Toronto Hydro: Electronics Takeback Pilot Final Evaluation

October 2\textsuperscript{nd}, 2017

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# Table of Contents

Acronyms and Abbreviations ........................................................................................................ iv

Executive Summary ....................................................................................................................... v

Pilot Description ............................................................................................................................ v

Methodology ....................................................................................................................................... v

Key Findings and Conclusions ...................................................................................................... vi

1. **Introduction** ............................................................................................................................ 1

   1.1 Pilot Description ................................................................................................................ 1

   1.2 Pilot Participation Summary ............................................................................................ 2

2. **Impact Evaluation** ................................................................................................................... 3

   2.1 Methodology ...................................................................................................................... 3

       2.1.1 Verified Gross Energy Savings and Demand Reduction ........................................ 3

       2.1.2 Verified Net Energy Savings and Demand Reduction ............................................ 7

   2.2 Findings .................................................................................................................................. 7

       2.2.1 Verified Gross Savings ............................................................................................ 7

       2.2.2 Realization Rates ...................................................................................................... 7

       2.2.3 Verified Net Savings .............................................................................................. 8

3. **Process Evaluation** ................................................................................................................ 9

   3.1 Methodology ...................................................................................................................... 9

       3.1.1 Document Review .................................................................................................... 9

       3.1.2 Stakeholder In-Depth Interviews ............................................................................ 9

       3.1.3 Participant Surveys .................................................................................................. 9

   3.2 Findings .................................................................................................................................. 9

       3.2.1 Pilot Design and Delivery ...................................................................................... 10

       3.2.2 Pilot Documentation .............................................................................................. 11

       3.2.3 Awareness and Motivation .................................................................................... 12

       3.2.4 Participant Experience ............................................................................................ 14

       3.2.5 Successes, Challenges and Future Planning ............................................................ 18

4. **Conclusions and Recommendations** .................................................................................... 21

Appendix A. Electronics Takeback Pilot Participant Demographics ............................................ A-23

Appendix B. Electronics Takeback Pilot Participant Survey ........................................................... B-29

Appendix C. Electronics Takeback Pilot Staff Interview Guide ..................................................... C-39
List of Tables
Table 1. Electronics Takeback Pilot Savings Summary ......................................................... vi
Table 2. Planned and Verified Per-Unit Savings Values for Tier 1 Advanced Power Strips .......... 3
Table 3. Planned and Verified Per-Unit Savings Values for Tier 2 Advanced Power Strips and Most Efficient TVs ................................................................. 4
Table 4. Planned Pilot Per-Unit Savings for Most Efficient Televisions by Size ......................... 5
Table 5. PY2016 Gross Reported Versus Verified Savings per Measure ................................ 7
Table 6. Electronics Takeback Pilot Realization Rates ............................................................ 8
Table 7. PY2016 Net Verified Savings per Measure ............................................................... 8
Table 8. Electronics Takeback Pilot Documents Reviewed ..................................................... 9
Table 9. Usefulness of Energy Saving Information Provided .................................................. 15
Table 10. Suggestion to Improve the Toronto Hydro Electronics Takeback Pilot ....................... 20

List of Figures
Figure 1. Awareness of the Free Offering ............................................................................. 13
Figure 2. Motivations to Turn in Old Electronic Device ....................................................... 14
Figure 3. Whether Respondent Received Information .......................................................... 14
Figure 4. Reasons for Not Using Smart Power Bar Received ................................................. 15
Figure 5. Devices Plugged into APS .................................................................................... 16
Figure 6. Devices Plugged into Existing Smart Power Bar .................................................... 17
Figure 7. Participant Satisfaction ........................................................................................ 17
Figure 8. Reasons for Dissatisfaction with the Power Bar .................................................... 18
Figure 9. Household Income ............................................................................................... A-23
Figure 10. Education Level ................................................................................................. A-24
Figure 11. Primary Household Languages ......................................................................... A-25
Figure 12. Ownership Status of Current Residence ............................................................ A-25
Figure 13. Home Type ....................................................................................................... A-26
Figure 14. Home Age ........................................................................................................ A-26
Figure 15. Number of Bedrooms ....................................................................................... A-26
Figure 16. Number of Bathroom ....................................................................................... A-27
Figure 17. Home Square Footage .................................................................................................................. A-28
## Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym or Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS</td>
<td>advanced power strip</td>
</tr>
<tr>
<td>EUL</td>
<td>effective useful life</td>
</tr>
<tr>
<td>IESO</td>
<td>Independent Electricity System Operator</td>
</tr>
<tr>
<td>ISR</td>
<td>in-service rate</td>
</tr>
<tr>
<td>LDC</td>
<td>local distribution company</td>
</tr>
<tr>
<td>NTG</td>
<td>net-to-gross</td>
</tr>
<tr>
<td>PIA list</td>
<td>prescriptive input assumptions list</td>
</tr>
<tr>
<td>PY</td>
<td>program year</td>
</tr>
<tr>
<td>Toronto Hydro</td>
<td>Toronto Hydro Electric System Limited</td>
</tr>
<tr>
<td>TRM</td>
<td>technical reference manual</td>
</tr>
</tbody>
</table>
Executive Summary

As part of the program year 2016 (PY2016) consumer portfolio evaluation, the Cadmus team (Cadmus, Apex Analytics, Econoler and Nielsen Opinion Quest) evaluated the Electronics Takeback Pilot offered the local distribution company (LDC), Toronto Hydro Electric System Limited (Toronto Hydro). Through the pilot, Toronto Hydro promoted the retirement of older, inefficient electronics and promoted advanced power strips (APSs), also referred to as smart power bars, and ENERGY STAR® Samsung Most Efficient televisions.

With the evaluation, the Cadmus team sought to address several research objectives:

- Evaluate net energy savings and demand reduction
- Assess the delivery channel and marketing methods
- Assess participant and market actor experiences
- Document areas of success, challenges and changes to the pilot
- Assess the pilot’s scalability, including design and delivery modification and target markets
- Identify what, if anything, can be done to improve evaluability

Pilot Description

Toronto Hydro designed the Electronics Takeback Pilot to target its residential customers with older, less efficient electronics still in working condition. Toronto Hydro offered one of two types of smart power bars for free through the pilot to its customers who attended the annual Green Living Show, a three-day event where more than 400 enterprises showcase ecofriendly and healthy living products and services. Customers who went to the event but did not exchange eligible old devices received a Tier 1 APS, and those who went and exchanged eligible old devices received a Tier 2 APS and free admission to the event. Eligible electronics included TVs older than five years, monitors, computers, cell phones, keyboards, mice, audio/visual equipment, clock radios, GPS units, Bluetooth devices, routers, USB ports, earbuds and headsets). Toronto Hydro also offered a $200 coupon toward an ENERGY STAR Samsung Most Efficient television to customers who turned in eligible older televisions.

Toronto Hydro worked with Green Living Enterprises to plan and implement the pilot. Samsung Electronics offered a rebate on efficient televisions to participants who turned in eligible televisions and Global Electric Electronic Processing decommissioned electronic waste.

Methodology

The Cadmus team conducted both an impact and a process evaluation.

To evaluate gross energy savings and demand reduction, the Cadmus team (1) reviewed the per-unit savings values for items included in the Independent Electricity System Operator’s (IESO’s) most recent prescriptive input assumptions (PIA) list, (2) calculated new per-unit savings values for items not currently included in the IESO PIA list and (3) assessed the in-service rate (ISR) of all pilot items. In all
cases, the team ensured that our verified per-unit savings values were consistent with other consumer programs where identical measures are offered.

Since the pilot was a giveaway event over one weekend, the team used a net-to-gross (NTG) of 100%.

We gathered insight on the pilot design effectiveness and assessed the overall pilot operation and performance through a process evaluation. Following a comprehensive review of pilot documents, the team conducted phone interviews with staff from the sponsoring LDC and implementer. Additionally, we completed 141 participant surveys to assess their experiences with the pilot.

**Key Findings and Conclusions**

As shown in Table 1, the Cadmus team determined that the verified gross savings fell short of the pilot’s planned energy saving and demand reduction goals due to a downward revision of per-unit savings and the application of ISRs.

<table>
<thead>
<tr>
<th>Items</th>
<th>Units</th>
<th>Planned</th>
<th>Verified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive Spending</td>
<td>$</td>
<td>407,500</td>
<td>335,000</td>
</tr>
<tr>
<td>Participation</td>
<td>Participants</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Gross Savings</td>
<td>kWh</td>
<td>1,308,000</td>
<td>1,207,632</td>
</tr>
<tr>
<td></td>
<td>kW</td>
<td>160.00</td>
<td>38.02</td>
</tr>
<tr>
<td>Gross Realization Rates</td>
<td>% (kWh)</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>% (kW)</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Net Annual Savings</td>
<td>kWh</td>
<td></td>
<td>1,207,632</td>
</tr>
<tr>
<td></td>
<td>kW</td>
<td></td>
<td>38.02</td>
</tr>
<tr>
<td>Net-to-Gross</td>
<td>%</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Overall, the pilot design and delivery approach provided a positive experience for stakeholders and participants. The LDC and implementer staff were very satisfied with the distribution process, reporting the event ambassadors and the electronic data collection terminal as key elements to the successful distribution process. In addition, most participant survey respondents (62%) reporting being very satisfied with the APS received, while 92% of respondents said they were very satisfied with the electronic device decommissioning process.

The pilot location was both a success and a challenge. Locating the pilot within a larger event encouraged participation; in the three-day event, participants received 10,000 APSs and pilot staff decommissioned 9,181 pounds of old electronic devices. Being located downtown, the Green Living Show allowed the pilot to reach a different demographic than most programs (leading to enrollment of 36% tenants). However, the lack of car access to the event and parking area negatively impacted the ability for attendees to bring large electronic devices, notably TVs, which resulted in pilot staff distributing only 20 rebate coupons for energy-efficient TVs.
The Green Living Show website was an effective marketing tool. Most respondents (62%) became aware of the free APS giveaway directly at the Green Living Show, followed by word-of-mouth (16%) and the Green Living Show website (14%). Online advertising activities were most effective at informing participants about the electronic devices exchange opportunity, as respondents who turned in eligible electronic devices were more likely to have learned about the free APS through the Green Living Show website (23%) and social media (6%).

Despite a high ISR, the pilot fell short of its savings goals due to lower verified per-unit savings. The pilot did not save as much energy as planned because the verified APS per-unit savings review resulted in decreased savings. The team also applied an ISR of 69%, which, although being quite high for a giveaway pilot, reduced energy savings. The choice of the event, which targeted residential customers interested in ecofriendly and healthy living products and services, may have contributed to the high ISR. The information provided by trained-event ambassadors during APS distribution may also support this installation rate, since 73% of respondents reported obtaining information about energy conservation when they received their smart power bar and 87% reported that the information was useful.

Additional information on products given to each participant would result in a more robust evaluation. Although the pilot documentation contained most of the information required to conduct an evaluation, product details per participant were missing. The pilot documentation stated that 5,000 Tier 1 APS and 5,000 Tier 2 APS units were given away, but did not clearly identify which type of APS was given to which participants. Through the LDC interview, the Cadmus team learned that (1) the pilot team distributed some APS units to media as a marketing tool before the Green Living Show and (2) the pilot team ran out of Tier 1 units during the third day of the event, then distributed Tier 2 units to all participants on that day, rather than only to those who brought e-waste to the show as was originally planned.

Rapid uptake of the pilot suggests that it could be used again to connect with customers. The pilot team expressed interest in repeating the pilot, but with a few tweaks: notably, changing the product focus by distributing more attractive products rather than smart power bars, which the pilot team considered less attractive now that many energy efficiency programs promote these products. However, smart power bars are still a cost-effective choice considering the level of savings (for Tier 2 especially) and the low adoption level of this product in the market.

The Cadmus team suggests the Electronics Takeback pilot may be reproduced in its current scale and format if other big events, such as home shows, are identified. Some smaller events could also be included in the pilot by adjusting item quantities and the delivery process. In all cases, educating customers should continue to be part of delivery to continue raising awareness about energy conservation behaviours and products.
1. Introduction

The IESO contracted the Cadmus team to evaluate the pilot programs under the 2015–2020 Conservation First Framework. This report describes the evaluation objectives, approaches and results for the Toronto Hydro Electronics Takeback Pilot implemented in April 2016.

For the evaluation, the Cadmus team sought to address several research objectives:

- Evaluate net energy savings (kWh) and demand reduction (kW)
- Assess the delivery channel and marketing methods
- Assess participant and market actor experiences
- Document areas of success, challenges and changes to the pilot
- Assess the pilot’s scalability, including design and delivery modification and target markets
- Identify what, if anything, can be done to improve evaluability

1.1 Pilot Description

Toronto Hydro designed the Electronics Takeback Pilot to achieve the following goals:

- Determine the effectiveness of an exchange campaign that encourages customers to decommission older, less efficient electronics
- Assess the effectiveness of community-based social marketing practices to build awareness about phantom power and faster energy conservation behaviours
- Increase customer awareness and adoption of APSs, also referred to as smart power bars
- Explore the effectiveness of a midstream model for encouraging the adoption of energy-efficient electronics

Toronto Hydro targeted the pilot to its residential customers with older, less efficient electronics still in working condition. Toronto Hydro offered one of two types of smart power bars for free to customers who attended the Green Living Show. Customers who went to the event but did not exchange an eligible,\(^1\) old device were to receive a Tier 1 APS, and those who went to the event and exchanged an eligible, old device were to receive a Tier 2 APS and free admission to the event. Tier 1 APSs use a load detector technology that switches off secondary devices when the main device is powered down, while Tier 2 APSs use a technology that detects infrared remote control activity and motion and powers down devices when no activity is detected for a period of time. Toronto Hydro also offered a $200 coupon

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1 Eligible electronics included TVs older than five years, as well as monitors, computers, cell phones, keyboards, mice, audio/visual equipment, clock radios, GPS units, Bluetooth devices, routers, USB ports, earbuds, and headsets.
toward an ENERGY STAR Samsung Most Efficient television to customers who turned in an eligible older television.

Toronto Hydro worked with Green Living Enterprises to plan and implement the pilot. Samsung Electronics offered a rebate on efficient televisions to participants who turned in eligible televisions and Global Electric Electronic Processing decommissioned electronic waste.

1.2  **Pilot Participation Summary**

The Electronics Takeback Pilot team planned to distribute 5,000 Tier 1 APSs and 5,000 Tier 2 APSs, as well as influence the purchase of 2,000 ENERGY STAR Most Efficient TVs. The pilot team distributed 5,000 APSs of each type, dispensing 9,657 at the Green Living Show (April 15–17, 2016) and the remainder (343) during marketing efforts before the event. Moreover, the pilot team distributed 20 television coupons; however, only four participants bought an ENERGY STAR Most Efficient TV using these coupons.
2. Impact Evaluation

2.1 Methodology

This section presents the Cadmus team’s methodology to estimate gross and net savings for the PY2016 Toronto Hydro Electronics Takeback Pilot.

2.1.1 Verified Gross Energy Savings and Demand Reduction

To establish verified gross energy savings and demand reduction, the Cadmus team completed several steps:

- Reviewed per-unit savings values for pilot measures included on the most recent IESO PIA list
- Calculated new, per-unit savings values for items not currently included on the PIA list
- Assessed ISRs

The team verified gross savings according to the following formula:

\[ \text{Gross Savings} = \text{Number of Items Installed} \times \text{Unit Savings} \times \text{ISR} \]

Prescriptive Input Assumptions Review

The IESO maintains a list of prescriptive measures and their energy savings, demand reduction, effective useful life (EUL), incremental cost and other key characteristics.

The Cadmus team used primary and secondary research to assess the per-unit savings values and EULs for the pilot measure. The team also reviewed savings algorithms and input savings assumptions to assess whether any updates to the PIA list were required. As a result, we updated the per-unit savings and EUL values for the APSs and efficient TVs.

Table 2 summarizes the planned and verified per-unit savings values, as well as the EUL for Tier 1 APSs, which is the only measure currently on the PIA list for the Electronics Takeback Pilot.

| Table 2. Planned and Verified Per-Unit Savings Values for Tier 1 Advanced Power Strips |
|-----------------------------------------------|-----------------------------------------------|
| Planned Per-Unit Savings                      | Verified Per-Unit Savings                     |
| Unit Energy Savings (kWh)                     | Unit Energy Savings (kWh)                     |
| Unit Peak Demand Reduction (kW)               | Unit Peak Demand Reduction (kW)               |
| EUL (years)                                   | EUL (years)                                   |
| 76.58                                         | 61.2                                          |
| 0.01                                          | 0.0019                                        |
| N/A                                           | 5                                             |

**Tier 1 Advanced Power Strips**

The Cadmus team reviewed the unit energy savings for Tier 1 APSs, listed as “Power Bar, Smart (Auto shutoff)” in the IESO PIA list, and concluded that values were too low. The listed savings values of 0.0004 kW and 13.7 kWh per year were lower than all savings values for similar measures found in the literature. Toronto Hydro did not use the PIA list savings values in the pilot documentation; instead, it used a value of 76.58 kWh per Tier 1 APS, which the Cadmus team considers too high.
The Cadmus team reviewed existing literature and determined a verified energy savings value of 61.2 kWh per year, based on NYSERDA’s 2011 Advanced Power Strip Research Report. This study offers the most current research available and is often referenced in other jurisdictional technical reference manuals (TRMs). Since the NYSERDA 2011 report differentiates the savings generated by smart power bars used for an entertainment system (75.1 kWh per year) and an IT system (31.0 kWh per year), the Cadmus team established savings by using the weighted average of these values based on Electronics Takeback Pilot participant survey results for power bar usage: 69% of respondents had connected TVs and accessories, while 31% had connected computers and accessories. The team did not include respondents who said they connected equipment other than entertainment or IT systems to their power bars in the calculation, since savings data for other types of controlled equipment are not available.

The team calculated unit peak demand reduction using the following equation:

\[
Peak \ Demand \ Reduction \ (kW) = Unit \ Energy \ Savings \ (kWh/year) \times \ Summer \ Peak \ Demand \ Ratio
\]

Based on the IESO residential power bar load profile, the Cadmus team used a summer peak demand ratio of 0.000315 and updated the peak demand reduction to 0.0019 kW per year.

The PIA list establishes the EUL of power bars at 10 years, which is high compared to other jurisdiction values. The Cadmus team used a five-year EUL, based on 2016 Pennsylvania TRM.²

**Tier 2 Advanced Power Strips**

The Cadmus team verified the planned per-unit savings values and EULs for Tier 2 APSs and ENERGY STAR Most Efficient TVs, listed in Table 3, by reviewing engineering algorithms, existing literature, TRMs and public evaluation reports.

<table>
<thead>
<tr>
<th>Prescriptive Measure</th>
<th>Planned Values</th>
<th>Verified Per-Unit Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit Energy Savings (kWh)</td>
<td>Unit Peak Demand Reduction (kW)</td>
</tr>
<tr>
<td>Tier 2 Advanced Power Strips</td>
<td>345.90</td>
<td>0.04</td>
</tr>
<tr>
<td>ENERGY STAR Most Efficient TV</td>
<td>From 13.69 to 139.69*</td>
<td>From 0.00 to 0.04*</td>
</tr>
</tbody>
</table>

* Savings vary depending on TV size.

For Tier 2 APSs, Toronto Hydro used energy savings of 345.9 kWh, peak demand reduction of 0.19 kW and an EUL of 20 years. The Cadmus team determined verified energy savings of 288.2 kWh based on

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the average of values gathered for a 2016 study from the Pacific Gas and Electric Company on Tier 2 APSs.\(^3\)

The Cadmus team calculated unit peak demand reduction using the following equation:

\[
\text{Peak Demand Reduction (kW)} = \text{Unit Energy Savings (kWh/year)} \times \text{Summer Peak Demand Ratio}
\]

Based on the IESO residential power bar load profile, the Cadmus team used a summer peak demand ratio of 0.0000315 and updated the peak demand reduction to 0.0091 kW per year.

After reviewing studies and TRMs,\(^4\) the Cadmus team selected an EUL of eight years.

**ENERGY STAR Most Efficient Televisions**

The Electronics Takeback Pilot documentation identified savings for different categories of television sizes, ranging from 13.69 kWh to 139.69 kWh for energy savings and from 0.00202 kW to 0.044 kW for peak demand reduction. Table 4 lists savings by television size.

<table>
<thead>
<tr>
<th>Measure Description</th>
<th>Unit Energy Savings (kWh)</th>
<th>Unit Peak Demand Reduction (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;35-inch ENERGY STAR Most Efficient TV</td>
<td>20.00</td>
<td>0.04</td>
</tr>
<tr>
<td>40- to 44-inch ENERGY STAR Most Efficient TV</td>
<td>13.69</td>
<td>0.00</td>
</tr>
<tr>
<td>45- to 49-inch ENERGY STAR Most Efficient TV</td>
<td>15.52</td>
<td>0.00</td>
</tr>
<tr>
<td>50- to 54-inch ENERGY STAR Most Efficient TV</td>
<td>139.69</td>
<td>0.02</td>
</tr>
<tr>
<td>55- to 59-inch ENERGY STAR Most Efficient TV</td>
<td>25.56</td>
<td>0.00</td>
</tr>
<tr>
<td>60-inch ENERGY STAR Most Efficient TV</td>
<td>22.83</td>
<td>0.00</td>
</tr>
<tr>
<td>&gt;60-inch ENERGY STAR Most Efficient TV</td>
<td>44.73</td>
<td>0.01</td>
</tr>
</tbody>
</table>

To evaluate measure savings, the Cadmus team used the following equations:

\[
\text{Annual Savings (kWh)} = \frac{(W_{\text{baseline}} - W_{\text{measure}})}{1,000} \frac{W}{kW} \times \text{Hours of Use Annually}
\]

\[
\text{Peak Demand Reduction (kW)} = \text{Unit Energy Savings (kWh/year)} \times \text{Summer Peak Demand Ratio}
\]

---


Participants could apply the rebate coupon toward any purchase of a Samsung ENERGY STAR Most Efficient TV. The only model the Cadmus team could find that corresponded to that description was the Samsung TV model UN50J5500 AF, which is a 49.5-inch TV with a power consumption of 35.2 watts. The team used this wattage as the power value for the ENERGY STAR Most Efficient TV ($W_{\text{measure}}$).

Toronto Hydro considered ENERGY STAR-certified models as baseline measures. In the calculations, the Cadmus team used a power consumption baseline ($W_{\text{baseline}}$) of 82.59 watts, which is the minimum value specified in the ENERGY STAR program requirements for 49.5-inch televisions (version 7.0, the ENERGY STAR certification that was in effect in 2016).

For the annual hours of use, the Cadmus team used the Toronto Hydro “Appliance Usage Chart” value of 2,400 hour (200 hours per month). Based on the IESO residential televisions load profile, the Cadmus team used a summer peak demand ratio of 0.0001472.

Thus, the team calculated a verified unit energy savings value of 113.74 kWh per year and a summer peak demand reduction value of 0.01764 kW per year. The team also changed the EUL value from 10 years to six years, which is closer to values used in other jurisdictions’ TRMs.

In-Service Rate
The Cadmus team assessed the ISR for APSs through a participant survey, asking respondents if the APS they received through the pilot was installed and still in place.

While 66.2% of respondents reported that their APS was installed and still in place, 4.4% said that they had given it to someone else. The Cadmus team assumed that the ISR for APSs given away was the same (66.2%) as for pilot participants, therefore increasing the ISR to 69.1% (66.2% + [66.2% * 4.4%]) for both types of APS (which had a similar installation rates).

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For the ENERGY STAR Most Efficient TVs, the team assumed an installation rate of 100% because it is unlikely that participants would purchase and not install a television.

2.1.2 Verified Net Energy Savings and Demand Reduction
Since the pilot was a giveaway event over one weekend only, the Cadmus team used a NTG ratio of 100%.

2.2 Findings
The following sections detail the impact findings for the Electronics Takeback Pilot.

2.2.1 Verified Gross Savings
The Cadmus team established verified gross savings by multiplying the reported number of distributed APSs and purchased TVs by the verified per-unit savings and the ISR, as described in the Methodology section.

Table 5 provides a summary of pilot gross savings by measure. Overall, the Electronics Takeback Pilot achieved 1.21 GWh in gross energy savings and 0.038 MW in gross peak demand reduction.

Table 5. PY2016 Gross Reported Versus Verified Savings per Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Annual Gross Savings (kWh)</th>
<th>Annual Gross Reduction (Coincident Peak kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reported*</td>
<td>Verified</td>
</tr>
<tr>
<td>Tier 1 APS</td>
<td>382,900</td>
<td>211,446</td>
</tr>
<tr>
<td>Tier 2 APS</td>
<td>1,729,500</td>
<td>995,731</td>
</tr>
<tr>
<td>ENERGY STAR Most Efficient TV</td>
<td>559**</td>
<td>455</td>
</tr>
<tr>
<td>Total</td>
<td>2,112,959</td>
<td>1,207,632</td>
</tr>
</tbody>
</table>

* The Cadmus team calculated reported savings by multiplying the reported number of distributed APS units and purchased TVs by the corresponding planned per-unit savings.
** This value is for 50-inch televisions (see Table 4).

Tier 2 APSs accounted for 83% of overall pilot energy savings, while Tier 1 APSs accounted for 17% and ENERGY STAR Most Efficient TVs accounted for less than 1%.

2.2.2 Realization Rates
The Cadmus team calculated realization rates by dividing verified gross savings by reported gross savings at the pilot and measure levels. Table 6 outlines the energy savings and peak demand reduction pilot realization rates.
Table 6. Electronics Takeback Pilot Realization Rates

<table>
<thead>
<tr>
<th>Measure</th>
<th>Energy Savings (%)</th>
<th>Peak Demand Reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 APS</td>
<td>55</td>
<td>13</td>
</tr>
<tr>
<td>Tier 2 APS</td>
<td>58</td>
<td>16</td>
</tr>
<tr>
<td>ENERGY STAR Most Efficient TV</td>
<td>81</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

The Electronics Takeback Pilot achieved an overall 57% energy savings realization rate. This is mostly due to the downward revisions of power bar per-unit savings and the application of ISRs.

2.2.3 Verified Net Savings

As presented in the Verified Net Energy Savings and Demand Reduction section, the Cadmus team used an NTG of 100% because the pilot was a giveaway event for only one weekend. Therefore, the verified net savings listed in Table 7 are the same as verified gross savings.

Table 7. PY2016 Net Verified Savings per Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Annual Net Verified Energy Savings (kWh)</th>
<th>Annual Net Verified Peak Demand Reduction (Coincident Peak kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 APS</td>
<td>211,446</td>
<td>6.565</td>
</tr>
<tr>
<td>Tier 2 APS</td>
<td>995,731</td>
<td>31.441</td>
</tr>
<tr>
<td>ENERGY STAR Most Efficient TV</td>
<td>455</td>
<td>0.012</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,207,632</strong></td>
<td><strong>38.017</strong></td>
</tr>
</tbody>
</table>
3. Process Evaluation

3.1 Methodology
The Cadmus team reviewed pilot documentation and conducted phone interviews with the Toronto Hydro and the Green Living Enterprises staff, as well as completed 141 phone surveys with participants who attended the Green Living Show and received an APS. These data collection activities offered insights into pilot operations and helped the team understand stakeholder and participant experiences such as motivations and overall satisfaction.

See Appendix B and Appendix C for the data collection instruments.

3.1.1 Document Review
Table 8 lists documents provided by the IESO that the team reviewed to inform our development of the data collection instruments.

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Document Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Case</td>
<td>THESL Elec Take Back Pilot Business Case V8 23Feb16_DF Eval Plan</td>
</tr>
<tr>
<td>Final Report</td>
<td>Toronto Hydro Electronics Take Back Pilot Final Report*</td>
</tr>
<tr>
<td>Database</td>
<td>dataExtract_GreenLivingShow_Apr18[1]</td>
</tr>
</tbody>
</table>

*Produced by Green Living Enterprises

3.1.2 Stakeholder In-Depth Interviews
The Cadmus team conducted one in-depth telephone interview, with two key staff members: one from Toronto Hydro and one from Green Living Enterprises. This interview provided insight into pilot delivery, successes, challenges and future planning.

3.1.3 Participant Surveys
The team surveyed 141 participants by telephone (71 who received a Tier 1 APS and 70 who received a Tier 2 APS). With the survey, we sought to assess customers’ awareness of and experience with the pilot, including satisfaction, pilot delivery and marketing methods, home characteristics and demographics. This sample (n=141) had a precision of ±6.9% at the 90% confidence level.

3.2 Findings
This section provides findings from the stakeholder interviews and participant surveys that address the following:

- Pilot design and delivery
- Pilot documentation
- Awareness and motivation
- Participant experience
- Successes, challenges and future planning
3.2.1 Pilot Design and Delivery

Pilot Design
Toronto Hydro and implementer staff reported that the pilot objectives were to:

- Educate residential customers about the electricity consumption of electronics
- Introduce the APS technology in the market
- Offer and promote electronic waste recycling

Toronto Hydro staff reported that the pilot was also meant to have an upstream influence on the purchase of more efficient televisions, but that they encountered some logistical difficulties with this objective because consumers needed to bring their old TV to the trade show.

Staff agreed that the pilot targeted all Toronto Hydro residential customers, allowing it to be one of the few pilots to reach multiple types of residential customers, including low-income customers and tenants.

Toronto Hydro staff reported developing the pilot with the support of Green Living Enterprises, which acted as the delivery agent and coordinated logistics and reporting to Toronto Hydro. While the Green Living Show already employed many marketing activities and attracted more than 31,000 people, the pilot final report outlined a pilot-specific advertising campaign, mainly through the Green Living Show website, online ads, newsletters and newspapers ads.

Toronto Hydro pilot staff said they selected the Green Living Show because it took place in downtown Toronto during the spring cleaning period. Being located downtown increased the pilot’s accessibility to and impact on residential customers living in multifamily building, but offered less parking areas and accessibility by car, which negatively affected the decommissioning of large devices. Also, Toronto Hydro and implementer staff said the Green Living Show attracts people who have a more environmentally aware lifestyle, and are thus already more likely to install products such as smart power bars.

Pilot Delivery
Green Living Enterprises staff said they trained event ambassadors, before the show, to guide customers through the participation process, distribute the power bars and inform participants about energy conservation. As obtained from the database, 3,401 participants brought in an electronic device for decommissioning during the Green Living Show. Toronto Hydro provided details about the electronic devices decommissioned within the pilot. The net weight of the electronic devices collected was 9,181 pounds. Many types of electronic devices were collected, including these:

- 20 TVs weighing 954 pounds
- 53 monitors (all flat panel) weighing 745 pounds
- 113 computers (20 desktops and 93 laptops) weighing 1,131 pounds
- 776 cell phones weighing 194 pounds
• Peripherals (keyboards, mice, audio/visual equipment, clocks, radios, home phones, etc.) weighing 5,661 pounds
• Other ineligible devices (GPS units, Bluetooth devices, routers, USB ports, earbuds, headsets, electric appliances, etc.) weighing 496 pounds

Staff summarized the participation process as follows:

• **Engagement and Eligibility:** Staff reported that upon arriving at the event, the ambassadors directed visitors toward touch screen terminals to verify their eligibility. The validation process included a short questionnaire to ensure the visitor was a Toronto Hydro customer. The questionnaire also served to collect contact information.

• **Equipment and Education:** Staff said that after completing the questionnaire, eligible visitors (participants) received one of the two types of smart power bars. Participants who brought an old electronic device for decommissioning were directed to the electronic waste decommissioning area where they received a Tier 2 APS. Participants decommissioning an eligible television received a $200 rebate coupon for a Samsung ENERGY STAR Most Efficient television. Participants who did not bring an old electronic device received a Tier 1 APS. Each participant also received a coupon booklet and a booklet promoting the IESO’s other residential programs. Staff also confirmed that event ambassadors specifically informed participants about phantom power, which is the energy consumed by electronic devices in standby mode; smart power bars are designed to reduce standby power energy consumption. In addition, LDC staff said that Toronto Hydro and Trickle Star, the APS manufacturer and supplier, each had booths at the event and provided visitors with information on energy efficiency programs or smart power bars.

• **Follow-Up:** After the event, Green Living Enterprises staff said they followed up with participants by sending them information on how to properly install and use the APS.

Green Living Enterprises staff reported distributing approximately equal quantities of power bars each day to ensure that units were available for distribution on the third day of the event. While they gave Tier 2 APSs to participants with electronic devices for decommissioning on the two first days as planned, staff said they ran out of stock of Tier 1 APSs on the third day and gave out Tier 2 APSs to all participants, even if they did not bring an electronic device.

### 3.2.2 Pilot Documentation

As discussed in the Document Review section, the pilot documentation included the business case, final report and participant database.

**Business Case and Final Report**

The Cadmus team found the business case and final report informative, although not fully comprehensive. These documents presented the pilot description and objectives, eligibility criteria, implementation milestones, budget and marketing material. The final report, prepared by Green Living Enterprises, addressed pilot results, but without presenting the savings achieved by the pilot. The final
report also mentioned the overall quantity of distributed items and electronics devices received for decommissioning, but without providing details on which type of APS (Tier 1 or Tier 2) was given to each participant.

Participant Database
The database consisted of a list of participants who completed a short questionnaire to qualify for the pilot during the Green Living Show. The participant list was set up in an Excel spreadsheet, which contained participant contact information, addresses and dates of birth. The database had no indication of how or if the participant met the eligibility requirement, such as Toronto Hydro account numbers.

The spreadsheet also included participant answers to the following two questions:

- “Did you bring electronic waste to recycle today?”
- “How did you hear about the electronics exchange, waste recycling and power bar program at the Green Living Show?”

In addition, the database indicated whether participants were interested in receiving Toronto Hydro and Trickle Star marketing e-mails, as well as Toronto Hydro e-bills.

The Cadmus team encountered difficulty identifying how many power bars the pilot team distributed and what type each participant received. First, the database contained only 9,657 entries, with 10,000 power bars having been distributed. Toronto Hydro clarified this discrepancy during the pilot interview, explaining that they distributed some power bars to media as a marketing effort before the event. Since these power bars were distributed, the Cadmus team included them in the evaluation calculations using the same ISR as calculated from participant surveys.

Second, only 3,401 participants indicated that they brought electronic waste, but the pilot team distributed 5,000 Tier 2 APSs at the show. Again, Toronto Hydro explained during the interview that they started giving Tier 2 APSs to every participant when the 5,000 Tier 1 APSs were out of stock.

Despite these two difficulties, the team considered the database straightforward and the contact information enabled the participant survey.

3.2.3 Awareness and Motivation
The following sections outline how participants became aware of the pilot and their motivations to participate.

Awareness
As illustrated in Figure 1, respondents’ three major sources of awareness that Toronto Hydro was offering a free smart power bar at the Green Living Show were directly on site (62%), by word of mouth (16%) and on the Green Living Show website (14%). Ten-percent of respondents learned about the pilot from an online ad, 7% from a newsletter and 7% from a newspaper.
Respondents who turned in old electronic devices and received a Tier 2 APS were more likely to have learned about the free smart power bars through the Green Living Show website (23%) and social media (6%) than other respondents.

**Motivation**
Most respondents who turned in an old electronic device at the Green Living Show reportedly did so to either dispose of it (50%), gain free admission (33%), help protect the environment (31%) or to obtain a free smart power bar (25%), as presented in Figure 2.
Figure 2. Motivations to Turn in Old Electronic Device

![Bar chart showing motivations for turning in old electronic devices]

Source: Participant Survey Question B2. “Our records show that you turned in an old electronic device to the Electronics Takeback event. What motivated you to turn in this old device to the event?” (n=64; multiple response)

Although most of the returned old electronic devices were still in working condition (79%), only 7% of these devices were still being used by respondents.

3.2.4 Participant Experience

This section discusses whether respondents received energy savings information and if that information was useful; their use of the APS received, the smart features and what was plugged in; their satisfaction with the pilot; and the pilot influence on additional energy program participation.

Information Received and Usefulness

As shown in Figure 3, most respondents (73%) reported obtaining information about ways to save energy when they received their smart power bar, and most said this information was very useful (26%) or somewhat useful (61%; Table 9).

Figure 3. Whether Respondent Received Information

![Pie chart showing responses to receiving information about ways to save energy]

Source: Participant Survey Question C1. “Did you receive information about ways to save energy when you received your smart power bar?” (n=141)
Table 9. Usefulness of Energy Saving Information Provided

<table>
<thead>
<tr>
<th>C2. How useful did you find the information provided?</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very useful</td>
<td>26</td>
<td>26%</td>
</tr>
<tr>
<td>Somewhat useful</td>
<td>60</td>
<td>61%</td>
</tr>
<tr>
<td>A little useful</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Not useful at all</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>100%</td>
</tr>
</tbody>
</table>

Use of Advanced Power Strips

Two-thirds of respondents (66%) reported currently using the smart power bar they received at the event, and most of those (84%) said they had been using the unit and its smart features continuously.

Those not currently using the APS (34%) provided multiple reasons for not doing so, as presented in Figure 4, with 25% reporting they do not need the bar and another 18% stating it is too complicated to use.

**Figure 4. Reasons for Not Using Smart Power Bar Received**

Source: Participant Survey Question C4. “Why aren’t you using the smart power bar?” (n=47; multiple response)

As Figure 5 illustrates, respondents reported plugging multiple devices into the APS. Two-thirds of respondents (69%) plugged their TV into the APS, 33% plugged in a cable box, set-top box or satellite and 32% plugged in a computer or laptop. In total, 73 respondents reported plugging 220 devices into their APSs, with an average of three devices per APS.
Most respondents (82%) who reported using their new APS and features continuously did so to replace an existing power bar, with the remaining 19% using an APS for the first time. Nearly all of those who replace an existing power bar reported their old bar has not been a smart power bar (97%), and most said they were not actively turning on and off their previous power bar (71%).

Eighteen-percent of respondents reported already having a smart power bar installed prior to receiving one at the Green Living Show. Respondents said they had plugged different types of equipment into their previous smart power bar, although computers were the most common (Figure 6).
Figure 6. Devices Plugged into Existing Smart Power Bar

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer / Laptop</td>
<td>52%</td>
</tr>
<tr>
<td>Computer Speakers / Sound System</td>
<td>24%</td>
</tr>
<tr>
<td>Lighting / Lamp</td>
<td>24%</td>
</tr>
<tr>
<td>Modem / Router</td>
<td>24%</td>
</tr>
<tr>
<td>Other (DVD, Tape Recorder, External Hard…)</td>
<td>24%</td>
</tr>
<tr>
<td>TV</td>
<td>24%</td>
</tr>
<tr>
<td>Printer</td>
<td>20%</td>
</tr>
<tr>
<td>Cell Phone</td>
<td>12%</td>
</tr>
<tr>
<td>Computer Monitor</td>
<td>12%</td>
</tr>
<tr>
<td>Gaming Console</td>
<td>12%</td>
</tr>
<tr>
<td>Aquarium Stuff</td>
<td>8%</td>
</tr>
<tr>
<td>Cable Box / Satellite Receiver</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Participant Survey Question C13. “What do you have plugged into your existing smart bar?” (n=25; multiple response)

Pilot Satisfaction

As summarized in Figure 7, respondents reported being generally satisfied with the power bar received: 62% said they were very satisfied and 26% said they were somewhat satisfied. Satisfaction was particularly high with how easy it was to turn in old devices, where almost all respondents reported being very satisfied (92%) or somewhat satisfied (6%; Figure 7).

Figure 7. Participant Satisfaction

Source: Participant Survey Questions D1 and D3. “How satisfied are you with the smart power bar you received as part of the Electronics Takeback event?” (n=133) and “Overall, how satisfied are you with how easy it was to turn in your old electronic device and receive your new smart power bar?” (n=64)

Those respondents who said they were a little satisfied or not at all satisfied with the power bar (12%; n=15) had trouble making it work properly or did not need it, as shown in Figure 8.
Pilot Influence on Program Participation
Since participating in the Electronics Takeback Pilot, only 22% of respondents reported participating in another energy efficiency program provided by the IESO or Toronto Hydro.

3.2.5 Successes, Challenges and Future Planning
During the stakeholder interview, Toronto Hydro and Green Living Enterprises staff shared their perspectives on what worked well and what did not for the Electronics Takeback Pilot. This section presents the successes and challenges reported by interviewees, as well as future opportunities. In addition, we present survey respondents’ suggestions for improvement.

Successes
The pilot team reported several key successes, including distributing 10,000 smart power bars during one weekend. In addition, one Toronto Hydro staff member said that recycling the large amount of electronic waste was a success, noting that “people felt good about not wasting their electronics.” Indeed, most respondents (92%) reported being very satisfied with the decommissioning process.

Toronto Hydro and implementer staff also said that the electronic data collection terminal was a key element to the successful distribution process, as were the event ambassadors. The terminals allowed customers to rapidly validate their eligibility and enter their contact information, while ambassadors guided customers through the process. In addition, staff agreed that the event location was also a key element of success for distributing APSs, since the high traffic allowed the pilot team to reach a large number of people and engage with multiple types of residential customers.
Finally, Toronto Hydro staff reported that by providing people with new technology and corresponding information, the pilot allowed Toronto Hydro to expand its communication and connection with customers. In short, LDC staff said the pilot demonstrated Toronto Hydro’s commitment to introducing new efficient technologies in the market.

**Challenges**
The pilot team reported three key challenges:

- **Limited APS availability created time constraints:** Staff reported that the main challenge was difficulties procuring the correct amount of APSs in the short time allowed between pilot approval and the event. The products were not available in Canada, and were therefore imported. Despite this challenge, the pilot team received the units on time.

- **Limited APS accessibility affected the business case:** Staff said that since no Canadian retailer sold the APSs, the pilot team changed their original plans of distributing APSs at Best Buy stores. This led to changing the initial business case delivery model: initially, Tier 1 APS were going to be offered at a Best Buy decommissioning location, while only Tier 2 APS were going to be distributed at the Green Living Show. The pilot team came up with the solution of giving Tier 2 APSs to participants who brought electronic devices for decommissioning and giving Tier 1 APSs to those without electronic waste.

- **Location may have negatively impacted TV exchange:** The pilot documentation showed that event staff only provided 20 coupons for the decommissioning of televisions and of those, only four coupons were redeemed. The Toronto Hydro and implementer staff reflected that the main reason for this low number was the downtown event location, which was difficult to access by car and had few available parking spaces, complicating television transportation to the event. Most participants travelled to the event by public transit and preferred to bring smaller electronics for decommissioning.

**Future Planning**
When asked about the future of the pilot, Toronto Hydro staff expressed interest in repeating it in PY2018, but with a couple tweaks:

- **Equipment focus:** Staff said they would consider offering equipment other than smart power bars, which are now less attractive since they are more frequently included in other energy efficiency programs.

- **Revamp design:** Staff noted that they would split the upstream promotion of high-efficient televisions from electronic waste education and new technology distribution. Staff said the objectives of educating people about electronic waste and distributing new efficient products were complementary. However, the plan of having upstream influence on the high-efficient television market, should be left aside if another giveaway program were to be held at an event such as the Green Living Show with similar parking challenges. Staff also suggested that a pilot or program that decommissioned large electronics, such as televisions, should be held at
purchase points to coordinate simultaneously decommissioning of old devices with purchasing of new units.

When asked for suggestions to improve the Toronto Hydro Electronics Takeback Pilot, overall, many survey respondents provided positive comments about the event (see Table 10). Respondent made recommendations mainly aimed at advertising the event more (14%), establishing more venues or opportunities to turn in old electronic devices (13%), continue holding the event (10%) or holding it more frequently (9%) and providing more events and opportunities to save energy (9%).

Table 10. Suggestion to Improve the Toronto Hydro Electronics Takeback Pilot

<table>
<thead>
<tr>
<th>D5. If you could offer one suggestion for Toronto Hydro to improve the Electronics Takeback event, what would you recommend?</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertise More / Boost Awareness / Market More</td>
<td>19</td>
<td>13%</td>
</tr>
<tr>
<td>Provide More Venues / More Opportunities / More Information to Turn in Old Electronic Devices (Includes Cell Phones)</td>
<td>18</td>
<td>13%</td>
</tr>
<tr>
<td>Satisfied / Good Idea / Keep It Going</td>
<td>14</td>
<td>10%</td>
</tr>
<tr>
<td>Repeat It / Do It More Frequently</td>
<td>13</td>
<td>9%</td>
</tr>
<tr>
<td>Provide More Coupons / More Incentives / More Events and Opportunities to Save Energy</td>
<td>13</td>
<td>9%</td>
</tr>
<tr>
<td>Provide More Instruction on How to Use the Power Bar</td>
<td>8</td>
<td>6%</td>
</tr>
<tr>
<td>Improve Event Elements (Direction, Crowd, etc.)</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Lower Electricity Rate / Bill / Get More Efficient</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Nothing</td>
<td>22</td>
<td>16%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>14</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>141</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
4. Conclusions and Recommendations

Overall, the pilot design and delivery approach provided a positive experience for stakeholders and participants. The LDC and implementer staff were very satisfied with the distribution process, reporting the event ambassadors and the electronic data collection terminal as key elements to the successful distribution process. In addition, most participant survey respondents (62%) reporting being very satisfied with the APS received, while 92% of respondents said they were very satisfied with the electronic device decommissioning process.

The pilot location was both a success and a challenge. Locating the pilot within a larger event encouraged participation; in the three-day event, participants received 10,000 APSs and pilot staff decommissioned 9,181 pounds of old electronic devices. Being located downtown, the Green Living Show allowed the pilot to reach a different demographic than most programs (leading to enrollment of 36% tenants). However, the lack of car access to the event and parking area negatively impacted the ability for attendees to bring large electronic devices, notably TVs, which resulted in pilot staff distributing only 20 rebate coupons for energy-efficient TVs.

- **Recommendation**: Discontinue the upstream promotion of high-efficient televisions at event locations such as the Green Living Show or hold giveaway events that include decommissioning large electronics at purchase points to allow participants an easy way to bring in old devices when purchasing new units.

The Green Living Show website was an effective marketing tool. Although most respondents (62%) learned about the free APS giveaway directly at the Green Living Show, word-of-mouth (16%) and the Green Living Show website (14%) also contributed to respondent awareness of the pilot. Online advertising activities were most effective at informing participants about the electronic devices exchange opportunity, as respondents who turned in eligible electronic devices were more likely to have learned about the free APS through the Green Living Show website (23%) and social media (6%).

Despite a high ISR, the pilot fell short of its savings goals due to lower verified per-unit savings. The pilot did not save as much energy as planned because the verified APS per-unit savings review resulted in decreased savings. The team also applied an ISR of 69%, which, although being quite high for a giveaway pilot, reduced energy savings. The choice of the event, which targeted residential customers interested in ecofriendly and healthy living products and services, may have contributed to the high ISR. The information provided by trained-event ambassadors during APS distribution may also support this installation rate, since 73% of respondents reported obtaining information about energy conservation when they received their smart power bar and 87% reported that the information was useful.

Additional information on products given to each participant would result in a more robust evaluation. Although the pilot documentation contained most of the information required to conduct an evaluation, product details per participant were missing. The pilot documentation stated that 5,000 Tier 1 APS and 5,000 Tier 2 APS units were given away, but did not clearly identify which type of APS was given to which participants. Through the LDC interview, the Cadmus team learned that (1) the
pilot team distributed some APS units to media as a marketing tool before the Green Living Show and (2) the pilot team ran out of Tier 1 units during the third day of the event, then distributed Tier 2 units to all participants on that day, rather than only to those who brought e-waste to the show as was originally planned.

- **Recommendation:** Track the type and quantity of products given to participants. Keep records of the dates, quantities and product types as a pilot and program implementation best practise that supports robust evaluation.

**Rapid uptake of the pilot suggests that it could be used again to connect with customers.** The pilot team expressed interest in repeating the pilot, but with a few tweaks: notably, changing the product focus by distributing more attractive products rather than smart power bars, which the pilot team considered less attractive now that many energy efficiency programs promote these products. However, smart power bars are still a cost-effective choice considering the level of savings (for Tier 2 especially) and the low adoption level of this product in the market.

The Cadmus team suggests the Electronics Takeback pilot may be reproduced in its current scale and format if other big events, such as home shows, are identified. Some smaller events could also be included in the pilot by adjusting item quantities and the delivery process. In all cases, educating customers should continue to be part of delivery to continue raising awareness about energy conservation behaviours and products.
Appendix A. Electronics Takeback Pilot Participant Demographics

This section presents demographic information collected from participant surveys, including the respondent’s household income, education, primary language, homeownership status and housing characteristics.

As illustrated in Figure 9, 43% of respondent households reported an income over $80,000 per year, while 29% reported an income from $50,000 to under $80,000 per year. The remaining 28% reported an annual income under $50,000. In comparison, 17% of Ontario households have an income of $75,000 or over, 15% have an income between $50,000 and $75,000 and 68% have an income under $50,000.9

![Figure 9. Household Income](image)

Source: Participant Survey Question E12. “Please tell me which of the following categories applies to your total household income for the year 2016.” (n=106)

Respondents reported high levels of education. As shown in Figure 10, 85% of respondents had a college, university or postgraduate degree, while 36% of the population of Ontario have achieved a comparable level of education.

Three-quarters of respondents (77%) said the primary language spoken in their household is English, compared to 79% of Ontarian households. As illustrated in Figure 11, 9% of respondents reported that Chinese is the primary language spoken in their household. The remaining languages that participants primarily speak in their households are Arabic, Russian and Indo-Aryan, as well as other languages.

______________________________

Almost two-thirds (64%) of respondents reported that they own their current home, compared to 68% of the Ontario population (Figure 12).

Source for pilot participants: Participant Survey Question E4. “Do you own or rent your current place of residence?” (n=138)


http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil133g-eng.htm
Just over one-third of respondents live in a single-family detached house (36%), while 22% live in an apartment, 21% in a condominium and 20% either in a single-family semi-detached house, a townhouse or a row house (Figure 13).

![Figure 13. Home Type]

Source: Participant Survey Question E5. “What type of home do you live in?” (n=138)

As illustrated in Figure 14, 62% of respondents’ homes are 32 years or older. Most respondents reported their home being between 52 and 67 years old.

![Figure 14. Home Age]

Source: Participant Survey Question E9. “How old is your home? An estimate is fine.” (n=130)

Fifty-seven percent of respondents reported that they live in a home with three or more bedrooms, compared to 64% of homes in the population of Ontario (Figure 15).
Figure 15. Number of Bedrooms

Source for pilot participants: Participant Survey Question E6. “How many bedrooms are in your home?” (n=140)

http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil133g-eng.htm

Fifty-eight percent of respondents reported that they live in a home with two or more bathrooms, compared to 52% in the population of Ontario (Figure 16).

Figure 16. Number of Bathroom

Source for pilot participants: Participant Survey Question E7. “How many bathrooms are in your home?” (n=140)

http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil133g-eng.htm
In addition, 42% of respondents reported living in a one-story home and 41% reported living in a two-story home, while only 17% reported that their home is three stories or more. As illustrated in Figure 17, most respondents (61%) said their home is less than 2,000 feet.

![Figure 17. Home Square Footage](image)

Source: Participant Survey Question E10. “How many square feet is your home?” (n=138)

Pilot respondent reported an average of three people living in their home, which is the average for Ontarian households.\(^\text{11}\)

Most respondents (93%) reported having wireless Internet at their home, while in Ontario overall, only 19% of homes had wireless Internet in 2015.\(^\text{12}\)

---


Appendix B. Electronics Takeback Pilot Participant Survey

<table>
<thead>
<tr>
<th>Research Objectives</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen for valid participants</td>
<td>A1-A3</td>
</tr>
<tr>
<td>Assess delivery and marketing methods</td>
<td>B1-B4, C12-C13</td>
</tr>
<tr>
<td>Assess participant experience</td>
<td>C1-C2, D1-D6</td>
</tr>
<tr>
<td>Evaluate net energy savings (kWh) and demand reduction (kW)</td>
<td>C3-C11</td>
</tr>
<tr>
<td>Collect demographic information</td>
<td>E1-E12</td>
</tr>
</tbody>
</table>

**Target Quota** = 140 completes (70 Tier 1 and 70 Tier 2)

**Pilot Description:** Through the pilot, Toronto Hydro offered free Tier 1 advanced power strips (APS) to Toronto Hydro customers who came to the Green Living Show and free Tier 2 APS and admission ticket to Toronto Hydro customers who came to the event and turned in an eligible, older piece of electronics. The pilot also offered a $200 coupon towards an ENERGY STAR (most efficient) Samsung television to participants who turn in an eligible television.

**General Instructions**
- Interviewer instructions are in green [LIKE THIS]
- CATI programming instructions are in red [LIKE THIS]
- Items that should not be read by the interviewer are in parentheses like this ( )

**A. Introduction**

[IF CELL PHONE NUMBER, ASK IF RESPONDENT IS IN A SAFE PLACE TO COMPLETE THE SURVEY.]

A1. May I speak with [CONTACT NAME]? OR [IF NO NAME] May I speak with the head of household? [IF THAT PERSON IS NOT AT THIS PHONE NUMBER, ASK FOR THEIR NAME AND PHONE NUMBER AND START AGAIN]
   1. (Yes)
   2. (No or not a convenient time) [ASK IF RESPONDENT WOULD LIKE TO ARRANGE A MORE CONVENIENT TIME OR IF YOU CAN LEAVE A MESSAGE FOR A MORE APPROPRIATE PERSON]
   98. (Don’t know) [ASK TO SPEAK WITH SOMEONE WHO KNOWS AND BEGIN AGAIN]
   99. (Refused) [THANK AND TERMINATE]

A2. Hello, I’m [INSERT NAME] calling on behalf of the Independent Electricity System Operator, or IESO. We are conducting an important survey today about Toronto Hydro Electronics Takeback event. Our records show that you received a free smart power bar at the Green Living Show in April 2016. Is this correct?
   - [ASK TO SPEAK WITH SOMEONE WHO WOULD KNOW AND START AGAIN AT A1. IF NO ONE, THEN THANK AND TERMINATE]
Appendix B
Electronics Takeback Pilot Participant Survey

- [IF RESPONDENT ASKS HOW LONG, SAY “APPROXIMATELY 10-15 MINUTES.”]
- [IF NEEDED, STATE “THIS SURVEY IS FOR RESEARCH PURPOSES ONLY AND THIS IS NOT A SALES CALL. THIS IS THE PRIMARY WAY FOR CUSTOMERS TO PROVIDE INPUT INTO THE ENERGY EFFICIENCY PROGRAMS TORONTO HYDRO OFFERS. YOUR PERSPECTIVES HELP TORONTO HYDRO DECIDE WHAT ENERGY EFFICIENCY PROGRAMS TO OFFER.”]
- [ONLY IF ASKED FOR A CONTACT TO VERIFY THE SURVEY AUTHENTICITY, OFFER IESO CONTACT NAME AND NUMBER: XXX]

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

A3. Have you ever been employed by or affiliated with Toronto Hydro or any other utility?

1. (Yes) [THANK AND TERMINATE]
2. (No)
98. (Don’t know) [THANK AND TERMINATE]
99. (Refused) [THANK AND TERMINATE]

B. Awareness and Motivation

B1. To get started, I would like to know how you first learned that Toronto Hydro was offering a free smart power bar at the Green Living Show in April 2016? [DO NOT READ LIST, SELECT ALL THAT APPLY]

1. (Green Living Show website)
2. (At the Green Living Show directly)
3. (Newsletters)
4. (Newspapers)
5. (Online ads)
6. (Radio ad)
7. (Residential condo message boards)
8. (Social media [Facebook, Twitter])
9. (Subway)
10. (Television ad)
11. (Word of mouth)
12. (Other) [SPECIFY: ____________________]
98. (Don’t know)
99. (Refused)
Appendix B. Electronics Takeback Pilot Participant Survey

B2. **[ASK IF ELECTRONIC DEVICES=YES IN THE SAMPLE]** Our records show that you turned in an old electronic device to the Electronics Takeback event. What motivated you to turn in this old device to the event? **[DO NOT READ LIST, SELECT ALL THAT APPLY]**

1. (Get a free smart power bar)
2. (Get a free admission)
3. (Getting rid of my old electronic devices)
4. (Save energy)
5. (Save money)
6. (Help protect the environment)
7. (Influenced by Toronto Hydro pilot marketing)
8. (Influenced by my family, friend, neighbour or co-worker)
9. (Other) **[SPECIFY: ___________]**
97. (Did not turn in an old device)
98. (Don’t know)
99. (Refused)

B3. **[ASK IF ELECTRONIC DEVICES=YES IN THE SAMPLE AND IF B2≠97]** Was the electronic device you brought to decommissioning still in working order?

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

B4. **[ASK IF B3=1]** Were you still using that electronic device or was it a device you did not use anymore?

1. (Still using)
2. (Didn’t use anymore)
98. (Don’t know)
99. (Refused)

C. **Experience and Behaviour**

C1. Did you receive information about ways to save energy when you received your smart power bar?

1. Yes
2. No
98. (Don’t know)
99. (Refused)
C2.  [ASK IF C1=1] How useful did you find the information provided? Was it...

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

C3. Are you currently using the smart power bar that you received as part of the event?

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

C4.  [ASK IF C3=2] Why aren’t you using the smart power bar? [DO NOT READ LIST; SELECT ALL THAT APPLY]

1. (Did not work well)
2. (Too complicated to use)
3. (Did not believe any changes would result in lower energy bills)
4. (Not enough room for it/obstructive)
5. (It broke down/stop working)
6. (It turned off my audio-visual equipment too quickly)
7. (Forgot about it after I got home)
8. (Other) [SPECIFY: _________________]
98. (Don’t know)
99. (Refused)

C5.  [ASK IF C3=1] Since you connected the new smart power bar, have you been using it and the smart function continuously?

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

C6.  [ASK IF C3=1] For what do you mainly use the smart power bar received as part of the event?

1. TV and accessories
2. Computer and accessories
3. (Other) [SPECIFY: _________________] [SKIP TO C9]
98. (Don’t know) [SKIP TO C9]
99. (Refused) [SKIP TO C9]
Appendix B. Electronics Takeback Pilot Participant Survey

C7. [ASK IF C6=1] What do you have plugged into the smart power bar? [SELECT ALL THAT APPLY]
   1. TV
   2. Cable box
   3. Blue-ray/DVD
   4. Sound system
   5. Gaming console
   6. Light
   7. (Other) [SPECIFY: _________________]
   98. (Don't know)
   99. (Refused)

C8. [ASK IF C6=2] What do you have plugged into the smart power bar? [SELECT ALL THAT APPLY]
   1. Computer
   2. Computer monitor
   3. Internet router
   4. External hard drive
   5. Printer
   6. Scanner
   7. Computer speakers/sound system
   8. Fax
   9. Lamp
   10. (Other) [SPECIFY: _________________]
   98. (Don't know)
   99. (Refused)

C9. [ASK IF C3=1] Has the free smart power bar replaced an existing power bar?
   1. (Yes)
   2. (No)
   98. (Don’t know)
   99. (Refused)

C10. [ASK IF C9=1] Was the power bar replaced a smart power bar or a regular one?
    1. (Smart)
    2. (Regular)
    98. (Don’t know)
    99. (Refused)

C11. [ASK IF C10≠1] Were you actively turning your previous power bar on and off?
    1. (Yes)
    2. (No)
    98. (Don’t know)
    99. (Refused)
C12. Besides the free smart power bar that you received as part of the event, do you have one already installed in your home?
   1. (Yes)
   2. (No)
   98. (Don’t know)
   99. (Refused)

C13. [ASK IF C12=1] What do you have plugged into your existing smart bar?
   1. [RECORD RESPONSE]
   98. (Don’t know)
   99. (Refused)

D. Satisfaction

Now, I’d like to ask you a series of questions regarding your satisfaction with various elements of the Electronics Takeback event. Each question will use the same rating scale, using very satisfied, somewhat satisfied, a little satisfied or not at all satisfied.

D1. How satisfied are you with the smart power bar you received as part of the Electronics Takeback event?
   1. (Very satisfied)
   2. (Somewhat satisfied)
   3. (A little satisfied)
   4. (Not at all satisfied)
   98. (Don’t know)
   99. (Refused)

D2. [ASK IF D1=3 OR 4] Why are you [RESPONSE FROM D1] with this smart power bar?
   1. [RECORD RESPONSE]
   98. (Don’t know)
   99. (Refused)

D3. [ASK IF IN BD=ELECTRONIC DEVICES AND IF B2≠97] Overall, how satisfied are you with how easy it was to turn in your old electronic device and receive your new smart power bar?
   1. (Very satisfied)
   2. (Somewhat satisfied)
   3. (A little satisfied)
   4. (Not at all satisfied)
   98. (Don’t know)
   99. (Refused)
D4. **[ASK IF D3=3 OR 4]** Why are you **[RESPONSE FROM D3]** with your experience overall?
   1. **[RECORD RESPONSE]**
   98. (Don’t know)
   99. (Refused)

D5. If you could offer one suggestion for Toronto Hydro to improve the Electronics Takeback event, what would you recommend?
   1. **[RECORD RESPONSE]**
   2. (Nothing)
   98. (Don’t know)
   99. (Refused)

D6. Since you received a smart power bar as part of the Electronics Takeback event, have you participated in other energy efficiency programs provided by the IESO or Toronto Hydro?
   1. Yes
   2. No
   98. (Don’t know)
   99. (Refused)

**E. Demographics**

Finally, I have a few general questions about your household.

E1. What is the primary language spoken in your household?
   1. (English)
   2. (French)
   3. (Chinese)
   4. (Spanish)
   5. (German)
   6. (Italian)
   7. (Arabic)
   8. (Other) **[SPECIFY: ___________]**
   99. (Refused)

E2. What is the last level of education that you have completed? **[SELECT ONE]**
   1. (Grade school or less)
   2. (Some high school)
   3. (High school grad)
   4. (Vocational/technical school)
   5. (College)
   6. (Some university)
7. (University graduate)
8. (Postgraduate degree)
99. (Refused)

E3. How many people, including yourself, live in the household part time? [SELECT ONE]
   1. (One)
   2. (Two)
   3. (Three)
   4. (Four)
   5. (Five)
   6. (Six)
   7. (Seven or more)
   99. (Refused)

E4. Do you own or rent your current place of residence?
   1. (Own)
   2. (Rent)
   3. (Occupy rent-free)
   99. (Refused)

E5. What type of home do you live in?
   1. (Single family detached house)
   2. (Single family semi-detached)
   3. (Townhouse or rowhouse)
   4. (Duplex, triplex or fourplex)
   5. (Condominium)
   6. (Apartment)
   7. (Mobile/manufactured home)
   8. (Other) [SPECIFY: _____________]
   99. (Refused)

E6. How many bedrooms are in your home?
   1. (One)
   2. (Two)
   3. (Three)
   4. (Four or more)
   99. (Refused)
E7. How many bathrooms are in your home?
   1. (One)
   2. (One and a half)
   3. (Two or more)
   99. (Refused)

E8. How many stories is your home?
   1. (One)
   2. (Two)
   3. (Three or more)
   99. (Refused)

E9. How old is your home? An estimate is fine.
   1. (Less than two years old [built in 2015 or after])
   2. (Two to less than seven years old [built between 2010 and 2015])
   3. (Seven to less than 12 years old [built between 2005 and 2009])
   4. (12 to less than 17 years old [built between 2000 and 2004])
   5. (17 to less than 22 years old [built between 1995 and 1999])
   6. (22 to less than 27 years old [built between 1990 and 1994])
   7. (27 to less than 32 years old [built between 1985 and 1989])
   8. (32 to less than 42 years old [built between 1975 and 1984])
   9. (42 to less than 52 years old [built between 1965 and 1974])
  10. (52 to less than 67 years old [built between 1950 and 1964])
  11. (67 to less than 92 years old [built between 1925 and 1949])
  12. (92 years or more [built in 1924 or earlier])
  98. (Don’t know)
  99. (Refused)

E10. How many square feet is your home?
    1. (Less than 1,000)
    2. (1,000 to 1,999)
    3. (2,000 to 2,999)
    4. (3,000 to 4,999)
    5. (5,000 or more)
    98. (Don’t know)
    99. (Refused)

E11. Do you have wireless internet in your home?
    1. (Yes)
    2. (No)
    98. (Don’t know)
    99. (Refused)
E12. Please tell me which of the following categories applies to your total household income for the year 2016.
   1. Less than $20,000
   2. $20,000 to less than $30,000
   3. $30,000 to less than $40,000
   4. $40,000 to less than $50,000
   5. $50,000 to less than $60,000
   6. $60,000 to less than $80,000
   7. $80,000 to less than $100,000
   8. $100,000 to less than $120,000
   9. $120,000 or more
  98. (Don’t know)
  99. (Refused)

This completes the survey. Your responses are very important to Toronto Hydro. We appreciate your participation and thank you for your time. Have a good [EVENING/DAY].
Appendix C. Electronics Takeback Pilot Staff Interview Guide

<table>
<thead>
<tr>
<th>Research Objectives</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify roles and responsibilities</td>
<td>A1, C1</td>
</tr>
<tr>
<td>Document design process including goal setting and purpose</td>
<td>B1-B3</td>
</tr>
<tr>
<td>Assess delivery and marketing methods</td>
<td>C1-C3</td>
</tr>
<tr>
<td>Assess participant and market actor experience including satisfaction and effectiveness of incentive levels</td>
<td>D1-D7, E3, E4</td>
</tr>
<tr>
<td>Document areas of success, challenges and lessons learned</td>
<td>B4, B5, C5-C7, F1, F2, G1, G2</td>
</tr>
<tr>
<td>Assess scalability including design and delivery modifications and target markets</td>
<td>F3, F4</td>
</tr>
<tr>
<td>Identify key evaluation topics</td>
<td>G2</td>
</tr>
</tbody>
</table>

**Audience:** Local distribution companies (LDCs) and Independent Electric System Operator (IESO) staff responsible for the pilot programs.

**Purpose:** Identify key roles and responsibilities; document pilot design process and delivery; assess participant and market actor satisfaction; determine what works well and where challenges exist, scalability of pilot and ways to improve evaluable.

The Cadmus team scheduled and conducted these interviews, which took 45 to 60 minutes. We used the interview results to inform the evaluation plans.

**Target Audience:** The team conducted one interview per LDC (shown in table below) and one with the IESO staff for a total of nine interviews.

<table>
<thead>
<tr>
<th>Pilot</th>
<th>LDCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truckload Event</td>
<td>Enersource</td>
</tr>
<tr>
<td>Home Appliance Market Lift</td>
<td>IESO</td>
</tr>
<tr>
<td>Residential Direct Mail</td>
<td>Canadian Niagara Power Inc.</td>
</tr>
<tr>
<td>Residential Direct Install</td>
<td>Westario</td>
</tr>
<tr>
<td>Electronics Takeback</td>
<td>Toronto Hydro*</td>
</tr>
<tr>
<td>Solar Powered Ventilation Fans</td>
<td>Hydro One Brampton</td>
</tr>
<tr>
<td>Heat Pump Advantage</td>
<td>Hydro One Networks Inc.</td>
</tr>
<tr>
<td>Heat Pump Water Heater Advantage</td>
<td>Hydro One Networks Inc.</td>
</tr>
<tr>
<td>Residential Air Source Ductless Heat Pump</td>
<td>EnWin</td>
</tr>
</tbody>
</table>

* In partnership with Green Living Enterprises and Samsung Electronics.

**General Instructions**

- We did not read the interview guide verbatim, but used it to guide the conservation.
- Interviewer instructions are in green [LIKE THIS].
- Skip pattern instructions are in red [LIKE THIS].
E-mail Invitation

To: [E-MAIL]
From: [YOUR E-MAIL]
Subject: Evaluation Interview about the Electronics Takeback Pilot

Hello [XXX],

As part of the 2016 consumer evaluation, which includes certain pilot programs, the Cadmus team (Cadmus, Apex and Econoler) is conducting in-depth interviews with key local distribution companies (LDCs) and Independent Electric System Operator (IESO) staff. As such, I would like to set up a time to speak with you regarding the Electronics Takeback Pilot.

The purpose of these interviews is to ensure we have a thorough understanding of the pilot design and delivery and to inform development of the evaluation plan. We’ll also get your perspective on things that work well or any challenging areas.

Please let me know if you are available during any of the following times [LIST OPTIONS]. I expect this interview to take about 45 to 60 minutes, but we can always schedule a follow up if we need more time. If these times and dates do not work well, let me know what availability you have next week, and I’ll schedule a time for us to speak then.

I appreciate your time and help with this. I look forward to speaking with you.

Calendar Invite

To: [E-MAIL]
From: [YOUR E-MAIL]
Subject: Interview about the Electronics Takeback Pilot

Hello [XXX],

Thank you for agreeing to speak with me about the Electronics Takeback Pilot. Our call is scheduled for [INSERT TIME AND DATE OF CALL] and will take about 45 to 60 minutes.

Thank you. I look forward to speaking with you.

A. Introduction

Thank you for making the time to speak with me. As part of the IESO pilot evaluation and to inform the development of the Electronics Takeback Pilot evaluation plan, the Cadmus team is conducting in-depth interviews with key LDCs and IESO staff.

The purpose of these interviews is to ensure we have a thorough understanding of the pilot, data sources and what you are looking forward to learning through the evaluation. We’ll also get your perspective on things that work well or any challenging areas. We will use the information you provide
to inform our understanding of the pilot, so that we can provide well rounded and balanced observations and recommendations.

A1. To start, please tell me about your role and main responsibilities working on Electronics Takeback Pilot.

**B. Pilot Design**

Now, I’d like to talk about how the pilot was initially designed.

B1. Thinking about the design and intent of the pilot, what would you say was the pilot’s primary purpose?
   1. [SKIP IF NOT DISCUSSED B1] In your opinion, was the pilot more about building awareness about energy efficiency or decommissioning old electronic devices?

B2. How did you and your team...
   1. Decide which technologies to offer in exchange for decommissioning qualifying, older, working-condition electronics? [OFFERED ADVANCED POWER STRIPS AND A COUPON FOR ENERGY STAR MOST EFFICIENT SAMSUNG TELEVISIONS]
   2. Decide what equipment would qualify for the exchange (what could be brought in and exchanged)?
   3. Decide on the TV coupon value? [CLARIFY VALUE: $100 IN BUSINESS PLAN OR $200 IN GREEN LIVING REPORT]
   4. Select the event timing and location? [PROBE: WHY DID YOU THINK THE GREEN LIVING SHOW WAS THE BEST LOCATION?]
   5. Identify Best Buy as a partner to redeem the TV coupons?
   6. Determine participant eligibility? [REPORT INDICATED PARTICIPANTS HAD TO SHOW PROOF OF RESIDENCY AND COMPLETE A SHORT SURVEY]
   7. Set goals for 10,000 participants (5,000 Tier 1 and 5,000 Tier 2), 2,000 TVs purchased and savings of 204 MWh and 0.12 MW?

B3. Based on the pilot documentation, we understand that 5,000 Tier 1 advanced power strips were given away to customers who purchased admission to the Green Living Show, and 5,000 Tier 2 advanced power strips were given away to customers who brought in a qualifying electronic device. Event ambassadors also distributed 10,000 Save on Energy Coupons Booklets. Is this correct?
   1. Were the 10,000 SaveONenergy Coupons Booklets distributed to the 10,000 customers who received a Tier 1 and Tier 2 advanced power strips?
   2. Did you stop giving Tier 2 advanced power strips once you achieved your goal of 5,000? [IF SO] Did any customers bringing in a qualifying electronic device receive nothing in exchange?
   3. How did you verify that participants were Toronto Hydro customers?
B4. Why do you think the television exchange participation was so much lower than expected? [20 COUPONS GIVEN AWAY AND FOUR COUPONS REDEEMED INSTEAD OF 2,000 AS PLANNED]

B5. What would you change about the pilot to help reach its goals?

C. **Pilot Delivery**

Now, I’d like to talk with you about the pilot delivery.

C1. Please describe how the pilot was administered and delivered, such as the roles of the supporting organizations (Green Living Enterprises, Samsung Electronics, Best Buy and Global Electric Electronic Processing), how customers first learned about the pilot, how the advanced power strips and TV coupons were distributed at the event and the e-waste decommissioning management.

C2. [SKIP IF DISCUSSED IN C1] What was the role of event ambassadors during the Green Living Show? [PROBE: WERE ENERGY CONSERVATION BEHAVIOURS DISCUSSED BY THE EVENT AMBASSADORS?]

C3. Beyond handing out SaveONenergy Coupon Booklets at the Green Living Show, how did the pilot cross-promote province-wide energy savings opportunities?

C4. How did your team monitor and report on the pilot progress?

C5. What, if any, challenges did you encounter with delivering the pilot?
   1. How where these challenges addressed?

C6. [SKIP IF DISCUSSED IN C5] Based on the business plan, it looks like the original design experienced a few changes:
   - One event instead of two (dropped the Best Buy event)
   - Initially, the participants exchanging old electronics during the Green Living Show would receive a Tier 2 advanced power strip, and participants exchanging equipment at Best Buy would receive a Tier 1 advanced power strip

   Why were these three changes made?

C7. Were any other changes made to the pilot?
   1. [IF YES] What were the changes?
   2. [IF YES] Why did you make them?

D. **Customer Experience**

Now, I’d like to talk about customer experience.

D1. How satisfied do you think participating customers were with their pilot experience?
   1. Why do you say that?
Appendix C. Electronics Takeback Pilot Staff Interview Guide

C-43

D2. How effectively do you think the free advanced power strips encouraged customers to decommission old electronic devices?
   1. Why do you say that?

D3. How effectively do you think the free event admission encouraged customers to decommission electronic devices?
   1. Why do you say that?

D4. How effectively do you think the TV coupons encouraged customers to decommission old TVs?
   1. Why do you say that?

D5. We understand you sent follow-up e-mails to participants regarding how to properly install and use their advanced power strip. Is that correct?
   1. [IF APPROPRIATE] Would you mind sharing these with the IESO, so we can view them?

D6. Besides customer e-mails, did you collect any other customer data during the pilot? For example, did you collect survey or focus group results? Would you mind sharing these with the IESO so we can view them?

D7. [SKIP IF NO CUSTOMER SURVEY USED TO QUALIFY PARTICIPANTS IN B2.6 OR DISCUSSED IN D5]. Would you mind sharing the customer survey results with the IESO so we can view them?

E. Market Actor Experience

The next few questions address supporting organizations: Green Living Enterprises, Samsung Electronics, Best Buy and Global Electric Electronic Processing.

E1. What, if anything, do you think were the main challenges for the supporting organizations?

E2. [SKIP IF NO CHALLENGES ARE IDENTIFIED IN E1] How would you change the pilot to address these challenges?

E3. How satisfied do you think the supporting organizations were with their pilot experience?
   1. Why do you say that?

E4. What benefit did organizations realize in taking part in this pilot?

F. Successes, Challenges and Future Planning

For the next set of questions, please think about the pilot overall.

F1. What would you say has worked particularly well?

F2. What were the key lessons learned?
F3. Is the pilot being (or has already been) converted into a local program?
   1. If yes, how was this decided?

F4. If the pilot were expanded, what changes do you think should be made? What markets would be most appropriate? [PROBE: DESIGN AND DELIVERY MODIFICATIONS AND TARGET MARKET]
   1. Why is that?

G. Closing

We are almost finished.

G1. Is there anything else you would like to cover that we did not discuss?

G2. Now thinking about the evaluation, what are you interested in learning from this evaluation?

G3. We would like to talk with key Green Living Enterprises staff about similar questions from their viewpoints. Can you provide us with a list of contact information?
   1. [IF YES, REQUEST CONTACT INFORMATION]
   2. [SKIP IF YES] Who should I request this contact list from? [DOCUMENT NAME AND CONTACT INFORMATION]

Thank you for your input. We appreciate your time. Have a nice day.