## USING REFUSE DERIVED FUEL (RDF) FOR ENERGY PRODUCTION

AK Enterprises (Naik)

Janghas Ali Khan

October, 2018



## Who we are

- AK Enterprises (Naik) UK based company, in the field of waste management solutions.
- Janghas Ali Khan Business Development Manager. Active role in finding users for RDF.
- What we do AK Enterprises is a UK based exporter of low cost waste recovered fuels. The core product being Refuse Derived Fuel (RDF).

## Objective

The objective of this presentation is to provide opportunity for using RDF as supplementary fuel in the electricity producing and, cement manufacturing.

We are introducing RDF to businesses and organizations in the field of power generation and users of solid fuels.

Our objective is to supply our RDF to industries, who require RDF as a cost effective fuel supplement.

## What is RDF

RDF is to use the valuable energy contained in the waste and to substitute the use of fossil fuels. During the recycling process the portions with a high calorific value are separated from the commercial and industrial waste and turned into a marketable product. Depending on the calorific value and the granular size, these fuels are used in fluidized bed combustion, cement plants and substitute fuel power plants.



## Why use RDF

- RDF is being used as a cost effective alternative to solid fuels like coal.
   <u>Potential users of RDF</u>:
- Fuel intensive industries in power generation and heating
- Industries like, cement, textiles, metal, sugar mills.
- Co firing with coal and all solid fuels.
- Tailor made Calorific Value for all heating requirements.
- Low cost and fuel efficient.
- Calorific values from 14 22 MBTU

## What to expect

#### **Utilization Areas**

RDF is suitable for cogeneration power plants with grate firing, refuse combustion plants, material recovery facilities (MRF) and mechanical biological treatment. Coincineration use in cement plant calciners, fluidised bed combustion and power plants for energy recovery.



# *"Low cost fuel alternative for electricity and power generation"*

RDF is co-incinerated in cement production at the stage of clinker production and cement making. Rotary kilns play a predominant role here.



## Get the exact result you want

- Co firing rates from 10% RDF up to 70% RDF with coal.
- High Calorific values ranging from 14-22 MBTU.
- Tailored solutions for end-user requirements.
- Export quality.
- Low carbon foot print compared to coal. RDF produces 50% less carbon dioxide.
- Firing 1.4 tonne RDF is equivalent to 1 tonne high grade coal.



## **RDF Specs**

Gross CV Net CV Moisture Ash Chlorine Shred size:

≈ 17,000 KJ/Kg
≈ 14,000 KJ/Kg
≈ 15% max
≈ 10% max
≈ 0.12% max
max 300 mm to 50 mm

## **RDF** Users



## How much RDF can be used

- RDF is a co-incineration fuel used in combination with main recommended fuel by the energy producer and/ or the manufacturer of the cement plant.
- RDF ratio use is 15% up to 70% depending on emission tests carried out under supervision of concerned EPA.
- Plants can increase RDF use by improving performance, of feeding control and pollution control system.



**A K E N AK ENTERPRISES NAIK LTD** www.akonline.biz info@akonline.biz Skype Name: janghas-khan