

Case		SLR High Recovery	SLR Low Recovery	ERM	Average
<b>Landfill Counterfactual</b>					
Waste Flow	t/yr	110,120	106,847	114,623	110,530
Carbon in waste	%	29.81%	31.50%	29.82%	30.38%
Biocarbon as percentage of carbon	%	52.40%	53.82%	54.27%	53.50%
Percentage of biocarbon sequestered	%	50.00%	50.00%	50.00%	50.00%
Methane content of landfill gas	%	55%	55%	55%	55%
Methane produced	t/yr	6,291	6,626	6,784	6,567
Landfill gas recovered	%	75%	75%	75%	75%
A <b>Direct GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>39,321</b>	<b>41,411</b>	<b>42,402</b>	<b>41,045</b>
Recovered landfill gas used in gas engine	%	65%	65%	65%	65%
Landfill gas engine efficiency	%	38%	38%	38%	38%
Power generated	MWh	15,216	16,025	16,408	15,883
B <b>GHG emissions displaced</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>6,065</b>	<b>6,387</b>	<b>6,540</b>	<b>6,331</b>
C <b>Transport GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>145</b>	<b>141</b>	<b>151</b>	<b>145</b>
D=A-B+C <b>Total GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>33,401</b>	<b>35,164</b>	<b>36,013</b>	<b>34,859</b>
<b>Gasification and MRF</b>					
Waste flow into MRF	t/yr	110,120	106,847	114,623	110,530
Non-ferrous recycling	t/yr	484	486	519	496
Ferrous recycling	t/yr	1,558	1,998	2,769	2,108
Plastics recycling	t/yr	537	2,295	2,248	1,693
Other materials removed	t/yr	20,526	9,404	12,897	14,276
E <b>GHG savings from recycling</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>8,092</b>	<b>10,209</b>	<b>11,762</b>	<b>10,021</b>
Waste flow into gasifier	t/yr	87,016	92,665	96,189	91,957
NCV of gasifier feedstock	MJ/kg	13.74	12.90	12.43	13.02
Carbon in waste	%	35.20%	34.07%	33.03%	34.10%
Biocarbon as percentage of carbon	%	54.57%	56.74%	57.39%	56.23%
GHG released from feedstock	tCO <sub>2</sub> e/yr	13,914.15	13,655.88	13,536.40	13,702.14
Coke flow into gasifier	t/yr	51,019	50,072	49,633	50,241
NCV of coke	MJ/kg	30	30	30	30
Carbon content of coke	%	91%	91%	91%	91%
GHG released from coke	tCO <sub>2</sub> e/yr	12,679.33	12,679.33	12,679.33	12,679.33
Limestone flow into gasifier	t/yr	7,600	7,600	7,600	7,600
GHG released from limestone	tCO <sub>2</sub> e/yr	3,342	3,342	3,342	3,342
Nitrous oxide contribution	tCO <sub>2</sub> e/yr	788	839	871	832
F <b>Total direct GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>67,827</b>	<b>66,931</b>	<b>66,525</b>	<b>67,095</b>
Total thermal flow into gasifier	MWh/yr	363,490	363,490	363,490	363,490
Net efficiency	%	20.44%	20.44%	20.44%	20.44%
Power exported from gasifier	MWh/yr	74,297.37	74,297.37	74,297.37	74,297.37
Power used in MRF	MWh/yr	2,690.00	2,690.00	2,690.00	2,690.00
Power exported to grid	MWh/yr	71,607.37	71,607.37	71,607.37	71,607.37
G <b>GHG emissions displaced</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>28,543</b>	<b>28,543</b>	<b>28,543</b>	<b>28,543</b>
H <b>Transport GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>955</b>	<b>901</b>	<b>982</b>	<b>946</b>
I = F-E-G+H <b>Total GHG emissions</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>32,147</b>	<b>29,081</b>	<b>27,202</b>	<b>29,477</b>
<b>Comparison</b>					
J = D-I <b>Benefit of facility</b>	<b>tCO<sub>2</sub>e/yr</b>	<b>1,254</b>	<b>6,083</b>	<b>8,811</b>	<b>5,382</b>

## Notes:

Marginal electricity displacement factor taken as 0.3986 teCO<sub>2</sub>/MWhBenefit of non-ferrous recycling taken as 10.7 te CO<sub>2</sub>e/teBenefit of ferrous recycling taken as 1.6 te CO<sub>2</sub>e/teBenefit of plastics recycling taken as 0.79 te CO<sub>2</sub>e/te