# DETAILS OF PUBLIC CONSULTATION FOR MACHAKOS WATER & SEWERAGE COMPANY LIMITED (FOR THE PERIOD 2024/2025 – 2028/2029)

## 1.0 Cost and Revenue Structure for the Tariff Period

| Expenditure Item          | 2023/2024   | 2024/2025   | 2025/2026   | 2026/2027               | 2027/2028   | 2028/2029   |
|---------------------------|-------------|-------------|-------------|-------------------------|-------------|-------------|
| Operations                | 100,545,664 | 115,127,210 | 126,416,063 | 133,961,219 140,281,610 |             | 148,000,759 |
| Maintenance               | 14,966,145  | 15,714,452  | 18,477,950  | 19,401,847              | 20,371,940  | 21,390,536  |
| Regulatory Levy           | 4,339,952   | 5,446,376   | 7,830,872   | 8,259,128               | 8,505,444   | 8,946,581   |
| Total O&M Costs           | 119,851,761 | 136,288,038 | 152,724,885 | 161,622,195             | 169,158,993 | 178,337,877 |
| Investment Costs          | ı           | -           | 14,540,000  | 13,057,000              | 16,547,000  | 17,094,000  |
| Debt Repayment            | 1           | -           | -           | -                       | -           | -           |
| Total Costs               | 119,851,761 | 136,288,038 | 167,264,885 | 174,679,195             | 185,705,993 | 195,431,877 |
| Total Billing (KShs)      | 108,498,809 | 136,159,390 | 195,771,803 | 206,478,203             | 212,636,092 | 223,664,528 |
| Collection Efficiency (%) | 88%         | 90%         | 91%         | 92%                     | 93%         | 94%         |
| Projected Revenue         | 95,478,952  | 122,543,451 | 178,152,341 | 189,959,947             | 197,751,566 | 210,244,656 |
| O&M Cost Coverage         | 80%         | 90%         | 117%        | 118%                    | 117%        | 118%        |
| Total Cost Coverage       | 80%         | 90%         | 107%        | 109%                    | 106%        | 108%        |

# 2.0 Proposed Change in Water Tariff Structure for the Period

| Recommended Tariff for MACHWASCO |                      |                 |                      |                 |  |  |  |  |
|----------------------------------|----------------------|-----------------|----------------------|-----------------|--|--|--|--|
| Consumer Categories              | Consumption<br>Block | Current Tariff  | Consumption<br>Block | Proposed Tariff |  |  |  |  |
|                                  | (m3)                 | (Kshs/M³)       | (m3)                 | (Kshs/M3)       |  |  |  |  |
|                                  | 0-6                  | 450 (Flat Rate) | 1-6                  | 180             |  |  |  |  |
| Domestic/Residential             | 7-20                 | 115             | 7-20                 | 205             |  |  |  |  |
|                                  | 21-50                | 150             | 21-50                | 220             |  |  |  |  |
|                                  | 51-100               | 185             | 51-100               | 240             |  |  |  |  |
|                                  | 100-300              | 230             | 101-300              | 260             |  |  |  |  |
|                                  | >300                 | 300             | >300                 | 300             |  |  |  |  |
| Multi-Dwelling Units             | Flat Rate            |                 | Flat Rate            | 205             |  |  |  |  |
|                                  | 0-6                  | 450 (Flat Rate) | <u> </u>             |                 |  |  |  |  |
|                                  | 7-20                 | 115             |                      |                 |  |  |  |  |
| Commercial/Industrial            | 21-50                | 150             | 1-50                 | 220             |  |  |  |  |
| Commercial/industrial            | 51-100               | 185             | 51-100               | 240             |  |  |  |  |
|                                  | 100-300              | 230             | 101-300              | 260             |  |  |  |  |
|                                  | >300                 | 300             | >300                 | 300             |  |  |  |  |
|                                  | 0-6                  | 450 (Flat Rate) |                      |                 |  |  |  |  |
|                                  | 7-20                 | 115             |                      |                 |  |  |  |  |
| Government/Institutions          | 21-50                | 150             | 1-50                 | 220             |  |  |  |  |
| Government/institutions          | 51-100               | 185             | 51-100               | 240             |  |  |  |  |
|                                  | 100-300              | 230             | 100-300              | 260             |  |  |  |  |
|                                  | >300                 | 300             | >300                 | 300             |  |  |  |  |
|                                  | 1-600                | 90              | 1-600                | 205             |  |  |  |  |
| Schools                          | 601-1200             | 115             | 601-1200             | 240             |  |  |  |  |
|                                  | >1200m3              | 130             | >1200m3              | 300             |  |  |  |  |
| Unique Consumer Categories       | Kiosk                | 35              |                      | 180             |  |  |  |  |

Customers with non-functional meters shall be billed based on the average of the last three months' bills

## 3.0 Sewerage Tariff Structure for the period 2024/2025 to 2028/2029

## a) Consumers with a Water Connection

Sewerage will be charged at 75% of the water volumes, billed at the tariff for water specified (in 2.0) above for all customer categories.

### b) Consumers without a Water Connection

Sewerage consumers without a water connection shall be charged as follows:

- Single dwelling Domestic unit: Ksh. 350 Per Month
- All other categories: 75% of the Volume of water consumed as per the metered source at the rates specified (in 2.0) above.

#### 4.0 Indexation

The utility's tariffs for water and sewerage shall be eligible for annual indexation as per the Water Services Regulatory Board (WASREB) regulations. The inflation adjustment shall come into effect after a full year of implementation, on the 15th day of July every year, and shall remain in force until the 14th day of July the following year.

## 5.0 Miscellaneous Charges

These shall be charged as per the approved miscellaneous charges approved by WASREB.

| Item/ Service   | Charge (Ksh.)                    |
|---|----------------------------------|
| Water Deposit   | <u> </u>                         |
| Category of consumer  |                                  |
| Domestic  | 2500                             |
| Retail shops less than 10m <sup>3</sup>                           | 3000                             |
| Retail shops more than 10m <sup>3</sup>                           | 3,500                            |
| Bar, and restaurants less than 15 m <sup>3</sup>                  | 4000                             |
| Bar, restaurants more than 15 m <sup>3</sup>                      | 6,000                            |
| Hotel class "A" and "B" less than 150 m <sup>3</sup>              | 12,000                           |
| Hotel class "A" and "B" more than 150 m <sup>3</sup>              | 15000                            |
| Hotel class "C" and 'D' less than 150 m <sup>3</sup>              | 18000                            |
| Hotel class "C" and 'D' more than 150 m <sup>3</sup>              | 20,000                           |
| Hospitals more than 150 m <sup>3</sup>                            | 20,000                           |
| Health centres less than 150 m <sup>3</sup>                       | 12,000                           |
| Schools and other institutions more than 200 m <sup>3</sup>       | 20,000                           |
| Schools less than 200 m <sup>3</sup>                              | 10,000                           |
| Minor construction sites of more than 200 m <sup>3</sup>          | 15,000                           |
| Major construction sites more than 300 m <sup>3</sup>             | 50,000                           |
| Light industries less than 200 m <sup>3</sup>                     | 30,000                           |
| Medium industrial between 200 m³ and 300 m³                       | 50,000                           |
| Heavy industries of more than 300 m <sup>3</sup>                  | 100,000                          |
| Water Kiosks  | 5,000                            |
| Customers with only sewer connection are to be charged a deposit  | equivalent to a water connection |
| Other Charges   |                                  |
| Service   |                                  |
| New water connection fee – Connection size: ½ inch to 1 inch      | 2,500                            |
| New water connection fee - Connection size: 1.5 inches to 3 inche | s 7,500                          |

| Item/ Service   | Charge (Ksh.)  |
|---|--|
| New water connection fee – Connection size above 3inches            | 15,000   |
| Water Reconnection fee – at meter point                             | 1,000  |
| Water Reconnection fee – at mains                                   | 5,000 and double deposit   |
| Tanker – 8000, 16,000 litres  | 2,500, 5,000 respectively per tanker within the WSP area for all |
|   | consumers  |
| Sale of water Per M <sup>3</sup> at bowsing point (own tanker)      | 180  |
| Replacement of stolen or damaged meters                             | 100% of the market cost of the meter                             |
| Meter testing on request  | 500  |
| Special meter reading under customer's request                      | 500  |
| Sewer Connection- Residential/ Domestic                             | 5,000  |
| Sewer Connection- Commercial, Government, Schools, Universities     | 7,500  |
| and Colleges  |  |
| Sewer Connection- Industrial  | 15,000   |
| Private sewer unblocking  | 2,500  |
| Leak detection services   | 1,000  |
| Sewer Reconnection fee  | 15,000   |
| Printing of customer's statement under own request                  | 200  |
| For cutting off the supply at the request of the consumer           | 200  |
| For turning on the supply otherwise than in respect of a first      | 200  |
| connection  |  |
| Exhauster Services (Company Exhauster)                              | 5,000 for other customers and 4,000 for informal settlements     |
| Private Exhausters (Dumping into the company's sewer system)        | 15,000 per Truck per month                                       |
| Penalties   |  |
| Illegal water connection, -Commercial, Industry, Construction       | 100,000 plus estimated consumption during the period of          |
| (Fraud)   | illegality   |
| Illegal water connection, (Fraud) – Domestic                        | 30,000 plus estimated consumption during the period of the       |
|   | illegality   |
| Overcharging (fraud) at water kiosk                                 | 15,000   |
| Illegal sewer connection- Commercial, Industry, Construction        | 100,000  |
| Illegal sewer connection- Domestic, Government, Schools,            | 30,000   |
| Universities & Colleges   |  |
| Self-reconnection after cut-off for non-payment                     | 5,000 and billing to be backdated from the date of cut-off       |
| Surcharge for tampering with meters (this to include meter removal, | 5,000  |
| reversing of meter etc)   |  |
| Surcharge for direct suction of water from the supply line using a  | 10,000   |
| pump  |  |
|   | <u>l</u>   |

## 6.0 Service Delivery Conditions attached to the Tariff.

The conditions attached to this approval, which shall form part of the license conditions of Machakos Water & Sewerage Company Limited are:

| Target                              | 2023/2024                      | 2024/2025 | 2025/2026 | 2026/2027 | 2027/2028 | 2028/2029 |  |  |  |
|-------------------------------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|--|--|--|
| Water Coverage (%)                  | 45%                            | 46%       | 47%       | 48%       | 49%       | 50%       |  |  |  |
| Water quality standards (%)         | 100% Compliance with Standards |           |           |           |           |           |  |  |  |
| Personnel Expenditure as % of O&M   | 44%                            | 43%       | 42%       | 41%       | 41%       | 40%       |  |  |  |
| Maintenance Expenditure as % of O&M | 12%                            | 12%       | 12%       | 12%       | 12%       | 12%       |  |  |  |
| Non-Revenue Water                   | 31%                            | 30%       | 29%       | 28%       | 28%       | 27%       |  |  |  |
| Hours of Supply (Hrs.)              | 12                             | 13        | 13        | 14        | 14        | 15        |  |  |  |
| Staff per 1000 connections          | 10                             | 9         | 9         | 8         | 7         | 5         |  |  |  |
| Metering ratio (%)                  | 100%                           | 100%      | 100%      | 100%      | 100%      | 100%      |  |  |  |
| Collection Efficiency (%)           | 88%                            | 90%       | 91%       | 92%       | 93%       | 94%       |  |  |  |
| Resale at kiosk                     |                                |           | 5kshs     | /M3       | •         |           |  |  |  |

#### **6.1 Other Conditions**

- i. Annual budgets: The utility shall adhere to the budgetary levels set in the tariff.
- ii. **Surpluses**: the surpluses realised during the tariff period shall be used to implement priority service delivery capital projects approved by WASREB.
- iii. Catchment Protection: The utility shall undertake measures to conserve/ protect the catchment areas of their water source as part of Corporate Social Responsibility.
- iv. **Reporting:** The utility shall submit quarterly performance reports to WASREB in the prescribed format.
- v. **Regulatory Levy:** The utility to pay monthly regulatory levy based on 4% of turnover which is inclusive of billing of other services and interest income earned.
- vi. Investments: The utility shall undertake the investments in Table 1 as follows: -

# TABLE 1: PROPOSED INVESTMENTS SCHEDULE- INTERNALLY GENERATED FUNDS

|  |                            | (MACHWASCO) 2025-2026  |          |      |              |          |                    |  |  |
|--|----------------------------|--|----------|------|--------------|----------|--------------------|--|--|
| TARGETTED INVESTMENT                     | PROJECT AREA               | NATURE OF ACTIVITIES   | SIZE     | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |  |  |
|  |                            | Procure leak detection equipment and tools   |          | LS   | 4,500,000.00 | 1        | 4,500,000.00       |  |  |
|  |                            | Install pressure loggers   |          | Nr.  | 500,000.00   | 3        | 1,500,000.00       |  |  |
|  |                            | Install pump probes and tank-level sensors   |          | LS   | 1,000,000.00 | 1        | 1,000,000.00       |  |  |
|  | Machakos Town and Environs | Leak repair records- Georeferencing bursts and leaks location to database with smartphones/ GPS  |          | LS   | 400,000.00   | 1        | 400,000.00         |  |  |
| Non-Revenue Water Reduction Plan         |                            | Formation of NRW unit and capacity building of the team  |          | LS   | 740,000.00   | 1        | 740,000.00         |  |  |
| To T |                            | Restocking of repair materials and capacity building of O&M team and area managers to enhance leak control in the distribution system and at the household connections               |          | LS   | 1,000,000.00 | 1        | 1,000,000.00       |  |  |
|  | Eastleigh Area             | Create new DMA and sub-DMAs; replacement of faulty meters, isolation valves, and control valves, rehabilitation and replacement of customer service lines and installation of meters |          | LS   | 5,000,000.00 | 1        | 5,000,000.00       |  |  |
|  |                            | Sub-Total  |          |      |              |          | 14,140,000.00      |  |  |
| Customer Metering                        | Machakos Town and Environs | Customer metering- replacement of faulty meters complete with associated fittings and mapping  |          | Nr.  | 4,000.00     | 100      | 400,000.00         |  |  |
|  |                            | Sub-Total Sub-Total  |          |      |              |          | 400,000.00         |  |  |
|  |                            |  |          |      |              |          |                    |  |  |
|  |                            | Total  |          |      |              |          | 14,540,000.00      |  |  |
|  |                            | 2026-2027  |          |      |              |          |                    |  |  |
| TARGETTED INVESTMENT                     | PROJECT AREA               | NATURE OF ACTIVITIES   | SIZE     | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |  |  |
|  |                            |  | DN 160mm | Nr.  | 150,000.00   | 1        | 150,000.00         |  |  |
|  | Kaseve Pipeline DMA        | Creation of new DMA and Sub-DMAs   | DN 110mm | Nr.  | 102,000.00   | 1        | 102,000.00         |  |  |
| Regional Master Meters                   |                            |  | DN 63mm  | Nr.  | 45,000.00    | 2        | 90,000.00          |  |  |
|  | Kimutwa Pipeline DMA       | Creation of new DMA and Sub-DMAs   | DN 250mm | Nr.  | 210,000.00   | 1        | 210,000.00         |  |  |
|  | Mindera i ipolino bivin    | Greater of now Differ and Gub-Differs  | DN 63mm  | Nr.  | 45,000.00    | 3        | 135,000.00         |  |  |
|  | Sub-Total                  |  |          |      |              |          |                    |  |  |
| Non-Revenue Water Reduction Plan         | Machakos Town and Environs | Leak repair records- Georeferencing bursts and leaks location to database with smartphones/ GPS  |          | LS   | 500,000.00   | 1        | 500,000.00         |  |  |

|                        |   | (MACHWASCO) 2026-20   | 27       |      |              |          |                    |
|------------------------|---|---|----------|------|--------------|----------|--------------------|
| TARGETTED INVESTMENT   | PROJECT AREA                              | NATURE OF ACTIVITIES  | SIZE     | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |
|                        |   | Purchase Portal Pressure Gauges to continuously monitor pressure in the distribution network  |          | LS   | 1,570,000.00 | 1        | 1,570,000.00       |
|                        |   | Categorize both physical and commercial losses by conducting MNF, leak measuring devices  |          | LS   | 1,800,000.00 | 1        | 1,800,000.00       |
|                        | Miwani, Eastleigh, and Kenya Israel areas | Create new DMA and sub-DMAs; replacement of faulty meters, isolation valves and control valves, rehabilitation and replacement of customer service lines and installation of meters |          | LS   | 7,000,000.00 | 1        | 7,000,000.00       |
|                        |   | Sub-Total   | I        |      | I            |          | 10,870,000.00      |
|                        |   | Customer metering- replacement of faulty meters complete with associated fittings and mapping   |          | Nr.  | 4,000.00     | 100      | 400,000.00         |
| Customer Metering      |   | Random field meter testing using electromagnetic meter  |          | LS   | 300,000.00   | 1        | 300,000.00         |
|                        |   | Geo-referencing customer meters using GIS and updating in the customer database   |          | LS   | 800,000.00   | 1        | 800,000.00         |
|                        |   | Sub-Total   | Г        | Т    | T            | Г        | 1,500,000.00       |
|                        | Total                                     |   |          |      |              |          | 13,057,000.00      |
|                        |   |   |          |      |              |          | . ,                |
| TARGETTED INVESTMENT   | PROJECT AREA                              | 2027-2028  NATURE OF ACTIVITIES   | SIZE     | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |
|                        |   |   | DN 200mm | Nr.  | 180,000.00   | 1        | 180,000.00         |
|                        | Mutituni Pipeline DMA                     | Creation of new DMA and Sub-DMAs  | DN 63mm  | Nr.  | 45,000.00    | 5        | 225,000.00         |
| Regional Master Meters | Managari Dinakina DAMA                    | Continue of any DMA and Cub DMA   | DN 110mm | Nr.  | 102,000.00   | 1        | 102,000.00         |
|                        | Kyumvi Pipeline DMA                       | Creation of new DMA and Sub-DMAs  | DN 63mm  | Nr.  | 45,000.00    | 6        | 270,000.00         |
|                        |   | Sub-Total   |          |      | _            |          | 777,000.00         |
|                        |   | (MACHWASCO) 2027-2028   |          |      |              |          |                    |

| TARGETTED INVESTMENT   | PROJECT AREA               | NATURE OF ACTIVITIES   | SIZE   | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |  |  |
|--|----------------------------|--|--------|------|--------------|----------|--------------------|--|--|
| Non-Revenue Water Reduction Plan                             |                            | Leak repair records- Georeferencing bursts and leaks location to database with smartphones/ GPS  |        | LS   | 700,000.00   | 1        | 700,000.00         |  |  |
|  |                            | Restocking of repair materials and capacity building of O&M team and area managers to enhance leak control in the distribution system and at the household connections |        | LS   | 800,000.00   | 1        | 800,000.00         |  |  |
|  |                            | Sub-Total  |        |      |              |          | 1,500,000.00       |  |  |
|  |                            | Customer metering- replacement of faulty meters complete with associated fittings  |        | Nr.  | 4,000.00     | 100      | 400,000.00         |  |  |
| Customer Metering  | Machakos Town and Environs | Random meter testing using portable electromagnetic meter  |        | LS   | 300,000.00   | 1        | 300,000.00         |  |  |
|  |                            | Geo-referencing customer meters using GIS and updating in the customer database  |        | LS   | 150,000.00   | 1        | 150,000.00         |  |  |
|  |                            | Sub-Total  |        |      |              |          | 850,000.00         |  |  |
| Sewer Improvement Macha                                      |                            | Rehabilitation of sewer system to improve on services through replacement and  | Slabs  | Nr.  | 8,000.00     | 160      | 1,280,000.00       |  |  |
|  | Machakos Town and Environs | manhole slabs, covers and ladder   | covers | Nr.  | 11,000.00    | 800      | 8,800,000.00       |  |  |
|  |                            |  | ladder | Nr.  | 340.00       | 1000     | 340,000.00         |  |  |
|  | T                          | Sub-Total  Rehabilitation/replacement and extension of pipeline network, air valves,   |        | 1    | 1            |          | 10,420,000.00      |  |  |
| Rehabilitation/ Replacement and<br>Extension of Water System | Machakos Town and Environs | washouts, chambers and associated fittings.  |        | LS   | 3,000,000.00 | 1        | 3,000,000.00       |  |  |
|  |                            | Sub-Total  |        |      |              |          | 3,000,000.00       |  |  |
|  |                            | Total  |        |      |              |          | 16,547,000.00      |  |  |
|  |                            | Total  |        |      |              |          | 10,041,000.00      |  |  |
|  |                            | 2028-2029  |        | · ·  | 1            |          |                    |  |  |
| TARGETED INVESTMENT  | PROJECT AREA               | NATURE OF ACTIVITIES   | SIZE   | UNIT | UNIT COST    | QUANTITY | PROJECT COST (KSH) |  |  |
|  |                            | Purchase leak detection tools and equipment  |        | LS   | 4,000,000.00 | 1        | 4,000,000.00       |  |  |
| Non-revenue Water Reduction Plan                             | Machakos Town and Environs | Leak repair records- Georeferencing bursts and leaks location to database with smartphones/ GPS  |        | LS   | 600,000.00   | 1        | 600,000.00         |  |  |
|  |                            | Restocking of repair materials and capacity building of O&M team and area managers to enhance leak control in the distribution system and at the household connections |        | LS   | 3,500,000.00 | 1        | 3,500,000.00       |  |  |
|  | Sub-Total Sub-Total        |  |        |      |              |          |                    |  |  |
| Customer Metering  | Machakos Town and Environs | Customer metering- replacement of faulty meters complete with associated fittings  |        | Nr.  | 4,000.00     | 100      | 400,000.00         |  |  |
|  | I .                        | Sub-Total  |        |      | •            |          | 400.000.00         |  |  |

(MACHWASCO) 2028-2029

| TARGETED INVESTMENT  | PROJECT AREA               | NATURE OF ACTIVITIES   | SIZE   | UNIT | UNIT COST    | QUANTITY      | PROJECT COST (KSH) |
|--|----------------------------|--|--------|------|--------------|---------------|--------------------|
| Sewer Improvement  | Machakos Town and Environs | Rehabilitation of sewer system to improve services through replacement of  |        | 160  | 720,000.00   |               |                    |
|  |                            | manhole slabs, covers, and ladders   | covers | Nr.  | 9,000.00     | 500           | 4,500,000.00       |
|  |                            |  | ladder | Nr.  | 340.00       | 1100          | 374,000.00         |
|  | Sub-Total Sub-Total        |  |        |      |              |               | 5,594,000.00       |
| Rehabilitation/ Replacement and<br>Extension of Water System | Machakos Town and Environs | Rehabilitation/replacement and extension of pipeline network, air valves, washouts, chambers, and associated fittings. |        | LS   | 3,000,000.00 | 1             | 3,000,000.00       |
| Sub-Total  |                            |  |        |      |              |               | 3,000,000          |
|  |                            |  |        |      |              |               |                    |
| Total  |                            |  |        |      |              | 17,094,000.00 |                    |