



EFFECTIVE FOR 2011 PROGRAM YEAR¹

Calculating Manufacturer Recycling Obligations

All manufacturers are assigned a return share and a return share by weight regardless of which type of recycling program they participate in or which covered electronic devices (CEDs) they manufacture. A manufacturer is responsible for collecting, transporting and recycling – at a minimum – their return share by weight through their recycling program.

A list of 2011 return share and return share by weight obligations is available on DEQ’s web site at www.deq.state.or.us/lq/ecycle/manufacturers/recycling.htm#returnshare.

How is Return Share and Return Share by Weight Calculated?

Return share (%) is determined by dividing the total weight of CEDs of an individual manufacturer’s brands by the total weight of CEDs for all manufacturers’ brands. This calculation does not include orphans, or CEDs for which there is no identifiable manufacturer.

Return share by weight (lbs) is calculated by multiplying a manufacturer’s return share percentage by the total weight of CEDs, including orphans, to be collected for recycling in the upcoming year.²

Return Share and Return Share by Weight Calculation Example

For this example, let’s assume there were five manufacturers and a total of 10,000 pounds of all brands of computers, monitors and televisions collected for recycling in year one. Table 1 shows how each manufacturer would have their return share calculated based on this data.

TABLE 1			
	Manufacturer’s Weight of all Brands Collected for Recycling	Return Share Calculation	Return Share % (RS)
Manufacturer A	2,000	2,000/10,000	= 20%
Manufacturer B	1,500	1,500/10,000	= 15%
Manufacturer C	900	900/10,000	= 9%
Manufacturer D	4,000	4,000/10,000	= 40%
Manufacturer E	1,600	1,600/10,000	= 16%
TOTAL	10,000		100%

To determine a manufacturer’s return share by weight in year two, DEQ multiplies a manufacturer’s return share percentage by the total pounds estimated to be collected in year two, which is determined by DEQ annually. Table 2 shows that the total pounds for the program to collect are 12,210,000 lbs.

TABLE 2					
	Manufacturer’s Return Share % (RS)		Manufacturer’s Return Share by Weight (RSW)		
	Calculation	RS%	Calculation	RSW	TV Manufacturer
Manufacturer A	2,000/10,000	= 20%	20% x 12,210,000	= 2,442,000	YES
Manufacturer B	1,500/10,000	= 15%	15% x 12,210,000	= 1,831,500	NO
Manufacturer C	900/10,000	= 9%	9% x 12,210,000	= 1,098,900	YES
Manufacturer D	4,000/10,000	= 40%	40% x 12,210,000	= 4,884,000	YES
Manufacturer E	1,600/10,000	= 16%	16% x 12,210,000	= 1,953,600	NO
TOTAL		100%		=12,210,000	

In Table 2 above, you see that manufacturers A, C and D are television manufacturers. A television manufacturer is defined as a manufacturer that makes more televisions than other CEDs. Television manufacturers, regardless of recycling program participation (State Contractor Program or manufacturer program), have their return share and return share by weight obligations assessed based on their market share of televisions sold in or into Oregon the previous year. Television manufacturers still have their return share and return share by weight determined as shown in table 2, just as computer and monitor manufacturers do, but a secondary calculation is done (shown in table 3) that takes the aggregate return share weights for all television manufacturers (and all of their CEDs) and redistributes it based on each television manufacturer's market share for televisions. This return share and return share by weight is a television manufacturer's minimum recycling obligation.

TABLE 3								
			TV Market Share % (TV MS)		TV Return Share by Weight (TV RSW)		TV Return Share % (TV RS)	
	Manufacturer's Original RSW	# of TVs sold	Calculation	TV MS%	Calculation	TV RSW	Calculation	TV RS%
Manufacturer A	2,442,000	12,950	12,950/ 37,920	= 34%	34% x 8,424,900	= 2,864,466	2,864,466/ 12,210,000	= 23%
Manufacturer C	1,098,900	8,645	8,645/ 37,920	= 23%	23% x 8,424,900	= 1,937,727	1,937,727/ 12,210,000	= 16%
Manufacturer D	4,884,000	16,325	16,325/ 37,920	= 43%	43% x 8,424,900	= 3,622,707	3,622,707/ 12,210,000	= 30%
TOTAL	8,424,900	37,920		100%		8,424,900		69%

Each television manufacturer's minimum recycling obligation is based on their television market share multiplied by the total return share by weight for all television manufacturers. As demonstrated in table 3 above, all television manufacturers collectively are responsible for the same aggregate total return share by weight, but how it is allocated amongst television manufacturers individually is based on their television market share. A television manufacturer's return share by weight is then divided by the total return share by weight of all manufacturers (both computer and monitor manufacturers and television manufacturers) to determine their return share percentage.

¹ TV manufacturer's return share by weight calculations were changed to be based on market share by 2010 HB 3606. Manufacturers 2011 return shares and return shares by weight were calculated according to the methodology described on this page. Previously, all manufacturers' return share by weight was based on returns.

² Data Used to Calculate Return Share and Return Share by Weight

For 2008 through 2011, Oregon's Electronics Recycling Law (ORS 495A.300-.365, amended by 2010's HB 3606) directs DEQ to calculate return share and return share by weight using the best available public return share data and weight data from the U.S.

2008-2009: DEQ utilized the Brand Data Management System developed by the National Center for Electronics Recycling (NCER). DEQ obtained a report from NCER containing return share data from four of seven electronics collection studies whose product scope closely matched Oregon's definition of CEDs. The report lists a total of 1,420 brands and their respective manufacturers, total units, and total tonnage collected.

2010: DEQ used return share data and weight data from Washington State's 2009 annual sampling or count of CEDs collected for recycling in Oregon.

2011: DEQ will use return share data and weight data from the most recent annual sampling or count of CEDs collected for recycling in Oregon.