

Turning renewables into a success

BayWa r.e. Indonesia

Jakarta, July 2019





Making energy better.



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BayWa r.e. APAC

A dedicated organization
for Asia-Pacific

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APAC & Worldwide



1

About Us

Introduction to BayWa r.e.



BayWa Group serves fundamental needs – BayWa r.e. is 100% focused on renewables



BayWa r.e. and BayWa AG:
Dynamic growth and sustainable profitability under the umbrella of a stable parent company

BayWa r.e. and BayWa AG in figures



BayWa r.e.



BayWa

€ 1.53 billion



Turnover 2018



€ 16.6 billion

€ 72.5 million



EBIT 2018



€ 172.4 million

>1,800



Employees



17,500

2009



Founded



1923

22 countries



Presence



41 countries



Success based on more than 6,100 MW through our sound energy mix



We provide experience in the development and realisation of wind farms with an installed capacity of more than **1,400 MW**.



We have brought solar farms with an output of more than **1 GWp** to the grid. We have supplied our installers with solar modules with a total output of **2,400 MWp**.



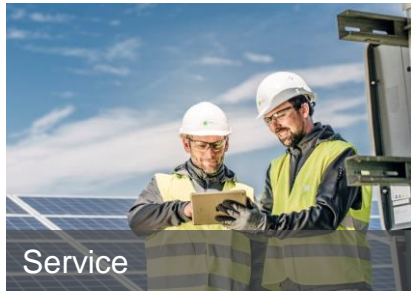
We have developed and set up **34** biogas plants with a total biogas output of **113 MW**.



Wind



Project development



Service



PV
Rooftop



Hydro



Utility
Solar

**One company,
comprehensive
experience.**

At BayWa r.e. we r.e. think energy. Our mission is to make renewable energy even better.

We are a leading global renewable energy developer, service supplier, wholesaler and energy solutions provider.



Renewable Energy from a single source



Wind projects

We draw on our 30 years of experience of global markets, to find the right solution for every customer.

- Planning and technical advice
- Project development
- Turnkey construction
- Repowering



Solar projects

Our customers benefit from expert technical knowledge and global best-practice management.

- Planning and technical advice
- Project development
- Power purchase agreements (PPAs)
- Personal consumption solutions
- Turnkey construction of projects



Hydropower

We focus on medium-size run-of-river hydropower plants due to their limited ecological impact and large untapped potential.

- Project development and co-development
- Strategic investments



Bioenergy

We offer sector-leading expertise thanks to our many decades of working within the agricultural sector.

- Planning and technical advice
- Project development
- Turnkey construction
- Raw material management



Services

Thanks to our technical and commercial project management, we maximise every project's potential.

- Technical management for wind, solar and bioenergy
- Commercial management for wind, solar and bioenergy
- Maintenance and servicing
- Rotor blade servicing



Energy Solutions

We create innovative solutions across energy, heat and mobility – helping companies around the world achieve their energy goals, no matter their size or location.

- Customised solutions
- Needs-based models (investment, leasing or Power Purchase Agreements)
- Consideration of national regulations and internal company sustainability goals



Energy trade

We are your reliable partner for the trade, acquisition and direct marketing of renewable energy.

- Direct marketing and Power Purchase Agreements
- Flexibility management
- Distribution of green electricity and green gas
- Portfoliomangement Services



Solar Distribution

We combine a comprehensive product range with outstanding customer service.

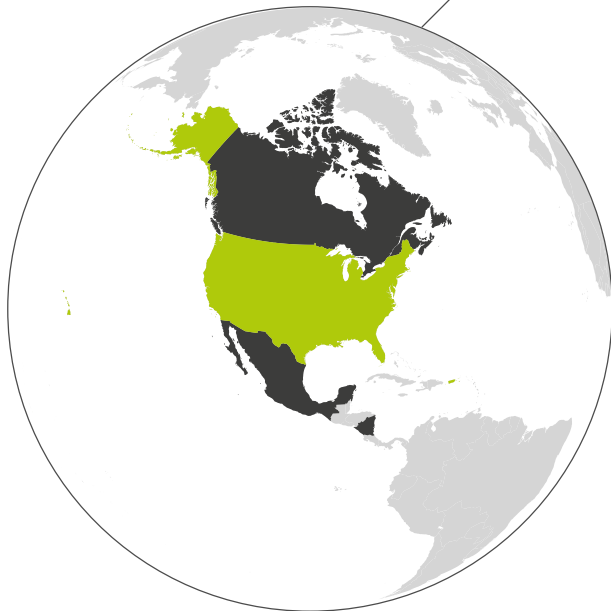
- Outstanding product quality
- Logistics expertise
- Seminars and training
- Comprehensive digital services
- Partner services for decentralised energy solutions



BayWa r.e. global presence

● BayWa r.e. location ● Active in the market

North America



EMEA



Asia Pacific



>1,800
employees
globally

68
locations
in more than 20
countries

~1.5
billion Euro
annual turnover
(2018)

>6,100
MW
being managed
globally

7,500
GWh
annual trade volume of
direct marketing, green
electricity and green
gas

2,500
MW
planned
global wind and solar
output

>2,400
MW
generated
by modules

>4,500
MW
inverters installed



2

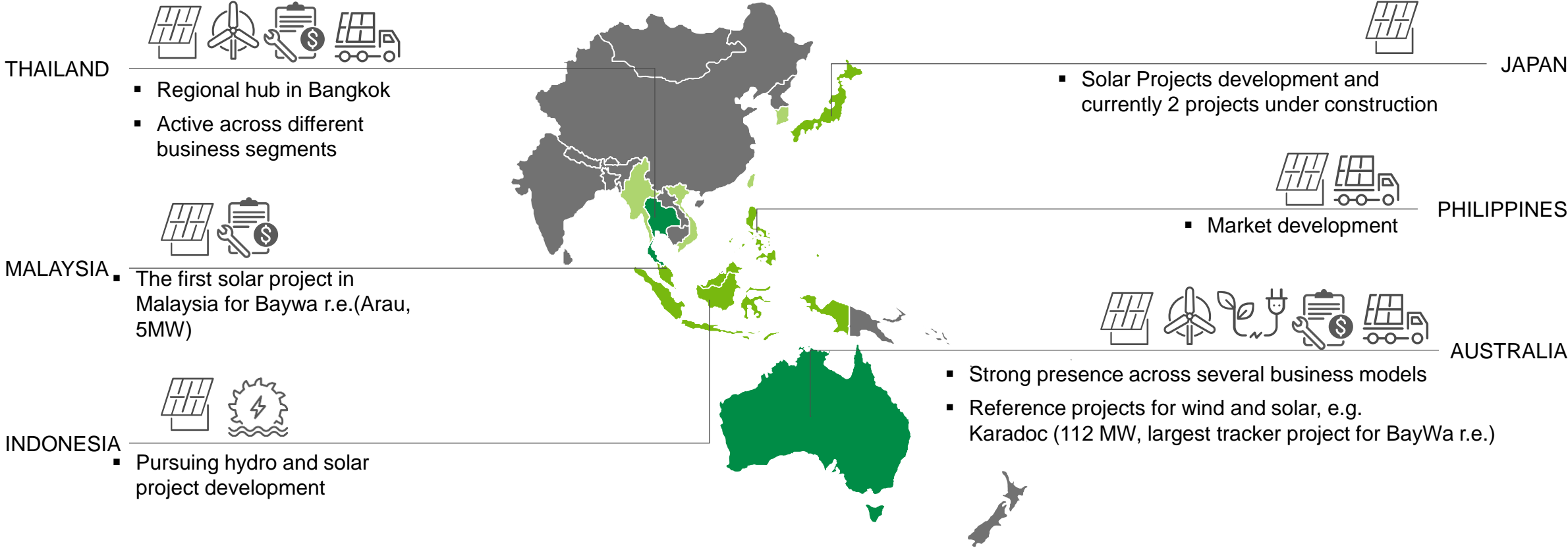
BayWa r.e. APAC

A dedicated Organization for
Asia-Pacific



Our activities in APAC at a glance

– we are continuously looking for new opportunities



- BayWa r.e. location (4+ business units)
- BayWa r.e. location (1+ business unit)
- Active in the market





Dedicated APAC Organization

Papong Pramroj Na Ayudhya



- More than 15 years of experience in sustainability and renewable investments
- Expert in solar, wind and biogas project development, financing and management
- Experience in investment banking in London and Sydney covering M&A, corporate finance, private equity and leveraged finance
- MS of Mechanical Engineering (Bristol)

Daniel Gaefke



- More than 17 years of professional experience in renewable energy – solar, wind, biomass and biogas
- Pioneer in Thailand's solar industry – built the first ground-mounted solar project and first self-consumption solar rooftop project in Thailand
- Founder of Annex Power, an EPC company specialized in solar projects
- BSc in Business Administration and MBA (Leicester University)

Solar Projects

Business Development

Procurement

Construction Management

PV Trading

Engineering

Wind Projects

Business Development

Engineering

Construction Management

Mini Hydro Projects

Business Development

Engineering

Construction Management

Project Finance

Legal

Accounting



3

Indonesia

Dedicated Organization for
an emerging Market



Dedicated Organization for Indonesia

Bjoern Heidrich



- Country Director Indonesia
- Over 15 years of working experience in Indonesia with an extensive local network and valuable knowledge of Indonesian renewable energy policies and frameworks
- Renewable Energy Entrepreneur, Expert and lobbyist
- R&D Background, State exam Medicine (FU Berlin)

Giovanni Banfi



- Project Manager Hydropower
- Joined BayWa r.e. to develop hydropower capabilities
- Experienced in mini & small hydro in Southeast Asia, specifically in Vietnam and Indonesia
- M.Sc. in Civil Engineering (Karlsruhe Institute of Technology)

Solar Projects

Project Finance

Legal

Mini & Large Hydro Projects

Business Development

Construction Management

Engineering

Procurement

PV Trading (planned 2020)

Business Development

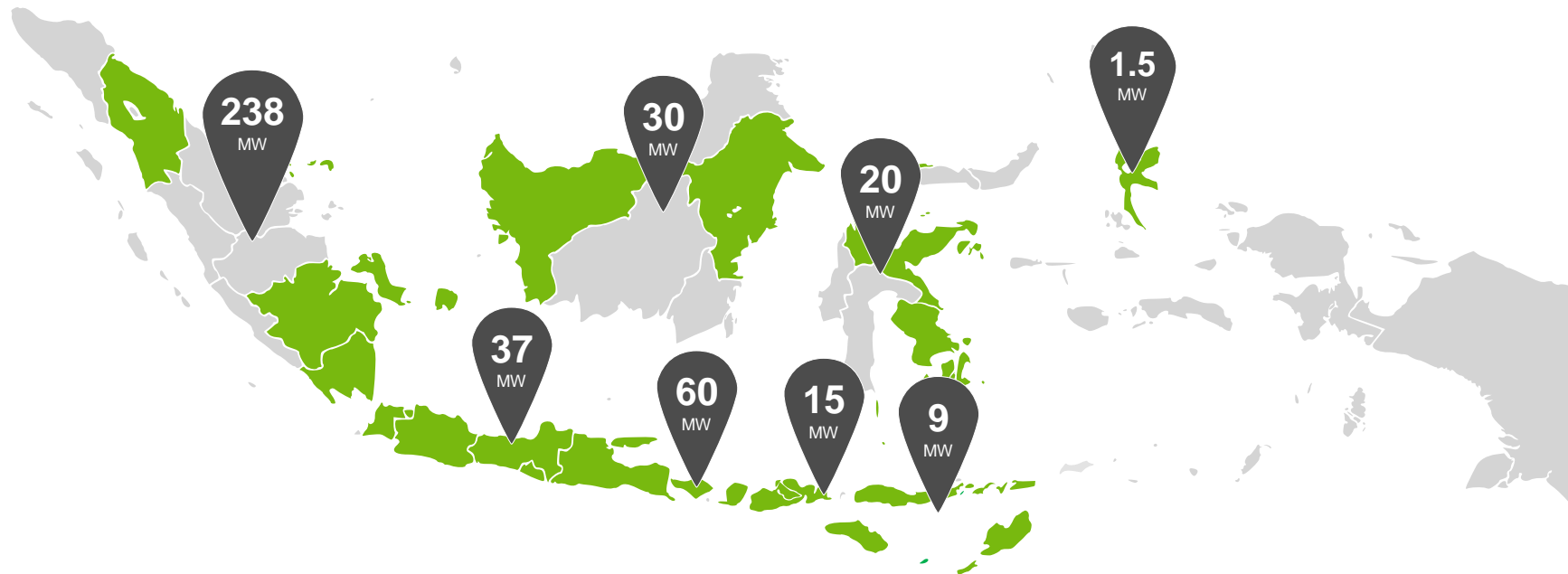
Construction Management

Engineering



Current Project Pipeline for Indonesia

INDONESIA PROJECT DISTRIBUTION BY REGION



LIST OF PROJECTS

Utility Scale Solar PV

- 15MW NTB 6 Projects
- 9MW NTT 3 Projects
- 10MW Sulawesi 1 Project
- 30MW Kalimantan 2 projects
- 120MW Sumatra 3 Projects
- 60MW Bali 3 Projects

Commercial & Industrial

- 3MW Java 5 Projects
- 1.5MW Maluku 1 Project

Hydropower

- 118MW Sumatra 7 Projects
- 34MW Java 4 Projects
- 10MW Sulawesi 5 Project



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Track Records





In Asia-Pacific & Worldwide



Gebeng, Pahang – Malaysia

Start of construction	September 2018
Project completed	February 2020 (expected)
Project success	The most advanced project in construction under the second round of the Large Scale Solar programme.
Output	38.89 MWp
Status	Under Construction

Our Services:

-  Project development
-  Turnkey construction
-  Technical management
-  Power Purchase Agreement





Tetrapak, Rayong – Thailand

Start of construction	September 2018
Project completed	December 2018
Project success	BayWa r.e. first project in Thailand and the first C&I project in APAC region.
Output	0.99 MWp
Status	In Operation

Our Services:



Project development



Turnkey construction



Technical management





Yawong Wind Farm, Victoria – Australia

Start of construction	March 2018
Project completed	November 2018
Project success	BayWa r.e. first Wind Project in Australia and APAC.
Output	7.20 MWac
Status	Sold

Our Services:



Project development



Turnkey construction



Technical management



Power Purchase Agreement





Don Rodrigo, Sevilla – Spain

Start of construction	February 2018
Project completed	December 2018
Project success	Europe's first subsidy-free utility-scale Solar Project; construction in record time of just 3 months
Output	175 MWp
Status	Sold

Our Services:



Project development



Turnkey construction



Technical management



Power Purchase Agreement





Vikase, Mabalacat – Philippines

Start of construction	November 2018
Project completed	January 2019
Project success	BayWa r.e. first large equipment supply in the Philippines.
Output	0.66 MWp
Status	In Operation

Our Services:

 Design & Engineering

 Equipment supply





Beethoven – South Dakota, USA

Start of construction	September 2014
Project completed	May 2015
Project success	Largest wind power project BayWa r.e. realised
Output	80 MWp
Status	Sold

Our Services:



Planning and technical advice



Project development



Turnkey construction



Technical management





Yatpool, Victoria – Australia

Start of construction	April 2019
Project completed	December 2019 (expected)
Project success	One of the largest solar project currently under construction in Victoria, Australia.
Output	106.47 MWp
Status	Under Construction

Our Services:



Project development



Turnkey construction



Technical management





BMW, San Luis - Mexico

Start of construction	June 2018
Project completed	January 2019
Project success	Corporate PPA with BMW México. The manufacturing plant outputs 150,000 vehicles a year and runs on 100% renewable energy.
Output	5.5 MWp
Status	Completed

Our Services:



Project development



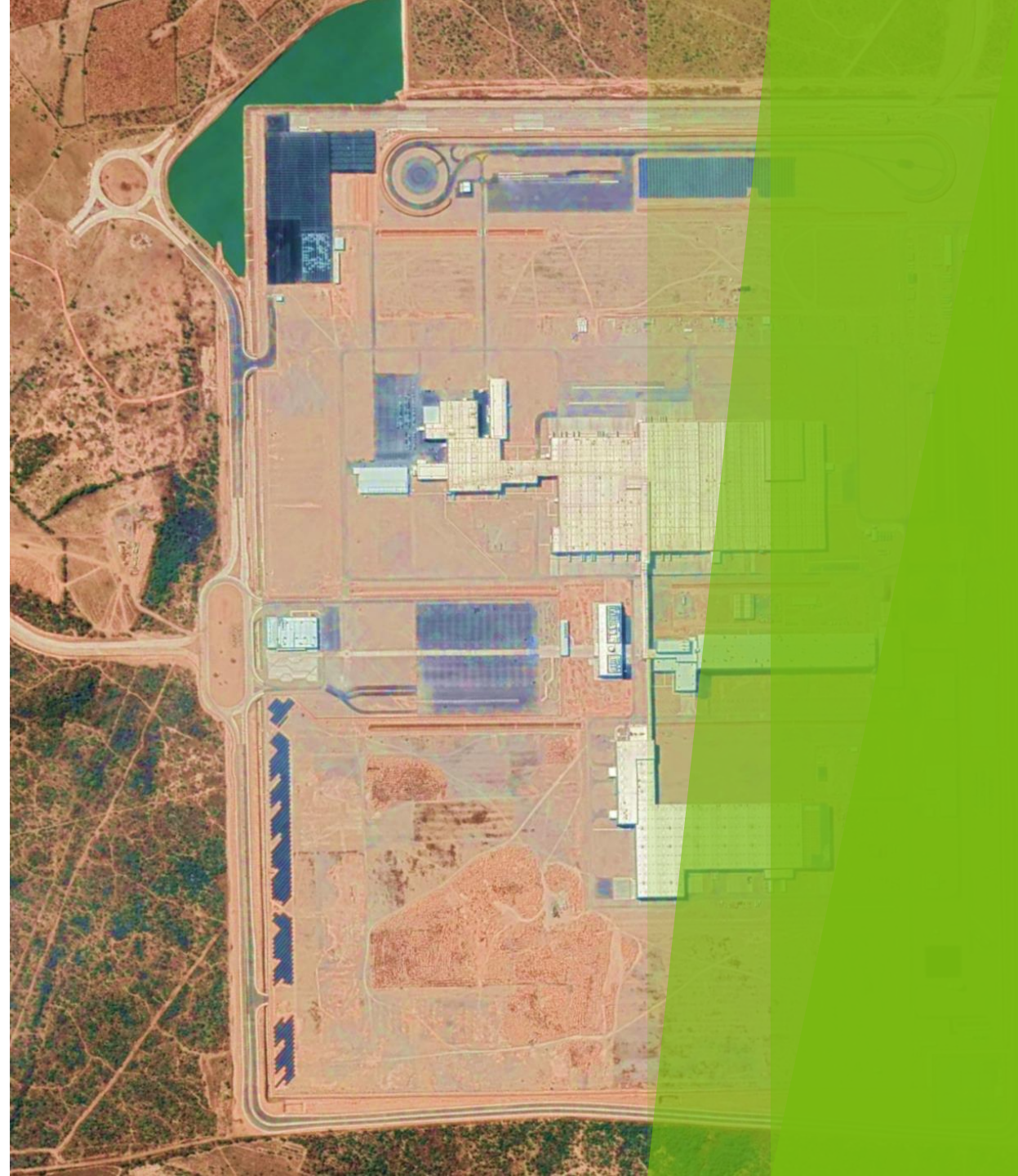
Turnkey construction



Technical management



Power Purchase Agreement





Karadoc, Victoria – Australia

Start of construction	March 2018
Project completed	November 2018
Project success	Largest solar project commissioned in Victoria, Australia.
Output	112.54 MWp
Status	In Operation

Our Services:



Project development



Turnkey construction



Technical management





Isohara, Ibaraki – Japan

Start of construction March 2019





Project completed January 2021 (expected)

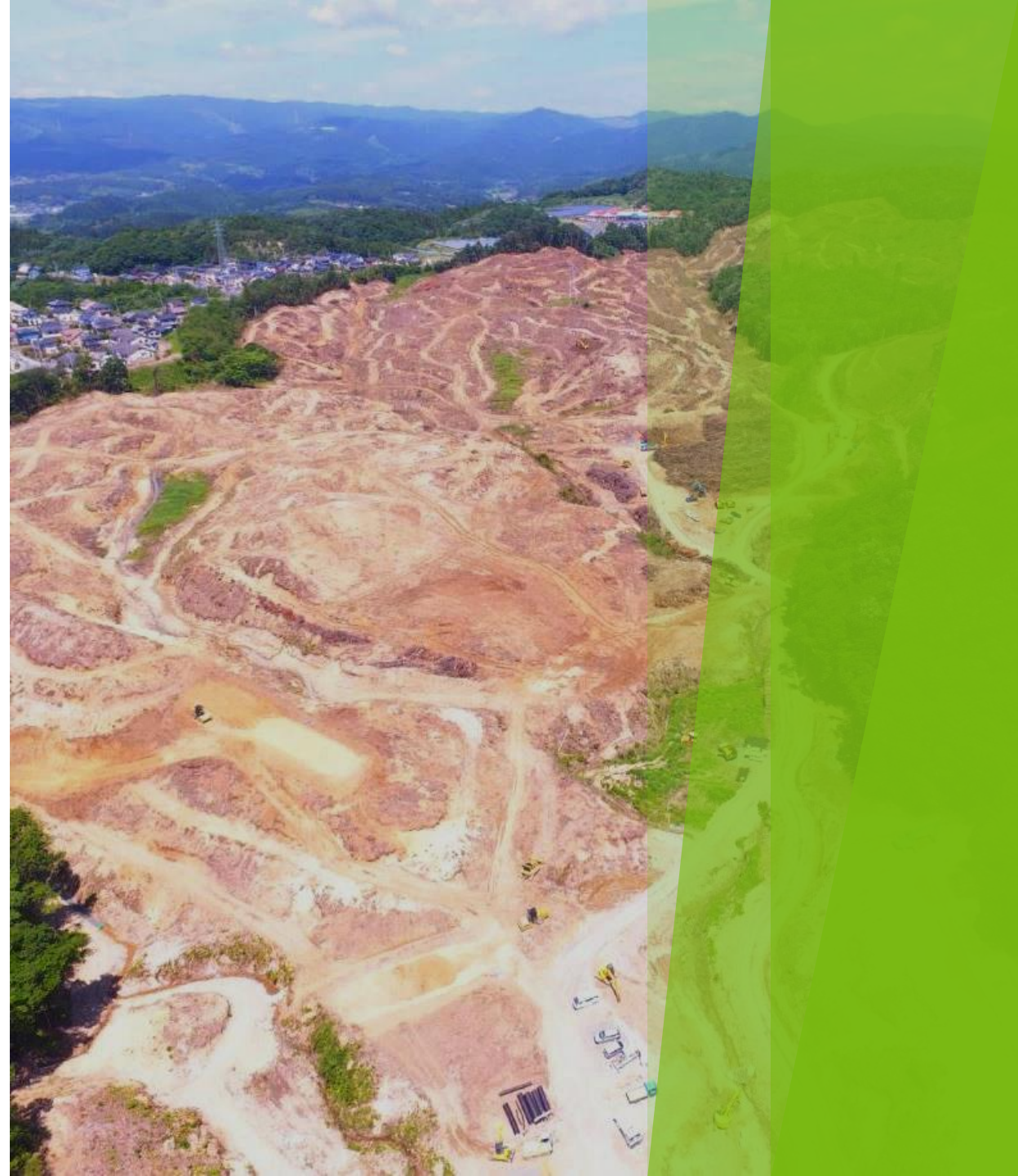
Project success The first project of BayWa r.e. in Japan under construction.

Output 34.98 MWp

Status Under Construction

Our Services:

-  Project development
-  Turnkey construction
-  Technical management
-  Power Purchase Agreement





Arau, Perlis – Malaysia

Start of construction	May 2017
Project completed	December 2017
Project success	First utility-scale solar project in Asia-Pacific and one of the first projects to be built under Malaysia's large-scale solar programme
Output	5.24 MWp
Status	In operation

Our Services:



Project development



Turnkey construction



Technical management



Power Purchase Agreement





Nervi Hall – Vatican City

Start of construction	December 2007
Project completed	November 2008
Project success	Highly complex design and extensive planning required. Was awarded the 2008 <i>European Solar Prize for Architecture and Urban development</i>
Output	250 kWp
Status	Completed

Our Services:



Project development



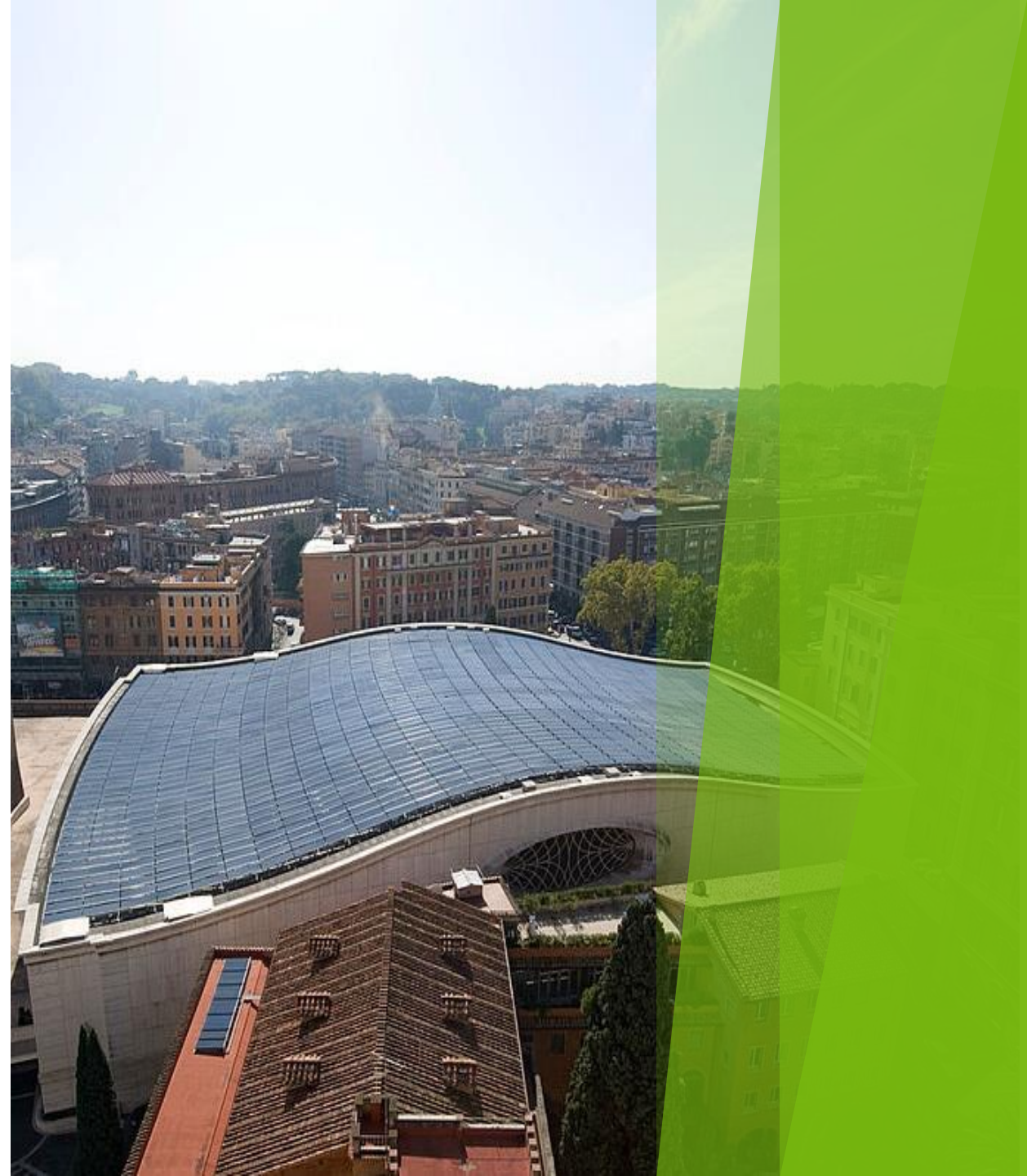
Product Range



Logistics Expertise



Customer Service





Hughenden, Queensland – Australia

Start of construction	June 2017
Project completed	December 2017
Project success	BayWa r.e. first Utility Scale Solar project in Australia.
Output	20.16 MWp
Status	In Operation

Our Services:



Project development



Turnkey construction



Technical management





Thank you

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