



**solarcentury**

**Making subsidy free projects work**

January 2019



# Solarcentury - a leader in solar for 20 years

One of the few pure-play solar companies to survive the nascent phase, driven by:



## Wide range of solar activity

- not dependent on any one country or market segment
- four continents; utility through to residential
- geographic focus on Europe since 1998; Latam and Africa since 2012
- 2012: moved into development
- 2017: moved downstream to invest in and own solar assets



## Investment in platforms that bring us to scale

- development: platform with Encavis; 1GWp to 2020
- technology: storage and highly-complex hybrid systems
- consumer: IT, including web-based customer engagement



## A strong sense of purpose

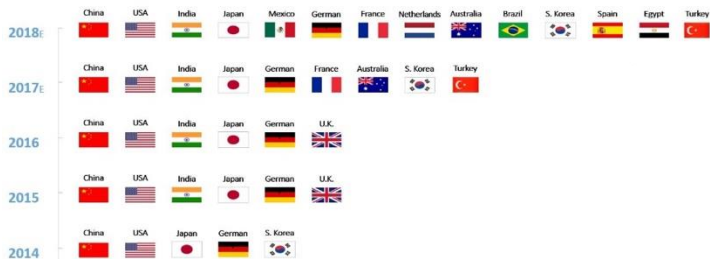
- our mission is to make a meaningful difference in the fight against climate change

Over 1GWp built and more than 3GWp in the pipeline

# SC strategy is aligned with solar's inevitable growth

## Markets

### Solar's Gigawatt-Scale Markets



Multi-polar sources of demand for solar are emerging

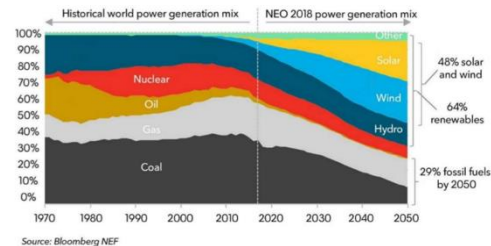
## Technology

Storage in same dramatic cost down and offer proliferation as PV 5 years ago

## SC strategy

- Capture full value of solar growth from greenfield development through to selling power via an integrated model
- Embrace new markets and subsidy-free opportunities
- Invest in storage and hybrid know-how
- Work with select committed partners who share our mission

## Business model



Cost down driving explosive growth

## Mission



IPCC driving behaviour at corporate, government and individual levels

# What we do

## Opportunity / customer

Utility



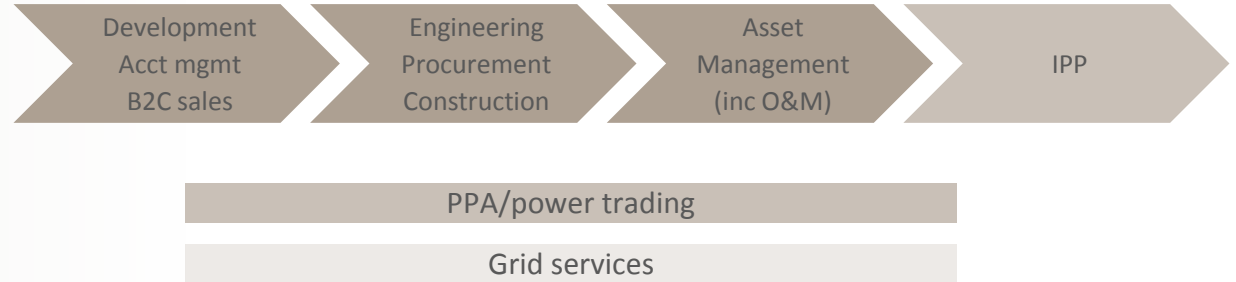
Corporate



Residential



## Project funding framework (development, bonding, asset ownership)



### Key

- Capability in place
- Actively building capability
- Future potential



# Leadership



## International growth:

3GWp pipeline cross 7 countries including the 2 of the largest systems in Spain



## Technical know how:

Including complex storage systems integrated with hydro and diesel



## Innovation:

World's largest solar bridge



## Firsts:

Largest solar farms built in Kenya, Netherlands, UK and Panama



## Customer focused:

Net Promoter Scores of >60 for IKEA's customers cross Europe



## Purchasing power:

Over 3m modules in five years

# Portfolio overview – Europe

*High-quality solar portfolio of 1.5 GW in three markets with additional opportunities in Portugal and Italy.*

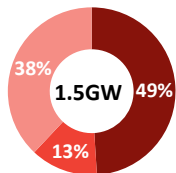
SPAIN (4 projects)	
Late-stage development	483 MW
Mid-stage development	249 MW
Early Stage	150 MW
<b>Total pipeline</b>	<b>881.5 MW</b>

NETHERLANDS (14 projects)	
Late-stage development	110 MW
Mid-stage development	86 MW
Early Stage	249 MW
<b>Total pipeline</b>	<b>445 MW</b>

FRANCE (11 projects)	
Late-stage development	17 MW
Mid-stage development	34 MW
Early Stage	167 MW
<b>Total pipeline</b>	<b>218.5 MW</b>

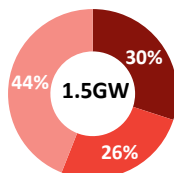


Gross pipeline –  
by country



■ Iberia ■ France ■ NL

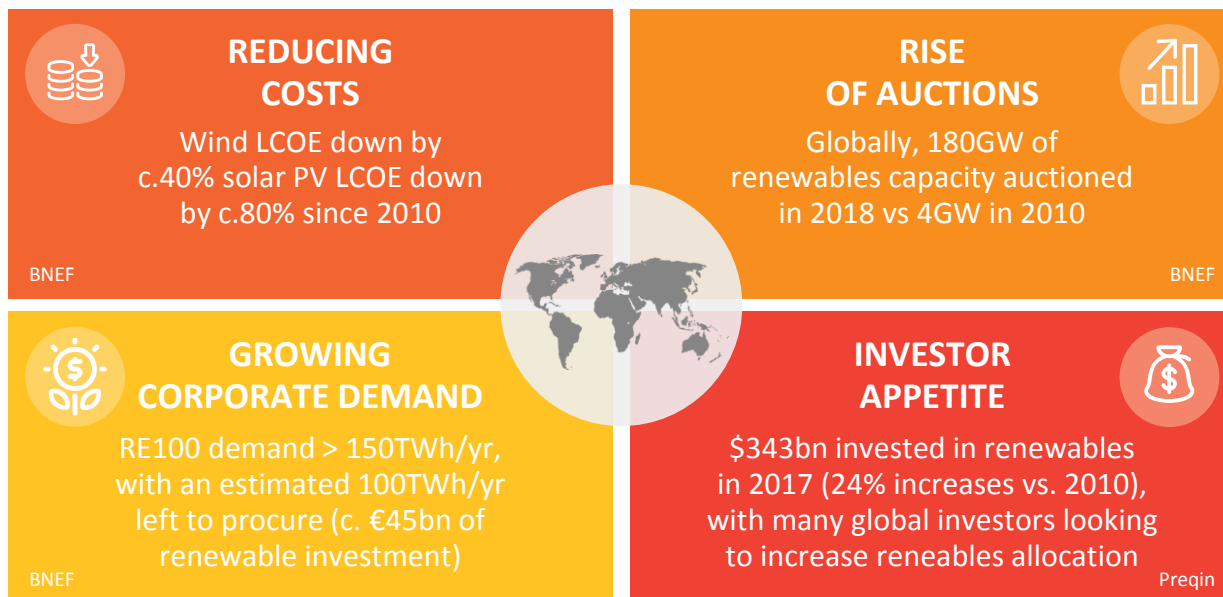
Gross pipeline –  
by development stage



■ Early Stage ■ Mid Stage  
■ Late Stage

# Subsidy-free renewables drivers

*Four trends are driving the growth of subsidy-free renewables around the globe*



# The old world

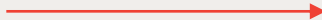
*Government subsidies mitigate price risks*



**Producer**

revenue = volume x price

MWh



MWh x Tariff



**Government-backed  
off-taking entity**

Focus on managing production risk rather than price risk



# The new world

*Renewable investments increasingly exposed to market*

Subsidized regimes

*Stable, certain income*

Income

Cost

Land, building, maintaining

Market-based regimes

*Uncertain income*

Market shift

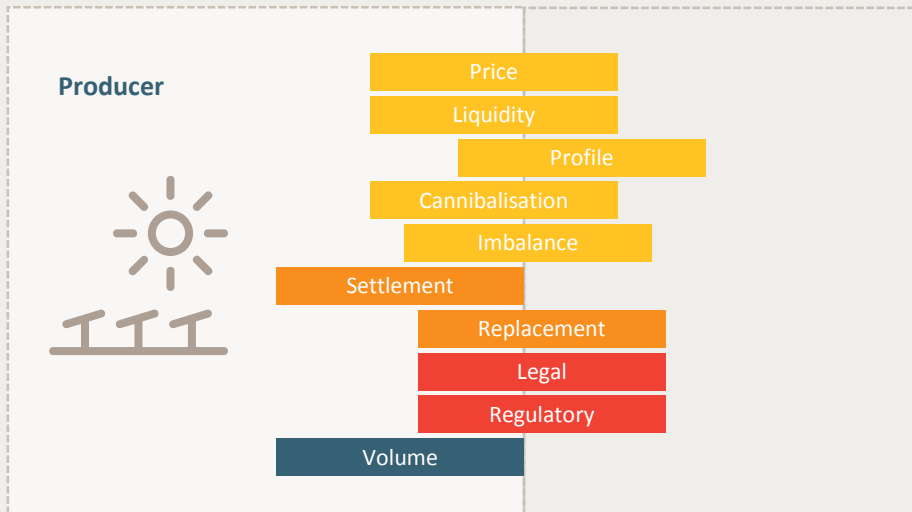
Energy trading and risk management



# Risk allocation without a sales contract

## *Risks borne by the producer/Equity*

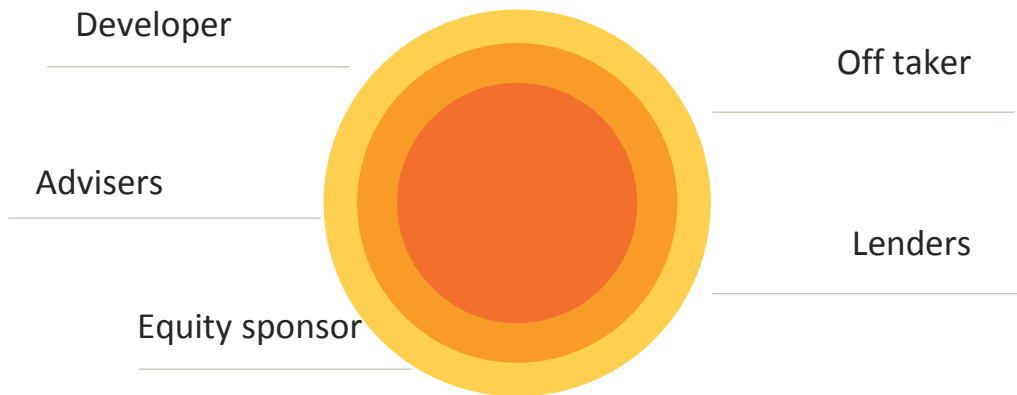
Risk allocation in a typical PPA market



The producer is exposed to several, complex risks

# Subsidy-free partnerships

*Delivering subsidy-free requires deep collaboration*



# Development challenges

## SPAIN



- Slow permitting
- Limited grid capacity
- Cost of land and cost of grid connection
- Variable local tax rates

## PORTUGAL



- Lack of transparency for grid capacity auctions
- Grid connection guarantees
- No shortage of projects, but few with permits

## NETHERLANDS



- Disconnect between ambitious national government and local government/communities
- Slow time to permit: 1-2 years
- Grid congestion
- Requirement for local community participation

# Development challenges, cont

## UK



- Lack of political support
- Availability and cost of land
- Cost of grid and grid capacity
- Planning process and costs for large systems
- Finding PPA offtakers

## GERMANY



- Limited to follow-up financings
- Competition with tender-projects/equity
- Priority Dispatch

## FRANCE



- Administrative and lengthy process (3-5 years)
- Costs and time to connect to the grid
- Intense competition for land
- Auction requirements drive up capex
- No PPA model as yet

# Development challenges, cont

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## ITALY



- Availability and cost of land
- Long timeline for obtaining approvals
- Lack of bankable off-taker/debt