



AFRICAN CLEAN ENERGY



**Enabling a green transition to clean cooking and lighting
for millions of deserving customers.**

August 2022



Globally 3 billion people have inadequate access to energy, forcing them to cook on open fire, creating a **market opportunity of over 600 million households**



A substantial majority cooks on open fire using wood or charcoal for reasons related to costs and accessibility of other alternatives causing emissions between 3 and 10 tonnes of CO2 per year



Over 4 million people die every year from illnesses attributable to household air pollution



In most African countries the rapidly growing need for fuelwood and charcoal is the #1 cause of deforestation

The sector that ACE operates in is often referred to as 'Clean Cooking', a framing that doesn't adequately reflect the fact that it represents the single biggest climate finance opportunity in almost every emerging market, currently still rapidly expanding, at:

2.5 Billion tonnes of CO2 emitted globally per annum / ~5% of all human emissions



MONTHLY COSTS TO

ACCESSIBILITY

Electricity (grid**) ⚡ EUR 29 ✗

Gas ⚡ EUR 29 ✓

Kerosene ⚡ EUR 22 ✓✓

Biomass 🌳 EUR 0-8 ✓✓

The average budget of low-income households amounts to EUR 60-120 per month

*<https://iopscience.iop.org/article/10.1088/1748-9326/aa6fd0>
** Assuming grid connection (note that Africa has a high number of blackouts). Costs for mini-grid are 2 to 4x times higher whereas solar home systems lack the capacity for cooking (thermal energy)

Electricity 1-5%

Lighting, charging and powering phones, radios, or other small devices

Thermal Energy

95-99% cooking and heating

kWh usage of a target household

Solar Home Systems:

Lack capacity for cooking

Mini Grids:

Too expensive for cooking

Centralised Grid:

Unstable supply and too expensive

1hr cooking = ~1,000x 1hr lighting



The ACE One provides an integrated high-quality solution for both thermal energy and electricity addressing the essential energy needs of low-income households



The ACE One is a modern cooking stove flexible to all biomass products saving 50-85% on fuel use compared to open fire, and by providing customers with sustainably sourced biomass ACE even transforms this market to fully climate neutral



A battery powered fan blows air into the burning chamber causing the biomass to gasify without smoke enabling fuel savings of up to 85% for 20+ hours on a single charge



The package includes an LED light



The ACE One can be paired with any Android smartphone using the ACE Connect app allowing usage data uploads and switch-off in case of default on payments



Solar energy charges a LiFePO4 battery powering the fan that controls airflow, and also provides electricity for USB device charging and lighting



ACE has a sophisticated technology platform through its unique Android integration with ACE One solving for all scalability hurdles

ACE's proprietary ACE Connect platform allows Energy-As-A-Service:



Pay-As-You-Go

Allows **complete switch-off of unit** in case of problematic default on expected payments, and digital customer interaction through customer facing Android application



Transparent Portfolio Management

Scalable **digitised loan management tool** that incentivises payments on time prevents over-indebtedness and promotes financial inclusion



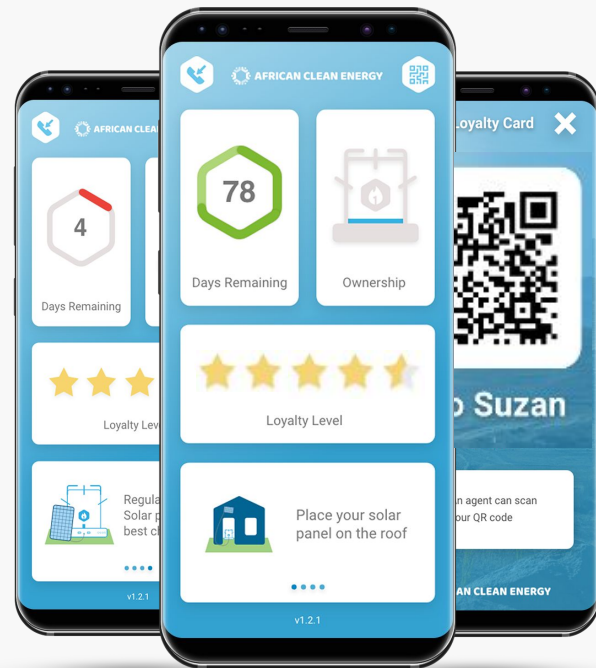
Live Data Uploading

Usage data is being **captured live** through a fully integrated **cloud-based CRM** allowing dynamic impact assessment based on real data, and use of data for **tokenizing carbon impact**



Digitally Accessible Fuel

Digital fuel ordering and reward functionalities to establish a sustainably sourced fuel distribution system for **convenient and affordable** pellets and briquettes



Launched in 2019

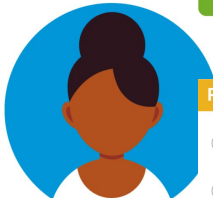
SAMSUNG

Samsung assists with technical integration, sourcing devices and mobile management

ACE's tech infrastructure allows for granular insight within operational data, and user data. Through our dashboard we see operational data for a cohort.



Responsibilities

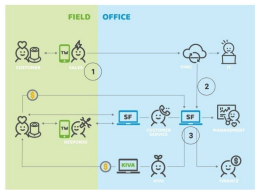


Promotion of the ACE One

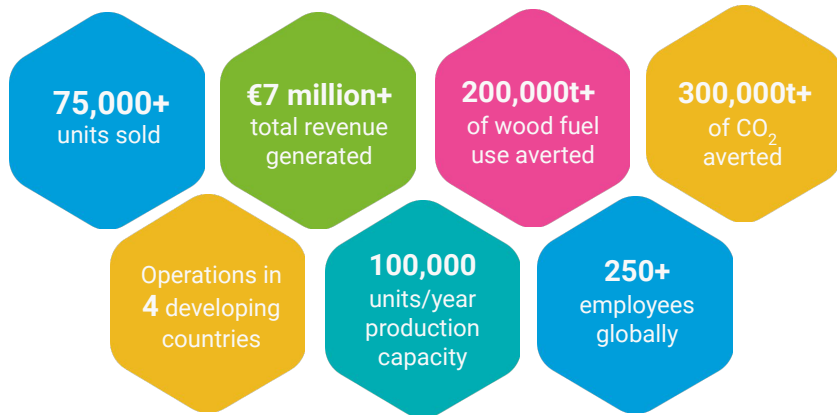
Sales of the ACE One

Reporting Process

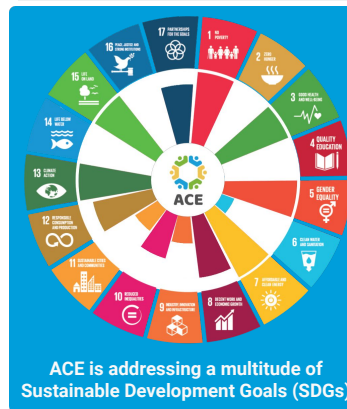
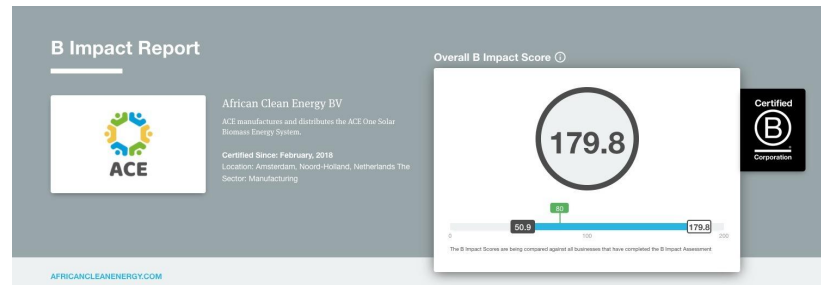
- The sales agents collect customer information in TaroWorks.
- TaroWorks is synced and the data is uploaded in the Salesforce system.
- Salesforce is used by different departments to collect and store data:
 - Response
 - Customer Service
 - Kiva
 - Management
 - Finance



ACE has gained significant traction in developing economies and is well positioned to become the global leader in its market



ACE is the #2 highest rated B Corp in the world (out of 4000+)

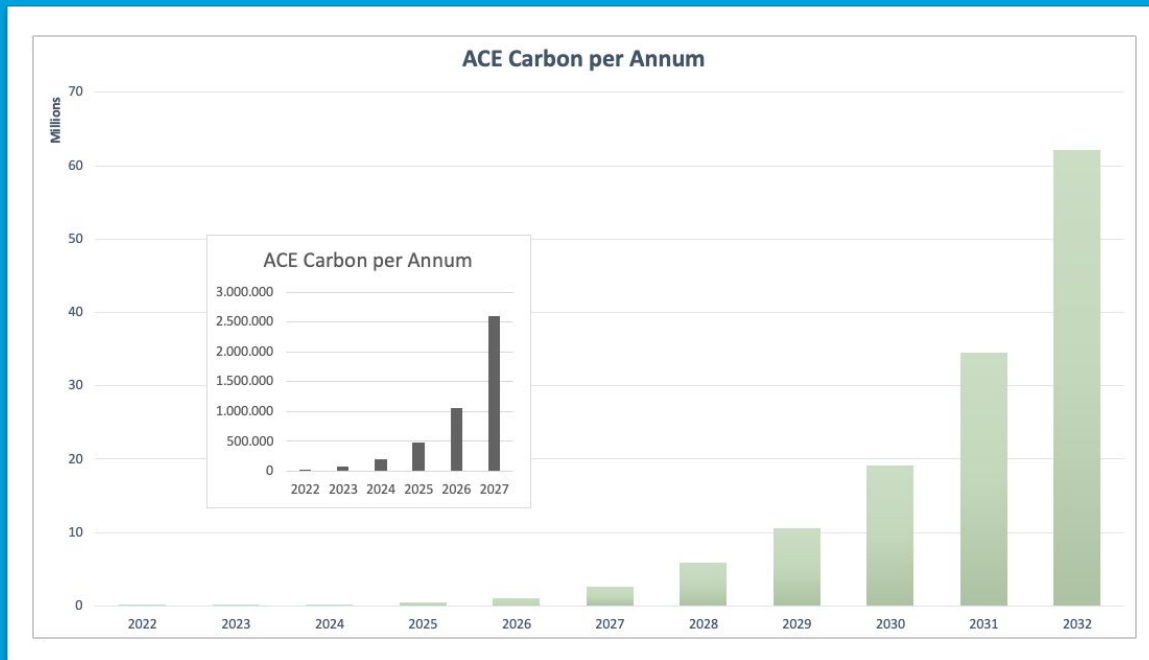


Key partners, funders and recognition





ACE has a contract to sell carbon at a minimum price of 15 euro per ton. Prices are anticipated to rise from 25-30 per ton or beyond.



ACE's team of experienced professionals as well as long-time company loyalists have guided the transition from start-up to scale-up with offices in 4 different countries with over 200 employees

MANAGEMENT



Ruben
Founder | CEO
 Environmental engineer, mobile tech, entrepreneur since 2009



Judith
COO
 Forbes 30 Under 30



Andra
Global Financial Controller
 8 years experience incl PwC

TECH TEAM



Wang
CTO
 15 years IceMobile



Amarins
CDO
 Former Salesforce Senior Solution Engineer with Analytics Blackbelt



Roger
Head of CRM
 Former Salesforce Consultant for Taroworks



OPERATIONS



Tyra
East Africa Director
 Background in law and internal audit



Rethabile
Lesotho Director
 8 years at Vodacom



Daniel
Cambodia Director
 Background in international business



Contact

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