



Summary of Key Scheme Metrics to Assist with July 2018 and Quarter 2 2018 True Up Calculations

1. Introduction

The invoice issued on 4 September 2018 contained two types of true up calculation:

- i. A monthly true up associated with adjustments for the difference between the forecast and actual container collections by the Network Operator; and
- ii. A quarterly true up associated with adjustments for the difference between the forecast and actual container volumes shipped for recycling by Material Recovery Facility Operators (MRFs).

This paper is designed to provide suppliers with an overview of the key inputs used to calculate the true up adjustments that may be present on the September invoice.

True up adjustments can only be calculated for suppliers that have provided their actual supply volumes for the relevant true up month. This ensures that suppliers that have provided their actuals are not disadvantaged by covering the additional market share for those suppliers yet to provide their actual supply volumes.

Even if you have not supplied any eligible containers during the month, you must report your volumes to be eligible for a true up adjustment. If you have not supplied any containers, you must enter zero (0) against each container category in the portal. Once you have provided your actual supply volumes your true up adjustment will be released in the next invoicing cycle.

2. Monthly True Up Adjustments

2.1 True ups for multiple months

As noted in previous newsletters and true up summaries, the NSW CDS permits suppliers to alter their historic volumes at any point in time, currently without a sunset date.

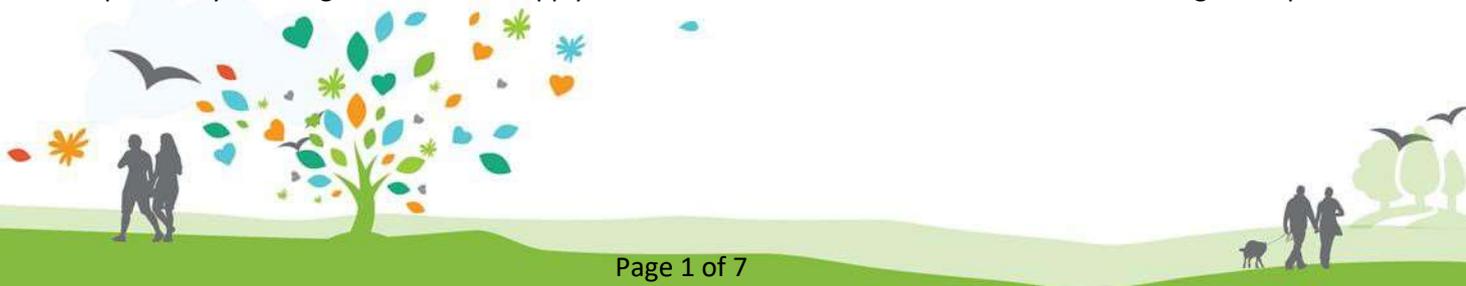
Consequently, the total supply volume in a given month may change resulting in an adjustment to the market share of all suppliers as each supplier's relative contribution to the total supply volume changes. The September invoice contained a true up for each scheme month for which actual volumes have been reported by suppliers.

In addition to changes made by existing suppliers, when new suppliers join the scheme and provide their volumes, this may also lead to a change in the total volumes reported in a given month and a corresponding change in the market share of all suppliers.

2.2 Restated "unit prices" for previously reported periods

Consistent with the information provided following the Quarter 1 2018 true up, the equivalent information for Quarter 2 2018 has been provided to assist you with your own calculations in relation to the September invoice.

As stated previously, an actual "unit price" is only valid at the point in time at which it is calculated due to the possibility of changes to the total supply volumes and as such it is not used when calculating true up





calculations. Rather, your contribution towards the scheme costs is calculated by multiplying your market share at the time of the calculation by the total cost of each container material type as relevant to your business.

While not used to calculate the true up adjustments in your invoice, the following table has been provided so that you are able to create a “unit price” should you wish to do so for the three months comprising Quarter 2 2018. Please note that these prices will vary from those previously presented for the same periods as they are based on the actual volumes in the portal at the time that the September invoice was generated.

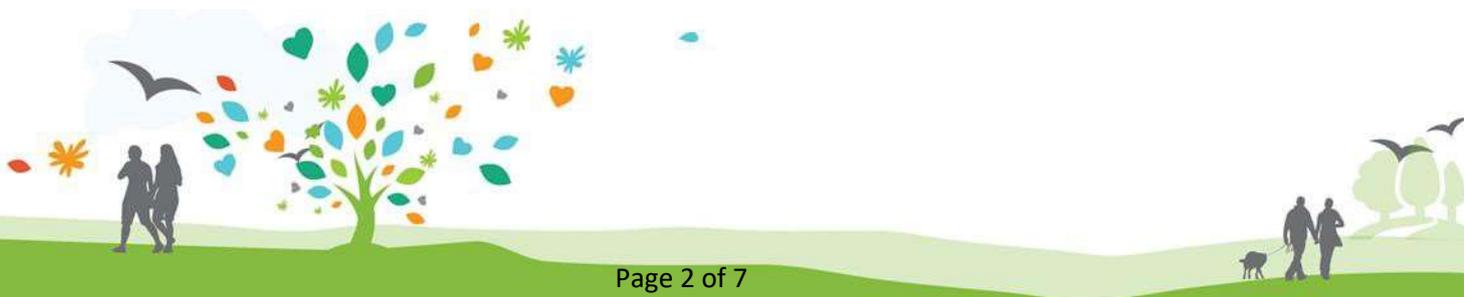
Container Material Type	Price per Container Apr 2018	Price per Container May 2018	Price per Container June 2018
Aluminium	\$ 0.1164479555	\$ 0.1091872932	\$ 0.1156582540
Glass	\$ 0.1142016507	\$ 0.1110435537	\$ 0.1238859847
HDPE	\$ 0.0779899843	\$ 0.0870989363	\$ 0.0817936333
PET	\$ 0.1011117217	\$ 0.1121001162	\$ 0.0995524589
Liquid Paper Board	\$ 0.0520989554	\$ 0.0695147667	\$ 0.0727001615
Steel	\$ 0.0970825351	\$ 0.0730024969	\$ 0.1105175552
Other Plastics	\$ 0.0583363169	\$ 0.1141885290	\$ 0.0971905274
Other materials	\$ 0.1450358214	\$ 0.0759920397	\$ 0.2710359137

2.3 Restated volumes for previously reported periods

The restated volumes used to determine all unit prices referenced in this document are as follows:

Container Material Type	Volume Apr 2018	Volume May 2018	Volume June 2018
Aluminium	87,262,686	92,537,397	92,653,451
Glass	73,216,512	70,127,861	63,729,265
HDPE	5,509,429	5,484,646	6,872,093
PET	77,651,205	65,446,591	77,210,263
Liquid Paper Board	17,074,373	13,945,174	13,661,395
Steel	112,114	171,782	77,582
Other Plastics	43,170	34,272	38,501
Other materials	24,523	62,313	13,264
Total	260,894,012	247,810,036	254,255,814

These volumes are the actual volumes reported by all suppliers in the reporting portal when the September invoice was generated.





2.4 The total costs of the scheme for the purposes of the July Network Operator True Up adjustments were:

Container Material Type	Cost (\$) July 2018
Aluminium	10,567,544
Glass	8,011,000
HDPE	503,839
PET	7,137,466
Liquid Paper Board	994,402
Steel	8,720
Other Plastics	3,119
Other materials	3,747
Total	27,229,838

2.5 July Non-Volume Provisions

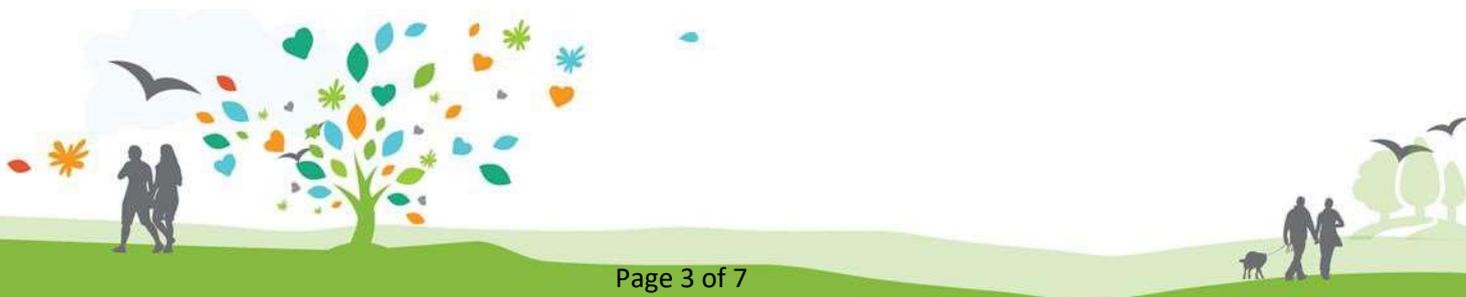
The June 2018 invoice included an advanced contribution for exports anticipated to be made in July 2018. As the ability to claim exports for this period has yet to lapse, a provision has been taken up to ensure that the funds raised through the advanced contribution are not released during the true up calculations. If these funds were to be released, there would be no money available in the scheme account to pay the export claims once they have been lodged as the true up calculations are designed to return any unneeded funds to first suppliers.

The MRFs are paid based on the volumes delivered for reuse or recycling during the quarter. Based on the difference between the volumes entering the MRFs and the number of containers claimed for Quarter 2 2018, Exchange for Change has identified a potential stockpile of 12.7 million containers recovered, but not delivered by the MRFs in Quarter 2 2018 in addition to the 10.3 million containers from Quarter 1 2018. To ensure sufficient funding is available to pay the MRFs when these containers are sent for recycling in a subsequent quarter, a provision has been made during the monthly true up.

The value of these provisions is summarised in the following table:

Non Volume Costs	Cost (\$) Jul 2018
Provision for Exports	1,998,044
MRF Stockpile Provision	1,156,776

These provisions are included within the costs shown in the table in section 2.4.





2.6 The total containers supplied by all suppliers eligible for a true up adjustment in July were:

Container Material Type	Volume July 2018
Aluminium	86,825,695
Glass	70,174,415
HDPE	6,711,901
PET	70,122,492
Liquid Paper Board	18,076,746
Steel	107,103
Other Plastics	45,015
Other materials	24,058
Total	252,087,425

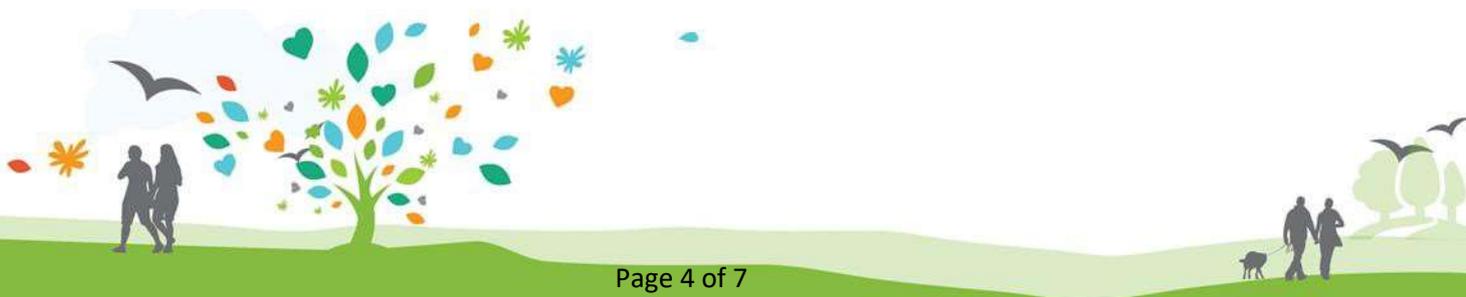
2.7 Actual prices per container type for July

As stated earlier, the actual prices per container are not used to calculate the cost of the scheme to each first supplier. They are a by-product of the calculations and are wholly dependent on the total volume of containers of each material type supplied into the NSW market during the month.

The table below shows the actual container pricing associated with the volumes and costs used during the July 2018 true up calculations.

Container Material Type	Price per Container July 2018
Aluminium	\$ 0.1217098726
Glass	\$ 0.1141584135
HDPE	\$ 0.0750665636
PET	\$ 0.1017856934
Liquid Paper Board	\$ 0.0550099853
Steel	\$ 0.0814190972
Other Plastics	\$ 0.0692879384
Other materials	\$ 0.1557449805

If the volumes reported for July are subsequently adjusted by suppliers, the rates will change, however, the total cost of the scheme will not. You may still see an adjustment to your individual contributions if your relative market share changes due to these volume adjustments.





2.8 The total number of containers collected during the month of July by collection stream and in total were as follows:

Container Material Type	Network Operator Actual Volume Jul 2018	MRF Operator Forecast Volume Jul 2018	True Up Container Volumes Jul 2018
Aluminium	40,437,804	24,467,554	64,905,358
Glass	27,203,679	21,432,026	48,635,705
HDPE	1,359,700	1,358,173	2,717,873
PET	24,512,680	20,300,200	44,812,880
Liquid Paper Board	1,309,564	4,658,819	5,968,383
Steel	37,940	41,454	79,394
Other Plastics	2,120	22,117	24,237
Other materials	11,200	5,624	16,824
Total	94,874,687	72,285,968	167,160,655

Italicised figures contain estimates as the eligible container factors (conversion factors) for Quarter 3 2018 have not been published by the Ministerial Advisory Committee. The estimates above are based on the Quarter 1 2018 factors as these were the most current factors available when the advanced contribution was calculated.

3. Quarterly True Up Process

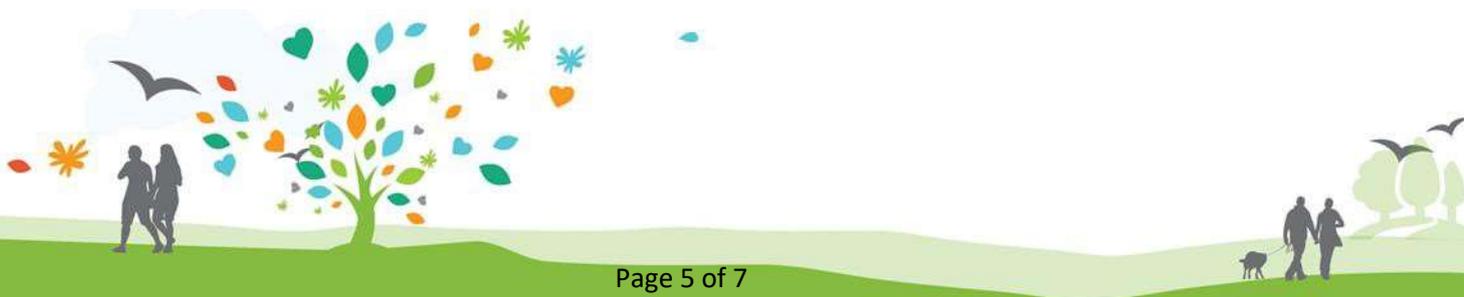
The quarterly true up process focuses solely on the difference in the forecast costs associated with the MRF collections and the cost for the actual containers claimed by the MRFs in their quarterly processing claims.

As noted in section 2.5, MRFs are paid when they deliver the eligible containers for reuse or recycling. In ordinary operation they will usually have stock on hand as they collect enough containers to fill a shipment. Due to the nature of the quarterly true up process the provision for stock on hand has been taken up in the monthly process to ensure that the quarterly true up deals only with the cost variance between forecast and actual containers shipped and claimed by the MRFs.

3.1 Forecast Cost of MRF Claims

The following table summarises the forecast costs by container material type and by month:

Container Material Type	Cost (\$) Apr 2018	Cost (\$) May 2018	Cost (\$) Jun 2018	Cost (\$) Quarter 2 2018
Aluminium	2,890,783	2,720,871	2,941,992	8,553,647
Glass	2,780,127	2,413,974	2,279,838	7,473,939
HDPE	171,184	189,709	204,442	565,334
PET	2,606,831	2,436,664	2,416,113	7,459,609
Liquid Paper Board	482,422	543,429	477,465	1,503,316
Steel	6,105	5,875	5,028	17,008
Other Plastics	1,997	3,050	2,454	7,501
Other materials	702	760	515	1,977
Total	8,940,150	8,314,332	8,327,847	25,582,330





3.2 Actual Cost of MRF Claims

The following table summarises the actual costs by container material type and by months:

Container Material Type	Cost (\$)	Cost (\$)	Cost (\$)	Cost (\$)
	Apr 2018	May 2018	Jun 2018	Quarter 2 2018
Aluminium	1,190,997	1,523,448	1,298,060	4,012,505
Glass	2,713,374	3,359,763	2,509,926	8,583,062
HDPE	66,646	84,781	73,478	224,905
PET	1,224,426	1,435,498	1,362,958	4,022,882
Liquid Paper Board	71	-	5	76
Steel	-	-	-	-
Other Plastics	-	-	-	-
Other materials	-	-	-	-
Total	5,195,514	6,403,489	5,244,427	16,843,431

Eligible container factors were not issued for Liquid Paper Board, Steel or Other Materials, allowing MRFs to claim only those containers directly counted for these container material types. No containers were attributed to the Other Plastics stream either, as Mixed Plastics outputs from the MRF are allocated back to the source streams. In this quarter only, HDPE and PET eligible containers were identified in the Mixed Plastics output from MRF outputs.

3.3 Net adjustment to supplier contributions

As with monthly contributions, unit rates are not used to determine adjustments for suppliers, it is the difference between the costs in tables 3.1 and 3.2 multiplied by the market share of the supplier for the quarter.

Container Material Type	Cost (\$)	Cost (\$)	Cost (\$)	Cost (\$)
	Apr 2018	May 2018	Jun 2018	Quarter 2 2018
Aluminium	- 1,699,786	- 1,197,423	- 1,643,932	- 4,541,141
Glass	- 66,753	- 945,789	- 230,088	- 1,109,124
HDPE	- 104,537	- 104,928	- 130,964	- 340,429
PET	- 1,382,405	- 1,001,167	- 1,053,155	- 3,436,727
Liquid Paper Board	- 482,350	- 543,429	- 477,461	- 1,503,240
Steel	- 6,105	- 5,875	- 5,028	- 17,008
Other Plastics	- 1,997	- 3,050	- 2,454	- 7,501
Other materials	- 702	- 760	- 515	- 1,977
Total	- 3,744,636	- 1,910,843	- 3,083,420	- 8,738,899

A negative number indicates a credit to suppliers, a positive number represents an additional contribution from suppliers.

The net refund adjustment shown above in the amount of \$8.74 million differs to the forecast true up published in the August newsletter. The forecast true up in the August newsletter was estimated to be \$6.49 million. The following table reconciles the two numbers:

Container Material Type	True Up Quarter 2 2018 \$millions
August Newsletter value	6.49
MRF forecast volume variance	0.73
Stockpile provision	1.16
Sampling cost	0.36
Total	8.74





MRF forecast volume variance

The MRF forecast volume variance relates to the difference in costs associated with the assumed container collections when pricing was set in Quarter 2 2018 (as published in previous monthly newsletters) and the forecast container volumes at the time the invoices were generated. As noted in the August 2018 newsletter, changes to supplier volumes can occur in the period between the price being set and the invoice being generated. In the period between the advanced contribution pricing for April 2018 being set and the invoices being generated there was a significant change in supplier volumes that accounted for the majority of the variance noted above.

Stockpile provision

The August newsletter presented the true up net of the stockpile provision as no provision would have been necessary had the MRFs delivered the containers received in the quarter for reuse or recycling. As noted in section 2.5 above, this provision has been taken up as a non-volume cost in July 2018 to ensure that sufficient funding is available during the Quarter 3 2018 true up should the stockpiles generated in Quarter 2 2018 be delivered for reuse or recycling during Quarter 3 2018.

Sampling cost

To calculate the eligible container factors necessary to convert MRF outputs reported in tonnes to containers, a sampling programme is undertaken. The cost of this sampling programme is deducted from the total payments to the MRFs. In the Quarter 2 2018 true up, the net payment to MRFs excluding the sampling costs was used in the true up calculation rather than the gross cost to the scheme resulting in the true up being overstated by the value of the sampling cost or \$0.36 million. This cost will be recouped as a provision in the next true up cycle.

Monthly scheme costs

For the purposes of allowing suppliers to create an effective cost per container by material type, the first table in section 3.3 can be divided by the restated container volumes shown at 2.3 to create a unit price adjustment for the quarterly true up.

Division by the values in table 2.3 creates a common denominator and allows the values shown in the table at 2.2 to be added to the table above to create an effective “unit price” for the quarter.

Please note that any values derived using this method will only be valid at the time the September invoice was run and any changes to supplier volumes will render any figures derived using this method invalid. Please also note that any unit pricing derived in this manner still contains estimated costs for export payments and MRF stockpiles which have been taken up as provisions.

Unit prices also fail to consider external factors such as seasonality, the availability of collection points and the maturity of the scheme and as such we caution against relying on these figures when making pricing decisions. As such we do not believe it is appropriate to publish these figures.

