

# EMIRATES RDF, UMM AL QUWAIN, U.A.E. FIRST LARGE SCALE WASTE TO FUEL PLANT IN THE GULF REGION

*Diverts 1000 tons of waste per day from going to landfill by turning it into a fuel for cement plants*



Design



Financing &  
Regulations



Construction



O&M



Customer Service



Reuse

## Overview

Waste collection in the United Arab Emirates is up to standards. However, the majority of the Municipal Solid Waste is still landfilled. UAE's Vision 2021 targets that 75% of the Municipal Solid Waste will be diverted from landfill. For the Emirates of Ajman and Umm Al Quwain, the Ministry of Climate Change and Environment, financially supported by the Ministry of Presidential Affairs of the U.A.E., wanted to develop a project for a treatment facility for the mechanical sorting, composting and Refused Derived Fuel (RDF) production of municipal waste. RDF is as good as renewable fuel can get as it consists of the combustible components of waste and can be an ideal replacement to fossil fuels and coal.

## BESIX Solution

BESIX joined forces with U.A.E. based contractor Tech Group and Finland based waste management specialists Griffin Refineries under the name of 'Emirates RDF'. Emirates RDF offered a solution to the client that maximized the amount of RDF extracted from the waste. Two process lines supplied by Finland based BMH Technology are able to treat more than 350.000 tons of waste per year.

Two shredders cut almost any solid waste reducing it to a very small size. Both ferrous and non-ferrous metals are sorted through magnets and magnetic fields. Air classifiers push high pressured air in the waste and non-combustible parts such as stones and wet organic waste are taken out. What remains is a fluff of combustible components which gets fed to the ovens of cement plants

Emirates RDF signed a 15-year Build Operate and Transfer (B.O.T.) contract with the Ministry of Climate Change and Environment. The project will be developed under a public private partnership (PPP) scheme and is financed by the Ministry of Presidential Affairs. The Commercial Bank of Dubai provides an additional long-term project financing facility of \$ 15 Million. Construction started in May 2019.

## Operations and Maintenance

BESIX plays a key role in operating the plant during the 15-year concession period. This based on the acquired experience in operating environmental plants in the U.A.E. It includes carrying out daily and major maintenance, operating the process lines and organizing the transport of the RDF to the cement plants.

**15**

Years of Operations and  
Maintenance

**emiratesRDF**  
WASTE TO FUEL نفايات إلى وقود

Daily capacity of  
**1200 tons**  
waste per day



Amount of long term  
debt financing

**\$15 Million**