



EXPRESSION OF INTEREST (EOI) ON ENERGY-FROM-WASTE PROJECT

Background

Nairobi City County population estimated at 4M currently generates 2500 tons of waste per day, with an average per capita generation of 0.61kg. It is projected that by 2030 when Nairobi's population will be about 6 million, waste generation will stand at 3990 tons per day. The waste situation is even made worse by the complexities associated by the changing lifestyle and consumption patterns, giving rise to new waste streams like plastic wastes, e-waste among others.

The management of solid waste in Nairobi since its inception as an urban centre has always been the responsibility of successive forms of local governments, including the former City Council of Nairobi. In the new dispensation of devolution, solid waste management (SWM) is a function constitutionally devolved to the county governments. Provision of SWM services across all times have had diverse challenges right from generation through collection, transportation and all the way to eventual disposal.

Waste collection in Nairobi is done by different actors, namely Nairobi City County Government (NCCG) own fleet, NCCG hired contractors, Private Service Providers (PSPs) and Youth Groups. Average daily collection is currently between 800-1200 tons. Of this, the hired contractors normally collect about 65% with NCCG own fleet collecting an average of 18% while PSPs collect an average of 15%. Waste recycling levels are still low, with an estimation of 5% of the total daily waste generation.

Disposal of solid waste remain a major and persistent challenge that the County administration has to address if Nairobi is to remain a City of international relevance and significance. Since 1981, the official disposal site for solid waste in Nairobi has been Dandora. Situated on the eastern part of the City, the disposal site measuring about 46 Ha used to be a quarry but was abandoned after many years of extraction and by default, waste disposal activities thereafter. To date, the site has received over 1.8 million m³ of waste against 0.5 million m³ considered as its ideal, thus deemed full and its decommissioning long overdue. The practice of waste disposal at Dandora dumpsite is open dumping with minimal control resulting in it being a public health and environmental hazard.

It is envisaged that Dandora decommissioning plan will incorporate establishment of a Waste-to-Energy facility and using the best available technology.

Scope of Work

The scope of works included is as follows:-

- (1) Establishment of a Waste Treatment Facility which may include, but not limited to Mechanical or Biological Treatment, Incineration, Pyrolysis, Gasification or any other technology with aim of producing energy out the waste,
- (2) Promotion of 3R's Concept,
- (3) Operation of the Waste Treatment Facility

In order to actualize the above and pursuant to the County Executive Committee directive dated 28th August 2015, Nairobi City County Government now wishes to seek Expressions of Interest (EOI) from reliable and experienced firms that can meet ALL of the requirements set forth herewith-

- (a) Ability to comprehend and advise on the entire Solid Waste Management (SWM) system from generation to final disposal;
- (b) Ability to embrace a SWM process that will address environmental health and safety within the existing Kenyan legislative framework;
- (c) Ability to advance a technology and SWM process that can be operated in a financially and economically sustainable manner;
- (d) That the technology and SWM process should include strategies that consider the existing value chain and promote, as is reasonably feasible, integration with the existing SWM environment to promote social sustainability and reasonable acceptance of the intervention;
- (e) That such proposed technology should consider using the current dumpsite at Dandora as a site for treatment of waste to level of being inert;
- (f) Proven expertise in application of proposed SWM technology;

In addition, the Expression of Interest should include verification of the followings:-

- (i) Ability to provide analyzing services to determine the scope of work, including electrical capacity, bio gas supply and distributed energy supply;
- (ii) Ability to conduct complete MSW, industrial and agriculture waste content analysis;
- (iii) Ability to prove expertise in the Turnkey BOT and financial capabilities to complete the project at the shortest possible time
- (iv) Proven expertise in the following areas: engineering (both FEED and detailed), Waste to Energy systems design and manufacturing, electricity production and distribution including financials based on delivery;
- (v) Proven expertise in hybrid power production;
- (vi) Water and sewage treatment for the supply of sludge to the process;
- (vii) Water desalination for utilizing excess heat and power;
- (viii) Design, Manufacture, install, commission, operate and maintain the complete system;
- (ix) Assurance for the lowest operating procedure and efficiencies in treating the waste;
- (x) Ability to consult on a continuous basis with the Nairobi City County.

The Nairobi City County will analyze the EOI and will issue a competitive Request For Proposal (RFP) from those who comply with its stated requirements.

The Nairobi City County has no obligation to request for any further information and is not responsible for any or all expenses involved in responding to this EOI.

The Bid for EOI should be submitted to the office of **Head, Supply Chain Management, 1st Floor, City Hall Annex** on or before 5th April, 2018 at 12.00 noon and addressed to:-

**The County Secretary
Nairobi City County
P.O. Box 30075-00100
Nairobi**

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AG. COUNTY SECRETARY & HEAD OF COUNTY PUBLIC SERVICE