

THE BOOT MODEL BY LEAN

**THE INNOVATIVE
BUSINESS MODEL**
OF LEAN ENERGY
SOLUTIONS LTD

**LEAN ENERGY IS
IN-CHARGE OF
THE BOOT MODEL**
KEN602



EEP

ENERGY AND ENVIRONMENT
PARTNERSHIP / SOUTHERN AND EAST AFRICA



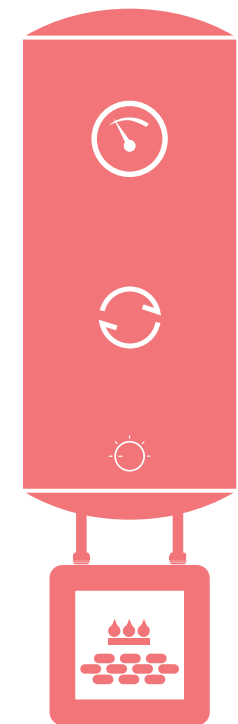


Lean Energy Solutions Ltd started the manufacturing of non-carbonized briquettes in the year 2007 and has in recent years ventured into energy efficient boiler conversions.

The boiler conversions has become the focus of Lean's operations. The refocusing has enabled Lean to perform boiler conversions to companies like Equator Bottlers (Coca Cola), Spinners and Spinners Ltd, Pepsi, Meru Central Dairy Corporative Union, Universal Corporation Ltd and Osho Chemicals Ltd.

LeanEnergy Solutions has partnered with Yajna Fuel Services, India, who have installed over 100 boiler/ furnace conversions for multinational companies.

Lean Energy Solutions Ltd has strong experience in the energy efficiency industry and a background from mechanical engineering of the Managing Director and founder of the company.



One of the highlights of the success of Lean Solutions Energy Group is the Boiler/Furnace Conversion programme, the aim of which is to save the users 25% in energy costs.

The Lean Boiler/Furnace Programme offers two solutions, conversion of existing fossil fuel boilers or furnaces to Lean Briqs fed boilers and furnaces or alternatively, for very old boilers, installation of a new lean fired boiler set.

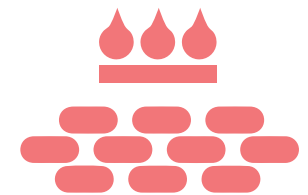
With the help of the EEP funding Lean has installed boilers to five new clients and further up-scaled their boiler installations and manufacturing of non-carbonized and carbonized Briquettes.

Lean Solutions has received various external recognitions for their innovative operations. Lean Solutions Energy Group were named as the overall winner of Kenya's Top 100 mid-sized companies in 2013, in addition to receiving the KABA award for the best Small Medium Enterprise (SME) in 2011.

Lean has developed an innovative business model that is based on four steps: Build, Own, Operate and Transfer – the BOOT model. The key difference and the unique solution of the BOOT model is that Lean takes full responsibility of the investment and the boiler that is located at the facilities of the client.

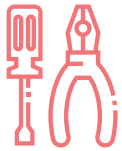
Lean is in-charge of building the boiler and Lean owns and operates the boiler. Only in the end of the contract period the client has an option to purchase the boiler or extend the contract.

"The service fee covers the costs incurred by Lean from the boiler operations, employees on site, and the raw material, mainly consisting of Lean Briqs, needed for the generation."



THE BOOT MODEL:

1. Build



2. Own



3. Operate



4. Transfer



Lean finances the boiler and the client only pays a security deposit for the system installation. The deposit is typically paid back already in 3 to 5 months, based on the energy cost savings of the new boiler. The client contracts extend from 8 to 10 years. The long client contracts are also a way to ensure a sustainable business model.

Once the system is operational, the client is billed based on generation of steam, flue gas or hot water with a fee that is the cost the client previously used for fossil fuel to generate the same amount of steam, gas or water output, minus an agreed percentage of savings, up to 25%. The service fee covers the costs incurred by Lean from the boiler operations, employees on site, and the raw material, mainly consisting of Lean Briqs, needed for the generation.

Therefore, with the Lean boiler, the client not only converts to more environmentally friendly source of power generation but also does so with decreased operational costs. After converting to a Lean boiler, the client is still able to switch over to the old fossil fuel boiler/furnace system if needed. The Lean boiler/furnace is made alongside with existing system, to ensure uninterrupted production during installation. Generally the clients who have converted to Lean boilers have ceased using the old fossil fuel boilers completely.

With the service fee model it is possible to reach a large client segment as also those that do not have the access to finance will be able to acquire new boilers running on renewable energy sources.

For all clients it also provides the possibility to use capital in key areas of their business.

"The Lean boiler/furnace is made alongside with existing system, to ensure uninterrupted production during installation."



"The model is highly replicable and the boiler conversions can be efficiently implemented."

In addition, the client saves through the new efficient boiler that at the same time is using renewable sources of energy, and as the Lean model is a turn-key service, the client no longer needs to use resources in supply of fuel oil or boiler maintenance.

The model is highly replicable and the boiler conversions can be efficiently implemented. However, availability of funding and investments from Lean are required to scale-up the business.

Lean Briqs is the brand name for the non-carbonized briquettes that have been developed and marketed by the Lean Solutions Energy Group. These briquettes are produced through the conversion of biomass into high density, compact, low volume lumps.

"The Lean Briqs, in addition to providing fuel to converted/new boilers or furnaces, can be fed into wood fired boilers and furnaces."

The raw material is charcoal dust and agricultural waste including sugar cane remains, saw dust and coffee husks. The Lean Briqs, in addition to providing fuel to converted/new boilers or furnaces, can be fed into wood fired boilers and furnaces.

The production of 1 tonne of Lean Briqs generates 12 man-days of employment. At the same time 1 tonne of Lean Briqs reduces 1 tCO₂ emission.

EEP funding has been used to scale-up the operations of Lean. The scale-up requires investment into the boilers and with the EEP funding five new boilers have been installed for clients in Kenya and Tanzania.

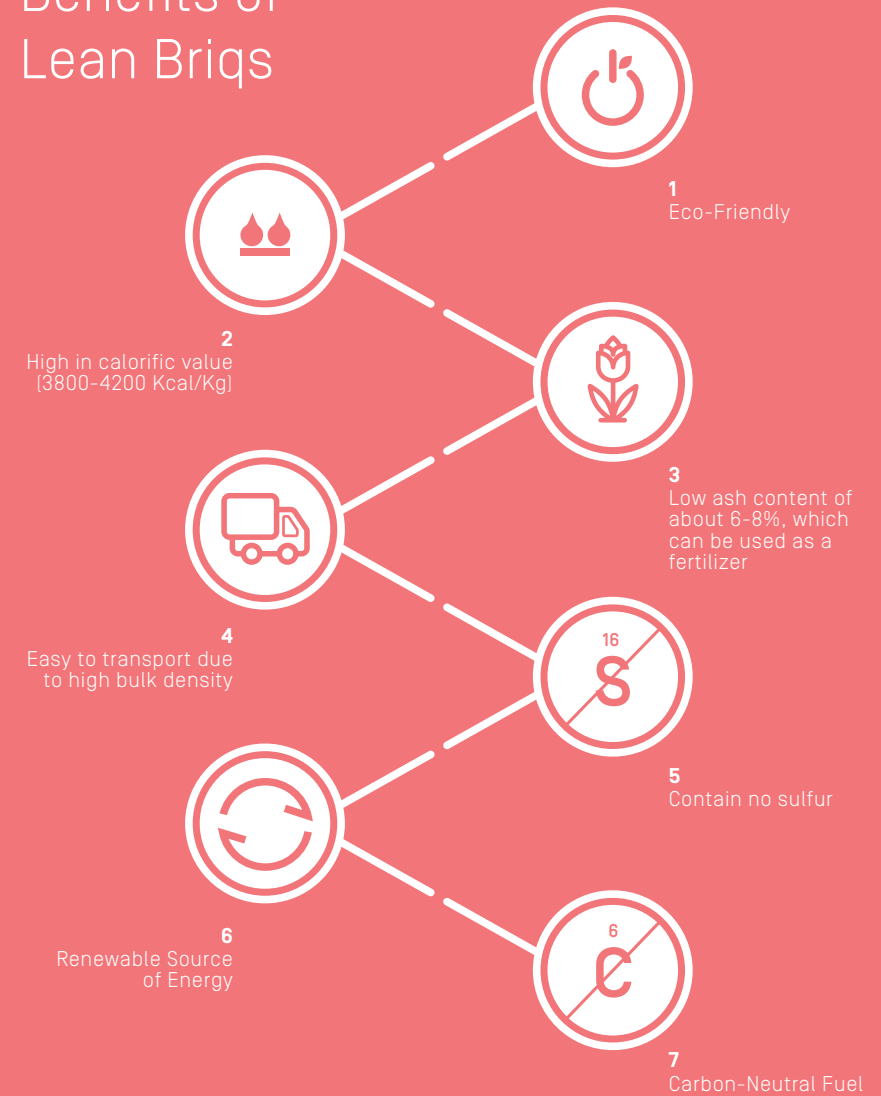




The production of the Lean Briqs for the annual consumption of these five boilers will create 72,000 man days of employment.

The new boilers will eliminate up to 2,000,000 litres of petroleum based fuel per year. Overall, the EEP funded project aims to achieve a 6,000 tCO₂ reductions, employing 160 and attracting 0.5 million USD of investment. The EEP funding is also expected to achieve a catalysing effect that will enable up to 30 boiler conversion projects within the next three years.

Benefits of Lean Briqs



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