

# Vattenfall Investor Presentation

Handelsbanken speed-dating  
11 November 2020

Johan Gyllenhoff, VP Finance & Group Treasury  
Johan Sahlqvist, Head of Investor Relations




VATTENFALL


# This is Vattenfall


## In Brief


- Vattenfall is a leading European energy company
- We want to make **fossil-free living possible within one generation**
- We are driving the transition to a more sustainable energy system through growth in renewable production and climate smart energy solutions for our customers
- **100 per cent owned by the Swedish State**
- Our long-term credit ratings are **BBB+ stable outlook by S&P and A3 negative outlook by Moody's**

 **6.9 Million**  
Electricity Customers

 **1.9 Million**  
Heat Customers

 **3.3 Million**  
Electricity Network Customers

 **2.5 Million**  
Gas Customers

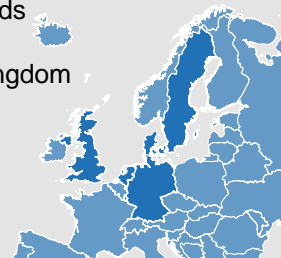
 **19,814**  
Employees

## Activities in the Value Chain

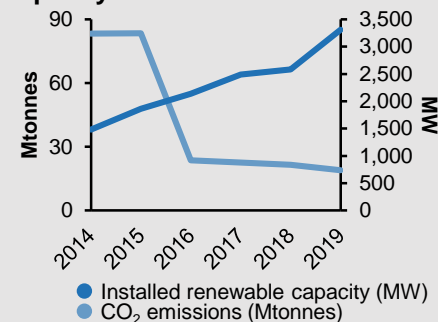


## Main markets

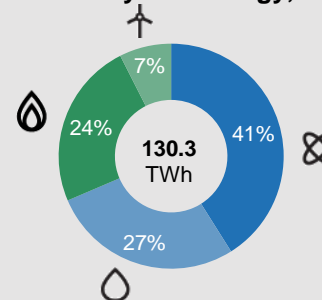
- Sweden
- Germany
- Netherlands
- Denmark
- United Kingdom



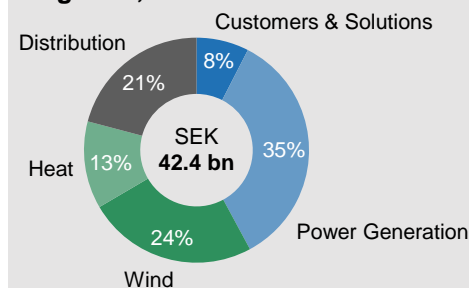
## CO<sub>2</sub> emissions & Renewable capacity



## Electricity generation breakdown by technology, 2019



## EBITDA breakdown by segment, 2019



# Operating segment overview FY 2019

## Operating segments

We report our operations broken down by the Group's operating segments: Customers & Solutions, Power Generation, Wind, Heat, and Distribution. The operating segments reflect our Business Area organisational structure except for the Power Generation segment, which is divided into the Generation and Markets Business Areas

## Number of Employees as of 31 December 2019<sup>1</sup>

Customers and Solutions	3,150
Power Generation	7,429
Wind	1,000
Heat	3,310
Distribution	2,247
Other <sup>2</sup>	2,678

<sup>1</sup> Full-time equivalents.

<sup>2</sup> Pertains mainly to Staff Functions and Shared Service Centres.

<sup>3</sup> Numbers reflect FY 2019

## Customers & Solutions

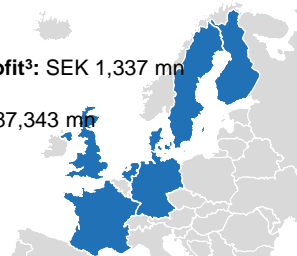
**Responsible for sales of electricity, gas and energy services in all of Vattenfall's markets**

- One of the market leaders in Sweden with nearly 900,000 electricity contracts
- One of the market leaders in the Netherlands with 3.6 million electricity and gas contracts
- Leading position in Berlin and Hamburg as an electricity supplier
- Activities in France expanded from business customers to also serve retail customers with electricity and gas
- Operates 14,900 e-mobility charging points in Sweden, Germany and the Netherlands
- Launch of Flexpower, a public smart charging network for e-vehicles, in cooperation with the city of Amsterdam

**Underlying Operating Profit<sup>3</sup>:** SEK 1,337 mn  
(5% of total)

**External Net Sales:** SEK 87,343 mn  
(53% of total)

**EBITDA:** SEK 2,976 mn  
(8% of total)



## Power generation

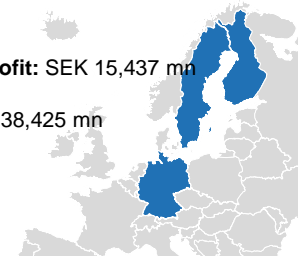
**Responsible for Vattenfall's hydro and nuclear power operations, maintenance services business, and optimisation and trading operations, including certain large business customers**

- Operates a portfolio with 7.2 GW nuclear capacity and 11.7 GW hydro power capacity across Sweden, Finland and Germany
- One of Europe's largest providers of fossil-free electricity, with 35.8 TWh from hydro power and 53.4 TWh from nuclear power
- Provides professional asset optimisation services and market access, and a leading player in PPA markets in northwest Europe
- Closure of Ringhals reactor 2 and preparation for the decommissioning of Ringhals reactor 1 in 2020

**Underlying Operating Profit:** SEK 15,437 mn  
(58% of total)

**External Net Sales:** SEK 38,425 mn  
(23% of total)

**EBITDA:** SEK 13,642 mn  
(35% of total)



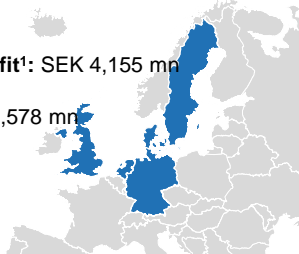
# Operating segment overview FY 2019 (Cont'd)

## Wind

*Responsible for development and operation of Vattenfall's wind farms as well as large-scale and decentralised solar power and batteries*

- One of the largest producers of offshore wind power in the world
- One of the largest producers of onshore wind power in Denmark and the Netherlands
- Inauguration of the Horns Rev 3 offshore wind farm (407 MW) in Denmark
- Winning bid for the subsidy-free Hollandse Kust Zuid 3 & 4 offshore wind farm (~750 MW) in the Netherlands
- Construction started on the Kriegers Flak (605 MW) offshore wind farm in Denmark

**Underlying Operating Profit<sup>1</sup>:** SEK 4,155 mn  
(16% of total)  
**External Net Sales:** SEK 6,578 mn  
(4% of total)  
**EBITDA:** SEK 9,645 mn  
(24% of total)

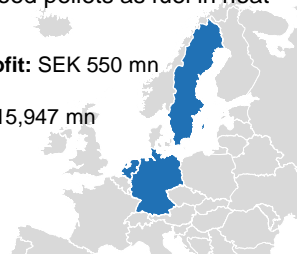


## Heat

*Responsible for Vattenfall's heat operations including sales, decentralised solutions and gas-and coal-fired condensing*

- One of Europe's leading producers and distributors of heat with more than 1.9 million end customers
- Power-to-Heat facility connected to district heating network in Berlin, enabling the closure of a coal-fired power plant
- Feasibility study conducted by Vattenfall and the City of Berlin shows that a coal phase-out in Berlin is feasible by 2030
- Transfer of district heating operations in Hamburg completed
- Closure of the Hemweg 8 coal-fired power plant in the Netherlands
- Switch from peat to wood pellets as fuel in heat-only boiler in Uppsala

**Underlying Operating Profit:** SEK 550 mn  
(2% of total)  
**External Net Sales:** SEK 15,947 mn  
(10% of total)  
**EBITDA:** SEK 4,957 mn  
(13% of total)

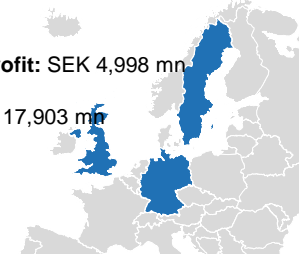


## Distribution

*Responsible for Vattenfall's electricity distribution operations in Sweden, Germany (Berlin) and the UK*

- Leading owner and operator of electricity distribution networks in Sweden
- Approximately 3.3 million business and retail customers in Sweden and Berlin, Germany
- Swedish Energy Markets Inspectorate announced significantly lower revenue frames for the next regulatory period, reducing the scope for needed investments
- Major disruptions after Storm Alfrida in 2019 with associated costs of approximately SEK 800 million

**Underlying Operating Profit:** SEK 4,998 mn  
(19% of total)  
**External Net Sales:** SEK 17,903 mn  
(11% of total)  
**EBITDA:** SEK 8,236 mn  
(21% of total)



<sup>1</sup> Numbers reflect FY 2019

# Our beliefs about the future



# A strategy based on an “integrated utility logic”

To enable our goal of fossil-free living within one generation

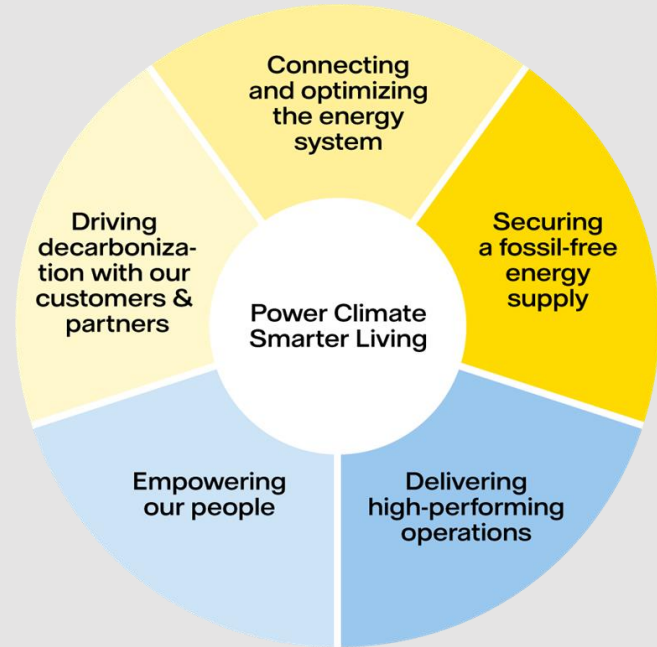
We believe being active in the whole value chain is strategically important:

It increases our competitive advantage in eg. wind auctions, by enabling stable revenues through Corporate PPAs with our customers

Access to renewable volumes on the customer side differentiates us from competitors as fossil-free electricity becomes more scarce

The ability to optimise dispatch across both customer loads and supply brings optimal value of a total portfolio

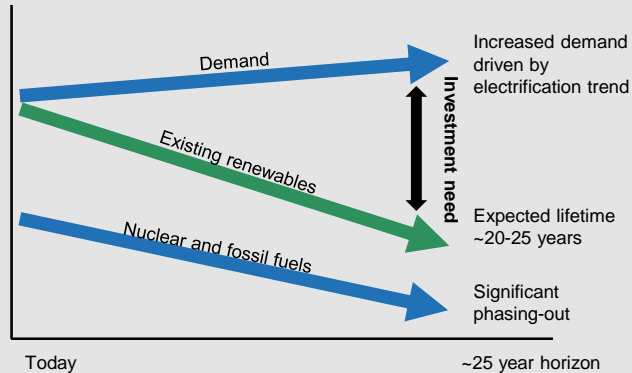
Diversifying and reducing total portfolio risk means lower cost of capital and an ability to take on more debt



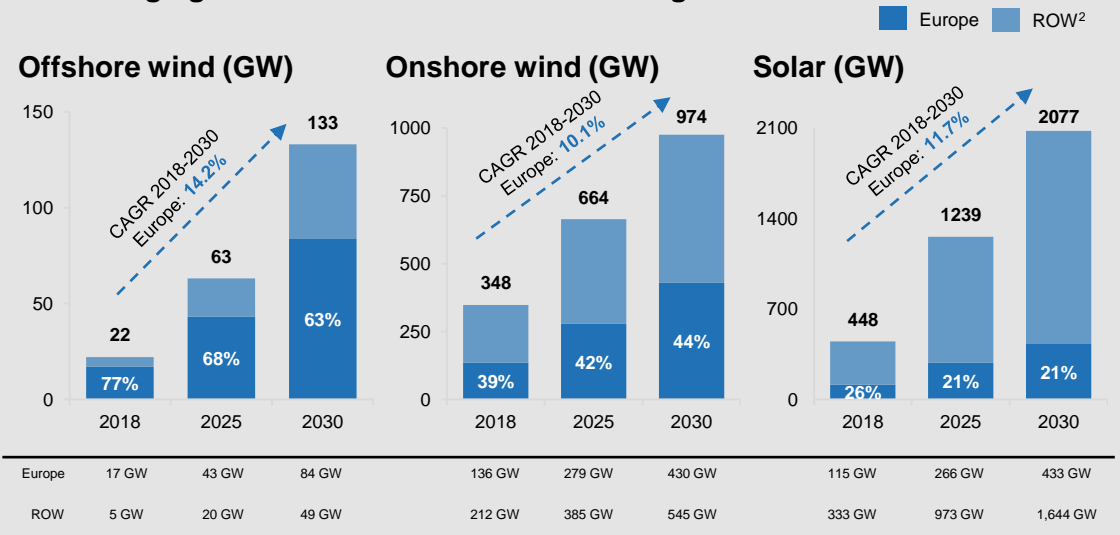
# Europe continues to be a highly attractive growth market

Despite significant ramp-up in renewables, much more growth is expected in the coming decade

## Increasing demand and phase-out of coal gives plenty of room for growth in Europe



## Double-digit growth across renewable technologies until 2030<sup>1</sup>



<sup>1</sup> Source: Bloomberg NEF – NEO 2019

<sup>2</sup> ROW excludes China

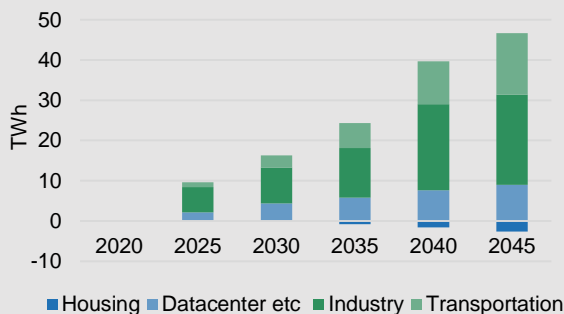
# Energy transition to spur dramatic growth in electricity demand in Sweden

Electrification, growth in renewable production capacity and ageing assets call for large network investments

## Electricity demand set to grow due to electrification and new electricity intensive businesses

- Electrification of industry and transports to increase total electricity demand
- New businesses such as data centres are also likely to have a significant impact
- Efficiency improvements in the housing sector only have a small mitigating effect on total demand

Forecast – Change in electricity demand (Sweden)<sup>1</sup>



<sup>1</sup> Source: Nepp, Färdplan för fossilfri el, Aug 2019

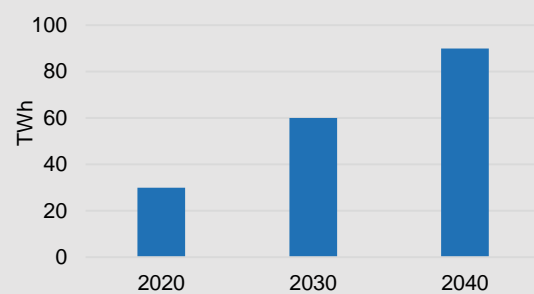
<sup>2</sup> Source: Svensk vindenergi, 100 procent förnybart 2040, Oct 2019

<sup>3</sup> Asset base per 2020-01-01

## Installed wind capacity continues to grow

- More and more capacity will be intermittent and decentralised
- Wind production is set to continue the growth in Sweden, mainly in the North and off the coast in Southern Sweden which increases the need for network capacity

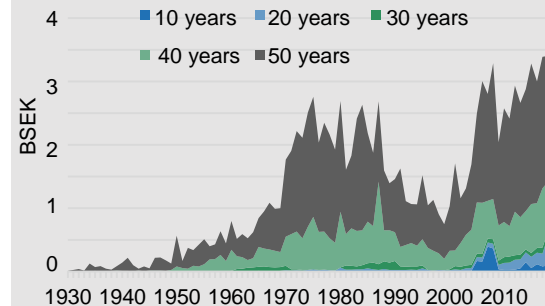
Forecast - installed wind capacity (Sweden)<sup>2</sup>



## Existing network assets are increasingly in need of reinvestments

- There was a large build out of network assets in 1970-1990. These assets are now reaching the age when they need to be reinvested in
- This is on top of the need to make new investments in the network to accommodate more renewable energy and electrification

Asset age structure – Vattenfall Eldistribution<sup>3</sup>

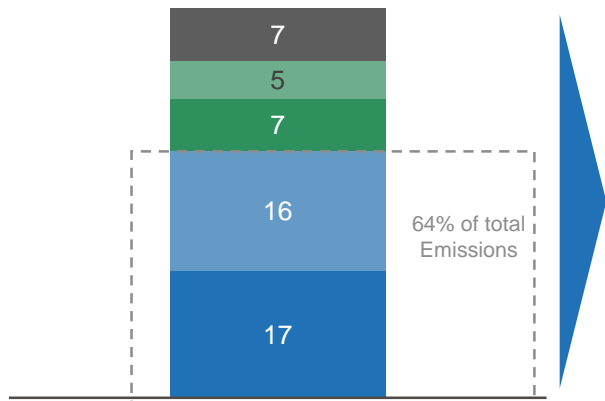




# Going beyond our own production maximises CO<sub>2</sub> impact

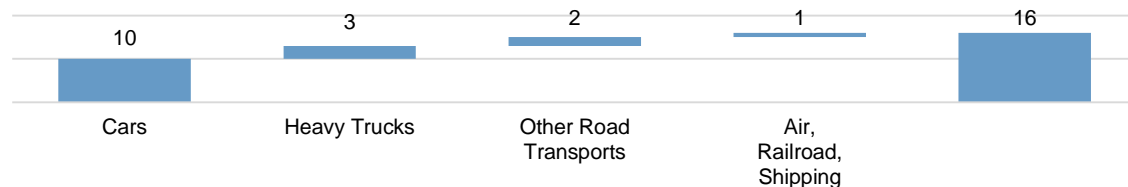
All parts of society need to adjust – electrifying transports and industry is key to enable a fossil-free life

**Total green house gas emissions  
Sweden<sup>1</sup> (2018) 52 MtCO<sub>2</sub>e**



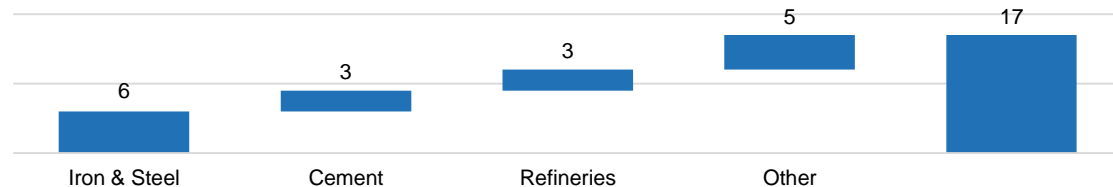
## Transports

MtCO<sub>2</sub>e



## Industry

MtCO<sub>2</sub>e



There is huge potential to reduce industry emissions through electrification. Vattenfall has discussions and research ongoing with (potential) partners in different sectors.

Besides fossil free steel via the HYBRIT initiative, with a 10% reduction potential of total Swedish emissions when fully implemented, Vattenfall sees potential in other sectors like cement, refinery, chemical, agriculture, shipping and aviation

<sup>1</sup> Source: Swedish Environmental Protection Agency

# Electricity - from a power source to a source of innovation

Together with our partners, we pave the way for a new generation of transports, industries and materials

Research project for a carbon dioxide-free steel industry



VATTENFALL 

Cooperation in large scale bio-diesel production



VATTENFALL 

Feasibility study on electrified cement production



VATTENFALL 

Electrification of mines and smelters



VATTENFALL 

Co-operation for e-mobility



VATTENFALL 

Green guaranteed energy delivery large customers, e.g.



VATTENFALL 

Support of a major enterprise for battery production in Sweden



VATTENFALL 

Northern Europe's largest charging network for e-vehicles



VATTENFALL 

Powering sustainable datacenters



VATTENFALL 

Storage projects at a number of wind parks



VATTENFALL 

# Project deep dive – HYBRIT

HYBRIT – towards the world's first fossil-free steel

UN SDG's



## HYBRIT

A joint initiative by

▶▶▶ FOSSIL-FREE STEEL



### What is HYBRIT?

- HYBRIT – short for Hydrogen Breakthrough Ironmaking Technology – is a joint venture between Vattenfall, SSAB (steel) and LKAB (mining and minerals)
- The aim is to replace coking coal, traditionally needed for ore-based steel making, with green hydrogen
- The result will be the world's first fossil-free steel, with virtually no carbon footprint

### Why is this important?

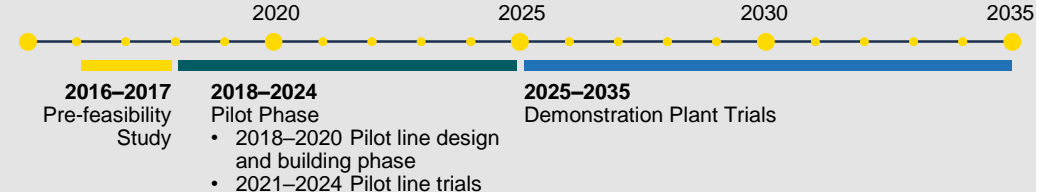
- The steel industry is one of the highest CO<sub>2</sub>-emitting industries, accounting for 7% of global and 10% of Swedish total CO<sub>2</sub> emissions
- Steel demand is set to grow due to population and urbanisation → carbon footprint of the industry needs to be addressed

### Financing and timeline

The total cost for the pilot phase is estimated to be SEK 1.4 billion. The Swedish Energy Agency will contribute more than SEK 500 million towards the pilot phase and the three owners, SSAB, LKAB and Vattenfall, will each contribute one third of the remaining costs. The Swedish Energy Agency has earlier contributed SEK 60 million to the pre-feasibility study and a four-year-long research project.

The pilot phase is planned to last until 2024, after which it will move to the demonstration phase in 2025-2035.

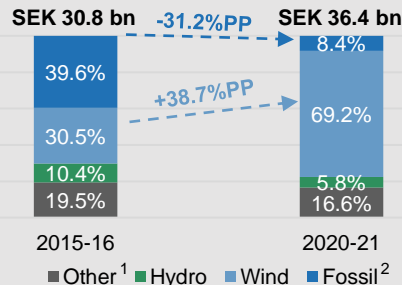
### Main project phases



# Significant shift in production portfolio over the past 5 years

The shift has accelerated with large investments in renewables and phase out of fossil production

## CAPEX by technology



## Major investments in renewable projects

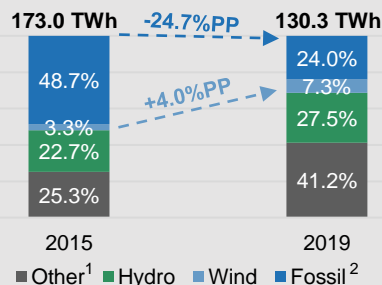
- Around SEK 25 billion of investments are planned for new wind farms, both onshore and offshore
- Recent milestones:
  - Winning bid for the world's first subsidy-free offshore wind farm once commissioned in 2023 (Hollandse Kust Zuid 1-4)
  - Major onshore projects in the Nordics and the Netherlands (Blakliden & Fäbodberget, Wieringermeer)
  - Proof of concept in solar & batteries ready for scaling up and innovative solutions such as co-location with wind farms (Haringvliet, Battery at Pen y Cymoedd)

<sup>1</sup> Other includes nuclear, solar & batteries (CAPEX only) & biomass

<sup>2</sup> Includes hard coal and gas

<sup>3</sup> Consolidated values for 2015. Consolidated emissions are approximately 0.5% higher than pro rata emissions, corresponding to Vattenfall's share of ownership

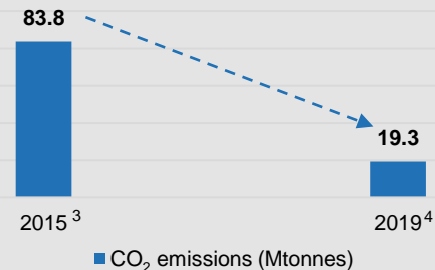
## Electricity production mix



## Share of fossil production has been reduced dramatically

- Strong wind growth: 3.4 GW installed capacity; > 3 GW under construction and >4 GW in development
- First large scale solar farm commissioned in 2016, Parc Cynog (5 MW)
- Increased focus on decentralised production, storage and EV charging
- Coal-fired production has been phased out such as Reuter C in Berlin and Hemweg-8 in the Netherlands

## CO<sub>2</sub> emissions



## ...and with this our CO<sub>2</sub> emissions

We sold the lignite business in 2016, which reduced our CO<sub>2</sub> footprint dramatically

- We continue to identify further actions such as retiring coal fired power plants earlier than planned (such as Hemweg-8 in the Netherlands)
- We are also phasing out coal from all of our heat operations by 2030, at latest
- In 2030, the Nordic production fleet will be free from fossil fuels

# Strategic targets 2025

Strategic focus area	Strategic targets to 2020	2025 Target	Actual 2019	Motivation
Driving decarbonisation with our customers & partners	Net Promoter Score <sup>1</sup> (Absolute)	18	2	Established and recognised as key to assess customer behaviours/attitudes
Securing a fossil-free energy supply	CO <sub>2</sub> Emissions Intensity	≤86 gCO <sub>2</sub> /kWh <sup>2</sup>	126 gCO <sub>2</sub> /kWh <sup>3</sup>	Established in Science Based Targets. Industry standard
Empowering our people	LTIF	≤1.0	2.1	Safety first, best practise KPI
	Engagement Index	75	69	Engaged employees is a key factor for success
Delivering high-performing operations	FFO/Adjusted Net Debt	22-27 %	26.5%	Key metric in financial steering
	ROCE	8 %	8.5 %	Key metric in financial steering

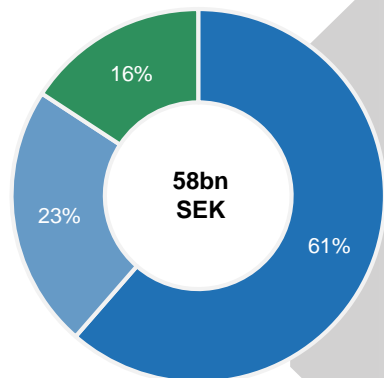
<sup>1</sup> NPS absolute target is calculated with a weighting of 80% from Customers & Solutions and 20% from Heat resembling size of customer basis

<sup>2</sup> Targeting 86 gCO<sub>2</sub>/kWh by 2025 puts us on a “1.5°C” trajectory by 2030 according to Science Based Target levels

<sup>3</sup> Excluding the heat operations in Hamburg, which were sold in September 2019

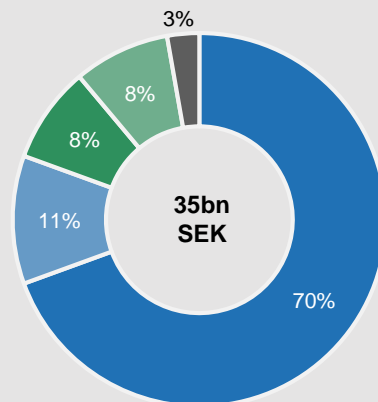
# Investment plan 2020-2021

Total capex  
2020-2021



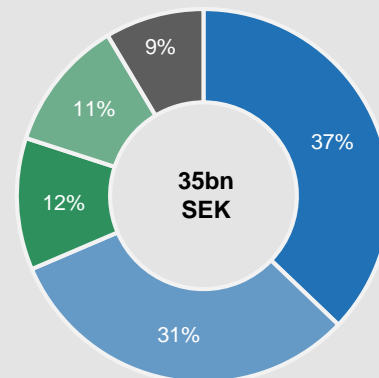
- Growth, 35bn SEK
- Maintenance, 13bn SEK
- Replacement, 9bn SEK

Growth capex per technology  
2020-2021



- Wind power, 25bn SEK
- Heat grids, 4bn SEK
- Distribution grids, 3bn SEK
- New businesses<sup>1</sup>, 3bn SEK
- Solar energy & batteries, 1bn SEK

Growth capex per country  
2020-2021



- Netherlands, 13bn SEK
- Denmark, 11bn SEK
- Sweden, 4bn SEK
- UK, 4bn SEK
- Germany, 3bn SEK

<sup>1</sup> Mainly decentralised solutions, energy storage and e-mobility

# Financial targets

Financial targets	Targets over a business cycle <sup>1</sup>	FY 2019	FY 2018	Comment
<b>Profitability</b>	Return on capital employed: ≥8% <sup>2,3</sup>	8.5%	7.0%	Return on capital employed was 8.5% (7.0%). A higher gross margin in the Power Generation segment and the capital gain from the divestment of the district heating operations in Hamburg made a positive contribution.
<b>Capital structure</b>	FFO/adjusted net debt: 22%–27% <sup>2</sup>	26.5%	20.7%	FFO/adjusted net debt increased compared with 2018, to 26.5% (20.7%). The increase is mainly attributable to higher EBITDA as a result of higher achieved prices in Power Generation operating segment and lower paid tax.
<b>Dividend policy</b>	Dividend: 40%–70% of the year's profit after tax	SEK 3.6 bn	SEK 2 bn	At the end of Q1'2020, the Board of Directors proposed a revision of the previously proposed dividend for 2019 from SEK 7.2 to SEK 3.6 bn due to uncertain market conditions, which was also approved at the Annual General Meeting.

<sup>1</sup> 5–7 years

<sup>2</sup> Rolling 12-month values

<sup>3</sup> The key ratio is based on average capital employed

# Credit ratings overview



Long term rating: A3

Short term rating: P-2

Outlook: Negative

*Latest publication: 04 June 2020*

- “Strategic role in Sweden, as well as “moderate” default dependence”
- “Overall, Vattenfall's A3 rating continues to be supported by (1) the company's breadth and scale of operations; (2) its clean generation portfolio in the Nordics; (3) moderate contribution from regulated electricity distribution and district heating activities; (4) an increasing contribution from contracted renewables; and (5) a solid financial profile with funds from operations (FFO)/net debt close to 25% in 2019
- “The negative outlook reflects Moody's expectation that Vattenfall's financial metrics will be weakly positioned against the guidance for the current rating, which includes FFO/net debt around the mid-twenties in percentage terms and RCF/net debt in the high teens in percentage terms”



Long term rating: BBB+

Short term rating: A-2

Outlook: Stable

*Latest publication: 12 May 2020*






- “Above 45% of EBITDA stems from relatively stable and low-risk regulated electricity distribution networks and district heating operations”
- “Leading position in the Swedish power generation market, supported by large nuclear fleet and flexible low-cost hydropower generation assets”
- Low power prices in the Nordics over 2020-2021 and a 5%-10% reduction in power demand following the outbreak of COVID-19 is expected to cause a shortfall in earnings
- “Increased cash contribution from subsidised, long-term contracted renewables (with wind representing about 24% of our 2019 adjusted EBITDA)”. Vattenfall will make significant investments in renewables, in line with its strategy
- “Recent investments in wind and heat is expected to increase EBITDA in 2021-2023, Vattenfall is working to actively reduce operating costs and maintain a financial risk profile, namely FFO to debt above 20%



# Environmental, social and governance (ESG) ratings

Vattenfall is assessed by several sustainability rating agencies on its ESG performance

We aim to be as open and transparent as possible in our sustainability reporting and we are proud to be highly ranked for our sustainability performance. The below table shows the agencies we actively engage with and our most recent rating scores

Rating Agency	Rating focus	Score	Latest assessment
 CDP <small>DISCLOSURE INSIGHT ACTION</small>	The leading system globally for disclosing environment data for investors, companies, cities, states and regions	Score A: top 2% of all rated companies	January 2020
 ecovadis	An online platform that enables companies to monitor the CSR performance of their supply chains by providing supplier sustainability ratings	Gold rating: top 1% of all rated companies and top 3% in the sector	December 2019
 ISS ESG	ESG rating mainly for the investment community. The assessment spans a broad range of ESG issues that are analysed on the basis of up to 100 rating criteria, most of them sector specific	Score B “Prime”: highest decile of companies assessed in the sector	January 2020
 MSCI	ESG rating mainly for the investment community. Uses a rules-based methodology to identify industry leaders and laggards. Ranks companies according to their ESG risk exposure and how well they manage those risks relative to peers.	Score AA “Leader”: meaning top 26% of companies assessed in the sector.	June 2020
 SUSTAINALYTICS <small>a Morningstar company</small>	ESG rating mainly for the investment community. Uses a two-dimensional materiality framework that measures a company’s exposure to industry specific material risks and how well a company is managing those risks.	ESG risk rating: Medium (Strong management score but high exposure). Top-15% of companies in subindustry	June 2020

# Vattenfall credit highlights

A leading European energy company with activities across the value chain

BBB+ stable outlook by S&P and A3 negative outlook by Moody's

100 per cent owned by the Swedish State

Regulated and predictable cash flow from electricity distribution and district heating

Leading towards sustainable production

**VATTENFALL** 

A significant transformation has already happened

Significant growth in renewable production and climate smart energy solutions

Experienced player in renewables and one of the leaders in wind power generation

# Appendix



VATTENFALL

# Vattenfall 9M Results 2020

## Financial highlights

### Key data

SEK bn	9M 2020	9M 2019
Net Sales	114.8	120.2
EBITDA	34.4	33.6
Underlying operating profit (EBIT)	17.8	16.9
EBIT	10.0	19.7
Profit for the period	2.0	14.4
Funds from Operations (FFO)	23.7	23.4
Cash flow operating activities	26.8	11.7
Net debt	58.9	59.6
Adjusted net debt	126.3	125.4
Adjusted net debt/EBITDA <sup>1</sup> (times)	2.9	3.0
<b>Financial targets</b>		
ROCE <sup>1</sup> (≥8%)	4.7	9.2
FFO/adjusted net debt <sup>1</sup> (22-27%)	27.9	24.5

<sup>1</sup> Last 12-month values

### Key developments

- Net sales decreased by SEK 5.4 bn to SEK 114.8 bn due to lower spot prices and lower volumes in the Nordics, the Netherlands and Germany as well as lower income from the heat operations
- Underlying EBIT increased by SEK 0.9 bn mainly due strong sales in Germany, lower depreciation in the Netherlands for Customers & Solutions, lower costs in Distribution (following Storm Alfrida in 2019) and higher realised trading result. Partly offset by lower achieved prices and lower nuclear power production
- Profit for the period decreased to SEK 2.0 bn, mainly as a result of write-downs in the operating segments Heat (SEK 9.0 bn) and Wind (SEK 1.5 bn)
- ROCE was 4.7% mainly due to impairments
- FFO/Adjusted net debt increased to 27.9%, mainly as a result of higher FFO due to higher EBITDA. Main drivers were positive effects from hedging activities and positive development in Customers & Solutions

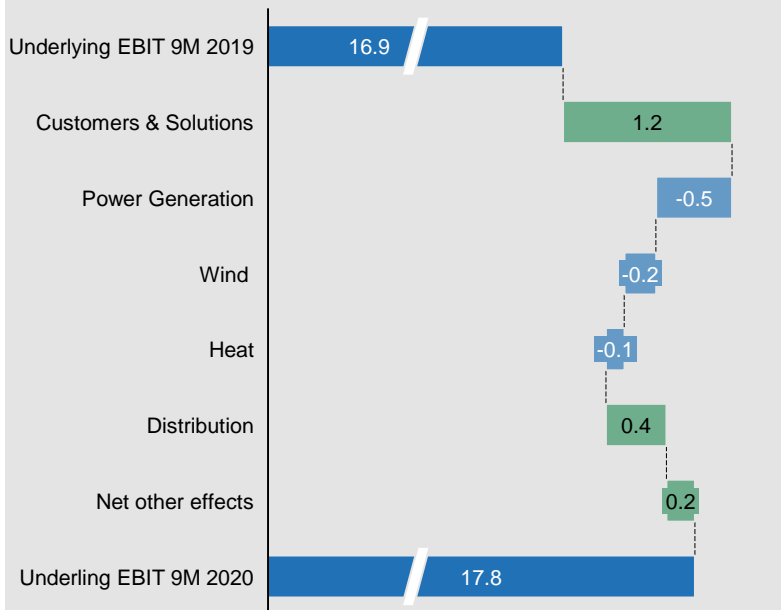


# Development of underlying EBIT 9M 2020

Increase from C&S and Distribution offset by lower earnings in Power Generation and Wind

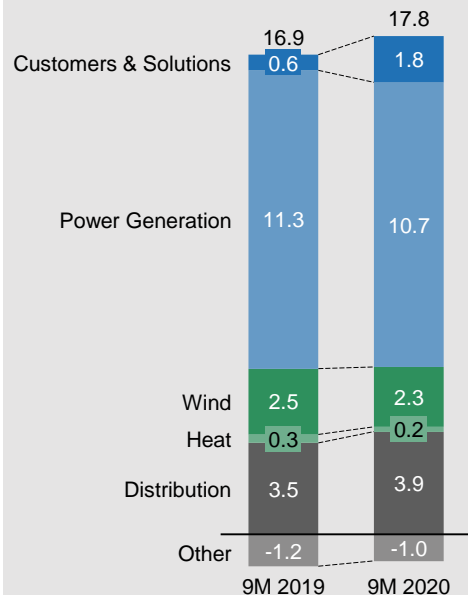
## Change in 9M 2020 vs. 9M 2019

SEK bn



## Breakdown per operating segment

SEK bn

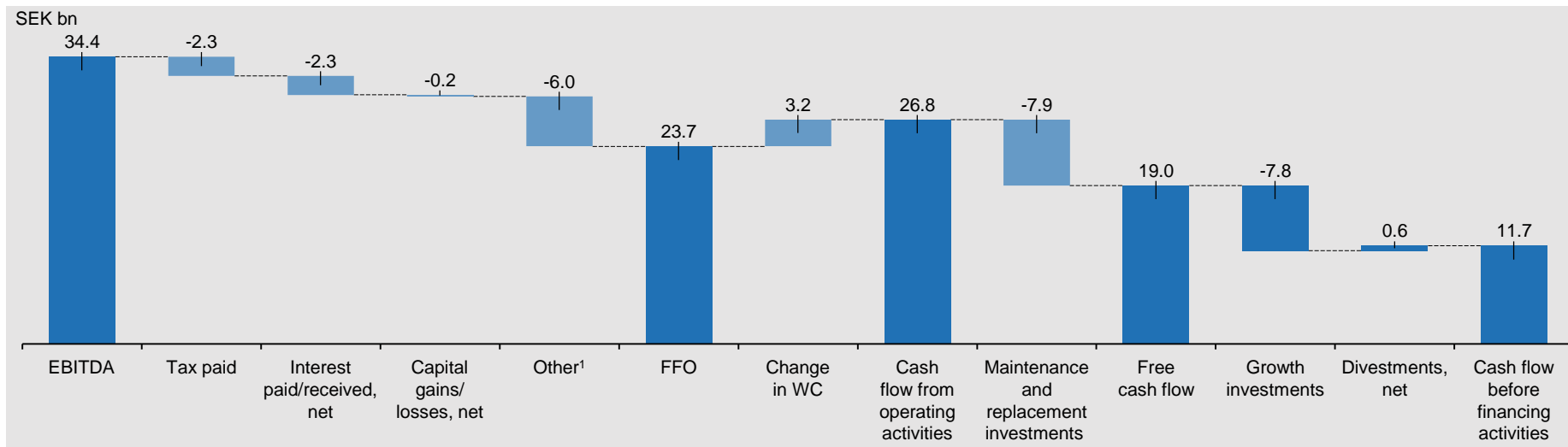


## Highlights

- Customers & Solutions: strong contribution from sales in Germany. Lower depreciation in the Netherlands
- Power Generation: lower achieved prices and lower nuclear generation, partly countered by higher realised earnings from trading
- Wind: additional capacity (Horns Rev 3) countered by higher depreciation and higher costs due to new capacity and project development
- Heat: effects from sale of district heating operations in Hamburg and the closure of Hemweg 8. Unfavorable clean dark and clean spark spreads also contributed to lower electricity production.
- Distribution: lower operating costs following the Storm Alfrida in Q1 2019

# Cash flow development 9M 2020

Positive working capital development mainly related to seasonality effects and changes in margin calls

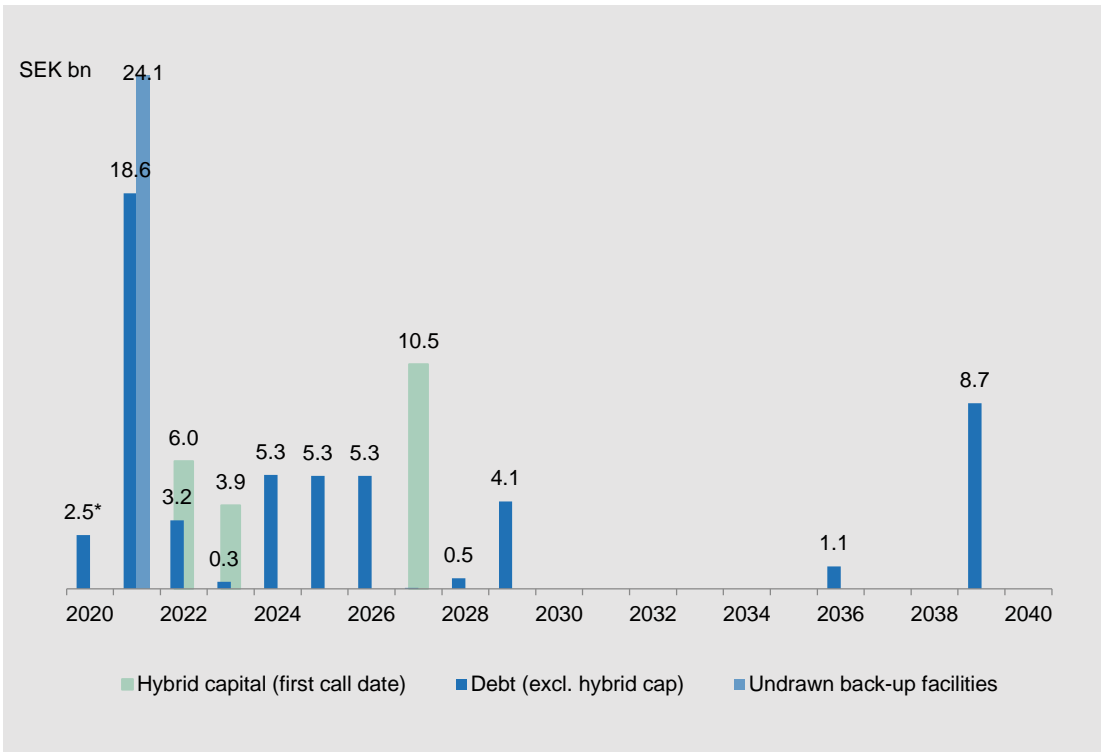


## Main effects

- Change in working capital mainly driven by changes related to seasonality in net change in operating receivables and liabilities in the Customers & Solutions and Heat operating segments (SEK 3.5 bn), net change in margin calls for commodity hedging activities (SEK 3.4 bn) and decreased inventory (SEK 1.6 bn). Changes related to CO<sub>2</sub> emission allowances had an offsetting impact (SEK -4.2 bn).
- Growth investments mainly related to wind power

1 "Other" includes non-cash items included in EBITDA, mainly changes in fair value of commodity derivatives

# Debt maturity profile<sup>1</sup>



\* Short term debt are excluded (Repo, ECP and SCP) (11.5) <sup>1</sup> Commercial paper (ECP) Loans from associated companies, minority owners, margin calls received (CSA) and valuation at fair value are excluded and currency derivatives for hedging debt in foreign currency are included

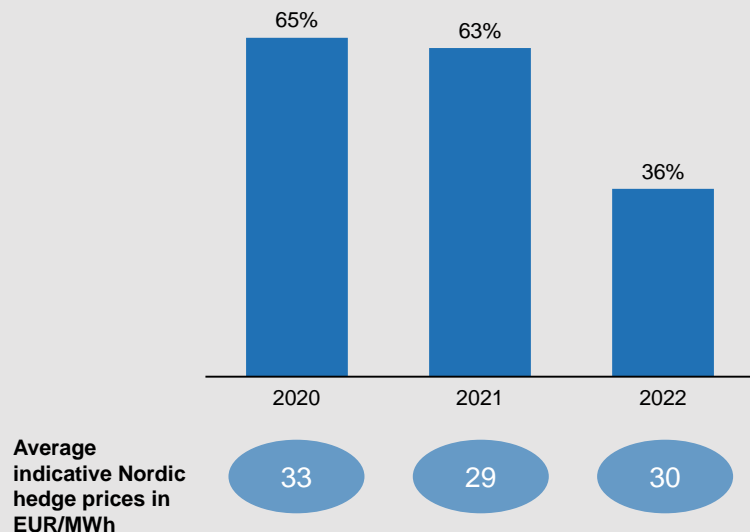
	30 Sep. 2020	31 Dec. 2019
Duration (years)	4.0	4.7
Average time to maturity (years)	5.2	6.8
Average interest rate (%)	3.3	4.0
Net debt (SEK bn)	58.9	64.3
Available group liquidity (MSEK)	44.9	29.3
Undrawn committed credit facilities (MSEK)	24.1	21.4

Cumulative maturities excl. undrawn back-up facilities			
	2020-2022	2023-2025	From 2026
Debt incl. hybrid capital	30.3	14.9	30.3
<i>% of total</i>	40%	20%	40%

# Price hedging

Vattenfall continuously hedges its future electricity generation through sales in the forward and futures markets. Spot prices therefore have only a limited impact on Vattenfall's earnings in the near term

Estimated Nordic<sup>1</sup> hedge ratio (%) and indicative prices



Achieved prices<sup>2</sup> - Nordic portfolio

YTD 2020	YTD 2019	Q3 2020	Q3 2019	FY 2019	LTM
31	32	38	29	32	31

Sensitivity analysis – Continental<sup>3</sup> portfolio

Market quoted	+/- 10% price impact on future profit before tax, MSEK <sup>4</sup>			Observed yearly volatility
	2021	2022	2023	
Electricity	+/- 22	+/- 457	+/- 1,124	18% - 25%
Coal	-/+ 133	-/+ 71	-/+ 3	16% - 19%
Gas	-/+ 79	-/+ 309	-/+ 681	18% - 25%
CO <sub>2</sub>	-/+ 84	-/+ 64	-/+ 269	47% - 49%

<sup>1</sup> Nordic: SE, DK, FI

<sup>2</sup> Achieved prices from the spot market and hedges. Includes Nordic (SE, DK, FI) hydro, nuclear and wind power generation

<sup>3</sup> Continental: DE, NL, UK.

<sup>4</sup> The denotation +/- entails that a higher price affects operating profit favorably, and +/- vice versa



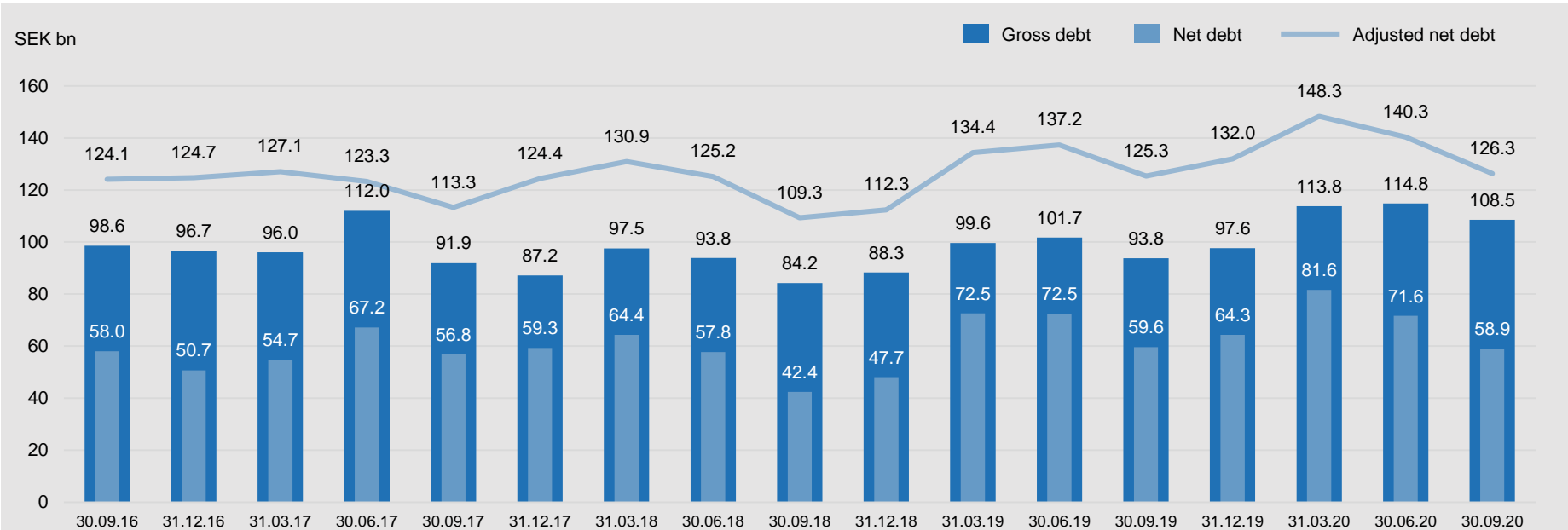
# Liquidity position

<b>Group liquidity</b>	<b>SEK bn</b>	<b>Committed credit facilities</b>	<b>Facility size, EUR bn</b>	<b>SEK bn</b>
Cash and cash equivalents	20.2	RCF (maturity Dec 2021)	2.0	21.1
Short term investments	29.1	RCF (maturity Oct 2021)		3.0
<b>Reported cash, cash equivalents &amp; short term investments</b>	<b>49.2</b>	Total undrawn		24.1
		<b>Debt maturities<sup>2</sup></b>		<b>SEK bn</b>
Unavailable liquidity <sup>1</sup>	-4.4	Within 90 days		2.5
<b>Available liquidity</b>	<b>44.9</b>	Within 180 days		14.9

<sup>1</sup> German nuclear "Solidarvereinbarung" 1.0 SEK bn, Margin calls paid (CSA) 2.4 SEK bn, Insurance "Provisions for claims outstanding" 0.8 SEK bn

<sup>2</sup> Excluding loans from minority owners and associated companies

# Debt development

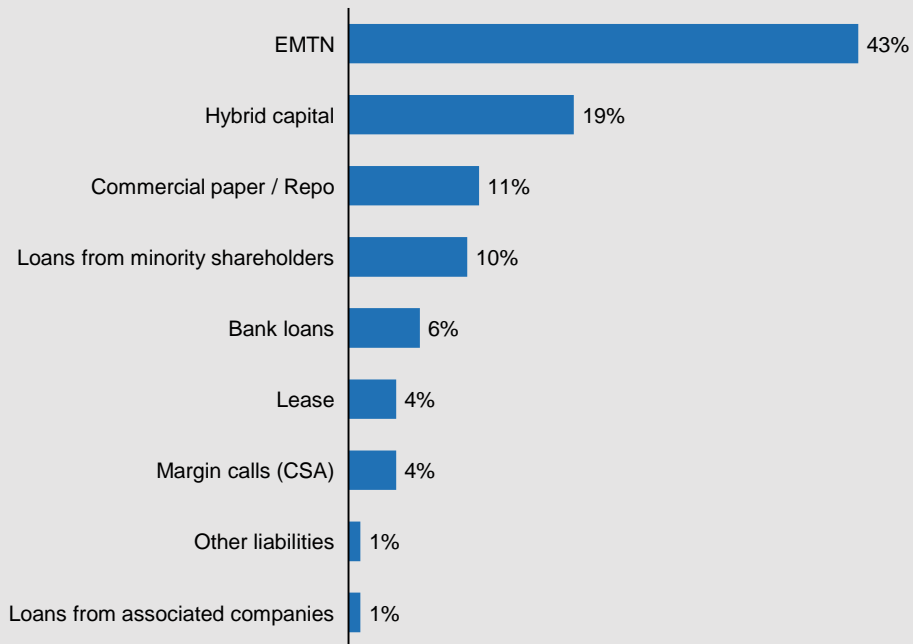


Net debt decreased by SEK 5.4 bn compared with the level at 31 December 2019. Adjusted net debt decreased to SEK 126.3 bn, SEK 5.7 bn lower compared with the level at 31 December 2019. For the calculation of adjusted net debt, see slide 26.

# Breakdown of gross debt

Total debt: SEK 108.5 bn (EUR 10.3 bn)

External market debt: SEK 96.4 bn (EUR 9.1 bn)



Debt issuing programmes	Size (EUR bn)	Utilization (EUR bn)
EUR 10bn Euro MTN	10.0	4.1
EUR 4bn Euro CP	4.0	1.2
Total	14.0	5.3

- All public debt is issued by Vattenfall AB
- The main part of debt portfolio has no currency exposure that has an impact on the income statement. Debt in foreign currency is either swapped to SEK or booked as hedge against net foreign investments.
- No structural subordination

<sup>1</sup> EMTN= Euro Medium Term Notes

# Reported and adjusted net debt

Reported net debt (SEK bn)	30 Sep. 2020	31 Dec. 2019	Adjusted net debt (SEK bn)	30 Sep. 2020	31 Dec. 2019
Hybrid capital	-20.2	-20.2	Total interest-bearing liabilities	-108.5	-97.6
Bond issues and liabilities to credit institutions	-52.8	-38.8	50% of Hybrid capital	10.1	10.1
Commercial papers and Repos	-12.3	-17.2	Present value of pension obligations	-43.2	-44.0
Liabilities to associated companies	-1,0	-0,7	Wind & other environmental provisions	-8.9	-8.6
Liabilities to minority shareholders	-11.1	-10.6	Provisions for nuclear power (net)	-36.5	-35.5
Lease liabilities	-4.9	-4.6	Margin calls received	4.8	3.7
Other liabilities	-6.2	-5.2	Liabilities to minority owners due to consortium agreements	11.1	10.6
<b>Total interest-bearing liabilities</b>	<b>-114.8</b>	<b>-97.6</b>	<b>= Adjusted gross debt</b>	<b>-171.2</b>	<b>-161.3</b>
Reported cash, cash equivalents & short-term investments	49.2	33.2	Reported cash, cash equivalents & short-term investments	49.2	33.2
Loans to minority owners of foreign subsidiaries	0.5	0.2	Unavailable liquidity	-4.4	-3.9
<b>Net debt</b>	<b>-58.9</b>	<b>-64.3</b>	<b>= Adjusted cash, cash equivalents &amp; short-term investments</b>	<b>44.9</b>	<b>29.3</b>
			<b>= Adjusted net debt</b>	<b>-126.3</b>	<b>-132.0</b>

# Nuclear provisions

Reactor	Net capacity (MW)	Start (year)	Vattenfall share (%)	Vattenfall provisions, SEK bn (IFRS accounting)	Vattenfall provisions, SEK bn (pro rata)	Sw nuclear waste fund SEK bn (Vattenfall pro rata share)
Ringhals 1	879	1976	70.4			
Ringhals 2	809	1975	70.4			
Ringhals 3	1,070	1981	70.4			
Ringhals 4	942	1983	70.4	<b>Total Ringhals: 35.5</b>	<b>Total Ringhals: 35.5<sup>1</sup></b>	
Forsmark 1	984	1980	66.0			
Forsmark 2	1,120	1981	66.0			
Forsmark 3	1,170	1985	66.0	<b>Total Forsmark: 31.3</b>	<b>Total Forsmark: 20.7</b>	
<b>Total Sweden</b>	<b>6,974</b>	<b>-</b>		<b>69.6<sup>2</sup></b>	<b>57.9<sup>2</sup></b>	<b>40.3<sup>3</sup></b>
Brunsbüttel	771	1977	66.7	11.9	7.9	
Brokdorf	1,410	1986	20.0	0	3.6	
Krümmel	1,346	1984	50.0	7.6	7.6	
Stade <sup>4</sup>	640	1972	33.3	0	0.9	
<b>Total Germany</b>	<b>4,167</b>	<b>-</b>	<b>-</b>	<b>19.4</b>	<b>19.9</b>	
<b>Total SE &amp; DE</b>	<b>11,141</b>			<b>89.1</b>	<b>77.8</b>	

<sup>1</sup> Vattenfall is 100% liability of Ringhals decommissioning, while owning only 70.4%

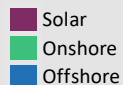
<sup>2</sup> Total provisions in Sweden (IFRS accounting) include provisions of SEK 0.5 bn (pro rata SEK 0.3 bn considering share in Studsviksfonden) related to Ägesta, and SEK 2.3 bn (pro rata SEK 1.0 bn considering share in Studsviksfonden) related to SVAFO

<sup>3</sup> Vattenfall's share of the Nuclear Waste Fund. IFRS consolidated value is SEK 47.3 bn.

<sup>4</sup> Stade is being dismantled

# Wind & Solar - Installed capacity (MW<sup>1</sup>) Q3 2020

	Solar	Onshore	Offshore	Total
United Kingdom	5	391	687	1,083
Denmark	0	237	565	802
The Netherlands	30	423	108	562
Sweden	0	234	110	345
Germany	3	19	636	658
<b>Total (MW)</b>	<b>38</b>	<b>1,305</b>	<b>2,106</b>	<b>3,449</b>



## United Kingdom – ROC scheme

■ Thanet	300
■ Ormonde (51%)	150
■ Aberdeen	97
■ Kentish Flats	90
■ Kentish Flats Extension	50
■ Pen Y Cymoedd	228
■ Ray	54
■ Edinbane	41
■ Clashindarroch	37
■ Swinford	22
■ Parc Cynog	4
■ PV@Cynog	5
■ Pendine	5

**Installed capacity (MW) 1,083**

## Sweden – certificate scheme

■ Lillgrund	110
■ Stor-Rotliden	78
■ Högabjär-Kärsås (50%)	38
■ Höge Väg (50%)	37
■ Hjuleberg (50%)	36
■ Juktan (50%)	29
■ Östra Herrestad	16

**Installed capacity (MW) 345**

## Denmark – FIT scheme

■ Horns Rev 1 (60%)	158
■ Horns Rev 3	407
■ Klim (98%)	67
■ Nørrekær Enge 1 (99%)	30
■ Rejsby Hede	23
■ Hagesholm	23
■ Nørre Økse Sø	17
■ Tjæreborg Enge	17
■ Hollandsbjerg	17
■ Bajlum (89%)	15
■ DræbyFed	9
■ Ryå	8
■ Ejsing (97%)	7
■ Lyngmose	5

**Installed capacity (MW) 802**

## Germany – EEG scheme

■ DanTysk (51%)	288
■ Sandbank (51%)	288
■ alpha ventus (26%)	60
■ Jänschwalde	12
■ Westküste (20%)	7
■ Decentral Solar installations	3

**Installed capacity (MW) 658**

## The Netherlands – MEP/SDE(+)

■ NoordzeeWind (50%)	108
■ Princess Ariane	184
■ Princess Alexia	122
■ Slufterdam	29
■ Eemmeerdijk	17
■ Irene Vorrink	17
■ Hoofdplaatpolder (70%)	10
■ Reyndersweg (50%)	9
■ Echteld	8
■ Coevorden	7
■ De Bjirmen	6
■ Oom Kees (12%)	6
■ Oudendijk	5
■ Mariapolder	5
■ Hiddum Houw	4
■ Eemshaven	6
■ Velsen	2
■ Enkhuizen	2
■ Hemweg	2
■ Decentral Solar installations	13

**Installed capacity (MW) 562**

<sup>1</sup> Capacity in operation: total capacity of the wind farms that Vattenfall has an ownership in. Minor shares included as 100%

# Main renewables projects in our 5 core countries

Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
DK	Kriegers Flak	605	FIT	X	50.000hrs	100	2021	Offshore construction works started
NL	Hollandse Kust Zuid 1-4	1,520	-	X	-	100	2023	Onshore works ongoing
NL	Princess Ariane	301	SDE+	X	15 yrs	100	2020	Commissioning ongoing
NL	Moerdijk	27	SDE+	X	15 yrs	100	2020	Commissioning ongoing
NL	Haringvliet	22	SDE+	X	15 yrs	100	2020	Commissioning ongoing
NL	Nieuwe Hemweg	19	SDE+	X	15 yrs	100	2021	Under construction
UK	South Kyle	240	-	N/A	-	100	2023	Construction started
NL	Jaap Rodenburg	30	SDE+	X	15 yrs	100	2021	Under construction
NL	A16	20	SDE+	X	15 yrs	100	2022	Construction started
SE	Blakliden + Fäbodberget	353	Certs	N/A	-	30	2022	Under construction
NL	Haringvliet	38	SDE+	X	15 yrs	100	2020	Commissioning ongoing
NL	Haringvliet	12	FCR*			100	2020	Commissioning ongoing
<b>In construction</b>		<b>3,187</b>						
UK	Norfolk projects	3,600	CfD		15 yrs	100	2027-2029	Vanguard positive consent achieved 1st July; Boreas DCO Examination extended until Oct-20
DK	Vesterhav	344	FIT	X	50.000hrs	100	2023/2024	Geotechnical Site Investigation Offshore finalized, tests ongoing
SE	Grönhult	67	Certs	N/A	-	100	2023	In development
NL	Windplan Blauw	57	SDE+	X	15 yrs	100	2023	In development
NL	Ny Hiddum Houw	14	SDE+	X	15 yrs	100	2021	Preparing for FID
DE	Kögel cluster	28	EEG	(X)		100	2021	Conditional FID
<b>In development (in mature stage)</b>		<b>&gt; 4 GW</b>						

	Offshore
	Onshore
	Solar
	Batteries


\* FCR - Frequency Response Regulation

# Investor Relations contacts



**Johan Sahlqvist**

Head of Investor Relations


 +46 8 739 72 51

 [johan.sahlqvist@vattenfall.com](mailto:johan.sahlqvist@vattenfall.com)



**Tobias Sjöberg**

Investor Relations Officer


 +46 8 739 60 63


 [tobias.sjoeborg@vattenfall.com](mailto:tobias.sjoeborg@vattenfall.com)



**Emmi Östlund**

Investor Relations Officer

 +46 8 739 69 24

 [emmi.oestlund@vattenfall.com](mailto:emmi.oestlund@vattenfall.com)



[Investor webpage](#) / [Financial reports & presentations](#)

## Financial calendar

- 4 February 2021** Year-end report for 2020
- 29 March 2021** Annual and Sustainability report 2020
- 29 April 2021** Interim report January-March 2021
- 20 July 2021** Interim report January-June 2021