

LEADER IN HYBRID POWER FOR TELECOM

MADEINITALY.ORG
CERTIFICATE - IT01.IT/1857.058.V

THE PIONEERS OF HYBRID POWER SOLUTIONS
12 YEARS OF WORLDWIDE PROVEN EXPERIENCE

Ascot 
Energy Everywhere

WE ARE PROUD TO SERVE THE TELECOM INDUSTRY WORLDWIDE

AFRICA
GUINEA CONAKRY
KENYA
MADAGASCAR
MAURITANIA
MOROCCO
MOZAMBIQUE
NIGERIA
SENEGAL
SOUTH AFRICA
SOUTH SUDAN
SUDAN
TANZANIA

ASIA & OCEANIA
BANGLADESH
CAMBODIA
INDONESIA
MYANMAR
PAPUA NEW GUINEA
PHILIPPINES
SRI LANKA

AMERICA
HAITI
PERU
USA

MIDDLE EAST
IRAQ
JORDAN
KSA
QATAR

EUROPE
GREECE
ITALY
ROMANIA



Ascot Gensets are designed and manufactured by **Ascot Industrial srl**
Ascot Industrial srl is certified to
UNI EN ISO 9001:2015
UNI EN ISO 14001:2015
OHSAS 18001:2007



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and/or accessories. Non contractual images.



Tower Xchange

Industry Awards 2016

Green initiative of the year

Presented to: Ascot for IHS

Date: 19.10.2016

Awarded by: TowerXchange

Judges comments: In a project of unprecedented scale in Africa, Ascot have replaced DGs running 24/7 at 2400 DHS sites with solar hybrid units yielding a 76% carbon footprint

Green Industry Awards
for the supply of:

"2400 Solar Hybrid HPU's
for IHS Nigeria, yielding a
76% reduction of carbon
emissions".



PROVIDING ENERGY SOLUTIONS SINCE 1986

HYBRID POWER

WORLDWIDE INSTALLATIONS

This book aims to show you the success of hybrid
power generators installed worldwide at telecom sites.

35 years experience in design and manufacture of power
solutions and an unstoppable research for the most efficient
and clean products has given birth to many successful
installations and satisfied clients.

Hybrid technology holds no more secrets for Ascot:
those who trust in us are now our strength and motivation to
go further everyday.





“The **Ascot Hybrid Power Unit** is a Generating set that gives power even when the engine is switched OFF”

<< During a routine visit in early 2007, one of my clients who was involved in a massive telecom operation in Africa expressed the need to reduce fuel consumption, which was drastically affecting OPEX >>



2003

First All in one Generator

In 2003 Ascot realised first all-in-one generator (with integrated control panel, ATS, lube oil system, automatic dummy load, and fuel tank).



2004

First Ascot Remote Management System

In 2004, with Ascot Remote control, telecom operators made a substantial reduction in capex and opex costs.



2007

Birth of the first Hybrid System for Telecom

Ascot has launched in the Sudanese desert, the first-ever Hybrid Power Unit in the Telecom history. Still in operation today.



2010

Birth of first Hybrid Control-Logic

Ascot's new Hybrid Power System can reduce Genset running hours up to 90% and fuel consumption up to 100% (merging Solar and Battery together).



2018

Birth of first Green-Friendly Hybrid

Ascot Group designs and realizes Power Plants (hybrid, diesel or natural gas), Wastewater Plants and Water Treatment Plants (for irrigation and drinking water).



BEFORE **HPU**
24/7 engine run



WITH **HPU**
4 hrs/day engine run
68% fuel savings

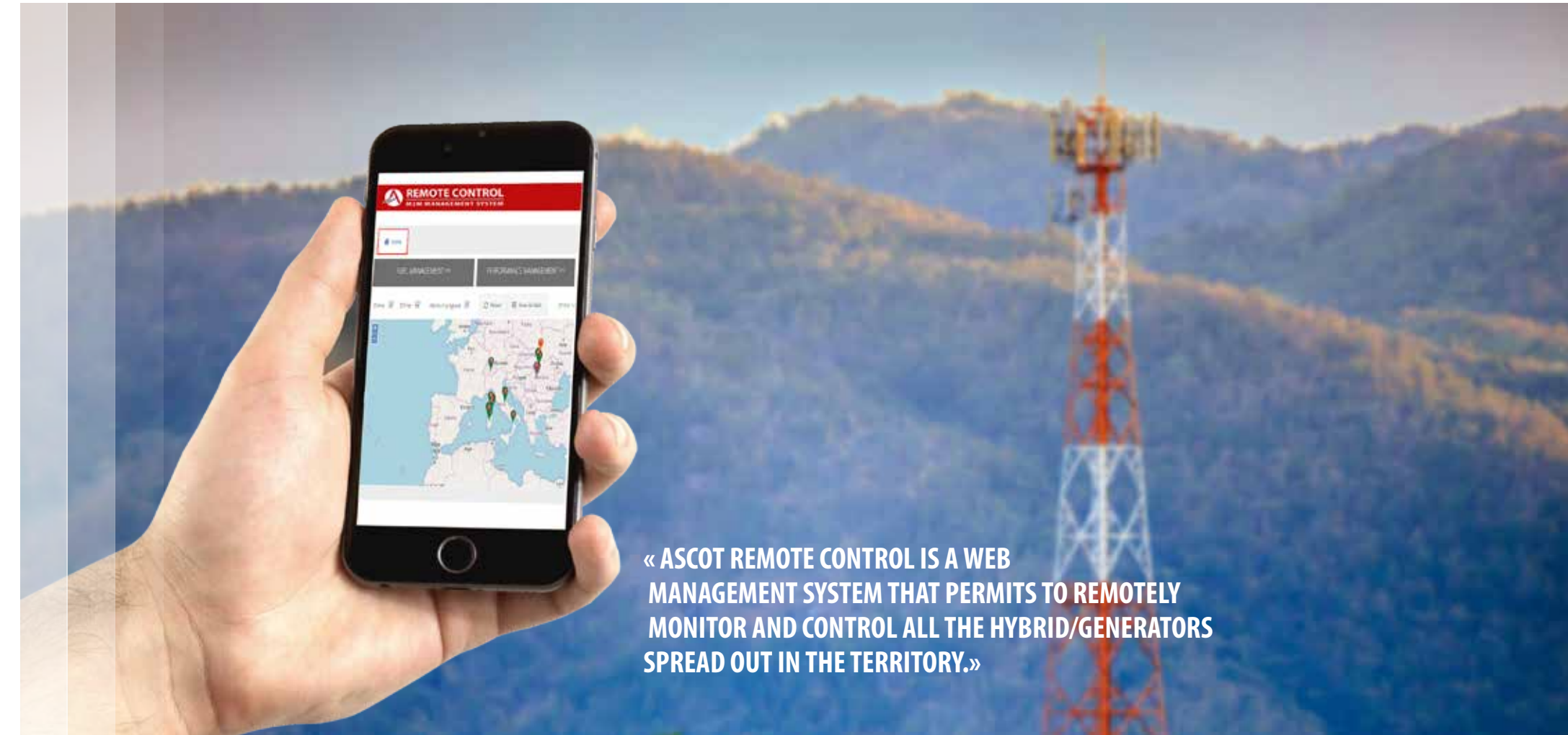


WITH **HPU-X**
Up to 99,9% fuel savings with PV plant

“The first ASCOT hybrid was implemented in Sudan, where it was swapped for an existing dual generator system and achieving a 68% of fuel saving. (2007)

A glance to the Telecom power r-evolution

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CERTIFICATE - IT01.IT/1857.058.V



Real time Opex Control for hybrid generators
Web based management system with m2m technology

Think about
Innovation



Think about Innovation!

Innovation is the key factor for
ASCOT's successes.
Today our Hybrid Power System
represents the leading technology
for all Telecom industry needs.

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HAITI

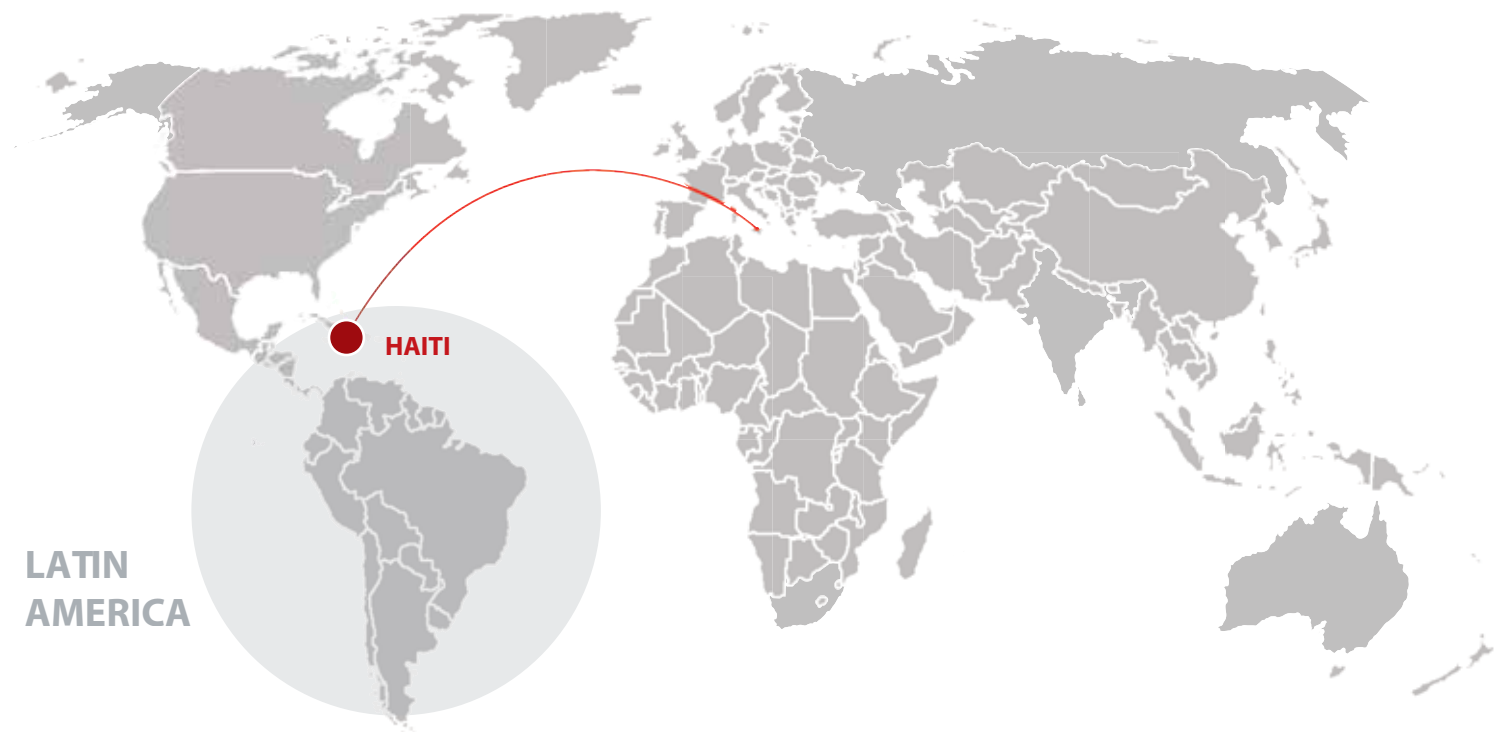
HYBRID WORLDWIDE

Year | 2019

Haiti |

Client

Digicel





HAITI

HYBRID WORLDWIDE

DIGICEL has a longterm partnership with Ascot. They have chosen HPU in order to reduce fuel consumption and have a reliable power solution for their remote telecom sites.

Year | 2017



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NEVADA

HYBRID WORLDWIDE



Year | 2019

Nevada | Challaghan

Client





NEVADA

HYBRID WORLDWIDE

Comnet has chosen Ascot's innovative and off-grid hybrid power generator. Installing the HPU LPG range in remote areas, the greener and reliable power solution has permitted to achieve great savings.

Year | 2016



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NEVADA

HYBRID WORLDWIDE



Year | 2016

Nevada | Horse canyon

Client



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NEVADA

HYBRID WORLDWIDE

Ascot's Hybrid has also ventured to the western part of America, in Nevada State. The remote and off-grid telecom site was located in a great expanse of desert. For this reason the suitable solution was the HPU equipped with GSM and CDMA systems for the remote monitoring.

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CALIFORNIA

HYBRID WORLDWIDE



Year | 2019

California

Client



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CALIFORNIA

HYBRID WORLDWIDE

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COLORADO

HYBRID WORLDWIDE



Year | 2019

Colorado

Client





COLORADO

HYBRID WORLDWIDE

Ascot's Hybrid has also ventured to the western part of America, in Colorado State. The remote On-grid and Off-grid telecom sites were located in a great expanse of desert. For this reason the suitable solution was the HPU equipped with GSM and CDMA systems for the remote monitoring.

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PERU

HYBRID WORLDWIDE

Year | 2013

Peru | Las delicias

Client

Telefónica
telecom

LATIN
AMERICA

PERU





PERU

HYBRID WORLDWIDE

The Ascot Hybrid has also ventured to South America. Telefonica's remote and off grid telecom site in Chiclayo is powered by a DC HPU.

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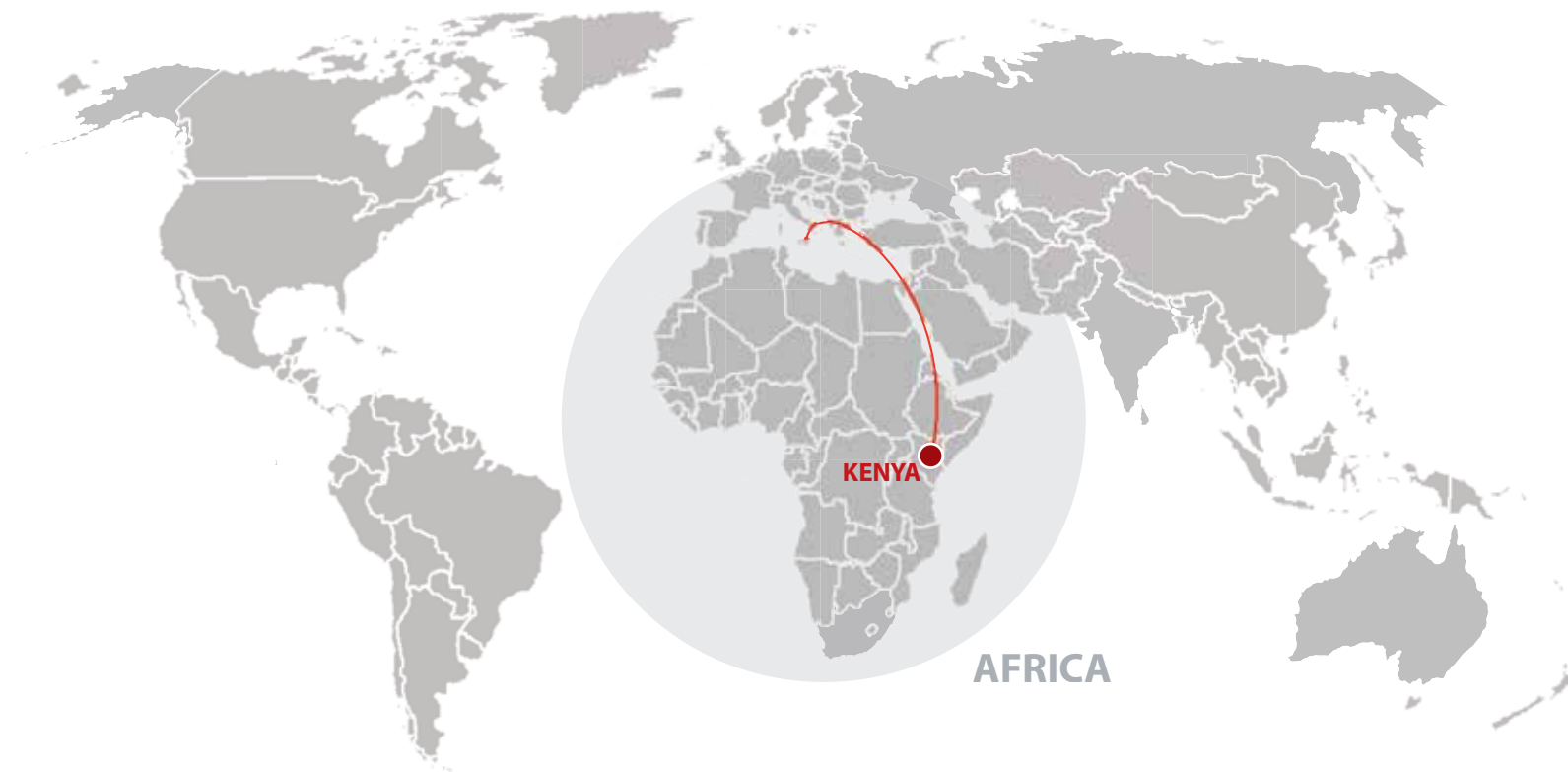
KENYA

HYBRID WORLDWIDE

Year | 2013

Kenya | Nairobi

Client





KENYA

HYBRID WORLDWIDE

In line with world trends, Kenya is committed to becoming a greener country. Safaricom is contributing to this by installing Ascot Hybrid Solutions at their Telecom sites.

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MOROCCO

HYBRID WORLDWIDE

Year | 2015

Morocco | Jbal Ouziane

Client





MOROCCO

HYBRID WORLDWIDE

Maroc Telecom chose to go green by installing the hybrid power solution with lithium batteries and solar panels, reducing both engine running hours and pollutant emissions.



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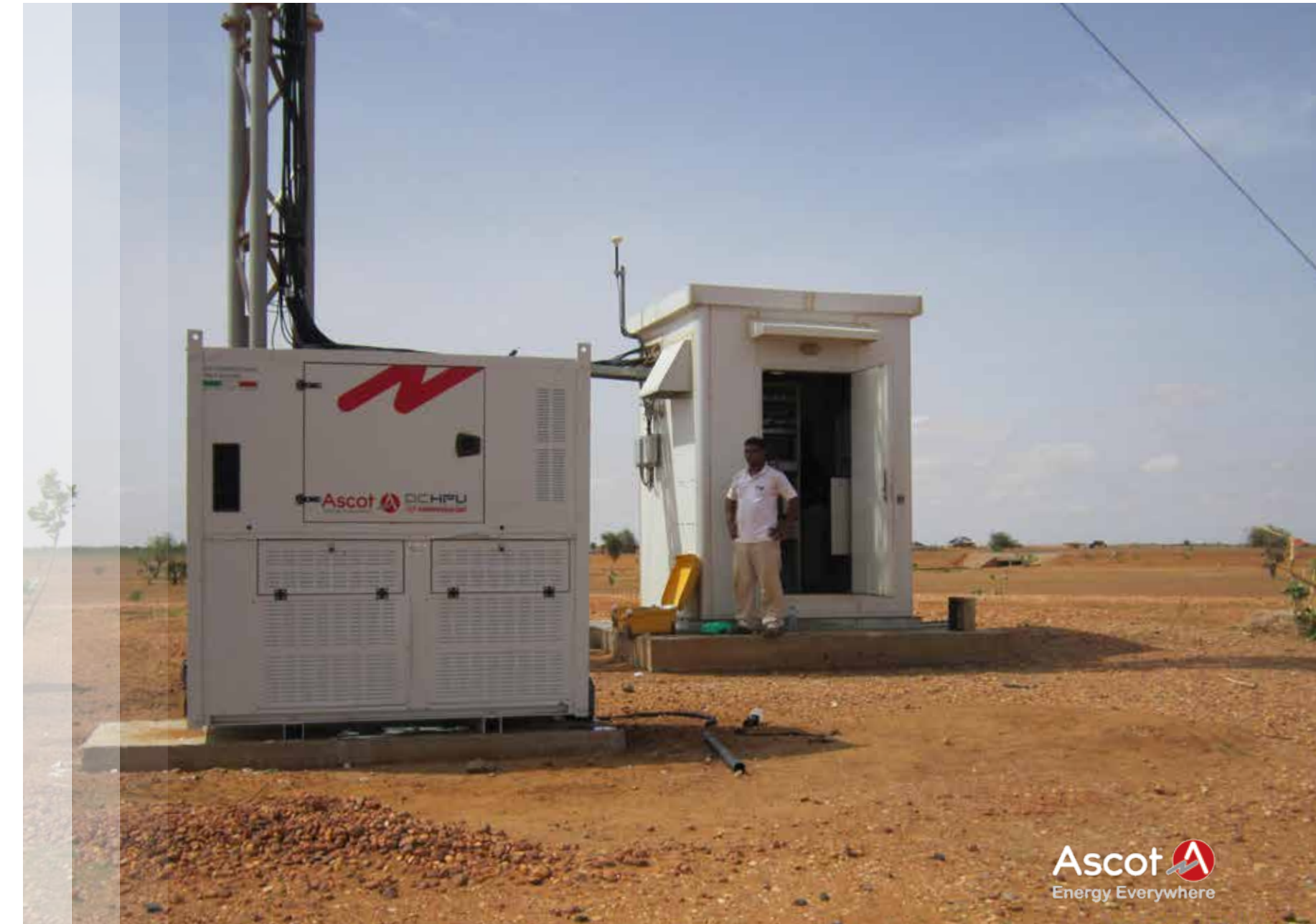
MAURITANIA

HYBRID WORLDWIDE

Year | 2012

Mauritania | Kankoussa

Client





MAURITANIA

HYBRID WORLDWIDE

**29 telecom sites on air
in less than 20 days.**

The Ascot team, in cooperation with Chinguitel, has “hybridized” Mauritania, installing three Hpu’s per day during a two-week mission. Each one is currently operating and achieving a fuel saving of 68%.

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MOZAMBIQUE

HYBRID WORLDWIDE

Year | 2013

Mozambique | Mugeba

Client



Telecomunicações de Moçambique (TDM)





MOZAMBIQUE

HYBRID WORLDWIDE

The TDM Group includes mCel, Mozambique's first mobile operator. In order to provide a more efficient service in a competitive market, many Telecom Operators are going green by choosing Ascot.

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NIGERIA

HYBRID WORLDWIDE

Year | 2015

Nigeria | Lagos

Client





NIGERIA

HYBRID WORLDWIDE

IHS Group, is the biggest tower operator in Africa, has selected Ascot as supplier of reliable and flexible hybrid power solution for multi-tenants sites.

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SOUTH AFRICA

HYBRID WORLDWIDE

Year | 2011

South Africa | Marapong

Client





SOUTH AFRICA

HYBRID WORLDWIDE

Ascot is in accordance with Vodafone's sustainability goal of reducing global CO₂ emissions by 50% by the year 2020. The DC HPU is helping to achieve this goal.

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SOUTH SUDAN

HYBRID WORLDWIDE

Year | 2013

South Sudan | Juba

Client



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SOUTH SUDAN

HYBRID WORLDWIDE

In 2007, Zain Group shared with Ascot its wish to save Opex by having a Generator that would be able to supply energy even when switched off. This led to the creation of the DC HPU.

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SENEGAL

HYBRID WORLDWIDE

Year | 2014

Senegal | Paffa

Client

expresso





SENEGAL

HYBRID WORLDWIDE

In Senegal Espresso Group is one of the main Telecom Operators. In June 2010 Espresso Senegal launched a GSM network, providing 3G services to the people of Senegal for the very first time. They decided to switch up to the greener and reliable power solution in 2011 in order to drastically reduce their TCO.

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TANZANIA

HYBRID WORLDWIDE

Year | 2013

Tanzania | Mbeya

Client





TANZANIA

HYBRID WORLDWIDE

A challenge along the whole Tanzanian territory: Ascot & Vodacom contribute to respecting the environment by installing Hybrid solutions at Telecom sites.

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IRAQ

HYBRID WORLDWIDE

Year | 2010

Iraq | Sulaymaniyah

Client





IRAQ

HYBRID WORLDWIDE

The Iraqi adventure started for Ascot in the year 1998 with the Oil for Food program. Today the refineries of Baiji, Kirkuk, Dora, Bashra are powered by Ascot as well as the most important telecom operators such as ASIACELL and IRAQI TELECOM.

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JORDAN

HYBRID WORLDWIDE

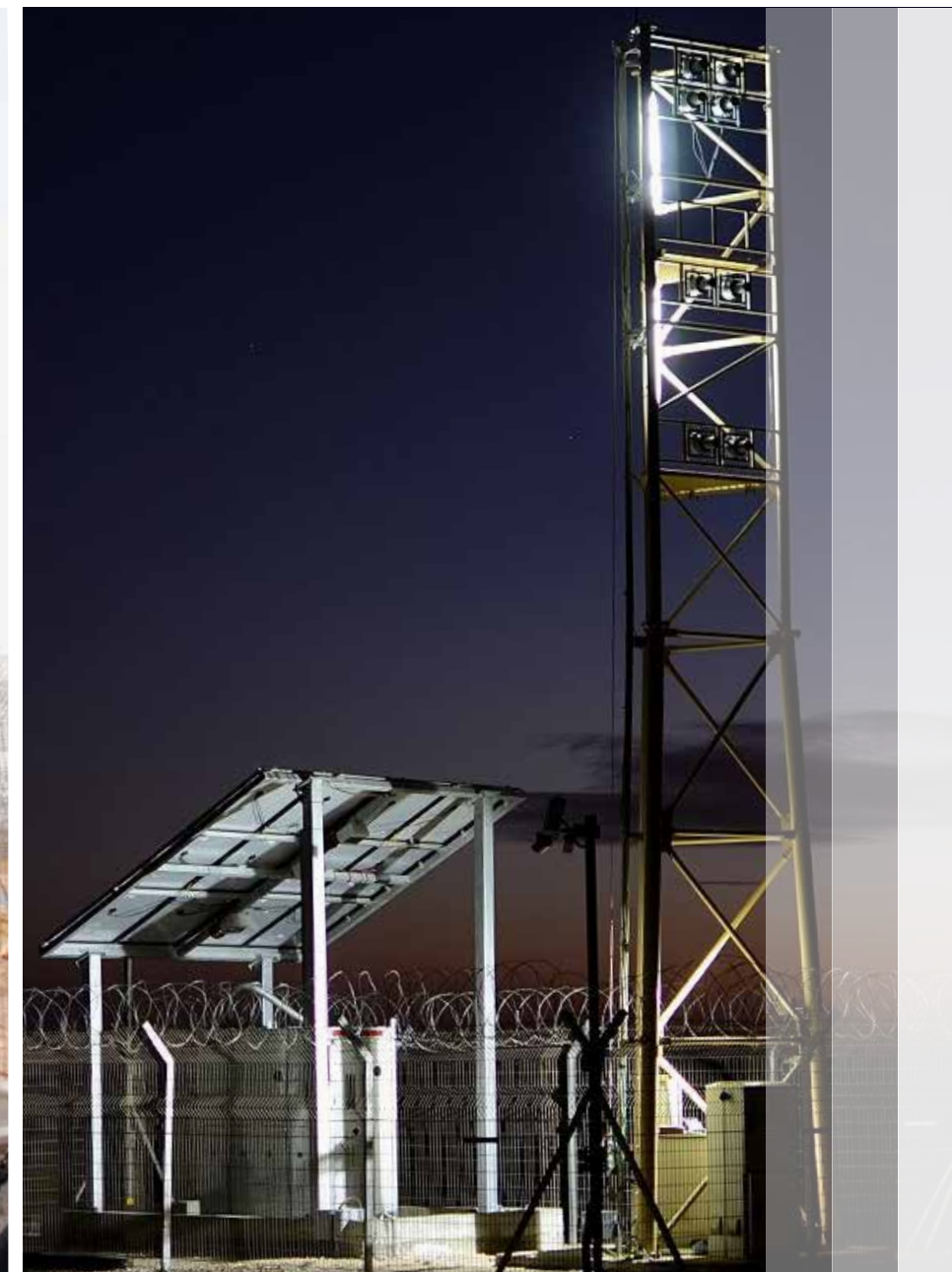
Year | 2013

JORDAN

DC HPU Hybrid Power Unit

DC HPU2_SUN+





JORDAN

HYBRID WORLDWIDE

Installed in countries where the sun shines all day long, the ASCOT DC HPU, combined with Solar Panels, are able to achieve up to 92% in fuel savings.

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QATAR

HYBRID WORLDWIDE



Year | 2016

Qatar | Doha

Client





QATAR

HYBRID WORLDWIDE

Vodafone chose Ascot for the successful installation of HPU 4S that is currently operating with a drastic OPEX reduction.

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SAUDI ARABIA

HYBRID WORLDWIDE



Year | 2011

Saudi Arabia | Umlaji Mountain





SAUDI ARABIA

HYBRID WORLDWIDE

The first Hybrid Cow assembled in Saudi Arabia: **A Hybrid Solution for Rapid Deployment sites.**



STC has a longterm partnership with Ascot. They have decided to trust Hybrid solution for their Remote Telecom Sites in order to have a plug & play solution.



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CAMBODIA

HYBRID WORLDWIDE

Year | 2013

Cambodia | Preykhlotclot Village

Client



ASIA PACIFIC





CAMBODIA

HYBRID WORLDWIDE

The ASCOT ASIA PACIFIC business unit, based in Malaysia, directly follows the Cambodian market, along with the APAC countries.

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INDONESIA

HYBRID WORLDWIDE

Year | 2010

Indonesia | Sepaamaai

Client



ASIA PACIFIC





INDONESIA

HYBRID WORLDWIDE

APAC is one of the best examples of the positive impact of choosing Ascot and the hybrid power solutions.

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MYANMAR

HYBRID WORLDWIDE

Year | 2017

Myanmar | Yangon

Client





MYANMAR

HYBRID WORLDWIDE

NTS has chosen to install 55 units of Ascot's HPU 2 in its network. The units are installed in remote areas and are remotely managed.

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PAPUA NEW GUINEA

HYBRID WORLDWIDE

Year | 2015

Papua New Guinea | Kemabolo

Client





PAPUA NEW GUINEA

HYBRID WORLDWIDE

Thanks to the hybrid power solution, BMobile has achieved reliability in telecom sites located in remote areas. This has reduced the number of visits of ordinary and extraordinary maintenance.

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PHILIPPINES

HYBRID WORLDWIDE

Year | 2012

Philippines | El Nido Palawan

Client



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PHILIPPINES

HYBRID WORLDWIDE

SEMI-KNOCK DOWN HPU FOR REMOTE SITES

On-site Assembly instead of assembling in factory. With the installation of DC HPU (semi-knock down version), Globe overcame the challenge to reach remote telecom sites with limited accessibility due to the lack of road infrastructure.



26

27

DC HPU
SEMI-KNOCK
DOWN
VERSION

26

27

26

27

26

27

26

27

FIRST STEP:
EASILY DIVIDED
INTO 5 PARTS

26

27

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27

SECOND STEP:
TRANSPORT
TO THE SITE

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27

THIRD STEP:
ASSEMBLY
ON SITE

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SRI LANKA

HYBRID WORLDWIDE

Year | 2013

Sri Lanka | Donbemada

Client



SRI LANKA

ASIA PACIFIC



Ascot
Energy Everywhere



SRI LANKA

HYBRID WORLDWIDE

Etisalat Sri Lanka chose the new DC HPU to reduce drastically their operating costs. The Units installed are currently on air and remotely managed.

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ITALY

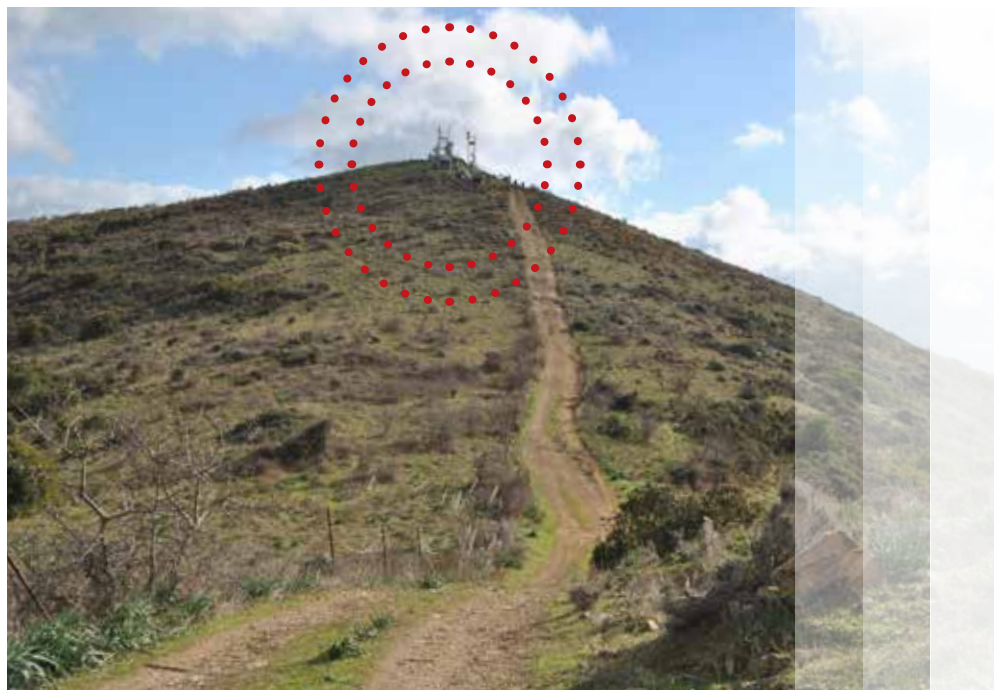
HYBRID WORLDWIDE

Year | 2015

Italy | Terraseo

Client



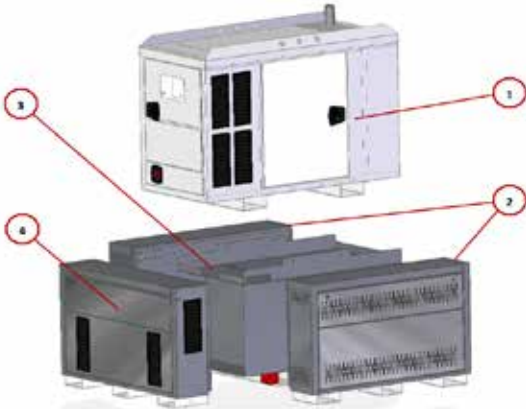


ITALY

HYBRID WORLDWIDE

Vodafone Italy has chosen Ascot for its Telecom site located in a remote area of Sardinia. A full optional solution has been successfully installed and is currently operating with great savings to the satisfaction of Vodafone Group.

HPU2 LEGO VERSION



Main Component

- 1 - DC-Generator
- 2 - Batteries Bank
- 3 - Fuel Tank
- 4 - DC-Distribution Panel



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ITALY

HYBRID WORLDWIDE

Year | 2016

Italy | Sgurgola Tav

Client





ITALY

HYBRID WORLDWIDE

A full optional HPU solution has been successfully installed in off-grid scenario. It is currently operating in a remote areas with great savings.



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ROMANIA

HYBRID WORLDWIDE

Year | 2017

Romania | Tatu

Client





ROMANIA

HYBRID WORLDWIDE

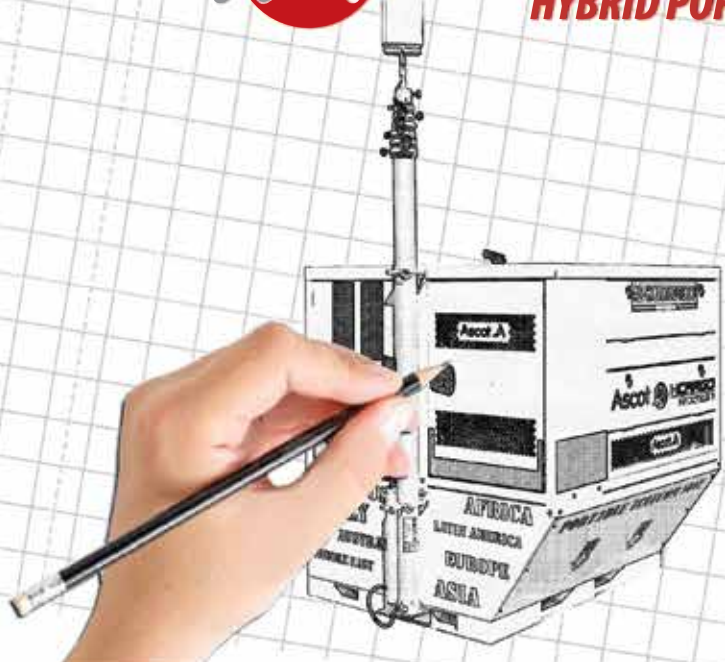
Vodafone preferred Ascot's power solution for it's mobile telecom sites located in remote areas. The HPU was the perfect solution to guarantee low fuel consumption and less maintenance.

RE-DESIGN THE WORLD

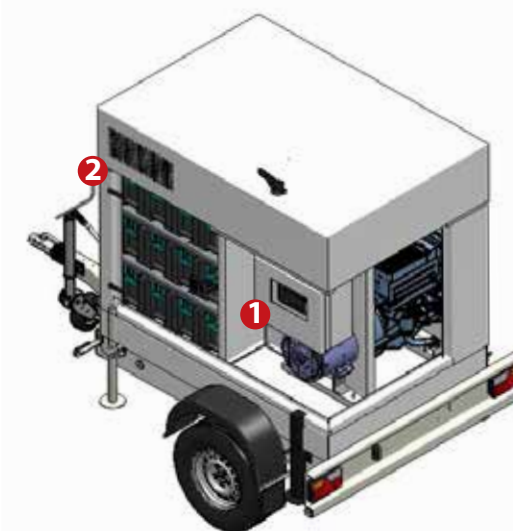
Innovation and progress has to be "one step ahead".

A mix of experience and intuition, supported by a strong presence in the market, permits our R&D team to re-design the world.

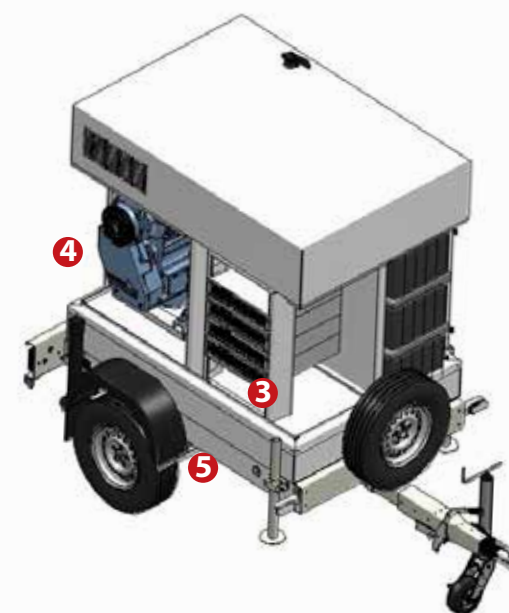
Ascot cannot be copied because our products are made by men of passion, and built in the Mediterranean where the sun and love contribute to creation of our unique solutions.



ON WHEEL HYBRID TELECOM SITE



- 1 Controller
- 2 Lithium batteries



- 3 Rack 19" 20 U
- 4 DC Generator
- 5 Integrated Fuel tank



- A Telecom equipment in 19" rack 20 U
- B Free cooling

THE LIGHTEST AND SMALLEST HYBRID & DC GENERATORS

HPU-X - HYBRID GENERATORS (10 - 15 kW)
DIESEL / LPG / NG - ETL/UL COMPONENTS*

DC GENERATORS (10 - 15 kW)
DIESEL / LPG / NG - cETLus CERTIFIED**

FEATURES

- Small Footprint, Size & Weight
- Compact & Easy to be moved
- Green Friendly - cETLus Certification

APPLICATIONS

- On Grid Urban site instead of stand by generator
- Off Grid Temporary Site



*COMPLETE SYSTEM | ETL/UL Listed to meet UL STD 2200, CSA C22.2#14:2018, CSA C22.2#100:2014 and NFPA 30-37-54-58-70-70E. Fuel tank is double wall UL 142 listed Meets EPA Emission Regulations.

** ETL/UL COMPONENTS | Manufactured according to ETL/UL Certification to meet UL STD 2200, CSA C22.2#14:2018, CSA C22.2#100:2014 and NFPA 30-37-54-58-70-70E. Fuel tank is double wall UL 142 listed Meets EPA Emission Regulations.



NEW CERTIFIED MODELS FOR USA & CANADA

THE WORLDWIDE LEADING HYBRID TECHNOLOGY
FOR OFF-GRID AND BAD-GRID TELECOM CELL SITES

- IoT Power Systems
- Lithium Batteries

NOW CERTIFIED FOR NORTH AMERICAN SAFETY STANDARDS



FUEL ENGINES AVAILABLE [kW]

10	DIESEL	15
10	LPG	20
10	NG	20



We drive innovations
we design power solutions
to keep up with technology
and the customers needs

The Ascot idea is to bring intelligence on those sites that will allow the owner of the tower to save operating costs and to add many new services that could generate a lot of new opportunities.

"Ascot IoT platform is a place where IoT is used to achieve both savings and even additional revenues streams, sharing the same infrastructure and thus optimizing the investments"

- Smart Energy uses IoT to improve itself through the Edge Computing
- Digital Energy provides both energy and IoT to switch to a network-level energy efficiency.

Consolidated Hybrid Generations System, IoT technology, High Efficiency Battery Management, Smarter O&M, Remote Connectivity, are all integrated in the Ascot Digital HUB providing the following Benefits and Additional Revenues.

Even the most remote site if reached by digital energy became a smart environment where is possible to dispatch innovative services e.g. Edge Computing, building management system and IoT based smart services.



WORLDWIDE PRESENCE

IN OVER 38 COUNTRIES

- ASCOT HEADQUARTERS
Gela, Italy
- ASCOT TECHNOLOGIES
Milan, Italy
- 1 CASA ASCOT USA
- 2 CASA ASCOT ARABIA
- 3 CASA ASCOT ASIA
- 4 CASA ASCOT NIGERIA
- 5 CASA ASCOT SUDAN
- 6 CASA ASCOT UAE

38 Countries
34.000 Generators
5.000 Hybrid Generators



OUR CLIENTS

SOMETHING WE ARE PROUD OF



**“ WE BRING ENERGY EVERYWHERE.
ENERGY IS OUR PASSION, PASSION IS OUR ENERGY. ”**

Think about
Innovation



Follow Us!



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Ascot 
Energy Everywhere

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