



Advanced Soltech

Senior Secured Green Bond Investor Presentation

13 January 2020

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Agenda

- 1 Transaction summary
- 2 Introduction to Advanced Soltech
- 3 Business model
- 4 Project portfolio
- 5 Market overview
- 6 Financials
- 7 Risk factors

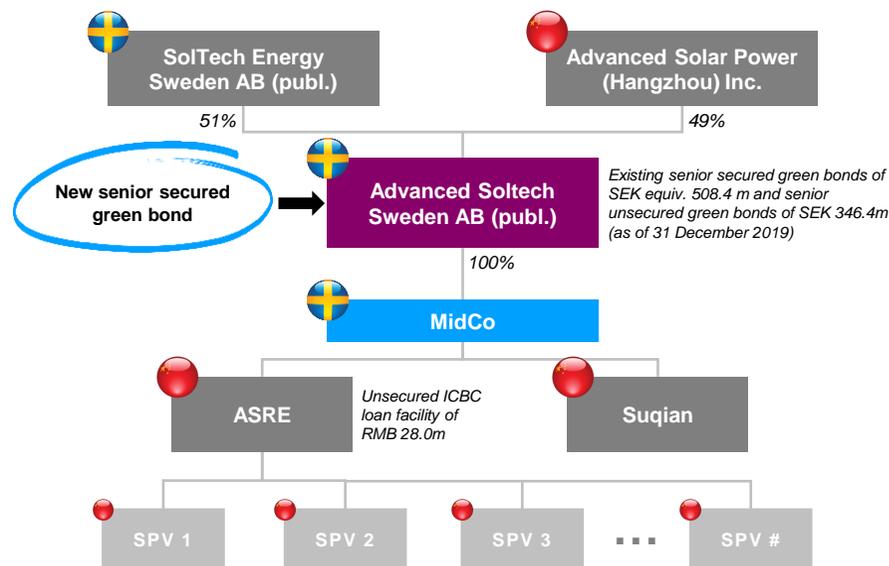
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Transaction overview

Background

- Advanced Soltech Sweden AB (“ASAB”) is a Swedish company which owns and operates rooftop solar power plants on commercial real estate properties in China and sells electricity to ASAB’s customers and the grid
- ASAB was founded in 2016 and is owned by SolTech Energy Sweden AB (publ.) (51%) (“SolTech Energy”), a Swedish First North listed entity and Advanced Solar Power (Hangzhou) Inc. (49%) (“ASP”), a Chinese producer of thin-film solar panels
- ASAB is contemplating to issue a senior secured green bond of an expected Swedish benchmark size (SEK/EUR) (with a framework amount of SEK 2.0bn/EUR 200m)
- The use of proceeds in line with the Green Bond Framework* rated **Dark Green** by Cicero will include:
 - Refinancing of existing secured and unsecured notes
 - Financing of expansion of the company’s operations and asset base
 - Paying transaction costs
- The security package to bondholders includes a full share pledge from ASAB over shares of the new MidCo and all intercompany loans
- The new financing structure with the contemplated bond issue is set up to give ASAB the financial strength to continue its expansion with the development and acquisition of solar photovoltaic asset portfolios and execute on its strategy going forward
- ASAB intends to list its shares on Nasdaq First North by H1 2020

Simplified transaction structure



Key figures

Capital structure as per 30 Sep. 2019		SEKm
Secured debt ¹		407.7
Unsecured debt ²		384.8
Cash on balance ³		155.1
Total net debt		637.4
Equity / Total assets		18.4%
Other key figures and events		
Installed capacity as per 30 Sep. 2019		104.3 MW
Senior secured bond issued in Nov. 2019 ⁴		SEK 100.7m
Installed capacity as per 31 Dec. 2019		139.2 MW
EBITDA capacity as per 31 Dec. 2019⁵		SEK 137.2

“ASAB is a **green** electricity producing utility company, we invest in and own rooftop solar power plants in China”

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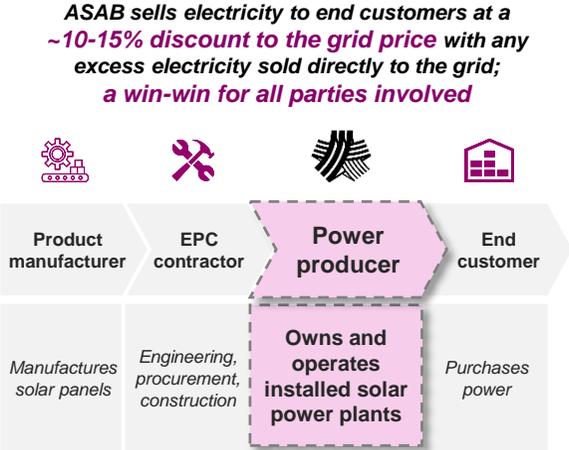
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Advanced Soltech at a glance

Overview

- Advanced Soltech Sweden AB (“ASAB”) is a Swedish company founded in 2016 and is owned by SolTech Energy (51%) and Advanced Solar Power (49%) with primary operations in China
- ASAB operates as a power producer in the solar as a service value chain in which the Company owns and operates installed rooftop solar power plants and sells electricity to its end customers at a c. 10-15% discount to the grid price
- ASAB operates in a large, untapped, high-growth market with a strong secular shift towards increased usage of renewable energy sources
 - With a significant uptick in renewable energy demand and a strong shift in political support for renewable energy and solar photovoltaics (“PV”), the Chinese solar energy market offers ample opportunity for growth for all players in the solar as a service value chain
- ASAB’s current and potential well-established, diversified customer base with contracts typically spanning 20 years provides a high share of recurring revenue and long-term cash flow visibility

Solar as a service value chain



Geographical presence

ASAB operates across several provinces in China and has a **diversified, well-established customer base**

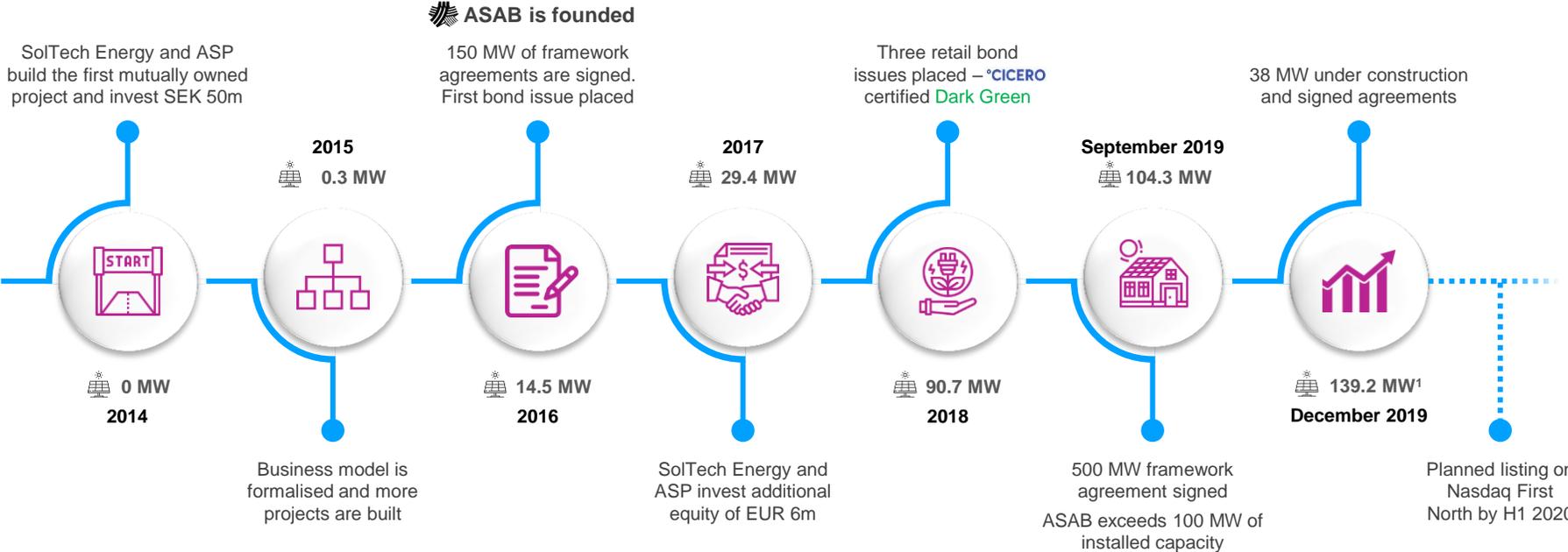


Key facts and figures



ASAB was founded in 2016 and is planned to be listed on Nasdaq First North by H1 2020

 End of period installed capacity



Founding and proof of concept

- The idea of using the combined knowledge and resources of SolTech Energy and ASP to operate rooftop solar power plants in China is born
- Proof of concept is achieved and ASAB's operations are formalised in a separate joint venture

Institutionalisation

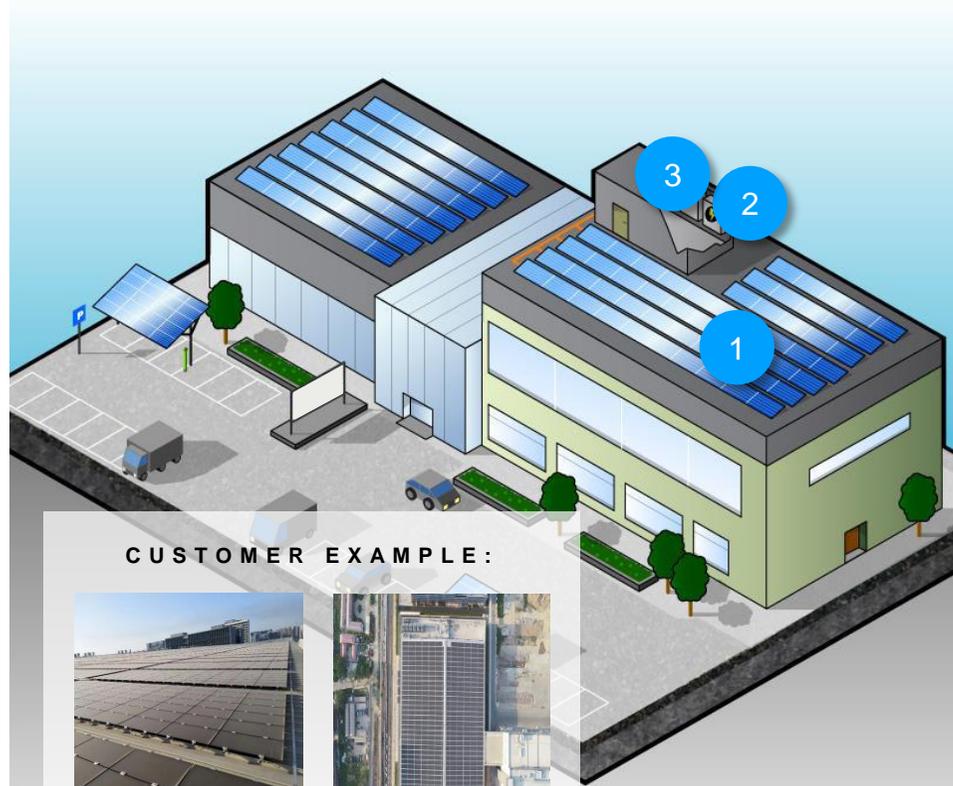
- Vote of confidence is received from both Chinese authorities and the capital markets through the first framework agreement as well as the first bond issue

Rapid scale-up

- Rapid growth in installed capacity as the solar as a service offering rapidly gains traction with customers

¹) Installed capacity as of 31 December 2019
Source: Company information

An illustrative overview of a solar PV setup



CUSTOMER EXAMPLE :



2 MW installation for China Star Optoelectronics Technology, Shenzhen

Solar PV panels and racking systems

1

- Typical lifespan of +25 years

Inverter and cabling

2

- Converts direct current (DC) into alternating current (AC)
- Lifespan of 15-20 years

Meter

3

- Measures generated electricity in kWh

Examples of projects owned by ASAB



Fenghua Xuri Hongyu Co., Ltd.
Capacity: 1.7 MW
Location: Ningbo, Zhejiang



Ebara Great Pumps Co. Ltd.
Capacity: 3.1 MW
Location: Wenzhou, Zhejiang



Ningbo Sente Auto Parts Co. Ltd.
Capacity: 0.5 MW
Location: Ningbo, Zhejiang



Advanced Solar Power Hangzhou's Factory
Capacity: 1.0 MW
Location: Hangzhou, Zhejiang



Shaoxing Longze Pipeline Co's property
Capacity of 1.4 MW
Location: Shaoxing, Zhejiang



Zhejiang Jindun Fire Control Equipment Co. Ltd.
Capacity: 4.0 MW
Location: Shaoxing, Zhejiang

What we do and why we do it – **green** electricity producer



ASAB operates in the world's largest electricity market; China¹



A large, untapped market with a structural shift towards solar PV



Stable prices, technological advances, equipment cost declines, and government support



Solar PV is typically cheaper than grid electricity in every Chinese city



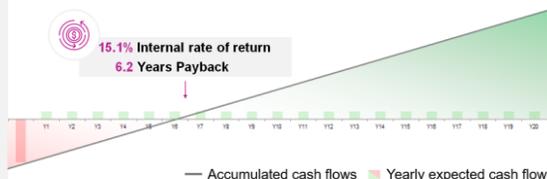
No grid fees or any need for additional land, distributed solar PV can supply densely populated areas



ASAB invests in new, high-yielding rooftop solar power plants



Case study: Sohbi Craft
1.3 MW solar power plant in Jiangsu



- No captive technology, low construction risk, low technology risk, no investment in land
- Guarantees from third party manufacturer/contractor
- Installation warranties
- Turn-key investments
- External sales network – low fixed costs
- Chinese local partnership enables low counterparty risk

ASAB's current installed portfolio offers long-term revenue and cash flow visibility



Green electricity producer to a well-established, diversified customer base



Zhejiang Roomeye Energy-Saving Technology Co., Ltd.
Capacity: 1.18MW
Location: Huzhou, Zhejiang

- Solar PV power plants installed on customer rooftops
- Customers are buyers of electricity
 - 20 year contracts
 - No customer investment
 - Receives ~10-15% discount to grid price
- Solar PV power plants are grid connected meaning that the electricity is transferable if the customer does not use the electricity produced
 - No overgeneration risk
- Low operational expenditure ~5%, leading to ~85% Group EBITDA margin
- Diversified customer base with no single dependent customer

20 years
contracts

0 SEK
Customer investment

~10-15%
Discount to grid price

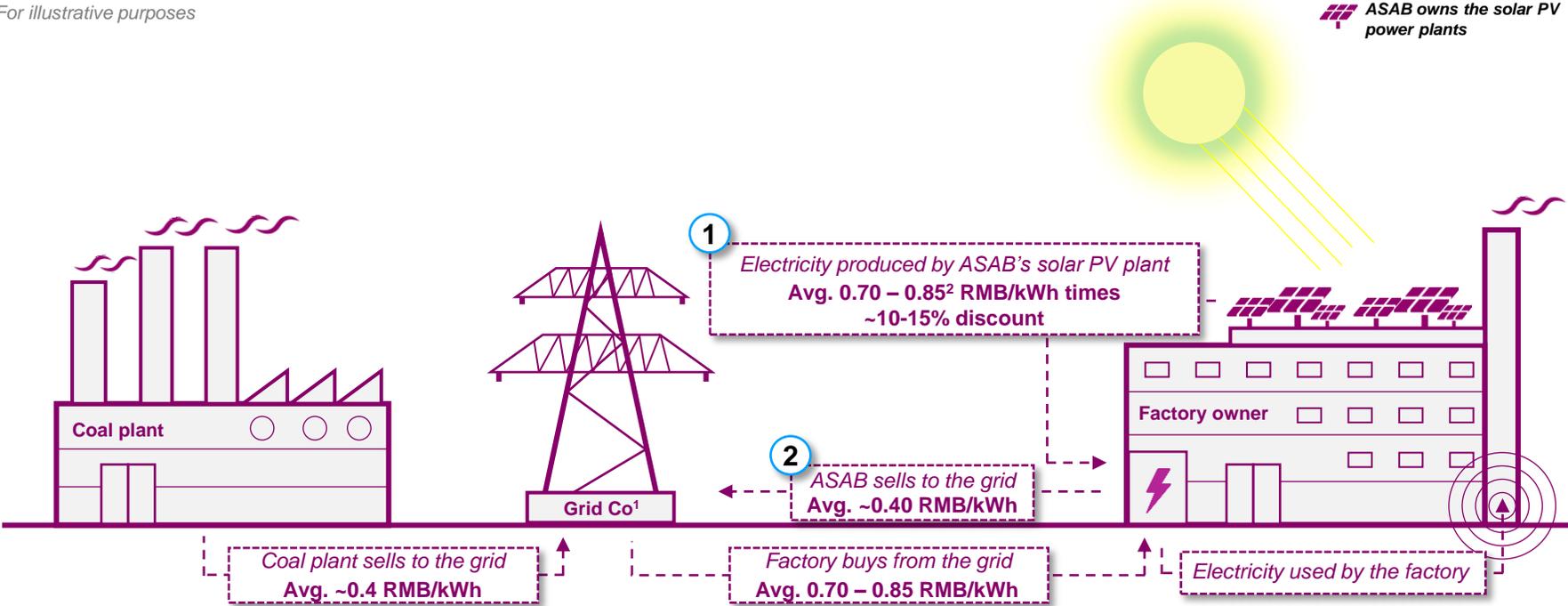
~ 5%²
OpEx.
(SPV level)

~ 95%
EBITDA margin
(SPV level)

ASAB enables customers to buy electricity at a discount

For illustrative purposes

 ASAB owns the solar PV power plants



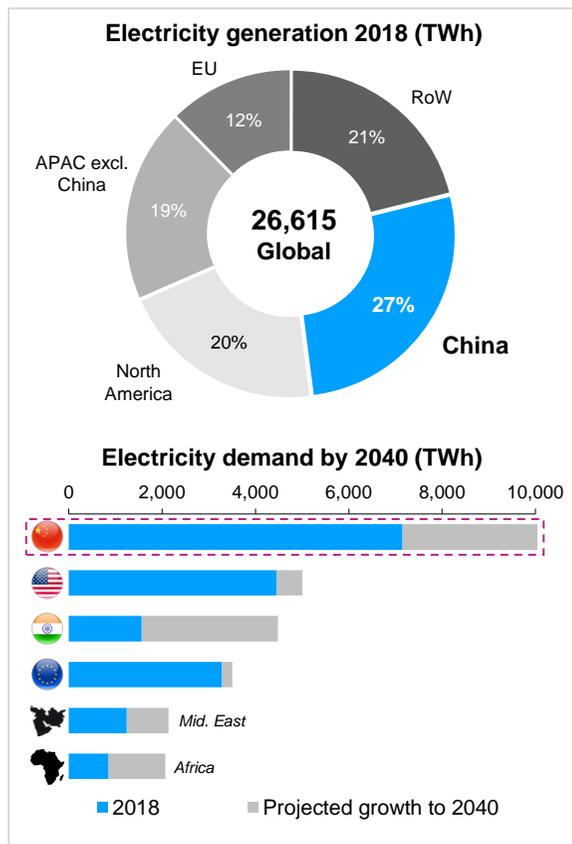
- 1 ASAB sells solar PV electricity produced on the rooftop to the customer/factory owner at a ~10-15% discount price compared to the grid price
- 2 If the customer/factory owner does not purchase the electricity produced by the solar PV, ASAB sells the electricity produced directly to the grid

The customer always has an incentive to buy the electricity produced by the solar PV instead of buying directly from the Grid Co¹

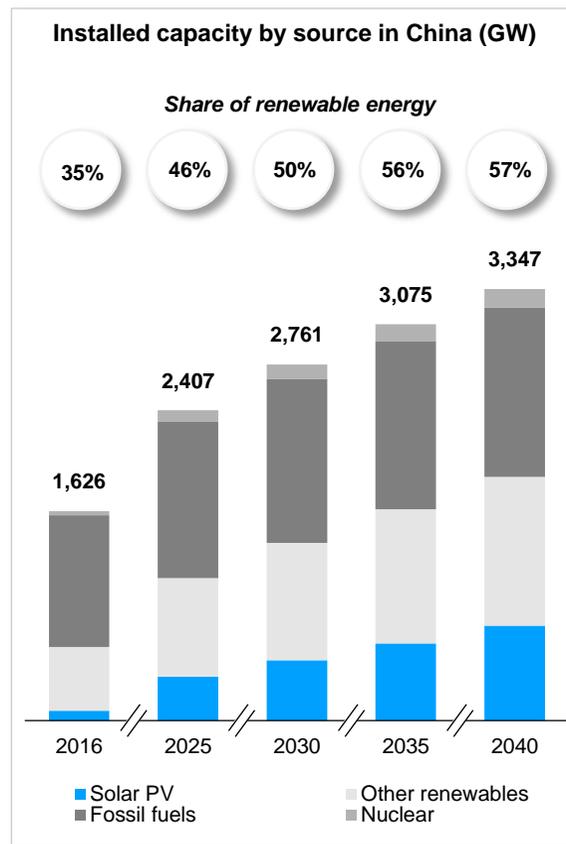
1) The state-owned State Grid Corporation of China supplies power to over 1.1 billion of the Chinese population in 26 provinces, autonomous regions and municipalities, covering 88% of Chinese national territory, source: Sgcc.com
 2) Highest 0.93 RMB/kWh and lowest 0.48 RMB/kWh within ASAB's customer base as of 31 December 2019 and not adjusted for VAT
 Note: All prices excluding subsidies.
 Source: Company information

ASAB is well-positioned in a large, stable, and untapped market with a structural shift towards solar PV

China is the world's largest electricity market with a need to generate more than 3,000 TWh of additional electricity by 2040



Rising electricity demand will be met with an increased share of renewable energy spearheaded by solar PV



Regulated electricity prices reduce uncertainty for ASAB

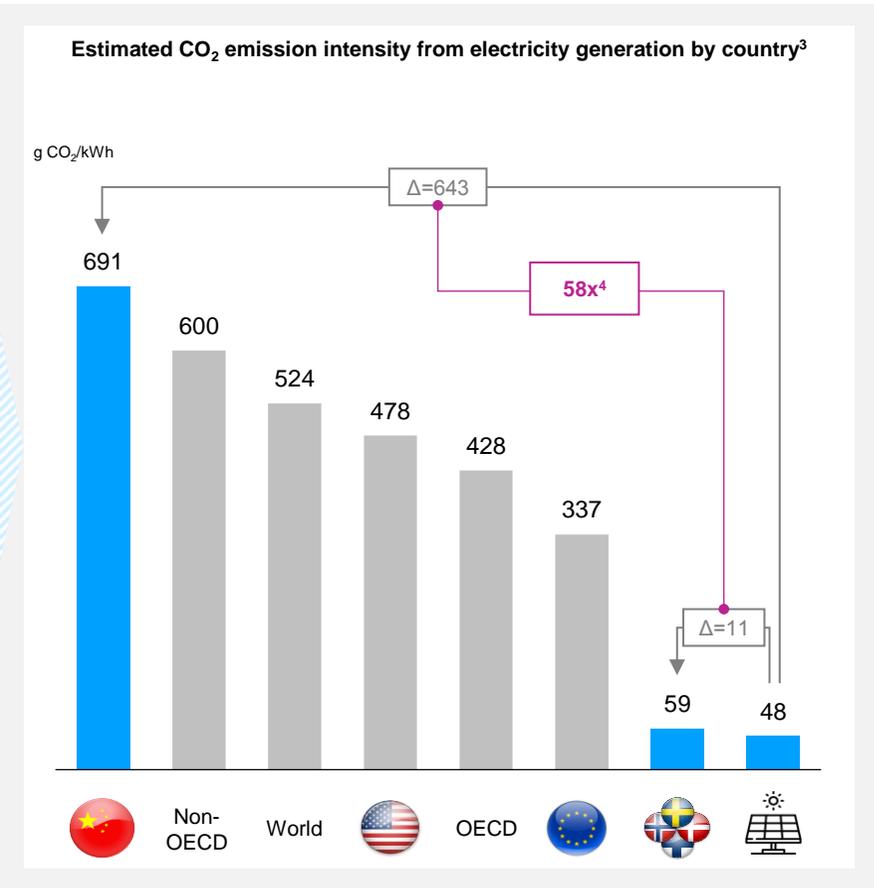
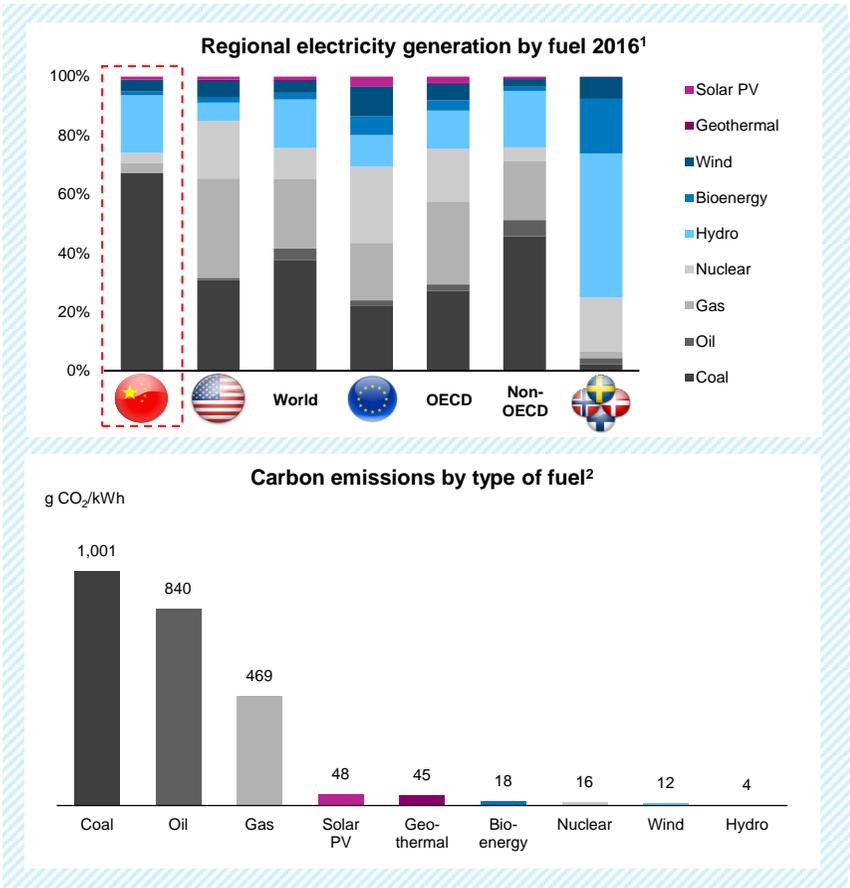
The Chinese electricity market

- The policy price of electricity in China is **centrally guided by NDRC¹** annually
- The actual customer price is **determined by local grid companies** with varying prices across provinces
- The price varies between different types of **end-customers**; depending on whether they are **residential** or **industrial customers**
- In Eastern China the prices are **relatively high due to high electricity demand**, several large cities, and well-developed manufacturing sectors

Industrial prices Hangzhou (Zhejiang) 2003-2019

Since 2009 the price has been in the range of RMB 0.81 – 0.84

Investments in solar power in China yields ~58x the carbon impact compared to Sweden



Investing in solar PV in China yields an outsized environmental impact due to the country's high carbon emission intensity

ASAB's business model in practice – customer case study

SEKm

ACCUMULATED PROJECT CASH FLOW

Sohbi Craft

1.3 MW solar power plant in Jiangsu installed in September 2019



General assumptions:

- 95% of the electricity is sold to the customer, the rest is sold to the grid
- The grid price is 65% of the customer price
- An average project uptime of 98%
- RMB/SEK = 1.37

(These assumptions will be referenced throughout the presentation where applicable)

Key project figures:

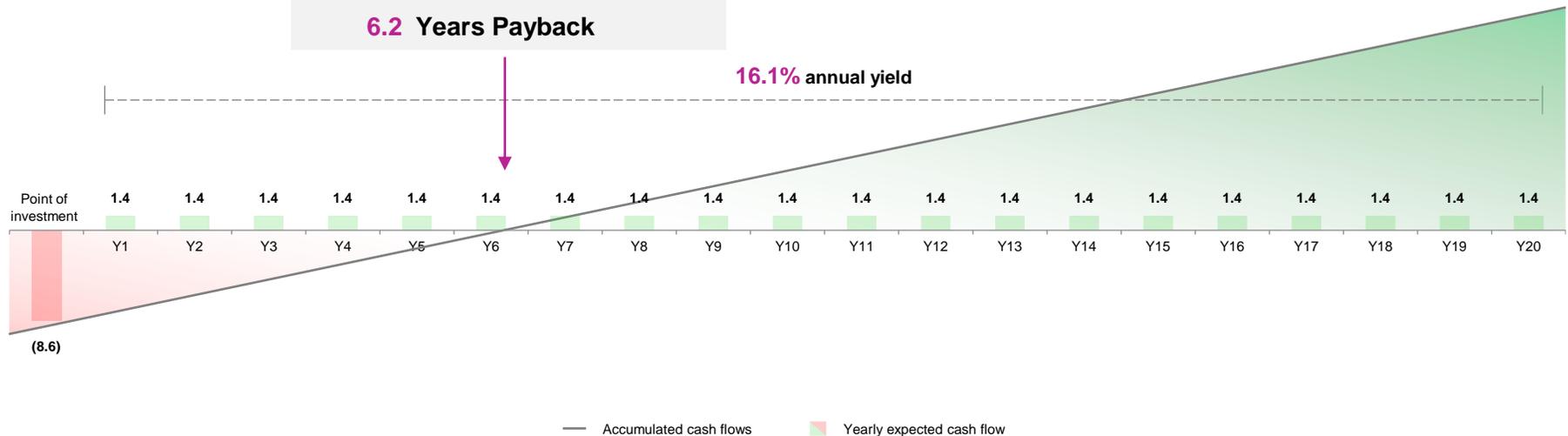
- 1,305 kW installed capacity
- 1.06 KWh/W and year
- 0.82 RMB/KWh price paid by customer
- 0.04 RMB/kWh subsidies over the 20-year period
- 0 SEK residual value



15.1% Internal rate of return

6.2 Years Payback

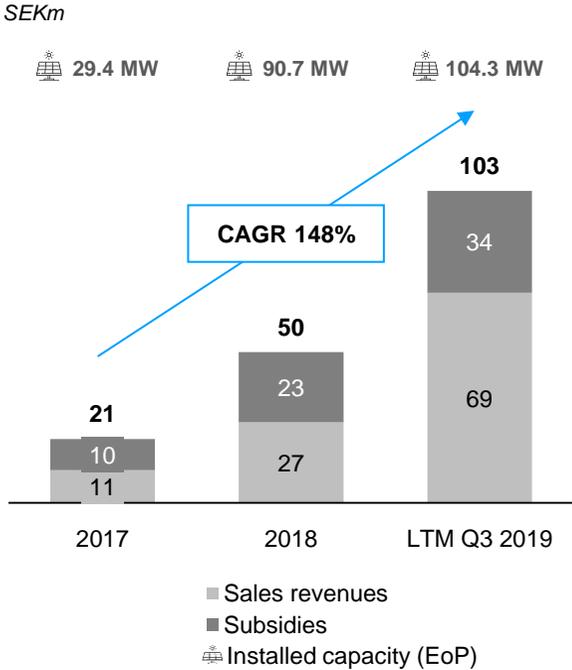
16.1% annual yield



Strong historical financial performance

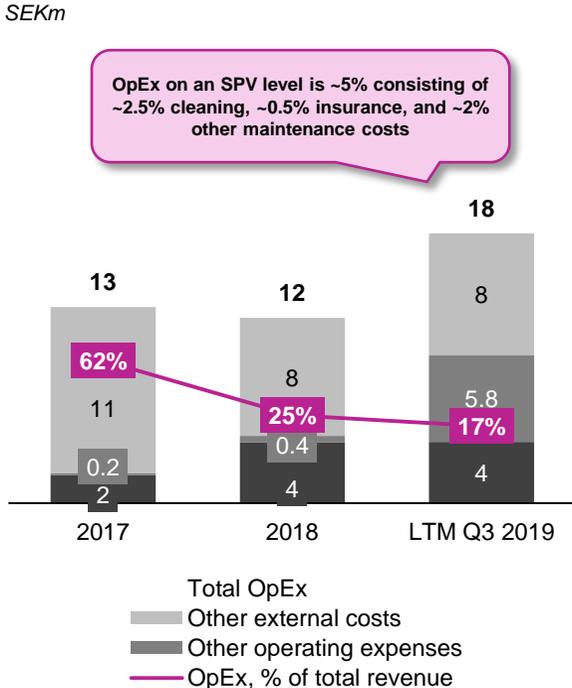
Revenue

Strong revenue development despite decreasing subsidies attributable to successful execution of 102¹ projects, which is expected to generate recurring revenues for the next ~20 years...



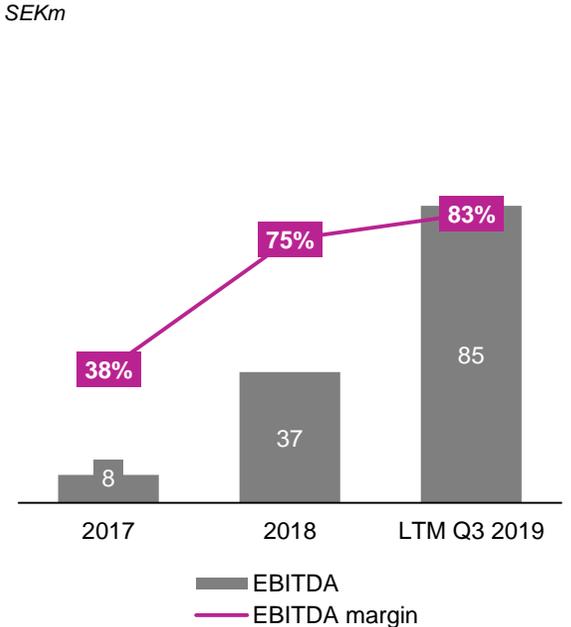
OpEx

...combined with decreasing OpEx² thanks to stable maintenance costs and build-up of a high-yielding asset base...



EBITDA

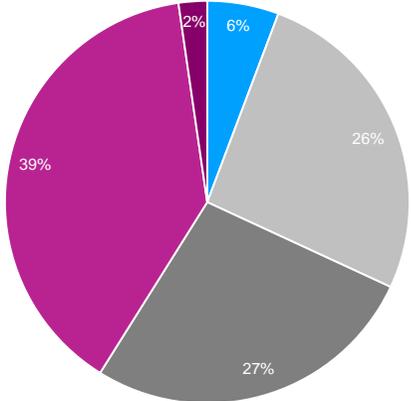
...has led to ASAB reporting an EBITDA of SEK 85m (83% margin) in LTM Q3 2019 which should increase over time due to a growing asset base with relatively stable group overhead costs



A well-diversified customer base with low sector risk

Customer split by size

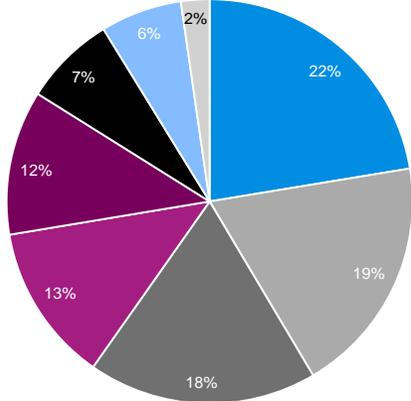
Installed capacity by customers ~FTEs



■ 50-99 ■ 100-499 ■ 500-999 ■ 1,000-4,999 ■ ≥5,000

Customer split by industry

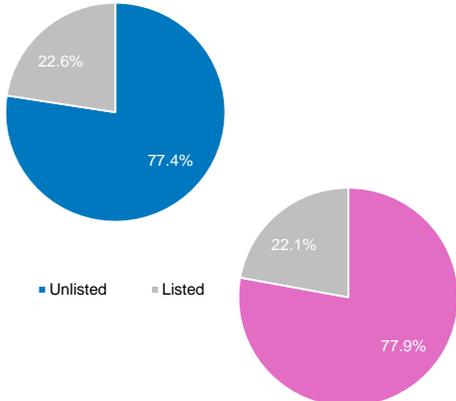
Installed capacity by customer industry



■ Machine manufacturing ■ Other
 ■ Electrical appliances manufacturing ■ Brewery
 ■ Basic materials ■ Textile
 ■ Auto parts ■ Government

Customer split by types

Installed capacity by customer type



■ Unlisted ■ Listed
 ■ Private ■ Government-owned

- A customer base of predominantly large organisations contributes to stability in the portfolio
- Proven offering to demanding customers who prioritise quality and reputation
- Diverse customer base ensures added protection against industry specific risk
- Proven offering across a large variety of industries
- Strong interest from government entities underscores the alignment of interests
- Strong interest from public companies shows the importance of public perception for environmental issues

A well-established customer base consisting of customers who pass a rigorous pre-contract evaluation process to ensure low counterparty risk

Revenue and EBITDA capacity given high-yielding asset base

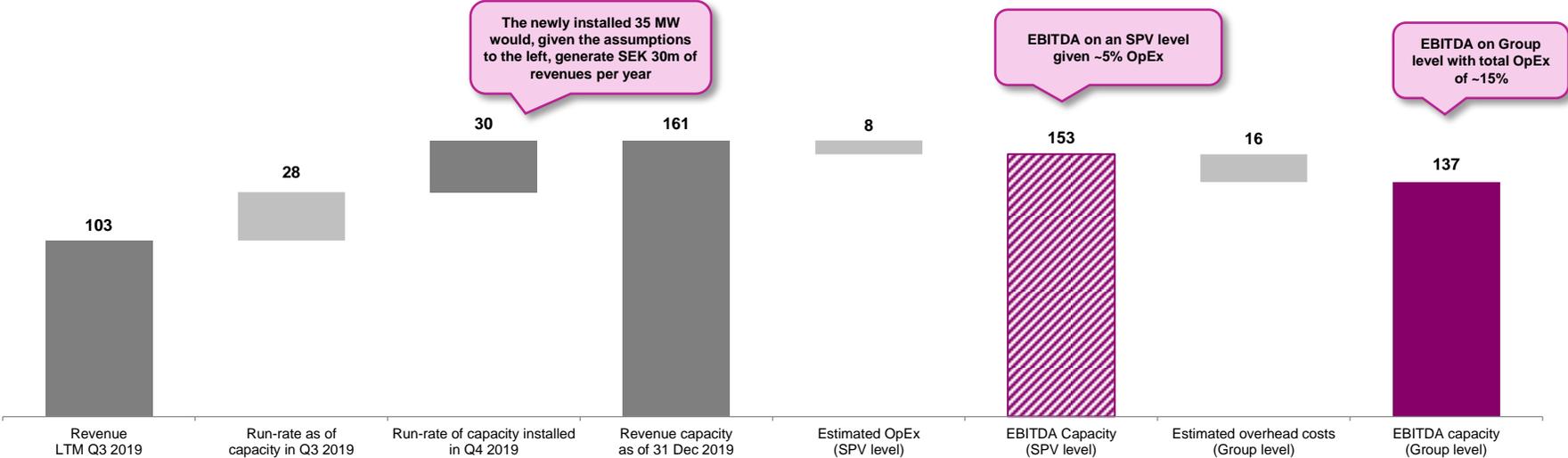
EBITDA capacity given recently installed capacity

ASAB has between 30 September and 31 December 2019 installed 35 MW of additional solar power which, together with existing projects, totals 139 MW installed and are expected to generate SEK +160m of revenues going forward (subject to assumptions made below)

SEKm

Key assumptions:

- 1.03 kWh per W installed
- 0.62 RMB sales price and 0.05 RMB in subsidies per kWh¹
- General assumptions as stated on page 17



Key credit highlights

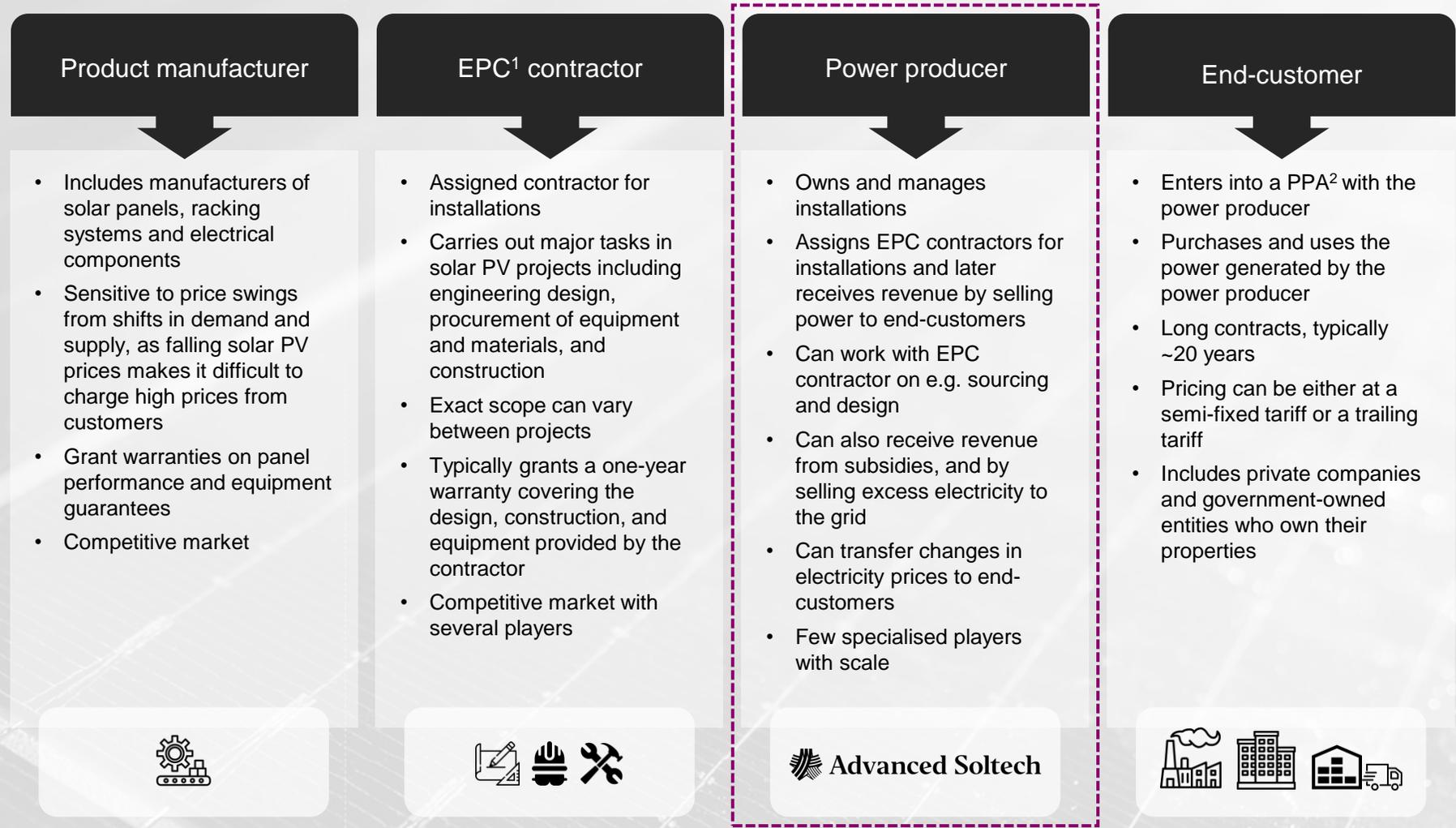
- 1** Large untapped growth market driven by secular shift towards renewable energy sources
- 2** Outsized positive environmental impact from solar power investments in China
- 3** Attractive, low-risk service offering to a stable, well-established customer base
- 4** Scalable business model with recurring revenue and long-term cash flow visibility
- 5** Large current project pipeline with substantial growth potential
- 6** Continuous accumulation of high-yielding underlying assets

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- 7 Risk factors

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ASAB is a key player in the solar as a service value chain



ASAB is powered by a resilient business model with an attractive customer offering and long-term contracts

Overview of distributed solar PV

With no grid fees and no need for additional land, distributed solar PV can supply densely populated areas with **reliable electricity at a low cost**

Distributed solar PV

- Distributed solar PV systems are decentralised, modular, and flexible systems located close to end-customers
- Commercial, industrial, and residential rooftop systems, plus ground-mounted systems of up to 20 MW which comply with various conditions
- Distributed generation consists largely of commercial and industrial systems with an increasing number of residential and floating projects
- Small compared to centralised solar PV systems

Key benefits:

-  Resilient and unaffected by grid issues
-  Supplies customers directly at location or to grid
-  Can utilise rooftop space at close to zero cost
-  Suitable for cities
-  No grid fees or other charges

Distributed solar PV



Centralised solar PV



Distributed solar PV offers several benefits as opposed to centralised solar PV which is typically highly capital intensive, in need of large areas of land, and designed for grid supply

Attractive customer offering

ASAB generates stable revenue on a recurring basis by providing high-quality customers an **attractive offering with limited downside and long-term visibility**



0
SEK
customer investment



~15
percent
of customer electricity usage



~10-15
percent
discount to the grid



20
Years
average contract length

Adaptive pricing model¹



Semi-fixed tariff

~37% of ASAB's installed capacity is priced with a semi-fixed tariff, meaning that the customer receives a fixed discount per kWh (~10-15%) to the official listed price from the local electricity company. This price is only adjusted if the official listed price is subject to an adjustment larger than 5%.² The listed price normally changes on annual basis



Trailing tariff

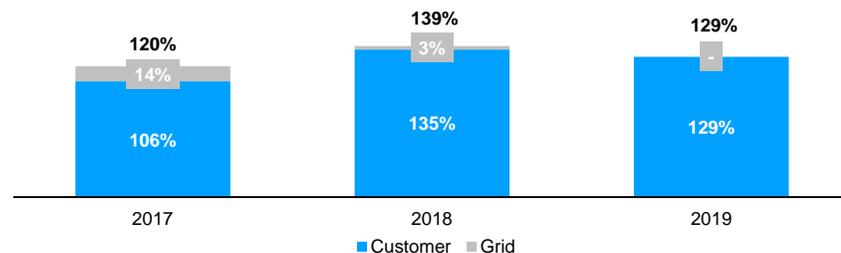
~63% of ASAB's installed capacity is priced with a trailing tariff, meaning that the customer receives a fixed discount (~10-15%) to the price per kWh the customer pays on their electricity bill from the local electricity company. The kWh price varies depending on the time of day the electricity is consumed

ASAB's estimated vs. actual annual electricity generation for a few select projects

Kaifeng University

% of estimated production

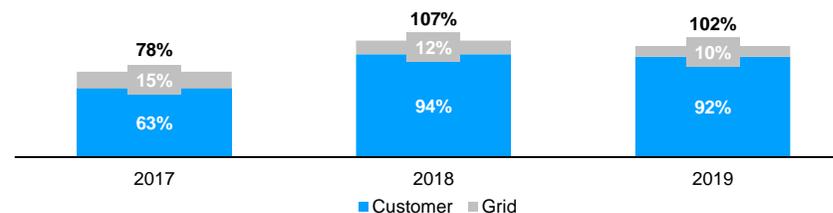
- Installed in February 2016
- Capacity of 0.3 MW
- Estimated annual electricity generation of 344 MWh



Jinma Packing Material Co., Ltd.

% of estimated production

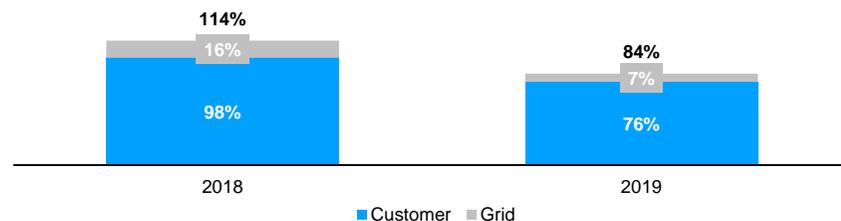
- Installed in December 2016
- Capacity of 1.0 MW
- Estimated annual electricity generation of 996 MWh



Nanhai Investment Co., Ltd.

% of estimated production

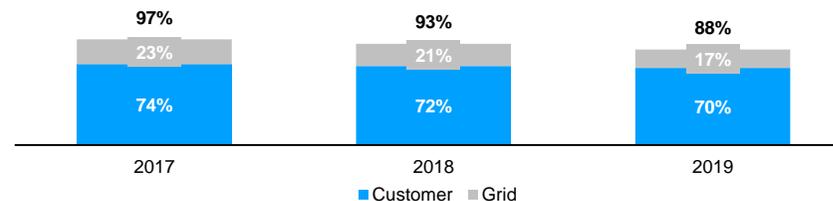
- Installed in September 2017
- Capacity of 1.4 MW
- Estimated annual electricity generation of 1,346 MWh



Jindun Fire Control Equipment Co., Ltd.

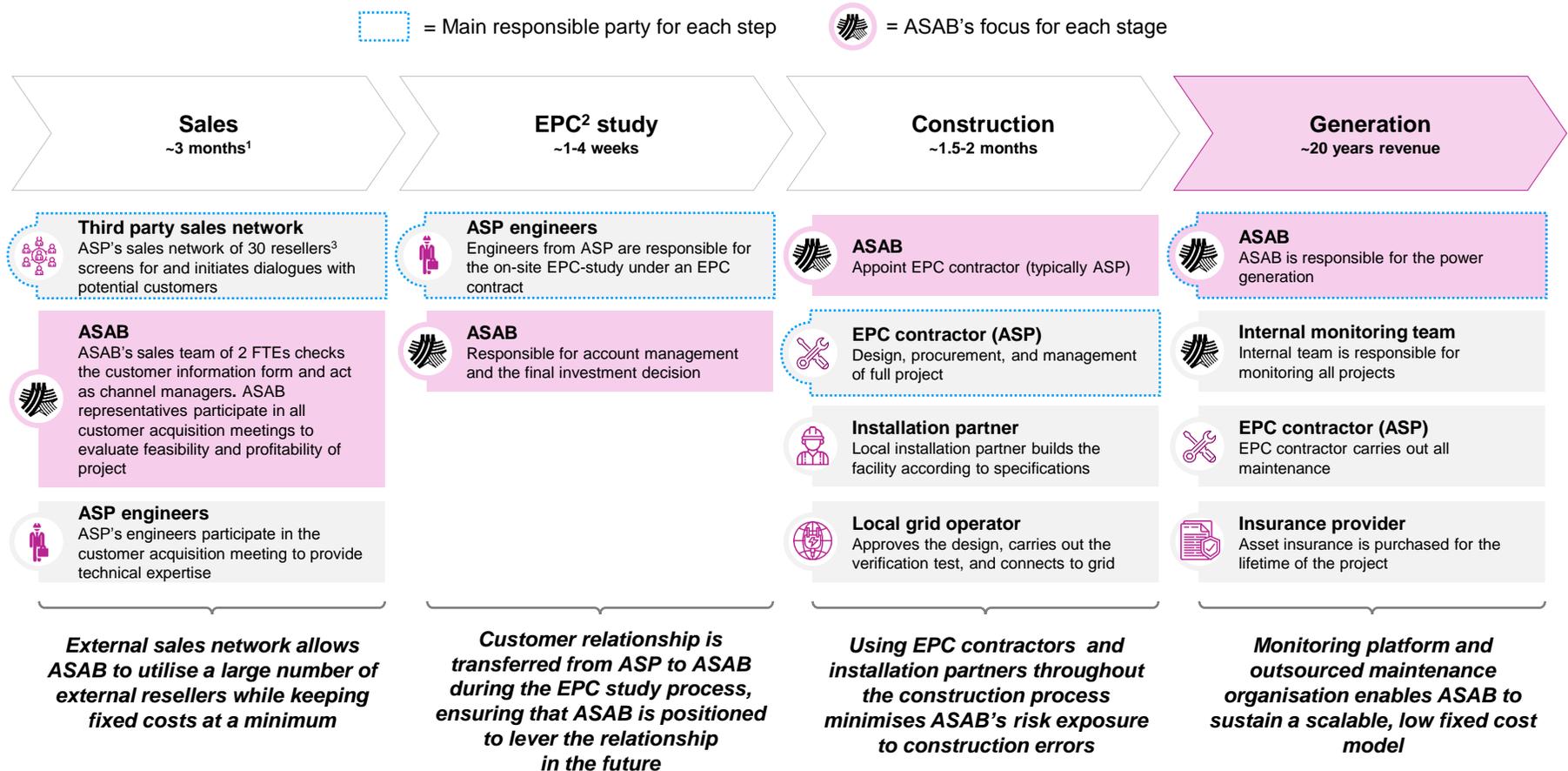
% of estimated production

- Installed in October 2016
- Capacity of 4.0 MW
- Estimated annual electricity generation of 3,916 MWh

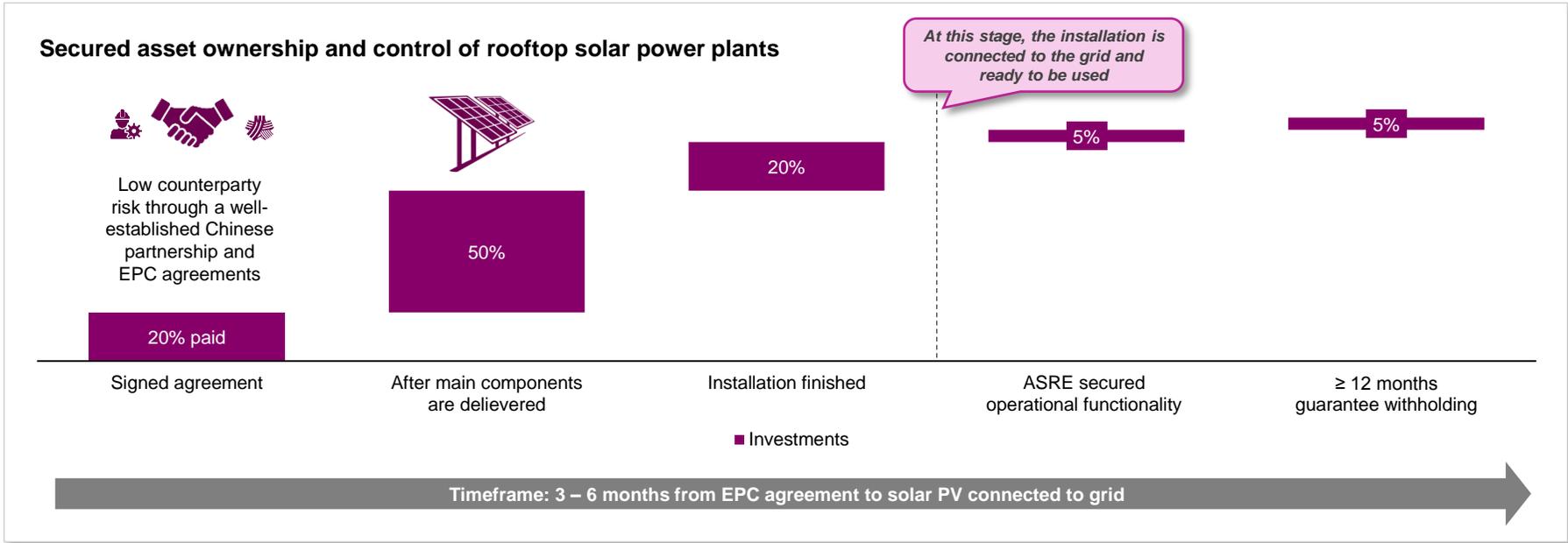


An overview of ASAB's value chain from start to finish

Independency and a low-risk business model enables ASAB to focus on high margin electricity generation



Secured process for handling and installation of solar power plants



The EPC agreement (“Engineering Procurement Construction Agreement”) regulates the agreement between ASAB and the EPC Contractor

- **Turnkey contracts:** the EPC Contractor has to execute and deliver the project within an agreed timeframe and budget
- **No dependent counterparty:** ASAB has only used ASP’s solar cells for ~20% of the projects
- **Insurances and guarantees:** the EPC contractor is responsible for insurance during the construction period. A standard production guarantee follows with the panels

The rooftop agreement is typically made with the property owner

- **Credit evaluation:** Approved creditworthiness evaluation
- **Long contracts:** ~20 year agreement
- **Change in property owner:** If property sold to another owner, same terms apply subject to ASAB’s approval of the new customer, otherwise the asset needs to be bought for 130% of asset value¹
- **Certainty of electricity being sold:** ASAB sells the electricity to the customer. In case of non-payment, the electricity can be sold to the grid

Low installation risk, ownership, and visibility through EPC-agreements limits risks

1) Book value

Key contracts – an overview of rooftop and framework agreements

Rooftop agreements regulate all terms and conditions

What is it?



- The rooftop agreement is the **contract between the customer and ASAB** and specifies price and size of the installation
- Customers are typically **the owner and business operator of the facility** upon which solar power plants are installed
- A key benefit of operators and owners being the same entity is that it **aligns interests and minimises ASAB's project execution risk**
- Each contract consists of **general terms** dictating ASAB's and the customer's respective obligations and **specific terms** regarding price and approximate installation size negotiated
- Rooftop agreements are used for all types of projects and are **key for ASAB's business model**

General Terms

ASAB's obligations

- Not cause any substantial interference** to the customer's operations
- Not overload the roof**, structure or other parts of the building
- Ensure that the **quality of the power** generated by the solar power plants complies with the applicable **Chinese national standard**

Customer obligations

- Not erect** or permit the erection of **any building, structure, or equipment** on the roof or around the building that may **obstruct the free passage of light** to the roof
- If the **facility is sold**, the rooftop agreement is to be **transferred** to the new customer/owner subject to approval from ASAB or the solar power plant is to be **bought out** at 130% of the book value

Framework agreements provide exclusivity

What is it?

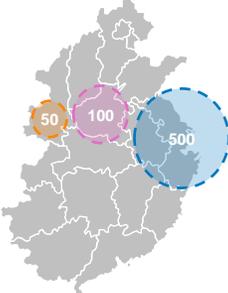


- Framework agreements are typically entered into with a government entity with a **pre-determined target capacity**
- The framework agreement dictates the capacity to be installed by ASAB over a certain number of years
- Entering into framework agreements gives ASAB a competitive advantage of exclusive rights to rooftops in areas covered by the framework agreement
- ASAB has no obligations and always has an option to walk away

Key highlights

- ASAB agrees to install a certain capacity in the area
- The counterparty suggests suitable buildings
- ASAB gets exclusive right to build rooftop solar plants in the area

	50	100	500
Framework capacity (MW)	50	100	500
Capacity completed projects (MW)	0	0.9	14.5
# of completed projects	0	7	4
Time frame	2016-2021	2016-2021	2019-2024



Key benefits of ASAB's business model



No captive technology

ASAB is not bound to use any particular solar panel technology



Low construction risk

EPC contractors assume responsibility for construction related risks



Low overgeneration risk

Grid connectivity provides protection against overgeneration, excess capacity can be sold to the grid



Low technology risk

Panel producers are responsible for the product risk through warranties on all solar panels



No investment in land

"Borrowing" existing rooftops eliminates need to invest in land area



Low-cost business model

Low maintenance OpEx paired with an external sales network minimises cost base enabling rapid scale-up

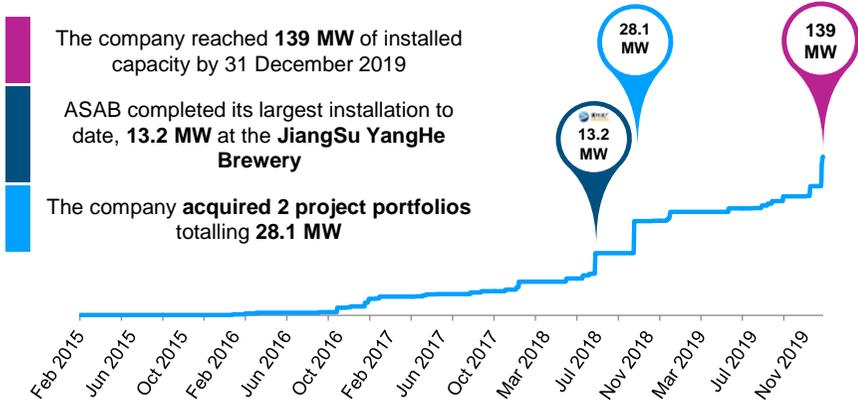
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Rapid development of installed capacity in several areas with the capacity to sign further large contracts

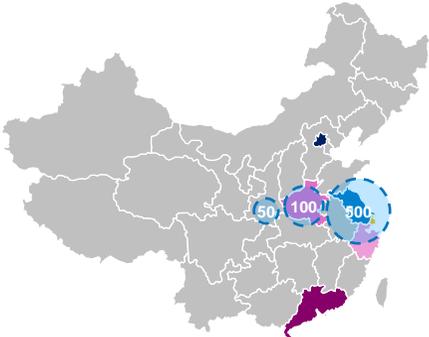
Fast growing installed capacity



Regional overview

Current portfolio			
Province	Installed capacity (MW)	Number of projects	Under construction and signed agreements (MW)
Beijing	0.6	1	-
Henan	0.9	7	-
Jiangsu	39.1	13	10.6
Shanghai	0.8	3	2.5
Zhejiang	93.9	76	8.6
Guangdong	2.2	1	-
Anhui	1.7	1	9.0
Hebei	-	-	1.5
Shanxi	-	-	5.5
Total	139.2	102	37.7

Framework agreements - Portfolio focused on eastern China



Framework agreements

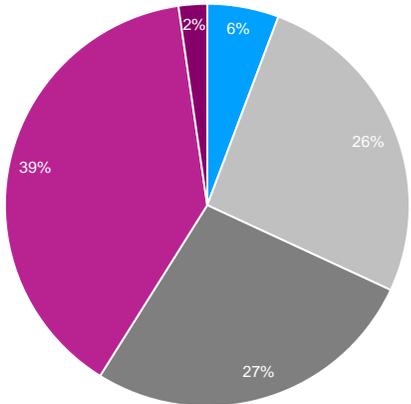
ASAB receives exclusive rights to install a pre-determined capacity in an area

Framework capacity (MW)	Counterparty	Province	Time frame
50	YangTai Group	Shanxi	2016-2021
100	Henan Provincial Energy Conservation	Henan	2016-2021
500	Jiangsu Siyang Administrative Committee of Economic Development Zone	Jiangsu	2019-2024

A well-diversified customer base with low sector risk

Customer split by size

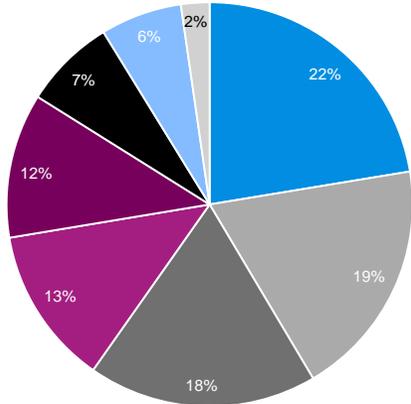
Installed capacity by customers ~FTEs



■ 50-99 ■ 100-499 ■ 500-999 ■ 1,000-4,999 ■ ≥5,000

Customer split by industry

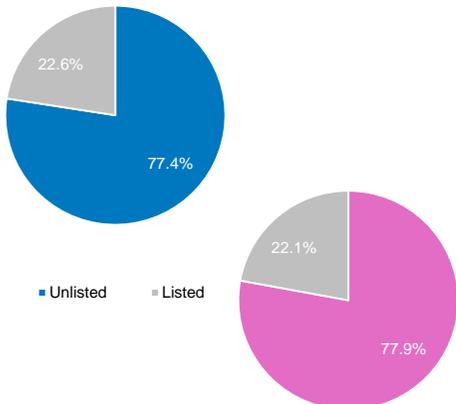
Installed capacity by customer industry



■ Machine manufacturing ■ Other
 ■ Electrical appliances manufacturing ■ Brewery
 ■ Basic materials ■ Textile
 ■ Auto parts ■ Government

Customer split by types

Installed capacity by customer type



■ Unlisted ■ Listed
 ■ Private ■ Government-owned

- A customer base of predominantly large organisations contributes to stability in the portfolio
- Proven offering to demanding customers who prioritise quality and reputation
- Diverse customer base ensures added protection against industry specific risk
- Proven offering across a large variety of industries
- Strong interest from government entities underscores the alignment of interests
- Strong interest from public companies shows the importance of public perception for environmental issues

A well-established customer base consisting of customers who pass a rigorous pre-contract evaluation process to ensure low counterparty risk

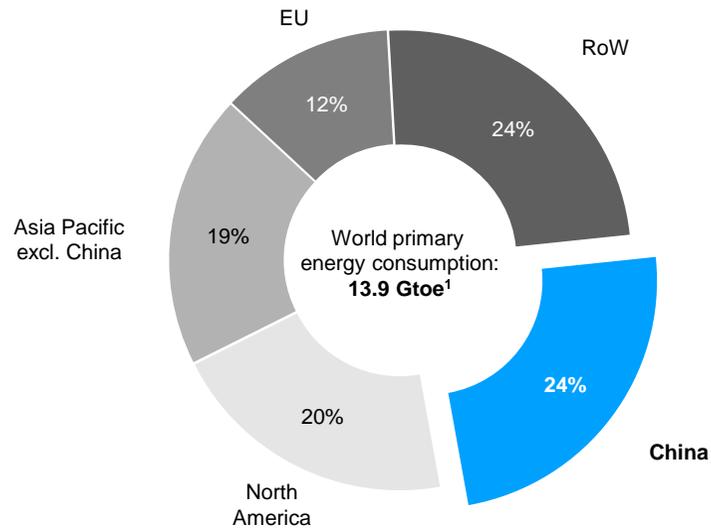
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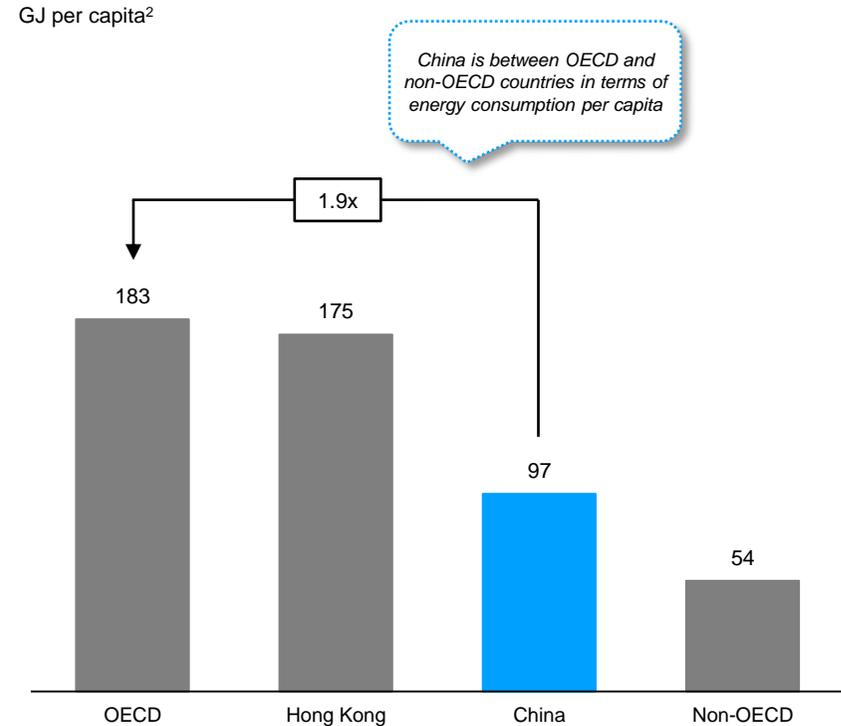
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ASAB operates in the world's largest energy market

Primary energy consumption by geography 2018



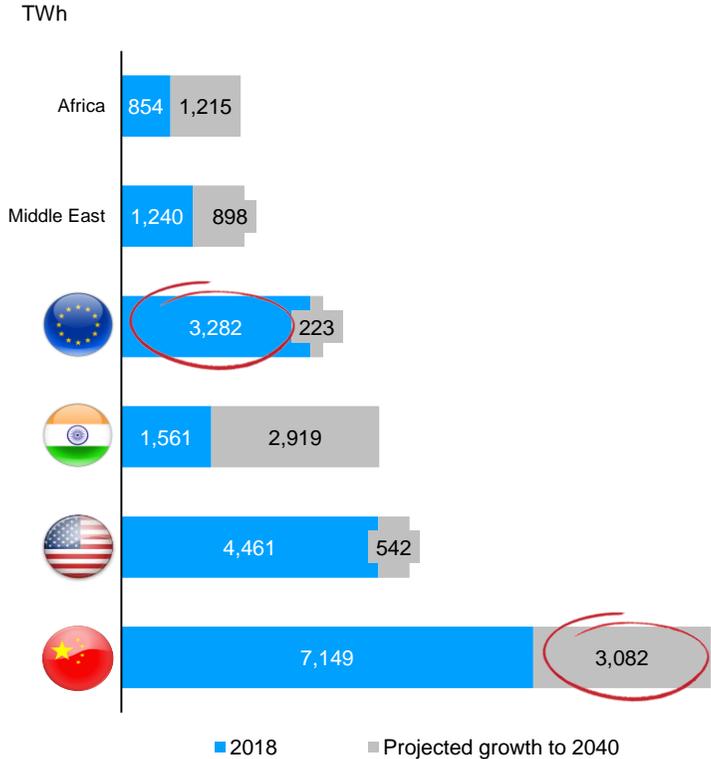
Primary energy consumption per capita 2018



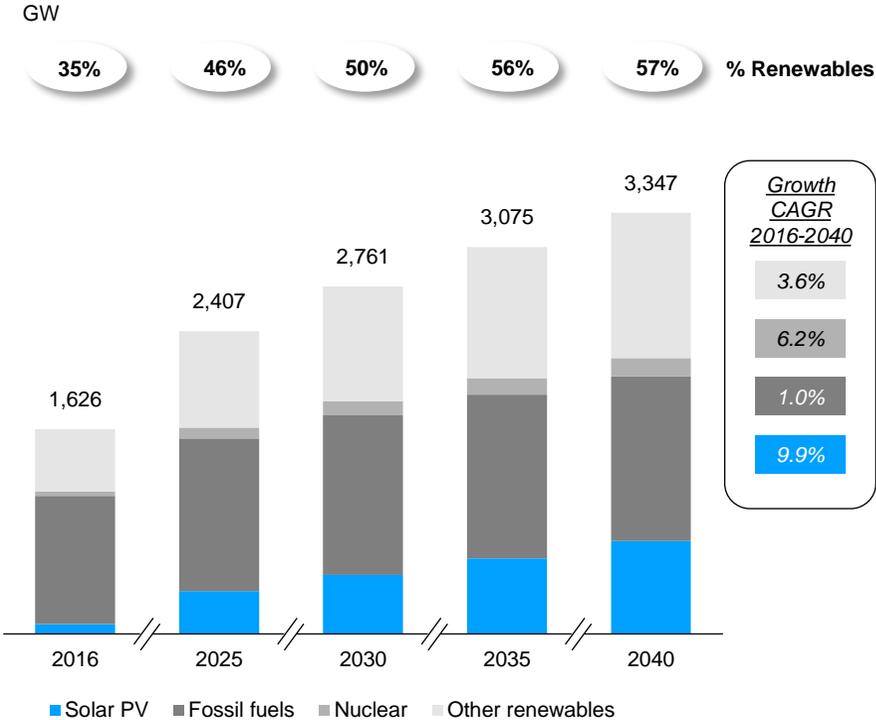
While China accounts for almost a quarter of global energy consumption, it is still behind developed countries in terms of energy demand per capita

To meet rising demand, China needs to add the equivalent of today's EU electricity generation system to its infrastructure by 2040

Electricity generation, 2018 vs. 2040



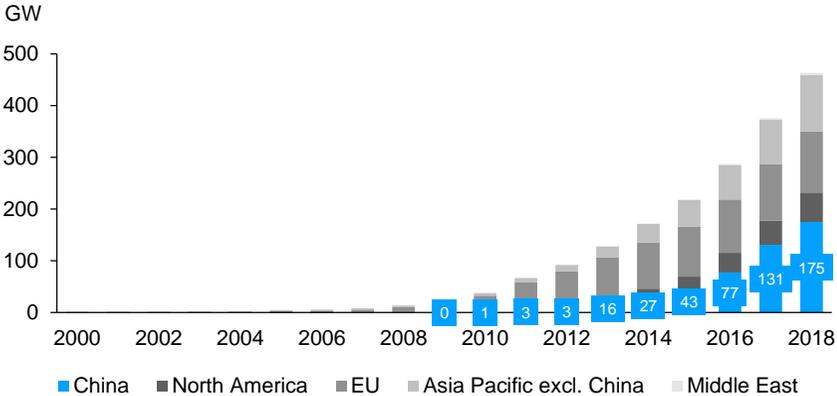
Chinese electricity: installed capacity by technology



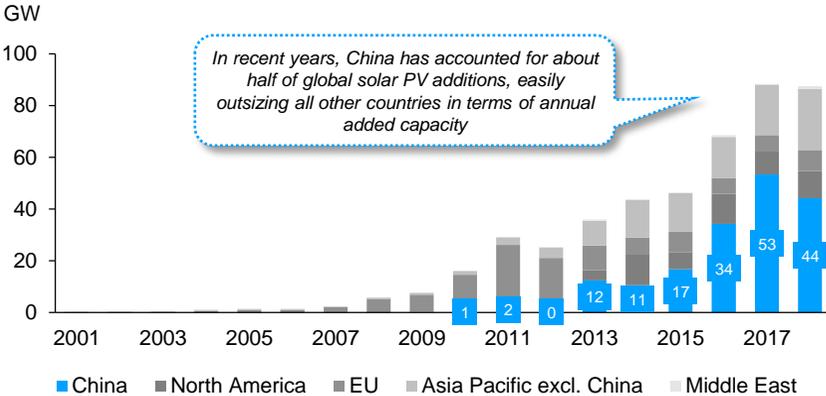
China's growing electricity needs are increasingly met by renewables with a focus on solar PV

China is ramping up focus on solar PV with a significant uptick in installed and planned capacity

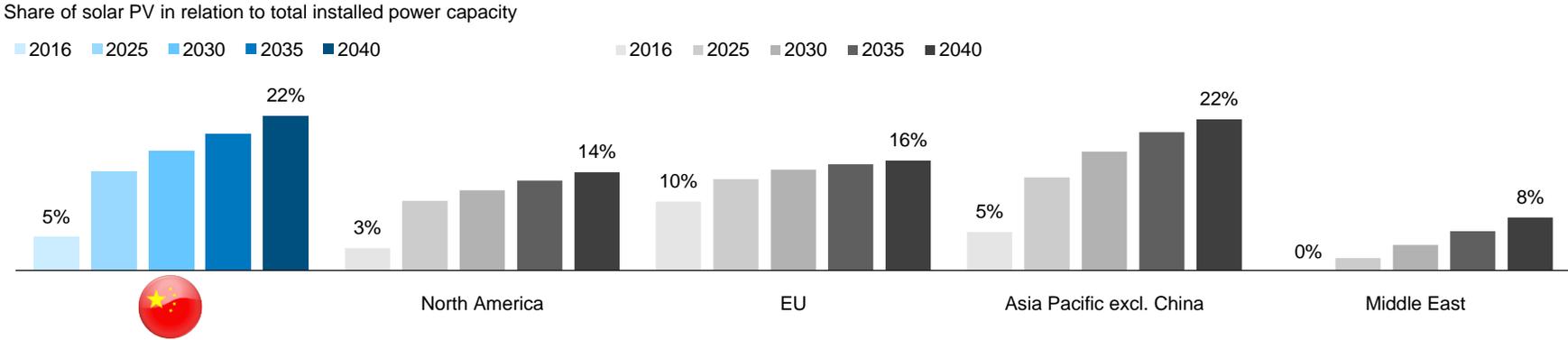
Installed solar PV capacity by geography



Change in installed solar PV capacity by geography



Solar PV expected to represent a substantial share of future power generation capacity

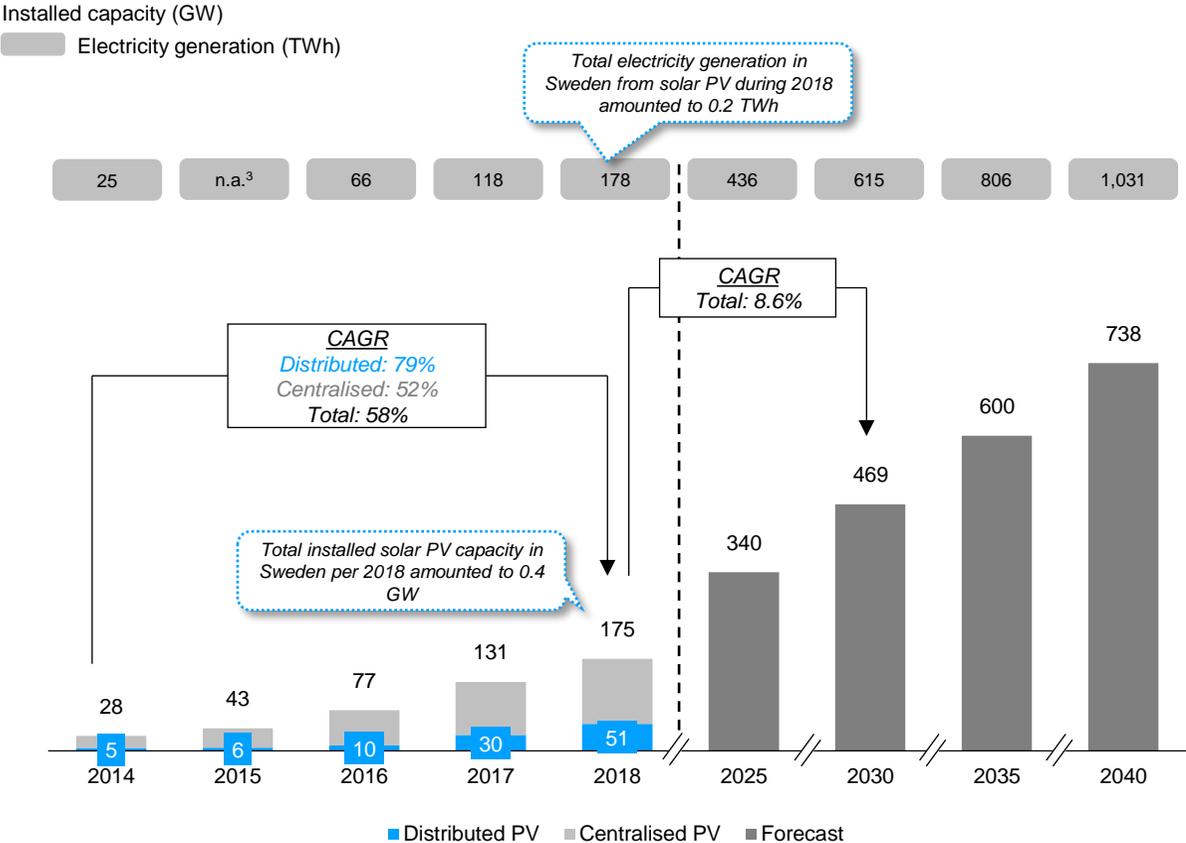


Distributed solar PV is growing faster than centralised solar PV

Comments

- Between 2014 and 2018, installed capacity of solar PV in China increased from 28 to 175 GW, corresponding to a **CAGR of 58%**
- Distributed solar PV has experienced significantly higher growth, from 5 to 51 GW, corresponding to a **CAGR of 79%**
- Installed solar PV capacity in Sweden amounted to 411 MW¹**, or ~0.2% of China's installed capacity, and **only ~3x greater than ASAB's installed capacity in China** of 139 MW²
- Continued declines of solar PV production costs (LCOE), combined with policy incentives sets solar PV on a continued growth path and is expected to account for **~10% of China's total electricity generation** by 2040, up from ~1% today
- Distributed solar PV** is set to grow at an even faster pace, as the best and cheapest locations for centralised solar PV has already been taken
 - In addition, the trend towards cheaper solar PV panels increases incentives for private companies and residential units to invest in distributed systems

China: installed capacity and electricity generation from solar PV



Regulated electricity prices reduces uncertainty for ASAB



Since 2004, the policy price of electricity in China is centrally guided by the National Development and Reform Commission (NDRC) annually, which is the agency for macroeconomic coordination in China. This keeps electricity prices relatively stable



The actual prices are determined by local grid companies, and prices can thus vary across different regions. The price also varies between different types of end-customers, depending on whether they are residential or industrial customers



In Eastern China, which is an important market for ASAB, the prices tend to be high due to high electricity demand, several large cities, and well-developed manufacturing sectors



Due to state-controlled negotiations of prices, they are expected to remain on a stable level

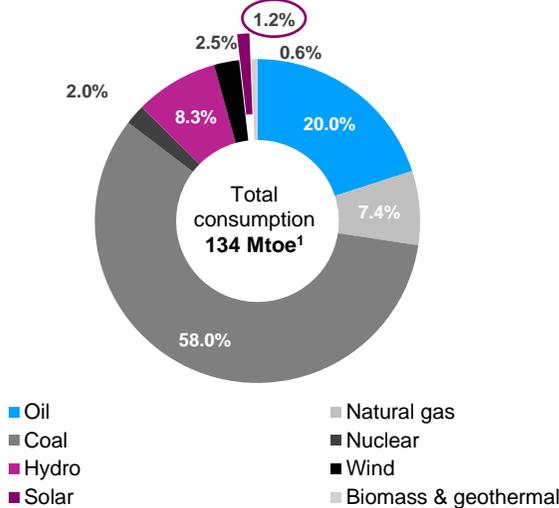


The state-owned State Grid Corporation of China supplies power to over 1.1 billion of the Chinese population in 26 provinces, autonomous regions and municipalities, covering 88% of Chinese national territory. The cost of production of solar power is equal to or below coal-fired power and other dominating energy sources.

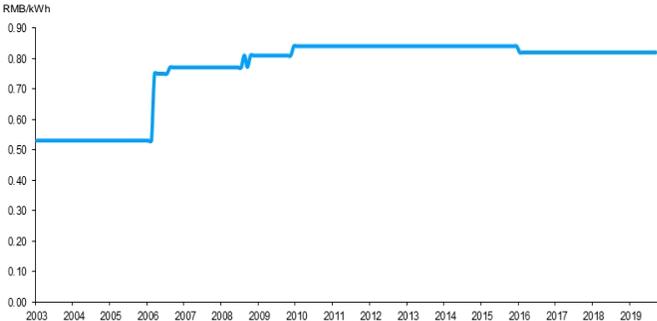


Despite ASAB being exposed to the price of electricity, the stable development and involatile market reduces the risks of large swings in cash flows from sales of electricity

Energy source split 2018 (China)



Energy price, industry Hangzhou (Zhejiang) 2010-2019



1) Million tonnes of oil equivalent
Source: BP Statistical Review (2019). Ceicdata.com. Chinadialogue.net. McKinsey & Company. Swedishsmartgrid.se

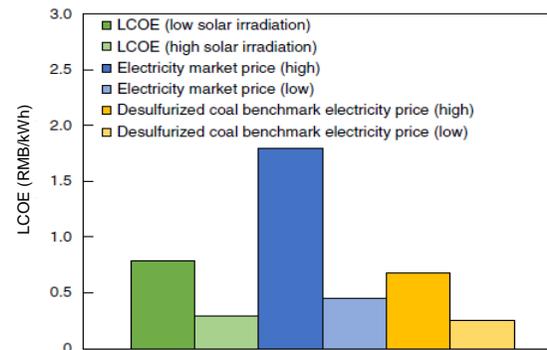
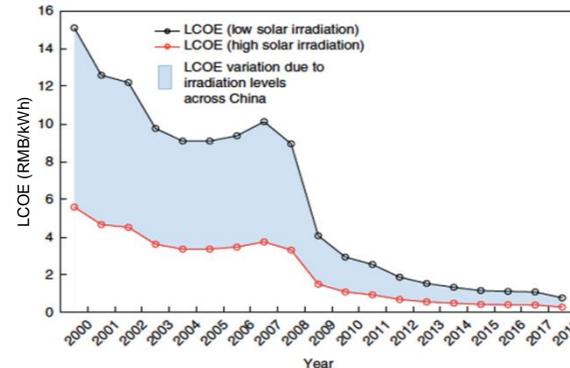
Reduced cost of solar energy increases demand and eliminates earlier reliance on subsidies

Comments

- In recent years, China has become not just a large panel producer but also a major market for solar PV
- Due to the rapid decrease in solar PV prices, researchers and analysts now estimate that Chinese cities can achieve, without subsidies, solar PV electricity prices lower than grid-supplied electricity prices
 - Grid parity has thus been reached** in Chinese cities per 2019¹

Rooftop solar has no distribution costs, increasing its competitive advantage further

Historical LCOE of solar PV generation in China¹



Overview of subsidies

Government

- Valid for 20 years, starting from connection date
- Historically ~30 cent RMB/kWh
- Currently ~5 cent RMB/kWh
- Once granted, subsidy levels remain fixed for the entire period (i.e. lowered subsidy levels only affect new projects)
- Usually paid on a monthly basis

Provincial

- Usually valid for 20 years
- Currently ~0-5 cent RMB/kWh, depending on region
- Not all regions provide subsidies
- Usually paid on an annual or semi-annual basis

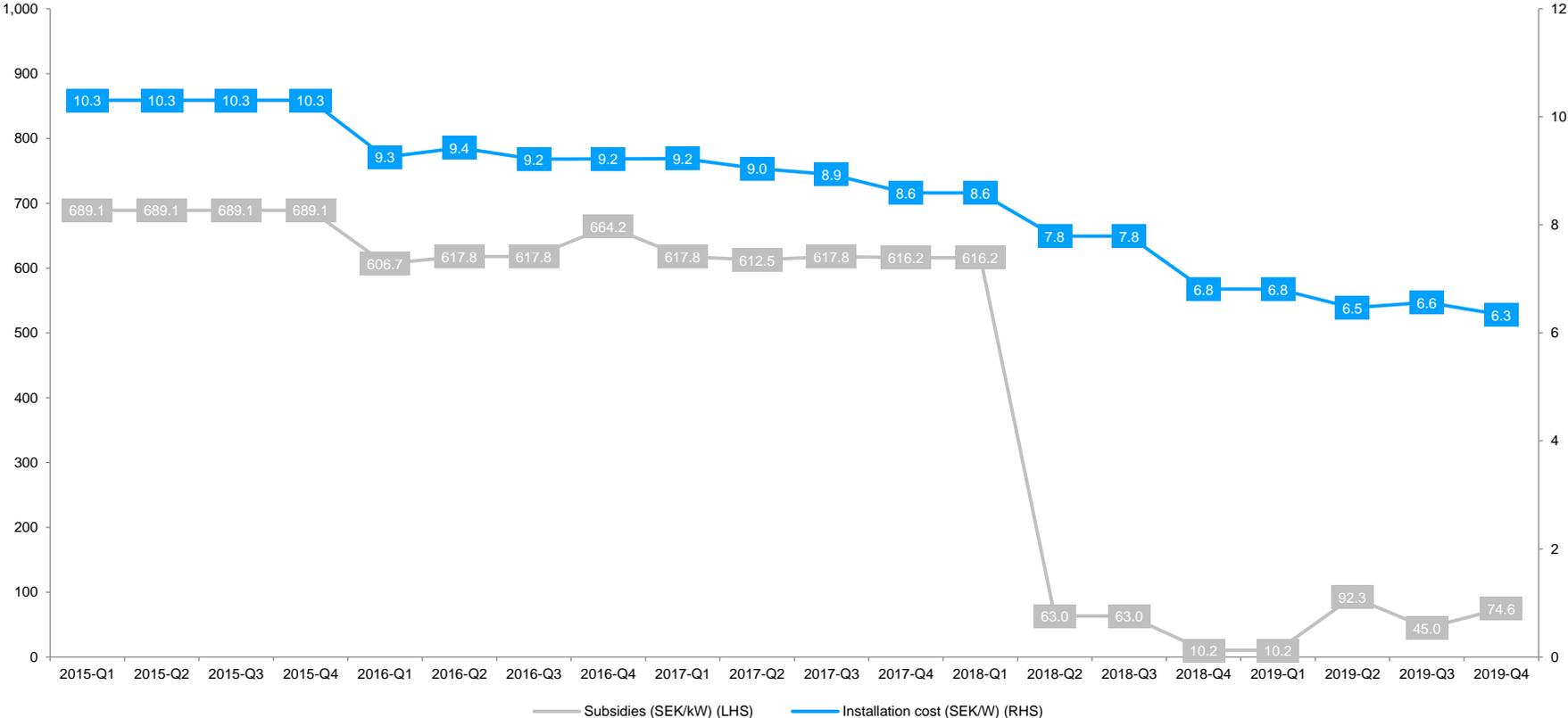
District

- Usually ~0-5 cent RMB/kWh
- City-level subsidies can vary significantly in terms of structure, e.g. one-time subsidies or recurring subsidies

Solar PV subsidies have gradually reduced as LCOE of solar PV has decreased – the industry is now able to operate without relying on subsidies

Installation costs and subsidies have fallen together for ASAB's greenfield projects

Historical installation costs and expected subsidies for ASAB's greenfield projects by quarter¹



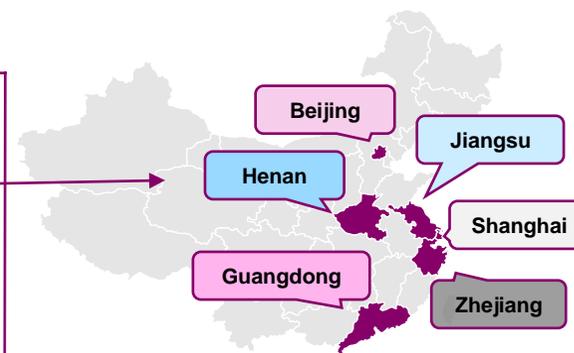
1) Data refers to historical installation costs for ASAB's greenfield projects and expected subsidies. For quarters with no completed installations, the figure of the previous quarter is stated. The calculations are subject to the *General assumptions* as stated on page 17. Because the yield from subsidies, for some projects, vary over the duration of the contract, a weighted average of the subsidies has been used where applicable.
Source: Company information

Chinese electricity prices for industrial consumers

Regional electricity prices for industrial consumers¹

Region	Cost per unit (RMB/kWh)		
	<1kv	10kv	35kv
Anhui	0.69	0.67	0.66
Beijing	0.82	0.81	0.79
Chongqing	0.71	0.69	0.67
Fujian	0.66	0.64	0.62
Gansu	0.69	0.68	0.67
Guangdong	0.75	0.72	0.70
Guangxi	0.74	0.72	0.71
Guizhou	0.64	0.63	0.62
Hainan	0.64	0.64	0.63
Heilongjiang	0.75	0.74	0.73
Hebei (North)	0.59	0.57	0.56
Hebei (South)	0.61	0.6	0.59
Henan	0.68	0.65	0.62
Hubei	0.78	0.76	0.74
Hunan	0.77	0.75	0.73
Inner Mongolia (East)	0.73	0.72	0.68
Inner Mongolia (West)	0.60	0.56	0.50
Jiangsu	0.73	0.72	0.71
Jiangxi	0.70	0.68	0.67
Jilin	0.80	0.78	0.77
Liaoning	0.72	0.71	0.70
Ningxia	0.60	0.58	0.56
Qinghai	0.52	0.51	0.51
Shaanxi	0.69	0.67	0.65
Shanxi	0.60	0.58	0.56
Shandong	0.68	0.66	0.65
Shanghai	0.79	0.77	0.75
Sichuan	0.73	0.72	0.71
Tianjin	0.75	0.73	0.68
Yunnan	0.61	0.60	0.59
Zhejiang	0.77	0.74	0.71

Geographical presence



National average general industrial power rates

Cost per unit (RMB/kWh)		
<1kv	10kv	35kv
0.69	0.68	0.66

National average large-scale industrial power rates

Cost per unit (RMB/kWh)			
10kv	35kv	110kv	220kv
0.58	0.56	0.54	0.53

Selected competitors in the Chinese market – backed by a reputed investor base

Selected competitors				Private investors
Description	<p>Asia Clean Capital Ltd. (“ACC”) is a leading clean energy solutions developer that serves large multinational and domestic firms throughout China. Focused on rooftop solar projects, ACC invests 100 percent of the project costs and provides the design, engineering, equipment, government approvals, installation, and long-term maintenance of solar systems</p>	<p>EDF Renewables, the global renewable energy affiliate of the EDF Group, is a leading international player in renewable energies, with gross installed capacity of 13 GW worldwide. Its development is mainly focused on wind and solar photovoltaic power</p>	<p>Total is a major energy player that produces and markets fuels, natural gas, and low-carbon electricity. 100,000 employees are committed to better energy that is safer, more affordable, cleaner, and accessible to as many people as possible. Total Solar Distributed Generation is today a major international provider of fully integrated solar solutions for commercial and industrial customers in Southeast Asia</p>	<p>Individual investors have entered the growing distributed solar energy market in the search for higher return on own invested capital</p>
Technique	Solar PV and Ground energy systems	Mainly focused on Wind and Solar PV	Wind turbines and Solar PV	Solar PV
Selected clients in China				Customers include SMEs and Single family homes
Selected investors				Family offices/High Net Worth Individuals

Despite reputed competitors entered the Chinese Solar PV market, it’s still deemed untapped, especially within the medium sized enterprise segment

1) In September 2019, Total S.A. formed a 50:50 joint venture with Envision Group to develop solar energy project in China. Thus, selected clients reflects full Asia region with a focus on Japan
 Source: Bloomberg, asiacleancapital.com, edf-renouvelables.com and total.com

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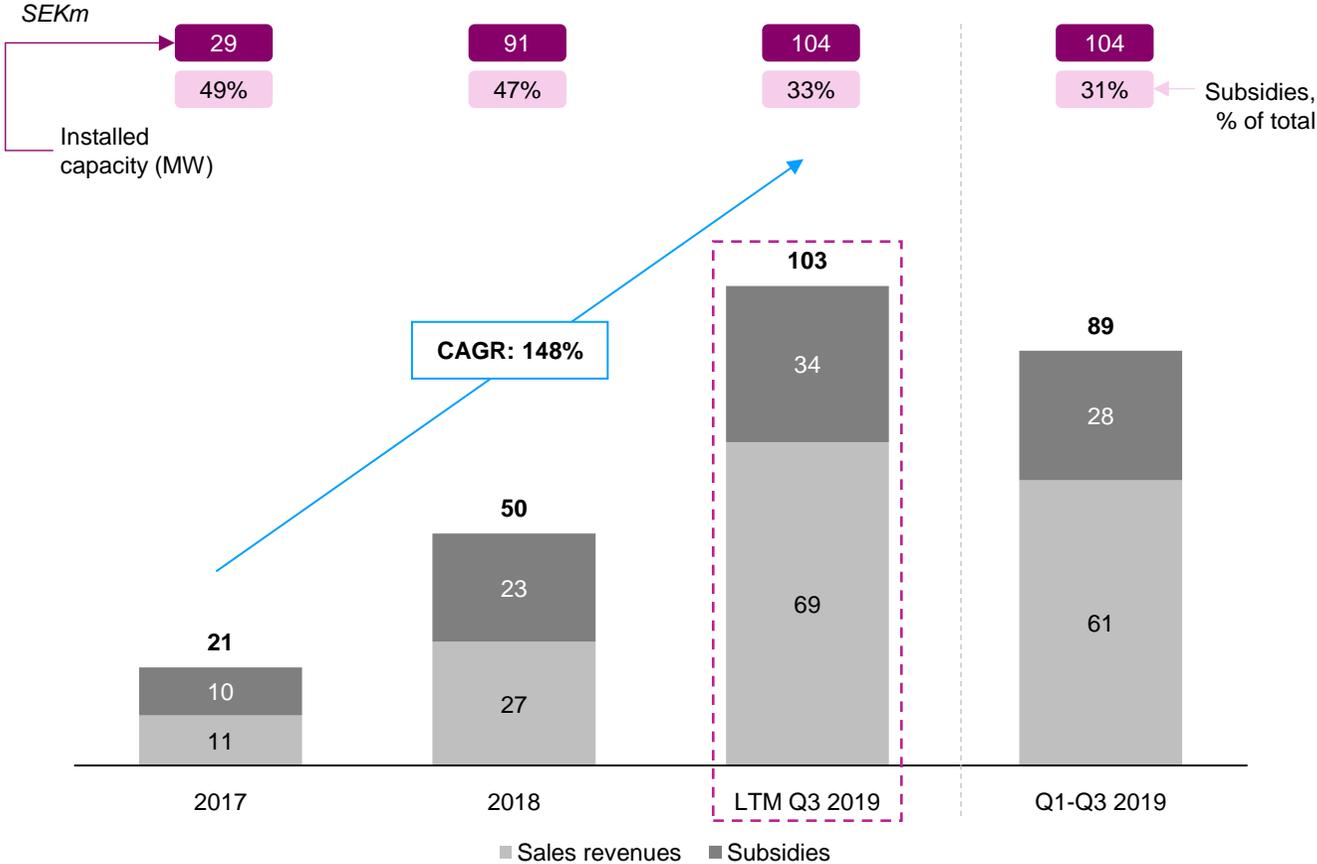
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Revenue development

Revenue development

- The share of revenues related to subsidies depends on several factors including: (i) subsidy rates on existing installed capacity, (ii) subsidy rates on new installed capacity, (iii) the portfolio mix of (i) and (ii), and (iv) electricity price
- Subsidy related revenue has decreased from 49% in 2017 to 31% Q1-Q3 2019. The level will continue to fall as the part of the portfolio with projects that have subsidies will decrease
- The subsidy levels have decreased rapidly the last years and from 2020 ASAB expects it to be zero as LCOE of solar power is below grid parity. The profitability is compensated through lower construction costs

Comments

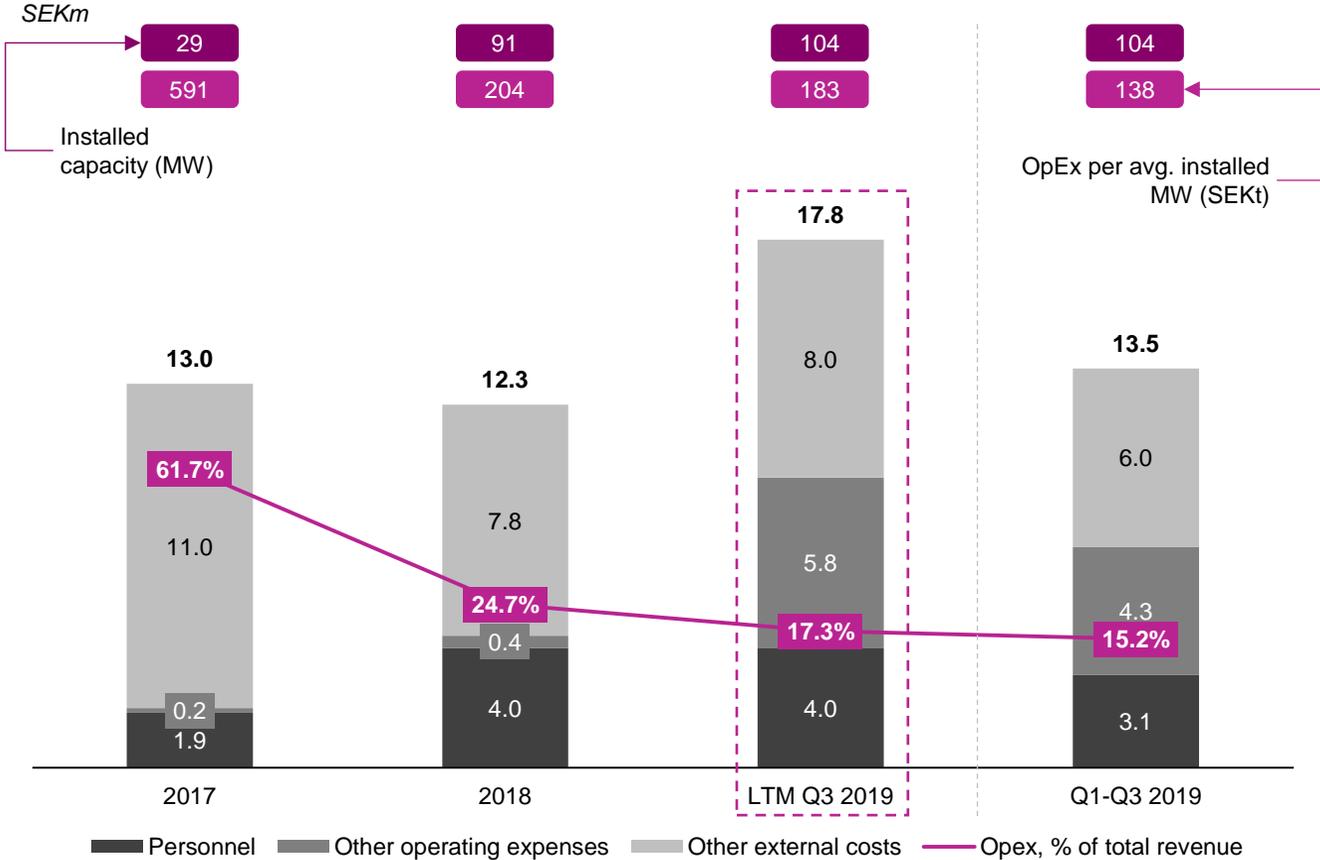


Operating expenses overview

Comments

- In China the panels have to be cleaned 1-3 times a year due to high particle content in the air
- The cleaning cost is the majority of the OpEx and is ~2.5% on an SPV level. This service is bought from third party local operators, usually the installer of the facility
- Other OpEx includes property insurance and maintenance and repairs

Panel maintenance makes up the largest part of OpEx

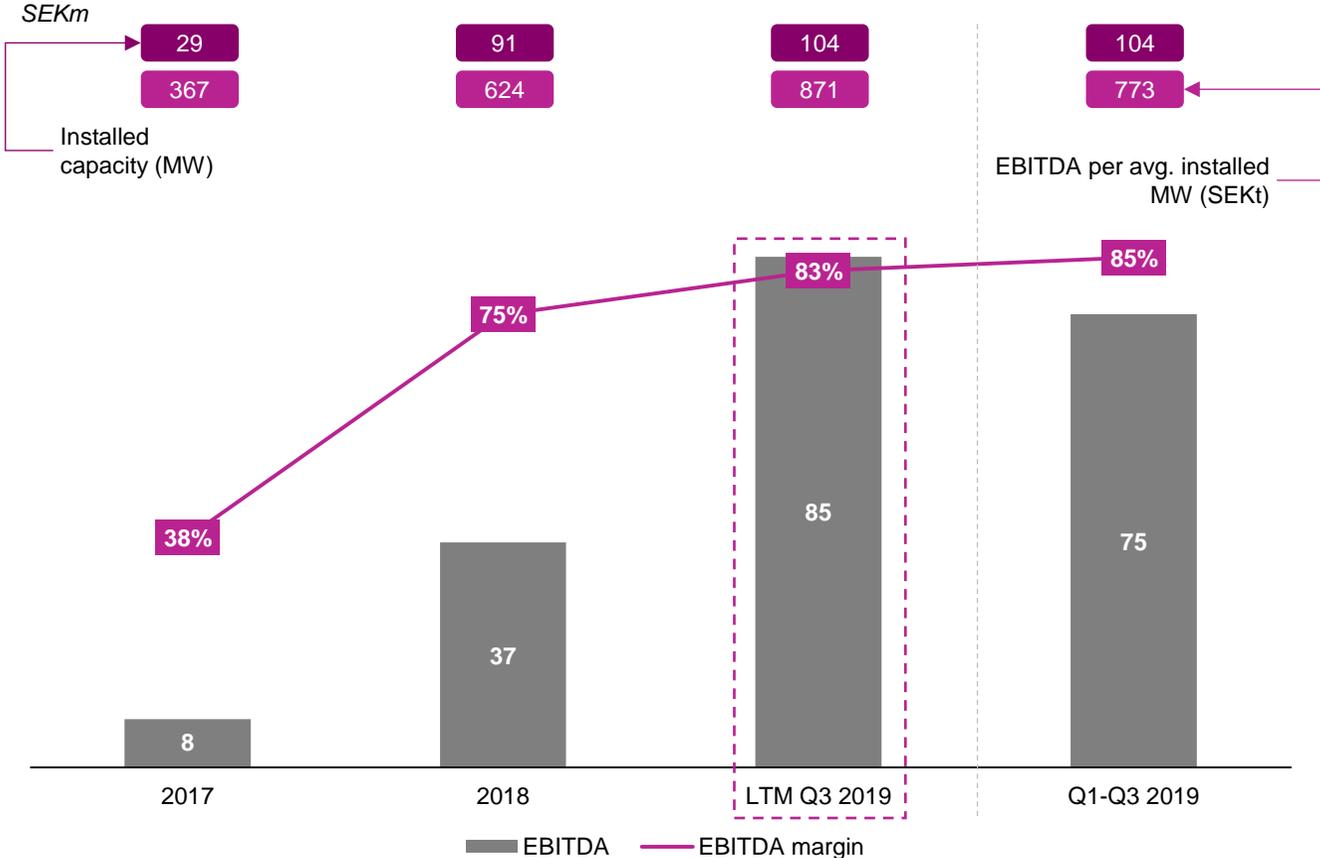


EBITDA development

Comments

- ASAB has a very low fixed operational cost base mainly consisting of administrative personnel and management
- There is room for further automation of processes e.g. invoicing
- ASAB estimates that an asset base of 1,000 MW can be operated without any major changes to the organisation
- The streamlined organisation allows ASAB to further improve the EBITDA margin

Operational leverage as new installations are managed by a streamlined organisation

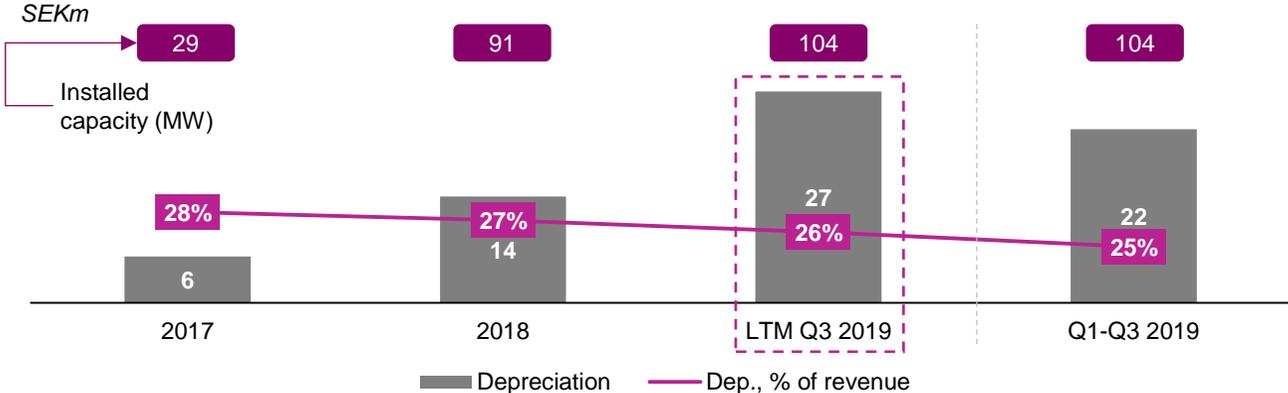


D&A and capital expenditure

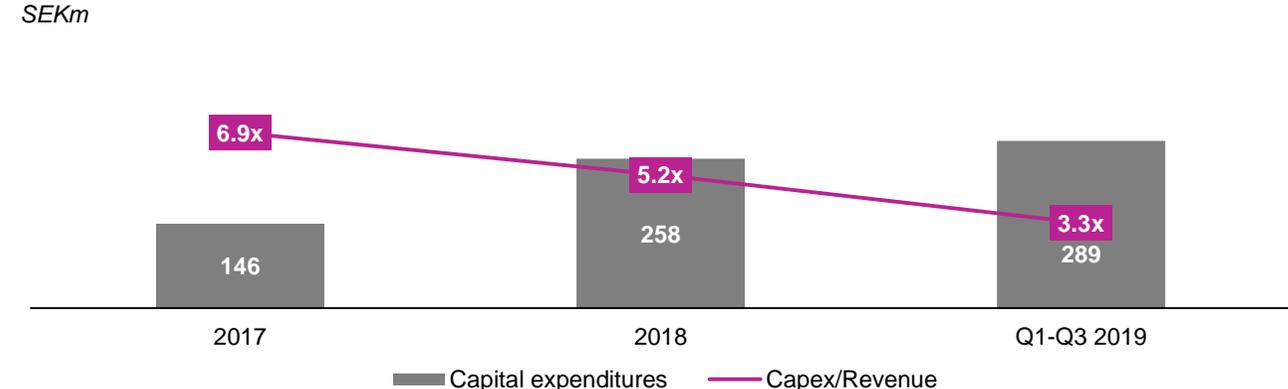
Comments

- Solar PV assets depreciation is a linear 4% per annum over 25 years economic lifetime
- All installation costs, including panels, labour costs, and other materials are capitalised
- Maintenance costs in the form of panel washing are booked as OpEx and are not capitalised

Depreciation



Capital expenditure

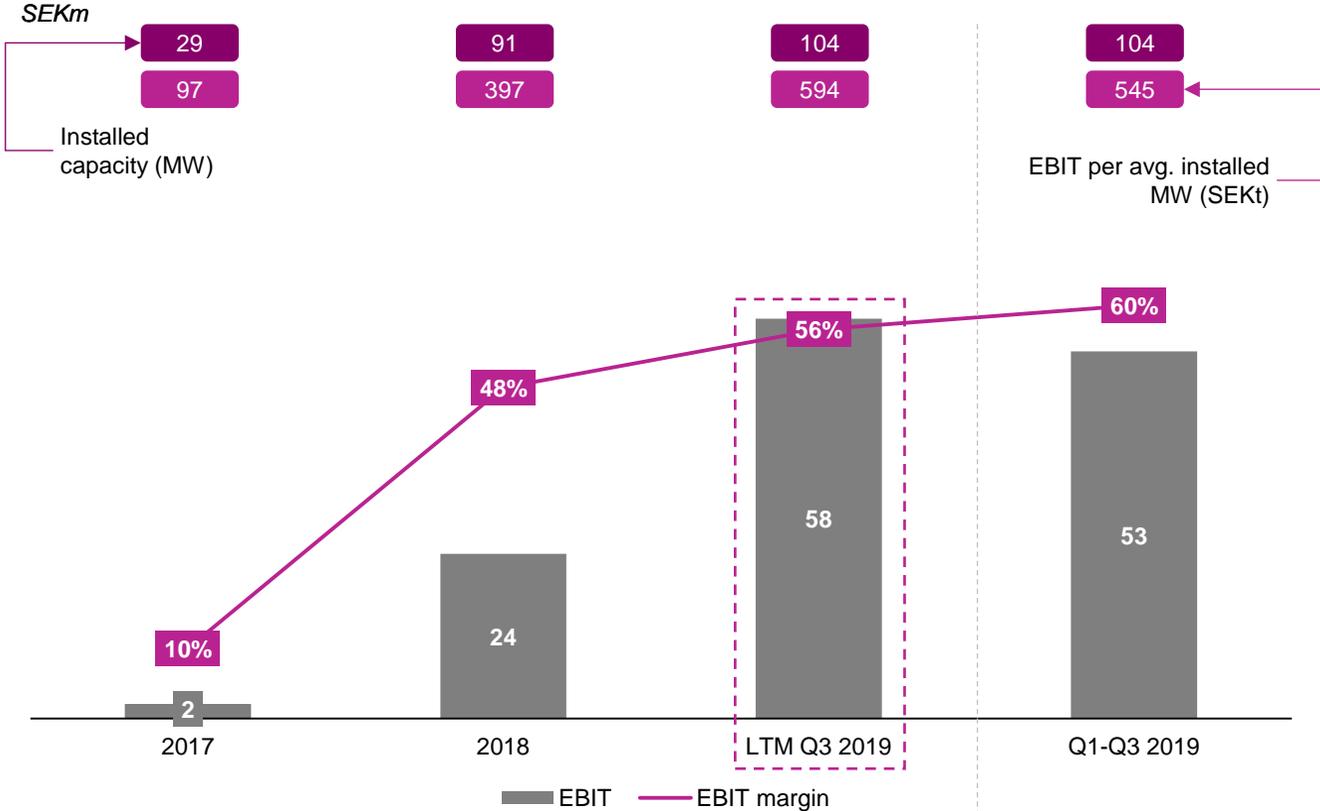


Operating profit continuously improving

Comments

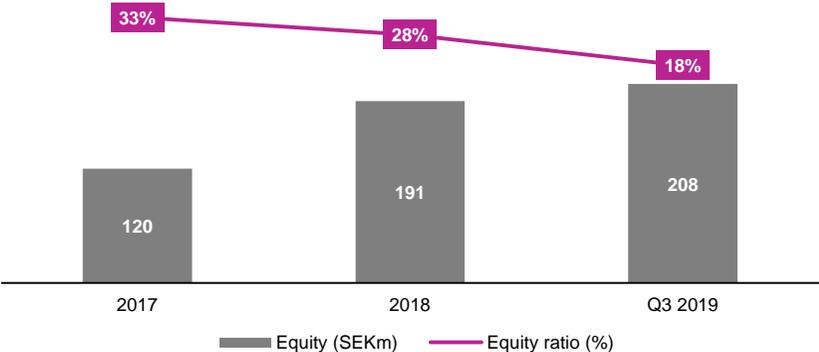
- The EBIT margin improves with a larger asset base
- This is due to a streamlined organisation with a low fixed cost base
- Lower construction costs results in lower depreciation per W
- Operational improvement with decreasing installation and building costs
- Installation and building costs are decreasing due to economies of scale and decreasing panel costs

EBIT development

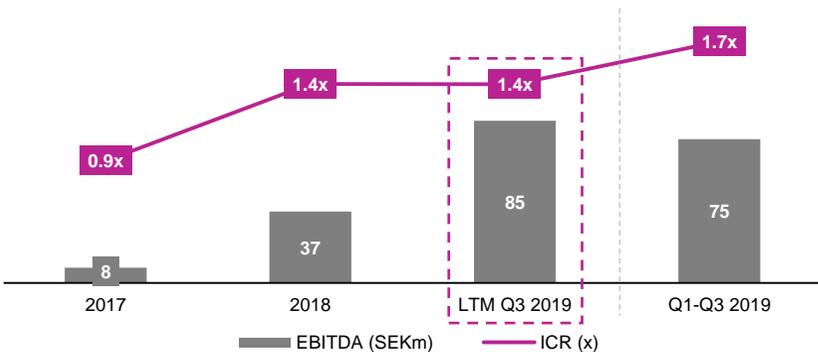


Key credit metrics

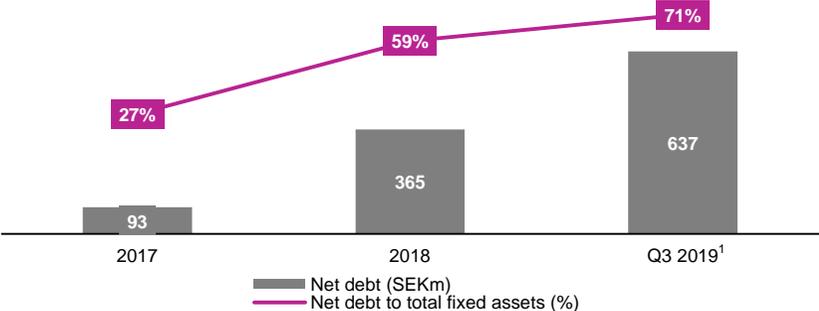
Equity ratio



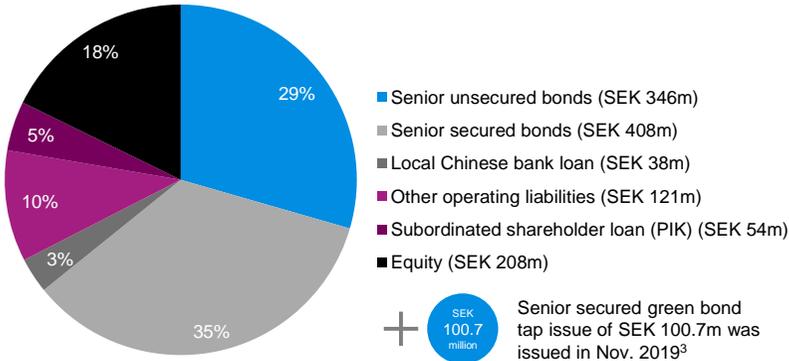
Interest coverage ratio



Net debt to total fixed assets



Capital structure²



1) Includes proceeds from bond issue which was issued before 30 September 2019 of which proceeds had not yet been transferred to ASAB; 2) As per 30 September 2019. Senior secured bonds includes EUR 18.4m. Local Chinese bank loan of RMB 28m. Subordinated shareholder loan of EUR 5m. RMB/SEK = 1.37. EUR/SEK = 10.73; 3) Includes EUR 5.8m. EUR/SEK = 10.73
 Source: Company information

Income statement

SEK '000s	2017	2018	LTM Q3 2019	Q1-Q3 2019
Revenue	10,751	26,511	69,275	61,121
Other operating income	10,266	23,198	33,256	27,758
Total revenue	21,017	49,709	102,801	88,879
Personnel	(1,853)	(4,040)	(4,046)	(3,141)
Other operating expenses	(154)	(416)	(5,750)	(4,318)
Other external costs	(10,958)	(7,800)	(8,037)	(6,028)
EBITDA	8,052	37,453	84,968	75,392
Depreciation	(5,914)	(13,627)	(27,085)	(22,255)
Operating profit	2,138	23,826	57,883	53,137
Financial income	65	425	207	107
Financial costs	(9,484)	(27,375)	(61,453)	(44,783)
Earnings before tax	(7,281)	(3,123)	(3,363)	8,461
Tax	1,435	(12)	(2,950)	(4,484)
Net income	(5,846)	(3,135)	(6,313)	3,977

Balance sheet

SEK '000s	2017	2018	Q3 2019	SEK '000s	2017	2018	Q3 2019
ASSETS				LIABILITIES AND SHAREHOLDERS' EQUITY			
Fixed assets				Liabilities			
Property, plant and equipment				Long-term liabilities			
Solar power plants	238,141	512,360	826,655	Borrowings	63,583	329,785	713,522 ²
Solar power plants under construction	56,476	36,865	-	Total long-term liabilities	63,583	329,785	713,522
Total property, plant and equipment	294,617	549,225	826,665	Current liabilities			
Financial assets				Liabilities to credit institutions	35,398	-	38,483
Other long-term receivables	44,826	63,515	70,318	Borrowings	-	65,540	-
Deferred tax assets	1,841	4,585	4,844	Prepaid income from customers	-	247	-
Total financial assets	46,667	68,099	75,162	Payables to suppliers	125,370	60,443	68,635
Total fixed assets	341,284	617,325	901,817	Liabilities to group companies	2,976	2,744	27,276
Current assets				Tax liabilities	579	1,029	3,120
Inventories				Other liabilities	2,977	15,102	60,106
Prepaid expenses to suppliers	11	274	8,083	Prepaid income and accrued expenses	7,577	14,134	15,066
Total inventories	11	274	8,083	Total current liabilities	174,877	159,239	212,686
Current receivables				Deferred tax liabilities	-	220	-
Receivables	2,242	7,818	27,277	Total liabilities	238,460	489,244	926,208
Receivables from group companies	1,530	0	4,256	Shareholders' equity			
Tax receivables	0	36	-	Share capital	500	500	500
Other receivables	7,663	23,943	150,809 ¹	Other contributed capital	125,912	199,791	213,454
Prepaid expenses and accrued income	88	614	1,855	Other equity including retained earnings	(6,461)	(9,584)	(5,608)
Total current receivables	11,523	32,410	184,197	Total shareholders' equity	119,951	190,707	208,346
Cash and cash equivalents	5,593	29,942	40,457	TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	358,411	679,951	1,134,554
Total current assets	17,127	62,626	232,737				
TOTAL ASSETS	358,411	679,951	1,134,554				

Cash flow statement

SEK '000s	2017	2018	Q1-Q3 2019
Cash flows from operating activities			
Operating profit	2,139	23,826	53,137
Depreciation	5,914	13,627	22,255
Other non-cash items	185	1,381	-
Interest received	65	425	107
Interest paid	(5,121)	(13,311)	(66,995)
Income tax paid	(104)	402	(2,358)
Changes in net working capital			
<i>Change in receivables</i>	(1,085)	(5,576)	(27,268)
<i>Change in other receivables</i>	11,241	(15,536)	(132,842)
<i>Change in payables</i>	100,756	(64,929)	7,945
<i>Change in other current liabilities</i>	5,102	4,079	69,536
Total changes in net working capital	116,014	(81,962)	(82,629)
Net cash provided by operating activities	119,092	(55,612)	(76,483)
Cash flows from investing activities			
Capital expenditures	(145,875)	(258,433)	(289,109)
Investments in other financial assets	(38,429)	(18,690)	(6,803)
Net cash used in investing activities	(184,304)	(277,123)	(295,912)
Cash flows from financing activities			
Shareholders' contributions	3,000	61,094	-
Borrowings	35,398	328,875	408,709
Change in current financial liabilities	-	(32,885)	(25,799)
Net cash provided by financing activities	38,398	357,084	382,910
Net cash flows	(26,814)	24,349	10,515
<i>Cash and cash equivalents, beginning of period</i>	<i>32,407</i>	<i>5,593</i>	<i>29,942</i>
<i>Cash and cash equivalents, end of period</i>	<i>5,593</i>	<i>29,942</i>	<i>40,457</i>

Agenda

- 1 Transaction summary
- 2 Introduction to Advanced Soltech
- 3 Business model
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- 5 Market overview
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- 7 Risk factors**
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Risk factors (I/X)

This section sets out the risk factors and the circumstances deemed material for Advanced SolTech Sweden AB (publ) ("ASAB")'s, Advanced Solar Renewable Energy Co., Ltd. ("ASRE")'s and Longrui Solar Power Co., Ltd. ("LSE")'s and their respective subsidiaries's, collectively the ("Group"), business and future development. The risk factors refer to the Group's market and business, operations, legal and regulatory risks in the People's Republic of China ("PRC"), financials, tax, the Notes and the listing of the Notes. The assessment of the materiality of each risk factor is based on the probability of the materialisation of such risk and the assessed impact of the negative consequences of the risk. In accordance with EU regulation 2017/1129 of the European Parliament and of the Council, the risk factors set out below are restricted to risks that are specific for the Company and/or the securities and material in order to make a well based investment decision.

The information is based on information available on the day of this investor presentation. The risk factors that currently are deemed the most material are presented initially in each category, whilst the risk factors following the initial risk factor are presented without any particular order or ranking.

Risks related to the market and business activities

Slowdown of the PRC economy

As all of ASRE's or Longrui Solar Power Co., Ltd. ("LSE")'s current revenue is derived from sales in the PRC, both ASRE and LSE rely on the PRC domestic demand for electric power, especially demand for solar power, to achieve growth in ASRE's or LSE's revenue. Domestic demand for electric power is materially affected by industrial development, growth of private consumption and overall economic growth in the PRC. As a result of global economic cycles, there is a risk that the PRC economy will not grow in a sustained or steady manner. Any slowdown or recession of the PRC economy may have a material adverse effect on ASAB's results of operations and financial condition.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Slowdown of the PRC economy

The Group operates within the renewable energy industry offering solar energy installations in which there are several actors with similar or alternative technology for example, Asia Clean Capital, China Solar (which is backed by Goldman Sachs and DCIF) and State Power Investment Corporation. Both competitors are PRC based. The Group may therefore be exposed to competition in price from potential economically stronger actors, such as Asia Clean Capital, China Solar and State Power Investment Corporation that may, through quick price reductions, increase their market share or establish similar products. This especially applies within in the solar cell sector which is heavily regulated by laws, government policies and internal rules and where local actors may gain financial benefits in terms of increased subsidies due to changes in such regulations at the expense of the foreign companies within the same sector. Increased competition that requires the Group to lower its prices to keep customers or retain market shares would have a material adverse effect on the Group's profitability and expansion.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Global macroeconomic conditions

The entire commercial operation of the Group is conducted in the PRC, and substantially all of the Group's assets are located within the PRC. As such, the development of the business of ASAB is closely connected with the performance of ASRE and LSE which in turn is connected with the development of the renewable energy business in the PRC, changes in the general economic situation or the taxation system or changes within the system for governmental grants or other regulatory conditions, in each case in the PRC. Even though the Group is operating in a growing market for renewable energy, changes in the global economy may affect the willingness to invest in new solar energy or to purchase electricity generated by solar energy systems. A weakened global economy, a long-lasting economic recession, or increased tariffs or a continued or escalated trade conflict between the PRC and the United States of America, may imply a reduced need of electricity, which could have a material negative impact on the Group's business, financial condition or results of operations.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Changes in the economic, political and social conditions in the PRC

The Chinese economy differs from that of most of the developed countries in many respects, including the degree of governmental involvement, control of capital investment, as well as the overall level of development. The PRC government has in recent years been committed to the continued reform of the economic system as well as the structure of the government. For example, the PRC government's reform policies have emphasised the independence of enterprises and the use of market mechanisms. However, any future actions and policies adopted by the PRC government and any changes in the PRC's political, economic and social conditions may have a material adverse effect on ASAB's or LSE's present and future business operations, results of operations and financial condition.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risk factors (II/X)

Political decisions relating to renewable energy

As the Group acts within areas which take greater consideration to the environment in production of electricity, there are several types of political instruments favouring investments in renewable energy. These may consist of different forms of financing or subsidies for certain types of energy. Up to 31 October 2019, the Groups' subsidies totaled approximately Renminbi ("RMB") 21.6 million. An important factor in the Group's revenue calculations is the expected subsidies from the PRC government and from regional and local authorities. In recent years, the PRC government has promulgated a series of laws and regulations to support and encourage the development of solar power. These laws, regulations and policies directly affect the prospects of the domestic solar power industry and are factors that may affect the demand for the Group's business. The level of acceptance of solar power as a viable form of renewable energy by the government agencies that establish energy policies as well as the general public in markets in which the Group operates has a significant effect on the Group's business, financial condition or results of operations. There is always a risk for changes in these systems, which would have an adverse effect on the Group's business, financial condition or results of operations.

Although the PRC government's latest five-year plan has clear directions to promote the development of renewables in order to address the PRC's acute pollution problem and for the PRC to thereby be less dependent on fossil fuel, should a direct or indirect reduction or termination of government support take place then there may be adverse effect on the PRC solar power market. In the event of changes in the support by the PRC government of the industry in which ASRE and LSE operate, or changes to the policies associated with ASRE's and LSE's industry, ASRE's and/or LSE's operations may be adversely effected. In the event of changes in these preferential policies by the PRC government, solar power may in the future and with respect to the photovoltaic ("PV") panel installations become less attractive which would have an adverse effect on ASRE's and/or LSE's business, results of operations and prospects.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Political decisions relating to the subsidies for solar power energy

The policies relating to the subsidies for solar power energy in some places of the PRC are unstable as local authorities have not officially issued specific regulations or rules to ensure such subsidies. For projects installed more recently, the subsidies are significantly lower and will most likely be abolished going forward. There is a risk that the Group may not receive or maintain already received subsidies due to the unstable local policies, which may have a low adverse effect on the Group's business and financial conditions.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Operational risks

Operational risks associated with fluctuations of the electricity tariffs and delays and use of products in the connection to the electricity grid

The revenue for ASRE and/or LSE is to a great extent dependent on the development in the electricity market in the PRC. A majority of contracts use a floating price mechanism. There are risks of fluctuations in the electricity price. A decrease in the electricity price would have a significant adverse effect on ASRE's and/or LSE's possibility to pay interest and any mortgage payments. The Group does not use any form of hedging to mitigate such risks linked to fluctuations in electricity prices, which may increase the Group's exposure.

ASRE and LSE design their PV panel installations to suit customers' electricity consumption. In short, ASRE's and LSE's aim is not to deliver electricity to the grid, but it needs the grid connection to sell any overcapacity, if a customer for whatever reason does not consume all the electricity produced, from time to time and thereby receives the subsidy from the government which is paid by the grid company. There is also a low risk that the price of the power sold to the grid may deviate from the price ASRE and/or LSE would receive if it was sold to the customer. In the event of any difficulties and/or delays in connecting completed installations to the electricity grid in the PRC, this may result in payment difficulties for ASRE and/or LSE and therefore affect ASAB's ability to pay the interest to the Noteholders under the Notes. In addition, certain technical issues with the existing electricity grids to which the existing projects are connected to, such as the less effectiveness of the solar panels as time passes or the decrease of the efficiency of the equipment during the lifetime of the projects, could have medium adverse effect on the Group's business, financial condition or results of operations.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risk factors (III/X)

Risks related to projects acquired

Some companies which ASRE or LSE may acquire or have acquired ("**Target Companies**") may have long term receivables. There is a risk that these receivables may not be collected in the end since the counterparties may not be able to fulfil their financial obligations. In addition, some Target Companies may have a relevantly high debt ratio. Even if ASRE or LSE has required these Target Companies to collect the receivables and service the debt, there is still a risk that the receivables and payables still exist which may adversely affect ASRE's or LSE's financial conditions.

If a PV panel installation materially violates applicable law, local authority may force the Group to close that PV panel installation. In such case, the closed plant will no longer generate electricity and therefore no revenues after its closure, which will have an adverse effect on the Group's revenues.

Mainly the electricity is sold to rooftop owners but on those rare occasions where the rooftop owners would not purchase the electricity then ASRE or LSE will have the option to sell the surplus to the grid. For the latter scenario, the Target Companies will face credit risks of the electricity buyer, namely rooftop owners. Further, some PV panel installations may not clearly state which model applies. Further, where the surplus electricity is sold to the grid there is an uncertainty whether the shareholder of the Target Companies will have joint liabilities for the payment of the power fees.

All of the above issues may have a material adverse effect on the Target Companies' receipt of the fees. Although ASRE could require the Target Companies to solve these problems, it is still possible that these problems will remain which may materially adversely affect ASRE's business and financial conditions.

Risk rating

Potential negative impact: medium

Probability of occurrence: medium

Operational risks associated with the development of new solar projects including credit risk

The Group's new PV panel installations may not be completed according to planned schedules or be completed at all and may not generate the levels of expected revenue or contemplated investment returns. The projects the Group undertakes typically require substantial capital expenditures during the construction phase and usually take many months to generate proceeds in cash. The latest completed project incurred a capital expenditure of RMB 5.20 per watt and took, from the signing of the contract, about three months to complete and generate proceeds. The time required and the costs involved in completing the construction of a PV panel installation can be affected by many factors, including shortages of construction materials, equipment or labour, adverse weather conditions, natural disasters, delays or failures in performance by the Group's contractors, labour disputes, disputes with contractors and subcontractors, accidents, changes in governmental priorities and other circumstances. Construction delays may result in material losses of revenue and increase in costs. There is a risk that the Group's future projects will not be completed on time, or at all, and not generate satisfactory returns.

As a part of the Group's business model, connection to grids is a necessary condition for the Group to be able to supply electricity generated by PV panels to the customers. In addition, approvals from the PRC National Development and Reform Commission ("**NDRC**") are required in order to legitimise construction, energy management or similar projects in the PRC, including rooftop projects. As such, there is a risk that connection to electrical grids can be denied or delayed due to reasons which are beyond the Group's reasonable control such as in relation to one acquired PV panel installations Hangzhou Yuhang Wanda Plaza Real Estate Co., Ltd.. Materialisation of such a risk may have a material adverse effect on the Group's financial condition or results of operations.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Credit risk

The Group's business is further subject to potential credit risk which may arise in the event that the Group's counterparties are unable to fulfil their financial obligations towards the Group. An assessment of the credit risk must therefore include an assessment of ASRE's, LSE's and their subsidiaries' possibility to operate their business and the credit risk that ASRE, LSE and their subsidiaries have against their customers and the risk that these customers may get in a financial situation where they cannot pay the agreed fees or other amounts owed to ASRE, LSE and their subsidiaries as they fall due or otherwise abstain from fulfilling their obligations. There is a risk that the ASRE's, LSE's and their subsidiaries' counterparties cannot fulfil their obligations, which would then affect ASRE's, LSE's and their subsidiaries' possibility to fulfil their obligations against ASAB which could materially affect the Group's financial condition or results of operations.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risk factors (IV/X)

Executive management, staff and operational risks

ASRE and LSE rely on consultants for certain services. Advanced Solar Power (Hangzhou) Inc. ("**ASP**") is ASRE's former shareholder and currently an affiliated company of ASRE and LSE. To a large extent, ASRE and LSE use ASP's network of installers/agents to sell, install and provide services to ASRE's and LSE's PV panel installations.

In addition, in most cases ASRE and LSE use ASP as engineering and construction contractor ("**EPC**") for their green field PV panel installations, but are allowed to use other parties as EPC contractors. This means that ASRE and LSE to an extent are dependent on ASP, which entails a risk for ASRE and LSE, although low, since they do not themselves control all vital parts of their business.

Moreover, there is no agreement in place preventing ASP from conducting competing business or increasing prices or ensuring that ASP remains as a key partner. ASRE and/or LSE may not be able to replace the current organisation if necessary. Operational risk is the risk of incurring losses due to inadequate procedures and/or irregularities. Should the Group's internal control, administrative system adapted for the purposes, skills development and access to reliable valuation and risk models fail, there is a risk that this will have an adverse effect on the Group's business, financial condition or results of operations. The Group's employees' knowledge, experience and commitment are important for the Group's future development. The Group would be materially negatively affected if the key employees, such as Ben Wu, Gang Bao, Frederic Telander and Max Metelius, would leave the Group, or if the Group's administrative security and control would fail. Frederic Telander and Ben Wu, the two founders of the Group, have a direct and material impact on the value of the business. To be more specific, their roles within the Group, responsibilities and decisions impact profitability, growth and other critical value drivers in the Group's business. Moreover, Frederic Telander and Ben Wu engage in a significant way to the strategic future of the Group's business. They have a vision for the future, bring ideas and solve problems creatively. In terms of sales, which also have an impact on profitability and growth of the Group, both Ben Wu and Gang Bao play critical roles and move very fast on the ground, which is necessary in order to stay ahead of competition in the PRC. Gang Bao also has a combination of skills and experience which would be difficult to replace. Although Max Metelius is relatively new to the Group, he has during a short period of time proved to be a key individual in the build-up of the Group's operations in Sweden.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Use of agents

ASRE and LSE have both elected to use a selected number of ASP's agents/distributors to market, sell, install and service ASRE's and LSE's PV panel installations on ASRE's and LSE's customers' rooftops. The installation procedure is safeguarded by ASP acting as EPC contractor and using its agents/distributors as subcontractors. As a result, this creates uncertainties since ASRE and LSE do not hold these relationships themselves and therefore needs to rely on ASP's network. This model needs to continuously be evaluated in order to address the development phase that ASRE and LSE may be in at the time of evaluation. Should ASRE and/or LSE in the future not be able to use ASP's agents/distributors or work directly with ASP's network of agents/distributors or be required to replace such agents/distributors within short notice this would have a moderate adverse effect on the Group's business, financial condition or results of operations.

Risk rating

Potential negative impact: medium

Probability of occurrence: medium

Risks relating to insurance coverage and sabotage

As, ASAB is covered by the insurance umbrella of its Swedish parent company, SolTech Sweden Energy AB (publ), this means that ASAB currently does not hold its own insurance.

Each of ASRE and LSE generally maintains all risks insurance policies for its properties. There might be delays in procuring the insurance policy and during the delayed period their properties are not insured. In addition, there are certain types of losses, such as losses from forces of nature, that are generally not insured because they are either uninsurable or because insurance cannot be obtained on commercially reasonable terms. Certain types of losses caused by war, civil disorder, acts of terrorism, earthquakes, typhoons, flooding and other natural disasters are not covered. Should an uninsured loss or a loss in excess of insured limits occur, the Group could lose capital invested in such property and anticipated future revenue therefrom while the Group remains liable for such loss. Any such loss could materially adversely affect the business, financial condition and results of operations of the Group.

In addition, there is a risk for sabotage, theft, attacks, epidemics and natural disasters or other force majeure events which the Group cannot control and which are not covered by insurance. Such events would have an adverse effect on ASRE's and/or LSE's business, financial condition and results of operation.

Risk rating

Potential negative impact: medium

Probability of occurrence: low

ASAB's dependence on its affiliated and related companies

Currently ASRE and LSE have slim organisations and a limited number of employees. In 2019, ASRE's and LSE's organisations consisted of 11 employees in total. The Group is still highly dependent on ASP's network and knowledge of the local PRC market to ensure that the corporate administration is properly carried out. If the corporate administration is not carried out at all or carried out inappropriately it could have a low negative effect on ASRE's and/or LSE's business operation. ASRE's and LSE's shareholders are instrumental in order for their business to develop successfully.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Risk factors (V/X)

Weather conditions and environmental influences

Incoming solar radiation will vary from year to year, meaning that different yield factors (electricity generation per installed watt and year) will be generated for ASRE's and LSE's PV panel installations. Incoming solar radiation may also vary significantly depending on the geographical location of the solar power installation. In the PRC, the "haze" factor must also be taken into account, even if it does not amount to a specific "weather condition". Considering that the majority of the PRC's power generation is still dependent on coal-fired plants emitting particles, such particles will to a small or larger extent, depending on where the solar power plants have been installed, end up on the surface of ASRE's or LSE's solar cells. This may significantly reduce the efficiency of the PV panel installations over time. This represents a quality risk over time for all PV panel installations no matter what technology has been deployed. This is still the case even if the PV panel Installations may be washed and capacity thereby restored.

Risk rating

Potential negative impact: low

Probability of occurrence: high

Legal and regulatory risks in the PRC

Legal system

ASRE and LSE are both incorporated under the laws of the PRC and conduct their business in the PRC. The PRC laws and regulations are based on written statutes, and past court judgments may be cited only for reference. As these laws and regulations are still evolving, and because of the limited number and non-binding nature of published cases, there exist uncertainties about their interpretation and enforcement.

The PRC's legal system is based, in part, on government politics and internal rules (some of which are not published on a timely basis or at all). As a result, ASRE and LSE may not be aware of its violation of these policies and rules until after the violation. Although the electricity market in the PRC is heavily regulated by laws, government policies and internal rules there is still a risk that ASRE and LSE may be subject to uncertainties in their operation and potential breaches of policies and rules in the PRC which could lead to governmental sanctions that could adversely affect the operations and financial results of the Group.

If the rooftop owner is declared bankrupt, ASRE, LSE or any of their subsidiaries, may terminate the rooftop agreement and dismantle the PV panel installation and remove it. If the administrator appointed, opts to not continue to be bound by the rooftop agreement, then there will be a cost for the owner of the PV panel installation to remove the PV panel installation, which is approximately 20-25% of the initial cost of the PV panel installation. The same risk prevails if the administrator decides to sell the property due to the previous owners' bankruptcy and the new owner does not wish to take over the PV panel installations.

Risk rating

Potential negative impact: medium

Probability of occurrence: low

Risks related to legal and arbitration proceedings

A majority of the documentation in relation to the business of the Group is governed by PRC law. There is a risk that the Group or any of its members will be involved in a legal or arbitration proceeding in the future. In the event of such proceeding, subject to the cause of the action and the judicial system of the state of the forum, the non-pledged assets of the Group or its member might be attached or enforced, which might bring an adverse impact on the business of the Group or its member, or on the Noteholder's remedy under the Notes. There is also a risk that the relevant member of the Group loses such a proceeding and, due to the fact that all rooftop agreements that the Group has entered into are governed by the laws of PRC, there is therefore a risk that such loss would have a material adverse effect on the Group's business, financial condition or results of operations.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Risk factors (VI/X)

Financial risks

Currency risk

RMB is not freely convertible into other currencies. All activities relating to payments and receipts of foreign exchange and the conversion of foreign exchange into RMB and vice-versa are regulated. All foreign exchange transactions are in some form controlled or supervised by State Administration of Foreign Exchange ("SAFE"), the main regulatory body of the PRC's foreign exchange control system. Only financial institutions designated by SAFE are allowed to process foreign exchange transactions and they must operate special foreign exchange accounts for this purpose. Foreign currency is not permitted to be circulated or used for payment within the PRC. Any domestic institution or individual that makes a payment in foreign exchange overseas in an amount equivalent to more than USD 50,000 must first make a tax filing with the competent office of the State Administration of Taxation where the institution or the individual is located. Generally, this can cause certain delays and require certain paper work which may have low adverse effect on the Group's business, operations and financial condition. The PRC government may temporarily restrict certain payments in relation to, inter alia, dividends. In such cases, this may have a substantial detrimental effect in relation to ASRE's and LSE's ability to pay for example dividends to the shareholders.

The exchange rate between RMB and other currencies may fluctuate from time to time and be affected by, among other things, changes in the PRC's political and economic environment. The Group does not use any form of hedging to mitigate such currency risks. The Group is therefore exposed to a potential devaluation of the RMB which may have a material adverse effect on the value of, and any dividends payable on, the shares held by ASAB.

The fluctuation in the exchange rate between the RMB and other currencies or the weakening of the RMB against the EUR or SEK means that ASRE and LSE may have exchange loss on their books which leads to a reduced income in real terms for the Group and this could have a material impact on the Group's business, results of operations and financial condition.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Financing and refinancing

Refinancing and new financing risks are the risks in relation to ASRE and/or LSE not being able to obtain necessary financing, or that such financing is only partly obtained at significantly increased costs as concerns refinancing of existing debts or new borrowing. There is a risk that future refinancing or new borrowing is not possible at all, is not possible on terms that are attractive for ASAB or that the capital markets are insufficiently liquid. To date, the Group has not experienced any difficulties in sourcing funds. However, if the Group is unable to raise additional funds as needed, the scope of its operations may be reduced and, as a result, the Group may be unable to meet its obligations and/or fulfil its long-term goals. This could have a material adverse effect on the business, results of operations and financial condition of the Group.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Interest rate risk

The Group has incurred, and may in compliance with the limits set out in the final terms and conditions of the Notes further incur, financial indebtedness to finance its business operations. Such financing may generate interest costs which may be higher than the gains produced by the investments made by the Group. Borrowing money to make investments will increase the Group's exposure to the loss of capital and higher interest expenses. Further, the Group is exposed to changes in interest rates through its financing agreements that carry floating rates of interest. The interest rates are affected by, for example, the interest rate policies of governments and central banks. An increase in interest rates entails an increase in the Group's interest obligations, which could have a material negative effect on the Groups' operations, financial position, earnings, cash flow and results.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Tax related risk

The Group conducts its main operations through subsidiaries in the PRC, but has also subsidiaries that are subject to taxation in Sweden. The strategies with regard to tax which the Group apply are based on its interpretation of applicable tax regulation in the PRC and Sweden. The Group may from time to time be subject to tax revision and otherwise investigated by the relevant tax authority. This risk could lead to a tax liability.

ASRE has not in respect of certain of its subsidiaries filed individual audited reports to local tax authority in the PRC. Although the local tax authority has confirmed that there is no local practice to file individual audited reports in relation to subsidiaries which are wholly owned by ASRE, this local practice may change or be differently applied in the future. As such there is a risk the ASRE may have to pay a penalty for those subsidiaries that have not filed any individual audited reports. Currently the penalty ranges between RMB 2,000 to RMB 10,000 in relation to each subsidiary.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Risk factors (VI/X)

Risks related to the Notes

Risk relating to the admission of the Notes to trading

In the event that ASAB fails to list the Notes on the sustainable bond list of Nasdaq Stockholm (or another regulated market) within 12 months from (and excluding) the day following the first issue the Notes will be mandatorily repayable. There is a risk that the application for the listing on the sustainable bond list of Nasdaq Stockholm, or another regulated market, will not be accepted or that the Notes will not be so admitted. Any such listing failure with a subsequent obligation to repay the debt under the Notes will have a material negative impact on the market value of the Notes.

Prior to any admission to trading, there has been no public market for the Notes. Even if a listing will occur, there is a risk that an active trading market for the Notes will not evolve or, if evolved, will not be sustained. The nominal amount of the Notes may not be indicative of their market value after being admitted for trading on Nasdaq Stockholm (or another regulated market). Furthermore, following a listing of the Notes, the liquidity and trading price of the Notes may vary materially as a result of numerous factors, including market fluctuations and general economic conditions and irrespective of the performance of ASAB and the Group. The degree to which the liquidity and the trading price of the Notes may vary is uncertain, and risks leading to the Noteholders not recovering their investments in the Notes. In addition, transaction costs in any secondary market may be high, which also presents a risk to the Noteholders not recovering their investments in the Notes.

Therefore, Noteholders may not be able to sell their Notes at the desired time or at a price level that will provide them with a yield comparable to similar investments that have a developed secondary market.

Accordingly, the purchase of Notes is suitable only for Noteholders who can bear the risks associated with a lack of liquidity in the Notes and the financial and other risks associated with an investment in the Notes. The degree to which the market value of the Notes may vary is uncertain, and presents a significant risk for holders' investment in the Notes.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Credit risk

Credit risk is the potential risk of financial loss arising from the failure of a counterparty to fulfil its financial obligations as they fall due. Noteholders carry a credit risk relating to, primarily ASAB and secondly the Group since payments under the terms and conditions are dependent on ASAB's ability to meet its payment obligations, which in turn is largely dependent upon the performance of the Group's operations and its financial position. An increased credit risk or decrease in ASAB's creditworthiness may cause the market to charge a higher risk premium on the Notes, which could have a materially adverse effect on the market price thereof. Another aspect of the credit risk is that deterioration in the financial position of the Group may reduce ASAB's ability to obtain any debt financing required to repay Noteholders at the time of the maturity of the Notes.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Refinancing risk

ASAB may be required to refinance certain or all of its outstanding debt, including the Notes advance when they become payable in accordance with the terms and conditions or if the Notes are redeemed in advance, for example by issuing new bonds or raising a bank loan. ASAB's ability to successfully refinance such debt is dependent on the conditions of the financial markets in general, the capital markets and ASAB's own financial position at such time. Even if the markets and ASAB's financial position are favourable, there is a risk that ASAB's access to financing sources at a particular time may not be available on acceptable terms, or at all. The risk that ASAB is unable to refinance its debt obligations on favourable terms, or at all, could have a material adverse effect on the Group's business, financial condition and results of operations and on ASAB's ability to repay amounts due under the Notes.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risks relating to the Noteholders' agent acting on behalf of the Noteholders

The Noteholders' agent is entitled to enter into certain agreements with ASAB or a third party or take any other actions necessary for the purpose of maintaining, releasing, altering or enforcing the security for the Notes, creating further security for the benefit of the secured parties or for the purpose of settling the Noteholders' or the ASAB's rights to the security for the Notes, in each case in accordance with the terms of the finance documents. Although there is a limitation that any such actions shall not be taken if the Noteholders' agent deems the action to be detrimental to the interests of the Noteholders, there is a risk that actions will be taken that may be considered to be detrimental in the view of some or all of the Noteholders.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risk factors (VII/X)

No actions against ASAB and Noteholders' representation

In accordance with the terms and conditions of the Notes, the Noteholders' agent will represent all Noteholders in all matters relating to the Notes and the Noteholders are prevented from taking actions on their own against ASAB. Consequently, individual Noteholders do not have the right to take legal actions to declare any default by claiming any payment from or enforcing any security granted by ASAB and may therefore lack effective remedies unless and until a requisite majority of the Holders agree to take such action. Notwithstanding, shall the above limit an individual Noteholder's right to claim and enforce payments which are due to a change of control event or other payments which are due by the Issuer to some but not all Noteholders.

However, there is a risk that a Noteholder, in certain situations, could bring its own action against ASAB, which could negatively impact an acceleration of the Notes or other action against ASAB.

To enable the Noteholders' Agent to represent Noteholders in court, the Noteholders may have to submit a written power of attorney for legal proceedings and duties. The failure of all Noteholders to submit such a power of attorney could negatively affect the legal proceedings.

Under the terms and conditions, the Noteholders' agent will in some cases have the right to make decisions and take measures that bind all Noteholders. Consequently, there is a risk that the actions of the Noteholders' agent in such matters could impact a Noteholder's rights under the terms and conditions in a manner that would be undesirable for some of the Noteholders.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Noteholders' meetings

The terms and conditions include certain provisions regarding Noteholders' meeting. Such meetings may be held in order to resolve on matters relating to the Noteholders' interests. The terms and conditions will allow for stated majorities to pass certain resolutions which are binding upon all Noteholders, including Noteholders' who have not taken part in the meeting and those who have voted differently to the required majority at a duly convened and conducted Noteholders' meeting. Consequently, there is a risk that the actions of the majority in such matters could impact a Noteholder's rights in a manner that would be undesirable for some of the Noteholders.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Restrictions on the transferability of the Notes

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended, or any U.S. state securities laws. Subject to certain exemptions, a holder of the Notes may not offer or sell the Notes in the United States. ASAB has not undertaken to register the Notes under the U.S. Securities Act or any U.S. state securities laws or to affect any exchange offer for the Notes in the future. Furthermore, ASAB has not registered the Notes under any other country's securities laws. It is the Noteholders' obligation to ensure that the offers and sales/transfers of Notes comply with all applicable laws. Due to these restrictions, there is a risk that a Noteholder cannot sell its Notes as desired. Restrictions relating to the transferability of the Notes could have a negative effect for some of the Noteholders.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Amended and new legislation

The terms and conditions are governed by Swedish law. Changes may take place in laws and regulations which may affect ASAB's operations, and the effects of such changes are often difficult to predict. Also, in the future, laws and regulations relating to or affecting, for example, solar power energy or energy taxes and their respective interpretations currently affecting ASAB, can change, and ASAB is unable to predict what regulatory changes can be imposed in the future as a result of regulatory initiatives in the PRC or in Sweden.

There is a risk that the measures that ASAB takes to ensure compliance with new laws and regulations are not adequate. There is also a risk that possible future legislative measures or changes or modifications to administrative practices may have an impact on the rights of the Noteholders and impact the value of any Notes affected by it.

Risk rating

Potential negative impact: medium

Probability of occurrence: low

Risk factors (VIII/X)

Risks relating to the clearing and settlement in Euroclear Sweden AB's book-entry system

The Notes are affiliated to Euroclear Sweden AB's account-based system, and no physical notes have been or will be issued. Clearing and settlement relating to the Notes, as well as payment of interest and redemption of principal amounts, will be performed within Euroclear Sweden AB's account-based system. Noteholders are therefore dependent on the functionality of Euroclear Sweden AB's account-based system. If, due to any obstacle for Euroclear Sweden AB, ASAB cannot make a payment or repayment, such payment or repayment may be postponed until the obstacle has been removed. Consequently, there is a risk that Noteholders receive payment under the Notes later than expected.

Risk rating

Potential negative impact: low

Probability of occurrence: low

Ranking of claims

While the Notes are secured, they rank *pari passu* with all other secured and unsubordinated indebtedness of the Issuer outstanding from time to time. The Notes are effectively subordinated to claims of creditors of any of the ASAB's subsidiaries'. Although the covenants in the terms and conditions impose certain limitations on the incurrence of additional indebtedness, the Group retains the ability to incur additional secured and unsecured indebtedness and other liabilities in the future that rank senior to or *pari passu* with the Notes. As there will be no security taken over any PRC assets owned by ASRE or LSE (or any of their subsidiaries), such as PV panel installations and their receivables received under the rooftop agreements, this means that any claim the security agent, on behalf of the Noteholders, may have against ASRE or LSE will rank *pari passu* with any other creditors. The Notes are thus effectively subordinated to all of the secured and unsecured indebtedness and other liabilities of ASAB's subsidiaries. Moreover, if such creditor has received a court order to force ASRE or LSE to realise any of its assets, then that creditor will rank ahead any other creditors (including the agent's claim) based on the date of the court order, provided that ASRE and LSE are not bankrupt. In a bankruptcy scenario, the court will transfer the case to the bankruptcy court and the creditor will rank *pari passu* with other creditors.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Intercreditor agreement

Under the terms and conditions for the Notes, ASAB is permitted, provided that the relevant conditions are met, to issue notes which will not be governed by the terms and conditions for the Notes. The holders of such notes will be entitled to share in the security granted for the Notes in accordance with the terms and subject to the conditions of the intercreditor agreement which shall be made among *inter alios* ASAB, the agent and the security agent and which shall be delivered as a conditions precedent to the release of the proceeds from the Notes to ASAB.

As such, the intercreditor agreement will govern the relationship between ASAB, the Noteholders and the holders of any future notes issued by ASAB and it sets the terms and framework for the enforcement of security on behalf of the Note Holders and, as the case may be, any holders of future notes. More specifically, holders of notes (including the Noteholders) representing more than 50 per cent of the total senior debt outstanding at the relevant time, are entitled to instruct the security agent to enforce the security consistent with the "security enforcement objective". An enforcement will comply with the security enforcement objective if it means maximising, so far as is consistent with prompt and expeditious realisation of value, the recovery by the secured parties, provided always that such enforcement is made in compliance with relevant applicable Swedish law laws including, without limitation, the fiduciary duty (*Sw. vårdplikt*) of the security agent (acting on behalf of the secured parties).

The Noteholders and any other secured parties under the intercreditor agreement will be represented by the security agent in all matters relating to the transaction security and are not permitted to take any independent enforcement action. There is a risk that the security agent will act in a manner which is not consistent with the preferences of all Noteholders since the interests and commercial imperatives among the Noteholders and any other secured holders of future notes may differ. Furthermore, there is a risk that the security agent or anyone appointed by it in accordance with the intercreditor agreement will not properly comply with and discharge its obligations and liabilities under the intercreditor agreement. In this respect it should be noted that the recourse of the Noteholders vis-à-vis the security agent may be limited to compensation for direct costs and that the security agent is under no obligation to compensate the Noteholders for loss of profit or other indirect losses.

Risk rating

Potential negative impact: medium

Probability of occurrence: medium

Ability to service the debt

ASAB's ability to service its debt under the Notes will depend upon, among other things, the Group's future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, some of which are beyond the Group's control. If Group's operating income is not sufficient to service its current or future indebtedness, the Group will be forced to take actions such as reducing or delaying its business activities, acquisitions, investments or capital expenditures, selling assets, restructuring or refinancing its debt or seeking additional equity capital. There is a risk that ASAB will not be able to affect any of these remedies on satisfactory terms, or at all. This would have a material adverse effect on ASAB's operations, financial position and business.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Risk factors (IX/X)

Risks relating to the restructuring of the Group and the implementation of the transaction structure

In connection with the issuance of the Notes, the Group will be restructured such that MidCo will assume ownership of ASRE and LSE and, indirectly, the other subsidiaries and assets of the Group (excluding the Issuer). For purely technical reasons and Chinese law administrative constraints, the restructuring may only be completed after settlement and release of the Note proceeds to ASAB. The estimated time for completing the restructuring is two to three weeks. Prior to completion of the restructuring, this may have implications for the value of the pledge over the shares in MidCo since it means that there will be a short period of time during which MidCo will not in effect be the indirect owner of the Group (excluding the Issuer). If ASAB were to become the subject of insolvency or bankruptcy proceedings in the interim, this may have a material adverse effect on the recovery from enforcement by the Noteholders of the pledge over shares in MidCo.

Risk rating

Potential negative impact: high

Probability of occurrence: low

Enforcement of security

If ASAB cannot service the debt under the Notes, then the Noteholders' agent may decide to sell MidCo with the entire PRC portfolio to a third party or require ASRE or LSE to sell some of its assets in piece-meal in order to service the payments for the debt under the Notes.

In case of an enforcement of the security over the shares of MidCo in which the Noteholders would assume control over MidCo with a view to realising sales of equity interests or assets further down in the Group structure, certain restrictions would apply. There would be a need for cooperation of the board/legal representative of ASRE and/or LSE as the legal representative needs to sign and use the company chop to materialise any equity transfer in the subsidiaries of MidCo. If the board/legal representative would not be cooperative in this process, the Noteholders' agent or other representatives of the Noteholders would have to sue the board/legal representative to make the legal representative sign and chop the relevant documents to materialise the equity transfer. This may cause delays in order to materialise the sales from MidCo and the entire PRC portfolio, which would have a material adverse effect on the recovery from enforcement by the Noteholders.

If the Noteholders' agent wishes to change the board and the legal representative of ASRE and LSE prior to an equity transfer, then the same cooperation from the board/legal representative of ASRE and LSE as mentioned above would apply to realise such change. This may also cause delays with regard to making the desired changes to the board/legal representative. This may have a material adverse effect on the recovery from an enforcement of the Noteholders.

In the case that ASRE or LSE would be requested to sell some PV panel installations in order to service the debt, ASRE needs to obtain consent from the PRC bank, Industrial and Commercial Bank of China ("ICBC"), if ICBC considers that the transfer of any assets of ASRE might reduce ASRE's solvency. It is at ICBC sole discretion whether the disposal of assets would be considered reducing ASRE's solvency. There is a risk that ICBC does not consent to the request from the agent to sell such assets which would have a medium detrimental effect on the Group's financial position and result of operations.

Risk rating

Potential negative impact: medium

Probability of occurrence: low

European Benchmarks Regulation

The process for determining STIBOR, EURIBOR and other interest-rate benchmarks is subject to a number of legislative acts and other regulations. Some of these acts and regulations have already been implemented whilst some are set to be implemented in the near future. The most extensive initiative in this respect is the Benchmark Regulation (Regulation (EU) 2016/1011 of the European parliament and of the council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014). The Benchmark Regulation came into force on the 1 January 2018. The Benchmark Regulation addresses the provision of benchmarks, the contribution of input data to benchmarks and the use of benchmarks within the European Union. The effect of the Benchmark Regulation cannot yet be fully determined due, among other things, to the limited time period that the regulation has applied. However, there is a risk that the Benchmark Regulation will affect how certain benchmarks are determined and how they develop in the future. This could, for example, lead to increased volatility regarding some benchmarks. A further potential risk is that increased administrative requirements, and resulting regulatory risk, may discourage stakeholders from participating in the production of benchmarks, or that some benchmarks cease to be provided. If this would happen in respect of benchmark that is used for the Notes, it could have negative effects for the Noteholders.

Risk rating

Potential negative impact: low

Probability of occurrence: medium

Noteholders' currency risks

The Notes will be denominated and payable in EUR or SEK. If the Noteholders measure their investment return by reference to a currency other than EUR or SEK, an investment in the Notes will entail foreign exchange-related risks due to, among other factors, possible significant changes in the value of the EUR or SEK, relative to the currency by reference to which investors measure the return on their investments. This could cause a decrease in the effective yield of the Notes below their stated coupon rates and could result in a loss to investors when the return on the Notes is translated into the currency by reference to which the investors measure the return on their investments. Government and monetary authorities may impose (as some have done in the past) exchange controls that could adversely affect an applicable exchange rate or the ability of ASAB to make payments in respect of the Notes. As a result, if these risks materialise there is a material risk that investors may receive less interest or principal than expected, or no interest or principal at all.

Risk rating

Potential negative impact: high

Probability of occurrence: medium

Risk factors (X/X)

Risks related to enforcing the Loan Pledges in the PRC

The Group's obligations toward the Noteholders are already secured by existing pledges over the existing intra-company loans provided from ASAB to ASRE and LSE ("**Loan Pledges**"). Pursuant to PRC Law, a secured creditor can enforce its security when either (i) the debtor fails to make a payment of the debts that become due, or (ii) an event of default, as agreed between the parties in the security agreement, occurs.

Loan Pledges

The Loan Pledges are governed by the PRC laws and have already been perfected by way of an on-line filing with the Credit Reference Centre of Central Bank of China ("**PBOC**") to ensure the enforceability or admissibility in evidence of the security established. For a properly registered Loan Pledge, if ASRE/LSE is in default, the security agent may request ASRE/LSE to transfer all amounts that is payable by the obligor to ASAB/LSE under the intra-company loan agreements to the bank account designated by the security agent. There is a risk that the obligor may not be cooperative, especially when the security agent is located outside of the PRC. In this scenario, the security agent will have to institute legal proceedings against ASRE/LSE. Enforceability of such transaction security could be subject to a certain degree of uncertainty or the enforcement of such security could be delayed. This may have an adverse effect on the value of the security that has been granted to the security agent, on behalf of the Noteholders.

In addition, the security agent is located in Sweden and the Loan Pledges are governed by PRC laws and subject to arbitration proceedings in the PRC. Although, there should not be any hurdles for the security agent to pursue enforcement of the Loan Pledges, the enforcement costs could be high due to the relatively weak PRC legal and institutional mechanisms for enforcing contracts and contract payments. Moreover, there may also be certain timing issue when enforcing a security in the PRC. PRC courts do not have enough resources, and, as such, there is a back-log of cases. This could mean that it could take time to enforce a security and cause delays. These risks may ultimately have an adverse effect on the value of the security that has been granted to the Noteholders.

More generally, PRC courts or an arbitral tribunal applying PRC law will in certain circumstances decline to enforce rights or obligations (i) which they regard as being contrary to public policy or (ii) which would involve the enforcement of foreign revenue or penal laws. The enforcement of security may be limited by the provisions of PRC law concerning frustration of contracts, and PRC courts or an arbitral tribunal applying PRC law will not enforce a penalty and therefore any default interest clause unless the court or tribunal (as applicable) finds that such provisions represent a genuine pre-estimate of the loss likely to be suffered as a result of a breach of the relevant contract.

Enforcement under insolvency proceeding

If an insolvency procedure is started, the Noteholder's rights to enforce its loan or security under PRC law normally would entail the following. On the acceptance by a court of a bankruptcy application, any litigation or arbitration proceedings brought by a creditor against the bankrupt debtor must be stayed until the liquidator takes over the bankrupt debtor's assets. If a creditor has applied to the court for an attachment order and the enforcement of a judgment or arbitral award, the attachment order will be lifted and the enforcement stayed on the court's acceptance of a bankruptcy application. The secured creditor's claim will be satisfied at the end of the bankruptcy proceedings from the proceeds of the realised security assets or the repayment by the guarantor. An unsecured creditor's claim will be satisfied at the end of the bankruptcy proceedings from the remaining assets of the bankrupt debtor in a *pari passu* ranking with other unsecured creditors.

Secured creditors' claims are satisfied from the realised proceeds of the sale of security assets. If the secured creditor's claim cannot be fully satisfied from the realised proceeds, he becomes an unsecured creditor for the outstanding amount and ranks *pari passu* with other secured creditors whose claims could not be fully satisfied. If the proceeds of an enforcement are not sufficient to repay all amounts due under or in respect of the Notes, then the Noteholders will only have an unsecured claim against the Issuer and its remaining assets (if any) for the amounts which remain outstanding under or in respect of the Notes.

Risk rating

Potential negative impact: medium

Probability of occurrence: medium

Risks relating to the PRC Loan Pledges

In terms of the Loan Pledges, there is risk that the proceeds of any enforcement of those Loan Pledges could be insufficient to satisfy all amounts owed to the Noteholders.

As the Noteholders are represented by a security agent in all matters relating to the Loan Pledges, there is a risk that the security agent, or anyone appointed by it, does not properly fulfil its obligations in terms of maintaining, enforcing or taking other necessary actions in relation to those Loan Pledges.

Risk rating

Potential negative impact: medium

Probability of occurrence: low

Agenda

- 1 Transaction summary
- 2 Introduction to Advanced Soltech
- 3 Business model
- 4 Project portfolio
- 5 Market overview
- 6 Financials
- 7 Risk factors

- 8 Appendix

ASAB's Green Bond Framework



Use of Proceeds

- Eligible Projects and Assets target climate mitigation. Meaning a project or asset funded in whole or in part, by ASAB that promotes the transaction to a low-carbon society
- ASAB defines new projects and assets as Eligible Projects and Assets where final payment for such was provided less than 12 months prior to the date of issue of the Green Bond
- Eligible Projects and Assets are new, under construction or existing, and/or represent an expansion or enhancement of any existing Solar Energy Solutions, defined as Solar Power Stations owned and managed by ASAB



Process for Project Evaluation and Selection

The process for Eligible Project and Asset evaluation and selection is a two-step process

- i) ASAB's sales team present a specific Solar Power Station project meeting the applicable Eligible Projects and Assets criteria to the Green Bond Committee
- ii) The Green Bond Committee solely makes the decision to finance Solar Power Stations, in line with the Eligible Projects and Asset Category definition, with net proceeds from the issuance of Green Bonds. A decision to allocate net proceeds will require a consensus decision by the Green Bond Committee. The decision is documented and filed



Management of Proceeds

- An amount equal to the net proceeds from the issue of Green Bond will be deposited in a separate account in the same name as the issuing entity, ASAB, held by a reputable financial institution (bank). The proceeds in such account is kept separate from other bank accounts to ensure and enable separate monitoring and tracking of the Green Bond net proceeds. ASAB will document all transfers to and from such separate accounts to ensure tracking of the funds and to simplify the annual review



Reporting and Transparency

- ASAB will annually and until maturity of the Green Bonds issued, to the investors – on its website; www.advancedsoltech.com and in ASAB's Annual Newsletter provide details and information on several different topics

Advanced Solar Power Hangzhou (ASP)

ASP in brief

- ASP is a prominent thin film solar cell producer based in China. ASP owns 49% of ASAB
- The company's CdTe based thin film solar cells have been distributed to customers in more than 38 countries, including Sweden
- ASP was founded in 2007 by professor Xuanzhi Wu and Ben Wu based on Xuanzhi Wu's longstanding research on solar cells
- The company is especially well-known for well-developed building integrated photovoltaic (BIPV) products
- Selected investors in ASP include:

SEQUOIA

LEGEND
CAPITAL
君联资本

MORNINGSIDE
晨兴资本



ASP BIPV facade



ASP BIPV roof



ASP BIPV semi-transparent corridor



ASP BIPV roof at the 2019 Worlds Garden Expo in Beijing

ASP and ASAB – a mutually beneficial relationship



Advanced Soltech offers



Reliable demand

ASAB provides ASP with reliable demand for ASP's solar cells



Key partnership

ASP's relationship with ASAB is essential for ASP's credibility as a player in the solar as a service value chain



Marketing platform

Increasing deployment of ASP's products through ASAB's installations



offers



Advanced Soltech



Chinese partnership

Having a Chinese partner with local knowledge is essential for foreign companies looking to enter the Chinese market



Committed production capacity

ASP has committed 35 MW in 2020 and 45 MW in 2021 of production capacity to ASAB, providing ASAB with a reliable supply of CdTe solar cells



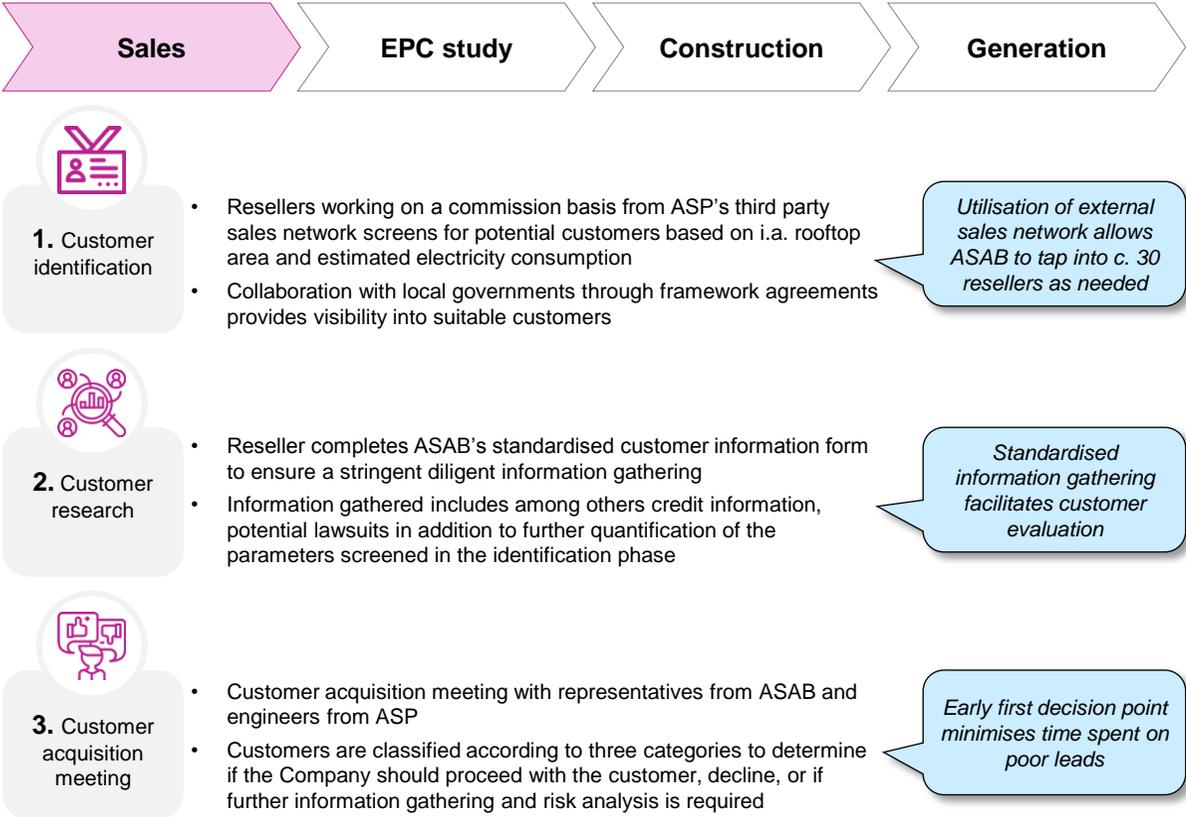
Large scale EPC and sales network

ASAB benefits from being able to tap into ASP's existing network of resellers and EPC contractors

ASAB and ASP both benefit from the mutual relationship with neither party being dependent on the other

A broad sales network with over 30 resellers

Structured sales process



Key parties involved

- Third party sales network**
ASP's third party sales network of 30 resellers¹ screens for and initiates dialogues with potential customers
- Internal sales team**
ASAB's sales team of 2 FTEs checks the customer information form and act as channel managers
- Representatives**
Representatives from ASAB participate in the customer acquisition meeting to evaluate the project
- ASP engineers**
ASP's engineers participate in the customer acquisition meeting to provide technical expertise

Division of responsibility

- Advanced Soltech**
 - Evaluate customers based on information gathered by third party
 - Third party** (Main responsible)
 - Lead generation
 - Customer screening and dialogue
 - Customer information gathering and completion of customer information form
- Main responsible*

External sales network allows ASAB to utilise a large number of external resellers while keeping fixed costs at a minimum

1) ASAB currently utilises 5-8 of the resellers
Source: Company information

Rigorous inspection and evaluation process ensuring quality and reliability of customer

Diligent customer inspection process



1. On-site evaluation

- Once the customer acquisition committee has decided to pursue a specific project, ASP's engineers go on-site and conduct an EPC-study
- Engineers investigate roof quality, study facility blueprints, potential implementation difficulties and provide a cost estimate

Diligent inspection limits future down-side risk

2. Data evaluation

- The data from the engineers' EPC-study is submitted to ASAB's account managers
- The account manager checks the data against ASAB's customer qualification criteria

Internal checklist of customer criteria ensures thorough investment decisions

3. Evaluation committee meeting

- ASAB's internal evaluation committee makes a final decision whether to pursue an investment based on the information compiled in the sales process, the EPC-study, and the qualification process
- When the customer has been approved by the committee, a rooftop agreement is entered into

Second decision point before further resources are committed

Key parties involved

ASP engineers
Engineers from ASP are responsible for the on-site EPC-study under an EPC contract

ASAB
ASAB is responsible for account management and the final investment decision

Division of responsibility

Advanced Soltech

- Evaluate customers based on information gathered by third party
- Negotiate rooftop agreement

Main responsible

Third party

- All on-site evaluation, including roof quality
- Responsible for ensuring that the customer complies with ASAB customer qualification criteria

Customer relation is transferred from ASP to ASAB during the EPC-study process, ensuring that ASAB is positioned to lever that relation in the future

Outsourced construction process eliminating construction risk

Construction phase structured as a turn-key arrangement



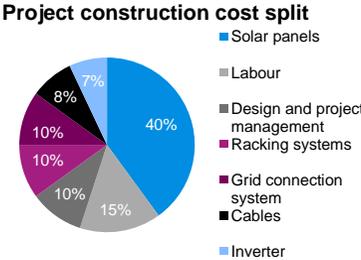
1. Engineering and design

- Engineers from ASP prepare designs and blueprints for the project
- The design is sent to the local grid operator for approval before construction can commence

Engineers from ASP provide market leading expertise of rooftop solar installations

2. Construction

- Solar panels are purchased from the producer with the most competitive offering
- The EPC contractor is responsible for all activities from design, procurement, and construction to commissioning and handover of the project to ASAB



Pre-approval eliminates grid connection risk at this stage

3. Grid connection

- When the construction is completed, the local grid operator carries out a verification test to ensure that the installation has been done according to the pre-approved design. This takes about one month
- ASAB signs a take-over notice once grid connection is completed, at which point ASAB assumes responsibility for the project

Key parties involved

- ASAB**
Appoints EPC contractor (typically ASP)
- EPC contractor (ASP)**
Design, procurement, and management of full project
- Installation partner**
Local installation partner builds the facility according to specifications
- Local grid operator**
Approves the design and carries out the verification test

Division of responsibility

- Advanced Soltech**
 - Appoint EPC contractor
- Third party** (Main responsible)
 - Prepare design and blueprint as well as stand any risk associated therewith
 - Manufacture solar panels and stand technology risk
 - Responsible for construction from start to finish

Using EPC contractors throughout the construction process minimises ASAB risk exposure to construction errors

Once installed, ASAB generates electricity for high-quality customers with contracts spanning over ~20 years with a low fixed cost model

Electricity generation is ASAB's main responsibility



1. Electricity generation

- Once the installation has been connected to the grid, the solar power plant will be turned on for electricity generation
- The solar plant will deliver green and cheap electricity for 20 years as stipulated in the rooftop agreement

The customer receives a reliable supply of renewable energy

2. Monitoring

- ASAB's monitoring team is responsible for monitoring all projects through a monitoring platform
- The monitoring platform enables remote monitoring of e.g. electricity generation, potential errors with the plant, etc.

Continuous monitoring of all projects has resulted in an uptime of 98%

3. Maintenance

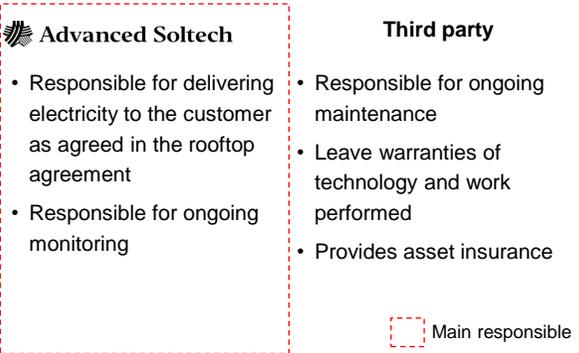
- An EPC contractor is contracted for ongoing maintenance
- Maintenance includes panel washing, repairs and monthly visits

Third party maintenance limits need to add internal fixed costs

Key parties involved

- ASAB**
ASAB is responsible for the power generation
- Internal monitoring team**
Internal team is responsible for monitoring all projects
- EPC contractor (ASP)**
EPC contractors carry out all maintenance
- Insurance provider**
Asset insurance is purchased for the lifetime of the project

Division of responsibility

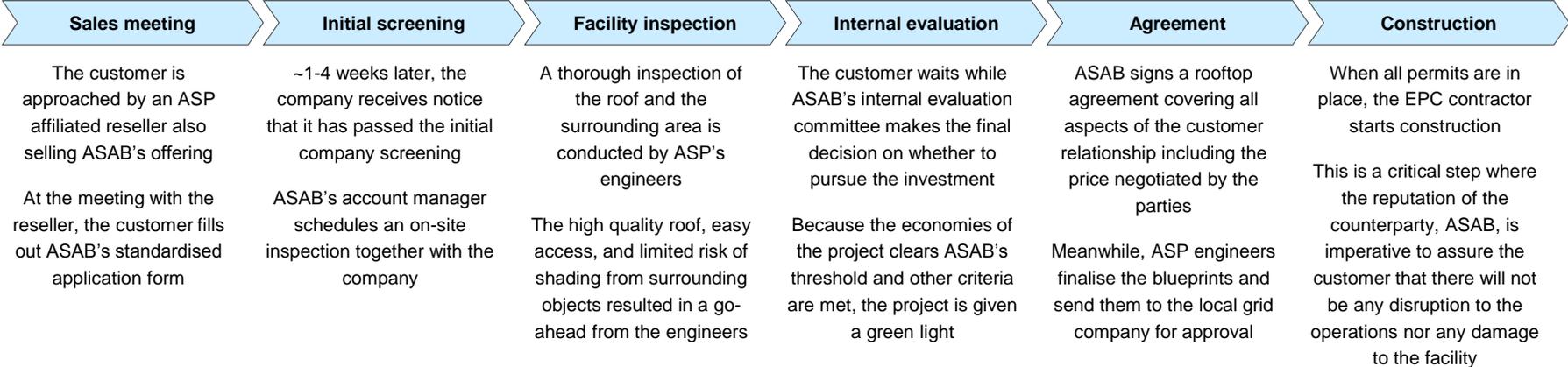


Monitoring platform and outsourced maintenance organisation enables ASAB to sustain a scalable, low fixed cost model

Customer case study - Jindun Fire Control Equipment (I/II)



CUSTOMER CASE STUDY
 Jindun Fire Control Equipment
 4 MW solar power plant in Zhejiang



3,996
kW
Installed capacity

Customer impact

Key issue for many stakeholders including employees, customers, the government, and investors

Good local PR, contributing to decreasing air pollution

15% customer discount on electricity generating cost savings of SEK 633k per year

SEK 1.11 per kWh
 SEK 0.95 per kWh

Jan Mar May Jul Sep Nov

— Grid price — Price paid

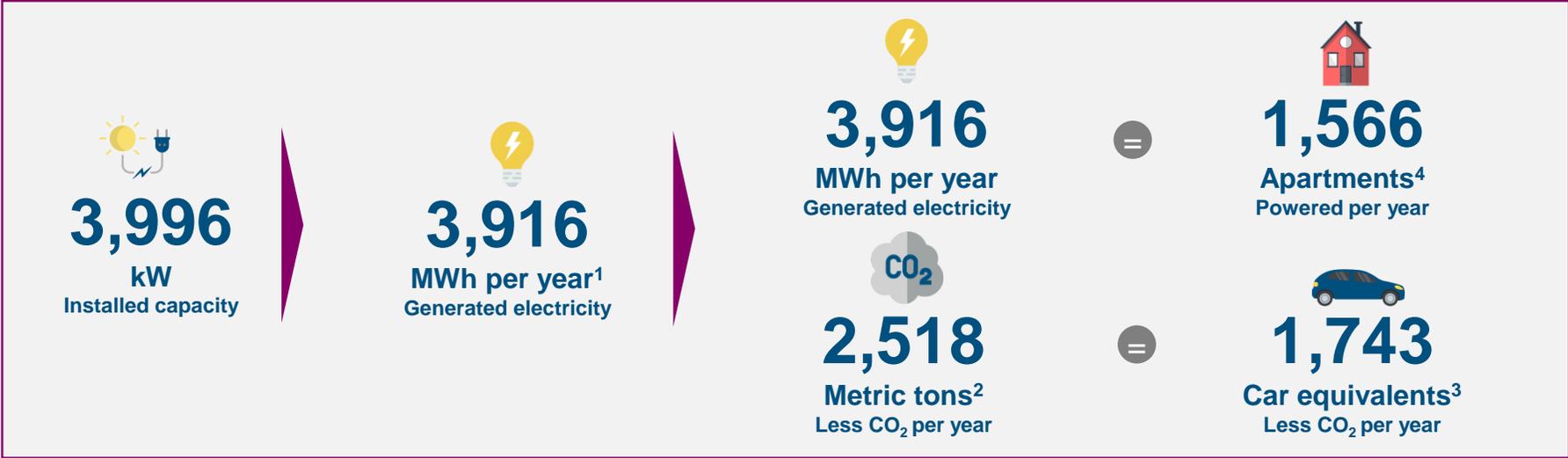
Monetary value

Potential total cost savings, SEK

12.4m

Customer case study - Jindun Fire Control Equipment (II/II)

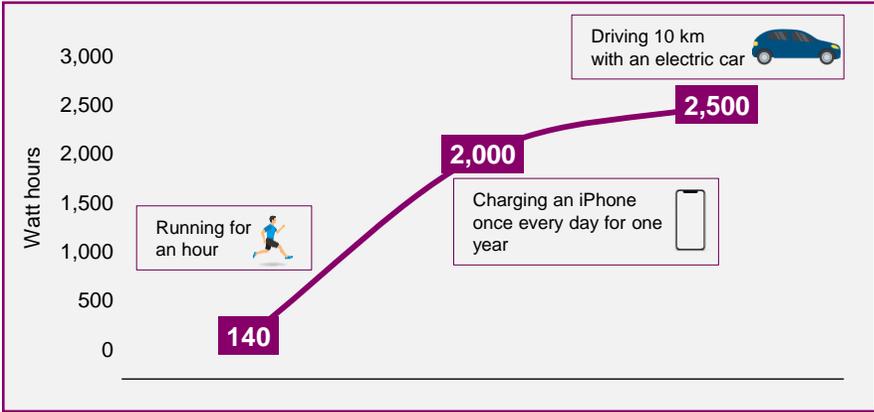
ASAB has a significant positive environmental impact due to scale and dirty alternative grid electricity



WATT
Is the measure of power

kW
Short for kilo Watt, one kW is 1,000 watt

kWh
Watt hours * 1,000



1) Assuming 1 kWh per W and a 98% uptime in line with the *General assumptions* on page 17
 2) Assuming: replacing 1 kWh of electricity in China with solar PV saves 643 g CO₂ in line with page 16
 3) Assuming: 120.4 g CO₂ per km, 12,000 km average driving range per year, source: European Environment Agency and Trafikanalys
 4) Assuming one apartment uses 2,500 kWh / year, source: Energiradgivaren.se

Portfolio deep-dive – Zhejiang

Regional breakdown

Hangzhou

Inhabitants 9.8m
Size 16,596 km²

- ASP headquarters is located in the city
- Suitable weather for solar panels



Terumo Medical Products Hangzhou

Ningbo

Inhabitants 8.2m
Size 9,816 km²

- Suitable weather for solar panels



NingBo Senate Auto Parts

Shaoxing

Inhabitants 4.9m
Size 8,279 km²

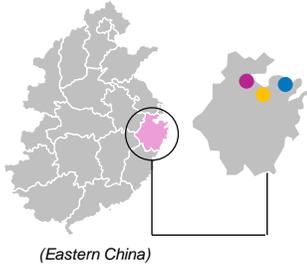
- Famous for its large textile manufacturing industry



Zhejiang Jindun Fire Control Equipment

Project description

Region	Installed cap. (kW)	% of total portfolio
Hangzhou	26,792	25.7%
Ningbo	15,352	14.7%
Shaoxing	25,250	24.2%
Other	4,291	4.1%



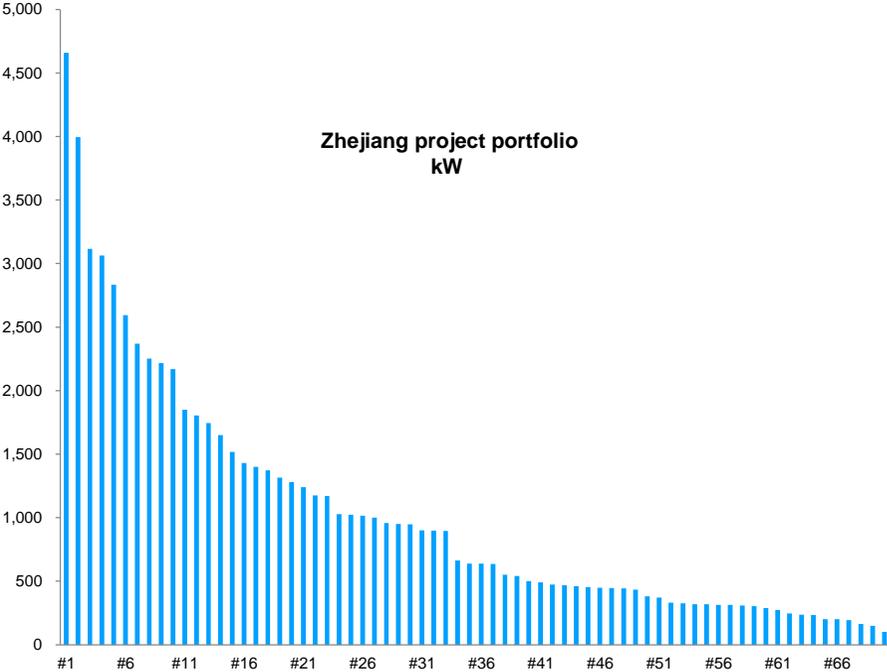
Regional project portfolio



Total capacity:
71.7 MW



Number of Projects:
70



Portfolio deep-dive – Jiangsu

Regional breakdown



(Eastern China)

Cities with potential for expansion

Nanjing		Suzhou	
Inhabitants	11.7m	Inhabitants	10.7m
Size	1,399 km ²	Size	8,488 km ²

Wuxi	
Inhabitants	6.5m
Size	4,628 km ²



- JiangSu YangHe Brewery is ASAB's largest customer with respect to installed capacity
- The company is a large spirit and wine manufacturer with more than 15,000 employees
- The company is listed on the Shenzhen Stock Exchange and has an enterprise value of USD ~25bn¹



Outside the factory building



View of the installation

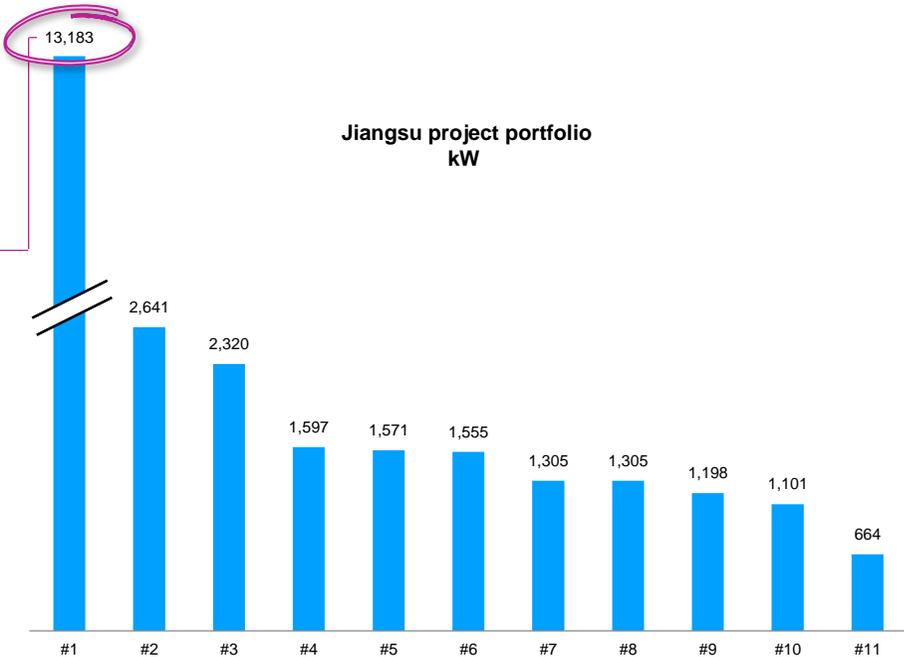
Regional project portfolio



Total capacity:
28.4 MW



Number of projects:
11



¹ Source: Bloomberg as per 11 January 2019
Source: Company information. As of 30 September 2019

Portfolio deep-dive – The rest of China

Regional breakdown

Examples of provinces with potential for expansion



(Eastern China)

- Guangdong
- Fujian
- Shandong
- Hebei
- Hubei

Regional project portfolio



Total capacity (MW)

Guangdong	2.2
Henan	0.9
Beijing	0.6
Shanghai	0.5



Number of projects

Guangdong	1
Henan	7
Beijing	1
Shanghai	2



- National Center for the Performing Arts (“NCPA”) is a government owned organisation that owns and operates culture centres in China
- NCPA is one of several governmental customers



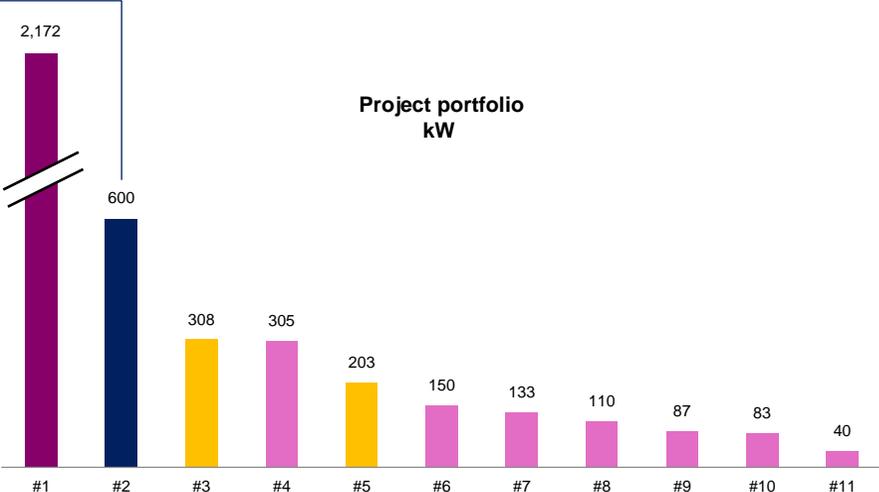
The performance center



View of installation



The Giant Egg”, NCPAs most famous building



Strong, dedicated management team...



Frederic Telander
CEO

- Frederic was CEO of SolTech Energy between 2009 and 2018 and is one of the founders
- Previous partner at EIG Venture Capital Ltd. and has led the expansion of Gas Turbine Efficiency, where he later was vice chairman in the listed entity



Max Metelius
CFO/COO

- Max is the CFO/COO of ASAB
- He has previously worked at HQ Bank and Carnegie, primarily within emerging markets
- Co-founded Eneo Solutions, a solar energy consulting and PPA provider



Lars Vilhelmson
Controller

- Lars is ASAB's Controller
- He has previously worked as CFO at Cool Carrier and the Stockholm listed Petrogrand and Nordic mines
- Lars has extensive experience from working with listed companies with assets in foreign countries

... backed by a seasoned board of directors



Stefan Ölander
Chairman

- Stefan has been involved in SolTech Energy since 2011, initially as a member of the board and later as chairman and is now the CEO of SolTech Energy
- Has worked as communications director at SEB and Kinnevik, founder of Rewir and currently on board of Zacco



Frederic Telander
Board member

- Frederic was CEO of SolTech Energy between 2009 and 2018 and since then Chairman of the Board
- Previous partner at EIG Venture Capital Ltd.
- Led the expansion of Gas Turbine Efficiency, with a leading role in the listing process of the company and served as Vice Chairman in the listed entity.
- Frederic also led SolTech Energy through the listing process on Nasdaq First North Stockholm



Ben Wu
Board member

- Ben is a co-founder of the ASP Group and CEO of ASRE
- Previously worked as an Associate at McKinsey & Co. and as Director at the Lenovo Group
- Also has experience from MSCI, Himalaya VC and various positions within the IT sector



Gang Bao
Board member

- Gang is the COO of ASRE
- Has extensive experience in running start-ups and has deep understanding of the company's business and development

Board member #1
Independent board member

- Board member to be appointed

Board member #2
Independent board member

- Board member to be appointed

