sun2com

sun2com™ solutions for telecommunications

by The meeco Group

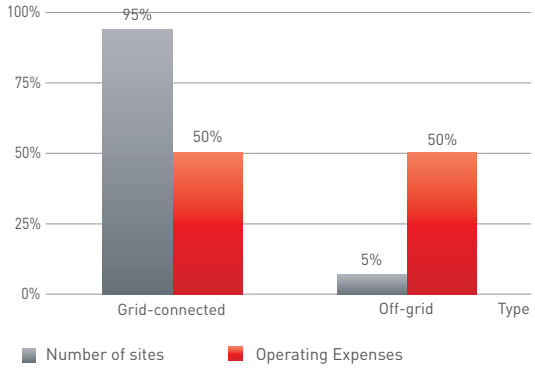
Overview

As wireless carriers expand service to more remote areas, stable electricity grids become harder to find. Most remote BTS sites and switching stations exclusively use diesel generators— expensive when considering the cost to purchase and transport fuel as well as maintain, repair, and overhaul, replace on-site equipment.

The meeco Group's **sun2com** off-grid solutions are specifically configured for each telecom site to minimize initial costs while providing reliable 24/7 power. With minimal ongoing operating expenses, **sun2com** solutions can produce a three-year ROI.

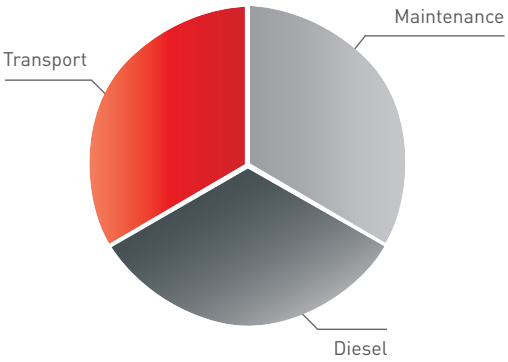
By installing over 380 MW of renewable energy capacity since 2005, The meeco Group has established the financial flexibility and technical, operational, and support expertise, to ensure reliable, profitable long-term results for service providers and infrastructure suppliers.

Operating Expenses of BTS sites



Source: Telecom service provider

Off-grid BTS operating costs



Indicative

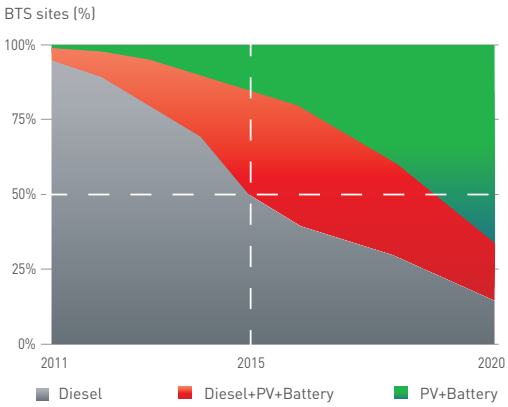
Telecommunications Challenge

As wireless service providers strive to serve the next billion subscribers, they face the challenge of serving more remote regions of the world at a competitive price.

For remote regions without access to the electricity grid, this is an enormous problem.

With the rising cost of diesel and the high cost of transport, economically reaching these new subscribers frequently appears impossible. For example, while only 5% of a service providers BTS stations may be off-grid, the OPEX cost of these sites can represent 50% of total network OPEX.

BTS power supply transition by 2020



Source: meeco research

Telecommunications Evolution

One approach taken by service providers is using renewable energy to power BTS stations. Trials are now underway in many countries, mostly hybrid solutions involving solar energy, battery storage, and diesel generators.

The results of these trials prove renewable energy can be economically deployed, and provide an important means to improve providers carbon footprint. Service providers are seeing a ROI of three years or less, especially when diesel transport costs are high.

Diesel Genset vs. PV Generator

Source: Solar23 · www.solar23.com

The meeco Group Approach

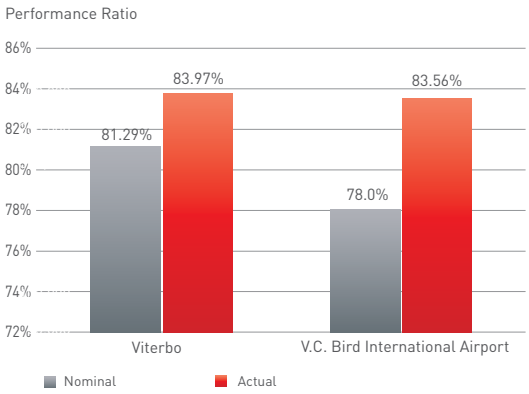
As a leader in renewable energy, we are ideally suited to build out telecom renewable energy capacity. In delivering and financing over 380 MW across five continents since 2005, we form long-term relationships with clients, involving:

- Project concept & financing
- Design & installation
- Operation & maintenance
- Technology upgrades

Leveraging our worldwide experience and industry leadership, we offer clients important advantages:

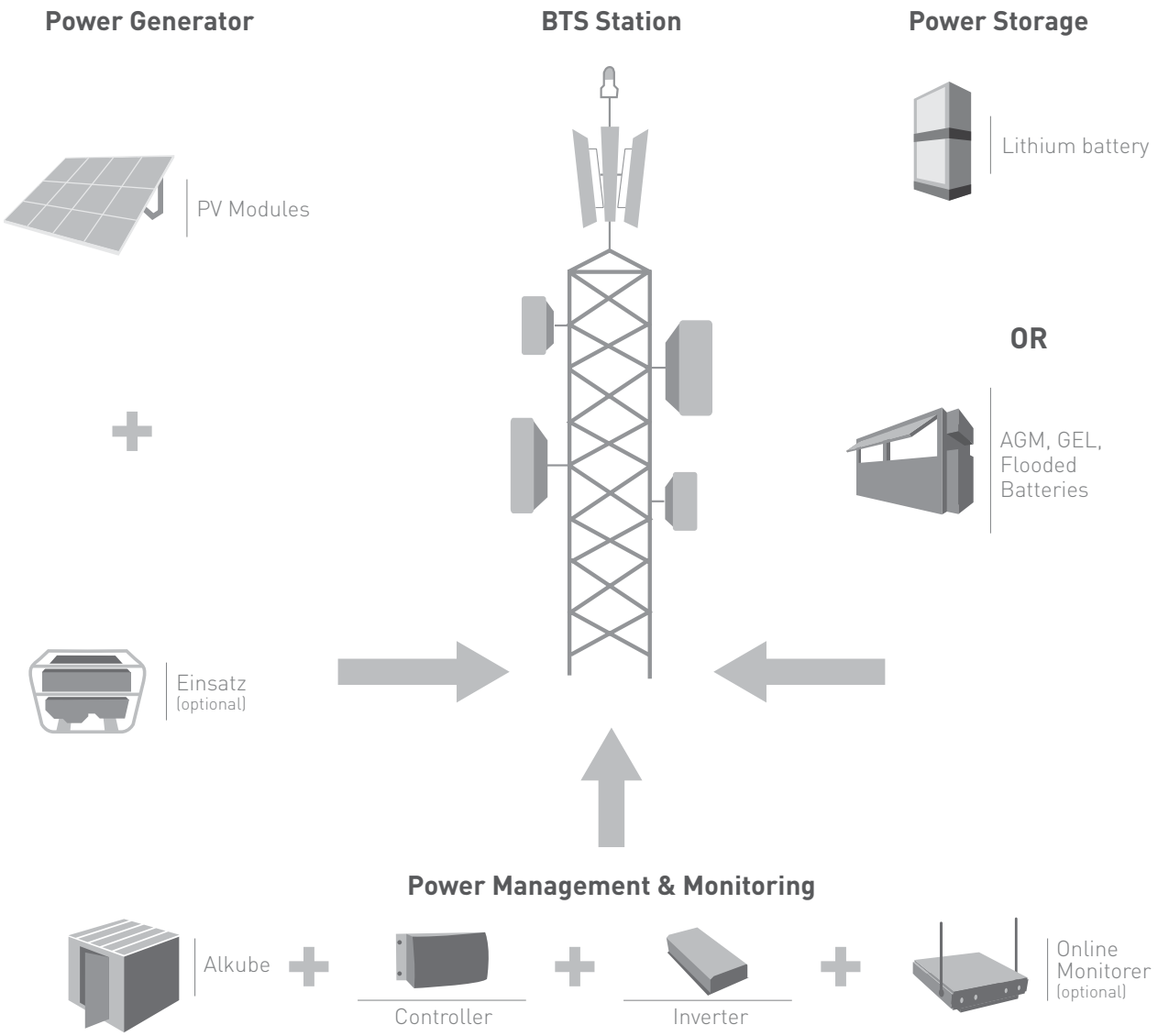
- Superior design discipline and technology sourcing
- Higher client operating efficiencies
- Various CAPEX or OPEX financing alternatives
- Continued R&D (e.g., power generation, energy storage, site security)
- Strong balance sheet and staying power

Delivered Performance Ratio



Production figures from year 2015

Technology Architecture



Features and Benefits

sun2com solutions are tailored to meet each client's specific requirements while minimizing their initial investment. We accomplish this in two ways:

- Mixing and matching a variety of technologies to optimize performance while minimizing upfront costs.
- Utilizing top-tier equipment and components to ensure reliable, consistent performance and the lowest possible ongoing expenses.

As a result, **sun2com** solutions have a number of advantages over BTS sites operated solely with diesel generators:

- Up to three-year ROI
- More reliable electricity supply (24/7)
- Reduced exposure to rising fuel prices and increasing delivery costs
- Limited maintenance, repair, replacement, and fuel costs
- Small carbon footprint

By incorporating best-in-class Swiss design, German engineering, top-tier components, financing alternatives, and local sales and service, **sun2com** solutions generate profitable, reliable, long-term results.

Technical Data

- **PV components**

  Module: oursun ESP 260 Wp Polycrystalline module (or equivalent)

  Mounting structure and sub-structure: Marine-grade aluminum; Standard layout:

  Two rows of four panels (extendable)

- **charge controller**

  Steca Solar (or equivalent)

  Capacity: 20 – 150 Amps

- **inverter**

  Studer Innotec (or equivalent)

  Capacity: 2-20 kW

- **battery**

  • GEL Battery

  • AGM Battery

  • Flooded Battery

  • Lithium Battery

- **alkubeTM housing**

  Material: Marine-grade aluminum

  Shipment-ready flat pack

  Thermally-insulated; fully rust free

About The meeco Group

As a leader in clean renewable energy, meeco has provided clients with services and solutions for over 380 MW across three continents.

We work behind the scenes with project developers, businesses, governments, technology providers, and EPC contractors to structure, finance, and commission highly bankable projects. By providing the optimal set of services and solutions for each project, we generate attractive returns for clients and other stakeholders.

Some of these services and solutions include:

- **clear advisory services:**
  strategic consulting, project services, financial advisory and communications
- **oursun turnkey solutions:**
  grid-connected and off-grid solutions, sun2go portable solutions and energy storage solutions
- **asset management services:**
  on-going site services

The meeco Group delivers these services and solutions via regional offices located worldwide to ensure we address local requirements and community needs.

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For more information, please email **info@meeco.net** or visit **sun2com.meeco.net**