



# Capital Markets Update 2019

Oslo, 18 September 2019



# Disclaimer

---



The following presentation is being made only to, and is only directed at, persons to whom such presentation may lawfully be communicated ('relevant persons'). Any person who is not a relevant person should not rely, act or make assessment on the basis of this presentation or anything included therein.

The following presentation may include information related to investments made and key commercial terms thereof, including future returns. Such information cannot be relied upon as a guide to the future performance of such investments. The release, publication or distribution of this presentation in certain jurisdictions may be restricted by law, and therefore persons in such jurisdictions into which this presentation is released, published or distributed should inform themselves about, and observe, such restrictions. This presentation does not constitute an offering of securities or otherwise constitute an invitation or inducement to any person to underwrite, subscribe for or otherwise acquire securities in Scatec Solar ASA or any company within the Scatec Solar Group. This presentation contains statements regarding the future in connection with the Scatec Solar Group's growth initiatives, profit figures, outlook, strategies and objectives as well as forward looking statements and any such information or forward-looking statements regarding the future and/or the Scatec Solar Group's expectations are subject to inherent risks and uncertainties, and many factors can lead to actual profits and developments deviating substantially from what has been expressed or implied in such statements.



# Expanding our platform for increased growth

Raymond Carlsen, CEO



# A clear strategic direction: Expanding our platform for increased growth

- Strong market outlook
- Growth target raised
- Introducing Release
- Continued ESG focus

Installed capacity\*  
**4.5 GW**  
by end 2021

Annual growth of  
**1.5+ GW**  
from 2022  
onwards



Effective execution of  
current project portfolio



Secure growth in  
priority regions



Broaden commercial  
and technology scope



Optimise financing and asset  
portfolio to enhance value



# Solar & wind expected to provide 50% of all power globally by 2050

## The global power sector towards 2050:

**62%**

Increase in global electricity demand

**12,000 GW**

New power generation capacity



**77%**

Of new demand to be covered by renewables

**98%**

Demand growth in non-OECD-countries

Solar from **2%** to **22%**  
market share in power

Fossil from **64%** to **20%**  
market share in power

# Scatec Solar at a glance

1.9 GW

In operation &  
under construction

5.6 GW

Backlog &  
pipeline

315

Employees



## Key facts

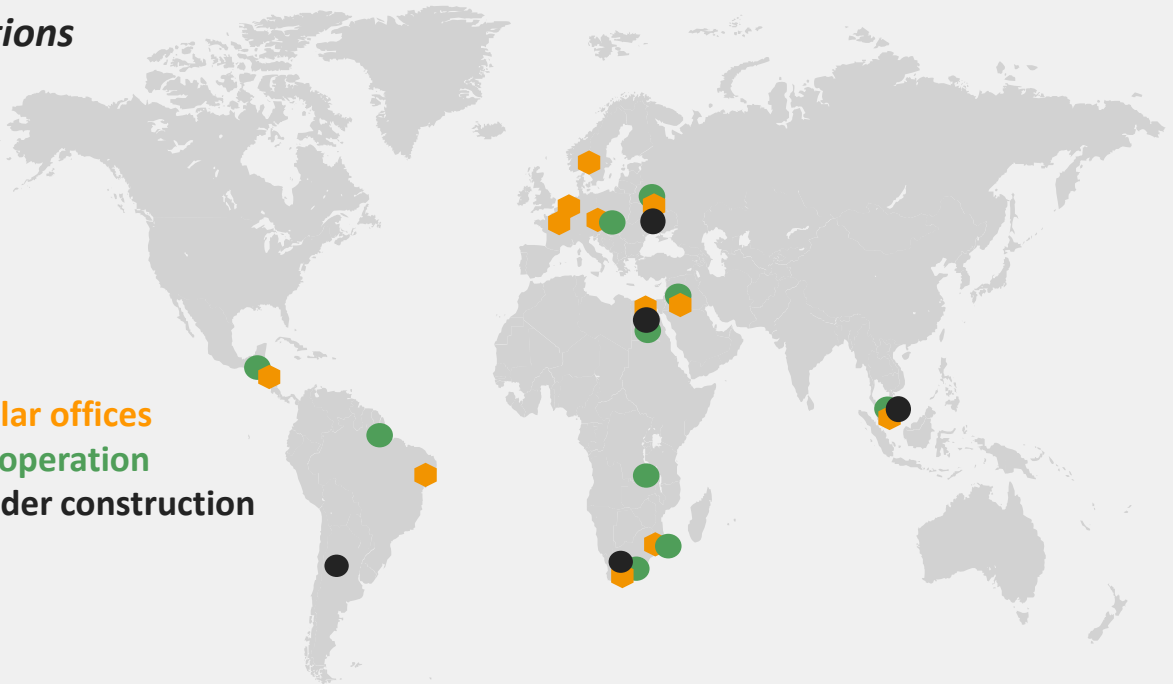
- We develop, build, own and operate solar plants across emerging market
- Founded in 2007 – Headquarter in Oslo, Norway
- Present in 13 countries globally

## Our locations

Scatec Solar offices

Plants in operation

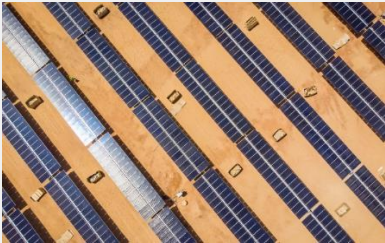
Plants under construction



# A portfolio of 1.9 GW in operation and under construction

IN OPERATION

**Egypt, 325 MW**



**Malaysia, 197 MW**



**South Africa, 190 MW**



**Brazil, 162 MW**



**Honduras, 95 MW**



**Ukraine, 47 MW**



**Jordan, 43 MW**



**Mozambique, 40 MW**



**Czech, 20 MW**



**Rwanda, 9 MW**



UNDER CONSTR.

**Ukraine, 289 MW**



**South Africa, 258 MW**



**Egypt, 65 MW**



**Argentina, 117 MW**

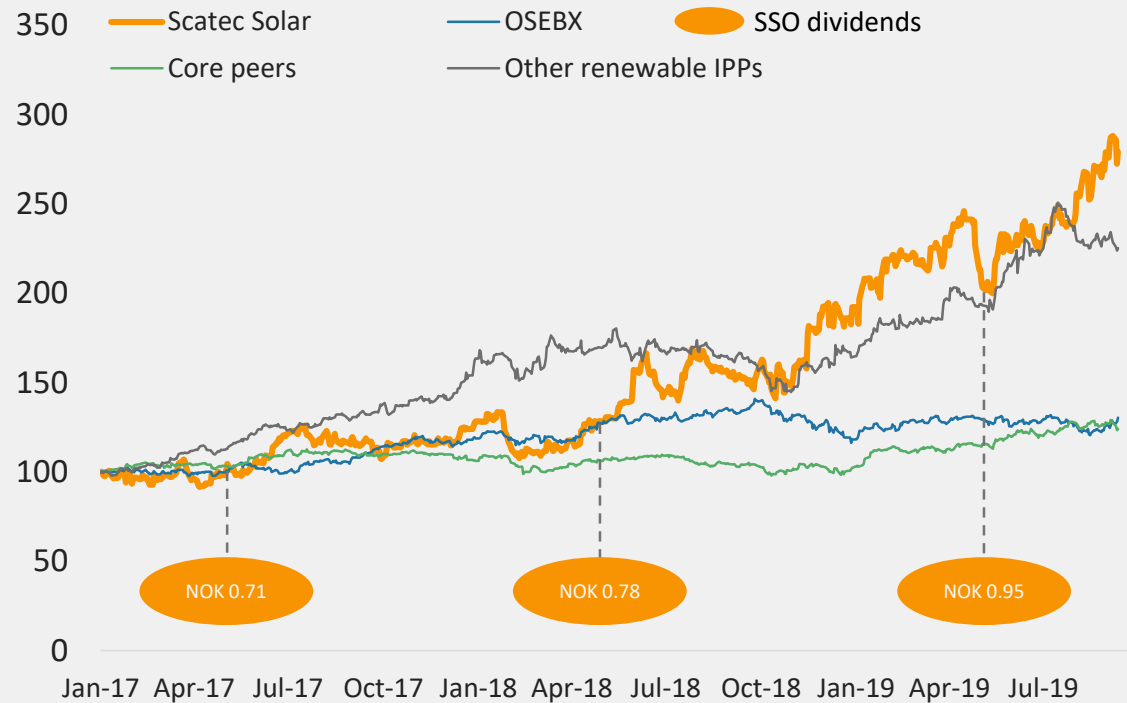


**Malaysia, 47 MW**

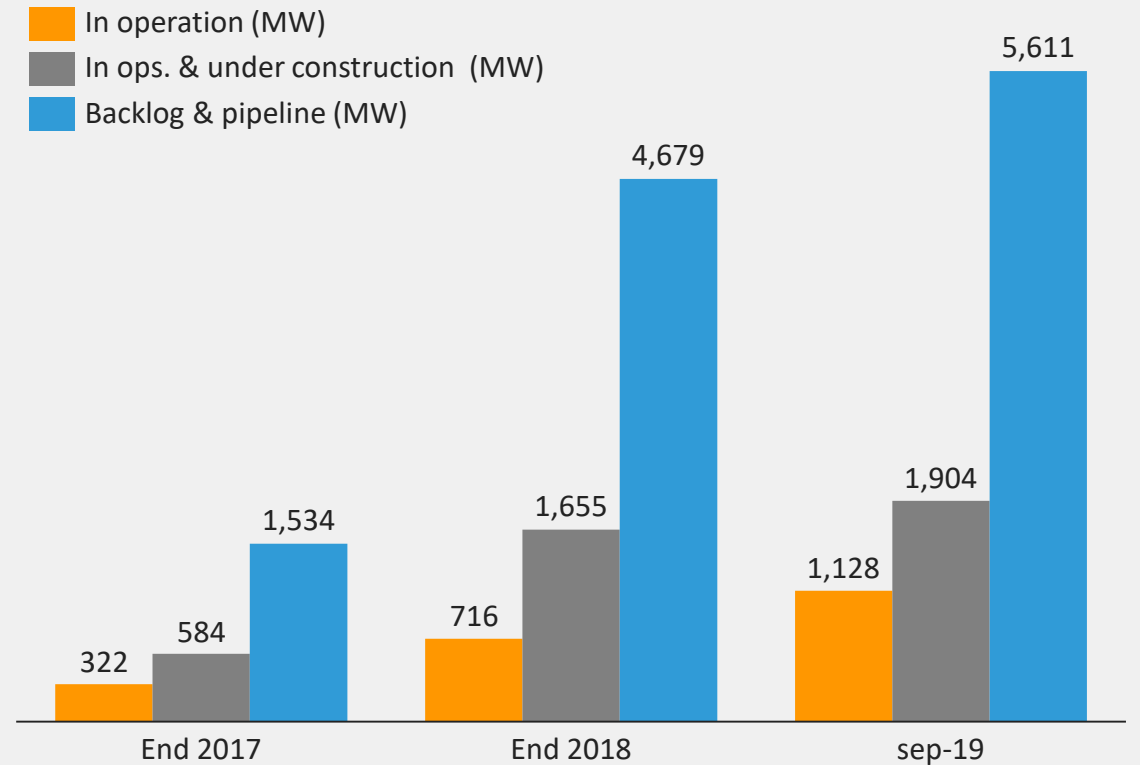


# We continue to deliver strong growth and shareholder value

## Strong share price development



## Strong increase in asset portfolio





# Main achievements since last Capital Markets Update



Global footprint expanded, now present in 13 countries – pipeline & backlog increased to 5.6 GW



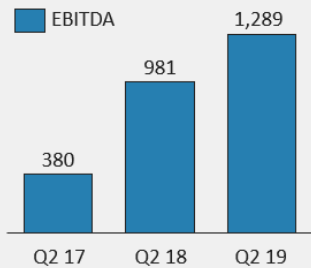
Grid connected 759 MW in Egypt, Malaysia, Brazil, Honduras and Mozambique



Comprehensive sustainability and compliance programmes in place to support our projects



Continued strong focus on HSSE. ISO certification obtained for Quality & HSSE systems

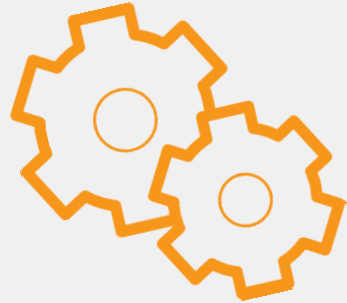


Substantial value creation – EBITDA up 30% since last CMU



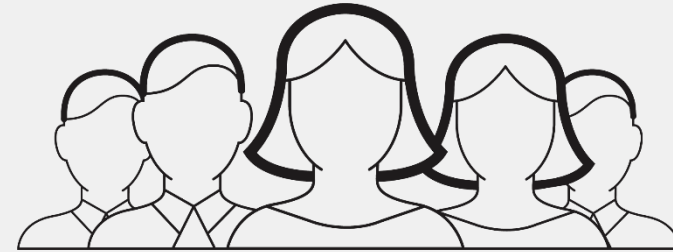
Ukraine: Four solar plants under construction and one in operation – 336 MW in total

# Our success is based on our business model and a strong entrepreneurial culture



## Business model

- Integrated – capturing full project value
- Structuring and financing
- Financial discipline
- Partnerships



## People

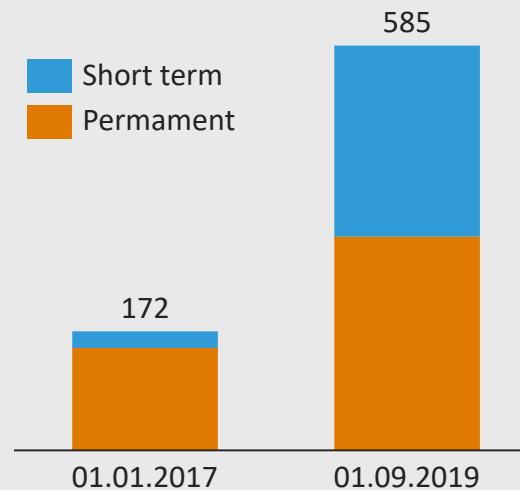
- Agile and lean
- Entrepreneurial culture
- Passionate and empowered people
- Strong and diversified talent pool

# Building a high performance culture based on the Scatec Solar company values

## Developing a global organisation:

- Culturally diverse
- Focusing on international experience
- Attracting & developing talent – offering global careers
- Maintain organisational flexibility
- Building expertise in entering new markets

## Our employees:



- Nationalities: 47
- Average age: 37



Predictable

Working together

Driving results

Changemakers

# Strong focus on Health Safety Security & Environment

## Key highlights

- 13 mill working hours performed - excellent safety records
- ISO certification obtained for HSSE systems
- Specific focus areas: Traffic, electrical work & security



## Key performance indicators



Lost time injury frequency



Sick leave Scatec Solar employees



Local and unskilled labour employed during project construction

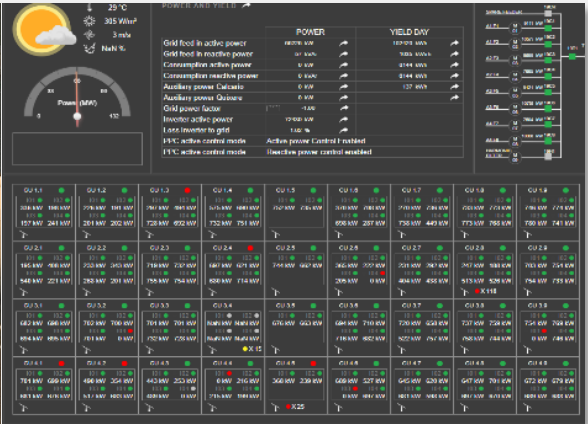
# Scatec Solar utilises new technology to improve power plant performance

## Bi-facial solar modules, Egypt

- The world's largest solar park with bi-facial modules
- 390 MW / 870 GWh annual production

## Global control & monitoring centre, Cape Town

- Real-time data from all plants globally 24/7
- Improving operational quality and efficiency
- R&D programs with several universities and institutions



# Significant market opportunities in both utility & corporate segment

## Utility scale solar

- PPAs with state owned utilities
- Non-recourse project finance



## Corporate & Industrial

- Large industrial customers
- Long-term PPAs with fixed prices



# Introducing **release** - offering reliable, flexible and low cost solar power

BY SCATEC SOLAR

**Pre-assembled and containerised solar and battery equipment**



**Quickly installed – modular, scalable and redeployable**



**Limited upfront investment  
flexible contract duration**



# Creating a sustainable business in complex environments

## Why sustainability is good business

- Ensures stable operations and investor return
- Enables compliance with international standards and reporting on non-financial results via Global Reporting Initiative
- Makes us attractive for solid financing partners
- Creates competitive advantage
- Long term engagement creates solid community relations





# Community development programmes – key contributor to local value creation



## Programmes roll-out

- 35 programmes ongoing, focusing on four of the UN's Sustainable Development Goals



## Long-term commitments

- Programmes for lifetime of solar plant.
- USD 15 mill. to be invested next five years



## Key programme areas

- Health, education, energy, small-medium enterprise development and agriculture

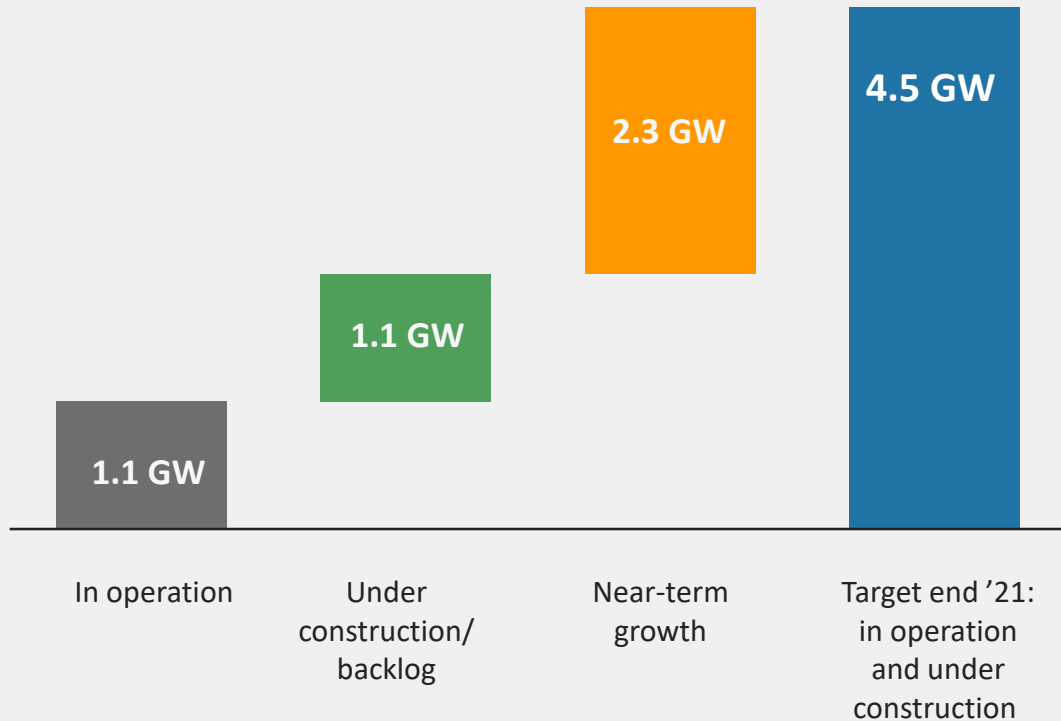
## Programme example - Medical brigade, Honduras

- Long-term strategic alliance with America Social Group
- Benefitting more than 8,500 in the communities over last two years
- 40 medical specialists with advanced and modern equipment



# Target raised – installed capacity of 4.5 GW by end of 2021

## Target installed capacity



## Financial and operational targets

Targeting **4.5 GW** by end 2021

Adding **1.5+ GW** per year from 2022



- Development & Construction gross margin; 12-14%
- Avg. Equity IRR on investments; 12-14%
- Grow Release to 300 - 500 MW per year from 2022 and onwards
- Further develop organization to support growth and new market segments
- Continued strong focus on ESG throughout the project life



# The solar market and our project pipeline

Terje Pilskog, EVP Project Development & Project Finance



# Introduction

---

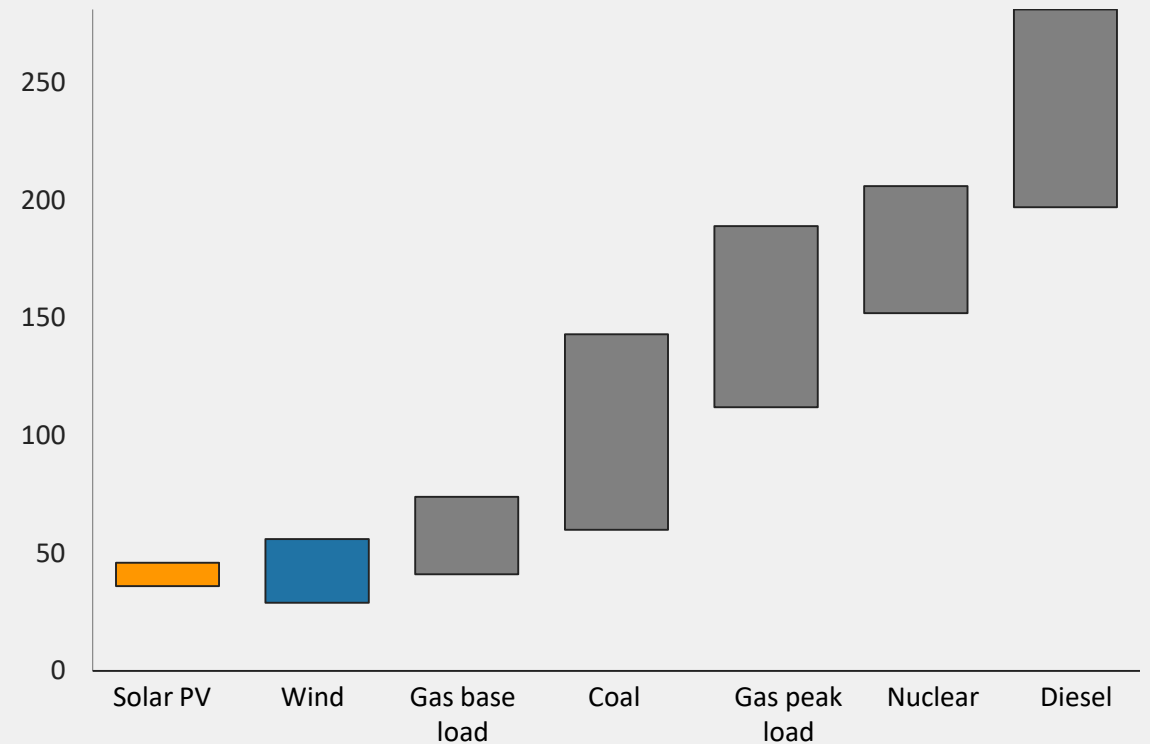
- As costs continue to decline, solar power is growing at a high rate across emerging markets
- New market segments are evolving and creating new opportunities
- Pipeline has increased in size and improved in quality
- Backlog and pipeline now exceeding 5.6 GW
- Significant pipeline has been secured in new markets
- Scatec Solar is securing projects through both bilateral negotiations, feed-in tariffs and tenders



# Solar is one of the world's most competitive sources of energy

- Solar is now the lowest cost source of energy across the sun-rich regions globally
- The levelised cost of solar has come down 85% since 2010 – industry scale and technology
- Storage and hybrid solutions are expected to become increasingly important for demand
- New business propositions are emerging when solar is cost competitive with base load

Cost of alternative energy sources (LCOE, USD/MWh)

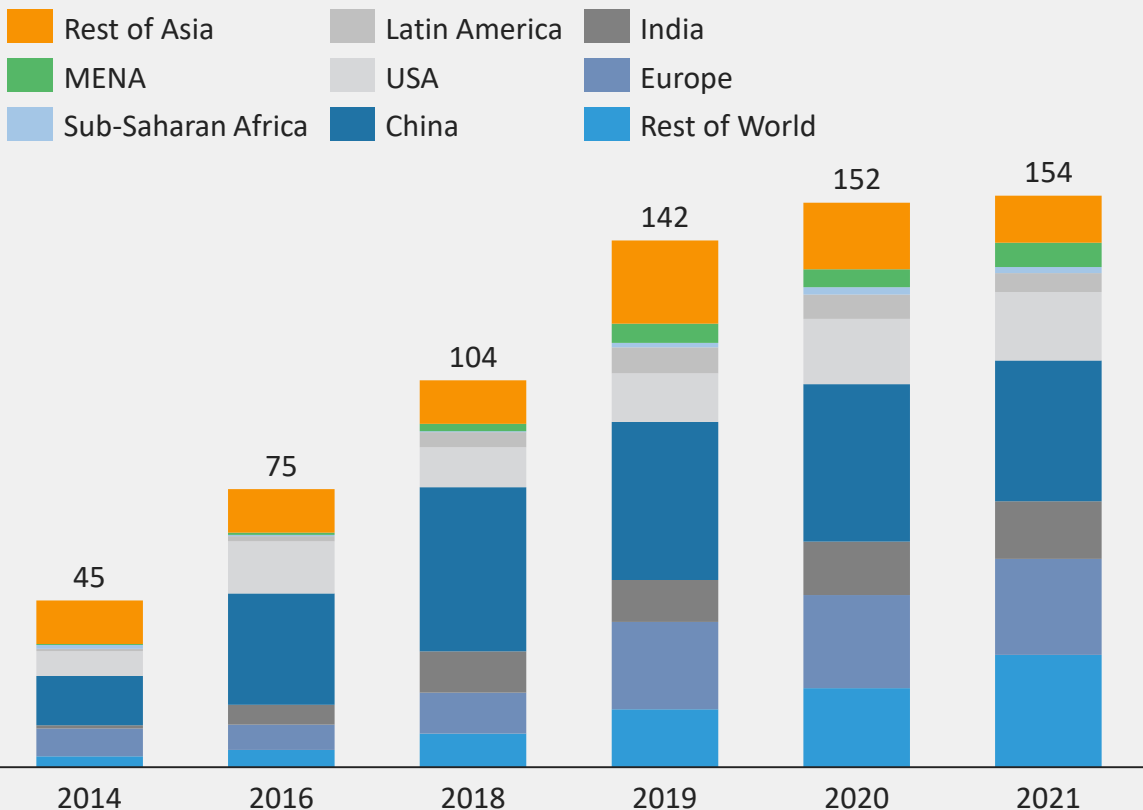


Source: Lazard Capital, LCOE v12, Scatec Solar.  
LCOE: Levelised cost of energy

# Solar market expected to reach more than 150 GW of annual installations

- Global demand expected to increase by 48 percent to 154 GW towards 2021 (compared to 2018)
- India, China and USA representing 47 percent of the market in 2019
- Emerging markets growing at a high rate from a small base – Latin America, Africa and Asia
- Utility scale representing about 50% of the market

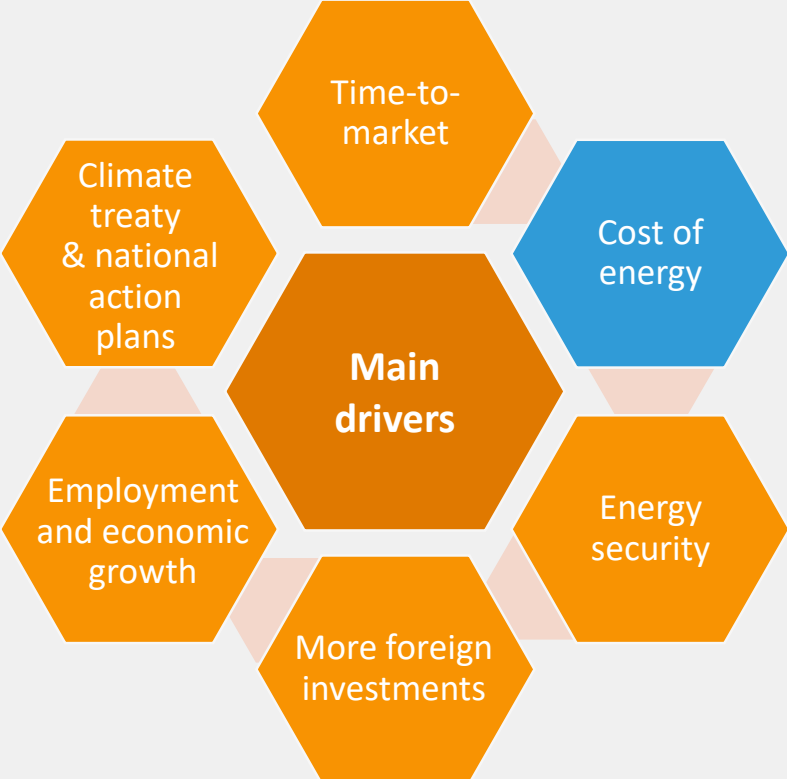
Annual global solar demand forecast - GW



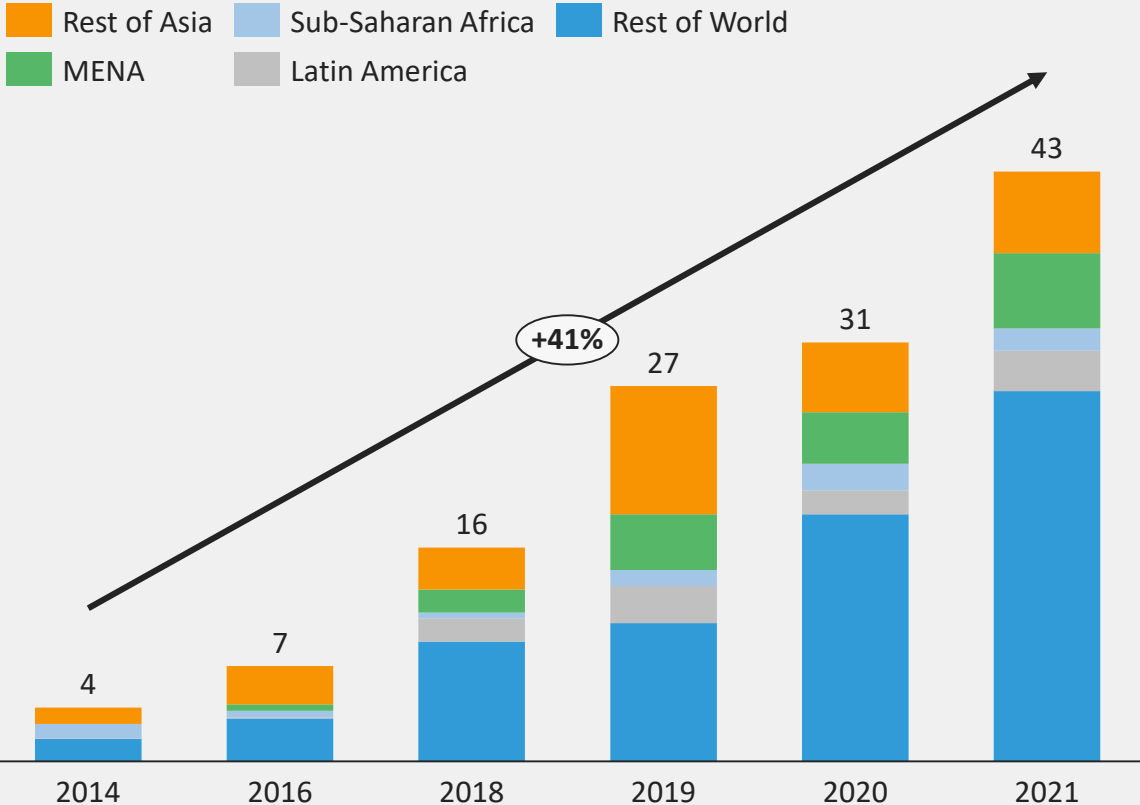
Source: Bloomberg NEF Q3 2019 forecast by region.

# A strong rationale for increased adaption of solar across emerging markets

## Multiple governmental drivers for solar demand

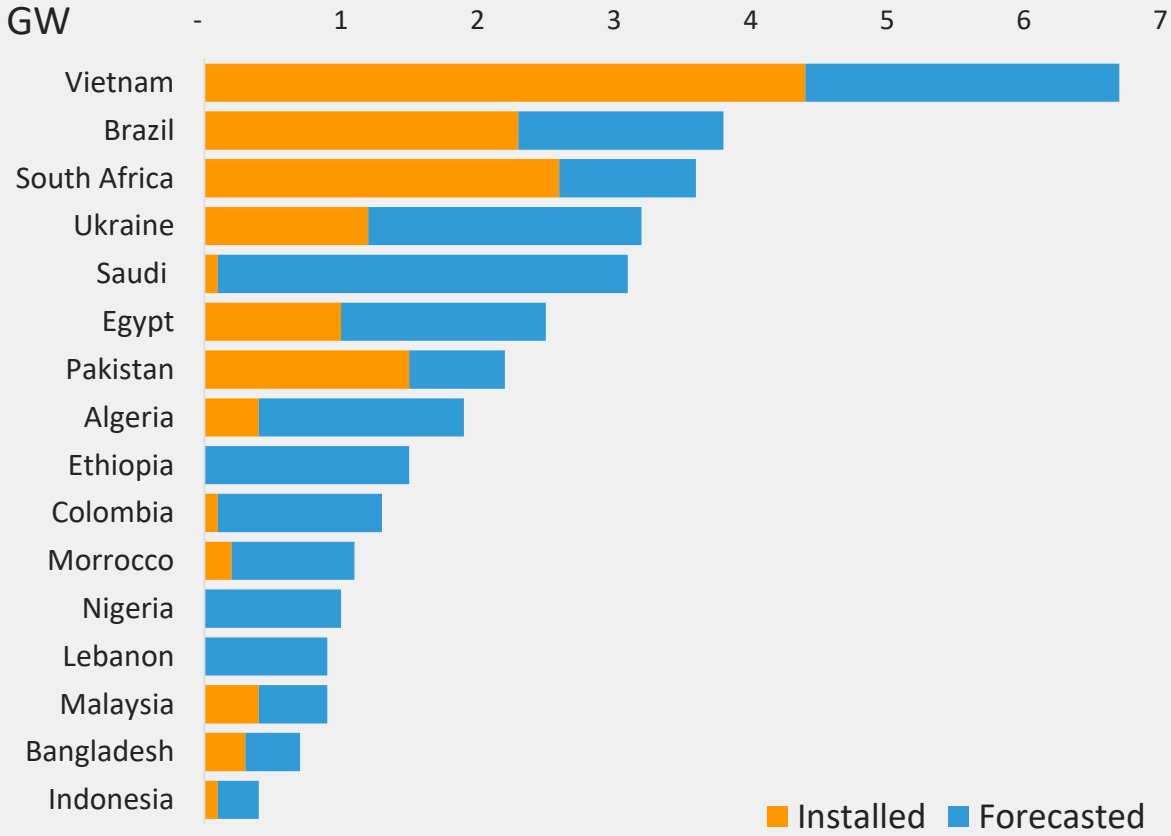


## Annual non-OECD (ex China & India) solar demand - GW



# Several large markets hold significant potential short to medium term

## Installed and forecasted solar volumes in selected emerging markets

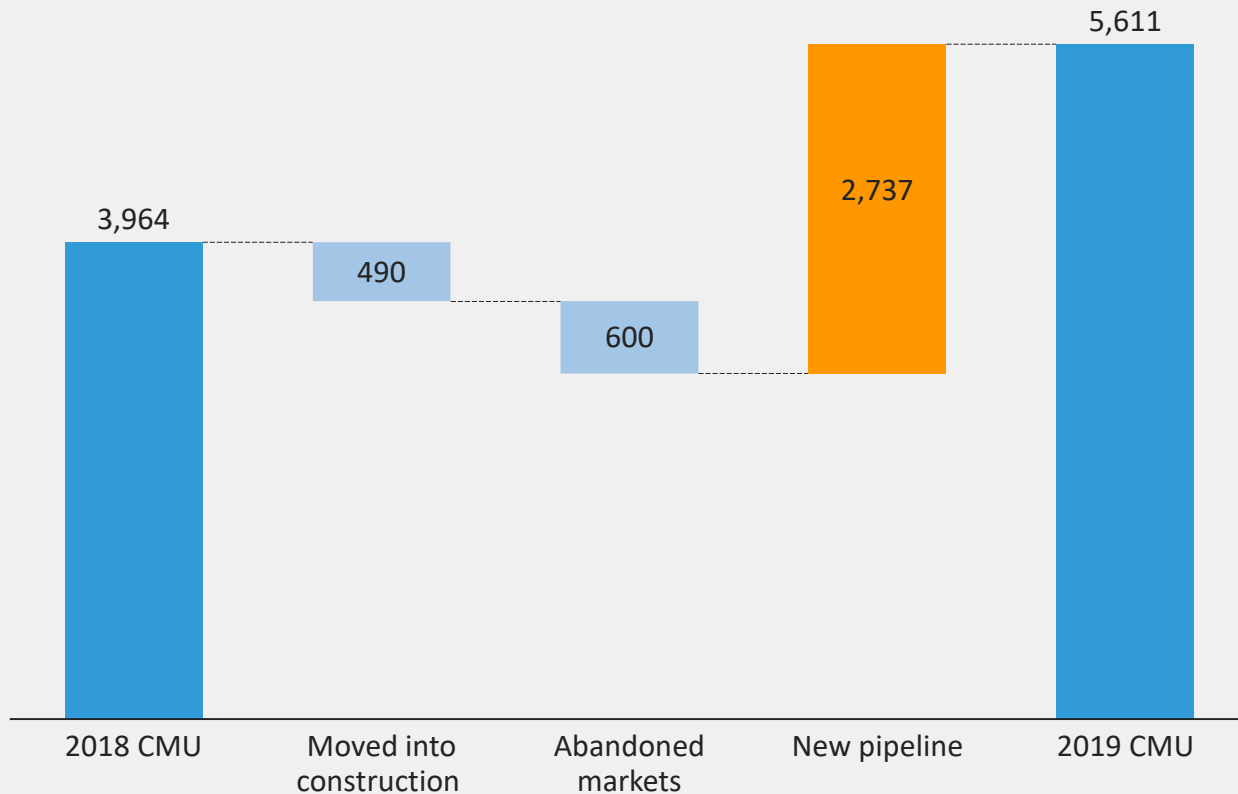


- Selected emerging markets are expected to install large volumes of solar over the next years
- Focus on larger emerging markets or regions and build scalable and concentrated portfolios
- Avoid smaller isolated tenders
- Maintain flexible approach to capture opportunities also outside main priority areas



# Increased size and quality in project pipeline since last Capital Markets Update

## Backlog & pipeline development since 2018 CMU (MW)



# Further expanding our market segments & product offerings

## Utility scale solar



- PPAs with state owned utilities
- Non-recourse project finance

### Key achievements

- Converted large volumes in pipeline to financial close
- Built significant new project pipeline

## Corporate & Industrial



- Large industrial customers
- Long-term PPAs with fixed prices

### Key achievements

- Built pipeline based on strong presence in key markets

## Release – Redeployable solar



- Hybrids with storage and gensets
- Off-grid or on-grid solutions

### Key achievements

- Established new commercial offering
- Built pipeline globally

# Succeeding across procurement approaches in utility scale solar segment



	Share of pipeline	Characteristics	Value creation
<b>Bi-lateral negotiations</b>	25%	<ul style="list-style-type: none"> <li>• Lower predictability</li> <li>• Longer timeline</li> <li>• Less competition</li> </ul>	<ul style="list-style-type: none"> <li>• Potential for higher margins and returns</li> </ul>
<b>Feed-in tariffs</b>	28%		
<b>Project tenders</b>	28%		
<b>Price tenders</b>	9%	<ul style="list-style-type: none"> <li>• Higher predictability</li> <li>• Larger volumes</li> <li>• More competition</li> </ul>	<ul style="list-style-type: none"> <li>• Typically lower margins</li> </ul>



# Key principles of our approach to project origination and development

## Prioritise growth markets

- Target scalable utility IPP business
- Focus on markets with a growth potential

## Build deep market knowledge

- Understand regulations
- Establish relationships with authorities and key market players
- Understand future ambitions and risks

## Originate through partnerships

- Qualify and partner with experienced local developers
- Source projects from a wide network of partners globally

## Develop based on integrated approach

- Use integrated teams to develop and optimise projects
- Ensure competitiveness across functions and geographies

## Manage development risk

- Maintain discipline on development spending
- Seek development grants and share costs with partners

# The approach to enter and succeed in the solar market in Ukraine

**Portfolio  
336 MW**

**Capex  
NOK 4.7 bn**

**Project Finance  
of NOK 2.3 bn**



## **Rengy, 47 MW**

- In operation since August 2019
- Financing partners:
  - EBRD
  - BSTDB

## **Kamianka, 32 MW**

- Financing partners:
  - EBRD
  - FMO

## **Chigirin, 55 MW**

- Financing partners:
  - EBRD
  - NEFCO
  - Swedfund

## **Boguslav, 54 MW**

- Financing partners:
  - FMO
  - GIEK
  - Green for Growth Fund

## **Progressovka, 148 MW**

- Financing partners:
  - Power China (Construction Financing)

# Vietnam – a high growth economy with a significant solar market potential

- Strong economic growth – GDP growth of 7% per year
- Population of close to 100 million
- Strong historic and future power demand
  - 10% p.a. last decade expected to grow by 60-70 GW next decade
- Current power supply from coal (44%), hydro (31%) and gas (21%)
- Few natural, sustainable sources to meet future demand
- A significant solar market potential

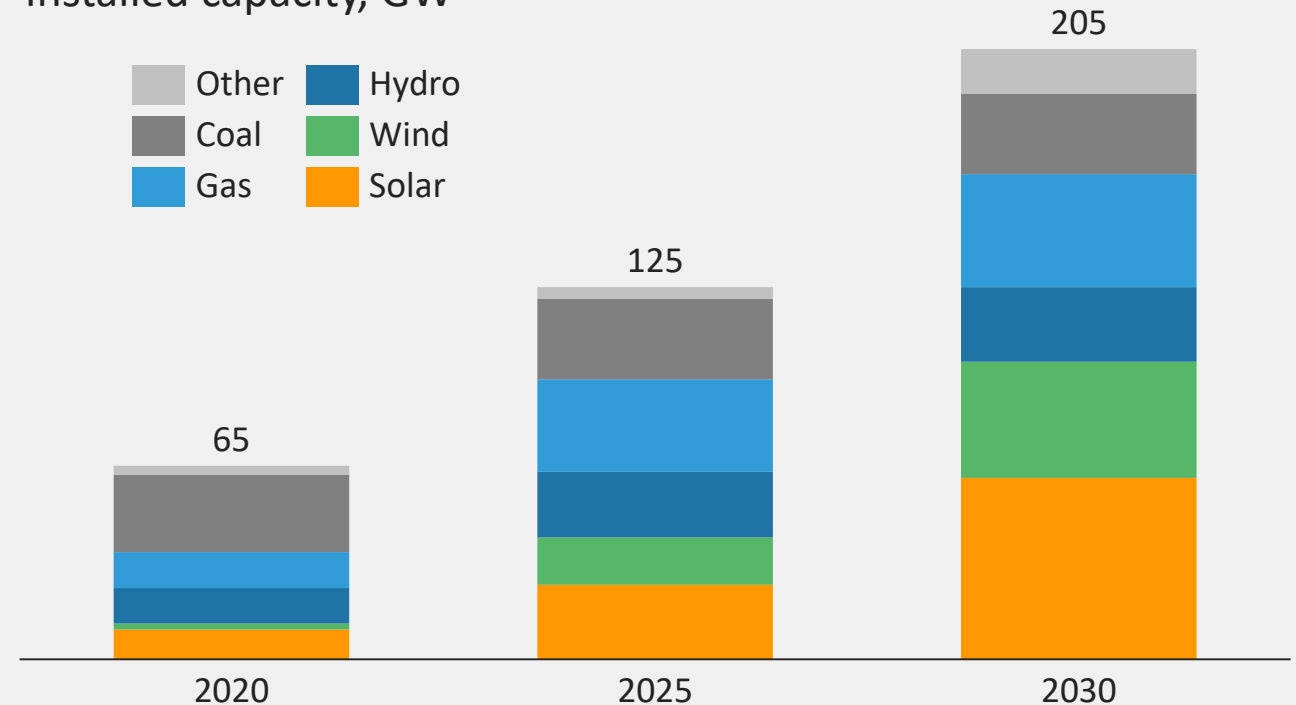


# Solar has huge potential in Vietnam in the years to come

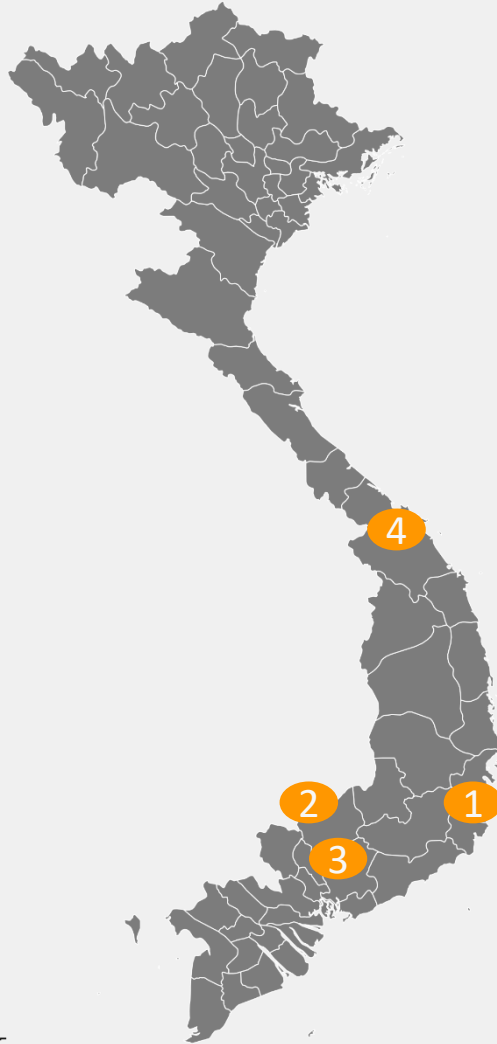
- Current plan implies build-out of 30 GW of new coal until 2030 to 60 GW in total
- Coal build-out currently delayed
- Current master plan “only” considers 15-20 GW wind and solar by 2030
- Solar and wind currently cheaper than coal and gas on levelized cost basis
- Renewables-led plan adds no coal, 100 GW of renewables and reduces total costs of energy in period to 2030

## Renewables-led plan for power generation in Vietnam

Installed capacity, GW



# Our current Vietnam portfolio



- 1 Hong Phong (48 MW):** Ground-based. Backlog, master plan approval and PPA received. Financing and EPC structuring under way
- 2 Binh Phuoc (140 MW):** Ground-based. Phase 1 (60 MW) in backlog. Master plan approval expected in 2019
- 3 Dong Nai (650 MW):** Large-scale floating. Expected to be executed in phases of 325 MW each. Master plan approval expected in 2019
- 4 Quang Tri (325 MW):** Floating and ground-based. Master plan approval expected in early 2020

**Several additional projects in opportunity stage**



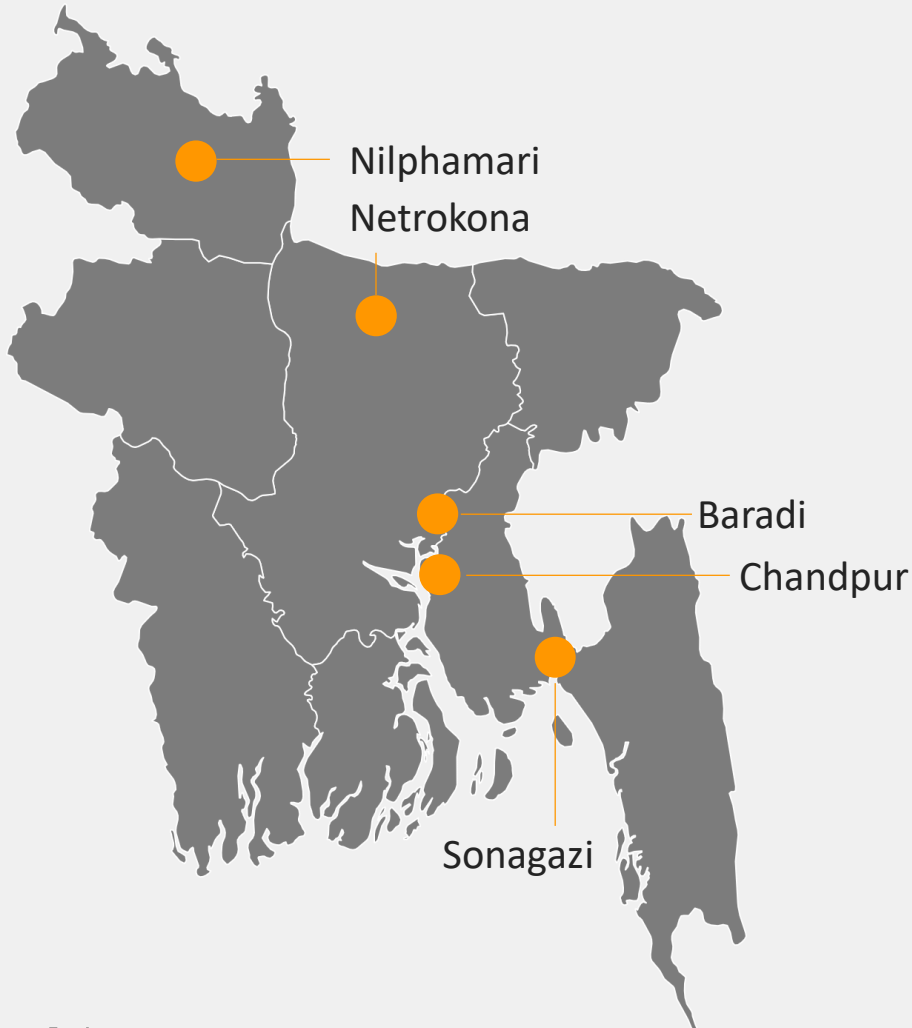
# Vietnam is a good fit for Scatec Solar's business model

- Complex land acquisition
- Regulatory approval process
- Template PPA for renewables requires new financing structures
- Limited domestic capital for large-scale rollout
- Grid limitations and curtailment risks



*The integrated approach, partnership focus, emerging market experience and financial structuring capabilities makes us well positioned to succeed in Vietnam*

# A range of projects under development in Bangladesh



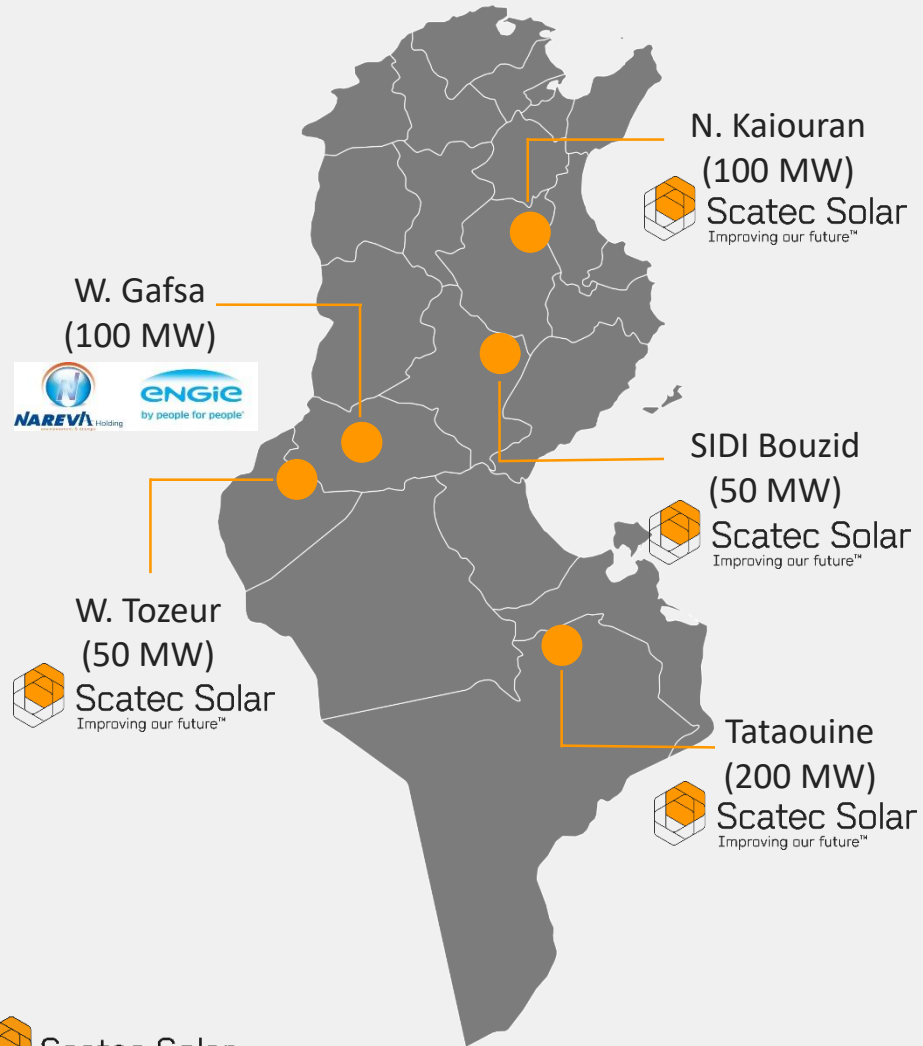
## Long-term development perspective in promising market

- Current generation capacity of 16 GW needs to double by 2030 to sustain economic growth of ~7% p.a.
- Target of 10% renewable energy by 2020
- Secured Nilphamari (62 MW) through bilateral process.
- Further significant pipeline of 350 MW developed
- Both bilateral and tender processes

## Our approach

- Understanding priorities of government
- Strong local partners
- Need to secure land up front

# Ability to compete in price tender in Tunisia



## Efficient process with opportunity to capture significant volume

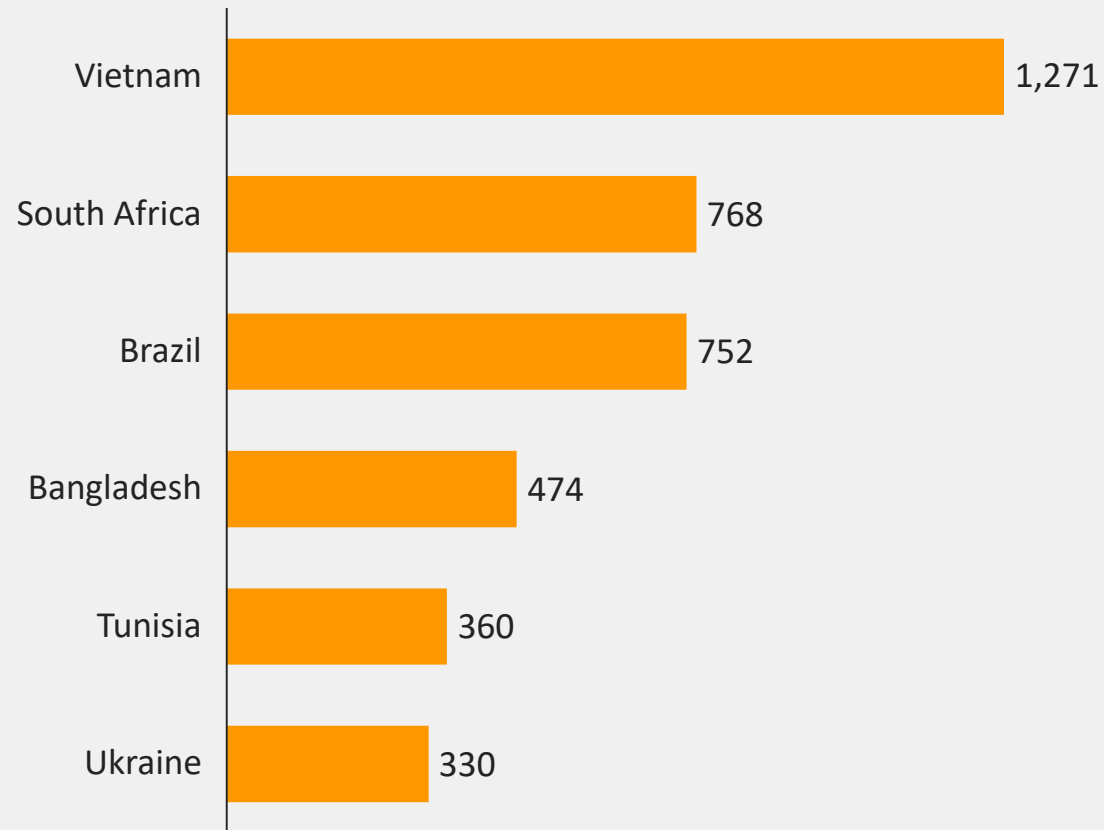
- Pre-qualification late 2018
- Bid during summer 2019
- Award and PPA during 2019 (pending)
- COD for the projects 2021 - 2022

## Scatec Solar delivered a competitive bid

- Price tender with multiple opportunities to win
- DFIs advising authorities on structuring tender
- Significant hurdles to participate
- Good understanding of competition
- Attractive portfolio for implementation in future

# Significant pipeline has been secured in several new markets

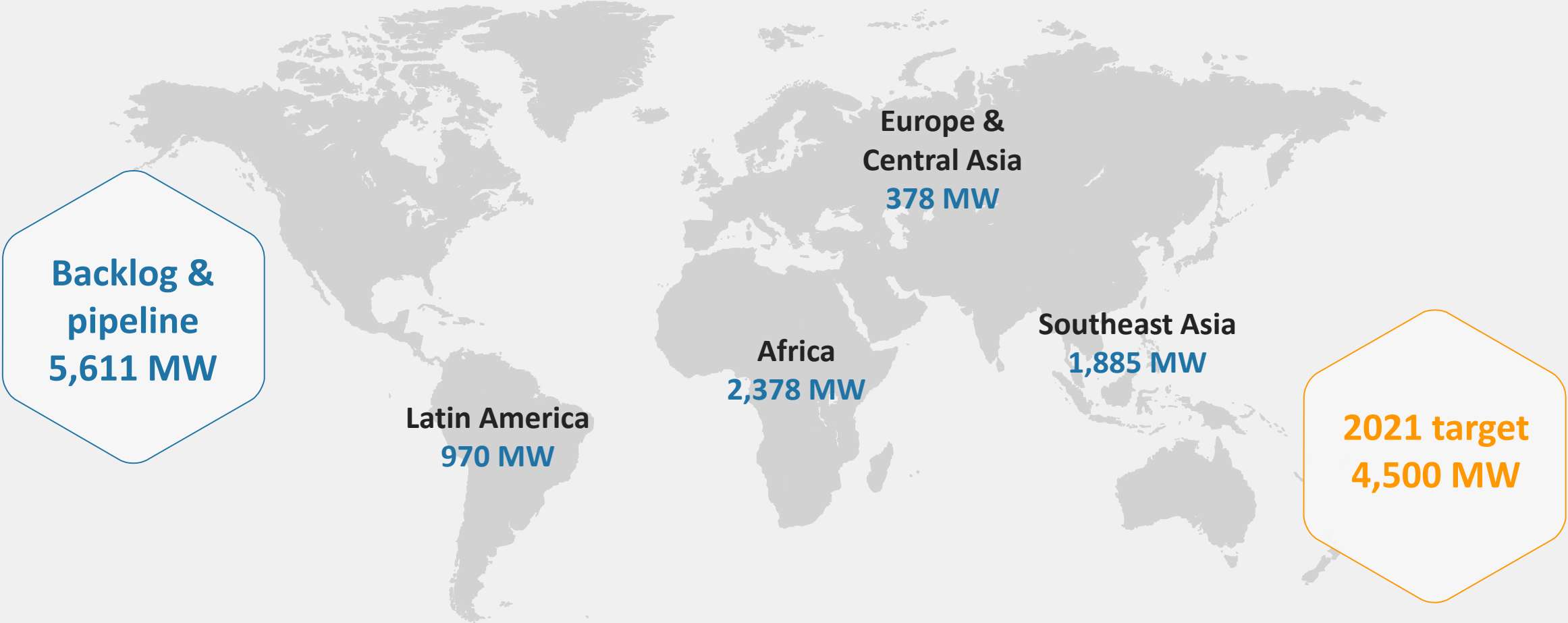
## Backlog & pipeline in key markets (MW)



## Key triggers for moving to backlog and construction

- Announcement of FiT II and final project approvals
- Integrated Resource Plan and REIPPP Round 5
- Negotiation of Corporate PPAs
- Bi-lateral negotiations and Project tenders
- Final award after Scatec Solar offered lowest prices in tender
- Securing new projects once new tender regulation is clarified

# A solid backlog & pipeline is supporting our ambition to accelerate growth





# Introduction to **release**

BY SCATEC SOLAR

Hans Olav Kvalvaag, SVP Release



# Introducing Release – a new growth platform for Scatec Solar

- Release offers affordable, clean, reliable and flexible solar power for rent
- Targeting industrial customers in emerging markets with pre-assembled and re-deployable solar parks
- Large addressable market, including 600 GW in large scale diesel power plants
- Targeting annual installations of 300–500 MW from 2022 and onwards
- Equity partnership with Norfund and other partners



# Release offers reliable, flexible and low cost solar power

**Pre-assembled and containerised solar and battery equipment**



**Quickly installed - modular, scalable and redeployable**



**Limited upfront investment - flexible contract duration**





# Supporting corporates in making the shift

## Key challenges in emerging markets:

- Replace or reduce diesel consumption
- Secure a reliable power source
- Get solar with shorter contract duration at competitive prices

Moving from expensive and polluting...



...to low cost and clean



# Targeting a diverse customer group with plant capacity of 1-20 MW

## Off-grid mining operations powered by diesel



- 23 GW only in Africa
- Rural locations with own land
- High, stable electricity consumption on diesel/HFO

## UN and NGOs



- About 600 MUSD/year spent on diesel for power across UN
- UN target of operating carbon neutral by 2020

## Small utilities with diesel or thermal generation



- Utilities seeks distributed power generation in addition to large scale power plants
- Leasing reduce balance sheet exposure

## On-grid users with high cost/unreliable power



- Industrials suffers from black-outs and high power prices
- Self-consumption is more reliable

# The first redeployable and containerised tracker solution

## Movable equipment provides flexibility:

- Reduces the customer's financial liabilities
- Provides counter-party risk mitigation
- Leads to shorter preparation and installation time
- Using the customer's own site requires less permits and licenses

## Our technical solution

- Cooperation agreement with Cambridge Energy Partners
- Certified by DNV GL and WSP\*
- Offers 30-40% more production using bifacial modules and trackers compared to customary fixed tilt solutions
- Ready for ramp-up in large volume



Photo: Cambridge Energy partners

# A customer case – substantial long term savings

## Customer:

- Western listed mining company operating in Africa
- Relies on diesel – life of mine 5 - 20 years

## Customer need:

- Power demand: 60 GWh/year - Solar to cover 28%
- Cost savings over 15 years: USD 24 million
- CO<sub>2</sub> emission reduction over 15 years: 160,000 tonnes

## Release solution set up:

- Customer pays up front fee and issues bank guarantees for a certain period lease payment
- 4 year lease contract – extension with lower cost for customer



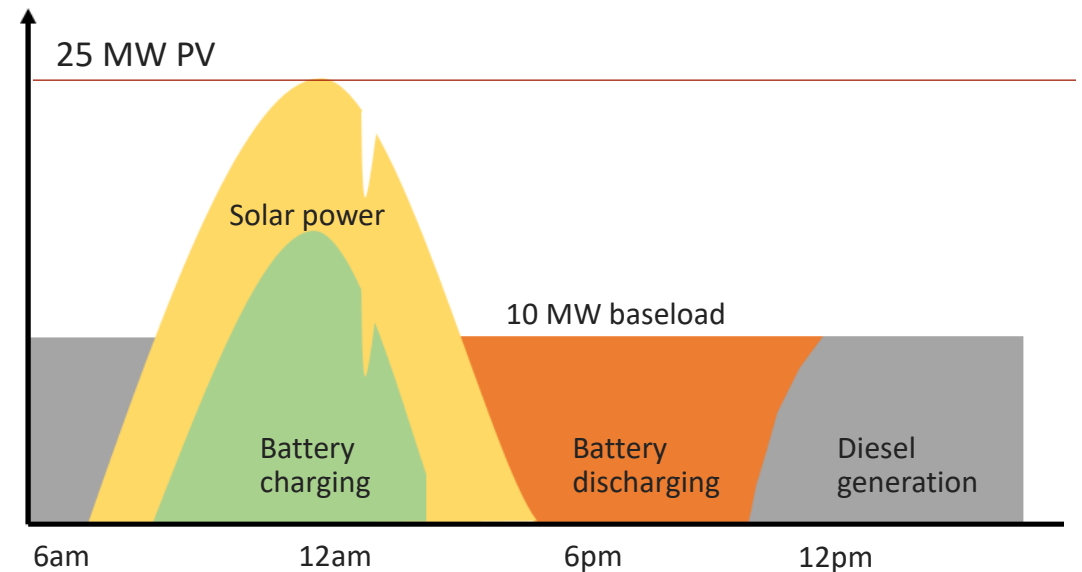
# Storage is an integral part of the Release offering

A battery solution can add benefits in combination with solar for diesel integration - today:

- Up to **40%** solar penetration, batteries can be included to optimise diesel and solar uptake
- Above **40%** solar penetration, batteries can be used to shift load from day to night
- Cost reductions will enable wider use of batteries over the next 3-5 years
- Framework agreement with Tesla and DEIF for supply of batteries with an integrated solution

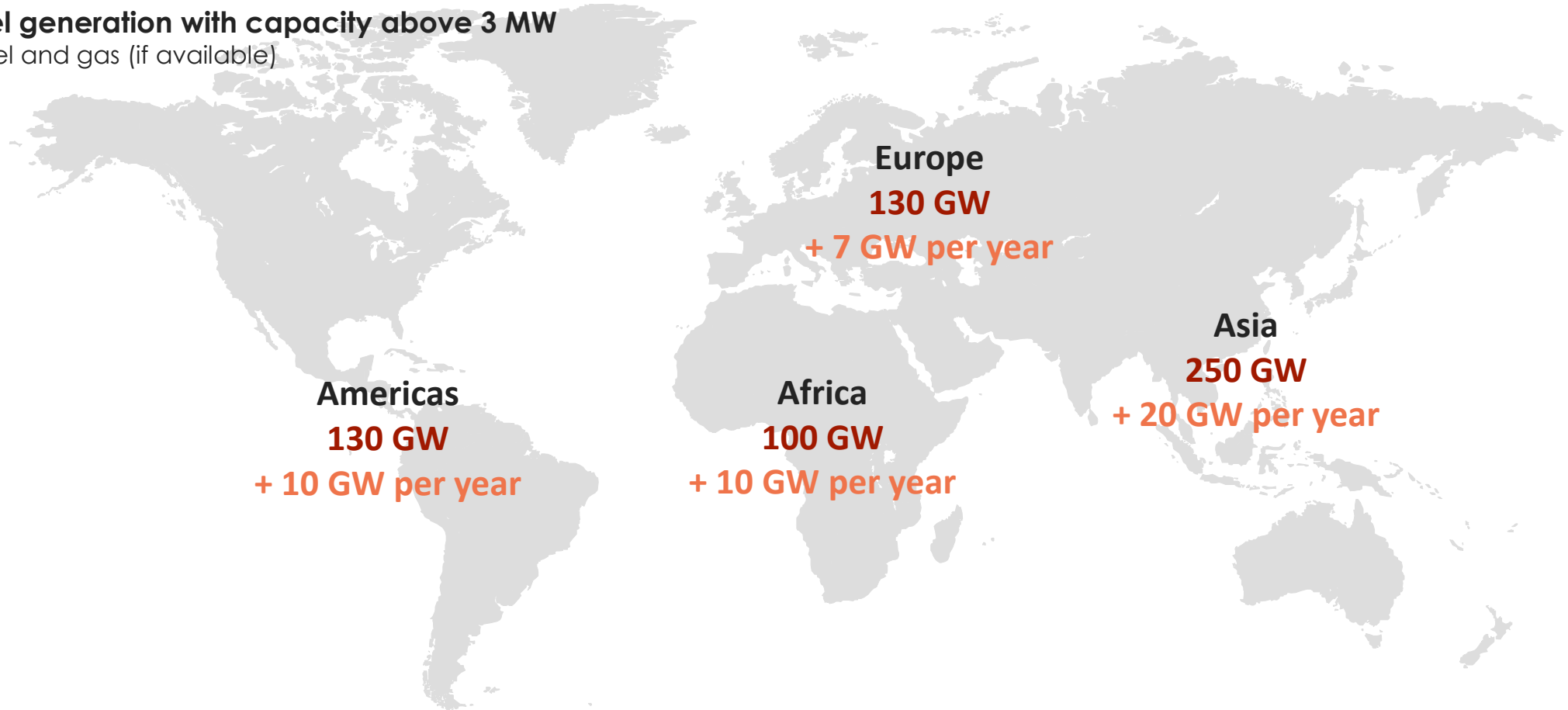
## Illustrative example

Hybrid plant with 65 % solarisation and constant base load of 10 MW – average per day



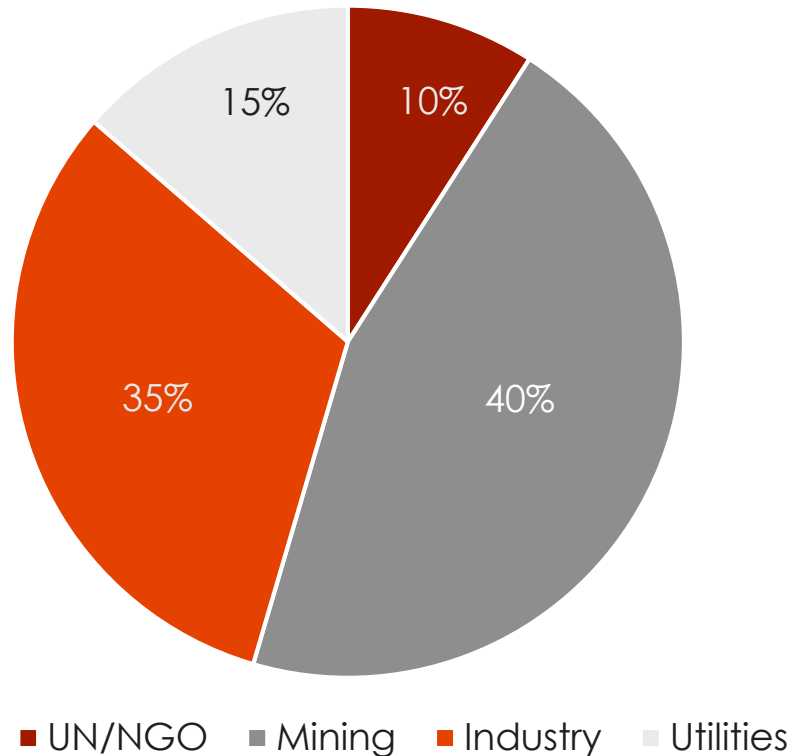
# A significant market potential – 600 GW of large scale diesel/HFO installed globally

Fossil fuel generation with capacity above 3 MW  
HFO, diesel and gas (if available)



# Starting in Africa - a solid pipeline of projects under development

## Current pipeline of 300 MW in Africa

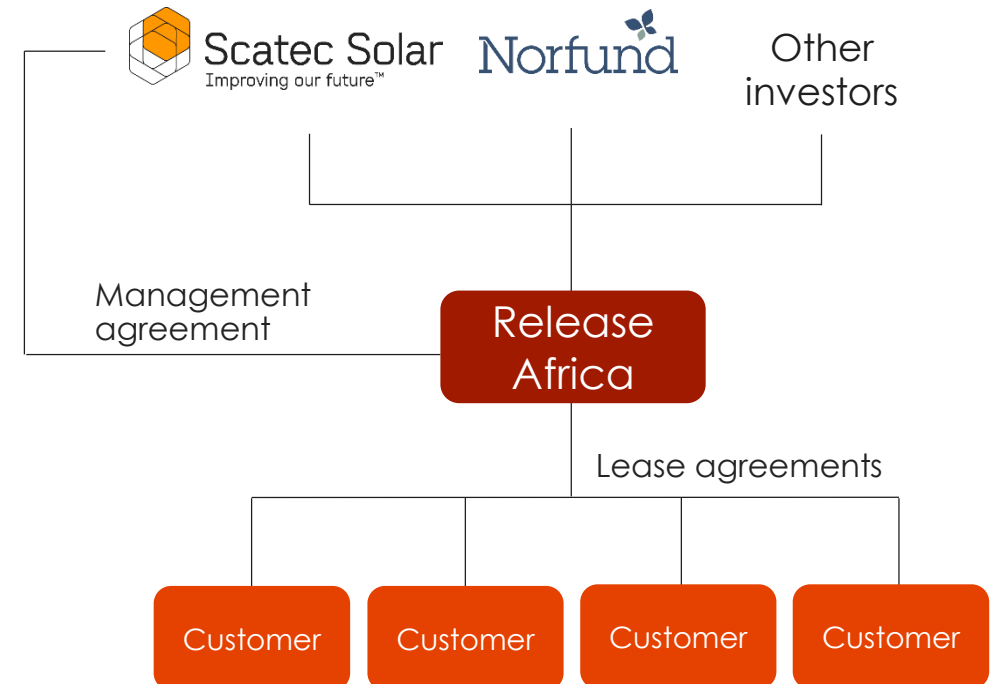


- Scatec Solar has been marketing the Release concept for the last six months
- Mainly targeting solid international companies with a footprint in emerging markets
- Signed contracts with UN on three projects in South-Sudan
- 7 MW contract with mining company Africa signed, subject to final self-production license
- Advanced discussions for additional 50 MW with international companies
- Opportunities also under development in Asia and Latin-America

# Release Africa – established in partnership with Norfund

- Release Africa in partnership with Norfund
- Initial fleet financed by equity
- Release Africa expected to be self funded when asset fleet passes around 300 - 400 MW
  - Operating cash flow is used to increase asset base
  - Debt taken on after 2-3 years
- Ownership to be reassessed over time
- Scatec Solar will operate & manage Release Africa

## Contemplated legal structure





# Release has a significant long term potential

## Targets for Release:

- Annual volumes of 300 - 500 MW from 2022 and onwards
- Above average returns compared to utility scale PPAs
- Starting with a focus on Africa
- Pipeline under the development in South East Asia and Latin America





## Investments & financing

Mikkel Tørud, CFO



# Our priorities when investing in solar stay firm

## **Continue to stay selective**

- Focus on value and risk adjusted returns
- Secure D&C margin – key for equity funding

## **Transactional and operational control**

- Scatec Solar – the lead developer and investor

## **Debt & Equity partnerships**

- Maximise return on equity and mitigate political risk

## **Capital structure approach remains unchanged**

- Maximise leverage at the project level
- Moderate group level debt

## **Dividend policy stays firm**

- Pay out 50% of free cash flow from operating power plants

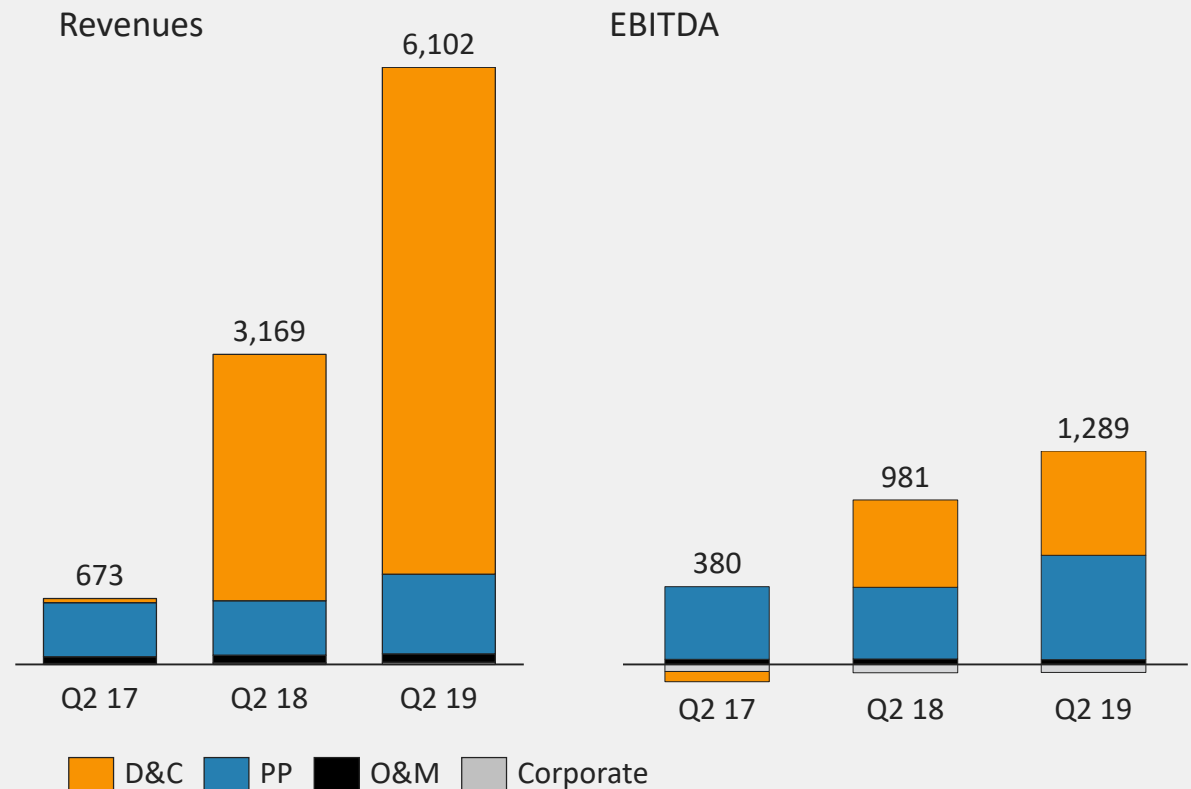


# Substantial value creation over the last few years - EBITDA up 4x

## Strong growth and solid financial performance

- Power production up by 57% to 979 GWh last 12 months
- Daily production up 2.5x since beginning of 2019
- A Development & Construction business with quarterly revenues above NOK 1 billion and gross margin of 14%
- Stable O&M business with EBITDA margins of 35%-40%

## Proportionate financials - last 12 months (NOK million)



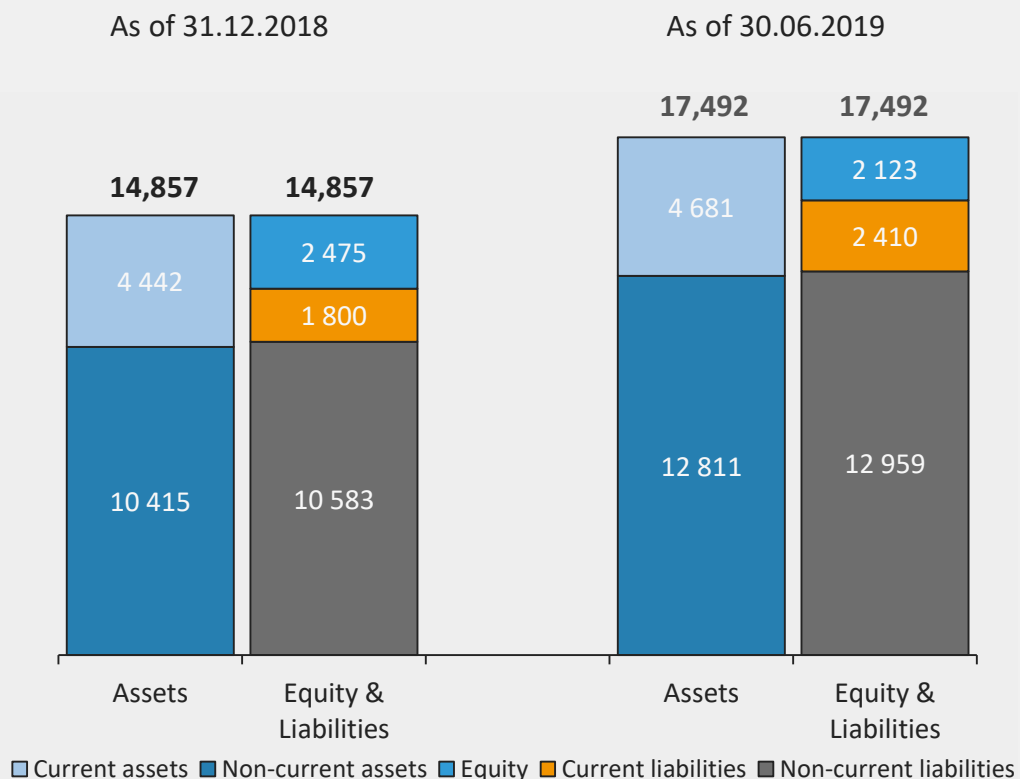
# A growing asset base and a solid financial position

End of Q2 2019

- Group free cash of NOK 560 million
- Undrawn Revolving Credit Facility at NOK 775 million
- Group\* book equity at NOK 3,318 million – equity ratio of 82%

NOK million	Consolidated	SSO prop. Share	Group level*
Cash	2,375	1,743	560
Interest bearing liabilities*	11,742	7,747	744
Net debt	9,367	6,005	184

## Consolidated financial position (NOK million)

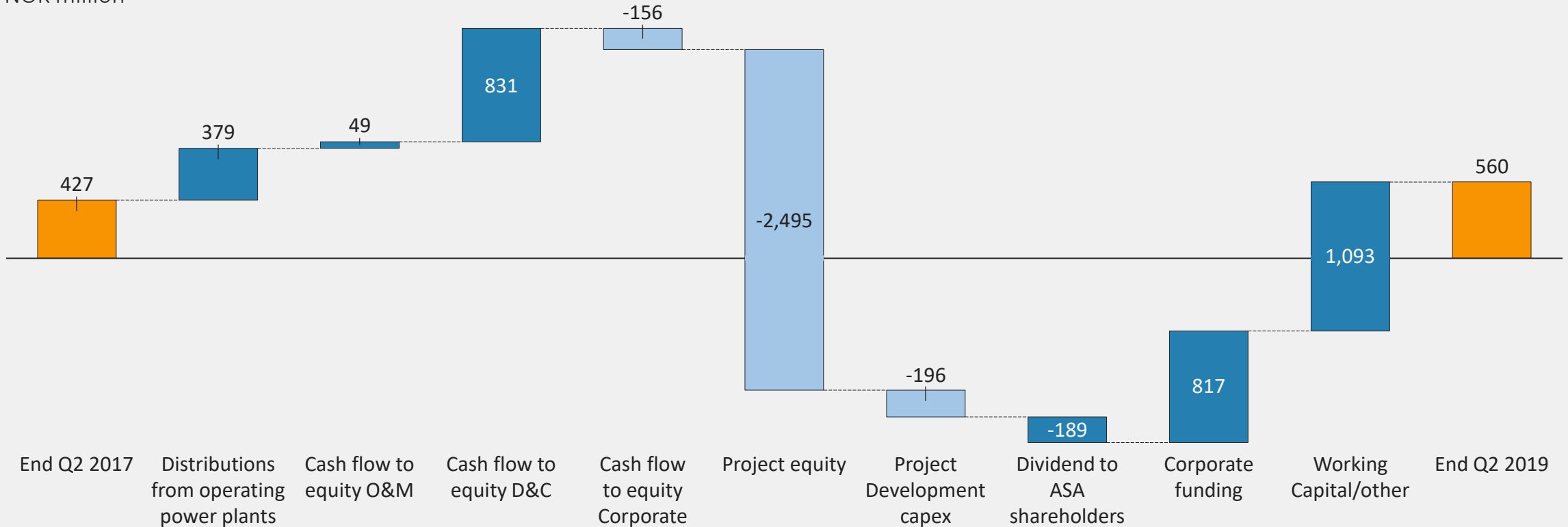


Last 2 years:

# NOK 1.3 billion of cash from D&C and operating assets while investing NOK 2.7 billion

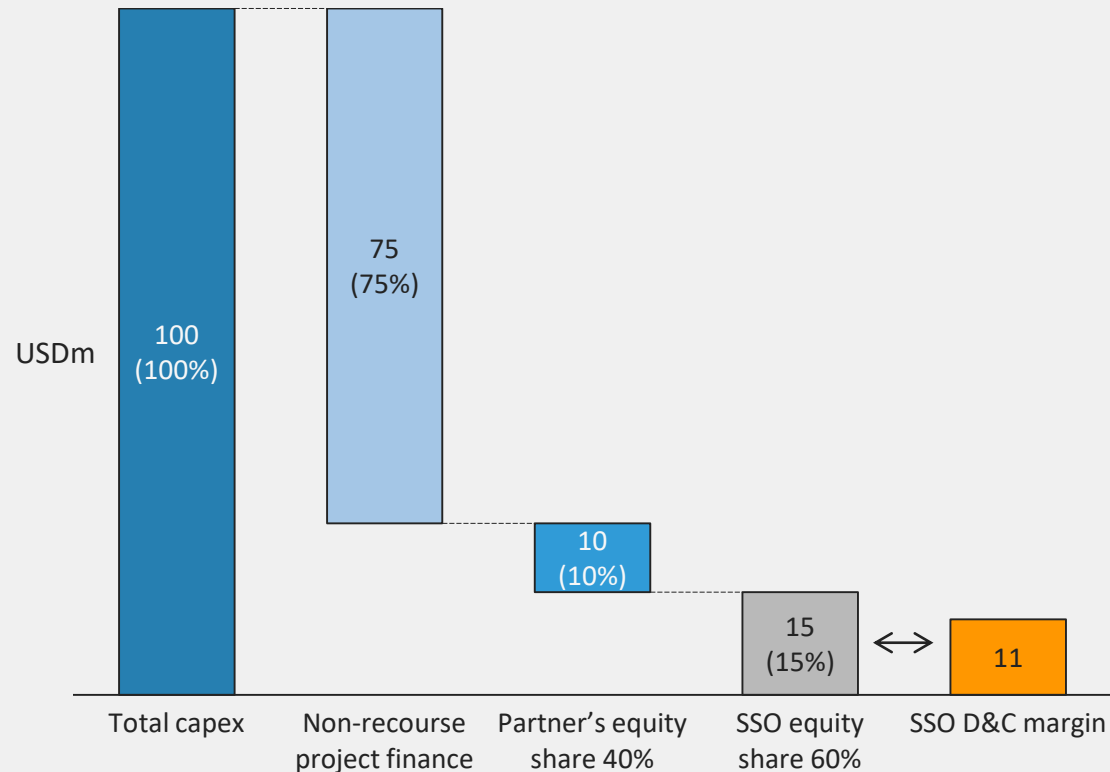
## Movement of free cash flow in Scatec Solar group over the last 2 years\*

NOK million



# Scatec Solar's growth capacity continues to increase

## Our business model and typical project capital structure:



100 MW project example

## Scatec Solar's growth capacity

- As the asset portfolio grows, more dividends/operating cash flow is available for investments
- In addition the integrated business model adds to our growth capacity – D&C margin generation
- Accelerated growth and new initiatives will most likely require increased funding
- Timing, size & type of funding depends on several factors:
  - Size and timing of new projects
  - Debt leverage of projects
  - Scatec Solar ownership in projects

# Partnering with Development Banks for project finance and risk mitigation

- Multilateral development banks (DFIs) are providing project debt to infrastructure in emerging markets
- DFIs are often advising governments on design of renewable programmes to promote private / public partnerships
- Project structures and contracts are set up to mitigate risk and facilitate non-recourse project level debt



European Bank  
for Reconstruction and Development

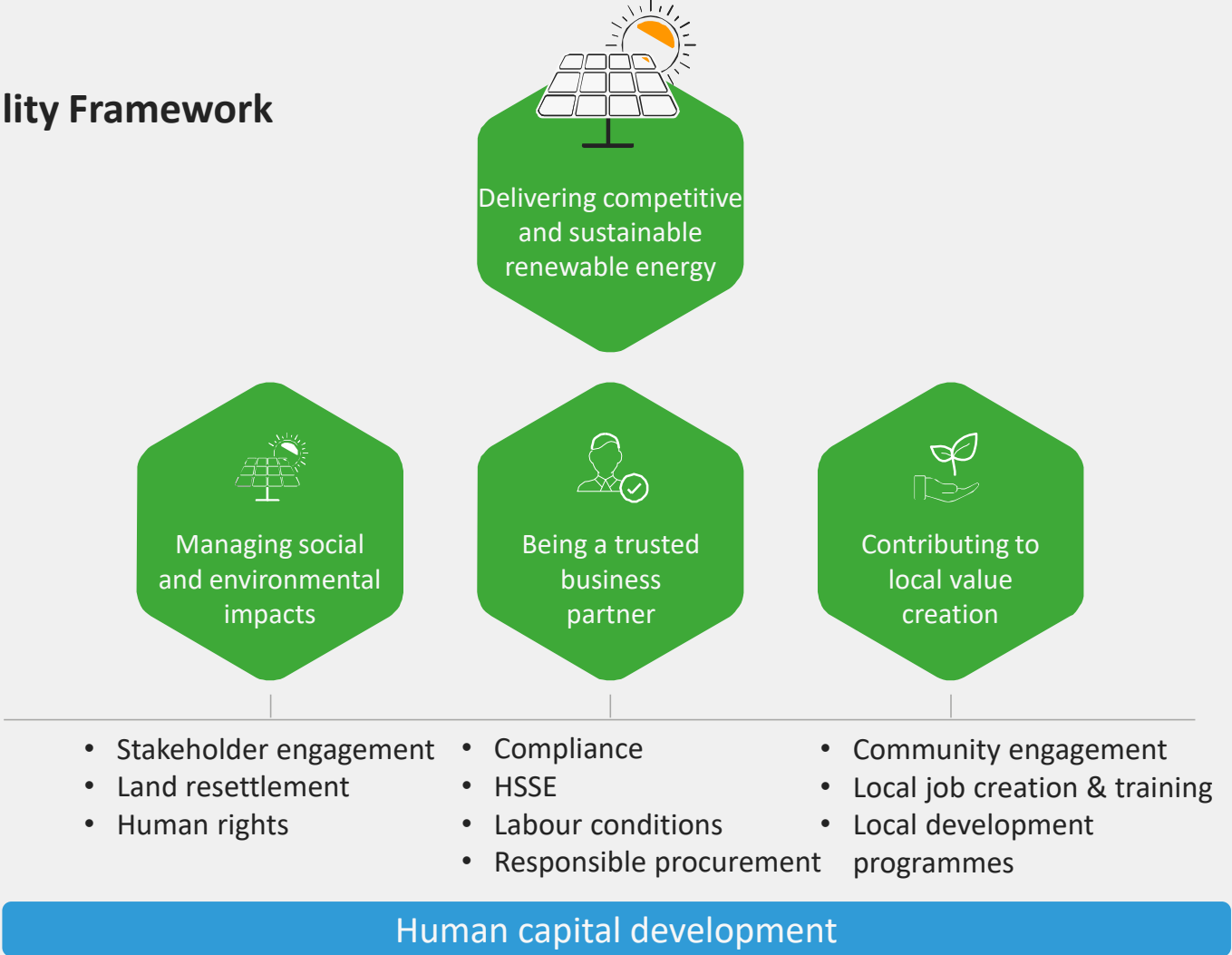


Entrepreneurial  
Development  
Bank



# A holistic and integrated approach to ESG and sustainability

## Scatec Solar's Sustainability Framework



# A comprehensive governance and compliance programme

- In the forefront combating corruption & other sanctionable practices
- Risk assessments and full integrity due diligence of all award processes, stakeholders and partners
- Follow the Equator Principles and IFC Performance Standards
- Zero tolerance principle - foundation for Code of Conduct and Partner Conduct Principles
- Focus on onboarding of new employees as well as quarterly follow up training



# Stable cash flows based on PPAs with public utilities and corporates

## Power price & volume

- Tariffs fixed in long term contracts
- Take or pay all volume produced
- Shorter contract tenors in Release concept

## Counterparty

- PPAs with state owned utilities
- Financing partners with strong government relations
- Political Risk Insurance in selected markets
- Corporate off takers with solid financial position and guaranteed payments

## Interest rate

- Project finance debt with fixed interest of 10 years or more from grid connection

## Currency

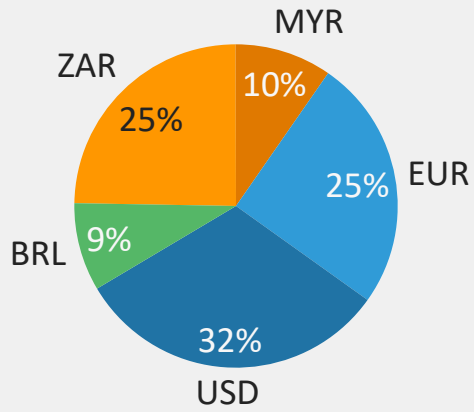
- Structuring of project debt in same currency as power sales revenues
- Inflation adjusted tariffs in PPA

# A well diversified portfolio with a PPA contract value of more than NOK 60 billion

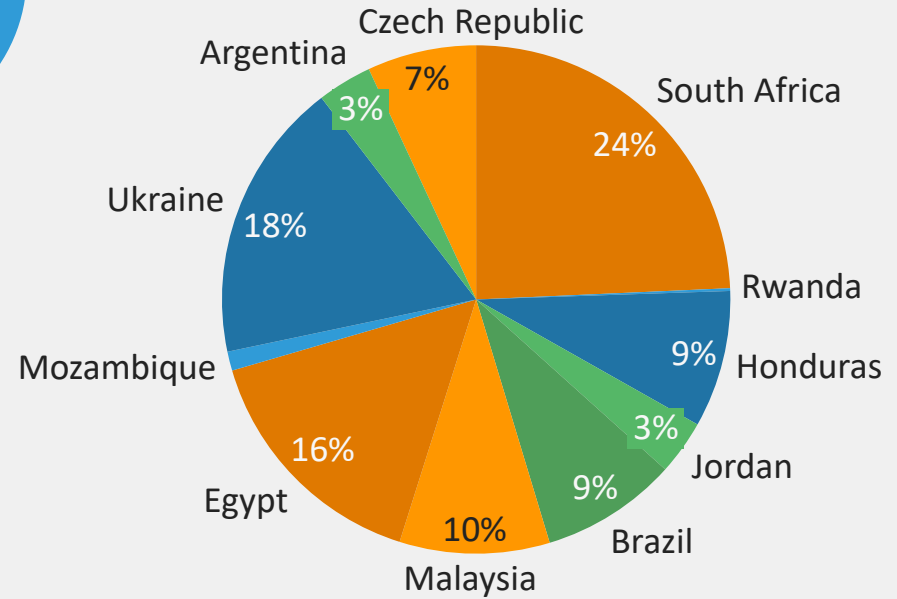
**1.9 GW**

in operation & under construction

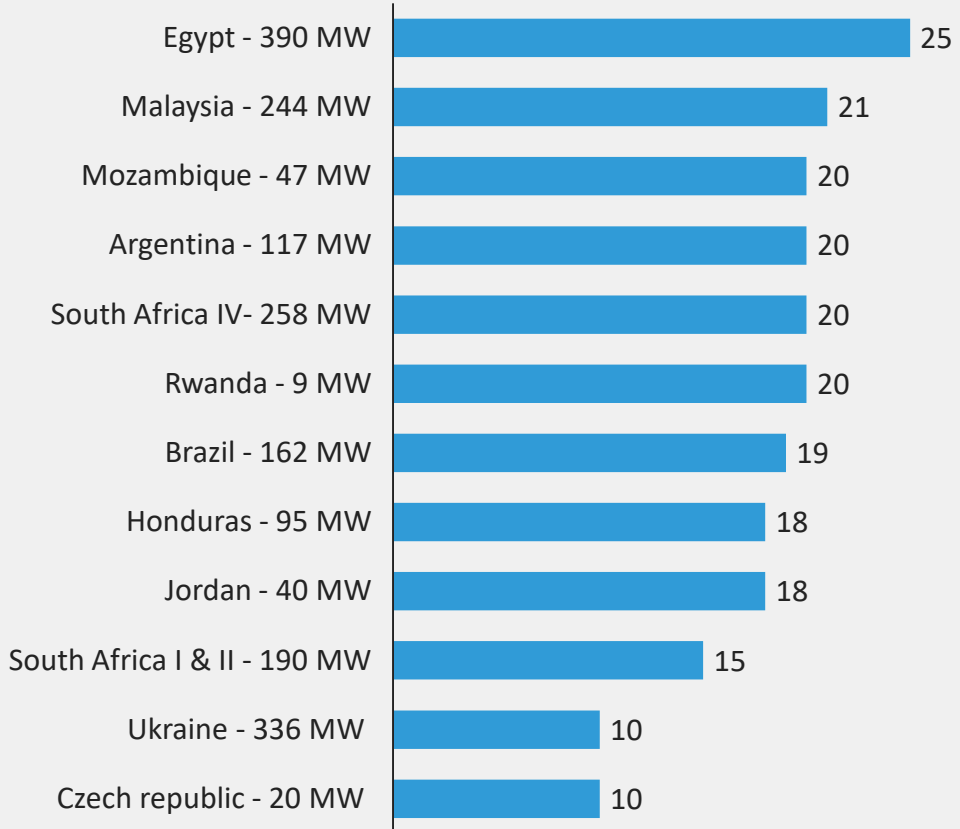
Portfolio currency split\*:



Portfolio country split\*:



20 years average remaining PPA tenor:

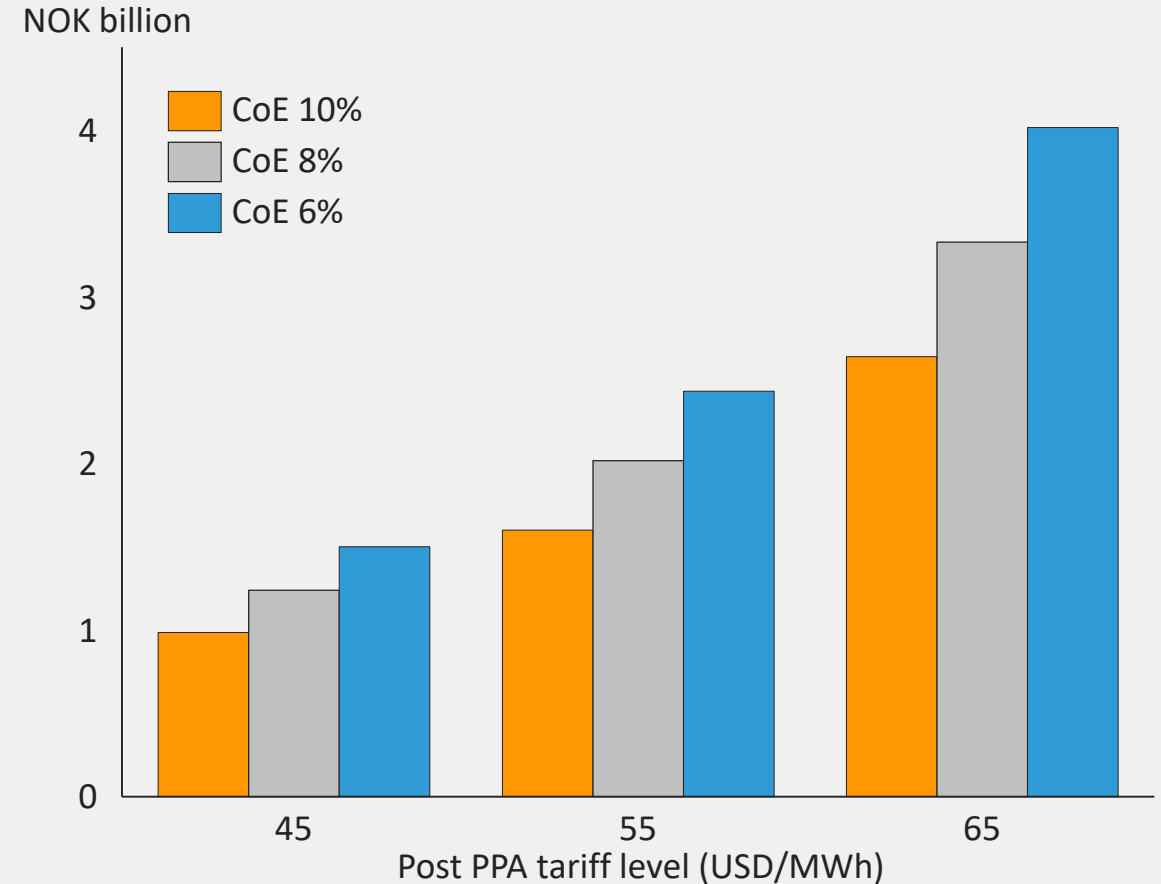


# A significant Post PPA value based on a plant life of 35+ years

## Post PPA value:

- Power Purchase Agreements of 20-25 years
- Technical life of solar plants of 35+ years
- After 20 years the marginal cost of solar power production is very limited
  - Fully depreciated and debt free plants
  - No fuel cost
  - Limited cost of operation & maintenance
- Market power prices are expected continue to increase – especially across emerging markets

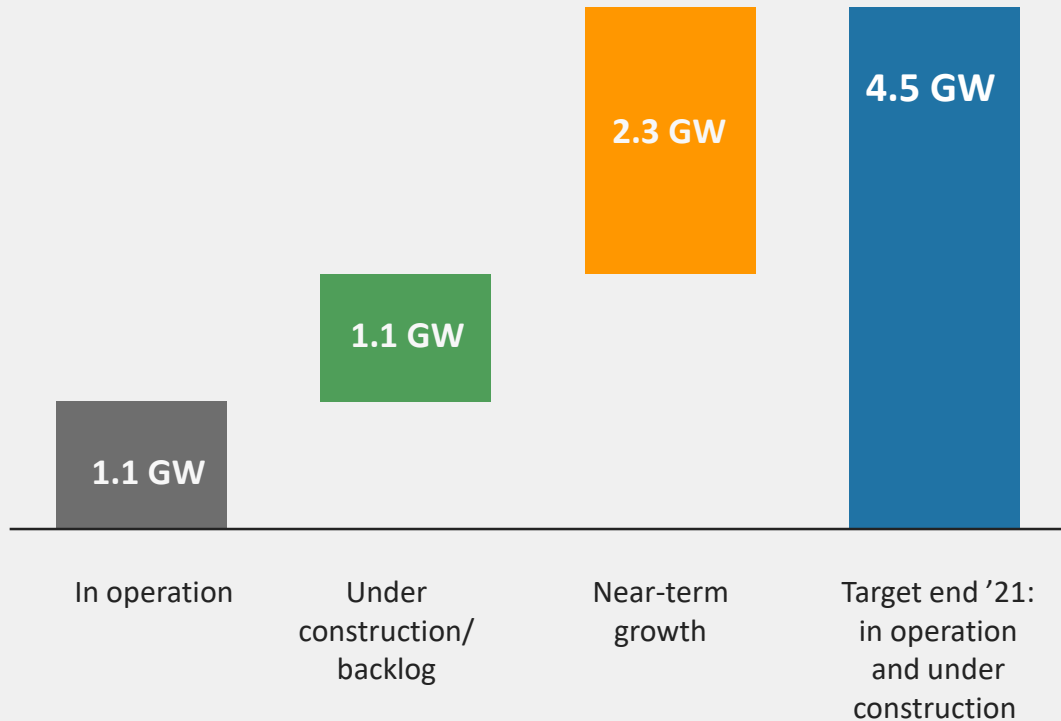
## 15 years of post PPA Equity Value for 1.9 GW\*



(\* ) 2019 tariff value, 65% ownership, 2.5% inflation and 20% tax rate

# Target raised – installed capacity of 4.5 GW by end of 2021

## Target installed capacity



## Financial and operational targets

Targeting **4.5 GW** by end 2021

Adding **1.5+ GW** per year from 2022



- Development & Construction gross margin; 12-14%
- Avg. Equity IRR on investments; 12-14%
- Grow Release to 300 - 500 MW per year from 2022 and onwards
- Further develop organization to support growth and new market segments
- Continued strong focus on ESG in all project phases



# Scatec Solar

Improving our future™