

## Mobile solar power plant for Africa (Solarcontainer)

Decentralized, mobile off-grid solar power plant for a broad range of applications.



37-48 kWp



30-120 kWh

Electricity by the Solarcontainer represents the clean alternative compared to generators run by fossil fuel. The system is suitable to supply up to 5,000 households, small businesses and industries, hotels as well as farms.





## Deploy container, pull out solar modules and start producing clean energy

The Solarcontainer can be built up and is ready to generate just in a few hours. That is why the utility suits perfectly for various applications, such as farms, communities, small businesses, faculties, mining, emergency services, refugee camps or offgrid-hotels in remote places.



The mobile Solarcontainer generates electricity out of 144 solar modules. It is conveniently delivered and ready for use through the integrated island inverter. The capacity of the modules is customizable (Please refer to technical details page).

The Solarcontainer is able to supply electricity out of a high-efficient and modern lithium-battery in times of no sunshine or in the evening.



The capacity of the battery system can be adapted according to customer's needs. By this, it is possible to secure all components inside the Solarcontainer within short time to protect them of heavy weather, vandalism, theft or in case of displacement.



## German quality, ALL-in-ONE

### Easy and fast installation

The mobile Solarcontainer can already be installed after a brief technical introduction.

### One package including all components

The Solarcontainer is an all in one solution for decentralized on-/off-grid power generation.

### Ready for operation within few weeks after order

Time of delivery to harbours worldwide within 6-8 weeks.

### Easy to transport

If necessary, the Solarcontainer can easily be transported from one location to another.

### Customized configurations

The capacity of solar panels and battery can be individually adjusted.

### Environmental friendly

No fuel consumption, no noise, no CO2 and pollutant emissions.



**6 - 8  
weeks**

## Compact installation, efficient electricity generation

The power of the sun is available for everyone. By now using the Solarcontainer, everyone is able to produce electricity - clean electricity, without emissions, without noise pollution, with production costs independent from uncertainties of fossil fuels.

Our mobile Solarcontainer substitutes diesel generators in areas without access to a centrally provided grid - whether as mobile interim solution or used as long-term primary energy source.

Possible applications of the Solarcontainer are not only diversly but also modularly. Thus, we are offering a wide range of possible technical add-ons, such as internet connections, smart meter and prepaid possibilities for operating the facility. Locations can be scaled up and down through additional Solarcontainer.



## Pilot project Mourdiah



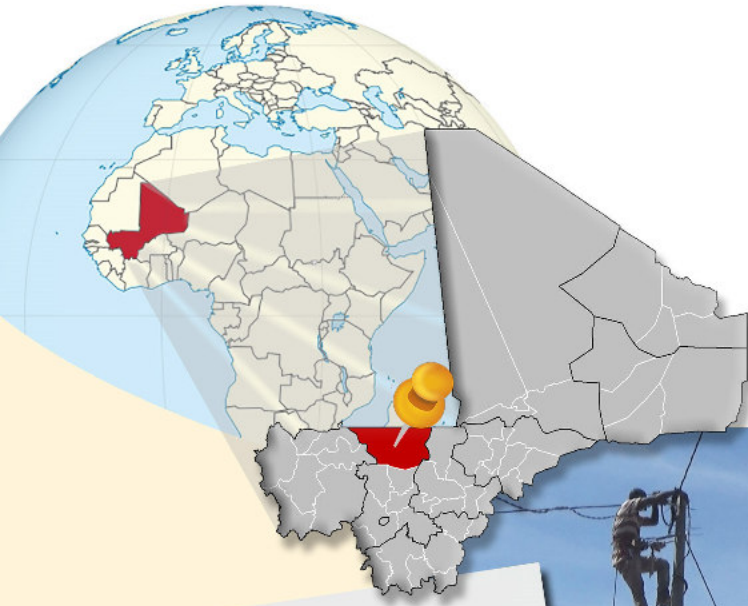
120 households



1,000 people



5 small businesses



## Fair and affordable energy supply for Africa

We decided on the small Malian village of Mourdiah for our pilot project because of the extreme conditions within Nara-Region at the border of Sahara.

The pilot-container has to withstand temperatures of above 40 degrees, sand storms and heavy precipitation within rainy season. Streets and general supply infrastructure are in bad conditions. However, the container runs since September 2015 and is already popular across Malian borders through many publications.





- New jobs
- Qualified training
- Consulting our customers to grow their business with electricity
- Affordable energy



- Reducing input of water pollutants by substitution of fossil generation
- Water supply container module



- Supporting rural areas in times of extreme urbanization
- Securing air quality within settlements



- Protecting biodiversity by reducing illegal logging activities
- Decentralized approach reduces need of infrastructure



- Empowering local communities through tax income
- Fair employment conditions
- Building international partnerships



- Running cool storages
- Preservation through energy
- Running efficient agriculture



- Clean, affordable and secure power supply
- Decentralized solution reduces need of costly and harmful grids



- Consulting employees and customers in sustainable resources management
- Powered by clean energy



- Supplying hospitals
- Fighting Malaria by use of LED Light
- Preventing injuries and deaths within handicraft sector



- Local jobs and fair tariffs
- Consulting our customers for their economic growth
- Fair employment standards



- Showing how to fight climate change
- Reducing illegal logging by providing electrical cookers and LED lights



- Offering qualified training in new jobs
- Cooperation with local schools
- Supporting the teachers of tomorrow



- Decentralized solution reduces need of costly and harmful grids
- German quality technology and 15 years of guarantee



- Protecting small waterbody against pollution by substituting fossil power generation



- Empowering women by electrifying their traditional handicrafts
- Job offers suitable for women



- No tolerance of discrimination
- Strengthening developing countries in international context



## Solarcontainer - SuperUtility with social impact

Energy is the first and most important step towards development of rural areas. The Solarcontainer by Africa GreenTec delivers instantly sustainable and emission-free energy at installation site.

Africa GreenTec developed the modular designed Solarcontainer as "SuperUtility" that can a.) generate power, b.) store power and can integrate further applications, such as internet connection, electric mobility, water treatment and filtration as well as cool storage services. We are able to positively and individually influence added value through these applications within a community, a farm or a company.

Africa GreenTec supports communities with training, employment, education and advice to combine resources and existing skills together with the functionality of the Solarcontainer.

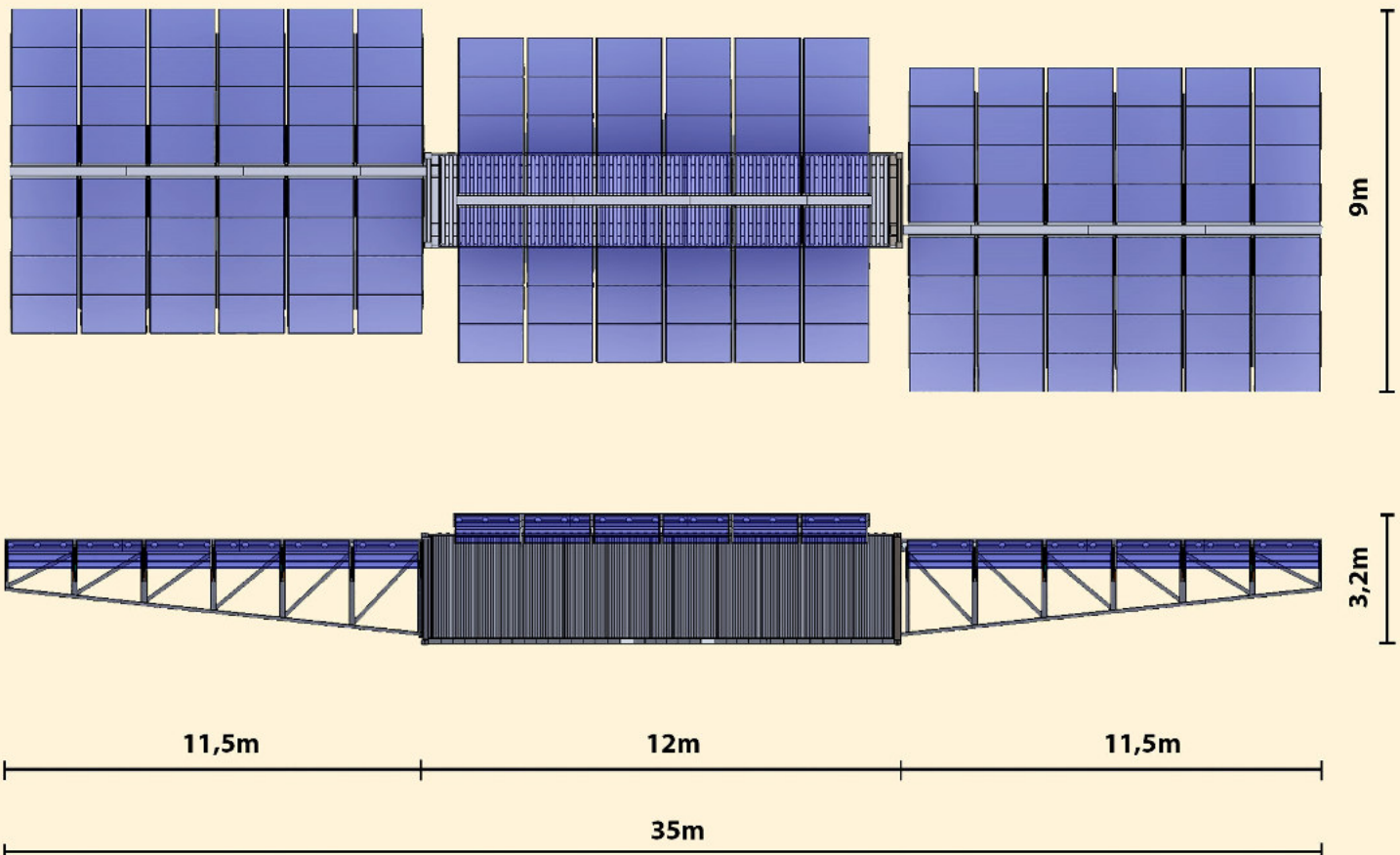
The own foundation promotes education of boys and girls by donating up to 40 computer from Germany with every Solarcontainer to local schools.

Electricity customers also get high efficiency devices, smart meter and lamps such as LED within the operation model of Africa GreenTec.

## Solarcontainer „Amali“ – Model 2016

The 2016 model “Amali” is based on a 40 feet ISO container and provides up to 50 % higher generator and up to 150 % higher storage capacity to the operator.

The self-supported frame, developed by Africa GreenTec, provides fast installation and flexible commissioning as well as orientation of the modules to the sun even in case of difficult surfaces. The half automatic roof frame offers a maximum of flexibility.



### Technical data / 100 % made in Germany

**Generator capacity:**

[260 watt/ module] = 37,44 kWp

[280 watt/ module] = 40,32 kWp

[300 watt/ module] = 43,20 kWp

[330 watt/ module] = 47,52 kWp

**Storage capacity:**

30 KWh

60 KWh

90 KWh

120 KWh

**Currents AC/DC**

400 Volt

220 Volt

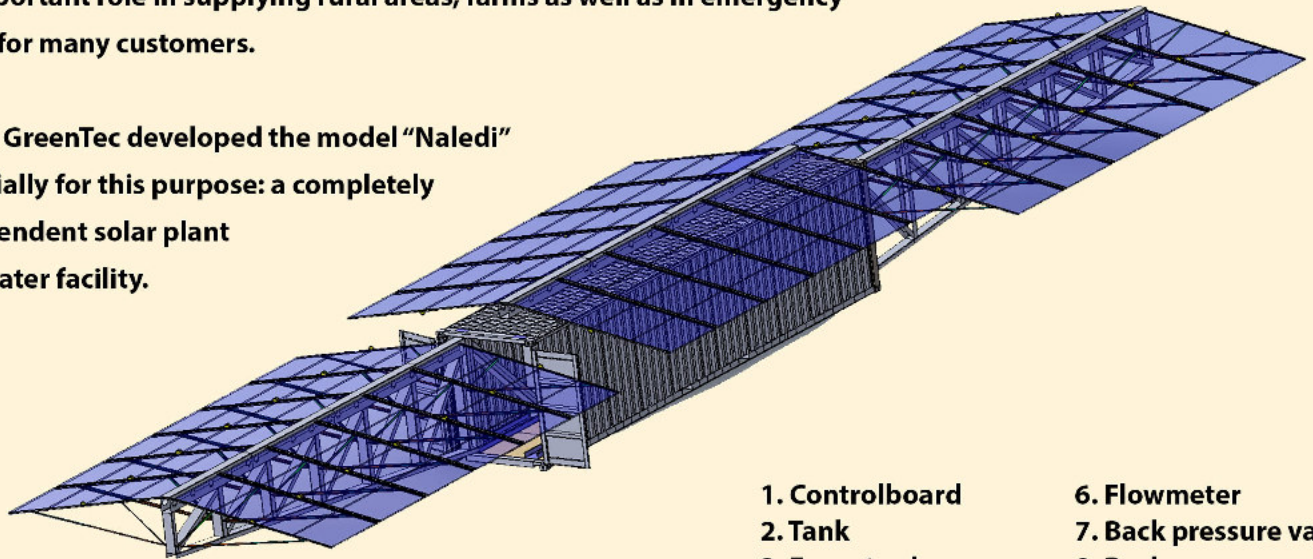
Three phase

alternating current / direct current

## Solarcontainer „Naledi“ – Model 2016

Next to a reliable electricity supply, treatment, pumping and cleaning of water plays an important role in supplying rural areas, farms as well as in emergency cases for many customers.

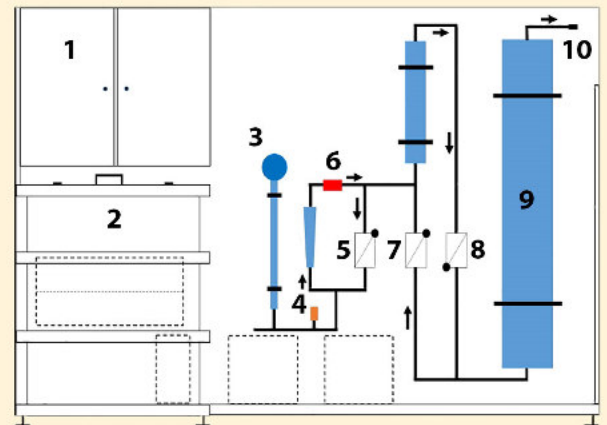
Africa GreenTec developed the model “Naledi” especially for this purpose: a completely independent solar plant and water facility.



- |                        |                        |
|------------------------|------------------------|
| 1. Controlboard        | 6. Flowmeter           |
| 2. Tank                | 7. Back pressure valve |
| 3. Exhaust valve       | 8. Back pressure valve |
| 4. Pressure sensor     | 9. Back washing tank   |
| 5. Back pressure valve | 10. Water outlet       |

Naledi is able to produce between 37.44 kWp and 47.52 kWp, like our model “Amali”. In addition to our lithium-battery of 60 kW, we provide a fully integrated and powerful water treatment and pumping facility within this model.

Naledi is able to provide 1,500 liter of fresh water out of river or well water within one hour. The facility and its tough design requires low maintenance and can be optimized according to the pollution degree of the specific location.



## Technical data / 100 % made in Germany

### Generator capacity:

[260 watt/ module] = 37,44 kWp

[280 watt/ module] = 40,32 kWp

[300 watt/ module] = 43,20 kWp

[330 watt/ module] = 47,52 kWp

### Storage capacity:

30 kWh

60 kWh

### Water treatment:

up to 1.5 m<sup>3</sup> per hour

### Currents AC/DC

400 Volt

220 Volt

Three phase

alternating current / direct current



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