

FEASIBILITY PROJECT OUTLINE 130 MW SOLAR PARK, GHANA ORION ENERGY GHANA LTD 2021

Using Energy From The Sun

Abundant in Ghana

ORION ENERGY



We offer electricity from renewable solar projects

... Your Renewable Energy Partner

Using Energy From The Sun

Abundant in Ghana

Orions Mission Statement:

Provide Renewable Energy to support
the Sustainable Development for
Posterity.

We develop and build solar projects,
and deliver Solar Energy all over Africa

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Orion Energy Ghana Ltd.

Value proposition

Orion Energy Ghana Ltd. Since 2012

- ✓ Develops Projects
- ✓ Structures Technology, Components & Services
- ✓ Operates and Maintains

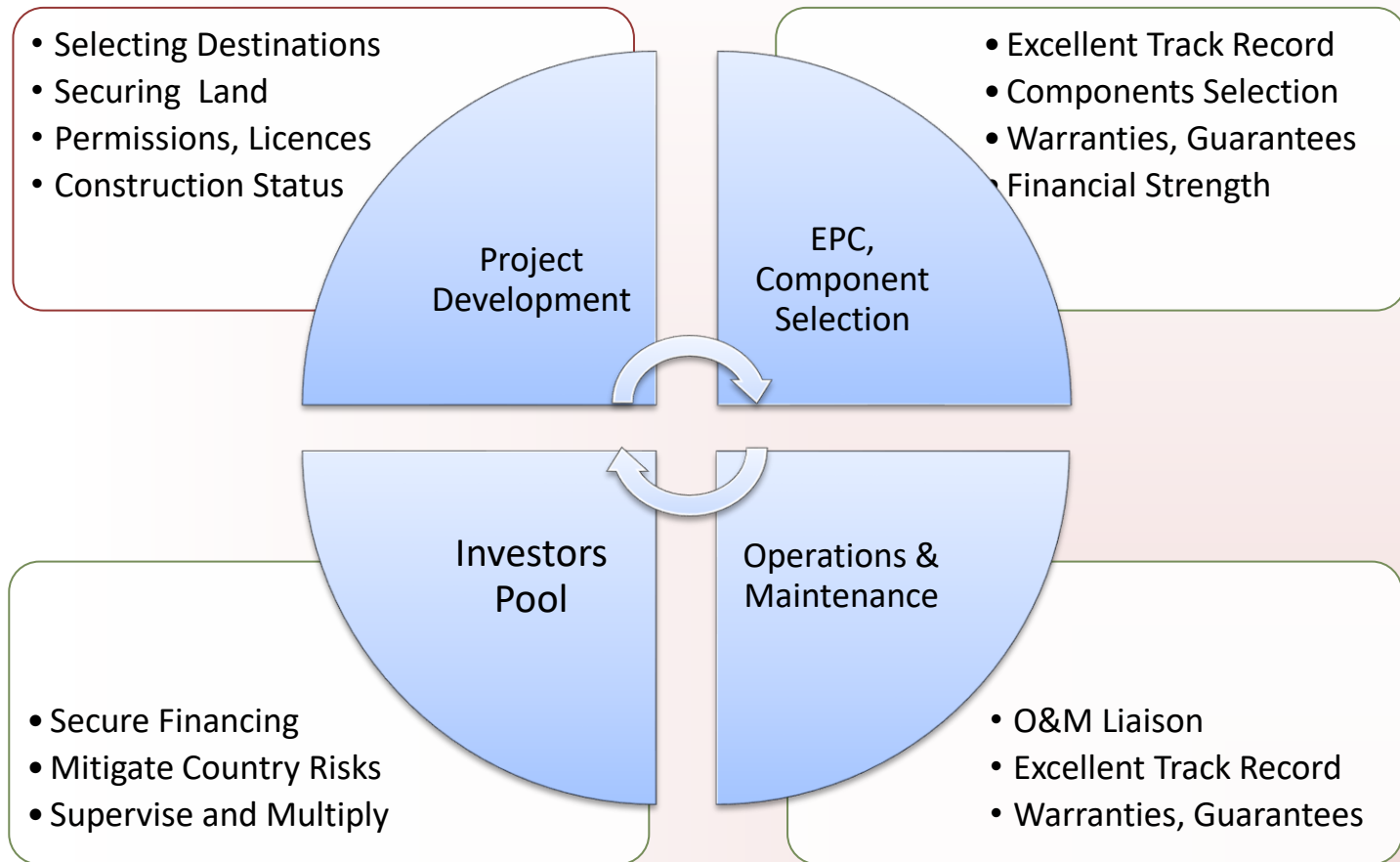
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Orion Energy Expertise

... best practice for fast implementation

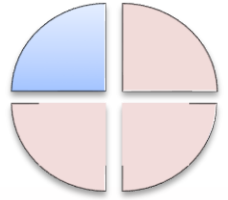
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Project Development

... where it all starts



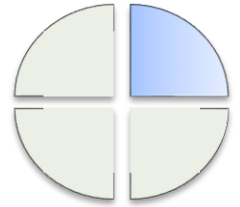
- Identification of Destinations ➤ Stakeholders
- Checking of Local Infrastructure ➤ NGOs
- Availability and Usage of Land ➤ Support Organisations
- Environmental Conditions
- Compliance to Rules & Regulations
- Country's Ratings
- Statistic & Development



EPC Selection, Quotations
Placement to Financial Markets

EPC, Component Selection

... to grant lasting output



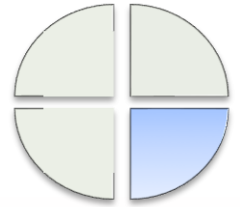
- ✓ Module selection to fit the environmental challenges
- ✓ Mounting system to grant the maximum outcome
- ✓ Inverters as distributed or central systems
- ✓ Substation planning installation
- ✓ Warranties and Guaranties



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Operations & Maintenance

... to grant max outcome

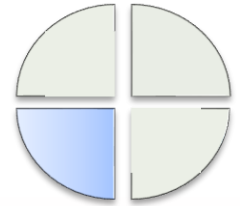


- ✓ Local Employment
- ✓ Industry leading warranty
- ✓ Local Service & Security
- ✓ Preventive Maintenance
- ✓ Best in Class Maintenance Plans
- ✓ 24/7 Automated Maintenance Alert System
- ✓ Replacement Parts Warehoused in Case of any Eventualities
- ✓ Cloud based Master Controlled Cleaning for max Output
- ✓ ...



Investors Pool

... access to financial markets



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Institutional investors

- Insurance
- Pension funds
- Investment funds
- ...

Diversifying parties

- Super 7
- Component suppliers
- ...

Family offices, private

Lower Risk
awareness



Higher Risk
awareness

Higher Risk
mitigation



Lower Risk
Mitigation

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Orion Energy & Co.

Reference List incl. Service Providers (selected)

#	Type	MW	Location	Scope
1	Solarpark	100	PRC	EPC
2	Solarpark tracked	50	PRC	EPC
3	Solarpark	44	PRC	EPC
4	Solarpark	40	Greece	Supply, Supervision
5	Solarpark tracked	40	PRC	EPC
6	Solarpark	35,1	Czech Rep	Supply, Supervision
7	Solarpark	35	Czech Rep	Supply, Supervision
8	Solarpark	30	PRC	EPC
9	Solarpark	24	PRC	EPC
10	Solarpark	20	PRC	EPC
11	Parks & Residential	23	All over Europe	EPC, Supply, Supervision

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Ghana Project Details

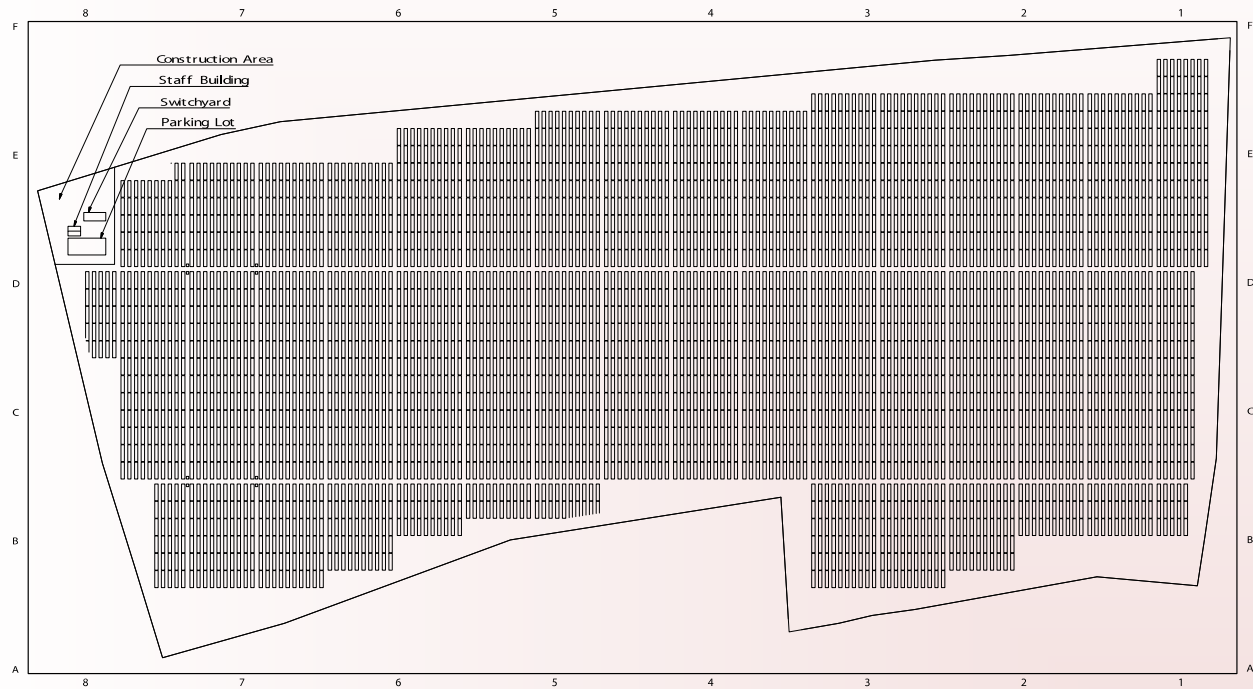
... from Spring 2022

- 130 MW Solar Power Plant with easy Access
- Property 210 hectares secured 40 km from Tema port
- Substation and Suitable Transmission Lines secured
- Permits and Licenses 95% secured
- Contract with EPC company signed
- Start of Operations from Spring 2022

Project details

... the Blueprint

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1st of a 20 MW Building Block

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Ghana Project Details

... from Spring 2022

- Consists of 241.106 x 540Wp Bi facial modules TIER 1
- One axis tracked mounting system with backtracking algorithms
- Central inverter layout, containerized, Oil cooled, plug & play
- Administration building with control center, Staff quarters
 - Energy created of 2.248 kWh / kWp
 - Energy evacuated to Grid 292.622 MWh/year



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Benefits for the OFFTAKER

... be the first to act responsible and sustainable

- No Capital Investment required
- Solar Power abundant in Ghana
- Save Natural Resources
- No Environmental Pollution in Comparison with Other Power Sources
- Responsible Consideration for Posterity
- Enhanced Electricity Generation Capacity During the Day
- Local Employment
- Installation could account for Carbon credits (CERs)
- Great Marketing and Communication Potential



Requirements

... for fastest implementation

- ✓ Agree on Bankable PPA for 20 Years
 - Index the Tariff
- ✓ Give Collateral

- ➡ Consume renewable Energy and save Cost
- ➡ Leave 292.622 MWh for community consumption



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Installation sequence

Civil Works to Mounting



Trenching



Ramming



Rammed



Set up Tables



Tables ready



Solar Panels on Tables

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Installation sequence cont.

Stringing to Commissioning



Inverter Installation



Transformer Setup



Grid Connection



Fencing and Commissioning

THANKS



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