

# BC Hydro Power Smart

Tracking Study: Showroom Presence Study of Appliances and TVs  
February 2010

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# Background | Methodology

## Background

Household appliances and consumer electronics are the second largest source of energy consumption after heating in B.C. residential homes. Therefore, the energy efficiency of these products is critical to energy savings. Over the past several years, BC Hydro Power Smart has actively promoted consumer adoptions of Energy Star® appliances and consumer electronics through customer education, individual residential program campaigns and cooperation with manufacturers and retailers on Energy Star® product promotions.

The shelf space study of household appliances and TVs with the different energy specifications currently available to British Columbia consumers will help BC Hydro Power Smart understand the current market conditions and establish a baseline estimation of current product offerings.

## Methodology

This study uses an observational approach to measure the presence of Energy Star® appliances and TVs in retail store showrooms. In this approach, researchers are provided detailed training about appliances and TVs and provided clear parameters in order to complete a census count of the products of interest in each store.

All data collection for appliances and TVs was performed from January 25 through February 16, 2010.

The sample plan was created in conjunction with the client team at BC Hydro Power Smart. The list of stores was randomly drawn from a database of stores created for this study. A total of 42 stores were visited during the 2010 showroom presence study. Quotas were placed on each product category to ensure 25+ sets of data were collected during the study.

# Notes and Weighting

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## EnerGuide Rating

Unless otherwise specified, the average EnerGuide rating takes into consideration the EnerGuide ratings from all products. In this report, comparisons are often made between the average EnerGuide rating of Energy Star® and non-Energy Star® products. In this case the data has been filtered to provide the average EnerGuide rating for **only** Energy Star® labelled models vs. **only** models without an Energy Star® label.

The EnerGuide rating is usually collected from one or more of the following sources: the Energy Star website, tags attached to the appliance (in-store) and store websites. If the information is not found for a model it is not included in EnerGuide rating calculations.

## ENERGY STAR

ENERGY STAR is a voluntary labeling program that identifies 10-25% of the more energy efficient products in the market. Products with the ENERGY STAR label can be found at [www.energystar.gc.ca](http://www.energystar.gc.ca)

## Consortium for Energy Efficiency (CEE)

CEE, through its Super-Efficient Home Appliances Initiative, has developed a set of specifications and qualifying products list (QPL) to define energy efficient appliances and electronics. Qualifying product lists can be found at [www.cee1.org](http://www.cee1.org)

## Sample Plan

Please note that while we adhered closely to the sample plan created in 2009, there were some changes. It should be noted that retailer sampled in 2009 was not sampled in 2010, which may have an impact on the results particularly for freezers.



## Weighting

Data were weighted to reflect each retailer's share of the market within the Lower Mainland and outside the Lower Mainland. In this case "retail showroom presence share" refers to the number of stores a retail banner has in a region. For example, if there are stores in the Lower Mainland and we sampled two, the data from those two stores will be weighted up to reflect the entire region (all 10 stores). Our weighting calculations are based on the number of stores in each region by retail banner according to the information on their web sites and the number of stores sampled in each region.

An important assumption made during this process is that an individual store is representative of any other store under the same retail banner within the same region. For example, Retailer X has a store in Langley, other locations found anywhere else in the Lower Mainland will be the same.

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Based on the sample sizes used for this study we do not consider the results to be statistically significant. The impact of small sample sizes may, in some cases, magnify small differences during regional comparisons. To this end we are concentrating on overall differences between the Lower Mainland and outside the Lower Mainland.

Regarding identifying whether a product had an Energy Star® label, if the label was not found on the unit or in the specifications tag attached to the unit, we assumed the model was not Energy Star® compliant. During the data clean-up stage for each product, online resources and data from other stores (when available) were used to supplement missing data (excluding pricing data, which may be unique to each store).

In this report the term “BC showrooms” or “retailer showrooms” represents the showrooms of all the store banners sampled and weighted to proportions reflecting each retailers share of the market (by number of stores in BC).

**Please note:** the purpose of this study is to measure and track the showroom presence among specific retailers of the five product categories covered in this project. The presence of these products on the showroom floor directly impacts their consumer exposure, but should not be considered a proxy for sales as even the most popular models may only have one display model in any given store.

**Note that that throughout the report some totals may not sum due to rounding.**

# Refrigerators



## Key Findings

This section presents the key findings from the 2010 showroom presence study of refrigerator/freezer combo units (refrigerators).

### Showroom Presence

On average, the refrigerator section of a retail store showroom has 35 refrigerator units consumers can examine.

Bottom mount refrigerators account for 56% of all refrigerators in BC showrooms, followed by top mount refrigerators (26%) and side-by-side refrigerators (19%).

Among the units observed in BC showrooms, two-thirds (68%) were clearly marked as being Energy Star® refrigerators.

After using online resources to determine the status of unknown models, the results show that more than three-quarters (78%) of refrigerators in BC showrooms have an Energy Star® label, an increase of 21 percentage points from 2009. The greatest impact is seen outside the Lower Mainland, where the showroom presence of Energy Star® refrigerators increased by 25 percentage points.

One percent (1%) of refrigerators on store shelves are equivalent to CEE Tier 3 specifications and none meet Tier 2 specifications.

### Energy Efficiency

The average EnerGuide rating among refrigerator units in BC showrooms is 471 kWh/year. The average EnerGuide rating among Energy Star® labelled refrigerator units is 466 kWh/year or 23 kWh/year per cubic foot of capacity.

On a per cubic foot basis, Energy Star® refrigerators consume 3 kWh/year less than non-Energy Star® refrigerators (26 kWh/year vs. 23 kWh/year). These results are consistent with the findings from 2009.

### Capacity

The average refrigerator in retail showrooms has a combined capacity (fridge + freezer) of 20.3 cubic feet. Just under one-half (46%) of all refrigerators have a total capacity of 18 to 20 cubic feet. These results are consistent with the findings from 2009.

### Pricing

The average price of a refrigerator in BC showrooms is \$1,590.

The size of a refrigerator has a direct relation to price. The average price of refrigerators with 18 to 20 cubic feet of capacity is \$1,139 per unit, \$1,022 less than refrigerators with 21 to 24 cubic feet of capacity. Price fluctuations are influenced by a number of factors, including changes in the distribution of refrigerator types, high priced specialty models and the introduction of new products.

Where available, the following data on refrigerators were gathered from the stores our researchers visited:

- Model, Brand Name and Manufacturer
- Energy Star® label
- EnerGuide Rating (kWh/Year)
- Capacity (cu. ft.) (freezer, fresh food section, and total)
- Defrost type (manual, auto and frost-free)
- Price and Sale/Discount Price
- Coupons or Rebates (from BC Hydro, retailers or manufacturers)
- Refrigerator type (top load, bottom load or side-by-side)

The purpose of this study is to measure the showroom presence of refrigerators. The presence of refrigerator units on the showroom floor directly impacts their consumer exposure, but should not be considered a proxy for sales as even the most popular models may only have one display model in any given store.

The following is used to analyze the results of data collection:

Units on the showroom floor – In this method, relative product shares are calculated using the physical number of units on the showroom floor that are within reach of our researchers. Stock in the warehouse or placed out of reach of our researchers were not counted during this study. Relative share is calculated as the number of units on the showroom floor of a certain type as a percent of all units on the showroom floor. For this shelf presence study we are assuming that popular models or models receiving special promotions would be allocated space on the showroom floor while less popular models would more often be kept in warehouses for special orders.

In this report the term “BC showrooms” or “retailer showrooms” represents the showrooms of all the store banners sampled and weighted to proportions reflecting each retailers share of the market (by number of stores in BC).

### Average Number of Units in Showrooms (opened or boxed), by Category

	Department Store	Appliances/Furniture	Other	Total
2009	44	34	18	32
2010	51	34	24	35

### Average Number of Units in Showrooms (opened or boxed), by Region

	Lower Mainland	Outside Lower Mainland	Total
2009	30	33	32
2010	39	31	35

There is an average of 35 refrigerator units (including boxed and display units) in the showroom of the retailers sampled for this study. On average department stores have the most refrigerators (51) in their showrooms, followed by appliance/furniture stores (34) and stores in the "other" category (24).

Proportion of Refrigerators, by Type, 2009 - 2010

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
Top	35%	36%	36%	27%	23%	26%
Bottom	45%	42%	43%	53%	60%	56%
Side by side	19%	22%	21%	20%	17%	19%

Refrigerators that have a freezer on the bottom (bottom mount) account for 56% of all refrigerators in BC showrooms, an increase of 13 percentage points over 2009. Top mount refrigerators account for one-quarter (26%) of all refrigerators in BC showrooms, a decrease of 10 percentage points from 2009.



**Proportion of Energy Star® Labelled Refrigerators (Actual vs. Observed), by Store Category, 2010**

	Department Store	Appliances/Furniture	Other	Total
Actual	84%	71%	78%	78%
Observed	75%	62%	68%	69%

**Proportion of Energy Star® Labelled Refrigerators (Actual vs. Observed), by Type, 2010**

	Refrigerator Type		
	Top	Bottom	Side-by-side
Actual	64%	83%	83%
Observed	55%	74%	76%

The above tables shows the proportion of refrigerators observed in-store that were clearly Energy Star® products. Researchers looked for the Energy Star® logo or information on its Energy Star® status on the price/information tag that is attached to many units. The "actual" proportion of Energy Star® units in BC retail showrooms includes missing information acquired though online resources and a list of Energy Star® appliances by using the unit's model number.



## Proportion of Energy Star® Labelled Refrigerators, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	68%	48%	57%
2010	76%	80%	78%

## Proportion of Energy Star® Labelled Refrigerators, by Store Category, 2009 - 2010

	Department Store	Appliances/Furniture	Other	Total
2009	61%	46%	71%	57%
2010	84%	71%	78%	78%

## Proportion of Energy Star® Labelled Refrigerators, by Type, 2009 - 2010

	Refrigerator Type		
	Top	Bottom	Side-by-side
2009	43%	64%	70%
2010	64%	83%	83%

Over three-quarters (78%) of refrigerators in BC showrooms have the Energy Star® label and 1% are CEE Tier 3. Increases in the presence of Energy Star® refrigerators are shown among all regions, store categories and product types. The decrease in showroom presence of top mount refrigerators, of which a lower proportion is Energy Star®, also contributed to the increase in showroom presence of Energy Star® refrigerators.

## Average EnerGuide Rating (kWh/year), by Category, 2009 - 2010

	Department Store	Appliances/Furniture	Other	Total
2009	482	491	495	488
2010	468	477	468	471

## Average EnerGuide Rating (kWh/year), by Capacity, 2009 - 2010

	Size in Cubic Feet				Overall
	7-17	18-20	21-24	25+	
2009	437	455	538	583	488
2010	426	442	510	549	471

The average EnerGuide rating among refrigerator units in BC showrooms is 471 kWh/year per unit, a decrease of 17 kWh/year from 2009. The lowest EnerGuide rating is 264 kWh/year and the highest is 730 kWh/year.

On average, as refrigerator size (capacity) increases, so does a unit's energy consumption rating.

## Average EnerGuide Rating (kWh/year), Energy Star® vs. Non-Energy Star® Models, 2009 - 2010

	2009			2010		
	Energy Star	Non Energy Star	Total	Energy Star	Non Energy Star	Total
Average	484	494	488	466	479	471
Average per cubic foot	23	26	24	23	26	24

The difference in energy consumption between the average Energy Star® refrigerator and non-Energy Star® refrigerator is 13 kWh/year, with Energy Star® labelled refrigerators consuming 466 kWh/year and non-Energy Star® labelled refrigerators consuming 479 kWh/year. On a per cubic foot basis, Energy Star® refrigerators consume three kWh/year less than non-Energy Star® refrigerators (23 kWh/year vs. 26 kWh/year). These results are consistent with the findings from 2009.

**Average EnerGuide Rating (kWh/year), by Refrigerator Type, 2009 - 2010**

	Refrigerator Type			
	Top	Bottom	Side by side	Total
2009	436	492	574	488
2010	415	473	549	471

Note that the top mount refrigerators has, on average, the lowest capacity among the three refrigerator types. There is little difference in terms of energy consumption per cubic foot of capacity between the three types of refrigerators (top load, bottom load and side-by-side).

### Average Capacity, by Refrigerator Type, 2009 - 2010

	Refrigerator Type			
	Top	Bottom	Side by side	Total
2009	18.0	20.9	23.4	20.3
2010	17.4	20.7	23.0	20.3

### Refrigerator Size (Capacity) Distribution, by Refrigerator Type, 2010

	Refrigerator Type			
	Top	Bottom	Side by side	Total
7 to 17 cubic feet	33%	5%	1%	12%
18 to 20 cubic feet	62%	54%	2%	46%
21 to 24 cubic feet	4%	36%	77%	35%
25+ cubic feet	-	5%	20%	7%

The average refrigerator in retail showrooms has a combined capacity (fridge + freezer) of 20.3 cubic feet. On average, side-by-side refrigerators have a higher storage capacity than bottom or top mount refrigerators (23 cubic feet compared to 20.7 and 17.4 cubic feet). Nearly one-half (46%) of all refrigerators on showroom floors have a total capacity of 18 to 20 cubic feet. These results are consistent with the findings from 2009.



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**Average Price, by Region, 2009 - 2010**

	<b>Lower Mainland</b>	<b>Outside Lower Mainland</b>	<b>Total</b>
2009	\$1,452	\$1,541	\$1,501
2010	\$1,565	\$1,622	\$1,589

The average price of a refrigerator is \$1,589, an increase of \$88 from 2009. The lowest priced refrigerator counted is \$109 and the most expensive refrigerator counted is \$13,749.

### Average Price, by Refrigerator Type, 2009 - 2010

	Refrigerator Type			
	Top	Bottom	Side by side	Total
2009	\$766	\$1,961	\$1,895	\$1,501
2010	\$747	\$1847	\$2005	\$1,590

### Average Price, by Size in Cubic Feet, 2009 - 2010

	Size in Cubic Feet				
	7-17	18-20	21-24	25+	Total
2009	\$740	\$1,134	\$2,006	\$2,349	\$1,501
2010	\$851	\$1,139	\$2,161	\$2,502	\$1,590

Bottom mount and side-by-side refrigerators, which also tend to be larger than top mount refrigerators, have higher average pricing than top mount refrigerators (\$1,847 and \$2,005 vs. \$747). Note that there are higher-end refrigerator brands may skew the average price and affect changes in price from year-to-year of those refrigerator types.

The size of a refrigerator (measured by storage capacity in this study) has a direct relation to its price.

**Average Price by Energy Star® Label and Refrigerator Type, 2009 – 2010\***

	Top		Bottom		Side-by-side	
	Energy Star	Non-Energy Star	Energy Star	Non-Energy Star	Energy Star	Non-Energy Star
<b>2009</b>	\$839	\$713	\$1,925	\$1,776	\$1,783	\$2,160
<b>2010</b>	\$806	\$645	\$1,858	\$1,495	\$1,918	\$2,159

**Average Price by Energy Star® Label, 2009 – 2010\***

	Non-Energy Star	Energy Star
<b>2009</b>	\$1,586	\$1,364
<b>2010</b>	\$1,646	\$1,219

Overall, Energy Star® refrigerators have a higher average price than non-Energy Star® units. This is consistent with the results for top and bottom refrigerators, though non-Energy Star® side-by-side units cost, on average, \$241 more than Energy Star® side-by-side refrigerators. Note that there is only a small proportion of non Energy Star® refrigerators and their average price is expected to vary from year to year.

\*Figures in these tables exclude units that have a regular price of \$4,500 or higher.

# Freezers

## Key Findings

This section presents the key findings from the 2009 showroom presence study of stand-alone freezers.

### Showroom Presence

On average, the freezer section of retail store showroom has 8 freezer units consumers can examine.

Chest freezers account for 61% of all freezers in BC showrooms and upright freezers account for the remaining 39%, which is consistent with the results from 2009.

Thirty-nine percent (39%) of freezers in BC showrooms have an Energy Star® label, a decrease of nine percentage points from 2009. This is consistent with what was observed in-store. The information provided by online resources did not alter the results.

### Energy Efficiency

The average EnerGuide rating among freezer units in BC showrooms is 337 kWh/year or 41 kWh/year per cubic foot of capacity.

On a per cubic foot basis, Energy Star® freezers consume 10 kWh/year less energy than non- Energy Star® freezers (35 kWh/year vs. 45 kWh/year).

### Capacity

The average freezer in retail showrooms has a capacity of 9.5 cubic feet. On average, upright freezers have a higher storage capacity than chest freezers.

### Pricing

The average regular price of a freezer in BC showrooms is \$444.

The size of a freezer has a direct relation to price. The average price of freezers with 10 to 15 cubic feet of capacity is \$499 per unit, \$336 less than freezers with 16+ cubic feet of capacity.

All of the mail-in rebates for freezers are offered by BC Hydro.



Where available, the following data on freezers were gathered from the stores our researchers visited:

- Model, Brand Name and Manufacturer
- Energy Star® label
- EnerGuide Rating (kWh/Year)
- Capacity (cu. ft.)
- Defrost type (manual, auto and frost-free)
- Price and Sale/Discount Price
- Coupons or Rebates (from BC Hydro, retailers or manufacturers)
- Freezer type (chest or upright)

The purpose of this study is to measure the showroom presence of freezers. The presence of freezer units on the showroom floor directly impacts their consumer exposure, should not be considered a proxy for sales as even the most popular models may only have one display model in any given store.

The following is used to analyze the results of data collection:

**Units on the showroom floor** – In this method, relative product shares are calculated using the physical number of units on the showroom floor that are within reach of our researchers. Stock in the warehouse or placed out of reach of our researchers were not counted during this study. Relative share is calculated as the number of units on the showroom floor of a certain type as a percent of **all** units on the showroom floor. For this shelf presence study we are assuming that popular models or models receiving special promotions would be allocated space on the showroom floor while less popular models would more often be kept in warehouses for special orders.

In this report the term “BC showrooms” or “retailer showrooms” represents the showrooms of all the store banners sampled and weighted to proportions reflecting each retailers share of the market (by number of stores in BC).

### Average Number of Units in the Showroom (open or boxed), by Category, 2009 - 2010

	Department Store	Appliance/Furniture	Other	Total
2009	7	8	6	7
2010	9	9	6	8

### Average Number of Units in the Showroom (open or boxed), by Region, 2009 - 2010

	Lower Mainland	Outside LM	Total
2009	6	8	7
2010	9	8	8

### Proportion of Showroom Presence, by Freezer Type, 2009 - 2010

	2009			2010		
	Lower Mainland	Outside LM	Total	Lower Mainland	Outside LM	Total
Chest	68%	53%	59%	53%	68%	61%
Upright	32%	47%	41%	47%	32%	39%

In 2010, the average number of freezers in BC retailer showrooms increased by one (8 to 9) from 2009.

While the overall proportion of chest and upright freezers remains consistent from 2009 to 2010, the regional distribution has shifted to favour chest freezers outside the Lower Mainland (and increase of 15 percentage points).

### Proportion of Energy Star® Freezers (Actual vs. Observed), by Category, 2010

	Department Store	Appliance/Furniture	Other	Total
Actual	43%	15%	60%	39%
Observed	43%	15%	60%	39%

### Proportion of Energy Star® Freezers (Actual vs. Observed), by Type, 2010

	Freezer Type	
	Chest	Upright
Actual	28%	55%
Observed	28%	55%

The above tables shows the proportion of freezers observed in-store that were clearly Energy Star® products. Researchers looked for the Energy Star® logo or information on its Energy Star® status on the price/information tag that is attached to many units. The “actual” proportion of Energy Star® units in BC retail showrooms fills in missing information acquired though online resources and a list of Energy Star® appliances by using the unit’s model number.

Freezers are the only product among all five product categories observed during this study where the proportion of Energy Star® observed in stores is the same as the actual proportion of Energy Star® freezers. This is in part due to the relatively small number of freezers in BC showrooms.

### Proportion of Energy Star® Freezers, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	62%	38%	48%
2010	45%	34%	39%

### Proportion of Energy Star® Freezers, by Category, 2009 - 2010

	Department Store	Appliance/Furniture	Other	Total
2009	53%	25%	73%	48%
2010	43%	15%	60%	39%

### Proportion of Energy Star® Freezers, by Type, 2009 - 2010

	Freezer Type	
	Chest	Upright
2009	49%	45%
2010	28%	55%

In 2010, two-fifths (39%) of the freezers in retail store showrooms are Energy Star® compliant, a decrease of nine percentage points from 2009. The decrease is primarily driven by changes in retail shelf space; retailers previously stocking freezers are no longer doing so. Results by store category show similar shifts. Note that due to the small number of freezers on showroom floors, these “shifts” may only amount to changes in one or two models at any given store.



**Average, Minimum and Maximum EnerGuide Rating (kWh/year),  
by Category, 2009 - 2010**

	Department Store	Appliances/Furniture	Other	Total
2009	399	365	281	350
2010	382	338	270	337

**EnerGuide Rating (kWh/year), by Freezer Type, 2009 - 2010**

	Freezer Type		
	Chest	Upright	Total
2009	278	450	350
2010	271	473	337

The amount of energy a freezer consumes is influenced by a number of factors, including the capacity and the type of freezer. The average EnerGuide rating among freezer units in BC showrooms is 337 kWh/year per unit or 41 kWh/year per cubic foot of capacity. The lowest EnerGuide rating is 212 kWh/year and the highest is 766 kWh/year.

The type of freezer also impacts energy efficiency. Overall, upright freezers are less energy efficient than chest freezers and have a higher average, minimum and maximum EnerGuide rating.



### EnerGuide Rating (kWh/year), by Freezer Size, 2009 - 2010

	Size in Cubic Feet			
	3 - 9	10 - 15	16+	Total
2009	265	380	538	350
2010	259	382	579	337

### EnerGuide Rating (kWh/year), by Energy Star® vs. Non-Energy Star® Models, 2009 - 2010

	2009			2010		
	Energy Star®	Non Energy Star	Total	Energy Star®	Non Energy Star	Total
Average	359	341	350	377	307	337
Average per cubic foot	39	42	40	35	45	41

As freezer capacity increases, on average so does the amount of energy used. Freezers with 10 to 15 cubic feet of space consume noticeably less energy than freezers with a storage capacity of 16 or more cubic feet.

On a per cubic foot basis, Energy Star® freezers consume 10 kWh/year less energy than non-Energy Star® freezers (35 kWh/year vs. 45 kWh/year). The difference is more than triple what it was in 2009.

### Average, Minimum and Maximum Storage Capacity, by Freezer Type, 2009 - 2010

	Freezer Type		
	Chest	Upright	Total
2009	7.6	13.0	10.0
2010	7.5	13.3	9.5

### Average, Minimum and Maximum Storage Capacity, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	10.8	9.3	10.0
2010	9.6	9.4	9.5

The average freezer in store showrooms has a capacity of 9.5 cubic feet. On average, upright freezers have a higher storage capacity than chest freezers (13.3 cubic feet compared to 7.5 cubic feet), though the largest freezer counted is a chest freezer with 25 cubic feet of storage space. These results are consistent with the findings from 2009.

### Freezer Prices, by Category, 2009 - 2010

	Department Store	Appliance/Furniture	Other	Total
2009	\$549	\$495	\$355	\$472
2010	\$505	\$462	\$317	\$445

### Average, Minimum and Maximum Price, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	\$513	\$441	\$472
2010	\$461	\$429	\$444

The average price of a freezer is \$444. The lowest priced freezer counted is \$160 and the most expensive freezer counted is \$1,399. On average, department stores carry higher priced freezer models than appliance/furniture stores. The average price of a freezer unit in a department store showroom is \$505 compared to \$462 at appliance/furniture stores. Overall, prices decreased in 2009. Please note that there are many factors that can affect freezer price, including capacity, brand and available features.

### Average Freezer Prices, by Type, 2009 - 2010

	Freezer Type		
	Chest	Upright	Total
2009	\$344	\$638	\$472
2010	\$344	\$611	\$445

### Average Price, by Special Feature

	Special Features		
	Auto	Manual	Frost -free
2009	\$878	\$376	\$778
2010	\$721	\$379	\$775

The defrost feature on a freezer impacts the price of the model. Freezers with the manual defrost function are less expensive than freezers with auto defrost or frost free features. Upright freezers, which also tend to be larger than chest freezers, have a higher average price than chest freezers (\$611 vs. \$344).

The average price of freezers with the "auto" defrost feature dropped by \$157 in 2010. Note that the majority of freezers counted during this study have the "manual" defrost feature.

### Freezer Prices, by Size (Cubic Feet), 2009 - 2010

	Size in Cubic Feet			Total
	3 - 9	10 - 15	16+	
2009	\$306	\$468	\$852	\$472
2010	\$325	\$499	\$780	\$444

### Average Price, by Energy Star® Label and Freezer Type, 2009 - 2010

	Upright Freezers			Chest Freezers		
	Energy Star	Non Energy Star	Total	Energy Star	Non Energy Star	Total
2009	\$831	\$488	\$638	\$431	\$356	\$345
2010	\$635	\$581	\$611	\$331	\$311	\$344

On average, the more storage capacity a freezer has, the more expensive the unit. In 2010 the average price of freezers with 16 feet or more of capacity decreased \$72 per unit from 2009.

Energy Star® upright freezers decreased in price by an average of \$196 per unit from 2009 to 2010. This is in part because high-end units from specialty manufacturers were not found in 2010. Conversely, the average price of Energy Star® chest freezers decreased by \$100 from 2009 to 2010.



# Dishwashers

## Key Findings

This section presents the key findings from the 2009 showroom presence study of dishwashers.

### Showroom Presence

On average, the dishwasher section of retail store showroom has 21 dishwasher units consumers can examine.

Among the units observed in BC showrooms, over three-quarters (78%) were clearly marked as being Energy Star® refrigerators.

After using online resources to determine the status of unknown models ninety-two percent (92%) of dishwasher units in BC showrooms have the Energy Star® label.

One-in-ten (11%) of dishwashers in BC showrooms meet the CEE Tier 2 specification.

## Energy Efficiency

The average EnerGuide rating among dishwasher units (both Energy Star® and overall average) in BC showrooms is 313 kWh/year. There are few non-Energy Star® dishwashers in BC showrooms and they have little weight when calculating the overall average.

## Pricing

The average price of a dishwasher in BC showrooms is \$863, an increase of \$78 from 2009.

Energy Star® dishwashers have a higher average price than non-Energy Star® dishwashers (\$867 vs. \$824).

Where available, the following data on dishwashers were gathered from the stores our researchers visited:

- Model, Brand Name and Manufacturer/distributor
- Energy Star® label
- EnerGuide Rating (kWh/Year)
- Drying Options (heat/no heat)
- Econo/Short Cycle (Yes/No)
- Temperature Control (Yes/No)
- Price and Sale/Discount Price
- Coupons or Rebates (from BC Hydro, retailers or manufacturers)

The purpose of this study is to measure the showroom presence of dishwashers in BC stores. The presence of dishwasher units on the showroom floor directly impacts their consumer exposure, should not be considered a proxy for sales as even the most popular models may only have one display model in any given store.

The following is used to analyze the results of data collection:

**Units on the showroom floor** – In this method, relative product shares are calculated using the physical number of units on the showroom floor that are within reach of our researchers. Stock in the warehouse or placed out of reach of our researchers were not counted during this study. Relative share is calculated as the number of units on the showroom floor of a certain type as a percent of **all** units on the showroom floor. For this shelf presence study we are assuming that popular models or models receiving special promotions would be allocated space on the showroom floor while less popular models would more often be kept in warehouses for special orders.

In this report the term “BC showrooms” or “retailer showrooms” represents the showrooms of all the store banners sampled and weighted to proportions reflecting each retailers share of the market (by number of stores in BC).

### Average Number of Units in BC Showrooms, by Category, 2009 - 2010

	Department Store	Appliances/Furniture	Other	Total
2009	22	17	12	17
2010	26	22	16	21

### Average Number of Units in BC Showrooms, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	17	17	17
2010	22	19	21

Overall, there has been an increase in the average number of dishwasher units in showrooms among all store categories and regions. There is an average of 21 dishwasher units in retailer showrooms (including boxed products) among the stores sampled in BC, an increase of four from 2009. Department stores (26), followed by appliance/furniture stores (22) have the highest average number of units displayed in their showrooms. This has been driven by increases among most of the store banners of interest.

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	Lower Mainland	Outside Lower Mainland	Total
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Overall, there has been an increase in the average number of dishwasher units in showrooms among all store categories and regions. There is an average of 21 dishwasher units in retailer showrooms (including boxed products) among the stores sampled in BC, an increase of four from 2009. Department stores (26), followed by appliance/furniture stores (22) have the highest average number of units displayed in their showrooms. This has been driven by increases among most of the store banners of interest.



### Proportion of Energy Star® Dishwashers (Actual vs. Observed), by Category

	Department Store	Appliance/Furniture	Other	Total
Actual	93%	89%	95%	92%
Observed	81%	74%	80%	78%

The above tables shows the proportion of dishwashers observed in-store that were clearly Energy Star® products. Researchers looked for the Energy Star® logo or information on its Energy Star® status on the price/information tag that is attached to many units. The “actual” proportion of Energy Star® units in BC retail showrooms fills in missing information acquired though online resources and a list of Energy Star® appliances by using the unit’s model number.

## Proportion of Energy Star® Dishwashers, by Category, 2009 - 2010

	Department Store	Appliance/Furniture	Other	Total
2009	83%	73%	87%	80%
2010	93%	89%	95%	92%

## Proportion of Energy Star® Dishwashers, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	92%	72%	80%
2010	90%	94%	92%

## Dishwashes by Energy Efficiency Specification, 2009 - 2010

	Non-Energy Star	Tier 1 (Energy Star)	CEE Tier 2	Total
2009	20%	80%	n/a	100%
2010	8%	80%	12%	100%

Nearly all (92%) dishwasher units in BC showrooms have the Energy Star® label. The presence of Energy Star® labelled dishwashers is strong in among all store categories and regions of interest. There has been increases in the showroom presence of Energy Star® dishwashers in all regions sampled during this study. CEE Tier 2 dishwashers account for 12% of the dishwashers in BC retail showrooms.

## Average, Minimum and Maximum EnerGuide Rating (kWh/year), Energy Star® vs. Non-Energy Star® Models, 2009 - 2010

	2009			2010		
	Energy Star	Non Energy Star	Total	Energy Star	Non Energy Star	Total
Average	329	341	331	313	317	313
Minimum	228	259	228	180	285	180
Maximum	451	433	451	387	366	387

## Average, Minimum and Maximum EnerGuide Rating (kWh/year), by Category, 2009 - 2010

	2009			2010		
	Department Store	Appliance/ Furniture	Other	Department Store	Appliance/ Furniture	Other
Average	327	335	334	312	309	318
Minimum	228	259	280	180	180	259
Maximum	451	433	387	376	376	387

The average EnerGuide rating among dishwasher units in BC showrooms is 313 kWh/year per unit. The lowest EnerGuide rating is 180 kWh/year and the highest is 387 kWh/year per unit. The minimum, maximum and average energy consumption ratings have all decreased from 2009 to 2010, reflecting the higher proportion of Energy Star® dishwashers on showroom floors. Please note that EnerGuide rating information is rarely accessible for non-Energy Star® dishwashers and the average shown in the above tables only uses a small amount of data.

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**Average EnerGuide Rating (kWh/year), by Energy Efficiency Specification,  
2009 - 2010**

	<b>Non-Energy Star</b>	<b>ENERGY STAR / Tier 1</b>	<b>CEE Tier 2</b>
<b>2009</b>	341	329	n/a
<b>2010</b>	317	314	304

CEE Tier 2 dishwashers are, on average, the most energy efficient dishwashers on displayed on BC retailer showroom floors.

## Average, Minimum and Maximum Dishwasher Price, by Category, 2009 - 2010

	2009			2010		
	Department Store	Appliance/ Furniture	Other	Department Store	Appliance/ Furniture	Other
Average	\$834	\$776	\$723	\$907	\$897	\$768
Minimum	\$250	\$249	\$219	\$299	\$249	\$249
Maximum	\$2,000	\$2,759	\$1,600	\$1,850	\$2,771	\$1,700

## Average, Minimum and Maximum Dishwasher Price, by Region, 2009 - 2010

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
Average	\$800	\$785	\$791	\$875	\$849	\$863
Minimum	\$219	\$220	\$219	\$249	\$249	\$249
Maximum	\$2,499	\$2,759	\$2,759	\$2,771	\$2,310	\$2,771

The average price of a dishwasher is \$863. The lowest priced dishwasher counted is \$249 and the most expensive dishwasher counted is \$2,777. The average price of a dishwasher from Department stores is slightly higher than from Appliance/Furniture stores. Stores in the "Other" category have the lowest average price. Average prices among all store categories increased from 2009.



**Average Dishwasher Price, by Energy Efficiency Specification, 2009 - 2010**

	<b>Non-Energy Star</b>	<b>Energy Star / Tier 1</b>	<b>CEE Tier 2</b>
<b>2009</b>	\$793	\$775	n/a
<b>2010</b>	\$824	\$826	\$1,165

CEE Tier 2 dishwashers have a higher average price than Energy Star® (tier 1) dishwashers (\$1,165 vs. \$926). This could be related to a higher proportion of newer dishwashers with expensive special features such as “econo cycle”.

**Please note:** Only 8% of the dishwashers on BC showroom floors are not Energy Star® labeled.

## Average, Minimum and Maximum Dishwasher Price, by Special Feature, 2009 - 2010

	2009				2010			
	Special Features				Special Features			
	Heat Options	No Heat Options	Econo Cycle	No Econo cycle	Heat Options	No Heat Options	Econo Cycle	No Econo Cycle
Average	\$783	\$742	\$846	\$693	\$872	\$698	\$908	\$777
Minimum	\$219	\$230	\$229	\$219	\$249	\$249	\$250	\$249
Maximum	\$2,499	\$2,000	\$2,499	\$2,759	\$2,771	\$1,699	\$2,771	\$2,199

One feature that is associated with higher priced dishwasher models is “econo cycle” or “short cycle”. This feature often uses less water during a cycle and is commonly considered an energy saving feature. Models with this feature have an average price of \$908, a \$131 increase over units without that feature, indicating the econo cycle feature is implemented into higher-end dishwasher models.

“Heat options” are included in the majority of dishwashers. These options usually include using a “heat element” which consumes a substantial amount of energy. The other option is “air drying”, which consumes very little energy. The dishwashers that have “no heat options” generally use a heat element.

**Dishwasher Discounts, by Region, 2009 - 2010**

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
Average Discount	14%	14%	14%	15%	14%	14%
Proportion of Units Discounted	13%	37%	27%	27%	34%	30%

In 2010, the average sale and rebate discount for a dishwasher in BC retail showrooms is 14% off the regular price, which is consistent with the results from 2009. Three-in-ten (30%) of the dishwashers counted during this study were on sale or offered a rebate. Note that “instant rebates” are considered sale pricing for the purpose of this report and are included in the average discount and proportion of units discounted calculations.

# Clothes Washers

## Key Findings

This section presents the key findings from the 2010 showroom presence study of clothes washers.

### Showroom Presence

On average, the clothes washer section of retail store showroom has 24 clothes washer units consumers can examine.

Front load clothes washers account for the largest proportion (73%) of clothes washers in retail store showrooms. These results are consistent with the findings from 2009.

Among the units observed in BC showrooms, over seven-in-ten (70%) were clearly marked as being Energy Star® clothes washers.

After using online resources to determine the status of unknown models most (79%) of clothes washers in BC showrooms having an Energy Star® label, a nine percentage point increase from 2009.

### Energy Efficiency

The average EnerGuide rating among clothes washer units in BC showrooms decreased to 197 kWh/year per unit or 54 kWh/year per cubic foot in 2010.

The average EnerGuide rating per cubic foot for Energy Star® clothes washers is 46 kWh/year and the average EnerGuide rating per cubic foot of non-Energy Star® units is 85 kWh/year.

Unlike the other appliance categories, lower capacity units, on average, have higher energy requirements.

### Capacity

The average capacity of front load and top load units in 2010 (3.8 and 3.7 cubic feet) is consistent with the findings from 2009.

### Pricing

The average price of a clothes washer in BC showrooms is \$1,149.

The average Energy Star® clothes washer is \$532 more than the average non-Energy Star® unit (\$1,266 vs. \$734).



Where available, the following data on clothes washers were gathered from the stores our researchers visited:

- Model, Brand Name and Manufacturer/distributor
- Energy Star® label
- EnerGuide Rating (kWh/Year)
- Capacity (cu. ft.)
- Auto water temperature Control (Yes/No)
- Load Size Option (Yes/No)
- Short Cycle (Yes/No)
- Cold Water Option for Wash/Rinse(Yes/No)
- Price and Sale/Discount Price
- Coupons or Rebates (from BC Hydro, retailers or manufacturers)
- Clothes washer type (front load or top load)

The purpose of this study is to measure the showroom presence of clothes washers. The presence of clothes washer units on the showroom floor directly impacts their consumer exposure, should not be considered a proxy for sales as even the most popular models may only have one display model in any given store. The following is used to analyze the results of data collection:

**Units on the showroom floor** – In this method, relative product shares are calculated using the physical number of units on the showroom floor that are within reach of our researchers. Stock in the warehouse or placed out of reach of our researchers were not counted during this study. Relative share is calculated as the number of units on the showroom floor of a certain type as a percent of **all** units on the showroom floor. For this shelf presence study we are assuming that popular models or models receiving special promotions would be allocated space on the showroom floor while less popular models would more often be kept in warehouses for special orders. In this report the term “BC showrooms” or “retailer showrooms” represents the showrooms of all the store banners sampled and weighted to proportions reflecting each retailers share of the market (by number of stores in BC).

## Average Number of Units in Showrooms (opened or boxed), by Category, 2009 - 2010

	Department Store	Appliances/Furniture	Other	Total
2009	23	19	13	19
2010	30	24	19	24

## Average Number of Units in Showrooms (opened or boxed), by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	17	20	19
2010	27	21	24

There is an average of 24 clothes washer units in retailer showrooms (including boxed products) among the stores sampled in BC. Department stores have the most clothes washers in their showrooms (30), followed by appliance/furniture stores (24) and stores in the "other" category (19).

**Distribution of Front Load and Top Load Clothes Washers, by Region, 2009 - 2010**

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
Front Load	71%	74%	73%	70%	77%	73%
Top Load	29%	26%	27%	30%	23%	27%

Front load clothes washers account for the largest proportion (73%) of clothes washers in retail store showrooms. Regionally, retailers outside of the Lower Mainland and retailers within the Lower Mainland allocate approximately the same proportion of their clothes washers in their showroom front load types. These results are consistent with the results from 2009.

**Distribution of Front Load and Top Load Clothes Washers, by Region, 2009 - 2010**

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
Front Load	71%	74%	73%	70%	77%	73%
Top Load	29%	26%	27%	30%	23%	27%

Front load clothes washers account for the largest proportion (73%) of clothes washers in retail store showrooms. Regionally, retailers outside of the Lower Mainland and retailers within the Lower Mainland allocate approximately the same proportion of their clothes washers in their showroom front load types. These results are consistent with the results from 2009.

## Proportion of Energy Star® Labelled Clothes Washers (Actual vs. Observed), by Store Category

	Department Store	Appliance/Furniture	Other	Total
Actual	74%	81%	80%	79%
Observed	70%	66%	78%	70%

## Showroom Presence of Energy Star® Clothes Washers (Actual vs. Observed), by Type

	Washer Load Type	
	Front	Top
Actual	91%	64%
Observed	80%	47%

The above tables shows the proportion of dishwashers observed in-store that were clearly Energy Star® products. Researchers looked for the Energy Star® logo or information on its Energy Star® status on the price/information tag that is attached to many units. The “actual” proportion of Energy Star® units in BC retail showrooms fills in missing information acquired though online resources and a list of Energy Star® appliances by using the unit’s model number.



## Proportion of Energy Star® Labelled Clothes Washers, by Store Category, 2009 - 2010

	Department Store	Appliance/Furniture	Other	Total
2009	72%	66%	75%	70%
2010	74%	81%	80%	79%

Consumer exposure to Energy Star® clothes washer models is high, with 79% of clothes washers in BC showrooms having an Energy Star® label, and increase of nine percentage points from 2009. The showroom presence of Energy Star® clothes washers in Appliance/Furniture stores increased by 20 percentage points from 2009 to 2010.

## Showroom Presence of Energy Star® Clothes Washers, by Type, 2009 - 2010

	Washer Load Type	
	Front	Top
2009	88%	22%
2010	91%	45%

The proportion of top-load clothes washers in BC showrooms that have an Energy Star® label increased by 21 percentage points from 2009 to 2010.

## Proportion of Energy Star® Labelled Clothes Washers, by Store Category, 2009 - 2010

	Non-Energy Star	Tier 1 (Energy Star)	CEE Tier 2	CEE Tier 3	Total
<b>2009</b>	30%	70%	n/a	n/a	100%
<b>2010</b>	21%	43%	5%	33%	100%

One-third (33%) of clothes washers in BC retail showrooms meet the CEE Tier 3 specification while only 5% meet the Tier 2 specification. The 2009 study did not track the models that met the CEE specifications for clothes washers.

Tier 3 clothes washers are the most energy efficient, consuming an average of 42 kWh/year per cubic foot of capacity, one-half of what a non-Energy Star clothes washer consumes.

**Average EnerGuide Rating (kWh/year),  
Energy Star® vs. Non-Energy Star® Models, 2009 - 2010**

	2009			2010		
	Energy Star	Non Energy Star	Total	Energy Star	Non Energy Star	Total
Average	180	329	224	174	292	197
Average per cubit foot	48	95	61	46	85	54

In 2010 the average EnerGuide rating among clothes washer units in BC showrooms is 197 kWh/year per unit or 54 kWh/year per cubic foot, a decrease of 27 kWh/year and 7 kWh/year from 2009. The lowest EnerGuide rating is 100 kWh/year per unit and the highest is 410 kWh/year per unit. The difference in energy consumption between the average Energy Star® clothes washer and non-Energy Star® clothes washer is 118 kWh/year, with Energy Star® labelled clothes washers consuming on average of 174 kWh/year and non-Energy Star® labelled clothes washers consuming 292 kWh/year. The average EnerGuide rating per cubic foot for Energy Star® clothes washers is 46 kWh/year and the average EnerGuide rating per cubic foot of non-Energy Star® units is 85 kWh/year.

Note that a large proportion of Energy Star® clothes washers are front load washers, which are often more energy efficient than top-load washers by design. Unlike the other appliances captured during this study, clothes washers do not share the relationship between larger capacity and greater energy consumption.

## Average EnerGuide Rating (kWh/year), by Energy Efficiency Specification, 2009 - 2010

	2009		2010			
	Non Energy Star	Tier 1 (Energy Star)	Non Energy Star	Tier 1 (Energy Star)	Tier 2	Tier 3
Average	329	180	292	180	180	167
Average per cubic foot	95	48	85	49	48	42

CEE Tier 3 clothes washers are the most energy efficient clothes washers displayed on BC retailer showroom floors, with an average EnerGuide rating (per cubic foot) that is one-half of non-Energy Star clothes washers.

**Average EnerGuide Rating (kWh/year), by Clothes Washer Type, 2009 - 2010**

	Washer Load Type		
	Front	Top	Total
2009	175	342	224
2010	162	295	197

On average, top load clothes washers consume 133 kWh/year more energy than front load clothes washers. On a per cubic foot basis, top load clothes washers consume 82 kWh/year, almost double the average energy consumption of a front load clothes washer (43 kWh/year).

The decreases in energy consumption from 2009 in these tables reflect the lower overall average EnerGuide rating.



## Average EnerGuide Rating (kWh/year), by Size, 2009 - 2010

	Size in Cubic Feet			
	2 - 3.4	3.5 - 3.9	4.0 +	Total
2009	302	203	185	224
2010	235	196	178	197

Unlike the other appliances captured during this study, clothes washers do not share the relationship between larger capacity and greater energy consumption. Energy consumption per cubic foot of capacity for smaller clothes washers are particularly high among lower capacity clothes washers: 77 kWh/year for clothes washers with 2 – 3.4 cubic feet of space vs. 42 kWh/year for clothes washers with 4+ cubic feet of space.

Average Capacity in Cubic Feet, by Clothes Washer Type

	2009			2010		
	Washer Load Type			Washer Load Type		
	Front	Top	Total	Front	Top	Total
Average	3.9	3.5	3.8	3.8	3.7	3.8
Minimum	2.3	2.5	2.3	1.9	2.6	1.9
Maximum	7	5.2	7	7.5	5	7.5

In 2010 the average capacity of a clothes washer is 3.8 cubic feet, which is consistent with the results from 2009.

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**Average Price, by Store Category, 2009 - 2010**

	<b>Department Store</b>	<b>Appliances/Furniture</b>	<b>Other</b>	<b>Total</b>
2009	\$1,157	\$1,104	\$1,006	\$1,105
2010	\$1,211	\$1,210	\$965	\$1,149

In 2010 the average price of a clothes washer is \$1,149, a \$44 decrease from 2009. The lowest priced clothes washer counted is \$330 and the most expensive clothes washer counted is \$3,799.

### Average Price, by Clothes Washer Type, 2009 - 2010

	Washer Load Type		
	Front	Top	Total
2009	\$1,275	\$637	\$1,105
2010	\$1,331	\$701	\$1,149

### Average Price, Energy Star® Models vs. Non-Energy Star® Models, 2009 - 2010

	Energy Star	Non Energy Star	Total
2009	\$1,250	\$767	\$1,105
2010	\$1,266	\$734	\$1,149

The average front load clothes washer costs \$630 more than the average top load clothes washer.

The average Energy Star® clothes washer is \$532 more than the average non-Energy Star® unit.

## Average Price, by Clothes Washer Type, Energy Star and Non Energy Star, 2009 - 2010

	Front Load			Top Load		
	Energy Star	Non Energy Star	Total	Energy Star	Non Energy Star	Total
2009	\$1,288	\$829	\$1,250	\$1,213	\$583	\$758
2010	\$1,347	\$892	\$1,272	\$1,174	\$547	\$737

## Average Price, by Energy Efficiency Specification, 2010

	Front Load Clothes Washers				Top Load Clothes Washers			
	Non Energy Star	Tier 1 (Energy Star)	Tier 2	Tier 3	Non Energy Star	Tier 1 (Energy Star)	Tier 2	Tier 3
<b>2010</b>	\$1,174	\$1,272	\$1,075	\$1,470	\$547	\$778	\$998	\$1,105

The average price gaps between both types of Energy Star® clothes washers and non-Energy Star® clothes washers has remained consistent from 2009 to 2010. Energy Star® clothes washers are, on average, noticeably more expensive than non-Energy Star® clothes washers.

Tier 3 clothes washers have the highest average price among both top load and front load types.



# Televisions

## Key Findings

This report presents the key findings from the 2010 showroom presence study of televisions. This section analyzes the results of display-only (open-box) TV units counted in stores.

### Showroom Presence

On average, the TV section of retail store showroom has 40 TV units on display. LCD TVs account for 77% of all TVs displayed in BC showrooms followed by plasma TVs at 17%.

Eighty-two percent (82%) of TVs on display in BC showrooms are Energy Star® labeled.

Seventy-two percent (72%) of TVs displayed in BC showrooms are equivalent to CEE Tier 2, 3 or 4 specifications.

### Energy Efficiency

The average active mode power consumption among TV units in BC showrooms is 146 watts or 3.5 watts per inch of screen space.

The most energy efficient TV models are those that meet CEE Tier 4 specifications. Tier 4 TVs are 31% more efficient than Tier 3 TVs.

### Screen Size

Screen size is one of the key factors impacting how much energy a TV consumes and the price of a unit. The average size of a TV in BC showrooms is 39 inches.

Plasma TVs typically have a screen that is 40" or larger while LCD TVs come in a wider range of sizes.

### Pricing

In 2010 the average regular price of a TV in BC showrooms is \$194 less than it was in 2009 (from \$1,275 to \$1,079).

The average regular price of a TV increases in relation to screen size.

Three-fifths (60%) of TVs in BC showrooms cost less than \$1,000.

At the time of data collection, nine percent (9%) of TVs in BC showrooms in the Lower Mainland have BC Hydro point of purchase material on or in-front of the unit.

The television report is broken up into two sections: The first reflects the data collected for display (out-of-box) units and the second reflects all units on the showroom floor. The decision was made to report on display models **and** display models *plus* boxed units in order to illustrate how each method influences shelf presence. Display models typically have a significant impact on shelf presence, though for some stores such as Costco, boxed units also contribute to the showroom presence of TVs. For subsequent reports the client team may identify what information would be the most useful to have from both methodologies.

**Display units** – In this method, relative product shares are calculated using the physical number of open-box display units on the showroom floor that are within reach of our researchers.

**Units on the showroom floor** – In this method, relative product shares are calculated using the physical number of units (open or in boxes) on the showroom floor that are within reach of our researchers. Stock in the warehouse or placed out of reach of our researchers were not counted during this study. Relative share is calculated as the number of units on the showroom floor of a certain type as a percent of **all** units on the showroom floor. For this shelf presence study we are assuming that popular models or models receiving special promotions would be allocated space on the showroom floor while less popular models would more often be kept in warehouses for special orders. A third unit of measurement used, specifically for TVs, incorporated the mention of models on price tags. In rare instances, and usually in stores with space restrictions such as London Drugs, a model will be displayed with a price tag corresponding to different sizes of the same model. For the purpose of this study, those additional sizes were counted as separate displays. This assumes that the only differences between the display model and the additional models listed on the price tag were related to size and price.

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The decision was made to report on display models only due to the impact they have on the consumer. Display units are typically shown at eye level and are the units customer sales representatives show their customers. Boxed units are often placed out of reach, along the ground or stacked in such a way that obscures the picture representing the TV set.

**Display units** – In this method, relative product shares are calculated using the physical number of open-box display units on the showroom floor that are within reach of our researchers. Boxed units, price tags, stock in the warehouse or placed out of reach of our researchers were not counted during this study.

**Energy Star® units** – For the purpose of this study, Energy Star® TVs are defined as Tier 1 televisions as of February 15, 2010, according to the qualified product list (QPL) found on the CEE website. Note that we do not consider Energy Star® labelled units found at the retail level that are not on that list Energy Star® labelled.

**CEE Units** – For the purpose of this study, CEE TVs are defined as televisions that are meet the specifications defined on the CEE website ([www.cee1.org](http://www.cee1.org)) as of February 15, 2010. Tier 2 TVs are 15% more efficient than ENERGY STAR, Tier 3 TVs are 30% more efficient than ENERGY STAR and Tier 4 TVs are 45% more efficient than ENERGY STAR.



## Average Number of Units in the Showroom, by Category, 2009 - 2010

	Department Store	Electronic	General Merchandise	Total
2009	38	42	27	36
2010	40	43	37	40

## Average Number of Units in the Showroom, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	35	37	36
2010	38	44	40

The average number of TVs on display (display units only) is 40 per store, an increase of four per store from 2009. Electronics stores have the most TV units on display (43), followed by department stores (40) and general merchandise stores (37).



Proportion of LCD, Plasma, CRT and Projection TVs, by Region, 2009 - 2010

	2009			2010		
	Lower Mainland	Outside Lower Mainland	Total	Lower Mainland	Outside Lower Mainland	Total
LCD	80%	79%	79%	75%	80%	77%
Plasma	20%	17%	19%	17%	16%	17%
LED	n/a	n/a	n/a	5%	2%	4%
CRT	1%	4%	2%	3%	2%	2%
Rear Projection	<1%	<1%	<1%	0%	0%	0%

Televisions with LCD screens account for the majority (77%) of TVs in retail store showrooms. Plasma (17%), LEDs (4%) and CRT (2%) TVs account for the remaining types of televisions in retailer showrooms.

Overall, the 2010 results are consistent with the results from 2009. However, looking forward, LED and 3D displays may impact the showroom shares of the more popular LCD and Plasma displays.

## Proportion of Energy Star® TVs (Actual vs. Observed), by Store Category

	Department Store	Electronic	General Merch.	Total
Actual	86%	88%	62%	82%
Observed	72%	83%	55%	72%

The above tables shows the proportion of TVs observed in-store that were clearly Energy Star® products. Researchers looked for the Energy Star® logo or information on its Energy Star® status on the price/information tag that is attached to many units. The "actual" proportion of Energy Star® units in BC retail showrooms fills in missing information acquired though the CEE database using the unit's model number.

## Proportion of Energy Star® TVs, by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	69%	58%	64%
2010	85%	79%	82%

## Proportion of Energy Star® TVs, by Store Category, 2009 - 2010

	Department Store	Electronic	General Merch.	Total
2009	65%	74%	43%	64%
2010	86%	88%	68%	82%

Eighty-two percent (82%) of the TVs on display in retail store showrooms are Energy Star® labelled. Regionally, Energy Star® TVs account for a larger proportion of TVs within the Lower Mainland (85%) than outside of the Lower Mainland (79%).

On average, the proportion of Energy Star® TVs in BC retailer showrooms increased in the Lower Mainland, outside the Lower Mainland and all store categories sampled during the 2010 study.

## Proportion of CEE Tier 2, 3, 4 TVs, by Region, 2009 - 2010

	Lower Mainland				Outside Lower Mainland				Overall			
	Tier 2	Tier 3	Tier 4	Total	Tier 2	Tier 3	Tier 4	Total	Tier 2	Tier 3	Tier 4	Total
2009	43%	0%	0%	43%	34%	0%	0%	34%	39%	0%	0%	39%
2010	39%	24%	12%	74%	37%	24%	8%	68%	38%	24%	10%	72%

## Proportion of CEE Tier 2, 3, 4 TVs, by Store Type, 2009 - 2010

	Department Store				Electronic				General Merchandise			
	Tier 2	Tier 3	Tier 4	Total	Tier 2	Tier 3	Tier 4	Total	Tier 2	Tier 3	Tier 4	Total
2009	36%	0%	0%	36%	48%	0%	0%	48%	23%	0%	0%	23%
2010	42%	26%	9%	77%	42%	25%	13%	79%	27%	20%	7%	53%

Four-in-ten (38%) TV display models in BC showrooms are on the CEE qualified product lists. Among the three store categories, electronics stores and departments stores display the largest proportion of CEE Tier 2 TVs.

One-third (34%) of TV display models in BC showrooms are CEE Tier 3 or 4 units. CEE Tier 4 TVs account for a larger proportion of TVs within the Lower Mainland (12%) than outside of the Lower Mainland (8%). Tier 4 TVs account for 13% of the TVs on display in electronics retailer stores, the highest among the three store categories.

## Average Active Mode Power Consumption (Watts), by Region, 2009 - 2010

	Lower Mainland	Outside Lower Mainland	Total
2009	151	145	148
2010	148	145	146

## Average Active Mode Power Consumption (Watts), by Category, 2009 - 2010

	Department Store	Electronic	General Merch.	Total
2009	141	154	146	148
2010	144	137	152	146

The average active mode power consumption among TVs in BC showrooms is 146 watts or 3.5 watts per inch of screen size. These results are consistent with the findings from the 2009 study.



## Average Active Mode Power Consumption in Watts, for Energy Star® and CEE Tier 2 TVs, 2009 - 2010

	2009		2010	
	Energy Star (Tier 1)	CEE Tier 2	Energy Star (Tier 1)	CEE Tier 2
Average	148	141	181	159
Average per inch of screen size	3.6	3.5	4.3	3.7

The average active mode power consumption is affected by a number of factors including screen size and type. According to the active mode power consumption figures collected during the study, the amount of energy the average Energy Star® TV displayed in BC showrooms consumes is 181 watts or 4.3 watts per inch of screen size. On a per inch of screen size basis, CEE TVs consume 0.6 watts less energy than Energy Star® TVs, a difference of 14%.

The difference between the results from 2009 to 2010 may be influenced by the inclusion of Tier 3 and Tier 4 rankings to the system.

## Average Active Mode Power Consumption in Watts, for Energy Star® and CEE Tier 3 and 4 TVs

	CEE Tier 3	CEE Tier 4
Average	136	87
Average per inch of screen size	3.2	2.2

The average active mode power consumption is affected by a number of factors including screen size and type. According to the active mode power consumption figures collected during the study, the average CEE Tier 3 TV displayed in BC showrooms consumes 136 watts or 3.2 watts per inch of screen size. On a per inch of screen size basis, CEE Tier 4 TVs consume 31% (one watt) less energy than tier 3 TVs.

## Distribution of TVs, by Screen Size, 2009 - 2010

	2009	2010
12 to 19 inches	9%	8%
20 to 31 inches	12%	12%
32 inches	16%	16%
37 inches	8%	5%
40 inches	11%	14%
42 inches	15%	11%
46 inches	11%	15%
50 inches	8%	8%
52 inches	8%	7%
53 to 72 inches	2%	5%
<b>Average (inches)</b>	<b>38</b>	<b>39</b>

The average size of a TV in BC showrooms is 39 inches. Thirty-six (36%) percent of TVs displayed in BC showrooms have a screen sizes ranging from 12 inches to 32 inches. These results are largely consistent with the findings from 2009.

## Average TV Price, by Screen Size, 2009 - 2010

Screen Size	2009	2010
12 - 19	\$353	\$236
20 - 30	\$509	\$370
32	\$738	\$589
37	\$1,003	\$868
40	\$1,350	\$1,139
42	\$1,184	\$932
46	\$1,877	\$1,577
47	\$1,730	\$1,386
50	\$1,761	\$1,511
52	\$2,347	\$1,926
53 - 72	\$5,085	\$2,843
<b>Average (All Sizes)</b>	\$1,275	\$1,079

The regular price of a TV is \$1,079, a decrease of \$194 per unit from 2009. Prices range from \$50 to \$12,020. When looking at TV price by size, typically the larger the TV screen the higher the average price.

Overall, from 2009 to 2010, prices have decreased for all screen sizes.

## Distribution of TVs, by Regular Price, 2009 - 2010

	2009	2010
\$0 to \$499	15%	25%
\$500 to \$999	37%	35%
\$1000 to \$1499	20%	18%
\$1500 to \$1999	14%	11%
\$2000 to \$2499	7%	6%
\$2500 to \$2999	5%	2%
\$3000 or more	3%	2%

Three-fifths (60%) of TVs displayed in BC showrooms retail for less than \$1,000, an increase of eight percentage points from 2009. General merchandise stores remain the lowest cost providers of TVs. The TVs in their showrooms cost an average of \$628, substantially less than the other store categories.



## Average Regular Price by TV Type, 2009 - 2010

	LCD	Plasma	CRT	LED	Total
<b>2009</b>	\$1,209	\$1,665	\$185	n/a	\$1,275
<b>2010</b>	\$951	\$1,478	\$158	\$2,506	\$1,079

## Average Regular Price by Energy Efficiency Tier, 2009 - 2010

	Non-Energy Star	Tier 1 (Energy Star)	CEE Tier 2	CEE Tier 3	CEE Tier 4
<b>2009</b>	\$830	\$1,375	\$1,260	n/a	n/a
<b>2010</b>	\$640	\$1,083	\$1,195	\$1,114	\$1,390

On average, CRT TVs are the least expensive type of TVs on BC retail showrooms. The average price of plasma and LCD sets have decreased since 2009. LED TVs, which are relatively new to the market place, have the highest average price among the four TV types.

Overall, non-Energy Star TVs have the lowest average price when viewing prices by energy efficiency tier. This is in large part because they consist of older, smaller TVs, including CRT models. TVs that meet the CEE Tier 4 have the highest average price despite being, on average, 4 to 5 inches smaller than Tier 1, 2 or 3 TVs.

## Proportion of CEE Tier 3 or 4 TVs with BC Hydro Point of Purchase (PoP) Materials, Lower Mainland, 2010

	Lower Mainland
Units with PoP materials	10%

One-in-ten (10%) CEE Tier 3 or 4 TV units counted in the Lower Mainland had BC Hydro point of purchase materials on, or directly in-front of them. Note that point of purchase materials that were otherwise near by is not included in this figure. All point of purchase materials found were in electronics stores.

No point of purchase materials were found outside of the Lower Mainland.