

Disclaimer: A draft version of the procedure was previously released in April 2022.  
Minor clarifying edits have been made and this is now the final version of the procedure.  
Producers and their Verifiers are to reference this version instead.

The Resource Productivity and Recovery Authority (“RPRA”) consulted with battery and information technology, telecommunications, and audio-visual equipment (ITT/AV) producers and stakeholders regarding the principles and methodologies used to develop the Verification and Audit Registry Procedure for Batteries and the Electrical and Electronic Equipment (EEE) Verification and Audit Registry Procedure. With consideration given to consultation feedback, RPRA has combined the Batteries and ITT/AV Supply Data Verification Procedures into one procedure (the “Verification Procedure”) to create a more efficient reporting process.

This Verification Procedure is applicable to all registered battery and ITT/AV producers.

This Verification Procedure should be read in conjunction with Ontario Regulation 30/20: Batteries and Ontario Regulation 522/20: Electrical and Electronic Equipment. See [Appendix B](#) for links to documents that contain definitions and criteria that are essential for the understanding and completion of the Verification Procedure.

For information relating to battery and ITT/AV management requirements, read the [Batteries Verification and Audit Procedure](#) and the [EEE Verification and Audit Procedure](#).

## Purpose

Under the Batteries and EEE Regulations, batteries, and ITT/AV producers (“producers”) are required to report supply data each year in order to establish their management requirement for the following year.

Producers are also required to verify their supply data. The purpose of this Verification Procedure is to provide sufficient guidance to producers and the qualified person who will be verifying their data to ensure consistent reporting.

## Definitions

For the purposes of this Verification Procedure:

**“Consumer”** means any the end user of a product. It includes an individual who obtains the product for the individual’s own use and a business that obtains the product for the business’s own use.

**“Performance period”** means the applicable time period, set out under section 4 of the Batteries and EEE Regulations, during which a producer is responsible for collecting or managing batteries and ITT/AV.

**“Post-consumer recycled content”** means content that was recovered from products or packaging that was used by consumers. Note the following:

- Battery producers that supply batteries containing post-consumer recycled glass, metal or plastic may reduce their supply weight by the weight of that recycled content up to a maximum of 50% of the supply weight.
- ITT/AV producers that supply ITT/AV containing post-consumer recycled glass or plastic or batteries supplied with ITT/AV that contain post-consumer recycled content may reduce their supply weight by the weight of that recycled content up to a maximum of 50% of the supply weight.

**“Product”** means material that is a thing, part of a thing, or combination of things intended for use by a consumer, subject to any alternative meaning or meanings that may be provided for in the regulations.

**“Qualified person”** means an individual, either an employee of the business or a hired third-party, who has one of the following designations and is not the same person who prepared the supply report. The “qualified person” will be referred to as the **“Verifier”** for the rest of the document:

- CPA, (Chartered Professional Accountant) in Canada
- CPA (Certified Public Accountant) in the US
- ACCA (Association of Chartered Certified Accounts) Qualification
- CIA (Certified Internal Auditor)
- CPB (Certified Professional Bookkeeper) in Canada
- RPA (Registered Professional Accountant) in Canada

**“Supply”** means:

- (a) to offer the product for sale, expose it for sale or possess it for sale,
- (b) to distribute the product, whether for consideration or not, and
- (c) to lease the product, offer it for lease, expose it for lease or have it in possession for lease.

**“Verifier”** has the same meaning as “Qualified person” for the purpose of this Verification Procedure.

**“Weight of batteries”** means the weight of batteries supplied to consumers separately from other products, excluding the weight of any printed paper or packaging that may be supplied with the batteries.

**“Weight of ITT/AV”** means the weight of ITT/AV including all components, parts, or peripherals, including batteries, that are provided with the product at the time of supply to the consumer, but must exclude the weight of any printed paper or packaging supplied with the product.

**For compliance purposes:**

- (a) The requirement to include a description of the verification processes in the verification statement will be satisfied by a reference to this Verification Procedure if the Verifier completes the verification steps below and provides a conclusion based

on carrying out those steps. Where these verification steps are carried out and the verifier is able to give a conclusion, no other verification steps are required.

- (b) It is recognized that in a particular situation it may not be possible for the Verifier to carry out one or more of these verification steps and, as a result, the Verifier may carry out other verification steps. If so, the verification statement is expected to identify the verification steps that could not be carried out, the reason why, and a description of the verification steps that were carried out instead of or in addition to these verification steps.
- (c) In the event that a Verifier is unable to give a conclusion after carrying out the verification steps below, a producer has the option of (a) providing a report that reflects that outcome and a description of the exceptions, or (b) retaining the Verifier to carry out additional verification steps as may be recommended by the Verifier and preparing a report that includes a description of those additional verification steps.
- (d) Nothing in this Verification Procedure limits the ability of an inspector to review the records and data and require records or data.

## Reporting Requirements

Beginning in 2022, producers are expected to verify their supply data using this Verification Procedure. The verification report is expected to include the results of applying these specific verification steps and the qualifications of the Verifier. The Verifier is expected to be qualified as set out in the definitions section above.

Producers can choose to provide the actual weight of the new batteries and ITT/AV supplied or use the Weight Conversion Factors (the “WCF”) in this Verification Procedure to calculate the weight. In this Verification Procedure, the weight of the batteries and ITT/AV means either the actual weight or the corresponding weight based on the WCF found in [Appendix C](#) and [Appendix D](#).

To determine the calculated weight of the batteries and ITT/AV supplied, producers multiply the units of new batteries and ITT/AV supplied for a product category (i.e., cell phone batteries) within a product type (i.e., Lithium Cobalt Oxide) by the corresponding WCF. To determine the number of units provided into Ontario, producers can choose to use either the actual units or the calculated units of batteries and ITT/AV supplied using the formula set out in [Appendix E](#).

## Application and Review of the Verification Procedure

After considering the feedback received from battery and ITT/AV producers regarding proposed verification methodologies, RPRA is implementing the below verification method.

In 2022, **all** registered producers are expected to submit a Verification Report to RPRA. Producers that enter the Ontario Market after 2022 are also expected to submit a Verification Report to RPRA verifying the first-year supply data. Producers will need to work with a Verifier to submit a report to RPRA verifying the supply data being submitted.

Producers that supply a combination of tires, batteries, and ITT/AV are expected to submit one CPA audited supply report for tires and a second report for batteries and/or ITT/AV

verified by a Verifier in accordance with this Verification Procedure to meet the minimum reporting requirement. If preferred, these producers can exceed the minimum reporting requirements by providing one audited report for a combination of materials supplied (i.e. tires, batteries, and ITT/AV).

RPRA will use the 2022 Verification Reports submitted to assign producers to a large producer or small producer category based on weight. Each category will have different reporting requirements beginning in 2023. RPRA will consult on how to divide producers into large and small categories at a future date in 2022.

Starting in 2023, only large battery and/or ITT/AV producers will be expected to submit a Verification Report, although all battery and/or ITT/AV producers remain subject to inspections by RPRA regardless of the producer's size.

In 2023, the Registrar will also carry out a review of this Verification Procedure to determine whether there is a need to consider changes, including the frequency of the verification process.

## **Verification Steps**

Under the Batteries Regulation, producers that supply batteries containing post-consumer recycled glass, metal or plastic may reduce their supply weight by the weight of that recycled content up to a maximum of 50% of the supply weight.

Under the EEE Regulation, ITT/AV producers that supply ITT/AV containing post-consumer recycled glass or plastic or batteries supplied with ITT/AV that contain post-consumer recycled content may reduce their supply weight by the weight of that recycled content if applicable. ITT/AV producers may also reduce their supply weight by the weight of products with a manufacturer's warranty or right to repair.

For this reason, battery and/or ITT/AV producers are required to validate the following:

- Annual supply weight before management reduction, and
- If applicable, the weight of management reduction (i.e., post-consumer recycled content, manufacturer's warranty or right to repair).

The verification steps below address each component separately.

### **Verification Steps for Annual Supply before Management Reduction**

Battery and ITT/AV producers can meet their supply data reporting requirement by providing a report prepared by a Verifier using the following verification steps:

1. Document responses for the following questions:
  - What is the producer's marketing process, including how products are supplied in Ontario (e.g., ecommerce, retail sales, etc.)?
  - How are products supplied in Ontario tracked separately from products supplied in other provinces?

- How is a SKU (Stock Keeping Unit) set up in the producer's ERP/database/system, and what product specifications are included (e.g. product weight, product description, brand name, etc.)?
  - What are the producer's obligations based on the definition of a producer? (Refer to the corresponding Regulation.)
  - What are the brand names of products for which the producer has collection and resource recovery obligations?
  - What is the producer's methodology for determining how the products were supplied in Ontario (refer to the definition of "supply" in definition section)?
  - What is the producer's step-by-step process for preparing the product supply report, including what systems or applications are used to track product supply and what reports are used? (Ensure that all details required to understand how the product supply report is prepared are documented.)
  - What is the producer's methodology for determining the weight of the products supplied in Ontario?
  - How does the producer determine which products are included in the product supply report and which ones, if any, are excluded, based on the definitions in the Batteries and EEE Regulations?
2. Select a sample of obligated SKUs in accordance with [Appendix A](#) and perform the following for each:
    - If actual weight is used, agree it to the manufacturer's specifications.
    - If calculated weight is used, compare the calculation to the WCFs in [Appendix C](#) and [Appendix D](#) to determine if the products were reported in the correct categories and if the WCFs were applied correctly.
  3. Validate the accuracy of the product units reported.
    - If actual number of units is used, agree it to the producer's sales records to validate the total units reported.
    - If calculated number of units is used:
      - Agree the Ontario population to the most recent Statistics Canada official census,
      - Agree the population of each province and territory in Canada in which the producer sells batteries and/or ITT/AV to the most recent Statistics Canada official census, and
      - Recalculate the number of Ontario units supplied based on [Appendix E](#).
  4. Select a sample of non-obligated SKUs in accordance with [Appendix A](#). For each sample selected, verify that they do not meet the definition of "battery" or "ITT/AV," as applicable, based on the SKU selected.
  5. Confirm the accuracy and completeness of the reporting of obligated products supplied to the Ontario market by sampling one month's data and comparing the raw sales report with the obligated product supply report. Select samples in accordance with [Appendix A](#) and scrutinize the variances and validate if they are reasonable.
  6. Select a sample in accordance with [Appendix A](#) of manual adjustments made to the product supply report and assess if they are reasonable. For example:

- Products supplied into Ontario and subsequently shipped out of Ontario will result in an adjustment to the supply report.

## **Verification Steps for Management Reduction**

### **Batteries:**

Verification steps to validate post-consumer recycled content:

Battery producers that claim post-consumer recycled content are expected to have a qualified third-party verification performed by an independent product certification organization, such as Underwriters Laboratories of Canada (ULC), Intertek, or another third party that is qualified to provide such verification. The verification is expected to include an opinion on the accuracy of the total weight of the post-consumer recycled content.

The third party is expected to do the following:

- 1) Document the producer's step-by-step methodology to determine the total weight of post-consumer content claimed.
- 2) Conduct a review of the actual bill of material and receipt for the specified products with recycled content. Trace and validate the weight of the recycled content in the batteries to the products supplied.
- 3) Identify what types of materials are included in the post-consumer product (i.e. only glass metal and plastic in batteries can count towards a reduction).
- 4) Assess the accuracy of the post-consumer content weight in the new product for which supply data is being reported.
- 5) Confirm that the post-consumer content was used toward the correct management reduction in the correct type of battery (i.e. post-consumer recycled content used in single-use batteries can be used to reduce the supply weight of single-use batteries and not rechargeable batteries, etc.).
- 6) Verify that the total post-consumer content claim is less than 50% of the total supply weight.

### **ITT/AV:**

Verification steps to validate post-consumer recycled content:

ITT/AV producers that claim post-consumer recycled content are expected to have a qualified third-party verification performed by an independent product certification organization such as Underwriters Laboratories of Canada (ULC), Intertek, or another third party that is qualified to provide such verification. The verification is expected to include an opinion on the accuracy of the total weight of the post-consumer recycled content included.

The third party is expected to do the following:

- Document the producer's step-by-step methodology to determine the total weight of post-consumer content claimed.
- Conduct a review of the actual bill of material and receipt for the specified recycled content product. Trace the weight of the recycled content in the ITT/AV to the products supplied.

- Identify what types of materials are included in the post-consumer product (i.e. only glass and plastic contained in ITT/AV, and post-consumer recycled content in batteries supplied in or with ITT/AV can count towards a reduction), and
- Assess the accuracy of the post-consumer content weight in the new product for which supply data is being provided.

Verification steps to validate the manufacturer's warranty:

The Verifier is expected to do the following:

- Obtain and read the producer's corporate warranty policy.
- Select a sample of warranty claims in accordance with [Appendix A](#) and agree the warranty period to the producer's warranty policy (eligible warranty periods start one year from the date of purchase).
- Recalculate the producer's total warranty reduction by taking the weight of the material for which the warranty was provided and applying a 5% reduction for each full calendar year under warranty after one year from the date of purchase.
- Select a sample of warranty claims in accordance with [Appendix A](#) and ensure customers did not incur any additional charges by tracing to the replacement orders.

Verification steps to validate the right to repair:

The Verifier is expected to do the following:

- Validate if the producer provides information to the consumer at no charge regarding how to repair the product (e.g. online repair manual or free repair hard copy manual).
- Select a sample of repair orders in accordance with [Appendix A](#) and document the following for each:
  - Whether the customer was charged for tools or parts;
  - Whether the information, tools, and parts are still available to the customer at the time the producer is reporting the supply data;
  - Whether the producer only applied a 10% reduction to the product category that offered a repair option. For any product type that does not have a repair order, confirm with management any policy or documentation to support the provision of repair tool/parts/information to the customer for free repair; and
- Recalculate the producer's total right to repair reduction by taking the weight of the product that provided a repair option and multiplying it by 10%.

Verification step to validate the maximum management reduction for ITT/AV:

- Verify the total management reduction claimed by the ITT/AV producer, including post-consumer content, warranty, and right to repair.
- Validate that this total is less than 50% of the total supply weight.

Date	Revisions
Issued May 2022	N/A

## Appendix A – Sampling Methodology

Variable sampling is a statistical sampling method that estimates the amount of misstatement in an account balance or class of transactions and compares it to an allowable level of tolerable misstatement. The samples should be randomly selected (unbiased) from the entire population.

The following table sets out the sample sizes required:

Population	Sample size required
500+	60
250	50
100	40
50	30
10	10

Note: these sample sizes are based on 95% confidence level and 5% tolerable deviation rate.



## Appendix B – Links

Batteries Regulation (O. Reg. 30/20): <https://www.ontario.ca/laws/regulation/r20030>

Electrical and Electronic Equipment Regulation (O. Reg. 522/20):  
<https://www.ontario.ca/laws/regulation/r20522>

Resource Recovery and Circular Economy Act, 2016:  
<https://www.ontario.ca/laws/statute/16r12>

Statistics Canada official census: <https://www12.statcan.gc.ca/census-recensement/index-eng.cfm>

RPRA Compliance Bulletins:

- [What batteries need to be reported?](#)
- [What ITT/AV needs to be reported?](#)

RPRA Registry Procedures:

- [Batteries Verification and Audit Procedure](#)
- [EEE Verification and Audit Procedure](#)

## Appendix C – Batteries Weight Conversion Factors:

### Single-Use Batteries Weight Conversion Factors by Chemistry and Size

Battery Types by Material	Weight (kg)
Alkaline Manganese - Button Cell	0.0015
Zinc-Air - Button Cell	0.0026
Silver Oxide - Button Cell	0.0023
Lithium - Button Cell	0.0026
Lithium - AA	0.0145
Lithium - AAA	0.0076
Lithium - Primary	0.0100
Zinc-Carbon – 6 V oblong lantern	1.2700
Zinc-Carbon – 6 V square lantern	0.6000
Zinc-Carbon – 9 V	0.0375
Zinc-Carbon - D	0.0945
Zinc-Carbon - C	0.0483
Zinc-Carbon - AA	0.0170
Zinc-Carbon - AAA	0.0097
Alkaline Manganese - AAA	0.0112
Alkaline Manganese - AA	0.0234
Alkaline Manganese - C	0.0689
Alkaline Manganese - D	0.1445
Alkaline Manganese – 9 V	0.0455
Alkaline Manganese – 6 V square lantern	0.7485
Alkaline Manganese – 6 V oblong lantern	1.5855

### Rechargeable Weight Conversion Factors by Chemistry and Size

Size	Chemistry	Weight (kg)
4 V	Lead Acid	1.330
6 V	Lead Acid	1.626
9 V	Nickel-Cadmium	0.035
	Nickel-Metal Hydride	0.042
12 V	Lead Acid	2.043
N	Nickel-Cadmium	0.010
	Nickel-Metal Hydride	0.011
AAA	Nickel-Cadmium	0.0105
	Nickel-Metal Hydride	0.013
	Other	0.011
AA	Nickel-Cadmium	0.0215
	Nickel-Metal Hydride	0.0271
	Other	0.022
A	Nickel-Cadmium	0.032

		Nickel-Metal Hydride	0.040
<b>C</b>		Nickel-Cadmium	0.073
		Nickel-Metal Hydride	0.080
		Other	0.058
<b>Sub C</b>		Nickel-Cadmium	0.0529
		Nickel-Metal Hydride	0.055
<b>D</b>		Nickel-Cadmium	0.145
		Nickel-Metal Hydride	0.1628
		Other	0.104
<b>F</b>		Nickel-Cadmium	0.231
		Nickel-Metal Hydride	0.2613
<b>Pin Cell</b>		Lithium-Ion	0.001
<b>Button Cell</b>		Lithium-Ion	0.0025
<b>Prismatic Single Cell</b>		Lithium-Ion	0.0217
<b>Cylindrical Single Cell</b>		Lithium-Ion	0.0418
<b>Pouch Cell</b>	55-500 typical nominal mAh	Lithium-Ion	0.0052
	501-1000 typical nominal mAh	Lithium-Ion	0.0158
	1001- 2000 typical nominal mAh	Lithium-Ion	0.030
	2001- 5000 typical nominal mAh	Lithium-Ion	0.055
	>5001 typical nominal mAh	Lithium-Ion	0.112

#### Rechargeable Weight Conversion Factors by Application

Application	Chemistry	Weight (kg)
<b>Cell Phones</b> E.g. cellular phones, smartphones	Lithium Cobalt Oxide (LCO)	0.028
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.053
<b>Cameras/Games</b> E.g. video game controller	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide)	0.215

<b>Others portable</b> E.g. power banks, shavers, toothbrushes, drones, cordless mice, remote controls, MP3, cordless landline phones	Nickel-Metal Hydride (NiMH)	0.042
	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Iron Phosphate)	0.215
	Lead Acid (PbA)	0.806
<b>Tablets</b>	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide)	0.246
<b>Laptops/Portable PC</b>	Lithium Cobalt Oxide (LCO)	0.341
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.438
<b>Cordless tools</b> E.g. gardening tools, cordless tools, power tools	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.495
	Nickel-Metal Hydride (NiMH)	0.923
	Nickel-Cadmium (NiCd)	1.182
	Lead Acid (PbA)	1.556
<b>E-bikes</b>	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Cobalt Oxide, Lithium Iron Phosphate)	2.802
<b>Industrial excluding mobility</b> E.g. pallet lifters, forklifts, energy storage for industrial use, other non-portable	Any Nickel (Includes Nickel-Cadmium Nickel-Metal Hydride)	2.963
	Lithium-Ion (Includes Lithium Manganese Oxide, Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Nickel Cobalt Aluminium Oxide, Lithium Iron Phosphate)	2.984
<b>Lighting</b> E.g. security lighting, shielded or full cut-off lamps, control and power lines	Nickel-Cadmium (NiCd)	2.963
<b>Medical</b> E.g. measuring instruments, medical carts and beds, portable defibrillators	Lithium Cobalt Oxide (LCO)	2.984
<b>Uninterruptible Power Supply (UPS)</b>	Lithium Iron Phosphate (LFP)	2.984
<b>Telecom</b>	Lithium Nickel Manganese Cobalt Oxide (NMC)	2.984
<b>Personal Mobility Devices/ Light Electric Vehicles</b> E.g. golf carts, mobility scooters	Lithium Nickel Manganese Cobalt Oxide (NMC)	3.284
<b>Off-Grid Energy Storage</b> Eg. solar/wind energy systems, RV/boat energy storage	Lithium Iron Phosphate (LFP)	2.984

## Appendix D – ITT/AV Weight Conversion Factors:

Weight Conversion Category	Weight Conversion Factor (kgs)	These are examples of what is captured under each weight conversion category, it is not an exhaustive list.
Small IT Equipment/ Computer Peripherals	0.4	<p><b>Computer peripherals:</b> keyboard, mouse, webcams, modems, routers, pc's docking station</p> <p><b>External drives and memory:</b> external DVD/optical drives, CD writers, external disk drives, USB sticks, memory cards</p> <p><b>POS peripherals:</b> card reading appliance, money authenticator</p> <p><b>Small IT equipment:</b> calculators (including those that have printing capabilities), translating devices, except portable translating devices (see Portable Audio and Video), laser pointers</p> <p><b>Other:</b> power supply, adaptors</p> <p><b>Not included:</b> <u>battery chargers (see Small Personal Electronics), headphone/microphones (see Small Personal Electronics)</u></p>
Desktop PCs	8.77	<p><b>Desktop PCs:</b> Desktop personal computers, all-in-on computers, data processing machines, central processing unit, thin and zero clients, microcomputer, minicomputers</p> <p><b>Not included:</b> <u>standalone monitors (see Flat Display Panel Monitors)</u></p> <p><u>For any accessories/peripherals sold bundled with a desktop computer, each relevant weight conversion factor should be used</u></p>
Portable Computers (laptops and tablets)	0.85	<p><b>Portable Computers:</b> Laptops, notebooks, netbooks</p> <p><b>Tablets:</b> slates, mini tablets, phablets</p> <p><b>Not included:</b> <u>e-readers (see Portable Audio and Video)</u></p>

<b>Desktop/Countertop Printers (includes printer cartridges sold with)</b>	10.32	<b>Desktop Printers/Copiers/Scanner/Fax:</b> combination printer/copier/scanner/fax, desktop copiers, answering machines/fax combinations, inkjet printers, photo printers, laser printers, matrix printers, 3D-printers, picture scanners, fax machines  <b>Other printers:</b> thermal printers, pricing devices, label printers  <b>Other:</b> typewriters
<b>Desktop Printer Ink Cartridges</b>	0.12	
<b>Non-Cellular Telephone and Answering Machines</b>	0.45	<b>Telephones:</b> Cordless telephones, telephone sets, interphone, answering machines, videophones, telephone switchboard (small)  <b>Other:</b> two-way radios, baby monitors without video (see Flat Display Panel Monitor for video baby monitors)
<b>Mobile Phones</b>	0.09	<b>Mobile phone:</b> Cellular phones, smartphones  <b>Other:</b> pagers, personal assistant, PDA
<b>IT Equipment, including wide format printers</b>	48.02	<b>IT equipment:</b> servers, workstations, microfilm readers, electric multimedia table, professional electrical cabinet, ticket detector, barcode scanner, check filler, binding machine, accounting machines, postage-franking machines, ticket-issuing machines  <b>Wide format printers:</b> blueprint devices, plotters
<b>Floor Standing Printers</b>	122.86	Large multi-functionals, floor-standing copiers/printers
<b>Toner Cartridges for floor standing multi-functional equipment</b>	0.84	
<b>Flat Display Panel Monitors</b>	5.5	LCD, LED, OLED monitors  <b>Other:</b> game screens, digital photo displays, parts of LCD monitors, indicator panels, video baby monitors  <b>Not included:</b> TVs (see Flat Display Panel TVs – appropriate size)

<b>Small Personal Electronics, including chargers</b>	0.39	<p><b>Small personal electronics:</b> Headphones, earphones, microphones, headphone/microphone combinations, Bluetooth headsets</p> <p><b>Remote controls</b> (except those for use with game consoles – see Video Game Devices)</p> <p><b>Chargers:</b> Battery charger, charger for primary and secondary batteries</p> <p><b><u>Not included:</u></b> power supply, adaptors, batteries accumulators (see Small IT)</p>
<b>Portable Audio and Video</b>	0.23	<p><b>Audio Players:</b> MP3 players, portable radios, portable CD/DVD/players, world receivers, clock radios, alarm cd-radios</p> <p><b>Portable Speakers</b> (for other speakers see Speakers)</p> <p><b>Car displays and navigation:</b> Portable navigation, navigation devices with monitors, GPS devices</p> <p><b>E-readers</b></p> <p><b>Other:</b> portable translation device, tape recorder, voice recorders, karaoke machine</p>
<b>Non-Portable Audio Recording and Playing Devices</b>	3.73	<p><b>Non-portable audio players/recorders:</b> radios, Hi-Fi, CD-players/recorders, car stereos, record players, MP3/CD players, tuners, minidisc players/recorders, tape decks</p>
<b>Musical Instruments</b>	Use actual weight	<p><b>Musical instruments:</b> digital piano/keyboard/pianoforte, electric guitar, electrical organ, electrical accordions, synthesizers</p> <p><b>Musical peripherals:</b> equalizer, audio delay, sound processor, sound mixer, effects pedal, music docking station</p> <p><b>Other:</b> amplifiers</p>
<b>Video and Projectors (incl. antennas and receivers)</b>	2.7	<p><b>Video players and recorders:</b> DVD-player, DVD-recorder, laser disc player, blue-ray player, video-DVD player combination,</p> <p><b>Cameras:</b> cinematographic and television cameras (for other cameras see Cameras)</p>

		<p><b>Projection equipment:</b> cinematographic projectors, overhead projectors, video projectors, slide projector</p> <p><b>Antennas and receivers:</b> satellite receiver, satellite dish, cable TV, set-top box antenna, signal amplifier, antenna, satellite power amplifier, broadband amplifier, TNT receiver, satellite demodulator</p>
<b>Speakers</b>	2.14	<p><b>Speakers:</b> single and multiple loudspeakers, multimedia speaker, small loudspeaker MP3 player</p> <p><b>Other:</b> megaphone</p> <p><b>Not included:</b> portable speakers (see <u>Portable Audio &amp; Video</u>)</p> <p><u>For professional speakers use actual weights</u></p>
<b>Cameras, including security cameras</b>	0.29	<p><b>Cameras:</b> Digital photo cameras, electrical still picture camera, camera lens, DSLR camera, camcorder/video recorder, video camera, security cameras</p> <p><b>Not included:</b> cinematographic and television cameras (see <u>Video and Projectors</u>)</p>
<b>Flat Display Panel TVs less than or equal to 45 inches</b>	10.2	<p>LED, LCD, Plasma, OLED televisions</p> <p><b>Other:</b> TV-DVD combination, TV-tuner combination, TV-video combination, portable TV</p> <p><b>Not included:</b> monitors (see <u>Flat Display Panel Monitors</u>)</p> <p><u>For any accessories/peripherals sold bundled with a TV, each relevant weight conversion factor should be use</u></p>
<b>Flat Display Panel TVs greater than or equal to 46 inches</b>	Use actual weight	<p>LED, LCD, Plasma, OLED televisions</p> <p><b>Other:</b> TV-DVD combination, TV-tuner combination, TV-video combination, portable TV</p> <p><b>Not included:</b> monitors (see <u>Flat Display Panel Monitors</u>)</p>



		<u>For any accessories/peripherals sold bundled with a TV, each relevant weight conversion factor should be use</u>
<b>Video Game Devices, including portable and handheld devices</b>	0.48	Game consoles for use with TV or monitor, portable video game devices, game console accessories, handheld video game devices
<b>Drones</b>	Use actual weight	Drones with audio-visual equipment

## **Appendix E – Units Supplied into Ontario Calculation**

The estimated amount of batteries and ITT/AV supplied into Ontario can be determined by using the following formula:

$$(P1/P2) \times \text{Canada National Sales}$$

“P1” is the population of Ontario, as reported by Statistics Canada in the most recent official census.

“P2” is the total population of provinces and territories in Canada in which the producer sells batteries in, as reported by Statistics Canada in the most recent official census.

“Canada National Sales” is the total units of batteries/ITT/AV producer sold in Canada in the calendar year.