

## Track Record

## Rural electrification – projects involved



## Rural electrification – projects involved

| Year | Location                            | Customer                                 | Description of the project   | kWp   |
|------|-------------------------------------|--|--|-------|
| 2010 | Kuwait                              | Kuwait Cool & Solar                      | AC coupled system  | 12.0  |
| 2010 | Kuwait                              | Kuwait Society of Engineers              | Backup systems   |       |
| 2010 | Kenya & Namibia                     | Yingli Green Energy Europe               | Football for Hope Centre lighting systems                          | 1.6   |
| 2010 | Nigeria                             | Sudbraty                                 | 500 x street lighting systems                                      | 85.0  |
| 2010 | Eritrea                             | UNDP Eritrea                             | School lighting system and Solar Home System for teacher residence | 1.4   |
| 2010 | Eritrea                             | Grundschule Adi Belsey                   | PV system for teacher's and computer room                          | 2.2   |
| 2010 | Eritrea                             | Adebeza Church                           | Solar system for church  | 0.2   |
| 2010 | Burkina Faso                        | Ikratos Africa                           | 5 PV systems, 2.500 W/15 hrs load                                  | 11.0  |
| 2011 | Tanzania                            | ICSEE                                    | 100 Ulitium based Solar Home Systems                               | 0.02  |
| 2011 | Sudan                               | UNDP                                     | 26 power systems   | 0.2   |
| 2011 | Liberia                             | GIZ head office Germany                  | PV power supply for field office                                   | 0.1   |
| 2011 | Mozambique & Tanzania               | Yingli Green Energy                      | Pitch lighting systems for Football for Hope Centre                | 2.8   |
| 2011 | Ethiopia                            | PLAN International                       | PV systems for schools, health stations, water pumping systems     | 10.0  |
| 2011 | Sierra Leone                        | UNDP                                     | PV power supply for 30 schools                                     | 19.5  |
| 2012 | Iraq                                | Raban al Safina                          | 2000 street light systems  |       |
| 2012 | Cameroun                            | Yingly Green Energy                      | Pitch lighting systems for Football for Hope Centre                | 2.0   |
| 2012 | Tanzania                            | ICSEE                                    | 400 Ulitium based Solar Home Systems                               | 1.2   |
| 2012 | South Sudan                         | Savanna                                  | 400 Ulitium based Solar Home Systems                               | 1.2   |
| 2012 | Ethiopia                            | PLAN International                       | 500 solar lanterns   | 1.5   |
| 2012 | Eritrea                             | Office of President                      | Solar systems for health centres                                   | 22.0  |
| 2012 | Somalia, Madagascar                 | UNICEF                                   | 50 solar refrigerator systems 270 WP, capacity 76 L                | 13.5  |
| 2012 | India                               | UNICEF                                   | 2 solar refrigerator systems165 WP, capacity 18 L                  | 0.3   |
| 2012 | Mauritania                          | UNICEF                                   | 5 solar refrigerator systems 165 WP, capacity 18 L                 | 0.8   |
| 2012 | Zimbabwe, Botswana,<br>South Africa | Yingli Green Energy                      | Pitch lighting systems for "Football for Hope" centres             | 6.0   |
| 2012 | Pakistan                            | UNICEF                                   | 9 solar refrigerator systems 220 WP, capacity 76 L                 | 2.0   |
| 2013 | Somaliland                          | Horn Renewables                          | BOSS cooling system and mobile phone charging station for kiosks   | 0.2   |
| 2013 | Eritrea                             | FAO Eritrea                              | Off-Grid Connect system, backup with PV for FAO-office             | 12.6  |
| 2013 | Eritrea                             | Nelto Church                             | AC-Solar Home System for audio system and lighting                 | 1.1   |
| 2013 | Cameroon                            | Projet Baham/Matrix Power                | 200 street lighting system   | 28.0  |
| 2013 | Ghana                               | Central University Collage/<br>Lumentech | Back up system for university                                      |       |
| 2013 | Eritrea                             | German Embassy Asmara                    | Hybrid back-up for embassy & ambassadors house with PV             | 6.0   |
| 2014 | Ethiopia                            | AAU                                      | 500 Solar Home Systems and 9000 lanterns                           | 25.0  |
| 2014 | Eritrea                             | EU – Ministry of Development             | 429 community courts   | 310.0 |
| 2014 | Somalia                             | Horn Renewables                          | BOSS Solar Cooling Kits  | 5.0   |

| Year | Location     | Customer                                  | Description of the project  | kWp   |
|------|--------------|---|---|-------|
| 2014 | Nigeria      | AO Demarg                                 | 40 streetlights   | 5.4   |
| 2014 | Ivory Coast  | STel                                      | 45 streetlights PAA   | 9.0   |
| 2015 | Eritrea      | Aktion Eine Welt                          | Power supply for school   | 4.5   |
| 2015 | Sudan        | Solarman                                  | Streetlights  | 52,6  |
| 2015 | Gabon        | PSF                                       | Off-Grid Connect for private house  | 38    |
| 2015 | Chad         | PSF                                       | 21 streetlights   | 2.2   |
| 2015 | Ivory Coast  | Port Autonome d'Abidjan                   | 85 streetlights   | 17    |
| 2015 | Ethiopia     | Lydetco Plc                               | 2 Off-Grid Connect Systems  | 5.6   |
| 2015 | Somaliland   | Horn Renewable Energy<br>Company          | Various BOSS Systems  | 9.42  |
| 2015 | Zambia       | Electrical Maintenance Lusaka<br>Ltd.     | Off-Grid system   | 5.58  |
| 2016 | Eritrea      | Legeset Asghodom                          | Solar home system   | 0.8   |
| 2016 | Eritrea      | ZehaiAlem Abera                           | Solar home system   | 1.2   |
| 2016 | Djibouti     | Transit Marill                            | 16 solar streetlights 42 W  | 3.2   |
| 2016 | Senegal      | Solene                                    | BOSS sundaya charging station   |       |
| 2016 | Ivory Coast  | S-Tel                                     | 2 OGC systems for lighthouses for Port Autonome d'Abidjan (PAA)               | 15.6  |
| 2017 | La Réunion   | SECAB                                     | Stand alone Solar system for a school   | 8     |
| 2018 | Burkina      | CEGELEC/OMEXOM                            | 32x Solar Home Systems (11x 1kWc, 150Ah@48V + 21x 11x 520 Wc, 150Ah@24)       | 22    |
| 2018 | Ivory Coast  | Stel                                      | 250x Solar PicoPV Lithium - (20Wp, 51Wh)                                      | 5     |
| 2018 | Tanzania     | Northland Controls                        | Off-Grid PV system for manyara Ranch ranger Post, Arusha Region               | 3,9   |
| 2018 | Eritrea      | ICRC                                      | 10 Solar powered grain mills  | 18    |
| 2018 | South Sudan  | Deutsche Welthungerhilfe e.V.             | Off-Grid PV and backup system for a field office                              | 4,32  |
| 2018 | Eritrea      | Grundschule Adi belsey in<br>Eritrea e.V. | Off-Grid and back-up systems  |       |
| 2018 | Somaliland   | Horn renewable Energy company             | Various Cooling and PV systems  |       |
| 2018 | Guinea       | BEGECA                                    | Energy generation kits  | 11,96 |
| 2018 | Burkina Faso | BEGECA                                    | Off-Grid PV system  | 3     |
| 2019 | Eritrea      | Bisha mining                              | Field office PV system  | 2,72  |
| 2019 | Somaliland   | Horn renewable energy                     | Solar powered grain mill  | 4,68  |
| 2019 | Ethiopia     | RET Engineering                           | PV backup system  | 3,5   |
| 2019 | Malawi       | BEGECA                                    | 20 Energy generation kits   | 10,8  |
| 2019 | Liberia      | BEGECA                                    | 8 energy generation kits  | 5,9   |
| 2019 | Guinea       | BEGECA                                    | 3 Power tower kits  | 6,72  |
| 2020 | Ivory Coast  | S-Tel                                     | 2Total05 - Fronius  |       |
| 2020 | Somaliland   | Kaafi Horn Renewable Energy<br>Company    | Grid-parallel hybrid solar system (48kW inverter/charger, 48kWh battery bank) | 69    |
| 2020 | Congo        | BEGECA                                    | Hybrid power supply (18kW inverter/charger, 50kWh battery bank)               | 11,76 |
| 2020 | Eritrea      | Verein Grundschule Adi Belsey             | Solar power supply for 2 schools with 40kWh battery backup                    | 22,14 |
| 2020 | Ethiopia     | Lydetco, Humedica                         | Hybrid power supply (10kW inverter/charger, 130kWh battery bank)              | 21,32 |

| Year | Location | Customer                   | Description of the project  | kWp   |
|------|----------|----------------------------|---|-------|
| 2020 | Eritrea  | Bisha Mining Share Company | Hybrid power supply (10kW inverter/charger, 56kWh battery bank)                   | 7,35  |
| 2020 | Malawi   | GIZ                        | 5 Systems hybrid power supply (total: 76kW inverter/charger, 411kWh battery bank) | 50,76 |
| 2020 | Cameroon | GIZ                        | Hybrid power supply (5kW inverter/charger, 37,8kWh battery bank)                  | 3,96  |
| 2020 | Liberia  | BEGECA                     | Systems of 500W/24v and 1000W/24V, 2 Kits (total: 105kWh battey bank)             | 5,94  |
| 2020 | Ethiopia | GIZ                        | 10 Complete solar systems ( Total: 232,32kWh Battery bank)                        | 21,0  |
| 2020 | Congo    | BEGECA                     | Hybrid power supply ( 20kW inverter/charger, 82kWh battery bank)                  | 12,6  |
| 2020 | Senegal  | GIZ                        | Solar components ( 10kW inverter/charger, 37kWh battery bank)                     | 2,2   |

Note: Reference list up to 31 December 2020

Winner of:







Phaesun GmbH

Brühlweg 9 87700 Memmingen Germany

Phone +49 (8331) 990 42 0 Fax +49 (8331) 990 42 12 info@phaesun.com