

## 5 STAR CLEAN STOVES

EEP S&EA funded project, 5 Star Cook Stoves has been awarded with a SEED (Supporting Entrepreneurs for Sustainable Development) award. The SEED is awarded by UNEP, UNDP and IUCN. The 5 star cook stoves –project was awarded with the EEP grant on the 3rd call for proposals and again on the 5th call for proposals for a scale-up. 5 Star Stoves creates a local bio-energy value chain out of waste biomass. The project produces biomass pellets and use them in stoves for cooking and heating. The stoves are distributed to communities by a franchise model and assembled locally.



### Project Summary

The aim is to facilitate investment to a local community (Vunani Balimi Co-operative) with a sustainable clean cooking stove business. The business will include the full value process of biomass harvesting, beneficiation and finally bio-pellet distribution through a well-recognised transactional process in a clear business structure and business plans to guide the business. The utility side of the business is the 5 Star Clean Stove, that would be assembled in the community, by the community, serviced and maintained. The stove is a break through and is a well-constructed and very efficient stove design, making use of fan assisted gasification to ensure optimal efficiency.

The business aims to put a healthy, carbon neutral, lower cost alternative, which allows for local economic development in place.

South African rural & peri-urban communities suffer from energy starvation due to the increase in cost of energy. The average informal household spends an average of 250kWe per month. This is made up out of electricity, paraffin, gas, wood and coal. The average 5.5 person household spends in the range of R360 per month on their energy requirements. The aim is to provide the energy cost at half of the incumbent technologies with the net effect of:

1. Creating value for the Co-operative, with a sustainable business
2. Creating the opportunity for 5 people to be up-skilled in metal fabrication
3. Creating the opportunity for 5 people to be up-skilled in wood densification
- 4) Creating the opportunity for 10 people to harvest sustainable biomass and earn an income
4. Creating an energy cost saving of R4.32M for the users of the stove per annum
5. Creating a healthy living environment, reasonably smoke free
6. A fuel switch to a carbon neutral energy source, saving 2.5T CO<sub>2</sub> per stove, 5,000T CO<sub>2</sub> per annum and 50,000 TCO<sub>2</sub> for a 10 year carbon crediting period.

The planned budget for the business creation is EUR 263,280 and will be rolled out over a 12 month period. The business model is highly replicable and the number of distributed stoves are scaled to the output of the densification unit and the amount of available biomass for the specific area. RES contributes time and skills transfer, Vunani Balimi Co-operative land and sweat equity and our other stakeholders support time to ensure business success and continuity.