



# True Up and Invoicing

## Frequently Asked Questions:

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### 1. What is the True Up and how is it Calculated?

#### Background

The NSW Container Deposit Scheme is a pay in advance scheme with an adjustment for actual costs and volumes following the completion of the month. This process is known as a True Up.

The True Up adjustment will happen in two stages as the relevant information becomes available. These are:

1. True up for the actual containers returned through the Network Operator stream of Return and Earn (RVMs, over the counter, automated depot); and
2. True up for the actual containers returned through Materials Recovery Facilities (MRFs) that process material from kerbside collections (yellow lidded wheelie bins)

The true up for the Network Operator stream occurs every month once the previous month's information is available. Your February invoice contained the first Network Operator stream true up for December 2017, the first operational month of the scheme.

The true up for the MRF volumes will occur quarterly after the CDS Ministerial Advisory Committee sets the Eligible Container Factors for the quarter most recently ended. This factor is published on



the 43<sup>rd</sup> calendar day after the quarter ends and will be published for the first time in mid-May meaning the first MRF stream true up under the scheme will occur on the June invoice.

As the scheme commenced in December 2017, the first MRF true up will cover a four month period, quarter 1 2018 (January – March) plus December 2017. Thereafter the MRF true up will cover three month periods. The second MRF true up will be for quarter 2 2018 (April – June) and will be reflected on your September invoice.

#### Summary of the Network Operator Stream True Up included on the February Invoice

The Network Operator stream True Up is a three step process:

Step 1: Determine the cost of the scheme for each container type based on the actual volume of containers returned through the Network Operator

Step 2: Determine the market share for each First Supplier based on the actual volumes supplied in December

Step 3: Multiply the market share for each material type by the total cost of that material type to arrive at the cost to be borne by each individual First Supplier

Material type means: Aluminium, Glass, HDPE, PET, Mixed Plastic, Liquid Paper Board, Steel and Other Material.

#### Detailed Process with Worked Example

The true up that you have just received was calculated using the following information:

1. The number of containers of each material type that were returned via the Network Operator stream in December (**NO actual returns**).
2. The number of containers of each material type reported to be supplied in December by each First Supplier (**actual supply**).
3. The forecast containers of each material type calculated to be supplied by each First Supplier in December (**forecast supply**).
4. The rate invoiced for the forecast number of containers of each material type assigned to each First Supplier by the Scheme Coordinator (**forecast rate**).
5. The cost of collecting, handling and processing each container by the Network Operator (**NO processing cost**)
6. The fixed costs for administering the scheme (**fixed scheme cost**)
7. The forecast number of containers returned through the MRF stream (**MRF forecast returns**)
8. The cost of processing each container by the MRF operators (**MRF processing cost**)
9. Interest earned on the scheme accounts (**interest earned**)
10. Penalty interest levied (**penalty interest**)

*Step 1: Determine the cost of the scheme for each container type based on the actual volume of containers returned through the Network Operator*

Using aluminium containers as an example the calculation is as follows:

[Aluminium NO actual returns x Aluminium NO processing cost] + [Aluminium MRF forecast returns x Aluminium MRF processing cost] + [(fixed scheme cost – interest earned – penalty interest levied) x (Aluminium NO actual returns + Aluminium MRF forecast returns)] / (total NO actual returns + total MRF forecast returns).



**NO** means Network Operator

**MRF** means Materials Recovery Facility

This provides the total cost of aluminium container returns for the month of December.

The process is then repeated for each container material type.

Several aspects of the pricing are confidential and cannot be published, however, the table below provides the total cost for each container type for December 2017 (the outcome of the formula outlined above for each material type).

Container Material Type	Cost to Scheme (\$)
Aluminium	7,517,773.25
Glass	5,635,778.14
HDPE	331,906.36
PET	5,497,502.15
LPB	827,011.53
Steel	6,770.30
Other Plastics	2,418.43
Other Materials	577.06
<b>Total</b>	<b>19,819,737.22</b>

*Step 2: Determine the market share for each First Supplier Based on the actual volumes supplied in December*

For each commodity type for each supplier the market share is determined by dividing the number of containers supplied by that supplier by the total number of containers supplied during that period by all suppliers.

The total containers supplied in December by all suppliers were as follows:

Container Material Type	Containers Supplied
Aluminium	133,019,822
Glass	126,134,245
HDPE	6,437,345
PET	113,253,244
LPB	13,801,004
Steel	173,701
Other Plastics	12,540
Other Materials	9,656
<b>Total</b>	<b>392,841,557</b>

*Step 3: Multiply the market share for each material type by the total cost of that material type to arrive at the cost to be borne by each individual First Supplier*

Continuing with Aluminium as an example, let's assume Supplier ABC supplied 13,301,982 in December 2017.

Supplier ABC's market share is  $13,301,982/133,019,822 = 10\%$



Supplier ABC's actual cost for the supply of aluminium is then the product of the market share and the total cost of the Aluminium stream:

$$10\% \times 7,517,773.25 = \$751,777.33$$

This process is then repeated for each material type for each First Supplier.

## 2. How do I reconcile my true up against my original invoice for the period?

There are two methods that can be used to reconcile the true up calculations. When you first receive your invoice, you can perform a reconciliation by taking information from the original invoice and the true up invoice. To illustrate this, fictitious invoices for November and February have been generated below.

November 2 Invoice

Supplier Advance Contribution		Container Volume			Market Share			Amount (ex GST)	GST	Total (inc. GST)
	Material	Forecast Containers	Forecast Cost Per Container	Estimated Cost Per Material	Forecast Material Market Share	Forecast Cost per Market share	Estimated cost Per Material	Estimated Monthly Scheme Cost		
Dec-17	Aluminium	12,418,137	\$0.1349921311	\$1,676,350.78	10.00%	\$16,763,507.91	\$1,676,350.78	\$1,676,350.78	\$167,635.08	\$1,843,985.86

February 1 Invoice

Monthly Supplier Contribution Adjustment		Container Volume Adjustment			Market Share Adjustment			Amount (ex GST)	GST	Total (inc. GST)
	Material	Current Invoice	Revised Quantity	Difference	Current Invoice	Revised Share	Difference	Net Monthly Adjustment		
Dec-17	Aluminium	12,418,137	11,454,545	963,592	9.9999984%	8.61115646%	-1.38884338%	-\$1,028,983.56	-\$102,898.36	-\$1,131,881.92

To calculate a very close approximation of the actual rate invoiced in December for Aluminium:

Step 1: From your Dec invoiced issued on Nov-02, 2017 Note down your Estimated Monthly Scheme Costs (located within table on pg. 2) e.g. \$1,676,350.78

Step 2: From the current invoice (Feb) view your Net Monthly Adjustment for the same material type. E.g. \$1,676,350.78

Step 3: Adding your adjustment to your forecast will provide you with your December value.  
 $\$1,676,350.78 + (-\$1,028,983.56) = \$647,367.22$

Step 4: Divide the number from Step 3 by the number of units from the Feb invoice e.g.  
 $\$647,367.22 / 11,454,545 = \$0.056516$  per Aluminium container.

Laying it out in a different way:

$$\text{Pre-Payment} = 12,418,137 \times 0.1349921311 = \$1,676,350.78$$

$$\text{Actual cost} = 11,454,545 \times 0.056516 = \$647,367.22$$

$$\text{Adjustment} = \text{Actual Cost} - \text{Pre-Payment} = \$1,676,350.78 - \$647,367.22 = -\$1,028,983.56$$

The second method starts at the equations shown immediately above and can be calculated once the actual rates are published.

## 3. How is the Forecast calculated?

The forecast volume is calculated by creating a weighted average daily price from three months of your actual historical data before multiplying it against the number of days in the forecast month.



The three months are chosen in order of priority as follows:

1. The volume supplied in the target month in the previous three years
2. The volume supplied in the target month in the previous two years plus the most recently reported month
3. volume supplied in the target month in the previous year plus the two most recently reported months
4. The volume supplied in the three most recently reported months

If insufficient data is available to meet the requirements of the highest priority rule, the calculation methodology requires that you move down the list until a rule is reached under which all the criteria can be met. If you are a new entrant in the market and do not have any historical data, rule 4 will be applied to the extent that data has been provided to the Scheme Coordinator.

As part of the sign up process with the Scheme Coordinator you will have been requested to provide your historical data from October 2016 to the most recently reported month of December 2017. Each month you will continue to provide your data for the most recently completed month by the 15<sup>th</sup> of the following month. Your report for January 2018 will be due on or before 15 February 2018.

Based on the data provided to the Scheme Coordinator, rule 3 will apply for the majority of First Suppliers. This rule requires the following data:

1. The volume for the forecast month from last year
2. The second most recently reported month
3. The most recently reported month

The forecast for March 2018 used in the February 2018 invoice was calculated as follows:

Period	March 2017	November 2017	December 2017	Total
	Forecast month last year	2 <sup>nd</sup> most recently reported month	Most recently reported month	
<b>Days in Month</b>	31	30	31	92
<b>Volume of Aluminium</b>	10,000	15,000	18,500	43,500

Daily containers supplied =  $43,500/92$   
 = 472.8 containers per day

Forecast Month (Mar-18) has 31 days

Forecast Monthly volume =  $472.8 \times 31$  rounded to the nearest container  
 = 14,658 containers

If you had not reported your December 2017 actuals prior to the invoice being generated, the calculation will apply the same rules to your data. This would mean your March 2018 forecast would have been calculated as follows:

Period	March 2017	October 2017	November 2017	Total
	Forecast month last year	2 <sup>nd</sup> most recently reported month	Most recently reported month	



<b>Days in Month</b>	31	31	30	92
<b>Volume of Aluminium</b>	10,000	18,000	15,000	43,000

Daily containers supplied = 43,000/92  
 = 467.4 containers per day

Forecast Month (Mar-18) has 31 days

Forecast Monthly volume = 467.4 x 31 rounded to the nearest container  
 = 14,489 containers

#### 4. What were the actual recovery rates for each container type?

The volume of Containers recovered in December 2017 through the container deposit scheme is summarised in the table below:

Container Material Type	Network Operator Actual	MRF Operator Forecast	Total
<b>Aluminium</b>	8,230,370	<i>62,090,686</i>	<b>70,321,056</b>
<b>Glass</b>	4,852,848	<i>47,473,570</i>	<b>52,326,418</b>
<b>HDPE</b>	177,721	<i>3,174,608</i>	<b>3,352,329</b>
<b>PET</b>	4,458,598	<i>49,358,657</i>	<b>53,817,255</b>
<b>Liquid Paper Board</b>	160,497	<i>8,253,182</i>	<b>8,413,679</b>
<b>Steel</b>	4,810	<i>67,346</i>	<b>72,156</b>
<b>Other Plastics</b>	174	<i>71,175</i>	<b>71,349</b>
<b>Other Materials</b>	1,941	<i>7,693</i>	<b>9,634</b>
<b>Total</b>	<b>17,886,959</b>	<b><i>170,496,917</i></b>	<b>188,383,876</b>

The italicised figures will not be converted to actuals until the CDS Ministerial Advisory Committee publishes the eligible container factors for each material type in mid-May.

#### 5. What were the actual prices per container type?

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 type supplied into the NSW market during the month.

The table below shows the actual container pricing based on the costs calculated for December and the container volumes reported for December.

Container Material Type	Price Per Container
<b>Aluminium</b>	\$0.0565161879
<b>Glass</b>	\$0.0446807934
<b>HDPE</b>	\$0.0515595111
<b>PET</b>	\$0.0485416746
<b>Liquid Paper Board</b>	\$0.0599240125
<b>Steel</b>	\$0.0389767129
<b>Other Plastics</b>	\$0.1928567737
<b>Other Materials</b>	\$0.0597624095



**Note:** The Other Plastics rate is significantly higher as the forecast MRF return volumes exceed the actual volumes supplied. This will be adjusted when the MRF true up occurs in the June invoice.

Had the reported volumes of containers supplied in December 2017 been different, the rates would change even though the total scheme costs remain unchanged as the total scheme costs would be divided by a different number of containers.

To illustrate this point, had the volumes originally forecast for December 2017 been the actual volumes supplied, the price per container would be as shown in the table below.

Container Material Type	Price Per Container
Aluminium	\$0.0605386551
Glass	\$0.0593570079
HDPE	\$0.0522751722
PET	\$0.0556893409
Liquid Paper Board	\$0.0501025865
Steel	\$0.0502650491
Other Plastics	\$0.0169893221
Other Materials	\$0.0375055245

## 6. Why have I been charged interest?

The Scheme has strict 7 day payment terms to ensure that funds are available to pay the general public when they return their containers. To avoid incurring late payment charges, these payment terms must be strictly observed. The Supply Agreement requires that the invoiced amount must be paid, even in the event of a dispute.

If you believe an error has been made on your invoice, please contact our Accounts Receivable team immediately and you will be advised of the next steps in relation to the payment of your invoice.

## 7. When will we find out the pricing for the next month?

Exchange for Change will provide you with as much notice as possible of the pricing for the coming month. Pricing cannot be determined until First Suppliers have reported their actuals for the month most recently ended. Delays in providing actuals by Suppliers will delay the calculation of the proposed pricing. Exchange for Change will aim to have the pricing available on or before the 20<sup>th</sup> of the month.

## 8. What is the longer term view on pricing – will it continue to decrease?

There are several factors that influence price including but not limited to:

- Forecast containers to be supplied in the month (including the effects of seasonality and export volumes)
- Forecast containers to be collected via the Network Operator stream
- Forecast containers to be collected via the Materials Recovery stream
- Mix of container types forecast to be supplied

It is anticipated that pricing will increase steadily from the low point in the January invoice as the scheme matures following the roll out of the collection points. It is anticipated this process will take 6 – 12 months. Pricing is expected to remain relatively stable once maturity is reached, however, factors such as seasonality will continue to cause variations in the price from month to month.



**9. What is market share used for?**

As explained in detail in the true up explanation, the market share is used to determine how much each First Supplier pays of the actual scheme costs. Payment is determined by multiplying the market share by the relevant scheme costs, not by multiplying a unit rate by the number of containers.

**10. Who is responsible for setting the container pricing for the NSW CDS?**

The pricing is set each month by the Scheme Coordinator, Exchange for Change.

**11. Can the invoices be more clearly labelled to make it easier to identify which month they relate to?**

Future invoices will be more clearly labelled with the month to which they relate and also with the month that is being trued up.

**12. Why are we still being invoiced based on forecasts and not actuals?**

The NSW Container Deposit Scheme is a payment in advance scheme and will continue to be so.

**13. If I update the Portal with revised volumes to correct an error, will I automatically receive an adjustment?**

No, the system does not automatically generate adjustments when data is changed. Adjustments take place each time an invoice is run on the first business day of the month, unless you have made a special request with the Scheme Coordinator that has been accepted.

**14. Can I withhold payment until my queries are resolved?**

Your Supply Agreement requires that payments are made on strictly seven day payment terms, even in the event of a dispute. Interest will accrue if payments are not made on time.

Please discuss any concerns with the Exchange for Change Accounts Payable department immediately to minimise exposure to late payment interest charges.