



ENcome
ENERGY PERFORMANCE

EVERY WATT COUNTS

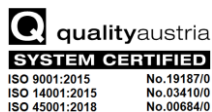
Focus & Goals:

- » Optimizing the output of solar energy power assets and thereby contributing to a maximized return on investment as a strong and reliable partner for our clients in the PV industry
- » Constantly keen to apply and extend our integrated service approach that creates the basis of customer satisfaction

Highlights:

- » Management of PV plants with a nominal capacity of 2 GWp and a total asset value of ca. € 3 billion
- » Leading independent O&M service provider in Europe
- » Centralized 365/24/7 Control and Monitoring Center
- » Active member of Solar Power Europe and Co-Author of Best Practice Guidelines, setting standards for quality

ENcome Energy Performance currently is certified to the following:



Leading independent service provider in Europe according to Solar PV O&M Report 2019



01 About ENcome

The served portfolio includes PV assets of all types, sizes, and technologies

Ground-mounted
50 MWp - Germany



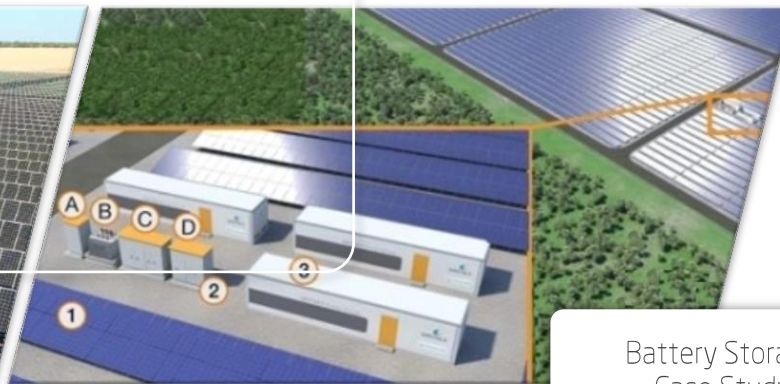
Roof-top
0.5 MWp - Austria



Single axis tracker
70 MWp - Australia



Battery Storage
Case Study



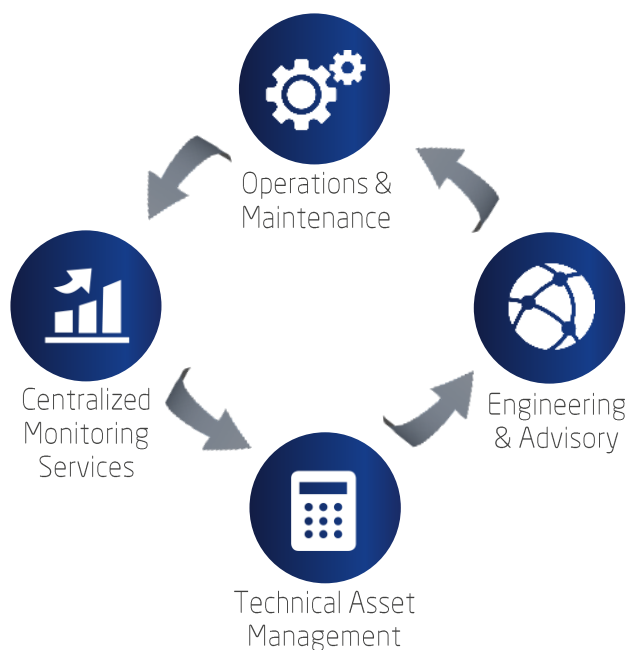
01 About ENcome

Dedicated technical
service provider for
PV power plant
management

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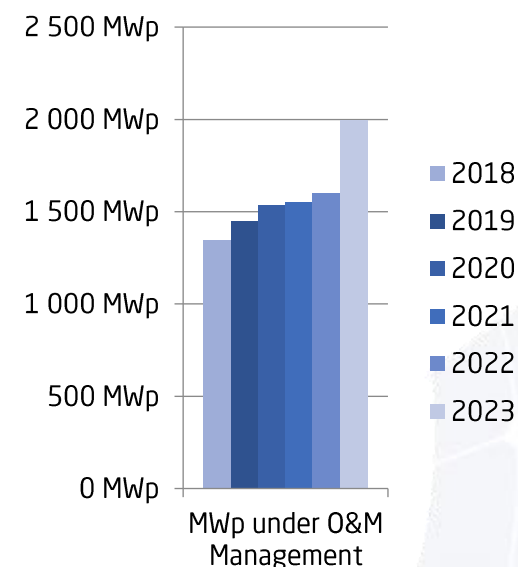
Key Facts

- » Leading independent Pan-European service provider focused on the Operations & Maintenance of PV power plants
- » Current assets under O&M management with a nominal capacity of ~2 Gigawatt as per 2023
- » Subsidiaries and representations in all major European PV markets and Australia to cover growth opportunities in APAC region
- » More than 120 employees, mainly technicians and engineers who are well trained and educated to ensure the best possible yield for every power plant in any grid environment



Service Offerings

Steady Growth



Average annual growth rate of assets under O&M management of 23 %.

ENcome is a „one-stop-shop“ for any technical service over the whole life cycle of photovoltaic power plants

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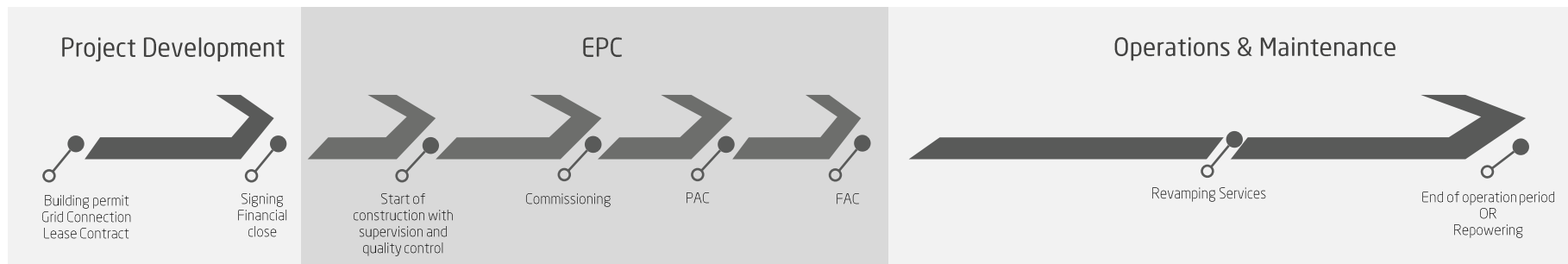
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01 About ENcome

Integrated service approach throughout the entire value chain

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Value Chain Photovoltaic Projects: Design-to-Operate



ENcome Service Offering

Due Diligence & Advisory

- » Technical Due Diligence
- » Advisory on technical contract terms
- » Procurement support
- » Bankable yield report

Engineering & Design Services

- » Concept designs
- » Design optimizations
- » Detail design and engineering
- » H&S concepts
- » Retrofits and revamping

Construction Supervision

- » Owners'/Lenders' Engineer
- » Quality control and reporting
- » Site visits and inspections
- » Preparation of defect list
- » Support during commissioning and acceptance

Centralized Monitoring Services

- » 365/24/7 Monitoring
- » Reporting to meet bank and investor criteria
- » Operations IT with self invented software solutions/ APIs

Operations & Maintenance

- » Preventive Maintenance incl. Big Data analysis
- » Corrective Maintenance
- » Optional Services on skilled and innovative basis (e.g. EL test, IV curve, etc.)
- » Revamping / Repowering

Technical Asset Management

- » Technical controlling
- » Evaluation and coordination of improvement measures
- » Coordination and supervision of third party service providers

Design-to-Operate approach ensures consideration of all technical planning aspects towards the whole life cycle of photovoltaic power plants



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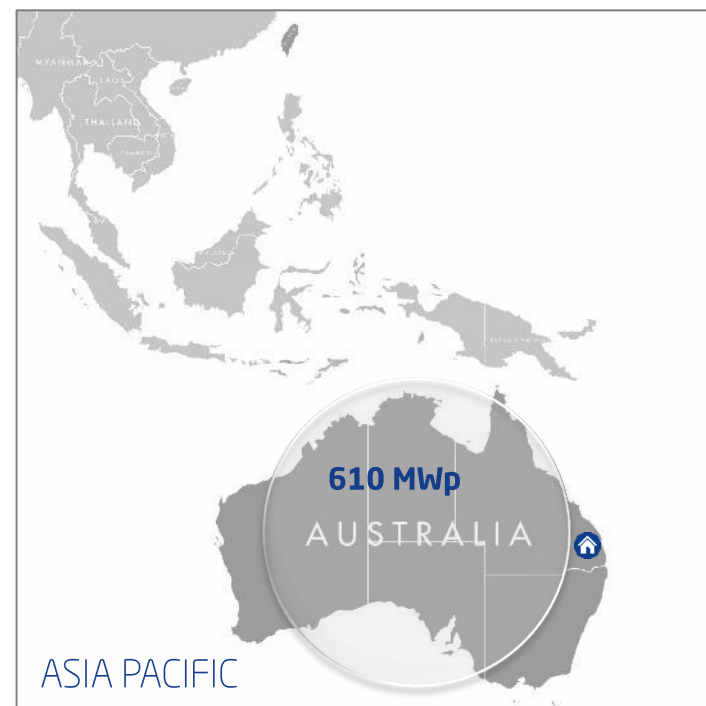
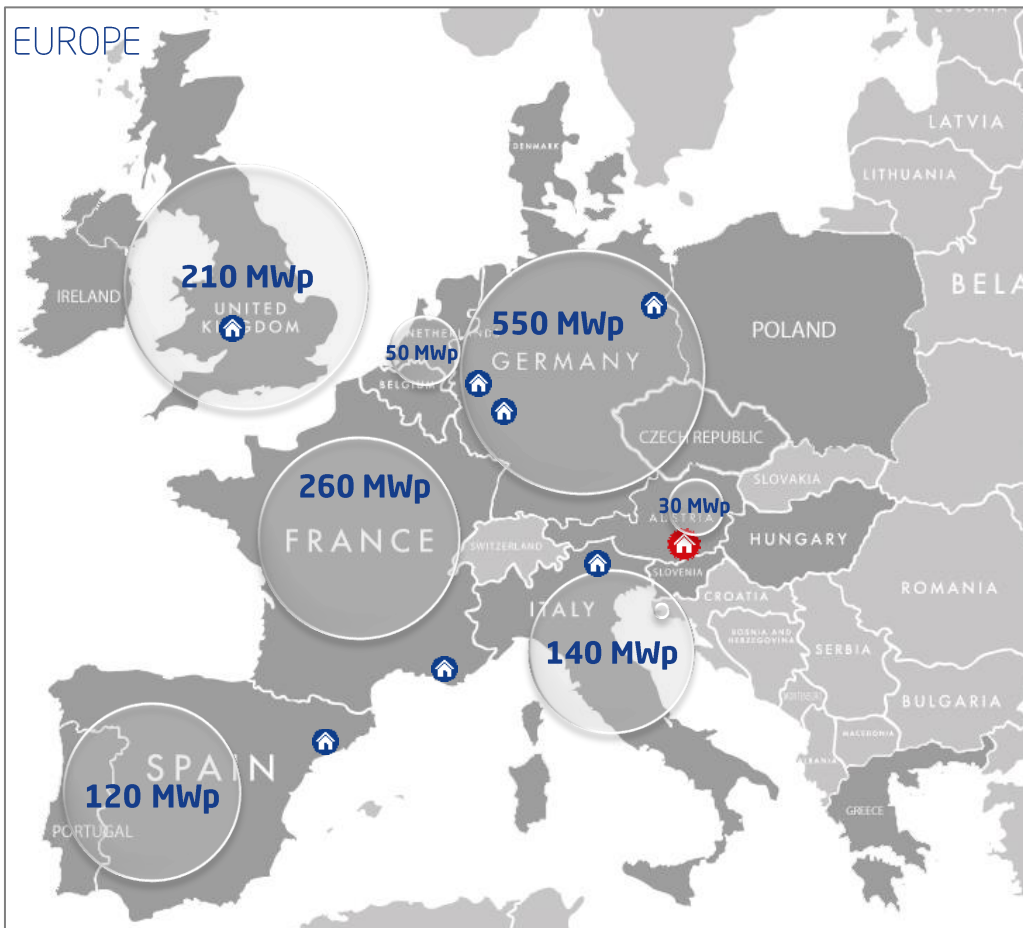


Long-term operation

01 About ENcome

Several hundred PV
power plants with a
growing nominal capacity
of about 2 Gigawatt

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01 About ENcome

Anchored in all major
European markets as well
as Australia and APAC



Jörg Christiansen
Chief Executive Officer

ENcome Energy Performance GmbH HQ Klagenfurt (AT)



Sebastian Nieding
Chief Operating Officer

ENcome Energy
Performance UK
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100%



Sebastian Nieding
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Richard Rath
Managing Director
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Engineering
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100%



02 Operations & Maintenance (O&M)

Our O&M service capabilities at a glance

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Centralized Monitoring Services

Monitoring

- » 365/24/7 Control Center service
- » Performance & security monitoring
- » Error diagnosis & remedial actions
- » CMMS based ticket system

Reporting

- » AV & PR calculation
- » KPI development & tracking
- » Quantitative trend analysis

Operations IT

- » Site Integration (GPM / PV+)
- » Data hosting & site configuration
- » ENcome Energy Monitor (Client front end)
- » Remote access (e.g. inverter, data logger)
- » Self invented "Hermes" software solution designed to integrate different monitoring solutions into a single platform



Operations & Maintenance



- » Preventive Maintenance
- » Corrective Maintenance
- » Optional Services, including i.a.
 - panel cleaning
 - green keeping
 - fence-, road- and building maintenance
 - drainage maintenance
 - IV curve measurement
 - thermographic inspection
 - pest control
- » Revamping / Repowering



Technical Asset Management



- » Technical Controlling
- » O&M Provider & Contractor Supervision
- » Reporting
- » Warranty administration

02 Operations & Maintenance (O&M)

ENcome's client front-end, the ENcome Energy Monitor, is particularly tailored to portfolio investors

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ENcome Energy Monitor Powerful monitoring system tailored to customers needs

Financial returns
in real time

Data download to allow
for various comparisons
(actual/actual, actual/budget,
plant/plant, string/string, etc.)

Individual interface and
reports customized and
tailored to customers
needs

Low switching
costs (if any)

24/7 worldwide
access to various
KPI overviews for an
entire portfolio

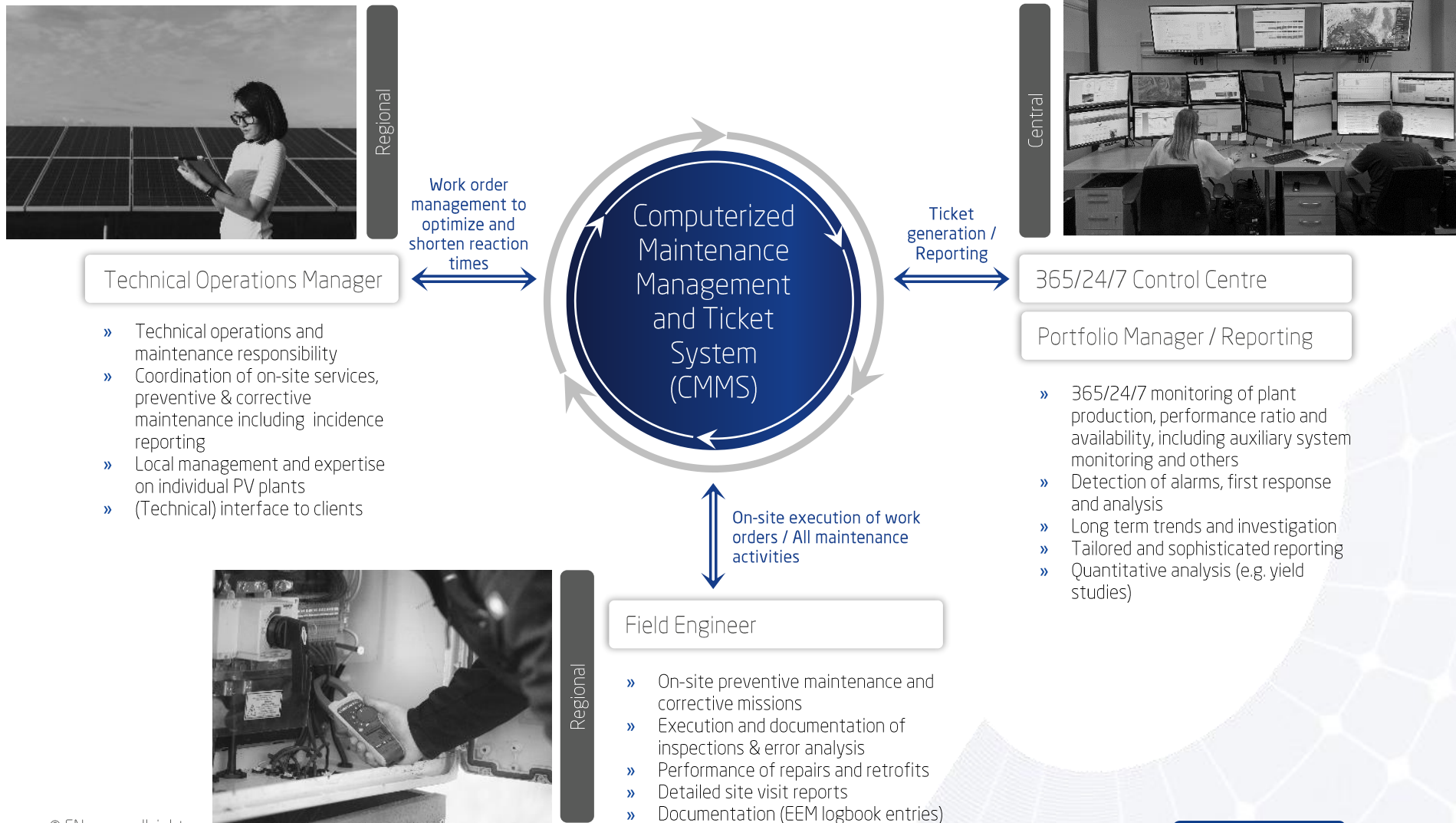
In-house software
solutions to maintain
independent from
inverter and data
logger brands

Possibility to
operate in parallel to
existing monitoring
solutions/platforms



02 Operations & Maintenance (O&M)

Professional structures and processes to deliver **best-in-class O&M services**





Revamping & Repowering Services

The terms “revamping” and “repowering” stand for the modernisation of an existing PV plant, to extend its lifecycle, improve availability and increase efficiency and size (kWp).

The repowering and revamping services of ENcome mainly include:

- » Initial project analysis and recommendations / Technical due diligence and cost-benefit analysis
- » Maintenance and technological upgrading:
 - » Inspection and adjustment of displaced photovoltaic modules
 - » Partial replacement, removal or reinstallation of modules, inverters, strings or mechanical components
 - » Addition of retrofit technologies to increase energy performance
 - » Installation of battery energy storage systems (BESS)
 - » Adjustments to the electrical configuration of the asset
 - » Adjustments to supporting structures of the modules or building structures of the plant

Examples for latest Revamping activities:

- » Modules revamping due to delamination issue
- » Inverter revamping due to reduced availability with original components
- » Roof repair after thunderstorm
- » Strings relayout to minimize shadowing effect



Rapid intervention in emergencies

In case severe weather conditions, natural disasters or fire are damaging solar assets, and in the event of theft, a short reaction time of the O&M Team is essential.

Our Services include:

- » Detection of alarms by our 365/24/7 Monitoring of solar assets incl. the evaluation of weather data
- » Quick restoration of the safety on site
- » Evaluation of the level of destruction, e. g. by drone inspections
- » Rapid replacement of damaged modules in order to restore energy production
- » Single point of contact for our customers

ENcome ENGINEERING



ENcome Engineering emerged from PV pioneer abakus Solar AG and has more than **20 years** of comprehensive technological **expertise** in the photovoltaic industry



Customized services for clients from various sectors (financing, investment, planning, construction etc.)



Independent advisory services for over **450MW projects** and engineering design services for over **1.3GW projects** with various capacities



Expert knowledge of processes and components with **highly qualified and experienced** engineering team covering the entire PV value chain



Excellent flexibility, in-depth experience and individual support

Concerning design and construction related challenges ENcome Engineering provides impartial and authoritative advice and possesses all required technical capabilities

03 Engineering & Advisory (E&A)

Our engineering capabilities at a glance

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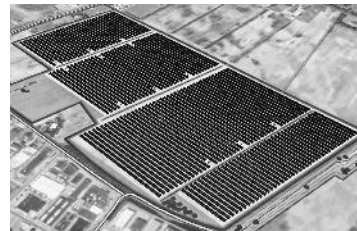
Due Diligence & Advisory



- » Technical Due Diligence for support in (re-) financing, acquisition & sale of PV power plants
- » Advisory on EPC and O&M technical contract terms
- » Evaluation of plant design and performance
- » Preparation of yield reports as well as analysis and evaluation of existing yield data
- » Infrared drone pictures and EagleEye™ Electroluminescence (EL) Test



Engineering & Design Services



- » Design to Operate approach – design the plant for a 25-30y design-life marathon
- » Energy yield studies (PVSyst and PVSoI)
- » From concept to detailed engineering design
- » Component selection and procurement support with decades of experience in purchasing in Asia



Construction Supervision



- » Active support during construction as Owner's Engineer with regular site inspections and reporting
- » Project management and project lead to control and ensure quality, cost and schedule
- » Preparation of defect lists and shortcomings
- » Support and assistance with technical inspection and acceptance

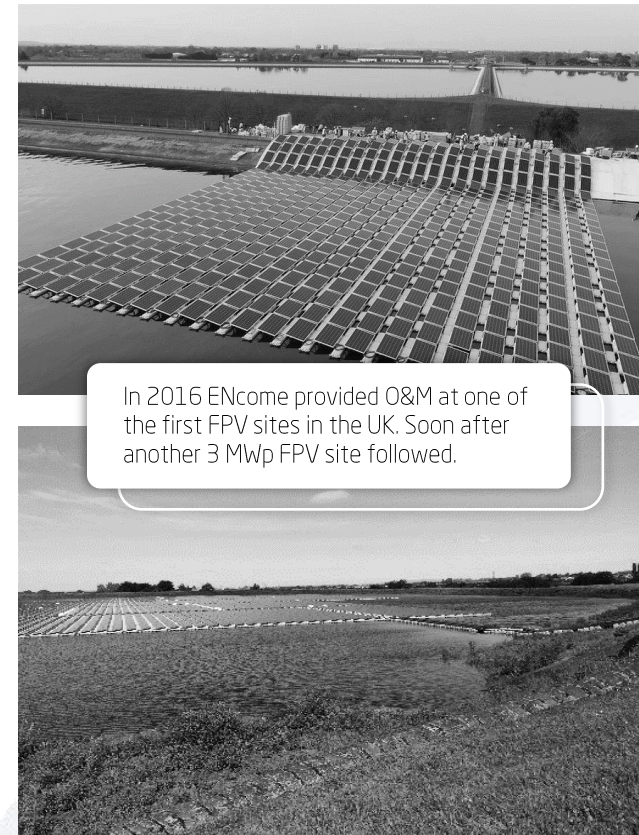
Design-to-Operate approach ensures consideration of all technical planning aspects towards the whole life cycle of photovoltaic power plants

» ENcome << Long-term operation
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Technical services for Floating PV (FPV)

- » Technical planning, implementation and consulting services for FPV
- » Feasibility studies for FPV systems, e. g. on a future open-cast mining residual lake. These projects add to the complexity as to the design of a FPV plant.
- » Precise analyses and estimates grant maximum project success and risk minimisation
- » Best results achieved by combining best practice guidelines for FPV systems and the design-to-operate approach as developed by ENcome
- » Technical support along the entire FPV value chain with an individual project approach to guarantee maximum flexibility – always matching individual customer requirements
- » We act as an innovation hub and are keen on covering future-oriented, challenging topics through our solid expertise
- » Trusting and transparent cooperation in every stage of the FPV-project



In 2016 ENcome provided O&M at one of the first FPV sites in the UK. Soon after another 3 MWp FPV site followed.

FPV-system on Godley Reservoir in UK

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Independence, reliability and long-term experience



Extensive know-how with ~2 GWp under management



Integrated services throughout the entire PV value chain



Powerful 365/24/7 Monitoring and Energy Monitor



Balanced mix of local competence centres & centralized services

05 Your contacts

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06
Selected references

Operations &
Maintenance

Niedergörsdorf, Germany
10 MWp (dc)



Parkes, NSW, Australia
65.8MWp (dc)



Dirac, France
2.8 MWp (dc)



Hedersleben, Germany
750 kWp (dc)



06 Selected references

Engineering &
Advisory

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Nees Solar Farm, Denmark
50MWp (dc)

Services: Detailed site inspection with
sample IR and string testing



Almelo Solar Farm, Netherlands
40MWp (dc)

Services: EPC tender process, design advisory,
Owner's Engineer incl. construction supervision



Tuszer Solar Farm, Hungary
10MWp (dc)

Services: Technical Due Diligence



Daydream, Hayman, Whitsunday,
Hamilton - Australia - 378MWp(dc)

Services: Full detail Design to IFC (2017)