



## Municipal Solid Waste Tariff Model:

### Demonstration example eThekweni Municipality <sup>1</sup>

## CONSUMERS

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### *Residential*

- Population: 3,578,625
- Households: 903,204
- No. of residential consumer units: 866,500
- Income profile:

<i>R/hh/month From</i>	<i>To</i>	<i>%</i>
R 0	R 1,600	41%
R 1,600	R 3,200	21%
R 3,200	R 6,400	14%

- Level of indigents = R1,600.
- Property rates exemption is R150,000

### *Non-residential*

- Total non-residential consumers who receive regular waste collection services: Approx. 20,000, of which, 15,961 are serviced by the municipality
- Total non-residential consumers who request waste collection on demand: 1,500, of which, 944 are serviced by the municipality

## SERVICE LEVELS

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### *Residential*

- Informal settlements: Community contractors collect black bags weekly = 306,449 CUs
- Formal townships: Principal contractors collect black bags weekly = 114,821 CUs
- Formal residential areas: Municipality collects black bags weekly = 388,419 CUs
- Residential flats: Municipality collects wheelie bins weekly = 2,200 CUs
- The remainder of CUs are rural and are unserved. 5,000 are considered high income.

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<sup>1</sup> The data in this worksheet is for demonstration purposes only. Many of the figures have been fabricated and do not represent the actual waste management practices of eThekweni Municipality

### ***Residential collection of recyclables***

- Orange bag system to collect recyclables separated at source. Operated by private contractors, partially paid for by municipality. Approximately 20,000 CUs served.
- Blue bags are used for garden refuse, which are collected weekly by the municipality. The bags are purchased by households to pay for the service. Service is provided to approximately 80,000 served.

### ***Non-residential***

Four different Round Collected Waste (RCW) services offered:

- Once a week – 10,361 CUs
- Twice a week – 700 CUs
- Three times a week – 3,500 CUs
- Five times a week – 1,400 CUs

Demand collected waste (DCW) – municipality collects 25,000 tons pa

### ***Public cleansing***

- Street cleaning: Municipality cleans streets – 3,000 tons pa
- Area cleaning: Municipality cleans parks and beaches: 2,861 tons pa

Estimate that 50% of the public cleansing waste is from residential areas

## **WASTE FACILITIES:**

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### ***Vehicles***

Municipality owns own vehicles with Current Replacement cost of approx. R210 million

### ***Transfer stations***

Municipality owns transfer stations that receive 270,090 tons of waste per annum. Approximately 4,000 tons of this is dropped off directly by consumers. 70% of the waste dropped off at the transfer station is charged for.

By 2017, 50% of all waste will be going via transfer station, as local landfills will be closed.

### ***Reclamation***

The municipality runs a reclamation facility as a Public-Private Partnership, where the municipality covers 10% of the operating costs and the private operator covers the rest. The facility handles the following waste:

- Municipal collected: 10,000 tons pa
- Other waste dropped off: 5,538 tons pa

Approximately 1,250 tons pa (8%) of non-recyclable material is sent from the recycling facility to the landfill.

The private contractor sells the reclaimed materials for his own profit.

### ***Landfills***

The municipality operates its own landfill sites, which receive 1,258,597 tons of waste per annum. Approximately 10,000 tons of the waste received by the municipal landfill is dropped off by consumers.

8% of waste accepted at landfill is not chargeable.

Total landfill space remaining at end of 2011 = 2,390,000 m<sup>3</sup>

### ***Waste-to-energy facilities***

The municipality does not have any waste-to-energy facilities.

### ***Landfill gas-to-energy facilities***

The municipality operates landfill gas extraction at 2 landfills, with a combined volume of 10,000 m<sup>3</sup>. The facilities generate 49 GWh of electricity per annum.

## **FINANCE**

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### ***Debt***

The solid waste department has a debt of R84,303,000 for its current landfill sites. The details of this loan are not known.

### ***Capital funding***

The following capital funding arrangements are in place:

<b><i>Source of capital funding</i></b>	<b><i>2012</i></b>	<b><i>2013</i></b>	<b><i>2014</i></b>
MIG/USDG for solid waste	R11,156,000	R12,532,000	R12,952,000
Own capital reserves (R'000)	R30,080,000	R34,425,000	R70,124,000

### ***Operating subsidies***

The solid waste department has been allocated the following amounts of the municipal Equitable Share:

<b><i>2012</i></b>	<b><i>2013</i></b>	<b><i>2014</i></b>
R232,451,000	R247,426,000	R293,106,000

## **TARIFFS**

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eThekweni Municipality recovers collection, transfer and disposal costs from consumers through tariffs. Public cleansing and other departmental activities are funded from the general municipal account.

The following tariffs apply:

### ***Residential***

Informal areas are not charged for the service (= 306,449 CUs)

Rest of the service is charged a tariff based on property values:

<b><i>Property value</i></b>	<b><i>Tariff (R/CU/month)</i></b>	<b><i>No. of CUs</i></b>
Property R190k-R300k	23.50	90,979
Property R300k-R400k	40.46	65,707
Property R400k-R500k	52.21	85,925
Property R500k-R750k	69.16	111,197
Property R750k-R1m	92.66	80,870
Property > R1m	114.86	70,762

### ***Non-Residential***

- No basic fee
- RCW Volume fee: R35 per m<sup>3</sup>
  
- DCW Volume fee: R41 per m<sup>3</sup>

### ***Average disposal tariff***

Tipping fees at landfills and transfer stations are charged at different rates for different types of waste, but the average is R65/ton.

## **OPERATING ACCOUNT**

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### ***Expenditure***

From Operating budget:

- Total Operating expenditure for solid waste: R1,000,921,000
  
- Non-operational expenditure = R503,000
- Provision for bad debt = R274,920,000
- Depreciation = R82,012,000
- Interest = R6,875,000
- Contribution to capital reserves = R8,300,000

### ***Income***

Residential rates income = R147,609

Non-residential rates income = R27,060