ACOR POLICY STATEMENT CARBON PRICE FOR RECYCLING

INTRODUCTION

The Australian Government has introduced the Clean Energy Act 2011 to place a price on carbon emissions to encourage the abatement of emissions. The carbon price, set initially at $23 per tonne, will apply to large landfill operations and to companies involved in recycling and resource recovery if emissions exceed more than 25,000 tonnes of carbon dioxide or the equivalent in greenhouse gases. The carbon price will not apply directly to other recycling and resource recovery operations but is likely to increase the operating and energy costs of materials processing by resource recovery operators.

Internationally, the waste and resource recovery sector are subjects of special treatments in GHG emission reduction schemes. Additionally, the resource recovery and recycling sector is a subject of free credits for CO_2 emission reduction.

Many materials obtained via recycling and resource recovery have potential for high GHG emission savings and contain a significant amount of embodied energy which can be recovered and increase the efficiency of the Australian economy.

POLICY PRINCIPLES

ACOR advocates the following principles in the amendment of the Clean Energy Act 2011

1 The carbon price regime should not operate inconsistently with:

   a the goals of the Government's National Waste Policy – that has recognized the positive effect of recycling on the reduction of greenhouse gases and energy conservation

   b the emission and energy saving benefits achievable from resource recovery and recycling.

2 The economic and environmental benefits of the resource recovery over waste disposal should be encouraged and not diminished or compromised by application of carbon payments that do not consider positive effect of recycling on carbon reduction

3 The carbon credits or offsets should not be selective and limited to methane emissions from waste management under the Carbon Farming Initiative as the Carbon tax applies to various GHG emissions but recognize the full potential of GHG emission reductions in the waste management and resource recovery

4 Various types of dry recyclables should be eligible to obtain carbon credits based on their GHG emission savings.

5 Carbon credits or offsets for materials recovered or recycled should be recognised and accounted for in full at the time of diversion (in the case of organics) or at the time of reprocessing (in the case of dry recyclables containing embodied energy).

6 The distribution of carbon credits or offsets for the recycling and resource recovery industry should be calculated according to a methodology, that estimated CO_2-e emission savings, and takes into consideration various aspects of materials production and material reprocessing, including material type and quantity, electricity consumption or CO_2 factor of used fossil fuels, and results in accurate calculation of GHG savings from recycling and resource recovery. (See appendix 1.)

7 If anomalies or undesirable complexity in the application of the carbon price cannot be obviated, then ‘waste’ should be removed as a covered sector under the Clean Energy Act.

Appendix 1. : Methodology

$$ER_y = BE_y - PE_y - LE_y$$

ER_y – Emission reductions in year y(tCO_2e)

BE_y – Baseline emissions in year y(tCO_2e)

PE_y – Project emissions in year y(tCO_2e)

LE_y – Leakage emissions in year y(tCO_2e)

Baseline emissions:

$$BE_y = \sum_i [Q_{i,y} \ x \ L_i \ x \ (SEC_{Bl,i} \ x \ EF_{el,y} + SFC_{Bl,i} \ x \ EF_{FF,CO2})]$$

BE_y	Baseline emissions in year y (t CO_2/y)
i	Indices for material type i
$Q_{i,y}$	Quality of material type i recycled in year y (t/y)
L_i	Net gross adjustment factor to cover degradation in material quality and material loss in the production process if the final production using the recycled material (use 0.75)
$SEC_{Bl,i}$	Specific electricity consumption for the production of virgin material type i (MWh/t)
$EF_{el,y}$	Emission factor from the grid electricity generation
$SFC_{Bl,i}$	Specific fuel consumption for the production of virgin material type i(GJ/t)
$EF_{FF,CO2}$	CO_2 emissions factor for fossil fuel (t CO_2/y)

Project Emissions:

$$PE_y = \sum_i Q_{i,j} \ x \ (EC_{i,y} \ x \ EF_{el,y} + FC_{i,y} \ x \ NCV_{FF} \ x \ EF_{FF,CO2})$$

PE_y	Project emissions in year y (t CO_2/y)
i	Indices for material type i

$Q_{i,y}$	Quantity of material type i recycled in year y (t/y)
$EC_{i,y}$	Electricity consumption of the recycling facility apportioned to material type i (MWh/t) in year y
$FC_{i,y}$	Fuel consumption of the recycling facility apportioned to plastic type i (unit mass or volume/t) in year y
NCV_{FF}	Net calorific value of the fossil fuel consumed at the recycling facility in year y (GJ/unit mass or volume)
$EF_{FF,CO2}$	CO_2 emission factor of the fossil fuel consumed at the recycling facility (tCO_2/GJ)