Functions

excalate the CPM premium of the gate fee at a different rate to the rest of the gate fee. If this charge is now just a fixed cost that is unlikely to change annually (aprt from with CPI), then this section can be left blank.

self.Waste\_Levy=

not sure to add waste levy as separate

Model set up

INPUT

* First year and last year assessment
* Operating weeks per year

Per waste stream

Set of parameters

Service Configuration

* Tonnes per waste stream ( provided or calculate)
* No of hhlds provided to
* No of buildings provided to
* No of bins serviced
* Collection vehicle
* Collection frequency

MIsc costs

Collection

* Km travelled per lift
* No. of trips
* No. of trips per tonne
* Fuel Type
* t CO2-e/km

Transfer

Transfer Station A

* % via Transfer Station A
* Vehicle Type from Transfer Station A to Facility
* Tonnes transferrred
* Facility gate fee (incl. levy & CPM premium if LF)
* Capacity (t)
* No of trips

PROCESSING

* Processing/disposal faciltiy
* Facility type
* Facility gate fee (incl. levy & CPM premium if LF)
* % delivered directly
* Tonnes delivered directly

|  |
| --- |
| ***Direct Landfill*** |
| Landfill |
| Tonnes landfilled |
| Facility gate fee (incl. levy & CPM premium) |
| Direct landfill cost - Annual |
| Direct landfill cost (full) - Per tonne |
|  |
| Waste generated/sourced location |
| Facility location |
| Levy rate category |
| Levy rate (2018) |
| Levy charges |
| Levy rate - Per tonne |
|  |
| CPM gate fee premium (2018) |
| CPM gate fee charges |
| CPM gate fee - Per tonne |
|  |
| Facility gate fee (base) - Per tonne |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| Gas catpure if landfill % |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| Direct Landfill Emissions (tCO2-e) - Annual |
| Direct Landfill Emissions (tCO2-e) - Per tonne |
|  |
| ***Processing*** |
| Facility |
| Tonnes prcocessed |
| Facility gate fee (incl. levy & CPM premium if LF) |
| Total process cost (full) - Annual |
| Process cost (full) - Per tonne |
| Residuals disposal cost - Annual |
| Residuals disposal cost - Per tonne |
| Process cost (base) - Annual |
| Process cost (base) - Per tonne |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| Tonnes recovered |
| Tonnes residual |
|  |
| Waste Stream Type (Processing) |
| Process Emissions factor (tCO2-e/t waste) |
| Process Emissions (tCO2-e) - Annual |
| Process Emissions (tCO2-e) - Per tonne |
|  |
| ***Residual landfill*** |
| Residuals disposal facility |
| Tonnes residual landfilled |
| Facility gate fee (incl. levy & CPM premium if LF) |
| Residual disposal costs (incl. levy & CPM premium if LF) |
| Residual disposal costs (full) - Per tonne |
|  |
| Waste generated/sourced location |
| Facility location |
| Levy rate category |
| Levy rate |
| Levy charges |
| Levy rate - Per tonne |
|  |
| Carbon gate fee premium |
| Carbon gate fee charges |
| Carbon gate fee premium - Per tonne |
|  |
| Facility gate fee (base) - Per tonne |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| Gas catpure if landfill % |
|  |
|  |
| FO |
| GO |
| Paper/Cardboard |
| Plastic |
| Glass |
| Residual |
| Metal |
| Other |
| Other organic |
| 0 |
| 0 |
|  |
| Landfill Emissions (CO2-e) - Annual |
| Resiudals Landfill Emissions (CO2-e) - Per tonne landfilled |
| Residuals Landfill Emissions (CO2-e) - Per tonne |
|  |
|  |
| **Summary** |
| Number of households |
| Number of bins |
| Tonnes in system |
| Tonnes collected |
| Tonnes processed |
| Tonnes landfilled (direct) |
| Tonnes landfilled (processing residual) |
| Tonnes landfilled (overall) |
| Tonnes diverted from landfill (direct) |
| Tonnes recovered (overall) |
| **Collection Only** |
| Collection cost - Per tonne |
| Collection km travelled - Per tonne |
| Collection vehicle emissons - Per tonne |
| **Transfer** |
| Transfer cost - Per tonne |
| Transfer km travelled - Per tonne |
| Transfer emissons (tCO2-e) - Per tonne |
| **Collection and Transfer Combined** |
| Collection and Transfer cost - Per tonne |
| Collection and Transfer km travelled - Per tonne |
| Collection and Transfer emissons (tCO2-e) - Per tonne |
| **Direct Landfill** |
| Tonnes landfilled |
| Direct landfill cost (full) - Per tonne |
| Levy rate - Per tonne |
| CPM gate fee - Per tonne |
| Facility gate fee (base) - Per tonne |
| Levy rate category |
| Landfill |
| Direct Landfill Emissions (tCO2-e) - Per tonne |
| **Processing** |
| Process cost (full) - Per tonne |
| Process cost (base) - Per tonne |
| Process Emissions (tCO2-e) - Per tonne |
| **Residuals to Landfill** |
| Tonnes residual landfilled |
| Residual disposal costs (full) - Per tonne |
| Levy rate - Per tonne |
| Carbon gate fee premium - Per tonne |
| Facility gate fee (base) - Per tonne |
| Levy rate category |
| Residuals disposal facility |
| Residuals Landfill Emissions (CO2-e) - Per tonne |
| **Residuals to Landfill** |
| Misc. cost no. 1 |
| Misc. cost no. 2 |
| Misc. cost no. 3 |
| Misc. cost no. 4 |
| Misc. cost no. 5 |
| Misc. cost no. 6 |
| Misc. cost no. 7 |
| Misc. cost no. 8 |
| Misc. cost no. 9 |
| Misc. cost no. 10 |

OUPUT

Overall

|  |
| --- |
| Tonnes in system |
| Tonnes collected |
| Tonnes processed |
| Tonnes landfilled (direct) |
| Tonnes landfilled (processing residual) |
| Tonnes landfilled (overall) |
| Tonnes diverted from landfill (direct) |
| Tonnes recovered (overall) |
| Number of households |
| Number of bins |

|  |  |  |
| --- | --- | --- |
| **Km travelled and Emissions Extrapolated by tonnages only** | | |
| Collection km travelled | Collection km travelled - Per tonne | collection only |
| Transfer km travelled | Transfer km travelled - Per tonne | transfer only |
| Collection vehicle emissons | Collection vehicle emissons - Per tonne | collection only |
| Transfer emissons (tCO2-e) | Transfer emissons (tCO2-e) - Per tonne | transfer only |
| Process Emissions (tCO2-e) | Process Emissions (tCO2-e) - Per tonne | processing |
| Direct Landfill Emissions (tCO2-e) | Direct Landfill Emissions (tCO2-e) - Per tonne | direct landfill |
| Residuals Landfill Emissions (CO2-e) | Residuals Landfill Emissions (CO2-e) - Per tonne | residuals disposal |
|  |  |  |
| **Collection and Transfer Costs (base cost for landfill) Extrapolated by tonnages and CPI** | | |
| Collection cost | Collection cost - Per tonne | collection only |
| Transfer cost | Transfer cost - Per tonne | transfer only |
|  |  |  |
| **Direct Landfill Costs Base extrapolated by tonnages and CPI , levy and CPM by annual (CPI inc. charge)** | | |
| Facility gate fee (base) | Facility gate fee (base) - Per tonne | direct landfill |
| Levy rate | Levy rate category | direct landfill |
| Levy charges |  |  |
| CPM gate fee | Landfill | direct landfill |
| CPM gate fee charges |  |  |
| Direct Landfill cost (full) |  |  |
| Direct landfill cost (full) | Direct landfill cost (full) - Per tonne | direct landfill |
|  |  |  |
| **Residuals Landfill Costs Base extrapolated by tonnages and CPI , levy and CPM by annual (CPI inc. charge)** | | |
| Facility gate fee (base) | Facility gate fee (base) - Per tonne | residuals disposal |
| Levy rate | Levy rate category | residuals disposal |
| Levy charges |  |  |
| CPM gate fee | Residuals disposal facility | residuals disposal |
| CPM gate fee charges |  |  |
| Resiudals Landfill cost (full) |  |  |
| *Residual disposal costs (full)* | *Residual disposal costs (full) - Per tonne* | *residuals disposal* |
|  |  |  |
| **Processing Costs Base extrapolated by tonnages, levy and CPI by annual (GST inc. charge)** | | |
| Process cost (base) | Process cost (base) - Per tonne | processing |
| Residuals disposal cost |  |  |
| Process cost full |  |  |
| *Process cost (full)* | *Process cost (full) - Per tonne* | *processing* |
|  |  |  |
|  |  |  |
|  |  |  |
| **Misc** |  |  |
| Misc. cost no. 1 | Food liners: FOGO | overall |
| Misc. cost no. 2 | Kitchen Caddys: FOGO | overall |
| Misc. cost no. 3 | GO Education Upfront | overall |
| Misc. cost no. 4 | GO Education Ongoing | overall |
| Misc. cost no. 5 | FOGO Fn Education Upfront | overall |
| Misc. cost no. 6 | FOGO Fn Education Ongoing | overall |
| Misc. cost no. 7 | FOGO Wk Education Upfront | overall |
| Misc. cost no. 8 | FOGO Wk Education Ongoing | overall |
| Misc. cost no. 9 | Mobile garbage bin (240L) | overall |
| Misc. cost no. 10 | Collection Vehicle (10t Side Lift) | overall |
| **Total** |  |  |

Collection

* No. of collections per year
* Cost per lift
* No. of lifts per year
* Cost per year
* Collection cost - Per tonne
* Km travelled
* Collection km travelled - Per tonne
* Vehicle emissions
* Collection vehicle emissons - Per tonne

Transfer

* Transfer A cost - annual
* Km from Transfer Station A to Destination
* Km travelled - annual
* Fuel Type
* Emissions tCO2-e/km
* Emissions CO2-e

TOTAL COSTS

* Collection cost - Annual
* Collection and Transfer cost - Per tonne
* Km travelled - Annual
* Collection and Transfer km travelled - Per tonne
* Emmissions t CO2e - Annual
* Collection and Transfer emissons (tCO2-e) - Per tonne

PROCESSING

Per Scenario

|  |
| --- |
| **Final Results** |
| Number of households |
| Number of bins |
| Misc Cost |
| Collection cost |
| Transfer cost |
| Process cost |
| Landfill cost |
| Total cost |
| Collection emissions |
| Transfer emissions |
| Process emissions |
| Landfill emissions |
| Total emissions |
| Collection km travelled |
| Transfer km travelled |
| Total km travelled |
| Tonnes in system |
| Tonnes collected |
| Tonnes processed |
| Tonnes landfilled (direct) |
| Tonnes landfilled (processing residual) |
| Tonnes landfilled (overall) |
| Tonnes diverted from landfill (direct) |
| Tonnes recovered (overall) |
| Diversion rate |
| Recovery rate |

Across number of assessment years- account for Growth factor, CPI