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# Release – solar and battery rental

Quick, flexible and affordable

# General Overview of Scatec

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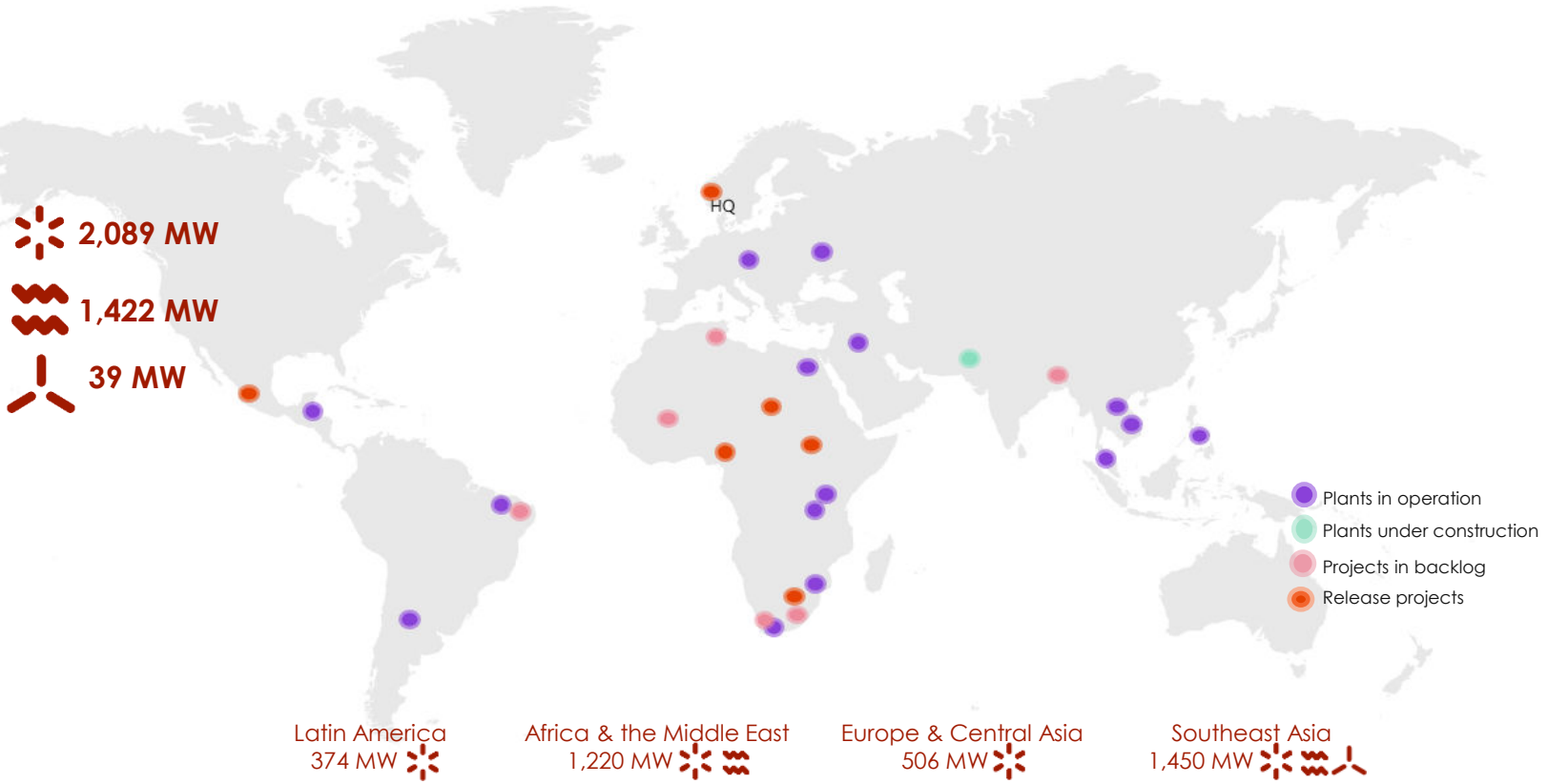
# Scatec provides renewable energy solutions in high growth markets

## - 3.5 GW of solar, wind and hydro in operation and under construction




## Scatec in brief

Develop, build, own and operate renewable energy

3.5 GW in operation and under construction

16.6 GW
backlog & pipeline

More than 600 employees in 27 countries

**15 GW**
Target by end 2025

Listed on Oslo Stock Exchange as SCATC

Release is a fully owned subsidiary of Scatec

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# Leaders in ESG

## How we work with ESG

- ESG is an integrated part of our business
- Dedicated E&S resources for long term approach and impact
- Solid Environmental and Social Management System covering all projects

## A competitive advantage

- Attracts projects and business partners
- Reduces risks and strengthens probability of successful completion of projects
- Becoming imperative to qualify for and win new projects

All our projects must adhere to the IFC PS and Equator Principles

IFC EQUATOR PRINCIPLES OECD

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## Top rating from independent rating agencies

SUSTAINALYTICS

**Rating summary: Low risk**
#1 of 450 – Utilities
#1 of 48 – Renewable power producers

ISS ESG

**Rating: A- (excellent)**
Status: Prime
Prime threshold: C+

MSCI

**Rating: AAA (top rating)**
Highest scoring range relative to global peers

CDP

**Rating: A**
Carbon Disclosure Project
Top score

THE GOVERNANCE GROUP

**Rating: A+**
#1 in ESG reporting among the 100 largest companies on Oslo Stock Exchange

# **Scatec**, the ideal renewable energy partner

**Multi-technology integrator**

*wheeling or behind-the-meter*

Hydro, wind

solar PV
(+ floating PV)

BESS

Hydrogen

**Track record**
delivering
challenging projects

Flexible lease
solution - **Release**

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# Introduction to Release

# Release is flexible, simple and innovative

## Rental solar and storage plug-and-play

### Flexible

**Redeployable, modular and scalable**

Pre-assembled and containerised

**Quickly installed** (1-2 MW per week)

### Simple


**"All-in-One"** rental contract, including **Battery energy Storage**

You only pay if it works

**Pre-financed –** option to extend or buy-out

### Innovative

**Short-term rental** possible

**Utility-scale** - only movable solar with trackers and bi-facial modules

**Integrated** with existing infrastructure and **monitored 24/7**

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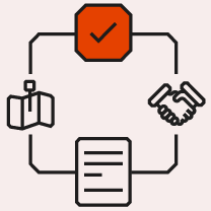
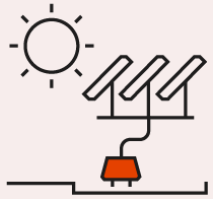
Link to the presentation video

# Release – making solar simple

## Why choose Release



Simplified contract

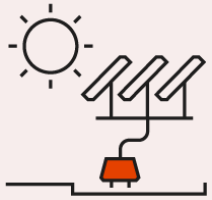


Quick installation (6 -9 months)

Limited upfront investments

## Benefits

Flexible contract durations



Modular and scalable

Guaranteed availability and performance

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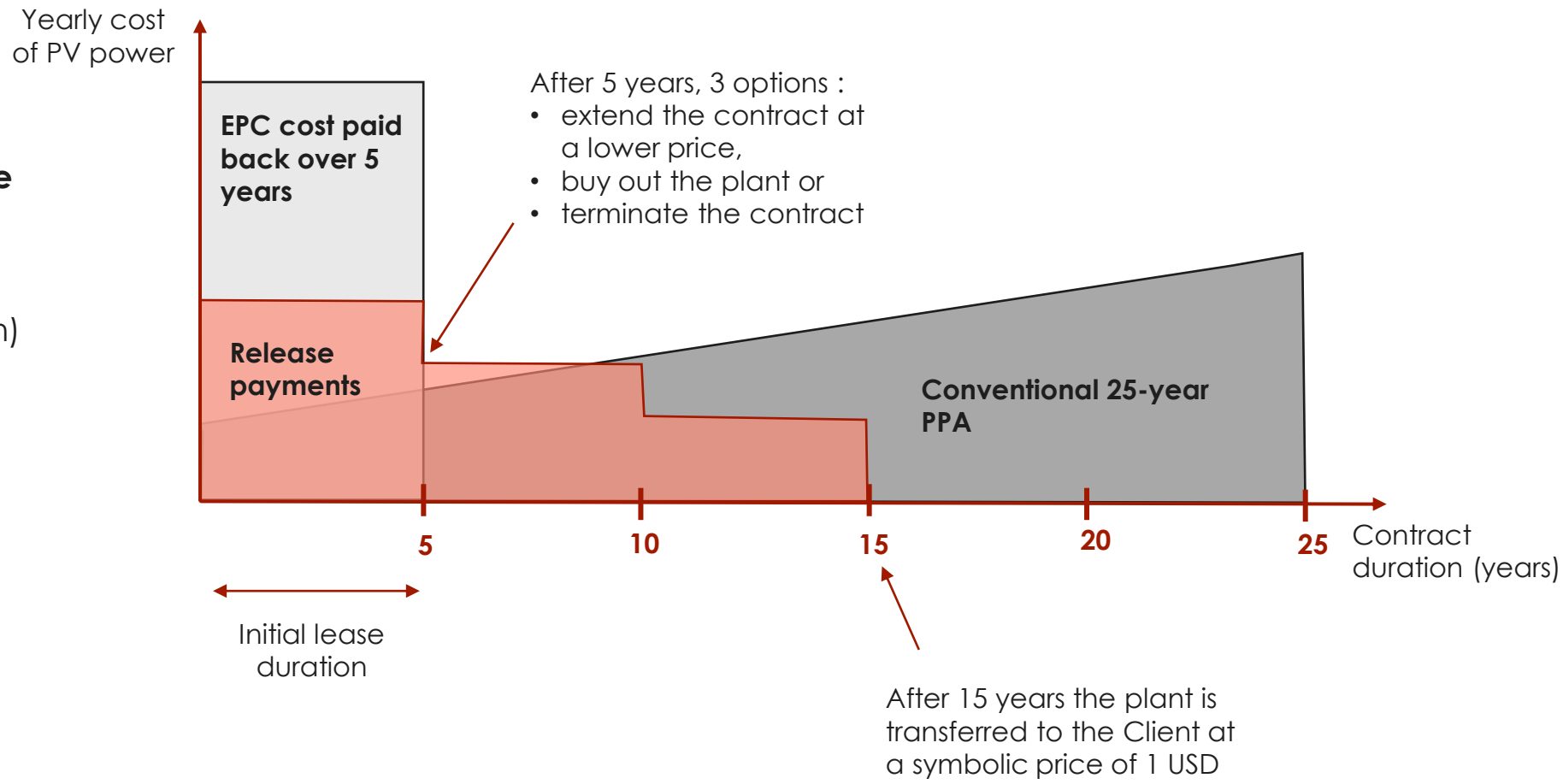
# Financial comparison of Release vs traditional project structures

**Release payment structure**

- Mobilization fee at contract signing
- **Fixed rental fee paid monthly** (no indexation) based on PV capacity installed

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# Improving on the IPP model

| Key characteristics | IPP | Release |
|---|---|---|
| **Location** | Fixed to one site | Can be moved from site to site |
| **Plant size** | Fixed | Can be scaled up or down |
| **Contract duration** | Fixed | Flexible – from 5 years and onwards |
| **Guarantee requirement** | Sovereign guarantee covering full contract | 1-year LC |
| **Price** | Fixed tariff with inflation adjustment for full contract term | Upfront fee; Rental decreasing every 5 years; Purchase option 1 EUR in Y15 |
| **Time to installation** | 3-5 years from initial discussions | 6-9 months from initial discussion |
| **Financing method** | Project financing (long negotiations, many contracts) | Equity financed, 1 contract |

# What We Deliver

- Transport of the PV plant and BESS to nearest port.
- Full installation of equipment at site.
- Performance and availability guarantees.
- Routine maintenance and repairs.
- Global 24/7 monitoring and Scada available also for the Customer.
- Weather and production prediction.
- Training for local power team to manage day-to-day maintenance.
- Release compact substations to step up from 800V to Customer desired voltage.

# Typical Customer Scope

- Perform customs clearance for equipment.
- Ensure land is made available and is free of any occupation.
- Ensure any required site preparation is performed.
- Obtain necessary permits, with the support of Release.
- Perform day-to-day maintenance tasks on site (module cleaning, vegetation control, simple electric works).
- Assist in local accommodation, identifying local workers as required.
- Local contractors for crane(s) and machinery as required

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# Technical Overview

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# Technical specifications

## PV Modules

We use the latest PV technology: bifacial modules to optimise performance.

- Supplier: JA Solar (or similar Tier 1)
- Power Class: 540+ Wp
- Technology: Mono PERC, double glass, framed
- Warranty: 12-year product warranty + 30-year linear power output warranty

## Trackers

The tracker structure is made from corrosion resistant galvanised steel with automatic stowing to safe angle under strong winds, using the same tracker control used in several of our utility scale projects.

- Supplier: Cambridge Energy Partners
- Model: Release Montaro 1P
- Technology: Single-Axis, East-West tracker. -45 to +45 degrees with back-tracking
- Wind speed tolerance: 44 m/s
- Slope tolerance: 15 %

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## Inverters

We use string inverters with less downtime and easy replacement.

- Supplier: Sungrow (or similar tier 1)
- Power: 350 kWac (@30°C)

## LVAC Combiner Box

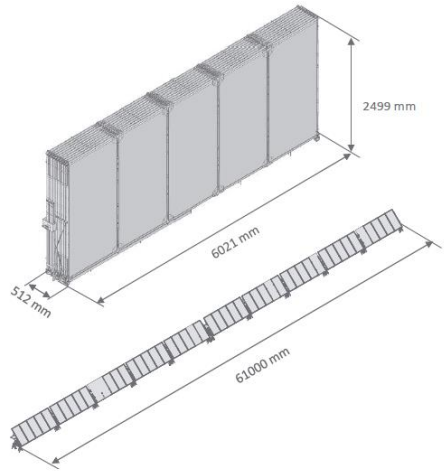
Standard AC Combiner Box (integrated within the compact substation),
Supplier: Various. Assembly and testing by Rubicon


## Compact Substation

Per 1000 kW block
6.6-33 kV
Supplier: Power Transformers or similar

# Our Montaro re-deployable tracker

- In –house assembly line in Spain
- Stock available of trackers and PV modules to be deployed immediately
- Compact transport configuration optimized to fit into containers (216 kWp per container)

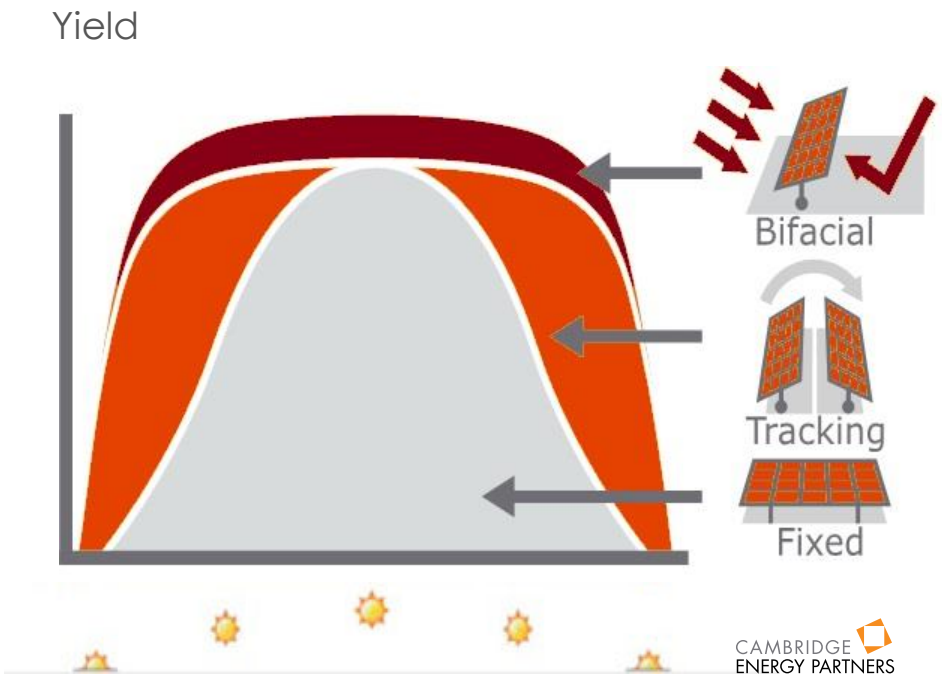


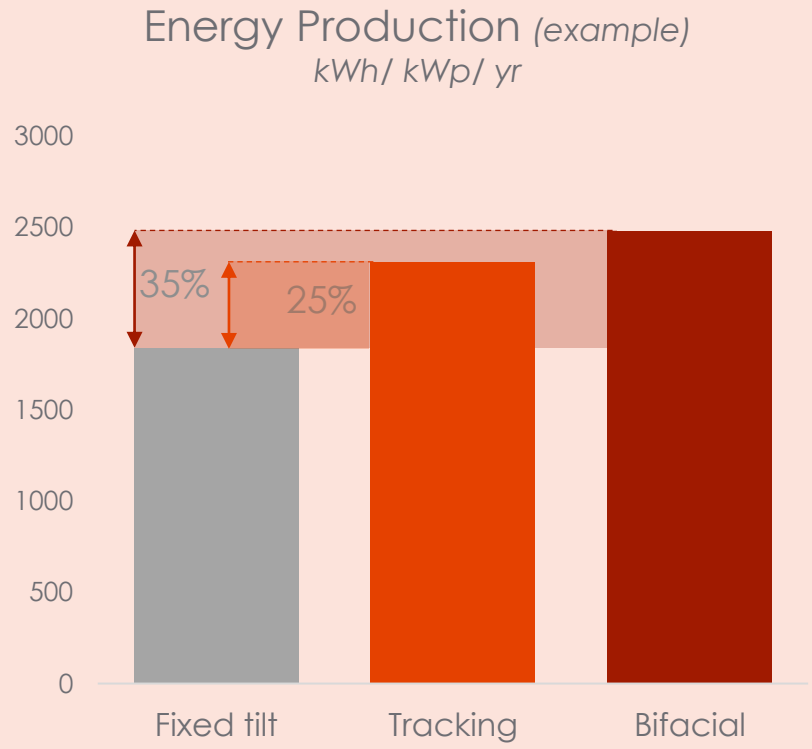

Assembly in Nomad factory *Source: Release*

Transport configuration

# The world's first movable solar tracker

## 30-40 % higher yield vs other movable systems

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# Solar PV + storage: Further fuel savings, engine optimisation and system stability

Battery storage (BESS) increase fuel savings and support overall system

- Solar power dispatchable during evening/night
- Support to the existing generators and power system
- Generators running at more efficient load
- Provides spinning reserve and thus allows engines to be turned off during the day
- Enables a larger solar PV system compared to a PV-only solution
- Ultimate choice of supplier and BESS technology subject to its functionalities in the project

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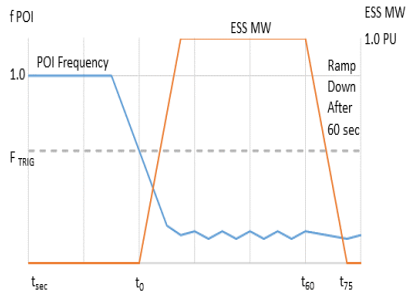
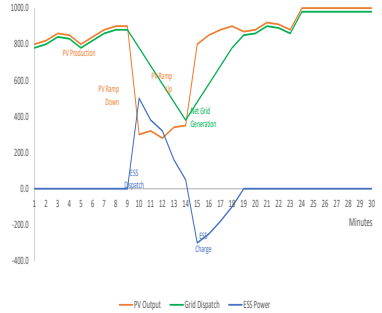
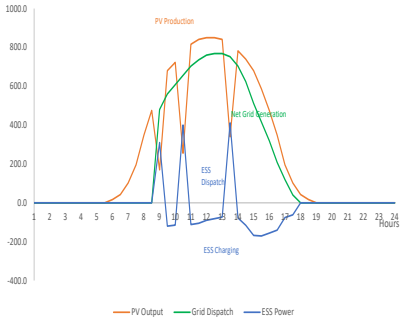
Frequency response



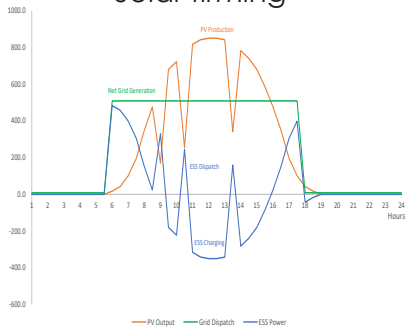

Ramp rate control



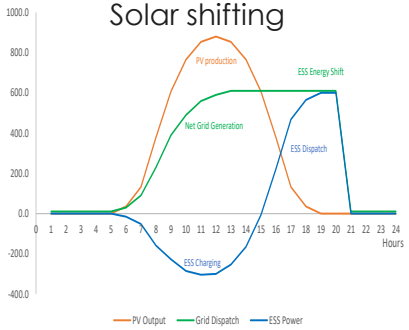

Solar smoothing




Solar firming




Solar shifting



# What Drives the Sizing of a PV + BESS System?

***There is no "perfect" size for each project but rather a balancing act between techno-economic parameters to provide customers the highest renewable energy penetration while targeting the lowest possible LCOE***

**Inputs**

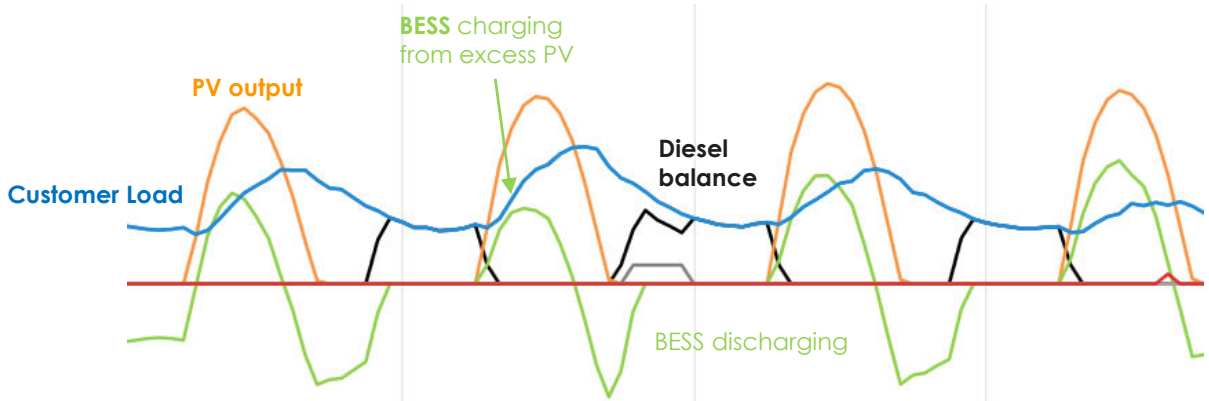
- Load demand and associated costs
- Solar generation
- Battery capacity and charge/discharge
- Mix of all available generation source (e.g. grid, thermal generation, other renewables)

We simulate the customer real operations with hourly data

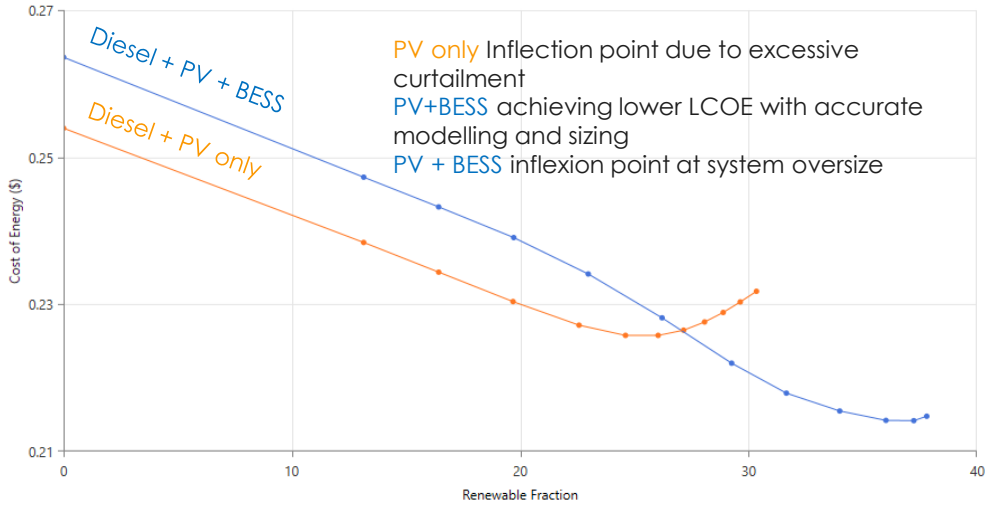
**Target to optimize the system design**

- Maximise renewable energy penetration, where and when required
- Minimize renewable energy curtailment
- Lower the overall energy costs by building capacity incrementally
- Increase system stability and support the existing power generation infras

*The modularity of Release solution provides ample flexibility to optimize the sizing*




*Customer weekly **load** and generation profile including **PV**, **Diesel** and **BESS**. Source: Release*




*Illustrative example of PV and BESS incremental modelling for blended LCOE. Source: Release*

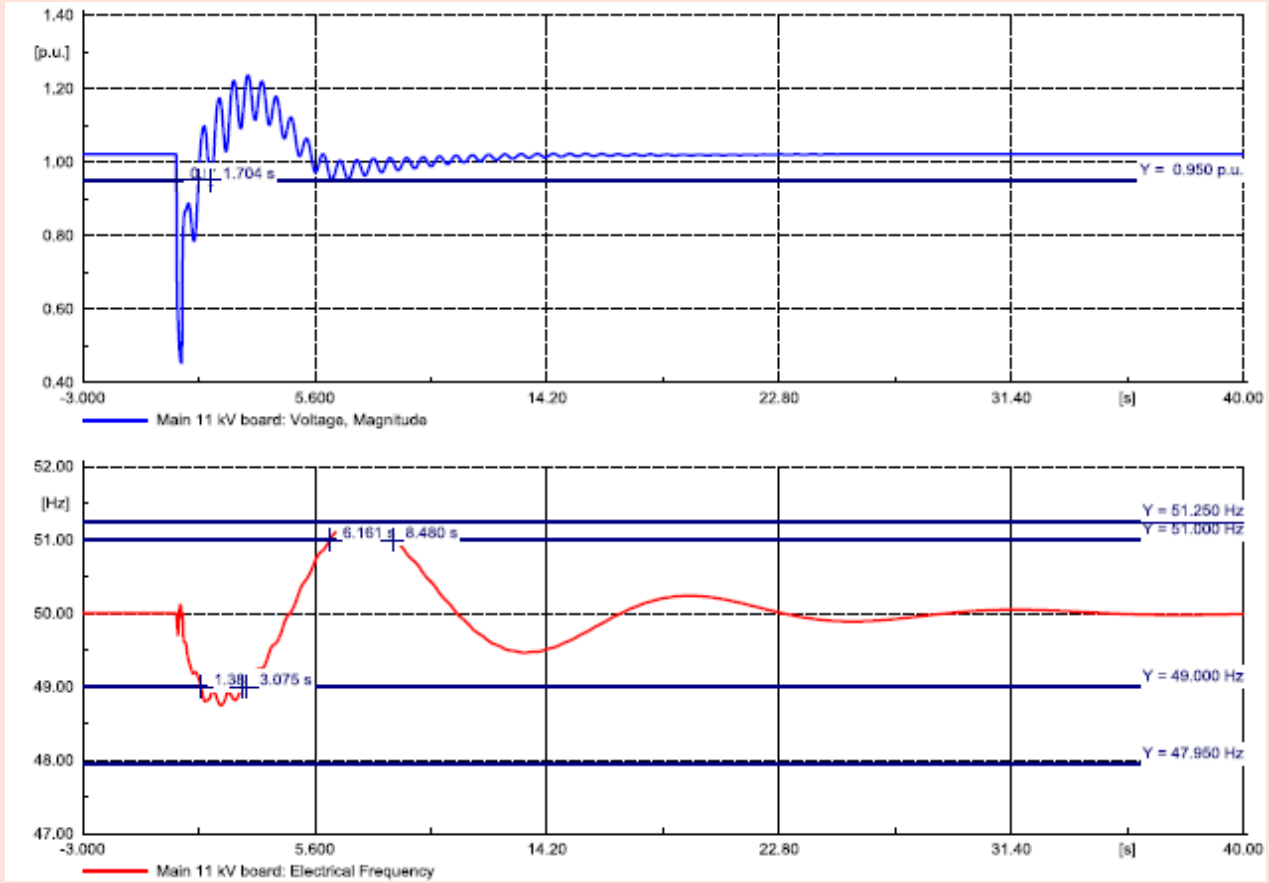
# Power system studies capabilities are critical to ensure stable operation

## Behind the meter

We can perform grid transient and protection studies on the network to ensure reliable power supply with intermittent loads and generation, including seamless islanding to alleviate outages or load shedding with batteries

## Front of the meter power generation

We analyse solar impact to the transmission, distribution and production, including batteries to firm and stabilise production and support the grid with ancillary  services and ensure compliance with  grid codes.

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# Our Hybrid Control System ensures an optimal dispatching of Release power

***We provide a customized Power and Energy Management System to control and optimize dispatch of Release and existing equipment in real time***

Our automated system **manages, learns and forecasts information**:

- Weather
- Loads
- Generation
- Tariffs

Hybrid control system

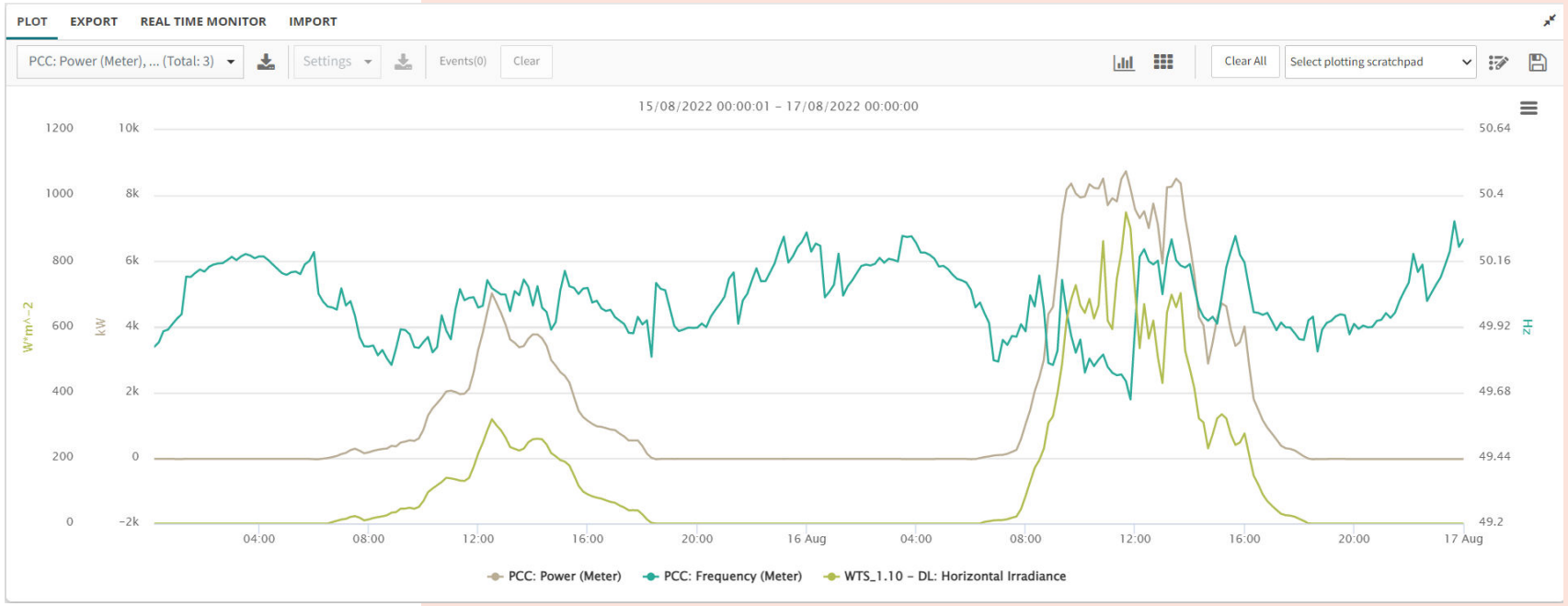
## Services and functionalities

### *Grid connected projects*

- Automatic and seamless transition between grid connected and islanded operation
- Provision of ancillary services
- Energy optimization

### *Off-grid projects*

- Balancing of real and reactive power at millisecond level
- Control of voltage and frequency
- Solar self consumption maximization
- Grid forming and synchronization from batteries and/or gensets

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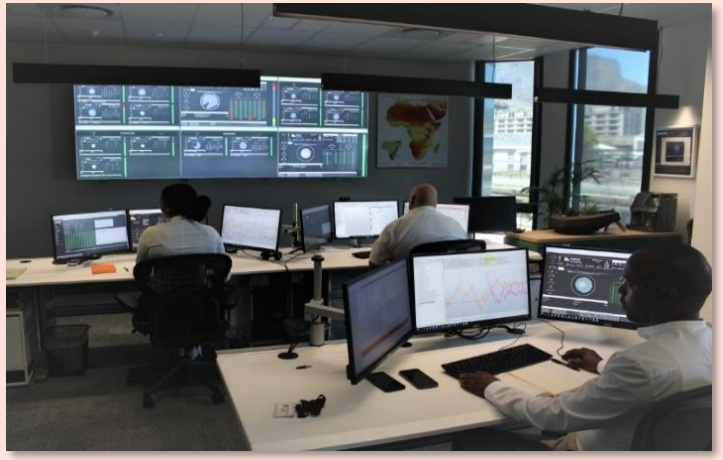
# Remote Monitoring

## Through Scatec Global Control and Monitoring Centre (CMC) in Cape Town, South Africa

- Scatec offices in Cape Town, South Africa hosts our world-class CMC facility. The CMC is active 24/7 and, thanks to Release design and communication hardware and software, we will be able to detect any faults or alarms in real time
- Each Release plant is monitored alongside Scatec's 2GW of operating plants
- Greater monitoring and diagnostic analysis will provide invaluable data for designing future large scale deployment
- Monitoring of up to 1s resolution - critical to optimising power performance and fault detection



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# Project Examples and Case Studies

# Release Leasing Projects

| | Name/ Location | Capacity | Client | Status | Comment |
|---|---|---|---|---|---|
|  | **Guider and Maroua, Cameroon** | Phase 1 – Guider: 17.8 MWp PV + 10 MWh BESS<br>Phase 2 – Maroua: 18.5 MWp PV + 10 MWh BESS | ENEO<br>National utility | Phase 1 – PV plant commissioned in **Q2 2022**<br>Phase 2 and BESS phase 1 under construction – **Q4 2022** | First utility Scale Release project, standard five-year leasing agreement with Eneo |
|  | **RhYNO, South Africa** | 600 kWp PV | Anglo-American<br>platinum mine | commissioned in **Q1 2022** | Short-term rental for powering a green hydrogen project at the mine |
|  | **IOM Humanitarian Hub, South Sudan** | 700 kWp PV and 1.3 MWh BESS | IOM<br>International Organisation for Migration | commissioned in **Q2 2020** | Release plant integrated with diesel gensets under rental agreement. Providing 80-90 % of the power to the hub |
|  | **Mexico** | 8.5 MW PV | Torex Gold mining company | Under construction - **Q3 2022** | Leasing contract |

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# RELEASE to ENEO, Cameroon: Utility scale project delivered in < 6 months

- **36 MW PV; 20 MWh storage solution**
- Delivered jointly with IFC
- Rental agreement signed August 2021; first power delivered 4 February 2022

The first project, with a capacity of 17 MWp is in operation since June 2022, while the second with a capacity of 18 MWp, as well as the 10MWh BESS plants for each project, are under construction.

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## Key project characteristics

- Pre-financed:
*no lengthy financing process*

- Guarantees pre-approved:
*no government guarantee required*

- One single agreement:
*5-year initial commitment, can be terminated thereafter*

- Competitively priced
*compared to existing IPP offers*



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# The Release team at work

# Case study: IOM MALAKAL - South Sudan

Scatec commissioned a combined solar and storage plant for the Humanitarian Hub in Malakal, managed by International Organization of Migration. The hub hosts more than 34 organisations involved with humanitarian projects. The hybrid system will cover up to 90 % of the Hub's energy demand with solar energy, reduce costs, pollution and carbon emissions, and provide a more reliable and robust energy supply.

**Impact**

- $CO_2$ emissions reduced by 80-90 %
- Initial cost reductions of ~20 %*
- A robust and reliable energy supply

**Technical solution**

- Hybrid solar PV and battery solution integrated with existing diesel generators
- Guaranteed plant performance
- 24/7 monitoring, maintenance support

**Commercial structure**

- A 3-year initial leasing contract
- Solar energy on a monthly invoice
- In case of extension beyond 10 years, the plant is transferred to IOM

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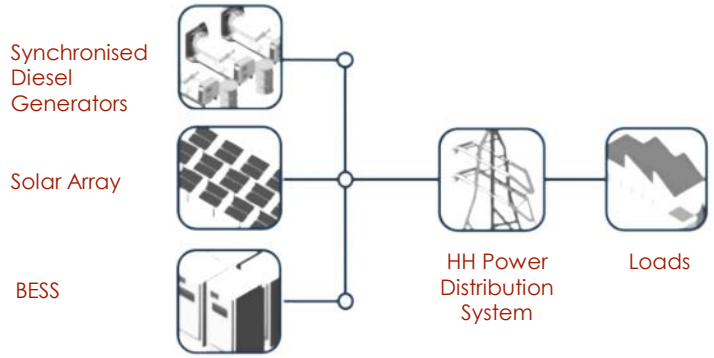
* further reductions as tariff is reduced over time

**System specifications**

| | |
|---|---|
| Solar DC capacity | 700 kWp |
| Mounting structures | Fix-tilt; 15° |
| Battery system | 1368 kWh Tesla Power Pack 2 |
| Diesel generators | Synchronised the existing generators |
| Control system | Tesla Micro grid Controller |



# Release & H2 : Rhyno Project
## Flagship Solar PV-for-Green-Hydrogen

**AngloAmerican Platinum - Engie, South Africa**

- 600 kW – short-term rental
- Chosen as supplier to deliver clean energy for pilot green-hydrogen mining at the Mogalakwena mine for heavy vehicles
- Integrated with the electrolyser
- Mechanical Completion 20/3/2022.
- Hot commissioning and Testing pending interconnection
- Lease running from 30/3/2022
- Flagship project in providing sustainable mining solutions

release BY SCATEC — Energy supply

ENGIE — Integrator

nel — Electrolyser

Tractebel — EPC

ANGLO AMERICAN — Client

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www.releasesolar.com

We finance – you lease