



Scatec Solar
Improving our future™

Scatec Solar ASA

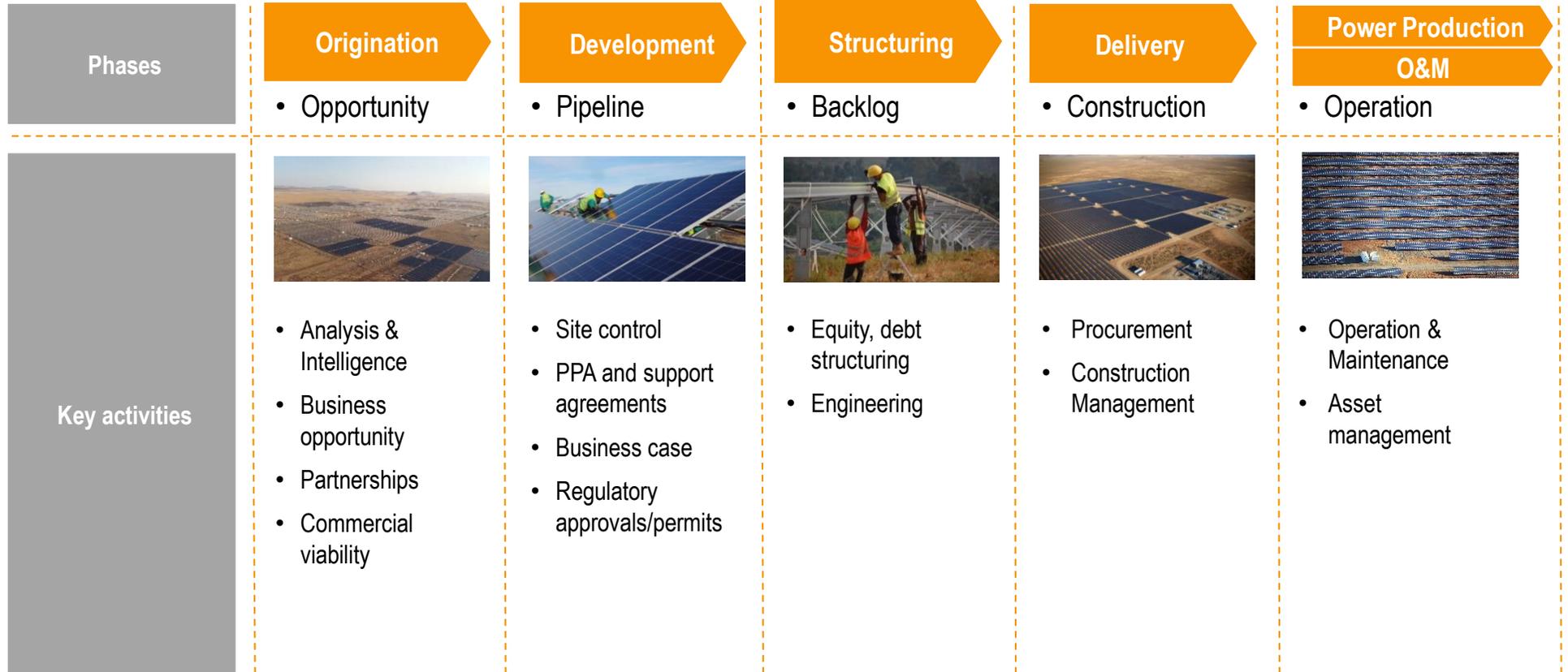
Mocuba – The First Utility Scale PV Project in Mozambique

October 26th, 2017



Scatec Solar - Integrated Independent Power Producer

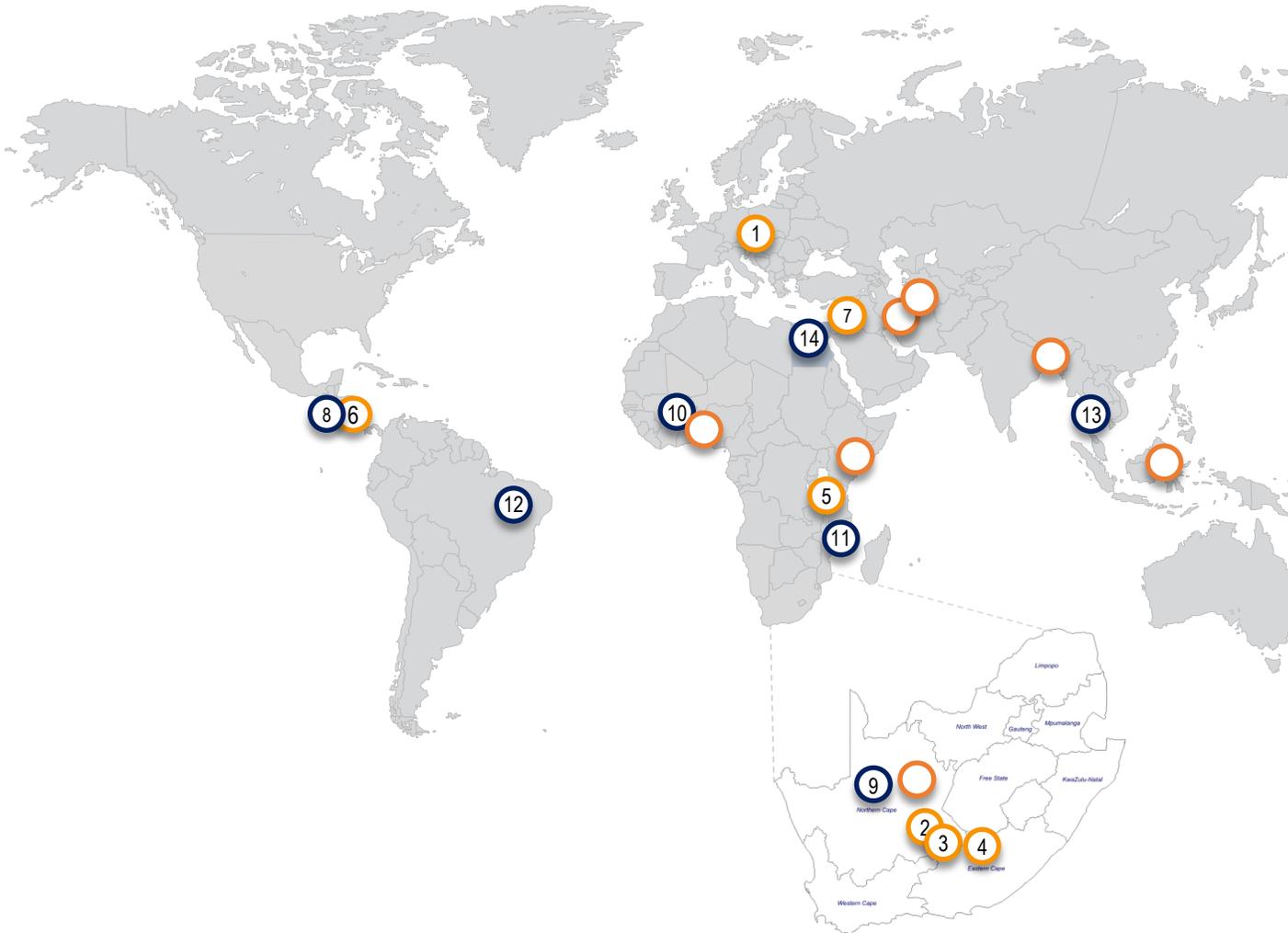
Scatec Solar develops, builds, owns & operates solar plants for 20 years



Our focus: Large scale PV and 20+ year cash flows



A growing and diversified asset portfolio



In operation		
Czech Republic	1	20 MW
Kalkbult, RSA	2	75 MW
Linde, RSA	3	40 MW
Dreunberg, RSA	4	75 MW
ASYV, Rwanda	5	9 MW
Agua Fria, Honduras	6	60 MW
Jordan	7	43 MW
Total		322 MW
Projects in backlog*		
Honduras	8	53 MW
South Africa	9	258 MW
Mali	10	33 MW
Mozambique	11	40 MW
Brazil	12	162 MW
Malaysia	13	197 MW
Egypt	14	400 MW
Total		1,143 MW
Pipeline & opportunities		3.0 GW

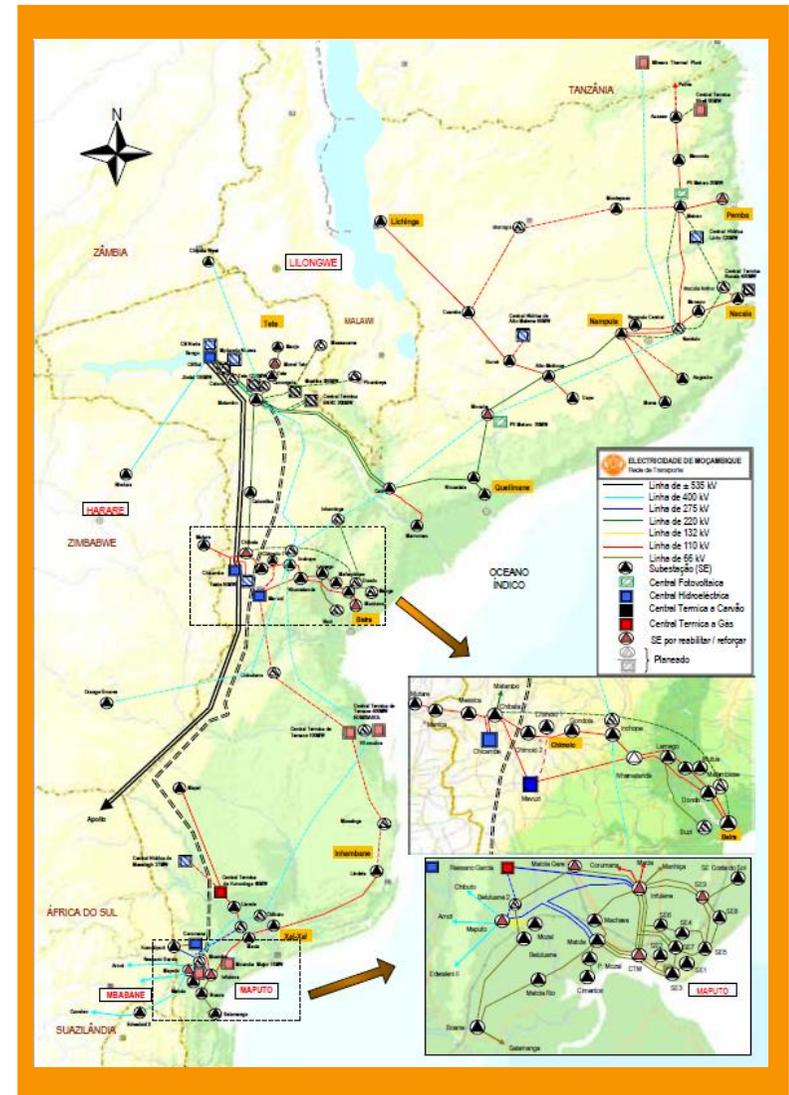
Project Framework

Addressing the Government and EDM energy policy objectives and plans

- Quality and reliability of electricity supply
- Diversification of energy mix
- Enhancing the electricity supply capacity
- Environmental awareness and sustainability
- Responding to Government’s policy, guided by 2009 “Policy for Development of New and Renewable Energy” followed by a “Strategy for Development of New and Renewable Energies” and subsequent compilation of a renewable energy atlas

Recommendation of a least-cost electricity supply study from EDM in 2014 addressing how to meet current and future energy demand growth in the northern parts of Mozambique

- Power supply and transfer capacity of Linha Centro-Norte has been reached
- A medium-term supply expansion plan was developed, recognising the importance of competitive cost renewable energy solutions, in particular Solar PV, as part of a least-cost supply mix
- Potential attractive grid locations were identified where Solar PV generation would be beneficial to the overall transmission grid performance, one of which is Mocuba



Mocuba bridge after the flood in Jan 2015



- The bridge crosses the Licungo river at the city centre of Mocuba
- The bridge is along a major transportation road connecting Mozambique to Malawi
- the bridge is also the infrastructure through which the line Centro Norte passes through

Project Description (1/2)

Technical Parameters

PROJECT NAME	Mocuba
LOCATION	12km North from Mocuba centre, Zambezia Province
DC CAPACITY	40.5MWp
ESTIMATED IRRADIATION	2024 kWh/m ² /year GHI
NET GENERATION	Approximately 77MWh per year (1 st Year)
PV MODULES	Approximately 125'000, Multi C-Si
INVERTERS	Centralized, 1500V system
SUBSTRUCTURE	Single axis trackers
VOLTAGE	33kV at Point of Connection
TRANSMISSION LINE	<1km distance. 33kV line from Mocuba Solar on site Switching Station to existing 220kV Mocuba Substation
HV SUBSTATION	Existing 220kV Mocuba Substation.

Did you know..?

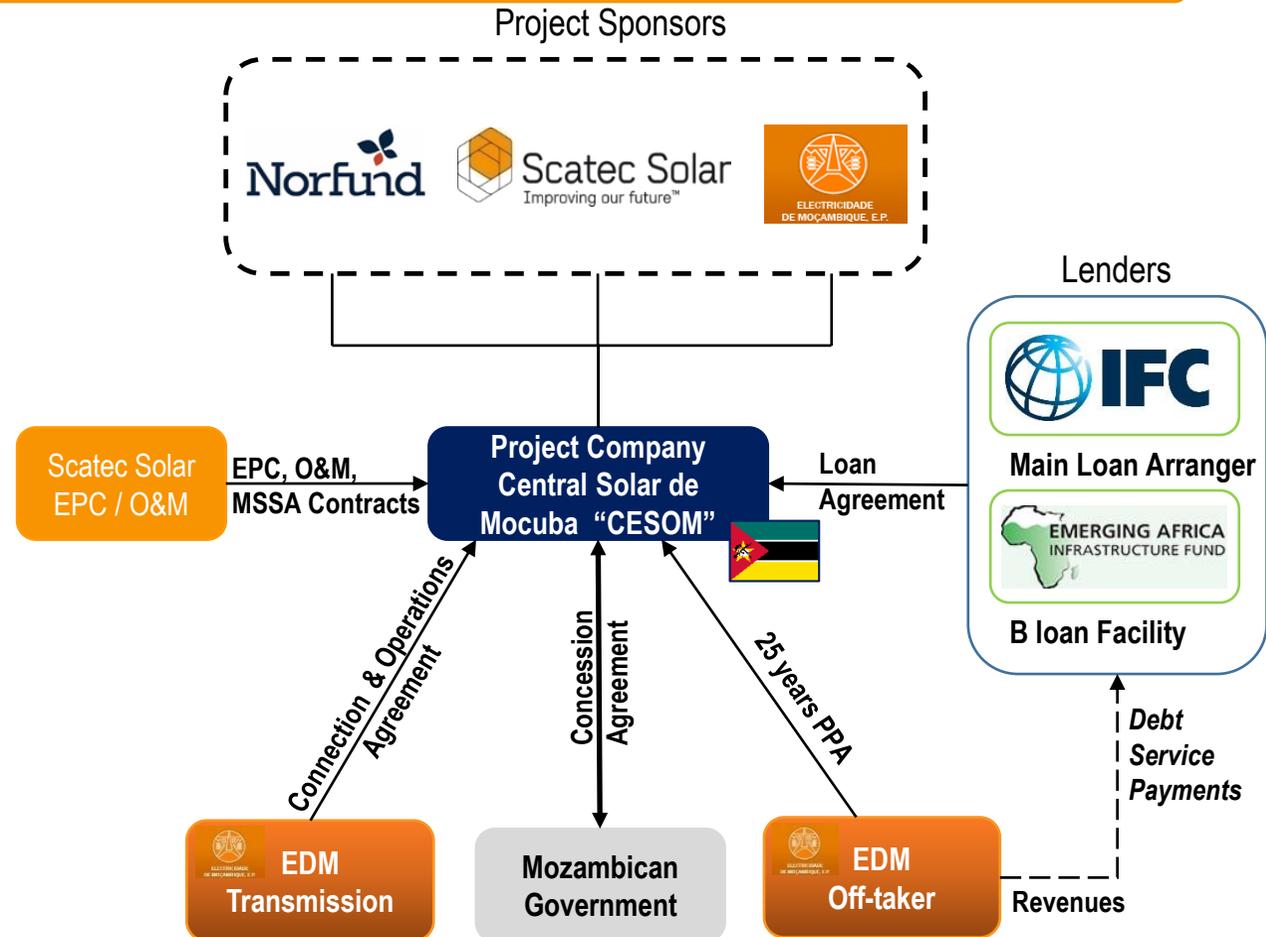
- *Mocuba should be the largest PV Project outside SA*
- *The electricity output will account for c.a.4.8% of Mozambique current electricity capacity and c.40% of the Northern Grid*
- *Annual electricity demand in the Mocuba area is approximately 90,000 MWh, growing at a rate of 9% p.a.*



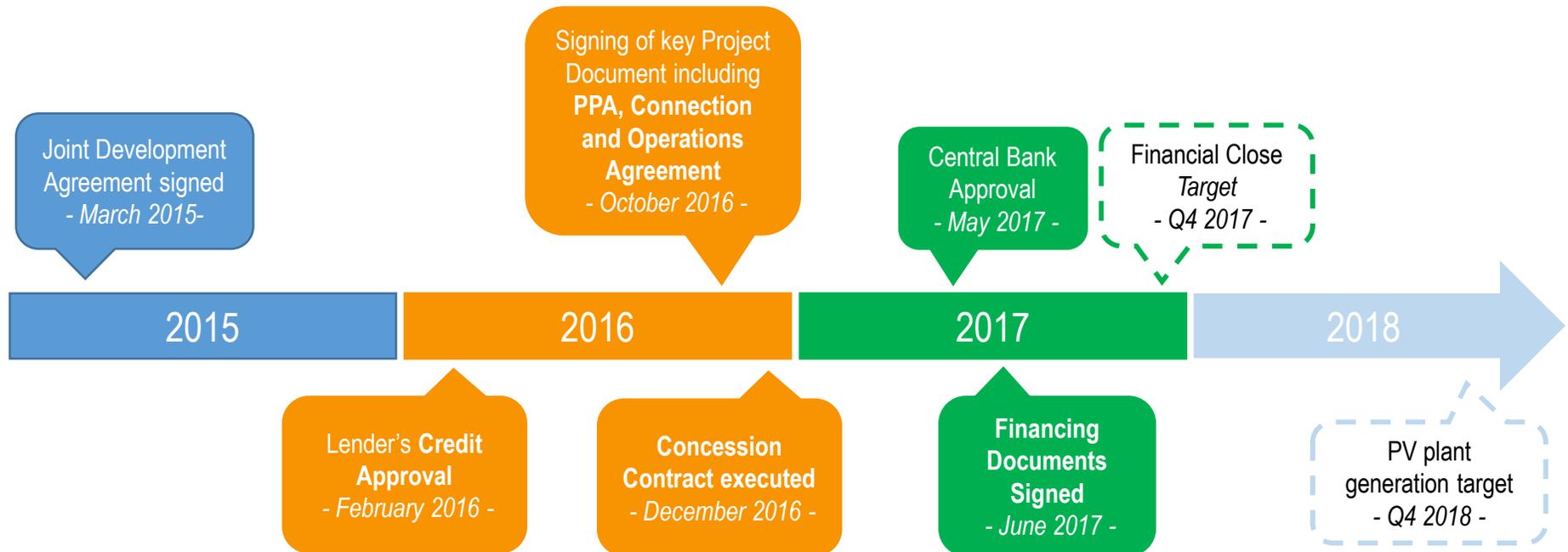
Project Description (2/2)

Project Structure and Funding

- Non-recourse project finance
- Norwegian Government support and participation
- IFC lead lender with approx. US\$38M
- Concessional funding from EAIF part of Private Infrastructure Development Group (“PIDG”) including grant from Viability Gap Fund (“VGF”)
- Lenders with long term experience in investing in the Country
- Strong willing customer



Development Timelines



- Flagship infrastructure development Project in Mozambique and SSA ≈ **2,5 yrs development**
- *Estimated average > 5 years for infrastructure Projects in the Region -*
- Targeting **start of construction the soonest possible** following Financial Close

Key Project Development Learnings & Suggestions

LEARNINGS

- (i) **Timelines slippage and costs overruns** are common denominators across Projects in Africa
- (ii) Complex and costly **Project guarantees**:
 - (a) PPA Credit Support from the EDM
 - (b) Concession Guarantee (Government Sovereign guarantee)
 - (c) Currency convertibility / Debt service guarantee
- (iii) Uncertainty on the **exemptions for import duties** for RE Projects
- (iv) Lack of **legal and permitting policy** framework
- (v) Non-registered land ownership, allotment and mapping. Misalignment between

SUGGESTIONS

- (i) Resilience (!) and flexibility to adapt to the situations
- (ii) (a) DFIs could consider supporting off-taker to put together a credit enhancement facility across different projects, allowing LCs to be issued by local commercial banks with security from international DFIs
 - (b) maybe reconsider % of the guarantee for RES Projects – less risky than thermal projects
 - (c) Central Bank allowing Project Companies to hold US\$ in local accounts
- (iii) Import duty framework should be technology neutral. Maybe government to address it modifying the customs code
- (iv) Clarify what permits are required at national, provincial and local government levels
- (v) Digitalisation of the territory and local Government formally registering land rights
- (vi) Sufficient capacity in the key Government ministries and departments to handle processes and expedite priority project



Scatec Solar
Improving our future™

Thank you