE]
- 7 Not applicable – contractor completed
- 8 I'm not sure
- 9 Refused

P9a [IF P9<4] What would you change about the application spreadsheet?

[OPEN ENDED RESPONSE]

DC SEU Influence – Free-ridership (DM only ASK IF C6DM=1)

LFR1 Which of the following is most likely what would have happened if you had not received [the program assistance] from DC SEU? Would you have...[READ LIST]

- 2 Cancelled or postponed the project
- 2 Reduced project size, scope or efficiency level of the project
- 3 Not changed
- 4 I'm not sure

LFR2 [ASK IF LFR1 = 2] Would you have reduced the size, scope or efficiency of the project a small amount, a moderate amount, or a large amount?

- 1 A small amount
- 2 A moderate amount
- 3 A large amount
- D I'm not sure



LFR3 [ASK IF LFR1 = 3]

Would you have paid the entire cost of the project in the absence of the financial incentive you received from DC SEU?

- 1 Yes
- 2 No
- D Unsure

LFR4 On a scale of 1 to 5, where 1 is 'not at all influential' and 5 is 'extremely influential,' please tell me how influential each of the following aspects were in your decision to implement the project. How influential was...

[NOTE: Include "Not applicable" option]

- A The incentive or rebate offered by DC SEU.
- B [IF P6J>5, SKIP] The technical assistance received from DC SEU staff.
- C The recommendation from the installation contractor you worked with
- D Previous experience implementing projects through DC SEU

DC SEU Influence–Spillover (DM only)

S5 Since you implemented the DC SEU project, has your company purchased, installed, or implemented any other type of energy efficiency equipment **on your own**, that is without DC SEU assistance?

- 1 Yes
- 2 No [SKIP TO E1]
- D I'm not sure [SKIP TO E1]

S6a What equipment did you install?

[RECORD VERBATIM RESPONSE]

S6b What amount or quantity did you install?

(Probe for quantity for each type of equipment from S6a, indicate X=#, Y=#)

[RECORD VERBATIM RESPONSE]

S6c What was the size or capacity of the equipment you installed?

[IF NEEDED, PROBE: What type of equipment did you install?]

[RECORD VERBATIM RESPONSE]

S6d Was this efficiency level of the equipment you installed?



[IF NEEDED, PROBE: What was the ES rating, SEER/EER, was it more efficient than standard code...]

[RECORD VERBATIM RESPONSE]

S7a Would this project have qualified for DC SEU assistance?

- 1 Yes
- 2 Yes, implemented through DC SEU [SKIP TO E1]
- 3 No [SKIP TO E1]
- D I'm not sure

S7b Did a recommendation by the contractor, engineer, or designer who you worked with under the DC SEU project influence your decision to implement some of this equipment on your own?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

S7c Did your experience with any energy efficient projects implemented through the DC SEU influence your decision to implement some of this equipment on your own?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

S7e On a scale of 1 to 5, where 1 is "no influence at all" and 5 is "a great deal of influence", how much influence did the DC SEU assistance have on your decision to install this equipment without an incentive?

___ [1 TO 5]

- 8 I'm not sure



S8a Why didn't you implement this project through DC SEU?

[DO NOT READ; SELECT ALL THAT APPLY]

- 1 Too much paperwork
- 2 Cost savings not worth the effort of applying
- 3 Takes too long for approval
- 4 The equipment would not qualify
- 5 Vendor does not participate in initiative
- 6 Outside eligible service territory
- 7 No time - needed equipment immediately
- 8 Thought the initiative ended
- 9 Didn't know the equipment qualified under another initiative
- 10 Just didn't think of it
- 11 Unable to get rebate--unsure why
- 12 Other [SPECIFY]
- D I'm not sure

S8b [IF S8a = EQUIPMENT WOULD NOT QUALIFY (IF S8a = 4)] Why wouldn't the project qualify?

[RECORD VERBATIM RESPONSE]

Economic Transfer (Both)

E1 Have you realized any energy savings since the installation of the energy efficient equipment?

- 1 Yes
- 2 No [SKIP TO E1b]
- D I'm not sure [SKIP TO FF1]

E1a [ASK IF E1=1] How do you plan to use the cost savings realized as a result of installing the energy efficient equipment?

[OPEN ENDED RESPONSE]

E1b [ASK IF E1=2] How will you use any cost savings you realize as a result of installing the energy efficient equipment?

[OPEN ENDED RESPONSE]



Future Plans (DM only ASK IF C6DM=1)

FF1 Do you have any plans for energy efficient improvements in the next two years?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

FF2 Will you consider involving DC SEU in your future or long-range plans?

- 1 Yes
- 2 No
- D I'm not sure
- R Refused

FF3 At what point will you get DC SEU involved?

[RECORD VERBATIM RESPONSE]

FF4 What can DC SEU do to assist you with meeting future energy efficiency needs?

[RECORD VERBATIM RESPONSE]

Firmographics - Operating Hours

OH1 Next I'd like to talk about your hours of operation.

Does the facility at this location operate 24 hours per day, 7 days per week?

- 1 Yes [SKIP TO F1]
- 2 No
- D I'm not sure
- R Refused [SKIP TO F1]

OH2 Do you operate your facility differently depending on the season or production cycle?

- 1 Yes [SKIP TO OH4a]
- 2 No
- D I'm not sure [SKIP TO F1]
- R Refused [SKIP TO F1]



OH3 [ASK IF OH2=2] How many hours per week does your facility operate?

[MAXIMUM NUMBER OF HOURS PER WEEK IS 168]

____ Hours per week
 888 I'm not sure
 999 Refused

OH4a [ASK IF OH2 = 1] How many hours per week is your business open during the summer, that is, June to September?

[MAXIMUM NUMBER OF HOURS PER WEEK IS 168]

____ Hours per week
 888 I'm not sure
 999 Refused

OH4b [ASK IF OH2 = 1] How many hours per week is your business open during the winter, that is, December to February?

[MAXIMUM NUMBER OF HOURS PER WEEK IS 168]

____ Hours per week
 888 I'm not sure
 999 Refused

Firmographics – Other (DM only)

Last, I'd like to ask you a few more questions regarding your facility.

F1 What is the main business activity performed at this facility?

[RECORD VERBATIM]



- F2** Approximately how many full and part time employees does this business employ at this location? *Please stop me when I get to the appropriate category.*

[PROBE: INCLUDE ALL PERSONS, PAID OR UNPAID, YOU CONSIDER AN EMPLOYEE OF YOUR COMPANY]

- 1 Less than 10
- 2 10 to 20
- 3 21 to 50
- 4 51 to 100
- 5 101 to 250
- 6 251 to 500
- 7 501 to 1000
- 8 1001 to 3000
- 9 More than 3000
- D I'm not sure

- F3** What is the approximate total floor area occupied by this business in the building at this location in square feet?

[ONLY READ IF R SAYS "DK"; IF R STILL SAYS "DK", SELECT "DK"]

- 1 Less than 1,000 square feet
- 2 1,000 to less than 2,000 square feet
- 3 2,000 to less than 3,000 square feet
- 4 3,000 to less than 5,000 square feet
- 5 5,000 to less than 10,000 square feet
- 6 10,000 to less than 15,000 square feet
- 7 15,000 to less than 25,000 square feet
- 8 25,000 to less than 50,000 square feet
- 9 50,000 to less than 100,000 square feet
- 10 100,000 to less than 200,000 square feet
- 11 200,000 to less than 500,000 square feet
- 12 500,000 to less than 750,000 square feet
- 13 750,000 to less than 1 million square feet
- 14 More than 1 million square feet
- D I'm not sure

- F4** Does this business own or lease this facility?

- 1 Own
- 2 Lease
- 3 Manage
- D I'm not sure

- END** That's all the questions I have. I'd like to thank you for your help with this survey. Do you have any comments you'd like to share?

- 1 Yes [RECORD COMMENTS]
- 2 No



APPENDIX G: COMMERCIAL AND INSTITUTIONAL PARTICIPANT SURVEY RESPONSE RATE

Table G-1. Commercial and Institutional Participant Survey Response/Cooperation Rate, by Program Track

	7512MTV	7520CUST	7520MARO	7511CIRX	Total
Starting Sample	82	91	9	159	341
Ineligible (did not participate)	4	1	0	7	12
Adjusted Sample	78	90	9	152	329
Bad number	3	5	1	9	18
Refusal	1	6	1	5	13
Partial	1	1	0	2	4
Language Barrier - Spanish	1	0	0	0	1
Language Barrier - Other	8	0	0	0	8
Active	36	47	4	93	180
Complete	29	35	4	51	119
Cooperation Rate	39%	41%	50%	36%	38%
Response Rate	37%	39%	44%	34%	36%



APPENDIX H: FOOD BANK INTERVIEW GUIDE

FOOD BANK INTERVIEW GUIDE	
Interviewee(s) <ul style="list-style-type: none"> • Phone • Email 	
Interviewer(s)	
Program/Area of responsibility	
Date(s):	

A. Summary of Findings

Document within this section:

- Overview of role and program
- Key issues identified through the interview(s), examples below:
 - Process-related program issues
 - Impact-related program issues
 - Program progress issues
 - Marketing issues
 - Organizational issues
 - IT issues
 - Implementation contractor / program staff issues
- Researchable questions that were identified
- Preliminary thoughts on activities to address issues

B. Confirm Role and Responsibilities

- 1) What is your role and responsibilities within the food bank?
- 2) What is your role and responsibilities regarding the program?
- 3) Who else is part of the program implementation?

Notes:



C. Food Bank Activity

- 1) Who is eligible to receive goods from the food bank?
- 2) How often are household or individual records updated to ensure continual eligibility, either for the program or for the food bank?
- 3) How is the food bank activity tracked and managed?
- 4) How many unique households visit the food bank on a daily/weekly/monthly basis?
- 5) Is the number of households using the food bank's services increasing each year, decreasing, or staying about the same? By how much?

Notes:

D. Program Recruiting, Communication, and Training

- 1) Who do you primarily work with regarding this program? (Name and organizations)
- 2) Has communication with program staff increased, decreased, or stayed the same since you first began participating in the program?
- 3) Why do you continue to participate in this program?
- 4) Is there anything that makes you hesitant to continue your participation in the future?
- 5) What sort of training and information have you been provided since you first began working with this program? Do you feel that is sufficient?
- 6) Any recommendations for changes in recruitment, program communication, or training?

Notes:



E. Targets

- 1) Are you aware of the program's overall performance targets? (i.e., number of households reached, number of bulbs distributed, etc.)
- 2) Do you have your own set targets? If so, what are they? What is the timeframe?
- 3) Do you feel the target is realistic, your own or overall?
- 4) What are the steps your facility is taking to reach these goals?
- 5) Does your facility have staff that qualify as a Green Job? If so, how many? If not, why not and are there plans to add Green Jobs in the future?
- 6) What reporting protocols are in place to program staff?
- 7) Do you feel there is enough support from program managers, for example for support or monetarily?
- 8) Any recommendations for changes in determining appropriate targets?

Notes:

F. Implementation

- 1) On average, what percent of your workload is spent on the program monthly?
- 2) What is the administrative burden for this program for your facility as a whole?
- 3) Have you had to increase the number of staff as a result of the program?
- 4) Do you feel the value of the program is worth the extra effort?
- 5) What do you feel is working well with the program? What is not?
- 6) What do you see as future challenges for the program?
- 7) Any recommendations on how the program implementation could be made easier for your facility?

Notes:



G. Measures, Marketing, and Materials

- 1) What items and information from the program are available for you to give to an eligible participant?
- 2) Have the items or information changed since you began participating with the program? If so, how?
- 3) Are there any other materials or products not associated with the program you include when distributing the items and information?
- 4) Do you feel the current LED and CFL choices meet the needs of most households?
 - If not, what should be added?
- 5) Do you have any recommendations of other materials that could be provided?
- 6) What marketing activities are being used?
- 7) How have the marketing activities changed since you first began participating in the program?
- 8) Do you feel program marketing is missing any target audiences? If so, which ones?
- 9) Do you have any marketing recommendations?
- 10) How effective have each of these methods been in identifying and enrolling potential participants? Why?

Notes:

H. Program Participation

- 1) Can you explain the process from the time someone walks through the door to when a CFL or LED may be given to them?
- 2) How is it determined what LEDs or CFLs are needed, along with quantity, for each household or individual?
- 3) Do most of your food bank users fall within the low income criteria (60% of the DC median income) required for eligibility for the program? What is the process for determining that?
 - If not, what would it need to be to capture more of them?



- 4) What percent of customers would you say agrees to receive the LEDs and CFLs if offered?
- 5) Why do you think customers choose to participate or not?
- 6) What are major barriers to participation?
- 7) What are the participation steps from the customer's perspective? Have these changed over time?
- 8) Do you feel the LED/CFL recipients understand or appreciate the value of what they are receiving, for example in energy efficiency, savings on their bill, or the cost of the bulbs? Or do you feel they see it as just free items?
- 9) Do you feel this is increasing energy efficiency awareness?
- 10) Is there any follow up with recipients of LEDs and CFLs to confirm installation, answer any questions, or to ask about their satisfaction with the program?
 - If so, is this information collected and stored?
 - Are there instances of recipients stating they have not installed the bulbs? Why?
- 11) There were very few participants that provided their phone number and therefore hindered follow up evaluation efforts to gauge customer response to the program and potential installation rates. What are things could we do to increase this response and still allow them to remain anonymous?
- 12) Do you feel this experience has behavioral effects on the participant? For example, they'll take further energy saving steps or continue to seek out LEDs or CFLs for future lighting needs?
- 13) Do you have any recommendations on ways this particular program could increase that effect?

Notes:

I. Conclusion

Those are all the questions I have. Do you have any questions for me?

Do you have anything else you'd like to share regarding your experience with this program?

Notes:



APPENDIX I: FOOD BANK HOUSEHOLD PARTICIPANT SURVEY INSTRUMENT

FY14 Food Bank Event Low Income Initiatives (Track 7710FBNK) Household Participant Survey Instrument

The participant survey is intended for households (HH) that participated in the DC SEU energy efficient lighting give-away event at a participating Food Bank. The DC SEU staff attend food bank distribution centers to provide clients with LEDs and to demonstrate energy efficient CFL bulbs. Educational material on how to save energy in their home is also provided. This survey is either a follow-up survey to previously conducted onsite intercept surveys, or a new survey. The overarching research objectives are:

1. HH awareness of DC SEU at event
2. Adoption of energy saving behaviors
3. Installation verification
4. Free-ridership and Spillover (including Snapback and Rebound)
5. Participation in DDOE energy saving initiatives

Researchable Topics

1. The HHs' awareness of the DC SEU.
 - a. Are HH aware of the DC SEU at the event?
 - b. Were HH aware before food bank visit?
 - c. Do HH recall seeing a demonstration on energy savings CFL or LED bulbs?
 - d. Are HH aware that the lighting equipment received through food bank visit was provided by the DC SEU?
 - e. Has HH visited the DC SEU website?
2. Adoption of energy saving behaviors
 - a. Do HH recall receiving information on how to save energy in their home?
 - b. What recommendations do they recall?
 - c. What recommendations have they adopted?
3. Installation verification (including Persistence and Rebound)
4. FR & SO
 - a. (FR) Had the HH purchased LEDs on their own before receiving from DC SEU? (with probes)
 - b. (SO) Has the HH purchased LEDs on their own since receiving from DC SEU? (with probes)
 - c. (SO) How likely is the HH to purchase LEDs on their own since receiving from DC SEU? (with probes)
 - d. (SO) Has the HH purchased CFLs since receiving LEDs from DC SEU? (with probes)
 - e. (SO) How likely is the HH to purchase CFLs since receiving LEDs from DC SEU? (with probes)
5. Participation in DDOE energy saving initiatives
 - a. Has the HH participated in the DDOE Energy Assistance and Weatherization program?
 - b. Has the HH participated in DDOE Energy Workshops?

- c. Has the HH received an energy efficiency kit from the DDOE?
- d. Has the HH participated in the DDOE EnergySmart DC Solar Initiatives?
- 6. Demographics

Variable List

The survey instrument contains a number of areas where sample information needs to be filled in to customize the survey. The following list describes the ‘fills’ contained in this instrument and the nature of that information.

<CONTACT>	Respondent name
<DDOECONT>	DDOE contact information
<FOOD BANK DISTRIBUTION CENTER>	Food Bank Distribution Center where HH given LED bulbs
<DATE>	Date of event
<LEDQTY>	Number of LEDs provided through Food Bank
<INTERVIEWER>	Interviewer Name

NOTE: For all questions, “I’M NOT SURE” and “REFUSED” will be coded if offered as a response. Interviewers will probe as needed to minimize the amount of missing data.

Researchable Topics and Survey Question Mapping Matrix

Survey Section	Topic	Questions
14.HH awareness	a. Are HH aware of the DC SEU at the event?	A1, A1a
	b. Were HH aware before food bank visit?	A1b
	c. Do HH recall seeing a demonstration?	A3, A3a
	d. Are HH aware that the lighting equipment provided by the DC SEU?	A8
	e. Has HH visited the DC SEU website?	DDOE5- DDOE6a
15.Adoption of energy savings behaviors	a. Do HH recall receiving information on how to save energy in their home?	B1
	b. What recommendations do they recall?	B2
	c. What recommendations have they adopted?	B3, B3a
16.Equipment installation (including Persistence and Rebound)	c. Installation and location	E2, E2a, E2b
	d. Plans for bulbs not installed	E8, E8a
	e. Plans to move from current residence	D4a
	f. Persistence	E5, E6
	g. Rebound	E7
17.FR & SO	a. (FR) Had the HH purchased LEDs on their own	FR1, FR1a,



Survey Section	Topic	Questions
	(with probes)	FR1b
	b. (SO) Has the HH purchased LEDs on their own since foodbank (with probes)	SO1, SO1a, SO1b
	c. (SO) How likely is the HH to purchase LEDs on their own (with probes)	SO2
	d. (SO) Has the HH purchased CFLs (with probes)	SO3, SO3a, SO3b
18. Participation in DDOE energy saving initiatives	e. Has the HH participated in the DDOE Energy Assistance and Weatherization program?	DDOE1
•	f. Has the HH participated in DDOE Energy Workshops?	DDOE2
	g. Has the HH received an energy efficiency kit from the DDOE?	DDOE3
	h. Has the HH participated in the DDOE EnergySmart DC Solar Initiatives?	DDOE4
19. Demographics	g. various	D1-D11



Introduction

- I1** Hello, my name is **[INTERVIEWER]**, and I'm calling from Tetra Tech on behalf of the Department of Energy and Environment. We are examining the different types of energy saving initiatives that the District of Columbia Sustainable Energy Utility (DC SEU) offers to help District residents save money on their energy bills.

May I please speak with **[CONTACT]**?

[ATTEMPT TO CONVERT, MENTION ADVANCE LETTER]

- 1 Yes
- 2 No

[INTERVIEWER: YOU ARE CALLING TO CONTINUE A PARTIALLY COMPLETED INTERVIEW]

Hello, my name is **[INTERVIEWER]**, and I'm calling from Tetra Tech on behalf of the Department of Energy and Environment. I'm calling to complete the interview we started earlier. For quality assurance and training purposes, this call will be recorded.

- 1 Continue

- I2** We are calling today to ask you about the experience you had during a **[FOOD BANK DISTRIBUTION CENTER]** event in **[DATE]**. This should take about 15-20 minutes of your time. Before we start, I would like to inform you that for quality control purposes, this call will be recorded and monitored.

- 1 Continue



I3 [Who is DC SEU? The District of Columbia Sustainable Energy Utility (DC SEU) helps District residents, businesses, and institutions save energy and money through energy efficiency and renewable energy offerings.]

[Why are you conducting this survey: Studies like this will help DC SEU better understand your needs, which in turn helps them in their design of energy saving offerings.]

[Timing: This survey should take about 15-20 minutes. *IF NOT A GOOD TIME, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070.*]

[Sales concern: This is not a sales call; we would simply like to learn about your household's experiences with the **[FOOD BANK DISTRIBUTION CENTER]** event. Your responses will be kept confidential. If you would like to talk with someone from DC SEU to verify this survey, please feel free to contact **[DDOECONT]**.]

1 Continue

CELL1 Have I reached you on your cell phone?

- 1 Yes
- 2 No [SKIP TO C1]

CELL2 Then I would just like to confirm that you are in a location where it is safe to talk to you on your cell phone [NOTE: We want to be sure the respondent is not talking on their cell phone while driving a car.]

- 1 Yes, it is okay to continue conversation
- 2 No [IF NO, SCHEDULE A TIME TO CALLBACK AND TERMINATE]



Recall

C1 Our records indicate that you received energy efficient LED light bulbs during a visit to **[FOOD BANK DISTRIBUTION CENTER]** on **[DATE]**. At this event, you provided one of our researchers with your name and phone number so that we could call you back to answer some questions. Do you recall this event?

- 1 Yes
- 2 No [THANK AND TERMINATE]
- 8 I'm not sure [THANK AND TERMINATE]
- 9 Refused [THANK AND TERMINATE]

Awareness

A1 Do you recall someone from the DC SEU staff being at the **[FOOD BANK DISTRIBUTION CENTER]**?

- 1 Yes
- 2 No
- 8 I'm not sure

A1a Do you recall someone **[IF A1=1 "from the DC SEU"; if A1= 2 or 3 "at the LOCATION"]** asking you about the number of light fixtures in your home in order to determine the number of LEDs bulbs that you could receive?

- 1 Yes
- 2 No
- 8 I'm not sure

A1b Before you visited the **[FOOD BANK DISTRIBUTION CENTER]**, had you ever heard of the DC SEU?

- 1 Yes
- 2 No
- 8 I'm not sure



A3 Do you recall someone demonstrating CFL (Compact Fluorescent Lights) or LED light at the **[FOOD BANK DISTRIBUTION CENTER]**? By demonstrating, I mean they had a display with an incandescent and a CFL or LED bulb that showed how much electricity the bulb uses.

- 1 Yes
- 2 No **[SKIP TO A6]**
- 8 I'm not sure **[SKIP TO A6]**

A4 **[if A1=3]** How much did you know about CFLs before they were demonstrated? Would you say that you knew a lot, knew something, or did not know anything about CFLs before?

- 1 Knew a lot
- 2 Knew something
- 3 Did not know anything **[SKIP TO A5]**

A4a **[IF A4=1 OR A4=2]** What did you already know about CFLs? (*Do not read; indicate all that apply*)

- A4a_1** They are more expensive than incandescent bulbs
- A4a_2** They save electricity
- A4a_3** They last longer than incandescent bulbs
- A4a_4** They cost more money than incandescent bulbs
- A4a_5** They contain mercury
- A4a_6** They have poor light quality
- A4a_7** Other (specify)
- A4a_8** I'm not sure

A5 **[IF A3=1]** Did you find the information from the demonstration useful?

- 1 Yes
- 2 No
- 8 I'm not sure

A5a **[IF A3=1]** What was the most interesting thing from the demonstration? (*Record verbatim*)

A6 And how familiar were you with Light Emitting Diode Bulbs, or LEDs, before you received them during your visit to the **[FOOD BANK DISTRIBUTION CENTER]**? Would you say that you knew a lot, knew something, or did not know anything about CFLs before?

- 1 Knew a lot



- 2 Knew something
- 3 Did not know anything **[SKIP TO A7]**

A6a **[IF A6=1 OR A6=2]** What did you already know about LEDs?

- A6a_1** They are more expensive than incandescent bulbs
- A6a_2** They save electricity
- A6a_3** They last longer than incandescent bulbs
- A6a_4** They cost more money than incandescent bulbs
- A6a_5** They contain mercury
- A6a_6** They have poor light quality
- A6a_7** Other (specify)
- A6a_8** I'm not sure

A7a What additional information could the DC SEU have provided you about CFLs and LEDs? *(Record verbatim)*

A8 Who paid for the LED bulbs that you received at the **[FOOD BANK DISTRIBUTION CENTER]**? **[DO NOT READ RESPONSES]**

- 1 FOOD BANK DISTRIBUTION CENTER
- 2 DC SEU
- 3 Other (specify)
- 8 I'm not sure

Adoption of energy saving behaviors

B1 Do you recall receiving information on how to save energy in your home when you received the LED light bulbs at **[FOOD BANK DISTRIBUTION CENTER]**?

- 1 Yes
- 2 No **[SKIP TO E1]**
- 8 I'm not sure **[SKIP TO E1]**

B2 What energy saving recommendations do you recall? **[Record verbatim]**

B3 Have you adopted any of the energy saving recommendations?

- 1 Yes
- 2 No **[SKIP TO E1]**
- 8 I'm not sure **[SKIP TO E1]**



B3A What energy saving recommendations have you adopted? **[Record verbatim]**

Equipment Installation (Including Persistence And Rebound)

E1 How many LED bulbs did you receive from **[FOOD BANK DISTRIBUTION CENTER]** on **[DATE]**?

_____ [Record quantity]

88 I'm not sure

99 Refused

E2 How many of the bulbs you received from **[FOOD BANK DISTRIBUTION CENTER]** on **[DATE]** did you install?

_____ [Record quantity] **[IF E2=0 SKIP TO E8]**

88 I'm not sure

99 Refused

E2a **[IF E2>0]** Did you install these bulbs within the District of Columbia, outside of DC, or both?

1 Some location in DC

2 Some location outside of DC

3 Both

-8 I'm not sure

E2b **[IF E2>0 and E2a = 1]** I am going to read a list of rooms you might have in your home. Please tell me how many of the LED bulbs are installed in each of these types of rooms. How many LEDs are installed...

[FOR A-J, RECORD QUANTITY]

E2bA in the kitchen?

E2bB in a dining room?

E2bC in living rooms, family rooms, or dens?

E2bD in a home office?

E2bE in bedrooms?

E2bF in bathrooms?

E2bG in closets or pantries?

E2bH in the basement?

E2bI on the exterior of your home?

E2c **[IF E2>0 and E2B<>E2]** What type of room(s) is/are the other **[E2-E2bTotal]** LED bulbs installed in? **[RECORD LOCATIONS]**



E3 **[IF E2>0]** How many of the LED bulbs you installed replaced traditional incandescent light bulbs?

___ **[RECORD QUANTITY]** (*probe to estimate if unsure*)

88 I'm not sure

99 Refused

E4 **[IF E2>0]** How many of the LED bulbs you installed replaced CFL bulbs?

___ **[RECORD QUANTITY]** (*probe to estimate if unsure*)

88 I'm not sure

99 Refused

E4a **[IF E2>0]** What was the condition of the CFLs you replaced with LEDs? [record verbatim]

E5 **[IF E2>0]** Have you taken out any of the LED bulbs that you installed?

1 Yes

2 No

[SKIP TO E7]

-8 I'm not sure

[SKIP TO E7]

E6 **[IF E2>0 AND E5=1]** Of the **[NUMBER INSTALLED]** that you installed, how many LED bulbs did you remove?

___ **(RECORD NUMBER REMOVED)**

88 I'm not sure

99 Refused

E7 **[IF E5=2]** For the LEDs that are still installed, are you using them for more hours a day than the bulb that it replaced, fewer hours a day, or about the same hours a day?

1 Use LED more hours a day

2 Use LED fewer hours a day

3 Use LED about the same hours a day

-8 I'm not sure

-9 Refused

E8 **[If E1 does not equal E2]** What do you plan to do with the **[E1 – E2]** LED bulbs that you haven't installed? (*Do not read*)

E8_1 Recycle them

[SKIP TO FR1]

E8_2 Throw them away

[SKIP TO FR1]



E8_3	Keep in storage until need	[SKIP TO FR1]
E8_4	Give them away	
E8_5	OTHER (specify)	[SKIP TO FR1]
E8_6	I'm not sure	[SKIP TO FR1]
E8_7	Refused	[SKIP TO FR1]

E8a [IF E8 = 4] Does this person also live in the District of Columbia?

1 Yes
2 No
-8 I'm not sure
-9 Refused

Free Ridership & Spillover

FR1 Had you purchased LEDs before receiving them from the **[FOOD BANK DISTRIBUTION CENTER]**?

1 Yes
2 No **[SKIP TO SO1]**
-8 I'm not sure **[SKIP TO SO1]**

FR1a [IF FR1=1] Do you remember the name of the store where you bought them most recently?

FR1b [IF FR1=1] Is this store in the District of Columbia?

1 Yes
2 No
-8 I'm not sure

SO1 Since you received LEDs from the **[FOOD BANK DISTRIBUTION CENTER]**, have you purchased any LEDs on your own?

1 Yes
2 No **[SKIP TO SO1c]**
-8 I'm not sure **[SKIP TO SO1c]**

SO1a [IF SO1=1] Do you remember the name of the store where you bought them?

SO1b [IF SO1=1] Is this store in the District of Columbia?



- 1 Yes
- 2 No
- 8 I'm not sure

SO1c [IF SO1 = 1 OR FR1 = 1] In total, how many LED bulbs have you purchased on your own, either before or after you visited the **[FOOD BANK DISTRIBUTION CENTER]**?

___ **[RECORD QUANTITY]** *(probe to estimate if unsure)*

- 88 I'm not sure
- 99 Refused

SO2 [IF FR1=1 AND SO1=1] On a scale of 1 to 5, with 1 meaning "not at all influential" and 5 meaning "extremely influential", how influential were each of the following on your decision to purchase the energy efficient light bulbs?

___ **[RECORD INFLUENCE 1 TO 5]**

SO2a DC SEU advertising you may have seen or heard

SO2b The information received during the **[FOOD BANK DISTRIBUTION CENTER]** event made you want to do more to save energy

SO2c The use of the LED light bulbs you received during the **[FOOD BANK DISTRIBUTION CENTER]** event made you want to do more to save energy

SO2d The price of CFL bulbs where you shop

SO3 In the future, how likely are you to purchase more LEDs on your own? Are you very likely, somewhat likely, or not at all likely to purchase LEDs on your own?

- 1 Very likely
- 2 Somewhat likely
- 3 Not at all likely
- 8 I'm not sure

SO4 Have you purchased any CFLs since you received the LEDs from the **[FOOD BANK DISTRIBUTION CENTER]**?

- 1 Yes
- 2 No **[SKIP TO DDOE1]**
- 8 I'm not sure **[SKIP TO DDOE1]**



SO4a [if SO4=1] Do you remember the name of the store where you bought them?

SO3b [IF SO4=1] Is this store in the District of Columbia?

- 1 Yes
- 2 No
- 8 I'm not sure

SO5 [IF SO4=1] On a scale of 1 to 5, with 1 meaning "not at all influential" and 5 meaning "extremely influential", how influential were each of the following on your decision to purchase the CFL bulbs?

— **[RECORD INFLUENCE 1 TO 5]**

SO5A DC SEU advertising you may have seen or heard

SO5_B The information received during the **[FOOD BANK DISTRIBUTION CENTER]** event made you want to do more to save energy

SO5C The use of the LED light bulbs received during the **[FOOD BANK DISTRIBUTION CENTER]** event made you want to do more to save energy

SO5D The price of CFL bulbs where you shop

Participation in DDOE energy saving initiatives

DDOE1 Have you participated in the DDOE Energy Assistance and Weatherization program? This program provides technical and financial assistance to help income-qualified residents reduce their energy bills by making their homes more energy efficient.

- 1 Yes
- 2 No
- 8 I'm not sure

DDOE2 Have you participated in any DDOE Energy Workshops? These workshops are free and teach consumers low-cost, do-it-yourself methods on how to install energy saving measures.

- 1 Yes
- 2 No
- 8 I'm not sure



DDOE3 Have you received an energy efficiency kit from the DDOE? This kit includes items such as caulk and a caulk gun, plastic storm windows, compact fluorescent light bulbs, and weatherstripping for doors and windows.

- 1 Yes
- 2 No
- 8 I'm not sure

DDOE4 Have you participated in the DDOE EnergySmart DC Solar Initiative?

- 1 Yes
- 2 No
- 8 I'm not sure

DDOE5 Have you visited the DC SEU website? (if asked, www.DCSEU.com)

- 1 Yes
- 2 No [SKIP TO D0]
- 8 I'm not sure [SKIP TO D0]

DDOE6 [IF DDOE5=1] Were you able to find what you were looking for?

- 1 Yes [SKIP TO D0]
- 2 No
- 8 I'm not sure

DDOE6a What were you looking for that you did not find? (Record verbatim)

Demographics

D0 I just have a few more questions to understand your household better.

D1 Do you own your home or do you rent?

- 1 Own [SKIP D2]
- 2 Rent
- 3 Occupied without owning/renting
- 8 I'm not sure [SKIP D2]
- 9 Refused [SKIP D2]



D1a [IF D1=2,3] Do you pay your own utility bills or does your landlord?

- 1 Respondent pays
- 2 Landlord pays

D1b [IF D1=2,3] Are you responsible for replacing bulbs in your residence or if that your landlord's responsibility?

- 1 Respondent responsible
- 2 Landlord is responsible

D2 What type of home do you live in?

- 1 Single Family detached
- 2 Detached Duplex or Triplex
- 3 Attached, including town houses and condominiums
- 4 Apartments
- 5 Other [SPECIFY]
- 8 I'm not sure
- 9 Refused

D3 In which decade was your home built? Was it...

- 1 In the 1930s or before
- 2 In the 1940s
- 3 1950s
- 4 1960s
- 5 1970s
- 6 1980s
- 7 1990s
- 8 2000s
- 9 2010s
- 8 I'm not sure
- 9 Refused

D4 Not including unfinished basements or crawlspace, which of the following best describes the square footage of your home? **[READ LIST UNTIL A RESPONSE IS PROVIDED]**

- 1 Less than 1,000 square feet
- 2 1,000 to 1,500 square feet
- 3 1,501 to 2,000 square feet
- 4 2,001 to 3,000 square feet
- 5 More than 3,000 square feet



- 8 I'm not sure
- 9 Refused

D4a How many bedrooms are in your home?

- 1 Studio (no separate room)
- 2 1 bedroom
- 3 2 bedrooms
- 4 3 bedrooms
- 5 More than 3

D4a Do you plan to move away from the DC area within the next 12 months?

- 1 Yes
- 2 No
- 8 I'm not sure
- 9 Refused

D5 How many people live in your household year-round?

- ___ [RECORD NUMBER OF PEOPLE]
- 88 I'm not sure
 - 99 Refused

D8 What is the highest level of education that you have completed so far? Please stop me when I get to the right category.

- 1 Less than Ninth Grade
- 2 Ninth to Twelfth Grade, No Diploma
- 3 High School Graduate (includes GED)
- 4 Some College, No Degree
- 5 Associates Degree
- 6 Bachelor's Degree
- 7 Graduate or Professional Degree
- 9 Prefer not to answer

D9 Which of the following categories best describes your age?

- 1 Under 20
- 2 20 to 29
- 3 30 to 39
- 4 40 to 49
- 5 50 to 64
- 6 65 or over
- 9 Prefer not to answer



D10 For classification purposes only, which of the following best describes your household's total income in 2014? Please stop me when I get to the right category.

- 1 Less than \$23,340
- 2 Between \$23,340 and \$31,459
- 3 Between \$31,460 and \$39,579
- 4 Between \$39,580 and \$47,669
- 5 Between \$47,700 and \$55,819
- 6 Between \$55,820 and \$63,939
- 7 Between \$63,940 and \$72,059
- 8 Between \$72,060 and \$80,179
- 9 \$81,180 or greater
- 8 I'm not sure
- 9 Refused

D12 Are you female or male?

- 1 Female
- 2 Male

END Those are all the questions I have for you. I'd like to thank you for your time with this important evaluation.

- 1 Continue



APPENDIX J: FOOD BANK HOUSEHOLD PARTICIPANT RESPONSE RATE

Table J-1. Food Bank Household Participant Survey Response/Cooperation Rate, by Program Track

Starting Sample	7710FBNK
	73
Ineligible (did not participate)	1
Adjusted Sample	72
Bad number	12
Refusal	4
Partial	4
Language Barrier - Spanish	1
Language Barrier - Other	0
Duplicated cases	0
Active	20
Complete	22
Cooperation Rate	37%
Response Rate	31%



APPENDIX K: MARKET ACTOR INTERVIEW GUIDE

K.1 INTERVIEW GUIDE FORMAT

This interview guide is for market actors including general contractors and suppliers who are working with the DC SEU Commercial and Institutional initiatives in DC.

Because senior staff will be conducting interviews, these interviews will be semi-structured. Therefore the following interview protocol is only a guide to ensure certain topics are covered, but evaluators will follow the flow of the interview and modify questions as needed to fit the interviewee's circumstance.

K.2 OVERARCHING KEY RESEARCHABLE TOPICS & MAPPING MATRIX

Topic Area	• Topics	Questions
Firmographics	<ul style="list-style-type: none"> contractor characteristics typical efficiency levels recommended and sold 	F1-F3 F4
Program awareness and involvement	<ul style="list-style-type: none"> first hear about DC SEU programs participation in programs program communications and DC SEU staff interaction program benefits and value DC SEU support 	P1 P2-P6 P7-P8 P9 P10-P12
Customer interactions	<ul style="list-style-type: none"> Contractor promotion of DC SEU incentives Contractor incentive structure Customer drivers & benefits, barriers additional services 	C1 C1A-C1B C2-C6 C7-C8
Program procedures	<ul style="list-style-type: none"> Application process Participant incentive structure QA/QC processes, removals 	E0-E4 E5-E6 E7-E8
Market	<ul style="list-style-type: none"> Influence of program to increase energy efficient equipment installations, recommendations, stocking practices 	M1-M3
Satisfaction	<ul style="list-style-type: none"> Contractor satisfaction 	W1-W5

NAME: _____

COMPANY: _____

TRACK(s): _____

TITLE: _____

PHONE: _____

INTERVIEWER: _____

DATE COMPLETED: _____ LENGTH: _____



K.3 INTRODUCTION

My name is _____, with Tetra Tech. Our firm is evaluating the energy efficiency initiatives offered by the DC SEU, or the District of Columbia Sustainable Utility. As part of this study we are talking with businesses, such as yours, to understand your experience with these initiatives.

Your feedback is extremely valuable as it will inform recommendations to DC SEU on how they can improve assistance to you and your customers.

This interview should take approximately 30 minutes of your time. May we take some time now to do the interview? (If no, when would be a convenient time?)

(IF NECESSARY) I want to assure you that all of your responses and information about your company will be kept confidential and will not be reported individually by your name or businesses name.

K.4 FIRMOGRAPHICS

Research company website before interview to learn about company.

F1. What is your primary role(s) in the supply and delivery of energy efficient equipment to the nonresidential (business, commercial, and institutional) market? (Examples designer, manufacturer representative, retailer, wholesale distributor, installation contractor)

F2. What percentage of your commercial business is:

Failed/Emergency Equipment Replacement _____%

Planned Equipment Replacement? _____%

New Equipment Purchases (not replacement) _____%

Other (specify) _____%

F3. Could you please tell me specifically the types of DC SEU eligible equipment or services you sell/specify for business, commercial, and institutional customers? (Probe for the specific types, sizes and efficiency levels as applicable.)

K.5 PROGRAM AWARENESS AND INVOLVEMENT

P1. Our records show that you completed at least one project for a customer through DC SEU's energy efficiency initiatives. How did you first hear about DC SEU's energy efficiency initiatives?

P2. Could you describe for me your participation with the DC SEU [Probe for reasons why R participates at the reported level of activity].



P3. When did you first get involved with DC SEU's energy efficiency initiatives? Why did you decide to participate/get involved with the DC SEU energy efficiency initiatives?

P4. When was the last time you completed a project or sold equipment through an initiative?

P5. Do you expect your participation/involvement to increase, decrease or stay the same in the next 12 months? Why? If not mentioned, probe specifically on the District's economic impact on current and expected involvement in the program.

P7. Do you feel there are adequate communications with DC SEU staff? Are any changes needed? How do you like to receive communications about the program?

P8. Who do you typically interact with from the program? For what purposes? How would you describe your interactions with program staff? (minimal, helpful, very involved, probe to characterize)?

P8a. Is there any part of the process where communication amongst parties could be improved?

P8b. Are there any aspects of the energy efficiency initiatives that are unclear to you? That are unclear to your customers?

P8c. What kind of additional support would you like from the DC SEU to assist in the implementation of their initiatives?

P9. What is the primary benefit you receive from DC SEU's energy efficiency initiatives?

P9a. On a scale of 1 to 5 where 1 is 'very little value' and 5 is 'very high value', How would you rate the usefulness of the DC SEU technical assistance provided? And why did you rate it a (#)?

P10. Are there other types of energy efficiency programs that you participate in /are aware of? If yes, are there aspects of those programs that the DC SEU should consider? (Probe on whether utility programs or federal/state programs).

P11. What could DC SEU do to help you provide more services/promote more equipment?

P12. Have you attended any DC SEU sponsored workshops or seminars? On a scale of 1 to 5 where 1 is 'not at all useful' and 5 is 'extremely useful', How informative or useful did you find the workshop/seminar? And why did you rate it a (#)?

P13. Would you find it useful if DC SEU offered a formal trade ally outreach program, where participating trade allies could sign up to receive periodic communications on upcoming marketing activities, training opportunities, and other updates? How would you prefer to receive this type of information?

K.6 CUSTOMER INTERACTIONS

C1. Do you actively promote DC SEU's energy efficiency initiatives to your business, commercial, or institutional customers? In what way?



C1A. What percent of your customers already know about the DC SEU energy efficiency initiatives before you tell them about it? How do they find out about the assistance DC SEU provides?

C1B. Are the requirements to be eligible for the DC SEU funding and technical assistance appropriate? Is there anything you would change about those requirements?

C2. [FROM CONTRACTOR PERSPECTIVE] What are the primary reasons why customers typically want to participate? What factors most influence customer project decision-making? Ask of mentioned factors: which are the one or two most important in influencing customers' decisions? Probe for differences (such as financial incentive versus technical assistance) among customer segments and differences for new construction (including major renovation) and retrofits of existing lighting systems.

C2a. What do you think are the main benefits your customers receive by participating in the DC SEU energy efficiency initiatives?

C3. What are the primary reasons why customers typically do not want to participate in the DC SEU energy efficiency initiatives? Do these reasons vary across different customer segments (type of business and size of business)? Is there anything DC SEU could do to help reduce these participation barriers?

C4. On a scale of 1 to 5 where 1 is very difficult and 5 is not at all difficult, how difficult do you find it to sell energy efficient equipment to your business, commercial, or institutional customers?

C4a. Why is the equipment or service [easy/difficult] to sell? Are there customer participation barriers (e.g., incremental cost of efficient high efficiency equipment, too long of a payback period, etc.)? Do you have any specific recommendations to make it less difficult?

C4b. What "lost opportunities" for DC SEU (e.g., projects that are not high efficiency that could have been) do you see?

C5. What feedback, if any, have you received from your customers regarding the newly installed energy efficient equipment?

C6. What can be done to increase the number of participating customers?

C7. What additional products or services would you like to see provided to customers?

C8. Are there other opportunities to promote energy-efficient products and services to business, commercial, and institutional customers that the DC SEU energy efficiency initiatives do not currently address? If yes, what kind of marketing would you like to see added? What can be done to help you market the DC SEU initiatives to your business, commercial, or institutional customers?



K.7 PROGRAM PROCEDURES

E0. What role do you usually play, if any, in helping your customers with the application process? If not currently doing so, would you be willing to play more of a role in helping customers fill out application forms and submit them to DC SEU to obtain rebates?

E1. On a scale of 1 to 5 where 1 is 'very difficult' and 5 is 'not at all difficult', how would you rate the administrative requirements in terms of application requirements and processing? Why do you give this ranking?

E2. What is working well about the application process your point of view? How would you like to see the application process improved?

E3. Is the information required on the rebate application reasonable? Are customers able to adequately fill out the rebate application on their own? Do you think the administrative requirements are a barrier for smaller customers?

E4. Do you have any issues using the submittal checklist at the end of the project? What issues have come up and how has DC SEU resolved them?

E5. Are the rebates offered for commercial projects adequate? How would you like to see the rebate structure revised? (Probe by measure type and business type)

E6. What changes, if any, would you make to the equipment and/or services rebated through the DC SEU energy efficiency initiatives?

E7. How involved are you with the quality control processes post-installation? Have you had any issues with the process? Who all is involved? Do you have any recommendations for improving the quality control process?

E8. Do you know if any installed equipment has been removed? Why? Do you know what was it replaced with?

K.8 MARKET

M1. One of the purposes of the DC SEU energy efficiency initiatives is to encourage customers to purchase and install more efficient equipment than they would otherwise purchase or install. Do you feel the program is accomplishing this? Why or why not?

M2. Have your company's sales or stocking of high efficiency equipment changed since you became aware of DC SEU's energy efficiency initiatives? On a scale of 1 to 5 where 1 is 'very little impact' and 5 is 'a great deal of impact', what impact have the initiatives had on these changes? And why did you rate it a (#)?

M3. One of the initiative's goals is to drive market transformation. Do you believe the DC SEU initiatives are accomplishing that goal? Do you have any recommendations for doing so?



K.9 SATISFACTION AND CONCLUSION

W1. Overall, how satisfied are you with this energy efficiency initiative? Would you say you are very satisfied, somewhat satisfied, neither satisfied or dissatisfied, somewhat dissatisfied, or very dissatisfied? Why do you provide this rating?

W2. How satisfied are you with the support that the DC SEU provides contractors? Would you say you are very satisfied, somewhat satisfied, neither satisfied or dissatisfied, somewhat dissatisfied, or very dissatisfied? Why do you provide this rating?

W3. How satisfied are you with your interactions with the DC SEU staff? Would you say you are very satisfied, somewhat satisfied, neither satisfied or dissatisfied, somewhat dissatisfied, or very dissatisfied? Why do you provide this rating?

W4. [IF NOT ANSWERED ABOVE] What do you think is working best with DC SEU's energy efficiency initiative? What do you think is most in need of improvement?

W5. Is there anything else that you would like to share concerning the DC SEU energy efficiency initiatives?

Thank you for your time. This completes our interview.



APPENDIX L: RETAIL EFFICIENT PRODUCTS RETAILER INTERVIEW GUIDE

DC SEU UPSTREAM LIGHTING RETAILER INTERVIEW GUIDE

Interviewee(s)

- Phone
- Email
- Job Title

Interviewer(s)

Initiative/Area of responsibility

Date(s):

Interview Guide Format

This interview guide is for retailers who are working with the DC SEU upstream lighting initiative. Because senior staff will be conducting interviews, these interviews will be semi-structured. Therefore the following interview protocol is only a guide to ensure certain topics are covered, but evaluators will follow the flow of the interview and modify questions as needed to fit the interviewee's circumstance.

Researchable Issues

- Assess program effect on the market share of energy efficient lighting
- Assess influence of DC SEU incentives, and other factors, on retailer participation
- Identify barriers to participation by retailers and customers and/or other challenges and ways to improve the program

L.1 INTRODUCTION

My name is _____, with Tetra Tech. Our firm is evaluating the energy efficiency initiatives offered by the DC SEU, or the District of Columbia Sustainable Utility. As part of this study we are talking with businesses, such as yours, to understand your experience with the DC SEU lighting buy-down initiative.

Your feedback is valuable as it will inform recommendations to DC SEU on how they can improve assistance to you and your customers.

This interview should take approximately 15 minutes of your time. May we take some time now to do the interview? (If no, when would be a convenient time?)

I want to assure you that all of your responses and information about your company will be kept confidential and will not be reported individually by your name or business' name. I would like to record this call so I can go back to take notes, is that alright with you?



L.2 PROGRAM AWARENESS AND INVOLVEMENT

When did you begin participating in the DC SEU lighting buy-down initiative? (unless MOU provides this info)

How did you become aware of the DC initiative?

From start to finish, what is the process for selling DC SEU initiative bulbs at your store?

L.3 SALES TRENDS AND MARKETING

Has your store's participation in this initiative affected your stocking and sales of...? If yes in what way?

Component	Y/N	In what way...
incandescent bulbs		
Halogen bulbs		
standard CFLs		
specialty CFLs		
LED bulbs		

Before you began participating in the DC SEU lighting buy-down initiative, what percent of your light bulb sales were ENERGY STAR-rated CFL bulbs? ENERGY STAR-rated LED bulbs?

Component	Percent	Comment
CFL bulbs		
LED bulbs		



Since you signed up with the DC SEU initiative, what percent of your light bulb sales are ENERGY STAR-rated CFL bulbs? ENERGY STAR-rated LED bulbs?

Component	Percent	Comment
CFL bulbs		
LED bulbs		

On a scale of 1 to 5 where 1 is 'not at all influential' and 5 is 'very influential', please rate the influence the following factors have had on your decision to offer ENERGY STAR-rated standard CFL light bulbs through the DC SEU buy-down. Why do you provide this rating?

Component	1-5 rating	Why this rating
Availability of product in competitor stores		
Consumer demand for efficient lighting products		
DC SEU incentive		
DC SEU program promotion and advertising		
DC SEU staff support		
Manufacturer promotion		
Energy Independence and Security Act (EISA)		



On a scale of 1 to 5 where 1 is 'not at all influential' and 5 is 'very influential', please rate the influence the following factors have had on your decision to offer ENERGY STAR-rated specialty CFL light bulbs through the DC SEU buy-down. Why do you provide this rating?

Component	1-5 rating	Why this rating
Availability of product in competitor stores		
Consumer demand for efficient products		
DC SEU incentive		
DC SEU program promotion and advertising		
DC SEU staff support		
Manufacturer promotion		
Energy Independence and Security Act (EISA)		

On a scale of 1 to 5 where 1 is 'not at all influential' and 5 is 'very influential', please rate the influence the following factors have had on your decision to offer ENERGY STAR-rated LED light bulbs through the DC SEU buy-down. Why do you provide this rating?

Component	1-5 rating	Why this rating
Availability of product in competitor stores		
Consumer demand for efficient products		
DC SEU incentive		
DC SEU program promotion and advertising		
DC SEU staff support		
Manufacturer promotion		
Energy Independence and Security Act (EISA)		



Does your store stock DC SEU qualifying bulbs that are not discounted through DC SEU? If so, approximately what proportion of your sales are program-qualifying bulbs? About what percent of your lighting sales are through the DC SEU initiative?

Component	Y/N	Proportion of sales program-qualifying bulbs	Comment
DC SEU Qualifying not incented			
DC SEU Qualifying incented			

Does your store have a goal for the number of program bulbs you sell? How did you do in reaching that goal last year (2014)? Could DC SEU have done anything specific to help reach that goal?

Do you still carry standard incandescent bulbs? If so, do you carry...[SEE TABLE]? About how many standard incandescent bulbs of each wattage, or in total if not possible to estimate by wattage, do you estimate will be sold in 2015?

Wattage	Y/N	Quantity	Comment
100 watt			
75 watt			
60 watt			
40 watt			
25 watt			

Has your participation in the efficient products initiative affected your stocking or sales of any other energy-efficient products? If so, what products?



L.4 PROCESS

Have you received any complaints from customers regarding the bulbs discounted through DC SEU?

Do you feel that the incentives are effective in encouraging your customers to buy efficient lighting products? If yes, why

Are your customers made aware that certain products are discounted? Do they know it comes from DC SEU? How are they made aware? If not, could DC SEU provide any assistance or materials to help raise awareness?

What are major barriers to participation for retailers?

How much flexibility do you have in implementing the program?

Who are your contacts at DC SEU? How has your interaction with your contact been? Is there anything else your contact could provide to help support your participation?

What marketing activities does your store conduct related to the DC SEU initiative? What materials are provided by DC SEU? Do you find these materials to be effective? (Probe for improvements)

What reporting do you complete for DC SEU? Do you consider reporting requirements to be reasonable?

How long does it typically take to receive payment after submitting an invoice?

What do you see as future challenges to the program?

Do you have any suggestions for improvement of the program?



APPENDIX M: MULTI-FAMILY PARTICIPANT INTERVIEW GUIDE

LI MF ICDI (Contractor Direct Install) - PARTICIPANT INTERVIEW GUIDE

Interviewee(s) Name :

- Phone:
- Email:
- Date/Time:
- Contractor ID:
- Project Name:
- Project Address:

Interviewer(s) Name:

This interview guide is for participants of the District of Columbia Sustainable Energy Utility (DC SEU) LI MF ICDI program in DC. (30 participants in the database)

Because senior staff will be conducting interviews, these interviews will be semi-structured. Therefore the following interview protocol is only a guide to ensure certain topics are covered, but evaluators will follow the flow of the interview and modify questions as needed to fit the interviewee's circumstance.

Overarching Key Researchable Topics

- Reasons for participation in the program
- Satisfaction with equipment received
- Other equipment you would like to see offered through the program
- Is the equipment still installed
- Any direct install recommendations turned down
- What benefits have you received since participating
- Do unit occupants have concerns about participating
- Satisfaction with the process of submitting paperwork

M.1 INTRODUCTION AND BUSINESS SCOPE

I'd like to start with some general information about you and your facility.

- 1) How many buildings are located at this address? How many units?
- 2) Do you own or manage this facility? How many other properties do you own or manage in the DC area? Have you participated at any of those other locations?

M.2 PROGRAM OUTREACH

- 1) How did you hear about the energy efficient equipment available through DC SEU's Low Income Multifamily Direct Install program?



- 2) Did you interact directly with anyone from DC SEU regarding this program? Who else?
- 3) What made you decide to participate in the program?

M.3 PARTICIPATION PROCESS

- 1) What was the process for determining eligibility? Did you have to fill out paperwork? If so, were there any issues in doing so?
- 2) How satisfied are you with the process of determining eligibility? Do you have any recommendations for improving the process?
- 3) Did you need to get buy in from the tenants to participate? If so, were there any issues doing so? Is there anything the program could do to help with those issues?
- 4) Was a project review or assessment conducted for this location? Who did the assessment? Were there any issues with scheduling or performing the assessment?
- 5) What opportunities did they identify? Were the recommendations directed at common area upgrades or tenant unit upgrades?
- 6) What barriers did you face, either inside or outside of your company, when deciding whether or not to install energy efficient equipment through the program? How did the program help you overcome those barriers?
- 7) What equipment was installed at this location?
- 8) Did you turn down any of the equipment that was offered? If so, why?
- 9) Where was the equipment installed (common areas, tenant units, etc)?
- 10) Is the new equipment still installed and operating? If not, what was removed and why?
- 11) Should the program include other types of equipment that currently are not offered? If so, what?
- 12) Are there other types of energy efficiency programs that you participate in or are aware of? If yes, do you think there are lessons that DC SEU could learn from these other programs?
- 13) How do you prefer to receive information from DC SEU about their energy efficiency programs for LI/MF housing?

M.4 PROGRAM SATISFACTION

- 1) I am going to read a list to you. Please rate your level of satisfaction for each item using a scale of 0 to 10 where 0 is very dissatisfied and 10 is very satisfied. How satisfied were you with the...? [RECORD 0 TO 10 FOR EACH]
 - A The type of equipment eligible for the program
 - B [if applicable] Interactions with program staff from DC SEU
 - C The contractor who installed the equipment
 - D The performance of the new equipment



- E Information provided about the program
- F The program overall

- 2) [For each item in E2 rated <=6] You gave a less than satisfied rating for [insert E2 item]. Why was that?
- 3) Since you participated in the DC SEU program, have you purchased and installed any high efficiency equipment or changed maintenance practices without a rebate from a DC SEU program at this facility or at other locations? If so, what?

M.5 PROGRAM OVERALL

- 1) Given everything we discussed, what part of the process would you say was the most complicated or difficult? (For example, establishing eligibility, getting tenant buy-in, having the assessment completed, installing the equipment?)
- 2) Do you plan to utilize the program for other properties?

M.6 CONCLUSION

Those are all the questions I have. Do you have anything else you'd like to share regarding your experience with this program?

Notes:



APPENDIX N: MULTI-FAMILY CONTRACTOR INTERVIEW GUIDE

LI MF ICDI (Contractor Direct Install) - CONTRACTOR INTERVIEW GUIDE

Interviewee(s) Name :

- Phone:
- Email:
- Date/Time:
- Contractor ID:

Interviewer(s) Name:

This interview guide is for contractors who are working with the DC SEU LI MF ICDI program in DC. (There are 6 contractors in the database. We will target all 6 for this effort.)

Because senior staff will be conducting interviews, these interviews will be semi-structured. Therefore the following interview protocol is only a guide to ensure certain topics are covered, but evaluators will follow the flow of the interview and modify questions as needed to fit the interviewee's circumstance.

Overarching Key Researchable Topics

- Have the marketing efforts been effective in generating awareness of the program?
- What barriers exist to participating in the program?
- What issues have been encountered in accessing tenant units? Has this improved?
- Is the program designed and operating efficiently and effectively?
- Are the direct install measures still appropriate?
- Are there other competing programs available to participants right now?
- How satisfied are contractors with the process of submitting paperwork?

N.1 FIRMOGRAPHICS

- 1) Can you summarize for me your firm's role in providing energy efficiency services in DC? And what is your specific role with the Low-Income Multifamily Contractor Direct Install program?
- 2) What percent of your work is with multifamily buildings?

N.2 PROGRAM AWARENESS AND INVOLVEMENT

- 1) When did your firm first become involved in the Low-Income Multifamily Contractor Implemented Direct Install program?
- 2) How many projects/jobs does your firm complete through the Low-Income Multifamily Contractor Direct Install program in a typical year?



- 3) How do you currently receive DC SEU program communications? How would you prefer to receive communications about the program? Are any changes needed?
- 4) Who do you typically interact with from the DC SEU? How would you describe your interactions with each party?
- 5) Are there any aspects of the program that are unclear to you? What is unclear?
- 6) What additional support could the DC SEU offer that you would find beneficial? Are there any additional tools that the program should offer?
- 7) What other types of energy efficiency programs do you participate in or are aware of? If yes, do you think there are lessons that DC SEU could learn from these other programs? Do these compete with this program in any way?

N.3 PROGRAM MARKETING AND CUSTOMER INTERACTION

- 1) Do you actively promote the Low-Income Multifamily Contractor Direct Install program? If yes, how? Who do you typically interact with (Landlords? Facility managers? Corporate vs local?)?
(IF DON'T ACTIVELY PROMOTE: Do customers ever ask you about this program?)
- 2) What percent of your multifamily customers already know about the program before you tell them about it? Has customer program awareness increased or decreased in the past 12 months? Why do you think this is?
- 3) How often are you making project arrangements with someone not typically onsite? For example, corporate office, landlord, etc.
- 4) Are there ever issues with onsite managers or tenants not being knowledgeable about what work is to be done when you arrive to complete a project? If yes, what implications has that had?
- 5) Are you able to access the units when you are scheduled to be onsite?
- 6) Are unit occupants provided with information about the equipment installed? Are they provided with information on how they can conserve energy?
- 7) Would you like to see the program do more direct or specific marketing to customers eligible for the program? If yes, what kind of marketing would you like to see added?
- 8) What are the primary reasons customers typically do not want to participate in the program? Or are there certain equipment that tend to be rejected more than others?



- 9) Have you received any feedback from customers on the program? If so, is it positive, negative, or neutral?
- 10) Should the program include other types of equipment that currently are not eligible?
- 11) Thinking about your service area in DC, would you say the multifamily program has saturated the market, or is there still opportunity to improve LI MF housing stock, i.e. make LI MF housing more energy efficient? Are there areas that the program could focus on? (PROBE FOR GEOGRAPHICAL AREAS AS WELL AS BUILDING TYPES, SIZES, CONDOS, ETC.)

N.4 PROGRAM REQUIREMENTS AND PRACTICES

- 1) Do you feel the current program requirements are appropriate? Any issues determining whether or not a multifamily building qualifies?
- 2) Do you perform the assessments for recommending the program equipment to install?
- 3) (If do assessments) If so, do you use the pre-assessment workbook? How easy is it to use?
- 4) Have you had any recommendations rejected by the DC SEU? If so, what were they and why?
- 5) Has the program affected your stocking practices of certain types of equipment? If so, what?
- 6) What is the process for submitting paperwork for the program? Any issues?
- 7) What is the QA/QC process for the program? Has this changed over time? Have there been any issues?
- 8) Have there been any issues with the payment process? Either with the time it took to receive payment or the amount being different than you anticipated?

N.5 OVERALL PROGRAM

- 1) Is the program designed and operating efficiently and effectively?
- 2) What do you consider to be the biggest advantages to you from being involved in the Low-Income Multifamily Contractor Direct Install program?
- 3) What have been the biggest challenges? Is there anything the DC SEU could do to help?
- 4) On a scale of 1 to 5, where 1 is very dissatisfied and 5 is extremely satisfied, how would you rate your satisfaction with DC SEU's Low-Income Multifamily Contractor Direct Install program?



N.6 CONCLUSION

Those are all the questions I have. Do you have anything else you'd like to share regarding your experience with this program?

Notes:



APPENDIX O: LICP AND ICDI ONSITE DATE COLLECTION FORMS

O.1 DC SEU 7610LICP & 7612LICP Desk Review Report

DCSEU 7610 LICP & 7612LICP - Desk Review Report				
This form summarizes the evaluation review and any resulting adjustments to the project savings.				
Project ID:			Case ID:	
Project name				
Project location				
Project description				
Project contact	Not applicable			
Measure Type(s)		Savings being claimed (Y/N):		Total # of Apt. Units Renovated
Evaluation Activity	Conducted (Y/N)	Firm, Person Conducting		
Project File/Desk Review				
Engineering analysis				
Onsite verification				
Onsite metering				
Phone verification				



Project ID:	Case ID:	
Evaluation Activity	Date(s) Conducted	Description of Findings
Project File/Desk Review		Appliance Measures: Building Shell Measures: Cooling Measures: Heating Measures: Domestic Hot Water Saving Measures: Lighting Measures: Other Measures:
Engineering Analysis Onsite Verification		Appliance Measures: Building Shell Measures: Cooling Measures: Heating Measures: Domestic Hot Water Saving Measures: Lighting Measures: Other Measures:
Phone Verification		



O.2 DC SEU 7510ICDI Onsite Review Report

DCSEU 7610ICDI - Onsite Review Report																												
Project ID:			Case ID:																									
Evaluation Activity	Date(s) Conducted	Description of Findings																										
Onsite Verification		Lighting Measures: Heating Fuel Type: KITT: 0 Project Documentation: 0 Onsite Updates: 0 Location of Installation: KITT: 0 Project Documentation: 0 Onsite Updates: 0 <table border="1"> <thead> <tr> <th></th> <th>Desk Review</th> <th>Onsite Review</th> <th>% of Total</th> <th>Units Visited</th> <th>% of Total</th> </tr> </thead> <tbody> <tr> <td>In-Unit Lamps per unit</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> <td rowspan="3">#DIV/0!</td> </tr> <tr> <td>Total High Common Area Lamps</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> </tr> <tr> <td>Total Low Common Area Lamps</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> </tr> </tbody> </table>						Desk Review	Onsite Review	% of Total	Units Visited	% of Total	In-Unit Lamps per unit	#DIV/0!		#DIV/0!		#DIV/0!	Total High Common Area Lamps	#DIV/0!		#DIV/0!		Total Low Common Area Lamps	#DIV/0!		#DIV/0!	
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In-Unit Lamps per unit	#DIV/0!		#DIV/0!		#DIV/0!																							
Total High Common Area Lamps	#DIV/0!		#DIV/0!																									
Total Low Common Area Lamps	#DIV/0!		#DIV/0!																									
Project ID:			Case ID:																									
Evaluation Activity	Date(s) Conducted	Description of Findings																										
Onsite Verification		Water Heating and Saving Measures: DHW Heating Fuel Type: KITT: 0 Project Documentation: 0 Onsite Updates: 0 Location of Installation: KITT: 0 Project Documentation: 0 Onsite Updates: 0 <table border="1"> <thead> <tr> <th></th> <th>Desk Review</th> <th>Onsite Review</th> <th>% of Total</th> <th>Units Visited</th> <th>% of Total</th> </tr> </thead> <tbody> <tr> <td>Kitchen Aerators (1.5gpm)</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> <td rowspan="3">#DIV/0!</td> </tr> <tr> <td>Bathroom Aerators (1.0gpm)</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> </tr> <tr> <td>Showerheads (1.5gpm)</td> <td>#DIV/0!</td> <td></td> <td>#DIV/0!</td> <td></td> </tr> </tbody> </table>						Desk Review	Onsite Review	% of Total	Units Visited	% of Total	Kitchen Aerators (1.5gpm)	#DIV/0!		#DIV/0!		#DIV/0!	Bathroom Aerators (1.0gpm)	#DIV/0!		#DIV/0!		Showerheads (1.5gpm)	#DIV/0!		#DIV/0!	
	Desk Review	Onsite Review	% of Total	Units Visited	% of Total																							
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Bathroom Aerators (1.0gpm)	#DIV/0!		#DIV/0!																									
Showerheads (1.5gpm)	#DIV/0!		#DIV/0!																									



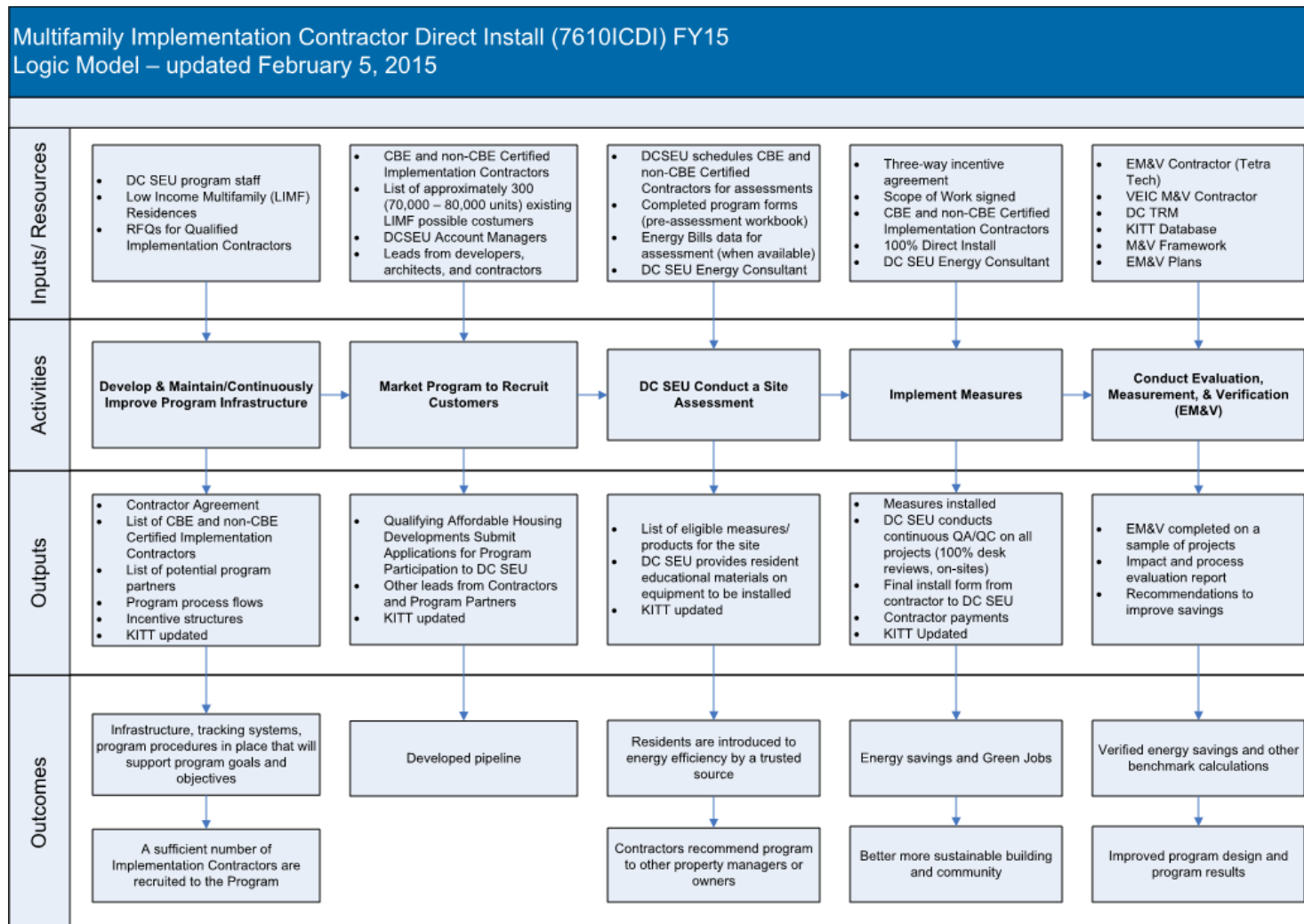
O.3 DC SEU 7610ICDI Desk Review Report

DCSEU 7610ICDI - Desk Review Report				
This form summarizes the evaluation review and any resulting adjustments to the project savings.				
Project ID:			Case ID:	
Project name				
Project location				
Project description				
Project contact				
Measure Type(s)	Lighting	Savings being claimed (Y/N):		Total # of Apt. Units Renovated
	Water Heating			
Project ID:			Case ID:	
Evaluation Activity	Conducted (Y/N)	Firm, Person Conducting		
Project File/Desk Review				
Engineering analysis				
Onsite verification				
Onsite metering				
Phone verification				

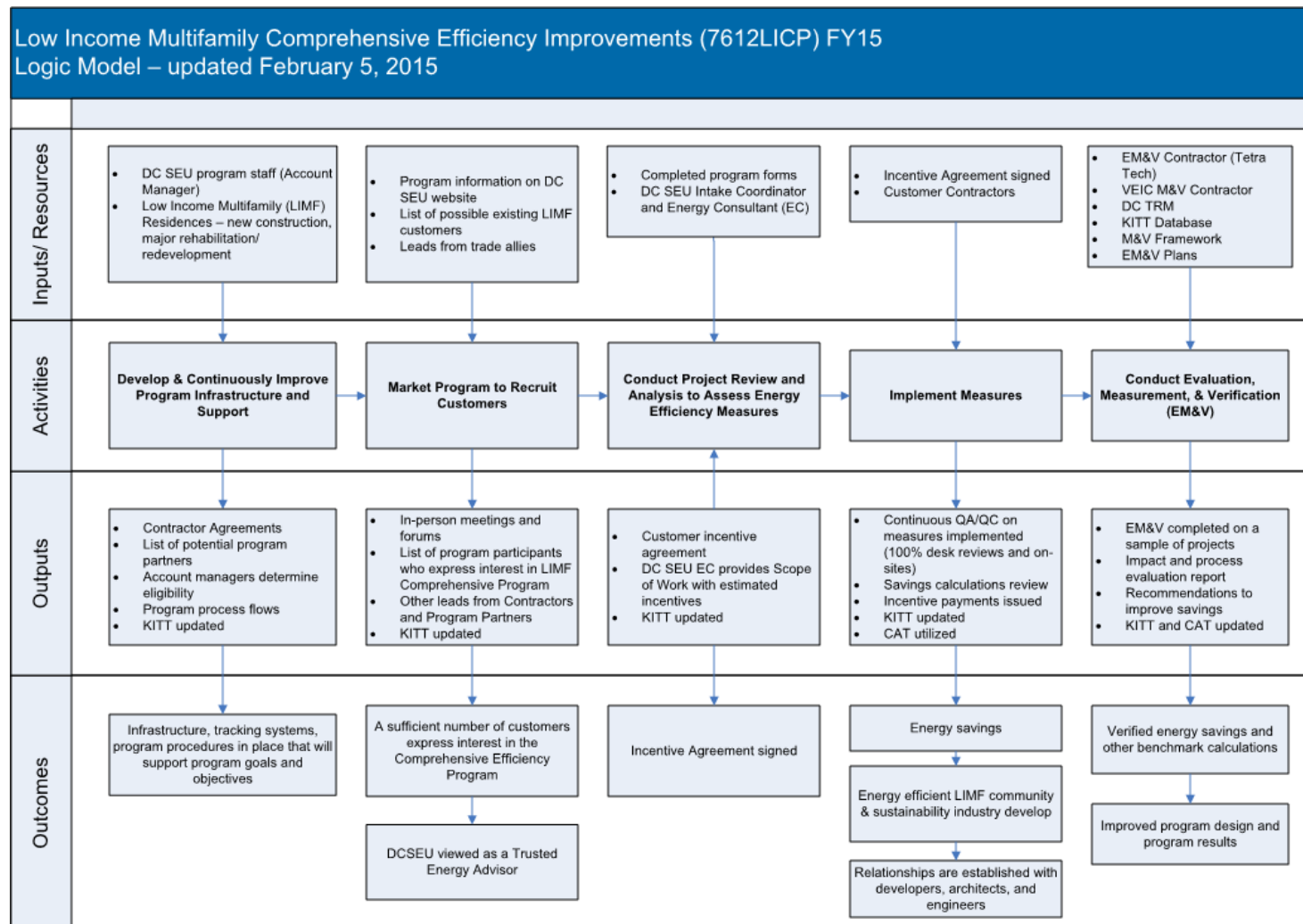


Project ID:	Case ID:	
Evaluation Activity	Date(s) Conducted	Description of Findings
Project File/Desktop Review		Lighting Measures:
		Heating Fuel Type: KITT: Project Documentation:
		Source:
		Location of Installation: KITT: Project Documentation:
		Source:
		Quantity: Total Fixtures Summary:
		Total In-Unit Lamps
		Total High Common Area Lamps
		Total Low Common Area Lamps
		Source:
		Source:
		Project ID:
Evaluation Activity	Date(s) Conducted	Description of Findings
Project File/Desktop Review		Water Heating and Saving Measures:
		DHW Heating Fuel Type: KITT: Project Documentation:
		Source:
		Location of Installation: KITT: Project Documentation:
		Source:
		Quantity: Total Measures Summary:
		Kitchen Aerators (1.5gpm)
		Bathroom Aerators (1.0gpm)
		Showerheads (1.5gpm)
		Source:
		Source:

APPENDIX P: MULTI-FAMILY ICDI LOGIC MODEL

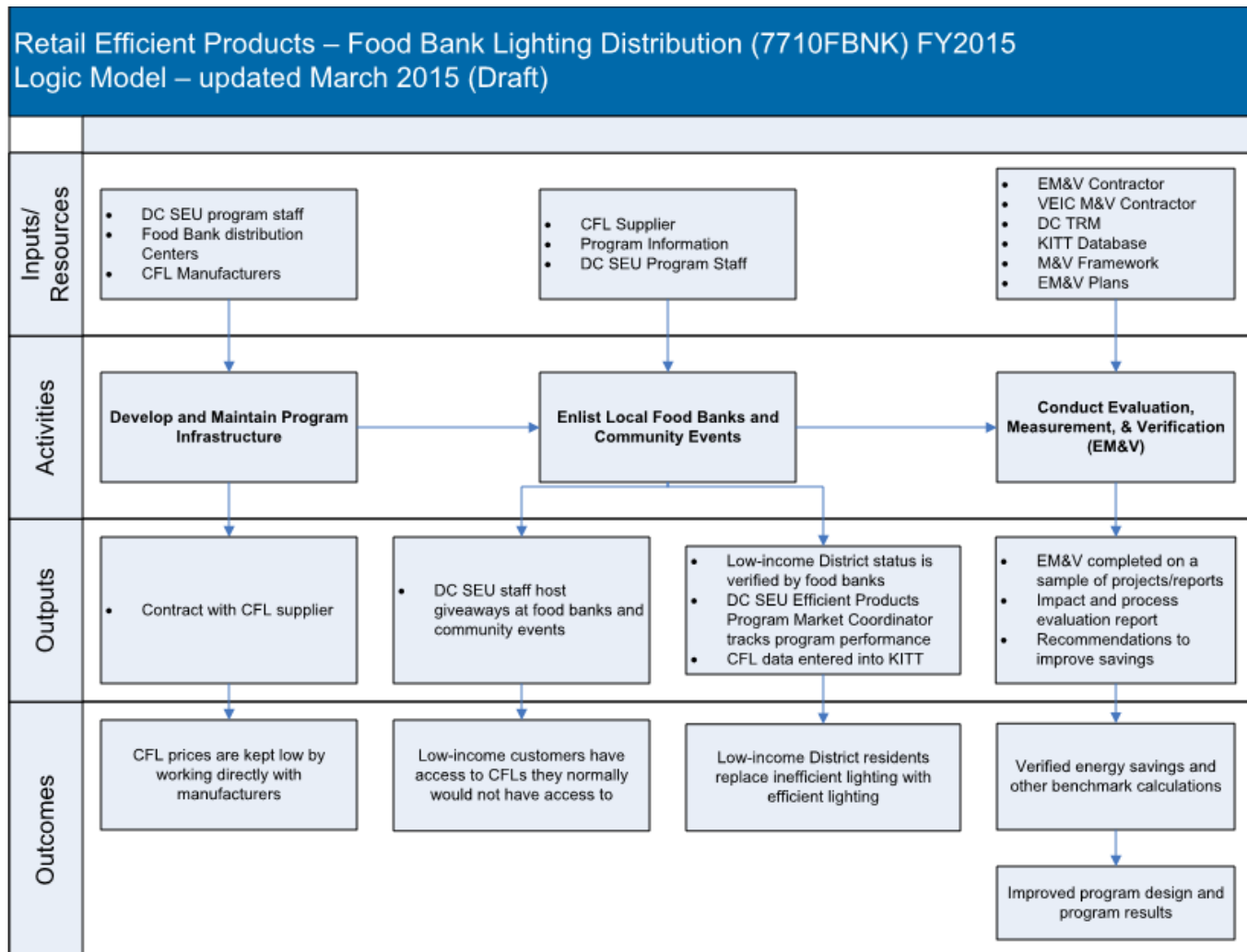


APPENDIX Q: MULTI-FAMILY LICP LOGIC MODEL

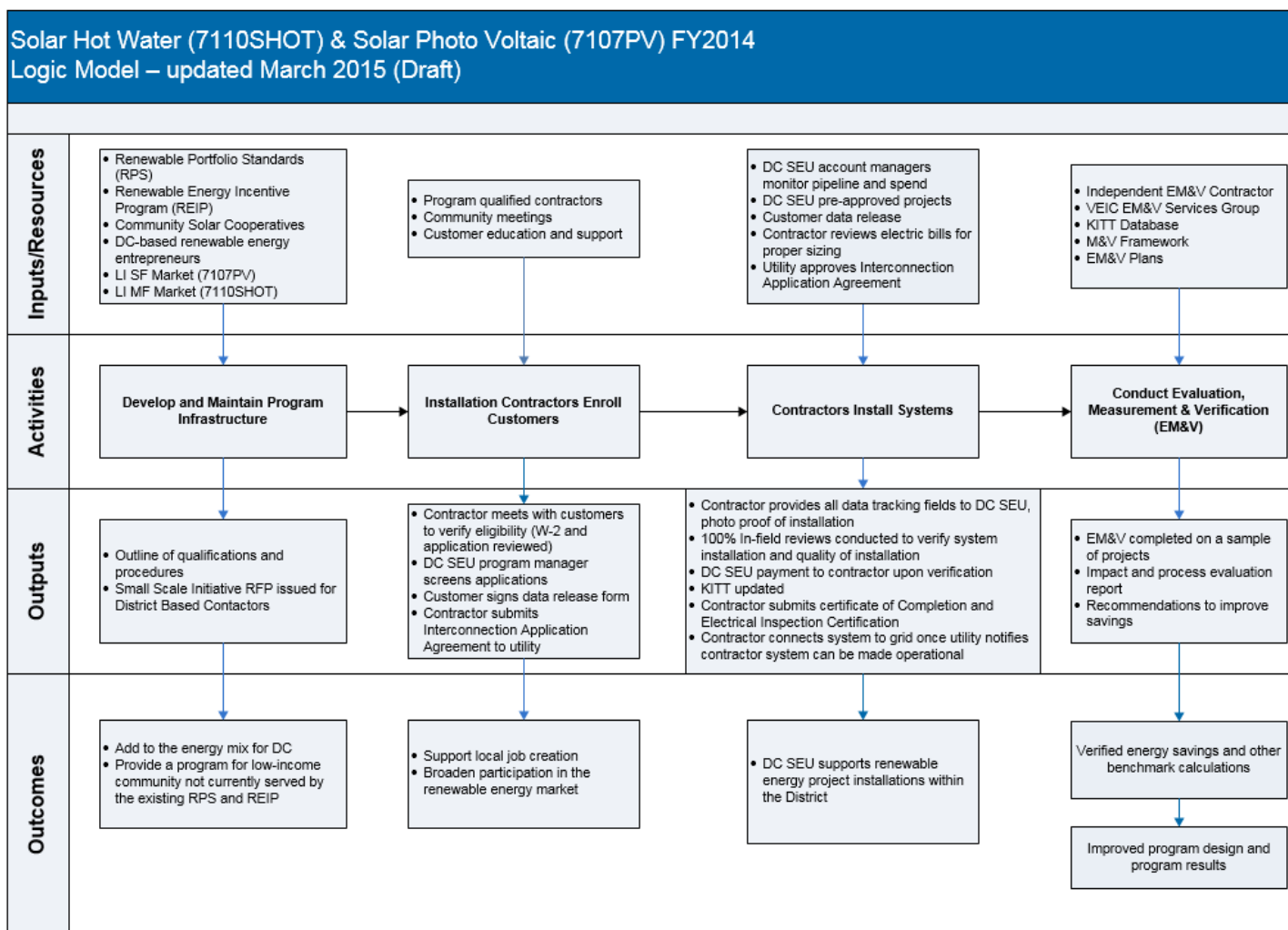




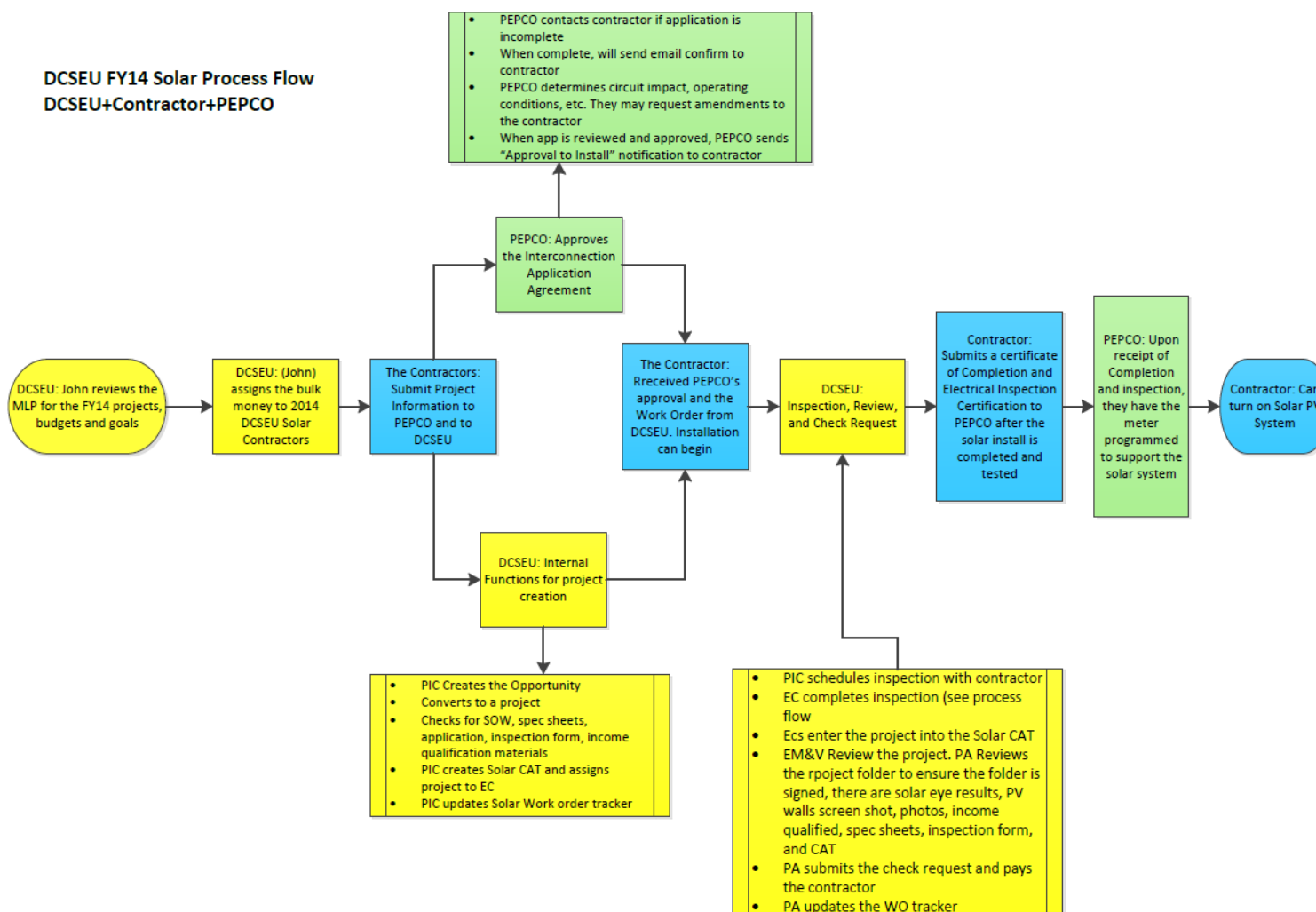
FOOD BANK LOGIC MODEL



APPENDIX R: SOLAR HOT WATER & SOLAR PV LOGIC MODEL

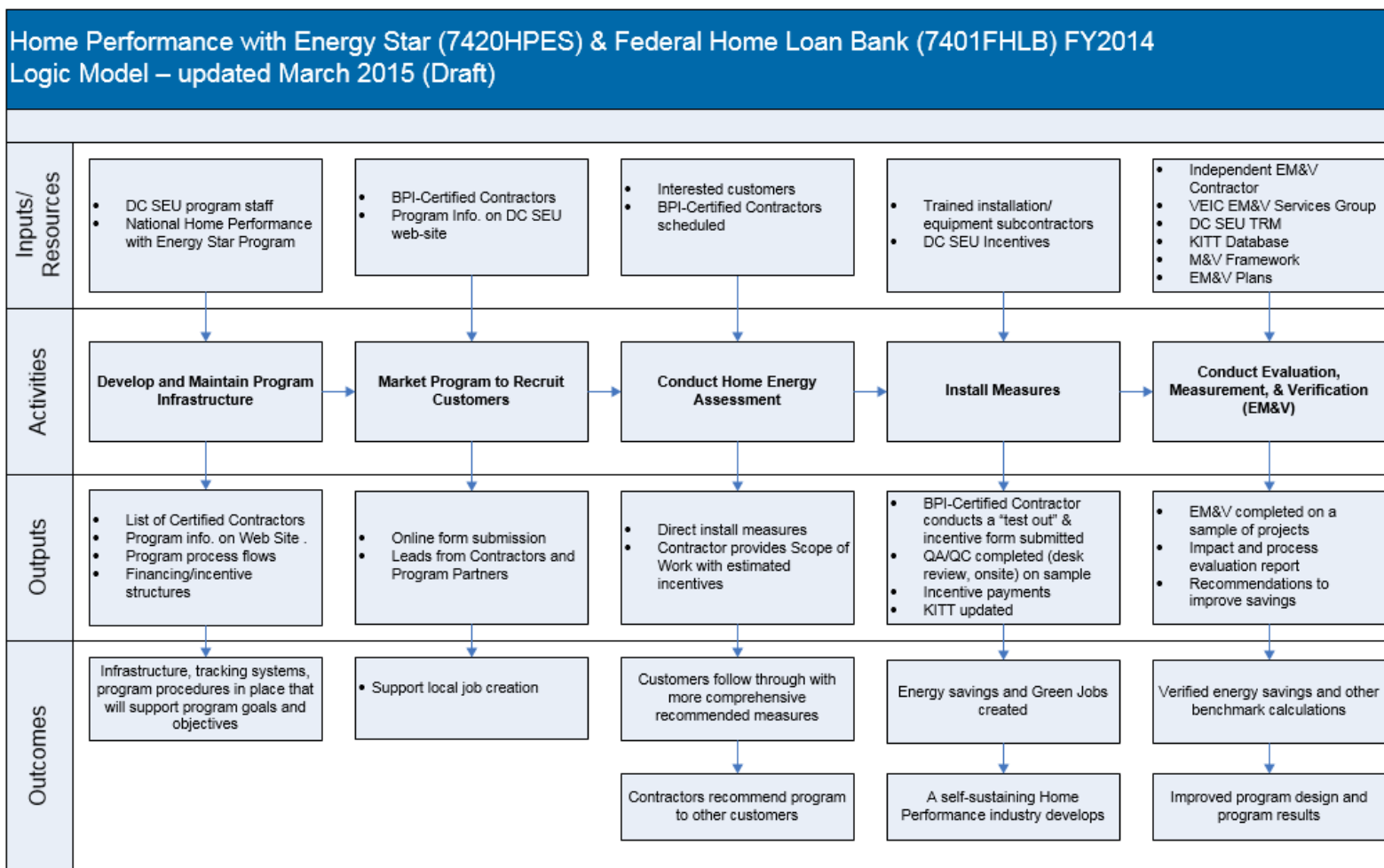


APPENDIX S: SOLAR PV PROCESS FLOW CHART

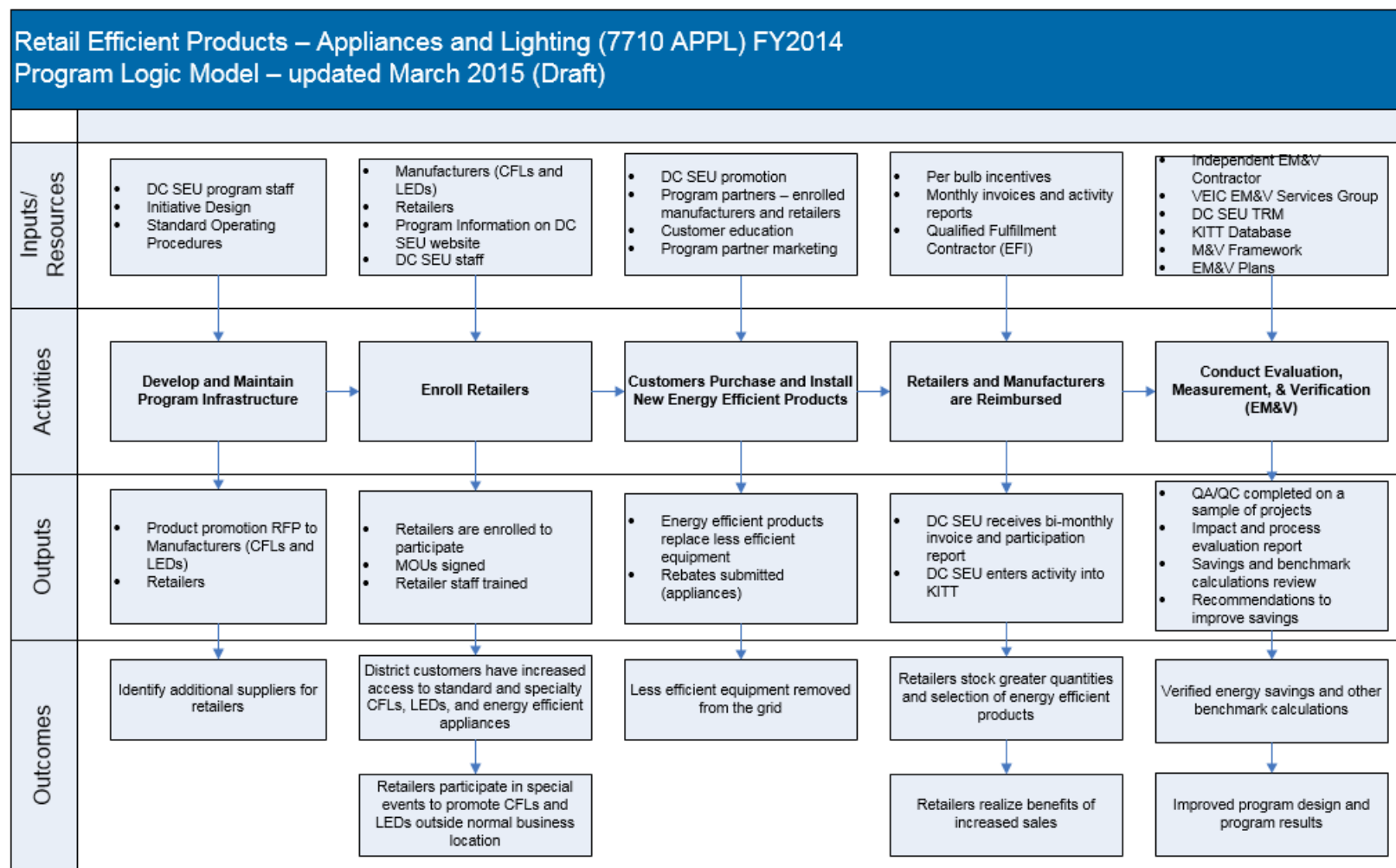




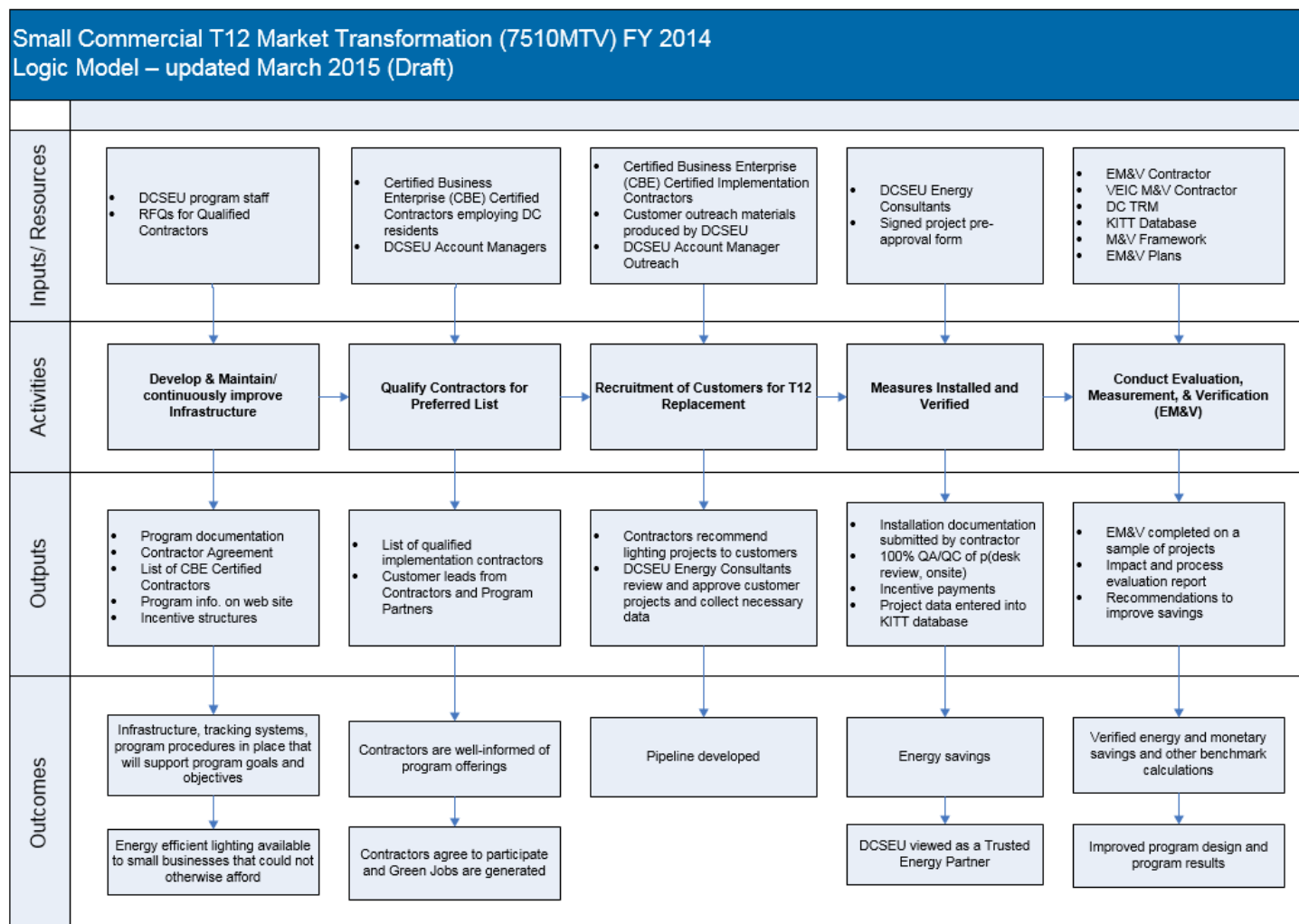
APPENDIX T: HOME PERFORMANCE AND FEDERAL HOME LOAN BANK LOGIC MODELS



APPENDIX U: RETAIL EFFICIENT PRODUCTS LOGIC MODEL

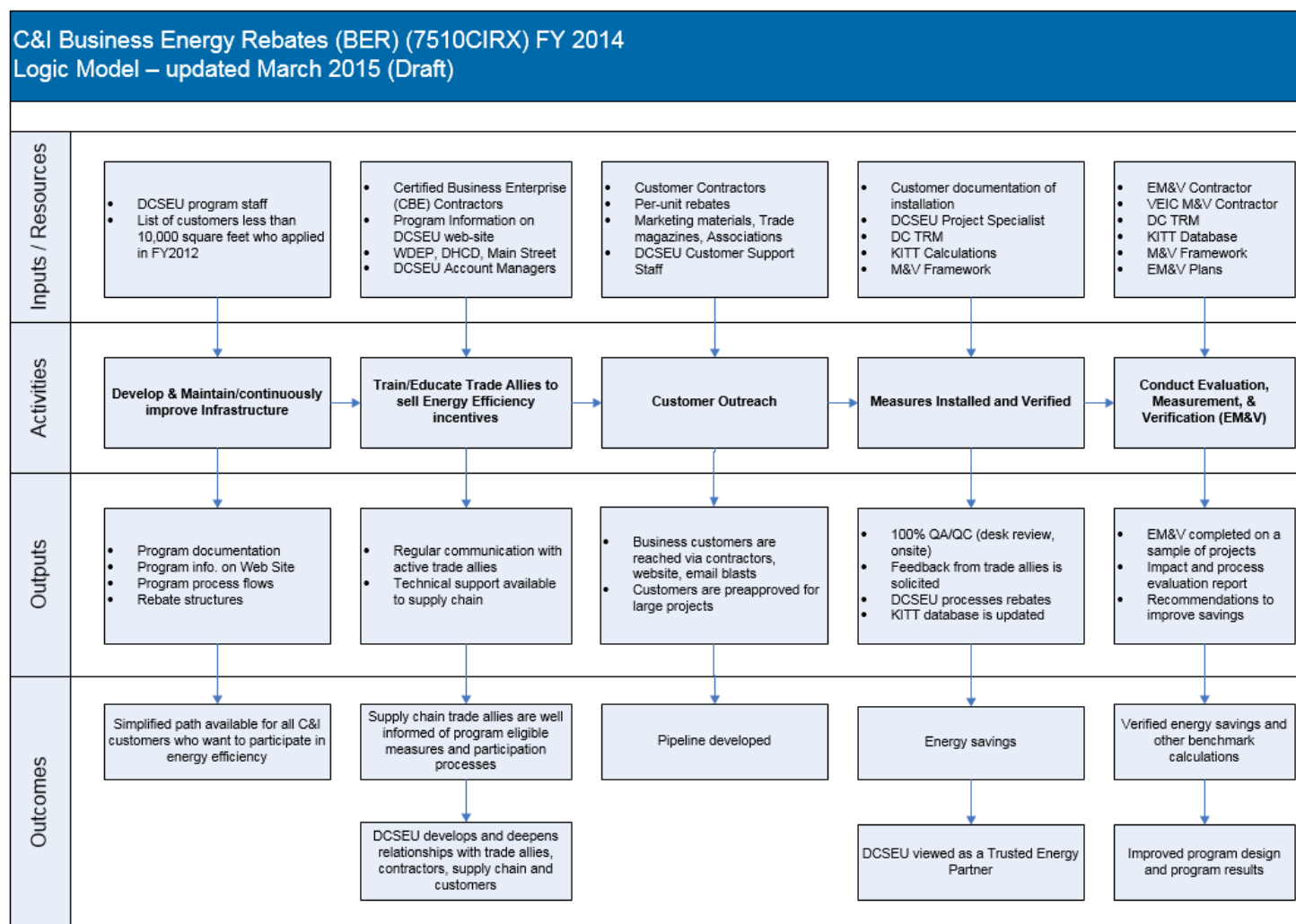


APPENDIX V: T12 MARKET TRANSFORMATION LOGIC MODEL





APPENDIX W: BUSINESS ENERGY REBATES LOGIC MODEL





APPENDIX X: CUSTOM SERVICES FOR C&I CUSTOMERS

