

Vattenfall Investor Presentation

Credit Suisse 2020 Virtual Global Energy Conference
5 June 2020




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

 **2.2 Million**
Heat Customers

 **3.3 Million**
Electricity
Network Customers

 **2.5 Million**
Gas Customers

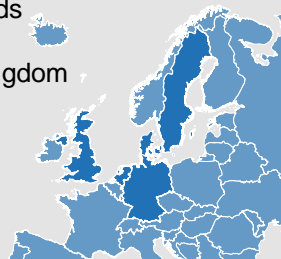
 **19,814**
Employees

Activities in the Value Chain ● Active ● Inactive

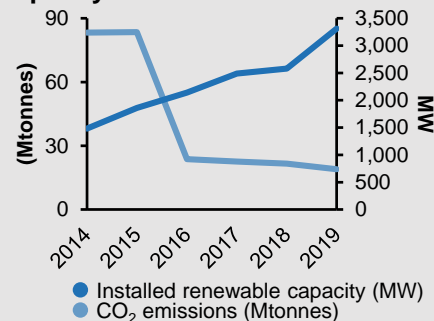


Main markets

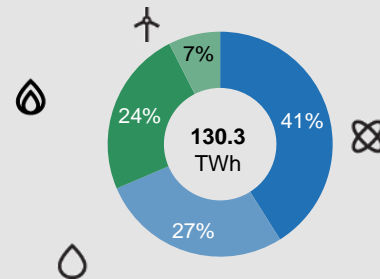
- Sweden
- Germany
- Netherlands
- Denmark
- United Kingdom



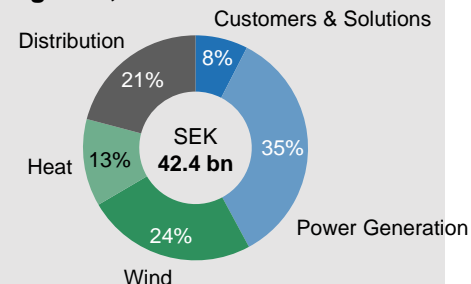
CO₂ emissions & Renewable capacity



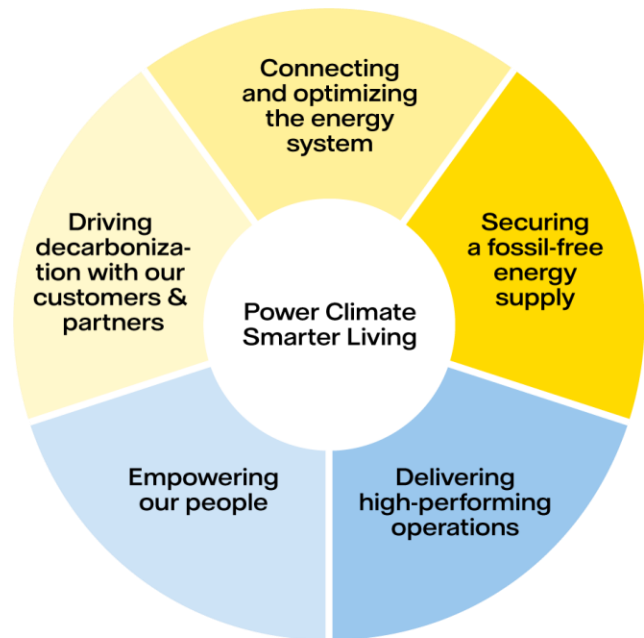
Electricity generation breakdown by technology, 2019



EBITDA breakdown by segment, 2019



A strategy for leading the energy transition



● **Driving decarbonisation with our customers & partners** with focus on increasing customer centricity and promoting electrification and climate smart energy solutions in areas where we have a competitive advantage. *(Formerly: Leading towards sustainable consumption)*

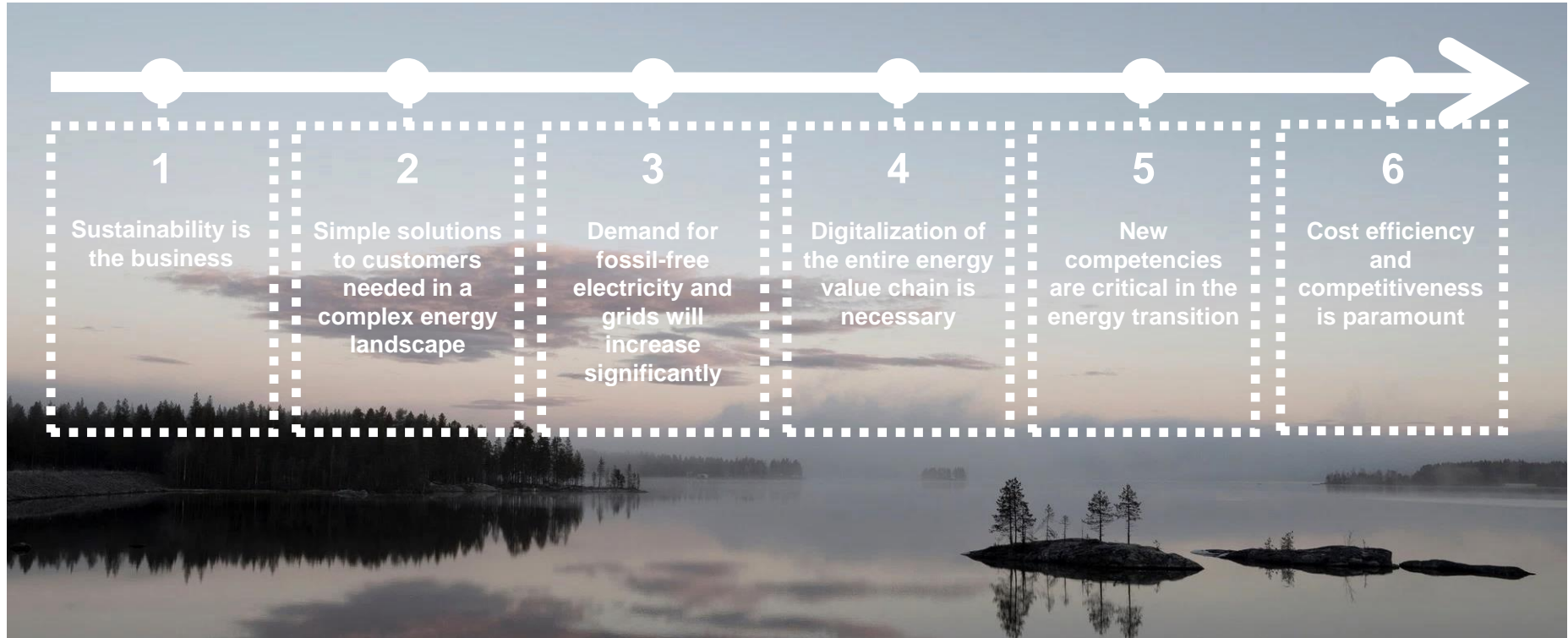
● **Connecting and optimising the energy system** with focus on maximising the value of flexibility and promoting a stable and cost-efficient grid infrastructure *(New)*

● **Securing a fossil-free energy supply** with focus on growing in renewables, maximising the value of our existing fossil-free assets, and implementing our CO₂ roadmap. *(Formerly: Leading towards sustainable production)*

● **Empowering our people** with focus on securing necessary competence while improving the employee journey and providing a safe working environment. *(Formerly: Empowered and engaged people)*

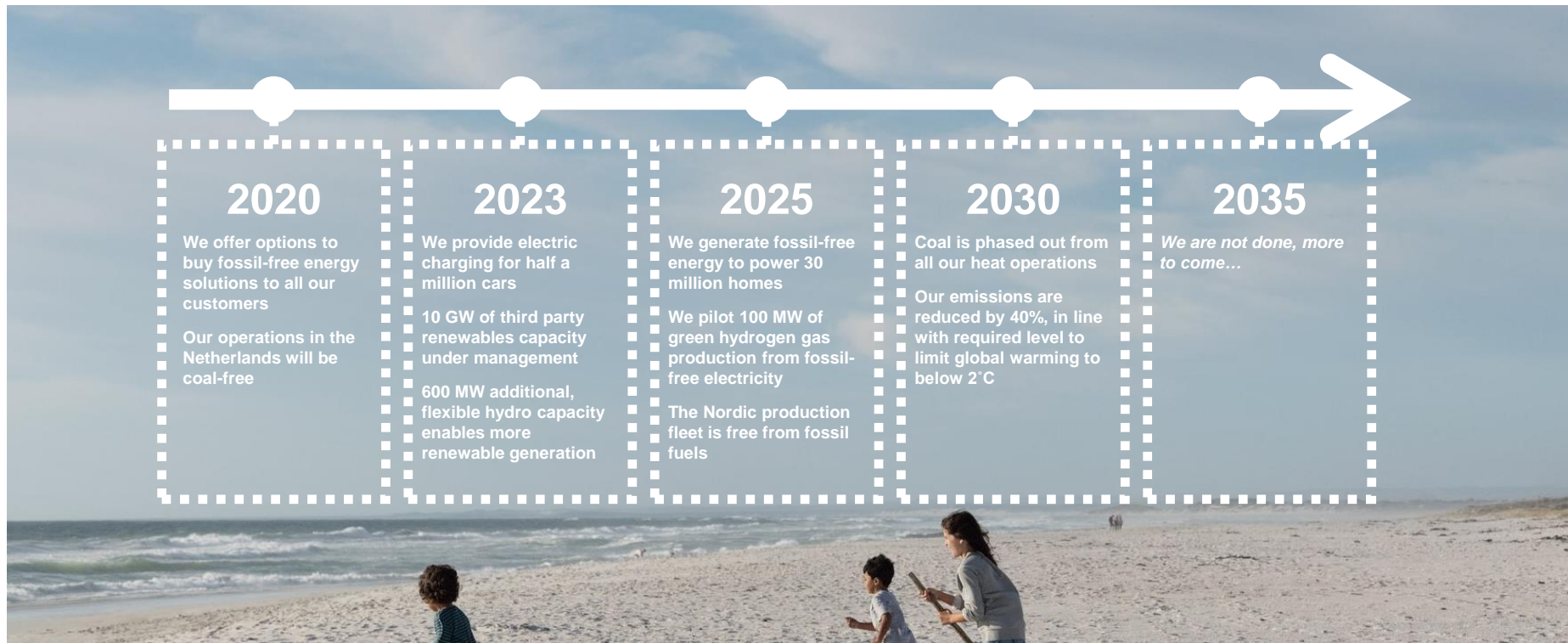
● **Delivering high-performing operations** with focus on being both competitive and cost-effective, leveraging opportunities in digitalisation and taking social and environmental responsibility throughout the value chain. *(Formerly: High-performing operations).*

Our beliefs about the future



Milestones toward 2030

Fossil-free living within one generation



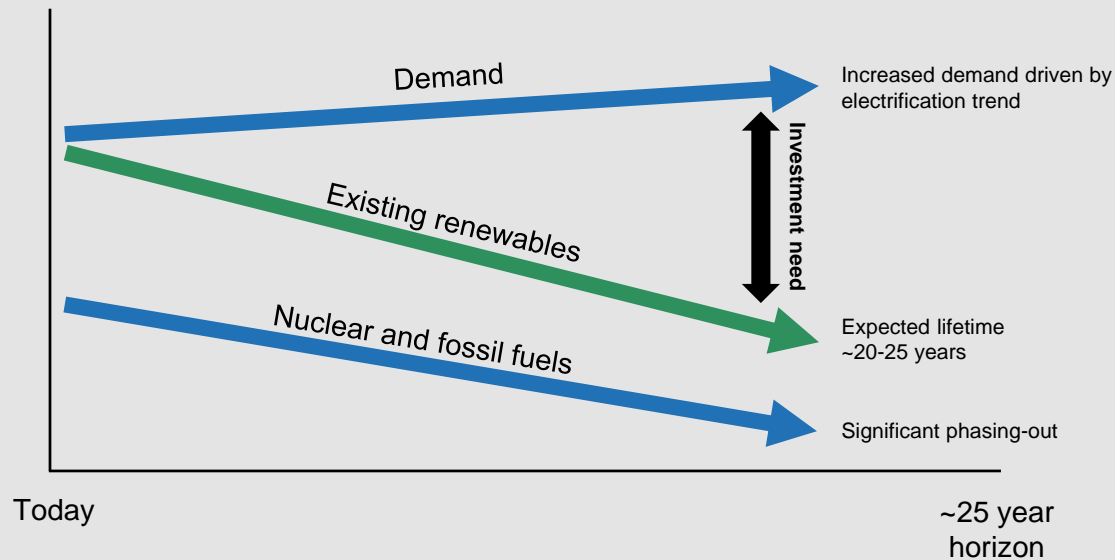
Strategic targets

Strategic targets to 2020	Q1 2020	FY 2019	FY 2018	Comments
Customer engagement, Net Promoter Score relative (relative customer satisfaction): +2	+1	+1	+1	Improved performance by Vattenfall and peers
Commissioned new renewables capacity 2016-2020: ≥2,300 MW	1 308 MW	1 226 MW	752 MW	Commissioning of Horns Rev 3 (407 MW) and Slufterdam (29 MW)
Absolute CO ₂ emissions, pro rata: ≤21 Mtonnes	3.9 Mt	19.3¹ Mt	22.0 Mt	Lower coal-fired generation
Return On Capital Employed (ROCE): ≥8%	9.4%	8.5%	7.0%	Higher gross margin in Power Generation and capital gain (Hamburg)
Lost Time Injury Frequency (LTIF): ≤1.25	1.9	2.1	1.9	Unsatisfactory level, major ongoing efforts
Employee Engagement Index: ≥70%	-	69%	64%	Strong improvement

¹ Including the heat operations in Hamburg, which have been sold and where the production amounted to 1 Mt during the period January – September.

The market for fossil-free generation is expected to grow

Demand for, and production of, electricity in Vattenfall's main markets (Sweden, Germany, Netherlands, Denmark, UK)



32%

New binding EU-target for renewable energy by 2030

RE
100

Growing ambitions within the industry for electrification and phasing-out of fossil fuels

LEC

When building new sources of energy, renewables are the most competitive option

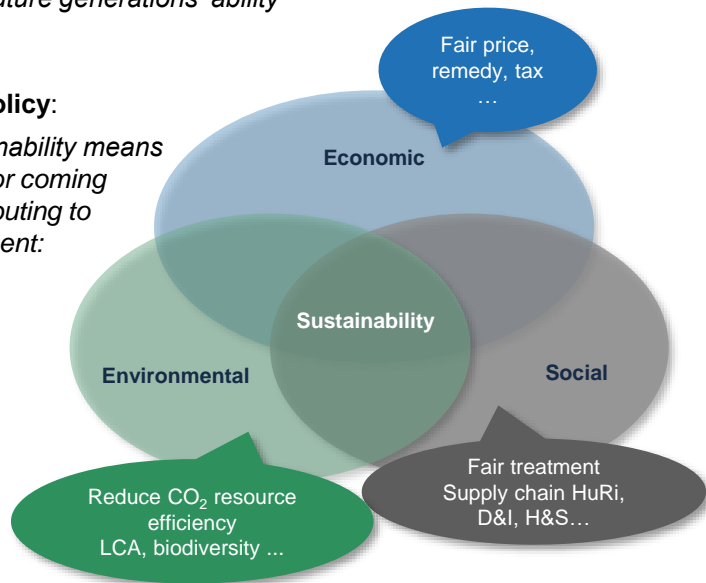
For us sustainability means taking responsibility for coming generations

The **Ownership Policy** defines sustainability:

“a development that meets the needs of today without jeopardising future generations’ ability to meet their needs”

Vattenfall Sustainability Policy:

“For Vattenfall, sustainability means taking responsibility for coming generations by contributing to sustainable development: economically, environmentally and socially.”



LCA=Life Cycle Assessment HuRi = Human Rights
D&I = Diversity and Inclusion H&S=Health & Safety

Vattenfall is highly ranked externally



EcoVadis:
"Gold
rating"



SUSTAINALYTICS
ESG REPORT

Sustainalytics:
"Outperformer"

#FARBästahållbarhet

FAR

FAR (Swe): "Bästa redovisning av hållbarhet 2017"
(Best Sustainability report)



VVC (NL):
Credit
Management of
the year



**SUSTAINABLE
BRAND INDEX**

SBI, B2B (Swe): "Branchbäst
inom Energi" (Champion in
Energy Industry)



CDP: Rating A
(CDP A-list)



CSR Europe:
Ranked as
most mature
company



Prime

ISS: Rating B
"Prime"

Vattenfall tackle CO₂ emissions throughout the value chain

CO₂ – emissions 2019 (*2018 numbers)



Suppliers

~ 5 Mt*

- Transparency on climate footprint
- Collaboration for phasing out fossil fuels



Own business

~ 19 Mt

- Climate neutral in the Nordic region 2030
- Coal phased out 2030 in the heat portfolio
- Fossil-free within one generation
- Travels (EV100, EV² policy, climate compensate)



Customers¹

~ 15 Mt*

- Products and services with clear climate footprint (EPD³ / LCA⁴)
- Renewable decentralised solutions
- Low carbon district heating
- Climate targets together with cities
- E-mobility
- Electrification of industries

¹ Primarily related to natural gas consumption

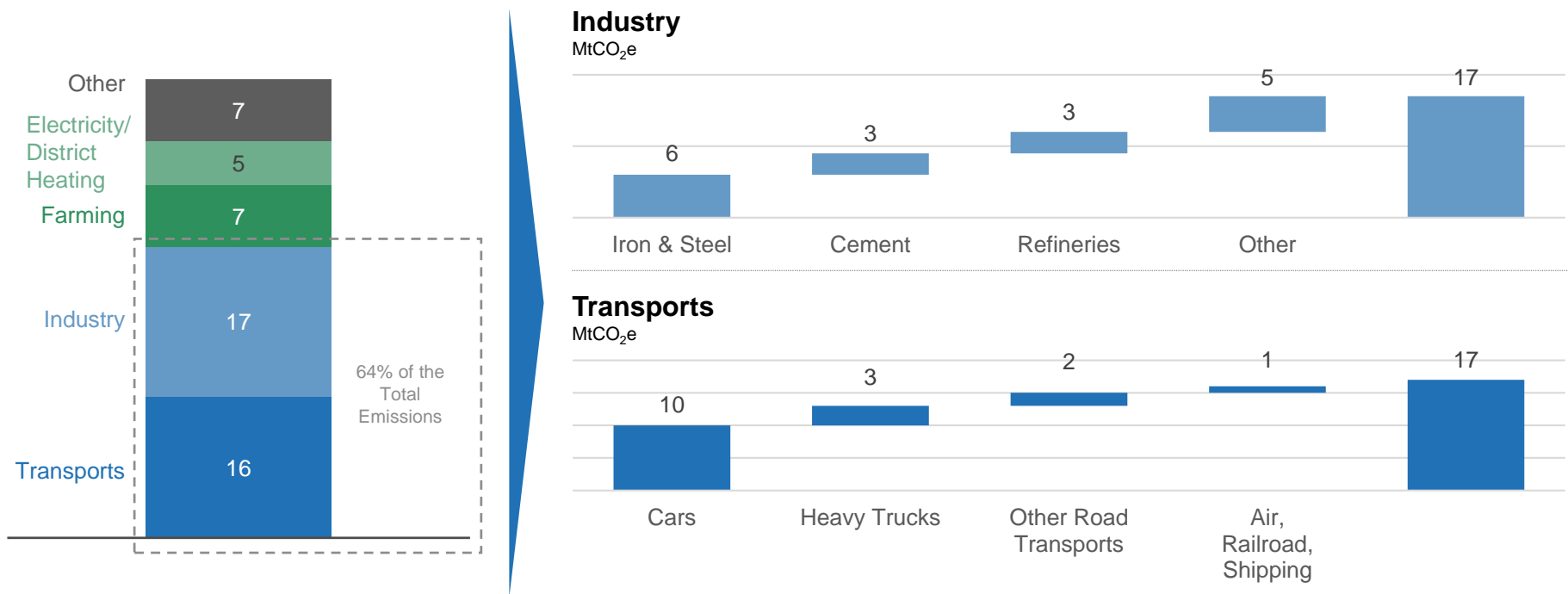
² EV – Electric Vehicle

³ EPD – Environmental Product Declaration – a third-party environmental declaration in accordance with ISO 14025

⁴ LCA – Life Cycle Assessment

All parts of society need to readjust

Green house gas emission Sweden (2018) 53 MtCO₂e



Source: Swedish Environmental Protection Agency (<http://www.naturvardsverket.se/Samar-miljon/Statistik-A-O/Vaxthusgaser-utslapp-fran-inrikes-transporter/>)

An attractive partner in the energy transition

Examples of partnerships

Research project for
a carbon dioxide-
free steel industry



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Cooperation in large
scale bio-diesel
production



VATTENFALL 

Study on electrified
cement production



VATTENFALL 

Electrification of
mines and smelters



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Co-operation for e-
mobility



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Market place for
energy sharing



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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 

We contribute to the UN's Global Sustainable Development Goals

Vattenfall has identified six SDGs that are most relevant for our business. We understand that businesses and industries will play a decisive role in reaching the objectives



- Partnership for welfare, investment in grid stability, and for phasing out fossil fuel in heating systems



- Strengthening guidelines for responsible purchasing and human rights policies and striving to achieve best-in-class efficiency in all operations



- Providing decentralised solutions, e-mobility solutions, and enabling cities to reduce their environmental impact



- Committing to enable a fossil-free living within one generation and developing roadmaps for climate neutrality



- Facilitating integration of fossil-free solutions in grids/networks and creating opportunities for electrification of processes



- Forming partnerships with energy-intensive industries to reduce CO₂ emissions and construction started on pilot plant for manufacturing fossil-free steel

A leading role in the energy transition

Sample developments in 2019 and initiatives going forward



Fossil-free steel through HYBRIT

- Co-owned with SSAB and LKAB
- World's first pilot plant based on direct reduction of iron ore with hydrogen to be ready in 2020
- SSAB's goal is a market launch of the first fossil-free steel products in 2026
- Technology with potential to reduce the world's total CO₂ emissions by 7 percent



Hybrid power plant Haringvliet

- A fully hybrid renewable energy plant, combining Wind (22 MW), solar (38 MW) and batteries (12 MWh)
- Complementary wind and solar generation profiles reduce the load on the grid compared to a single generation technology
- Cost-sharing of infrastructure
- Commissioning 2020



Flexibility for the network via Coordinet

- EU project with Swedish collaboration between TSO Svenska Kraftnät, E.ON and Vattenfall
- Four marketplaces for flexibility where suppliers and customers can provide increased/decreased load and production
- Vattenfall participating with Uppsala and Gotland



Conversion to hydrogen at Magnum

- Vattenfall's largest gas fired power plant (CCGT) is first out in the fleet where the feasibility of conversion to hydrogen (H₂) is being assessed
- Blue H₂ joint project with Equinor and Gasunie
- Green H₂ preferred solution long-term

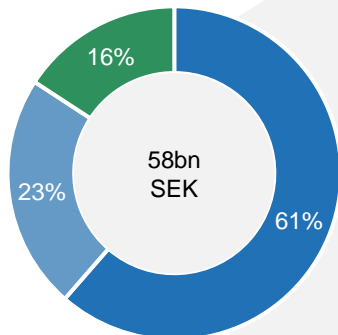


From coal to fossil-free hub at Hemweg 8

- Closure of coal-fired power plant at year-end 2019
- Future hub to provide
 - Fossil-free electricity
 - Fossil-free heat
 - Storage
 - Sustainable fuels (e.g. green hydrogen and synthetic kerosene)
- Developed with partners in Amsterdam port and metropolitan region

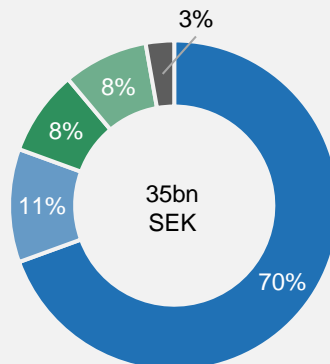
Investment plan 2020-2021

**Total capex
2020-2021**



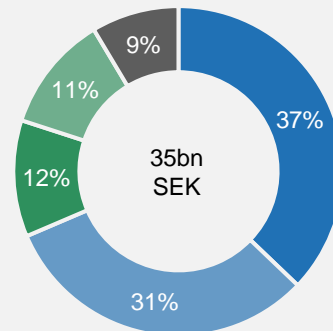
- Growth, 35bn SEK
- Maintenance, 13bn SEK
- Replacement, 9bn SEK

**Growth capex per
technology 2020-2021**



- Wind power, 25bn SEK
- Heat grids, 4bn SEK
- Distribution grids, 3bn SEK
- New businesses¹, 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

¹ Mainly decentralised solutions, energy storage and e-mobility

Green bond framework



Vattenfall's green bond framework

Use of proceeds - eligible categories

Renewable energy and related infrastructure



- Wind energy
- Solar energy
- Biomass
- Geothermal
- Hydrogen

Energy efficiency



- Hydro power
- Smart grids/meters
- Fossil-free¹ district heating and cooling
- Energy recovery

Electrification of transport and electrification of heating



- Infrastructure for electric vehicles
- Power to Heat

Industry projects



- Activities enabling the transformation to fossil-free¹ production

¹ Fossil-free: not depending on fossil fuels for its own operations (e.g. for Vattenfall no fossil fuels for energy generation and no fossil products to customers)

Green bond investor report

Investments under Vattenfall's Green Bond Framework, year-end 2019¹

Category	Project/country	Type	Capacity/ impact	Est. CO ₂ ⁴ reduction (ktonnes)	Vattenfall's share	Start/ completion	Total investment	Of which Green Bond/spent SEK million ⁵
Renewable energy and related infrastructure	Kriegers Flak/ Denmark	Wind offshore	605 MW	440	100%	2019/ 2021	7,700 MDKK	801
	Wieringemeer/ Netherlands	Wind onshore	180 MW	215	100%	2018/ 2020	220 MEUR	778
	Wieringermeer Extension/ Netherlands	Wind onshore	118 MW	140	100%	2019/ 2020	174 MEUR	295
Industry projects	HYBRIT/Sweden	Pilot project	Fossil- free steel	-	33%	2019/ 2021	858 MSEK	51
Total								1,925
Not yet used								3,298
Grand total								5,223

1. Published in Vattenfall's Annual and Sustainability Report 2019. An additional 500 MEUR green bond issued in 2020.

Dark green shading by CICERO





Governance: Excellent

"Vattenfall is deeply committed to contribute to a green transition towards a low carbon society in the longer run. In addition to subscribing to UN Compact and other sustainability guidelines, Vattenfall has clear and ambitious targets when it comes to reducing energy consumption and CO₂ emissions"



Project categories

"The Green Bond Principles are clearly fulfilled when it comes to the types of projects to be financed through the Green Bond, the selection process, the management of the proceeds and the reporting"

Categories		Green shading
	Renewable energy and related infrastructure	Dark Green
	Energy efficiency	Medium to Dark Green
	Electrification of transport and heating	Dark Green
	Industry projects	Dark Green

Q1 results



Vattenfall Q1 Results 2020

Opening remarks

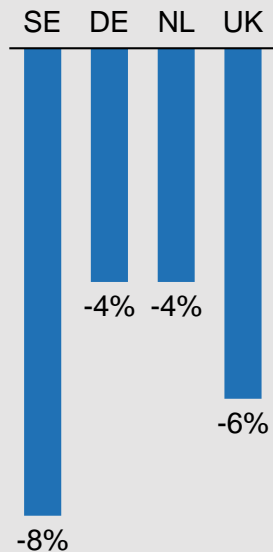
- Solid operational readiness for pandemic scenario - business continuity plans implemented
 - A stable quarter in spite of a clear impact from weakened market conditions
 - Covid-19 puts additional pressure on market, supply chain, operations and customers
- Underlying EBIT increased by SEK 0.5 bn to SEK 10.2 bn
 - Major impact from storm “Alfrida” in Q1 2019
 - Deteriorating electricity prices resulting in lower earnings in nuclear and hydro
 - Positive contribution from new wind capacity (mainly Horns Rev 3) and stronger winds
 - Higher earnings in sales business driven by German market
 - Continued margin pressure in fossil generation
- Profit for the period increased by SEK 0.5 bn to SEK 6.9 bn, mainly driven by the higher underlying operating result and a one-off effect from sale of nuclear production rights in Germany, partly mitigated by a lower return from the Swedish nuclear waste fund
- Dividend proposal from the Board of Directors revised from SEK 7.2 billion to SEK 3.6 billion due to uncertain market conditions. Approved at the Annual General Meeting.

FY 2019

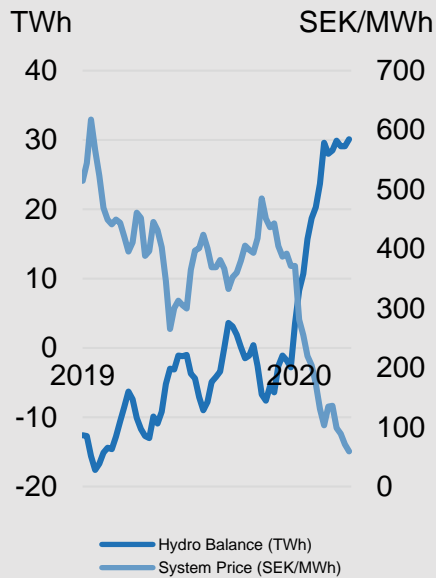


Deteriorating market trends

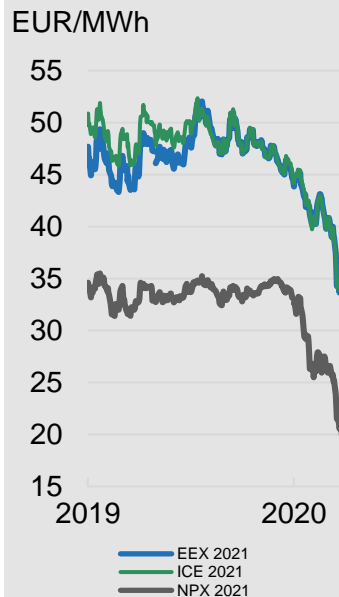
Demand in core markets in Q1
4-8% below normal level¹



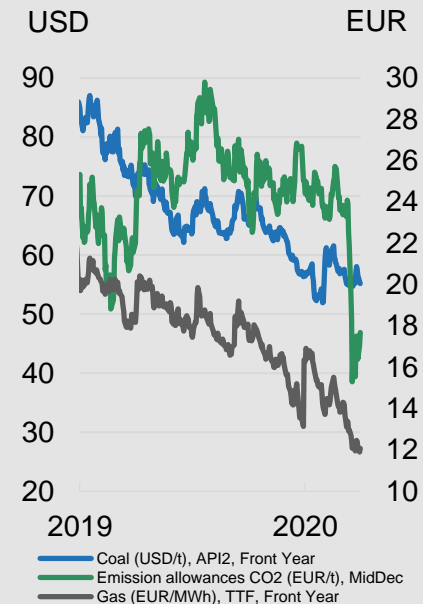
Mild, wet and windy weather and sharply falling electricity spot prices in the Nordics



Electricity futures down over 40% in Nordics and 25% in Continental vs 2019 level



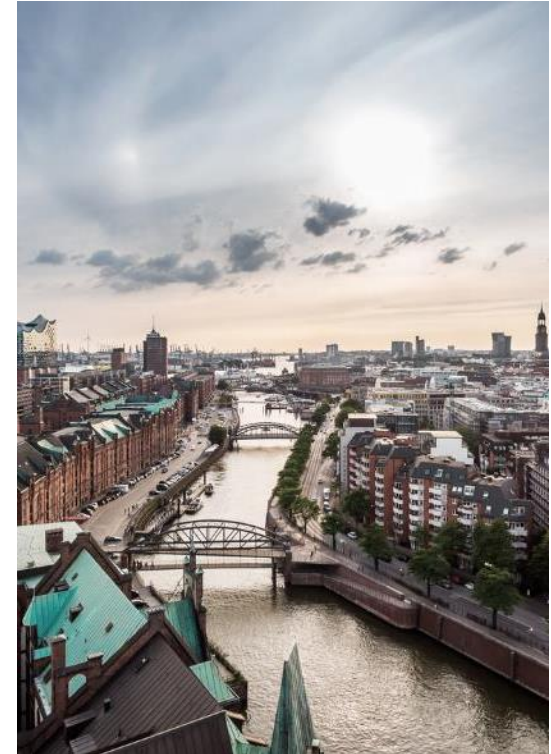
Steep decline in commodity prices



¹ Source: Wattsight. YTD deviation vs. level in a year with average demand.

Mitigating actions

- Health and safety measures in response to Covid-19 secured through rules and travel restrictions. Early actions aimed at limiting the spread of the disease and minimizing risk for our employees.
- Business continuity secured through a coordinated approach involving all operating segments. Actions range from reviewing operating shifts, increasing IT capacity and amending rules at the workplace.
- Output lowered at several nuclear power reactors. Delayed restart of Ringhals 1 until after summer.
- Ongoing work to align costs, investments and risks to dramatically deteriorated market conditions.



Vattenfall Q1 Results 2020

Overview

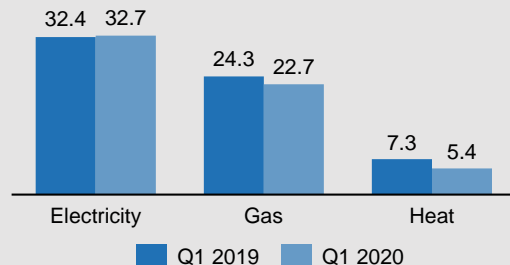
Result development

SEK bn	Q1 2020	Q1 2019	Δ
Net Sales	48.2	49.6	-3%
EBITDA	16.9	12.6	+34%
Underlying operating profit (EBIT)	10.2	9.7	+5%
EBIT	12.3	8.2	+51%
Profit for the period	6.9	6.4	+7%

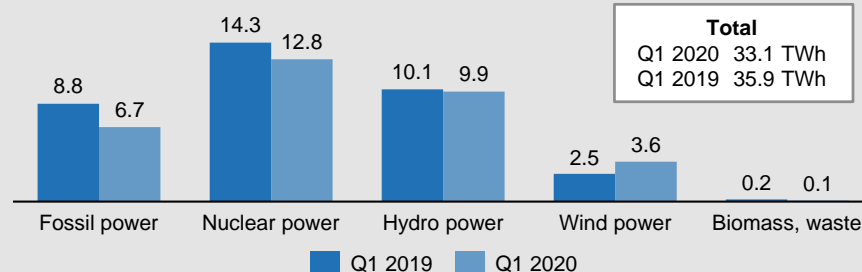
Financial targets

	Q1 2020	Q1 2019
Return on capital employed ¹ (≥8%)	9.4	7.1
FFO/adjusted net debt ¹ (22-27%)	25.2	18.1

Customer sales (TWh)



Electricity production (TWh)



¹ Last 12-month values

Customers & Solutions

Improved earnings mainly driven by strong contribution from Germany

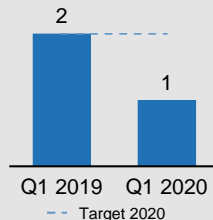
Highlights

SEK million	Q1 2020	Q1 2019
Net Sales	26,280	26,687
Underlying operating profit	1,019	397

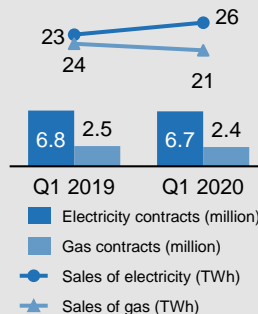
- Slight decrease in net sales following lower prices in the Nordics and the Netherlands as well as lower volumes on the same markets due to warmer weather
- Underlying operating profit increased mainly driven by a strong contribution from the German market and lower depreciation in the Netherlands (customer contracts from the Nuon acquisition fully depreciated)
- UK energy retail and e-mobility businesses sold to EDF and Statkraft, respectively
- E-mobility partnership with lubricant manufacturer Castrol in Germany
- Initiative launched in Germany to increase the share of green electricity contracts

Key data

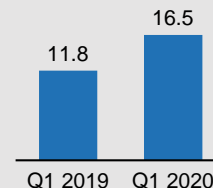
Net Promoter Score¹ (NPS)
relative to peers



Retail sales development



Charging points for electric vehicles (thousand)



¹ The target is a positive NPS in absolute terms and +2 compared to Vattenfall's peer competitors to be achieved by 2020.

Power Generation

Hydrological balance well above normal puts pressure on electricity prices

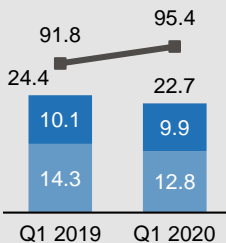
Highlights

SEK million	Q1 2020	Q1 2019
Net Sales	26,244	34,479
Underlying operating profit	4,557	5,438

- Net sales decreased due to lower prices in the Nordic countries and lower internal sales partly offset by a positive hedge result and currency effects
- Underlying operating profit decreased mainly due to lower prices achieved in the Nordic countries, partly countered by higher realised earnings from the trading operations
- Down-regulation at several nuclear reactors and, following revision, restart of Ringhals 1 postponed until after summer
- Lower production mainly due to closure of Ringhals 2
- 11 TWh of nuclear production rights sold in Germany

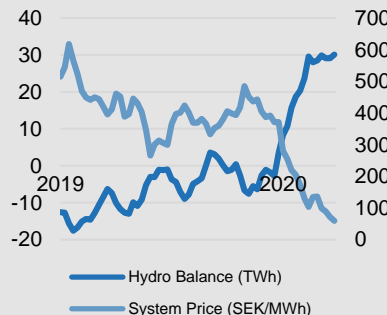
Key data

Production and availability

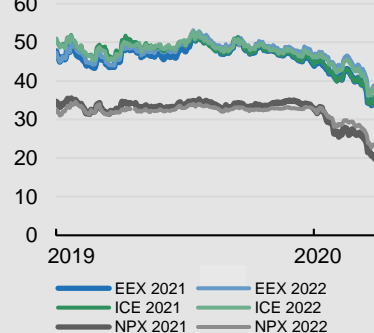


■ Nuclear availability (%)
■ Hydro (TWh)
■ Nuclear (TWh)

Nordic hydro balance and system price



Electricity futures prices (EUR/MWh)



Wind

Significant result increase supported by record production and new wind farms

Highlights

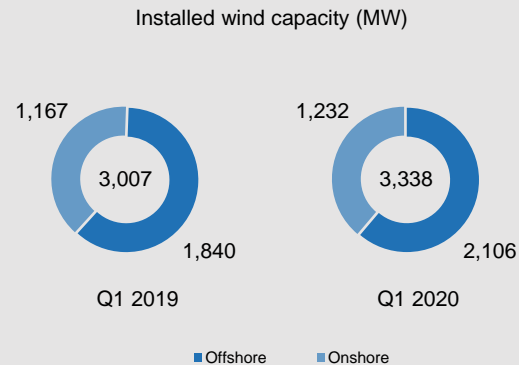
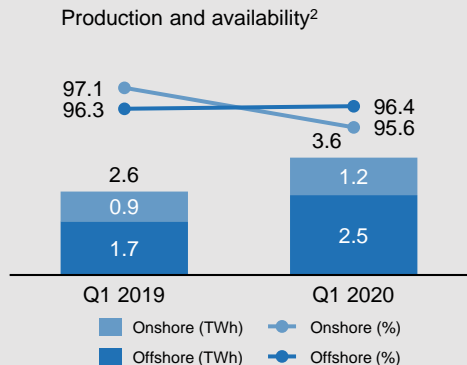
SEK million	Q1 2020	Q1 2019
Net Sales	4,732	3,657
Underlying operating profit	2,146	1,486

- Net sales and underlying operating profit increased as a result of additional capacity¹ and stronger winds
- The Danish Energy Agency (DEA) granted final permit for the Kriegers Flak offshore wind farm (605 MW), as the construction continues on schedule
- Construction of Wieringermeer onshore wind farm complex (303 MW) continuing on schedule
- Vattenfall decided not to participate in the Hollandse Kust Noord tender process
- First electricity generated from the large-scale solar energy project (7 MW) in Coevorden, Netherlands
- Post Q1: South Kyle onshore wind farm (240 MW, UK) FID and partnership with Greencoat, who will acquire the wind farm following its construction

¹ New capacity mainly from Horns Rev 3 (407 MW)

² Revenue based availability

Key data



Heat

Expansion of energy solutions and district heating parallel with margin pressure in condensing business

Highlights

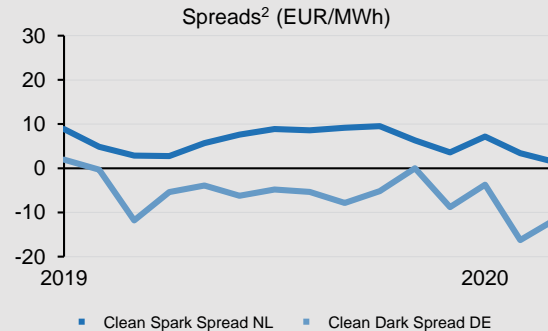
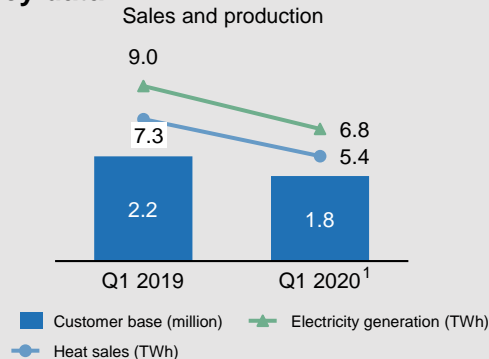
SEK million	Q1 2020	Q1 2019
Net Sales	7,052	10,537
Underlying operating profit	880	1,530

- Net sales and underlying operating profit decreased mainly due to sale of district heating operations in Hamburg and the closure of Hemweg 8. These effects impacted net sales by SEK 1.8 bn underlying operating profit by SEK 0.5 bn
- Unfavourable clean dark spreads and clean spark spreads contributed to lower electricity production
- Heat sales lower as a result of warmer weather
- Vattenfall selected as the preferred energy partner for a district heating project in Midlothian in Scotland
- Contract to build one of Sweden's largest solar parks in Uppsala
- Majority share (55%) in the Rugenberger Damm waste incineration plant in Hamburg sold to the plant's other partner, Stadtreinigung Hamburg. Closing expected in May, 2020

¹ Impacted by the sale of district heating operations in Hamburg

² CSS NL with 52% efficiency, CDS DE with 38% efficiency

Key data



Distribution

Mild winter storms brought operational costs back to normal level

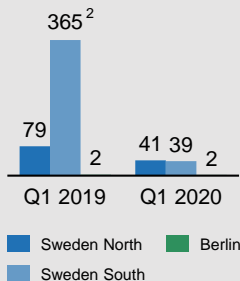
Highlights

SEK million	Q1 2020	Q1 2019
Net Sales	6,144	6,132
Underlying operating profit	2,074	1,267

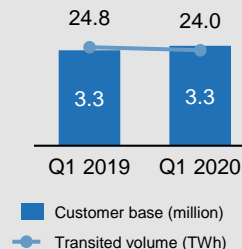
- Net sales largely unchanged as higher revenues from the Swedish regional network was offset by lower volumes in the local network as well as a lower contribution from Germany
- The underlying profit increased due to lower operating costs, that were elevated last year due to the impact of the storm “Alfrida”
- Investments increased by 44% compared to the same period last year
- Procurement finalised of smart meters meeting the new Swedish functional requirements
- Contract to build the largest battery storage facility in the Nordics, in Uppsala

Key data

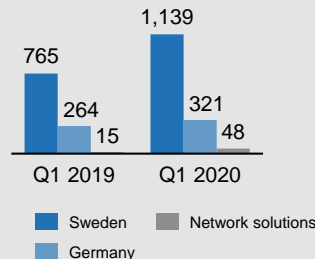
Service level (SAIDI, min)¹



Customers and volumes



Investments (SEK million)



¹ All outages longer than 1 second in medium and low voltage networks are included
City grid in Berlin results in lower SAIDI. Vattenfall's Swedish grid covers both urban areas and large rural areas.

² SAIDI in Q1'19 for Sweden South was driven by the storm “Alfrida”

Vattenfall Q1 Results 2020

Financial highlights

Key data

SEK bn	Q1 2020	Q1 2019
Net Sales	48.2	49.6
EBITDA	16.9	12.6
Underlying operating profit (EBIT)	10.2	9.7
EBIT	12.3	8.2
Profit for the period	6.9	6.4
Funds from Operations (FFO)	12.2	9.8
Cash flow operating activities	-8.5	-11.0
Net debt	81.6	72.5
Adjusted net debt	148.3	134.4
Adjusted net debt/EBITDA ¹ (times)	3.2	3.7

Financial targets

ROCE ¹ (≥8%)	9.4	7.1
FFO/adjusted net debt ¹ (22-27%)	25.2	18.1

Key developments

- Net sales decreased by SEK 1.4 bn to SEK 48.2 bn mainly attributable to lower spot prices and lower heat income
- Underlying EBIT increased by SEK 0.5 bn mainly due to the impact of the storm "Alfrida" in Q1 2019, a growing wind portfolio and stronger winds as well as improvement in the sales business driven by the German market. Partly countered by deteriorating electricity prices and continued margin pressure in fossil generation
- Profit for the period increased by SEK 0.5 bn to SEK 6.9 bn, mainly driven by the higher operating result and a one-off effect from sale of nuclear production rights in Germany
- ROCE at 9.4% mainly as a result of higher gross margin in Power Generation and Wind, capital gain from divestment of Hamburg district heating (SEK 3.1 bn) and sale of German nuclear production rights
- FFO/Adjusted net debt increased to 25.2%, mainly as a result of higher FFO due to higher EBITDA. Main drivers were positive effects from hedging activities, sale of German nuclear production rights, lower costs in Distribution and increased capacity in Wind



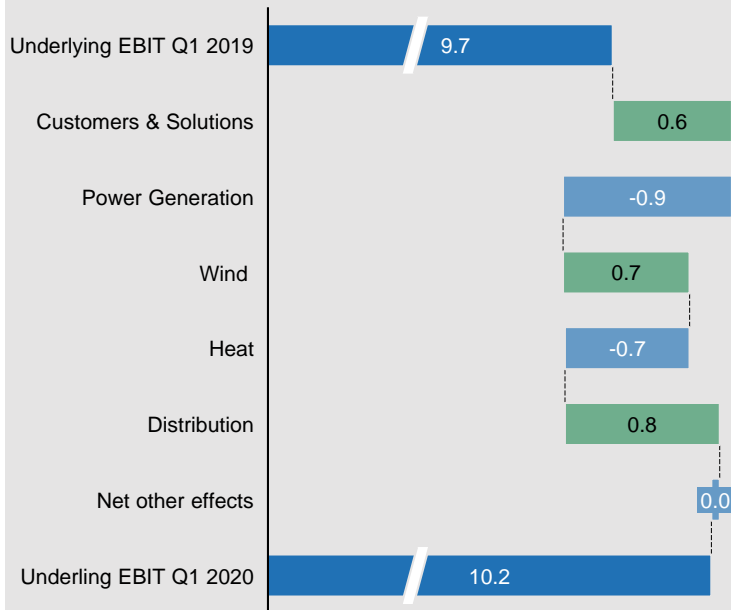
¹ Last 12-month values

Development of underlying EBIT Q1 2020

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

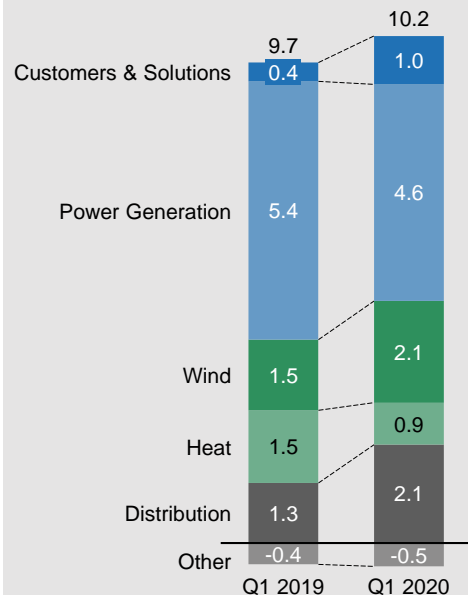
Change in Q1 2020 vs. Q1 2019

SEK bn



Breakdown per operating segment

SEK bn

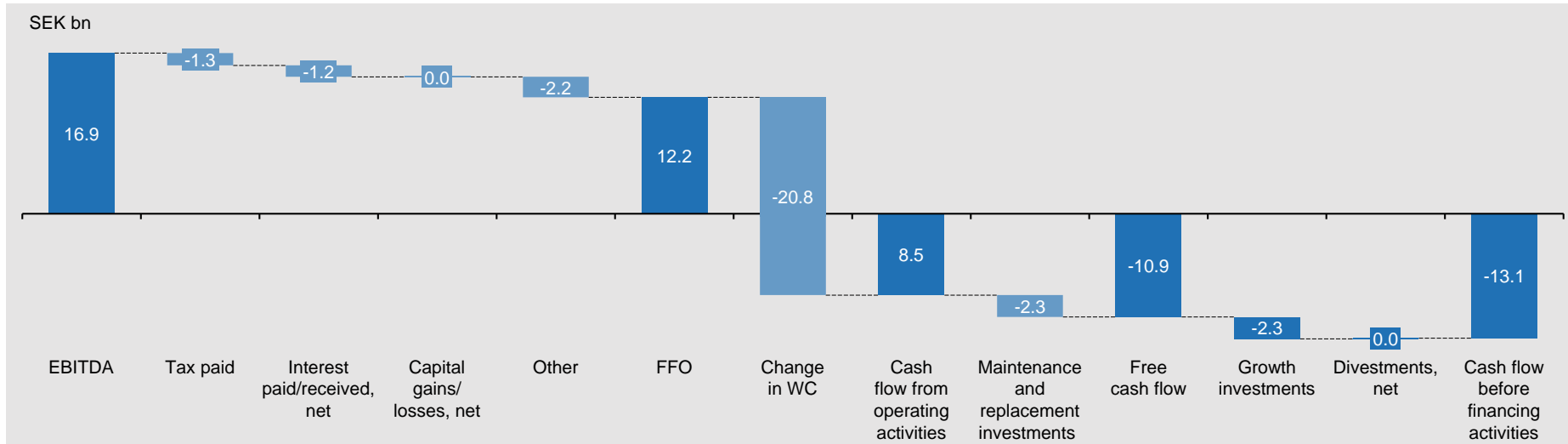


Highlights

- Customers & Solutions: strong contribution from the German market and lower depreciation in the Netherlands (customer contracts from the Nuon acquisition fully depreciated)
- Power Generation: lower achieved prices, partly countered by higher realised earnings from trading operations
- Wind: additional capacity (Horns Rev 3) and strong winds
- Heat: effects from sale of district heating operations in Hamburg and the closure of Hemweg 8. Unfavorable clean dark and clean spark spreads contributed to lower electricity production. Heat sales lower as a result of warmer weather
- Distribution: lower operating costs following the storm "Alfrida" in Q1 2019

Cash flow development Q1 2020

Change in working capital impacted by increased margin calls and seasonality effects



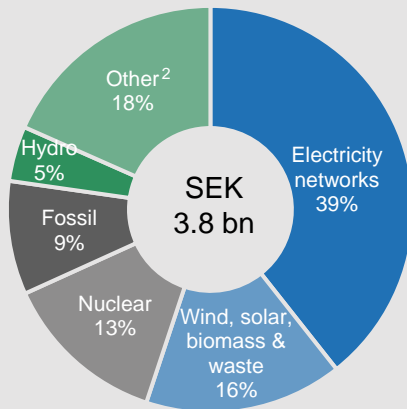
Main effects

- Lower forward power prices was the main driver of increased margin calls (SEK -8.4 bn), i.e. marginal security covering the counterpart's credit risk
- Seasonality in net change in operating receivables and liabilities in the Customers & Solutions and Heat operating segments (SEK -6.6bn)
- Increased stock of CO2 emission allowances, to be handed in to authorities in April (SEK -5.1bn)

Capital expenditures

Majority of investments directed to renewables and networks

Investments per category, Q1 2020



Detailed overview of investments, Q1 2020

SEK bn	Q1 2020	Q1 2019	Δ	FY 2019
Hydro	0.2	0.2	-5%	0.9
Nuclear	0.5	0.6	-17%	2.2
Fossil¹	0.3	0.3	-6%	2.6
Wind, solar, biomass & waste	0.6	1.6	-60%	7.7
Electricity networks	1.5	1.0	44%	7.1
Other²	0.7	1.3	-48%	4.4
Total	3.8	5.0		24.9

¹ Investments mainly related to coal to gas transition; Marzahn gas-fired CHP, Reuter heat-only boiler, Lichterfelde gas-fired CHP (updated to a more efficient and environmental compatible combined cycle gas turbine)

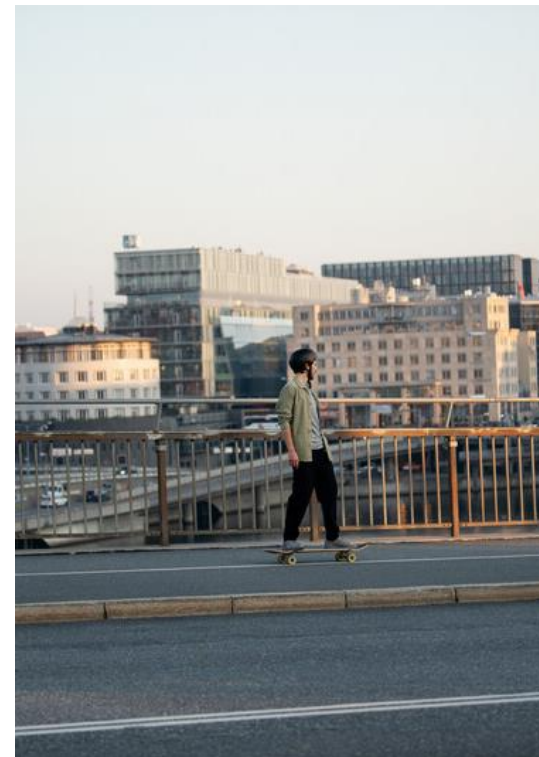
² Investments mainly related to Energy Solutions, infrastructure for district heating and Carpe Futurum.

Overview of key figures Q1 2020

Amounts in SEK bn unless indicated otherwise	Q1 2020	Q1 2019	FY 2019	Last 12 months
Net sales	48.2	49.6	166.4	165.0
EBITDA	16.9	12.6	42.4	46.8
EBIT	12.3	8.2	22.1	26.3
Underlying operating profit (EBIT)	10.2	9.7	25.1	25.6
Profit for the period	6.9	6.4	14.9	15.3
Electricity generation (TWh)	33.1	35.9	130.2	127.4
Sales of electricity (TWh)	45.5	45.4 ²	169.4	169.5
- of which, customer sales (TWh)	32.7	32.4	119.0	119.3
Sales of heat (TWh)	5.4	7.3	17.1	15.2
Sales of gas (TWh)	22.7	24.3	59.2	57.6
Return on capital employed ($\geq 8\%$)	9.4 ¹	7.1 ¹	8.5	9.4
FFO/adjusted net debt (22-27%)	25.2 ¹	18.1 ¹	26.5	25.2

¹ Last 12-month values

² The value has been adjusted compared with information previously published in Vattenfall's financial reports.

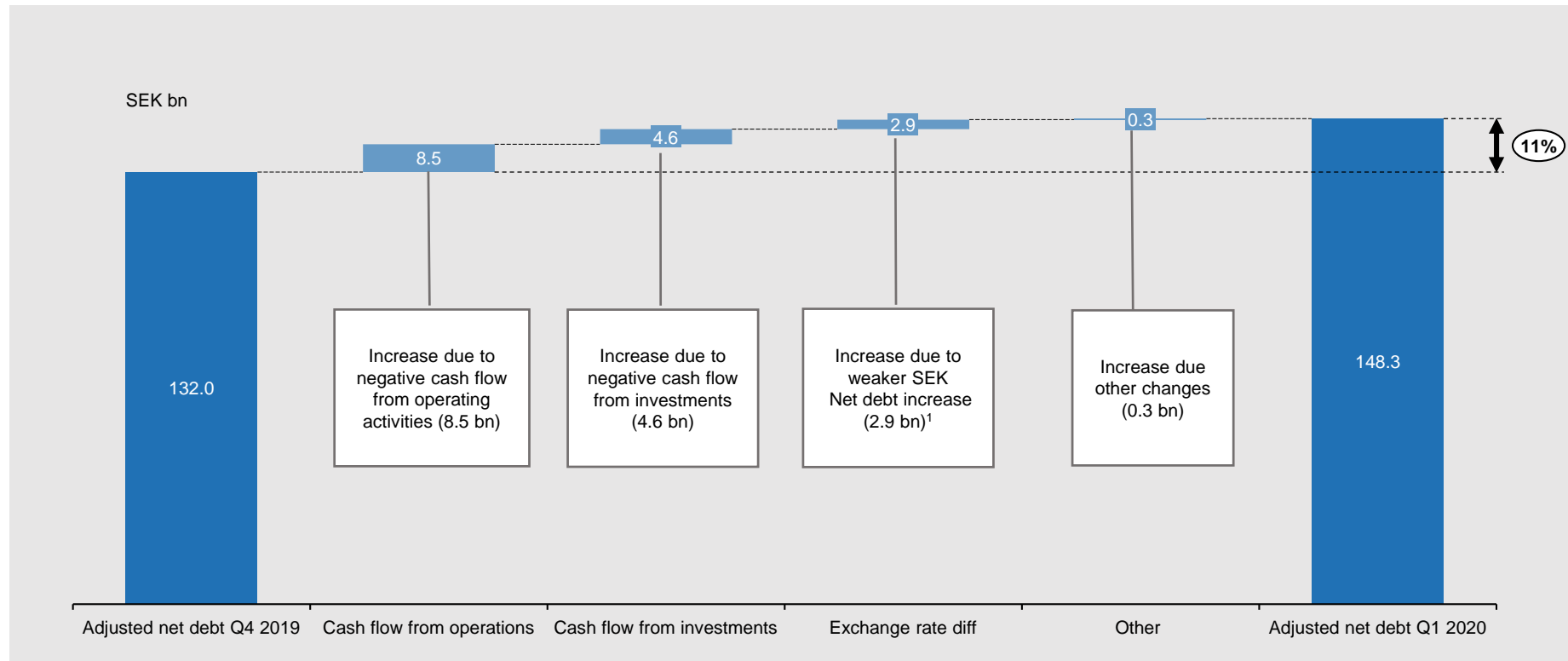


Appendix



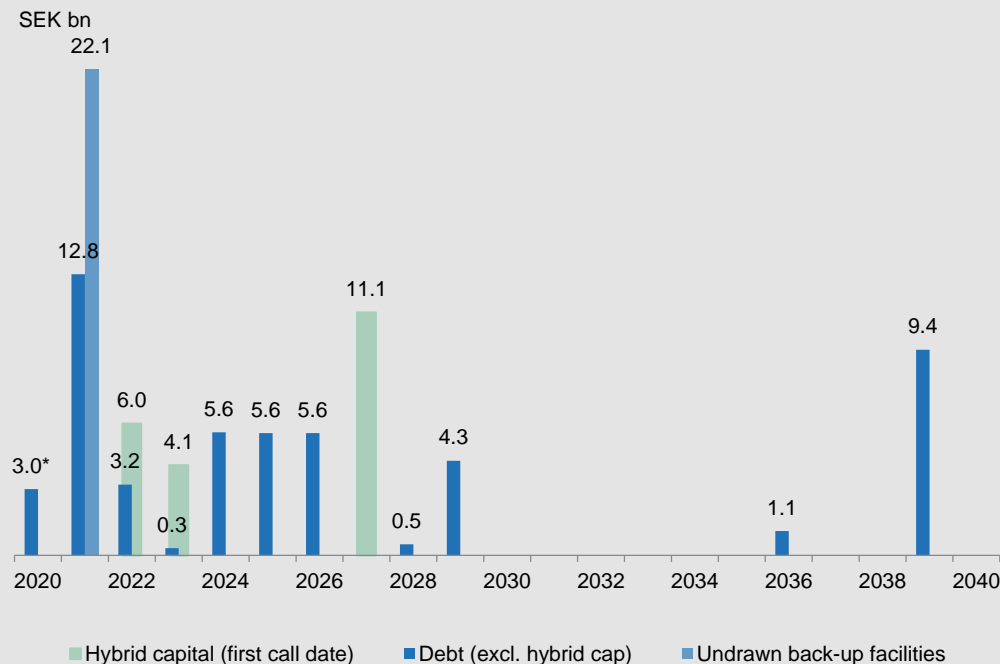
Development of adjusted net debt YTD 2020

Adjusted net debt increase mainly due negative cashflow after investments and negative translation effects.



¹ SEK weakened against EUR (from 10.45 to 11.06); translation of EUR denominated net debt into SEK leads to increase in Adjusted net debt

Debt maturity profile¹



* Short term debt are excluded (Repo, ECP and SCP) (20,2)

¹ 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

	31 Mar. 2020	31 Dec. 2019
Duration (years)	4.6	4.7
Average time to maturity (years)	6.2	6.8
Average interest rate (%)	3.6	4.0
Net debt (SEK bn)	81.6	64.3
Available group liquidity (MSEK)	27.8	29.3
Undrawn committed credit facilities (MSEK)	22.1	21.4

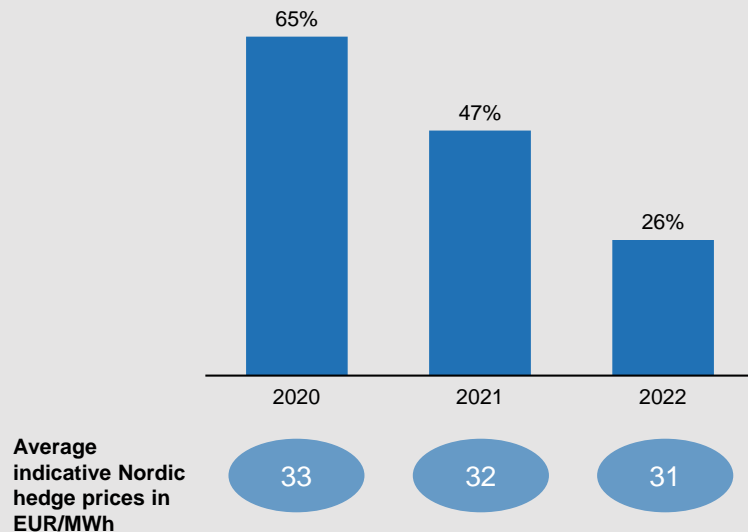
Cumulative maturities excl. undrawn back-up facilities

	2020- 2022	2023- 2025	From 2026
Debt incl. hybrid capital	25.0	15.6	32.0
% of total	34%	22%	44%

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 Nordic¹ hedge ratio (%) and indicative prices



Achieved prices² - Nordic portfolio

Q1 2020	Q1 2019	FY 2019
27	36	32

Sensitivity analysis – Continental² portfolio

Market quoted	+/- 10% price impact on future profit before tax, MSEK ³			Observed yearly volatility
	2020	2021	2022	
Electricity	+/- 846	+/- 1,311	+/- 1,343	18% - 22%
Coal	-/+ 77	-/+ 137	-/+ 120	19% - 22%
Gas	-/+ 433	-/+ 538	-/+ 694	20% - 26%
CO ₂	-/+ 175	-/+ 303	-/+ 292	41% - 42%

¹ Nordic: SE, DK, NO, FI

² Continental: DE, NL, UK

³ The denotation +/- entails that a higher price affects operating profit favorably, and -/+ vice versa

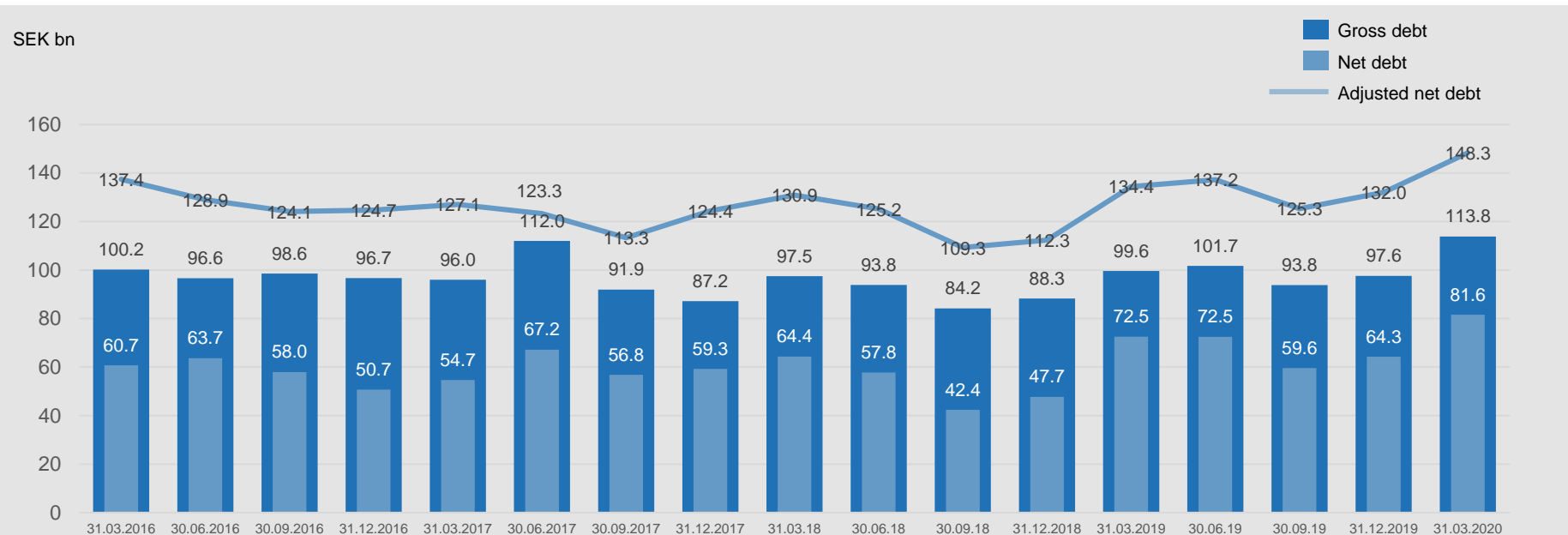
Liquidity position

Group liquidity	SEK bn	Committed credit facilities	Facility size, EUR bn	SEK bn
Cash and cash equivalents	8.7	RCF (maturity Dec 2021)	2.0	21.1
Short term investments	23.0	Total undrawn		21.1
Reported cash, cash equivalents & short term investments	31.7	Debt maturities²		SEK bn
Unavailable liquidity ¹	-3.9	Within 90 days		19.8
Available liquidity	27.8	Within 180 days		20.6

¹ German nuclear "Solidarvereinbarung" 1.1 SEK bn, Margin calls paid (CSA) 2.0 SEK bn, Insurance "Provisions for claims outstanding" 0.8 SEK bn

² Excluding loans from minority owners and associated companies

Debt development

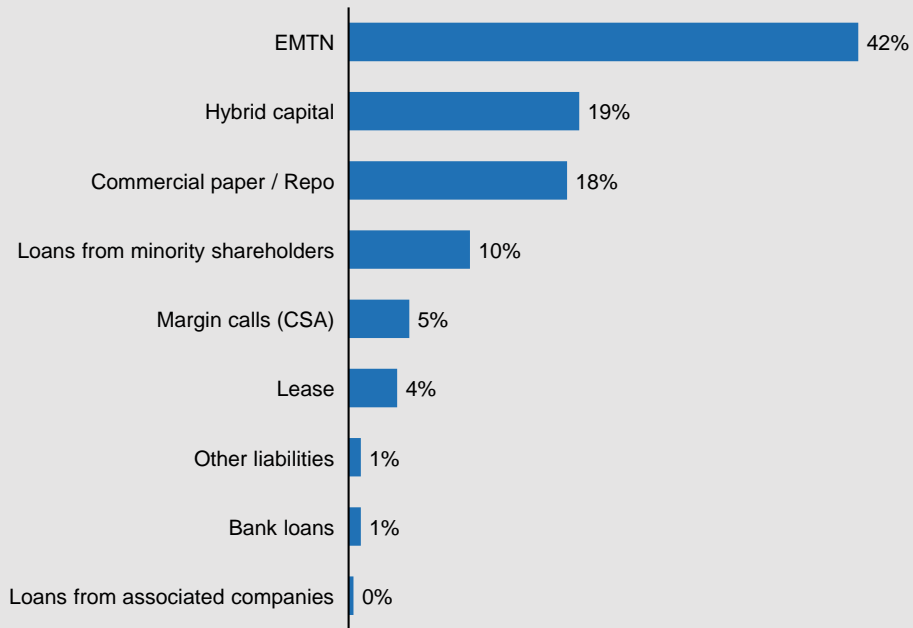


Net debt increased by SEK 17.3 bn compared with the level at 31 December 2019. Adjusted net debt increased to SEK 148.3 bn, SEK 16.3 bn higher compared with the level at 31 December 2019. For the calculation of adjusted net debt, see slide 24.

Breakdown of gross debt

Total debt: SEK 113.8 bn (EUR 10.3 bn)

External market debt: SEK 102.5 bn (EUR 9.3 bn)



Debt issuing programmes	Size (EUR bn)	Utilization (EUR bn)
EUR 10bn Euro MTN	10.0	3.7
EUR 4bn Euro CP	4.0	1.3
Total	14.0	5.0

- 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

¹ EMTN= Euro Medium Term Notes

Reported and adjusted net debt

Reported net debt (SEK bn)	31 Mar. 2020	31 Dec. 2019	Adjusted net debt (SEK bn)	31 Mar. 2020	31 Dec. 2019
Hybrid capital	-21.1	-20.2	Total interest-bearing liabilities	-113.8	-97.6
Bond issues and liabilities to credit institutions	-49.3	-38.8	50% of Hybrid capital	10.5	10.1
Commercial papers and Repos	-20.2	-17.2	Present value of pension obligations	-42.7	-44.0
Liabilities to associated companies	-0.6	-0.7	Wind & other environmental provisions	-9.0	-8.6
Liabilities to minority shareholders	-10.8	-10.6	Provisions for nuclear power (net)	-37.8	-35.5
Lease liabilities	-4.5	-4.6	Margin calls received	5.8	3.7
Other liabilities	-7.3	-5.2	Liabilities to minority owners due to consortium agreements	10.8	10.6
Total interest-bearing liabilities	-113.8	-97.6	= Adjusted gross debt	-176.1	-161.3
Reported cash, cash equivalents & short-term investments	31.7	33.2	Reported cash, cash equivalents & short-term investments	31.7	33.2
Loans to minority owners of foreign subsidiaries	0.6	0.2	Unavailable liquidity	-3.9	-3.9
Net debt	-81.6	-64.3	= Adjusted cash, cash equivalents & short-term investments	27.8	29.3
			= Adjusted net debt	-148.3	-132.0

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	Total Ringhals: 33.9	Total Ringhals: 33.9¹	
Forsmark 1	984	1980	66.0			
Forsmark 2	1,120	1981	66.0			
Forsmark 3	1,170	1985	66.0	Total Forsmark: 29.5	Total Forsmark: 19.4	
Total Sweden	6,974	-		66.0²	54.6²	37.3³
Brunsbüttel	771	1977	66.7	12.7	8.5	
Brokdorf	1,410	1986	20.0	0	3.7	
Krömmel	1,346	1984	50.0	7.9	7.9	
Stade ⁴	640	1972	33.3	0	1.0	
Total Germany	4,167	-	-	20.6	21.1	
Total SE & DE	11,141			86.6	75.7	

¹ Vattenfall is 100% liability of Ringhals decommissioning, while owning only 70.4%

² Total provisions in Sweden (IFRS accounting) include provisions of SEK 0.5 bn (pro rata SEK 0.3 bn considering share in Studsviks-fonden) related to Ägesta, and SEK 2.3 bn (pro rata SEK 0.9 bn considering share in Studsviks-fonden) related to SVAFO

³ Vattenfall's share of the Nuclear Waste Fund. IFRS consolidated value is SEK 44.3 bn.

⁴ Stade is being dismantled

Impairment history 2009 – 2019

SEK bn		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
The Netherlands	Thermal assets		4.3 ¹	0.4 ²	8.6 ²	14.7	2.6		2.8				33.4
	Trading					6.5 ¹	10.0 ¹		0.7				17.2
	Other	1.2	1.2			1.5 ²	1.9				0.1		5.9
Germany	Thermal assets			0.3		4.3	5.7	19.2	26.1				55.6
	Nuclear assets			10.5									10.5
	Transmission		5.1										5.1
	Other					0.1	1.1	0.3	2.3	0.4			4.2
The Nordic Countries	Renewable assets						1.4		0.1				1.5
	Thermal assets	4.1				3.0		0.1					7.2
	Nuclear assets							17.0	0.4				17.4
	Other								0.3				0.3
UK	Renewable assets						1.1	0.2					1.3
Not allocated		0.2	0.5	0.1									0.8
Impairment Liberia					1.3								1.3
Impairments; shares in Enea S.A. Poland					2.4								2.4
Impairments; shares in Brokdorf and Stade									1.1				1.1
Impairments		5.5	11.1	11.3	12.3	30.1	23.8	36.8	33.8	0.4	0.1	0.0	165.2
Reversed impairment losses		-1.3	-1.3	-0.4	0.0	0.0	0.0	-0.5	-0.9	0.0	0.0	0.0	-4.4
Impairments (net)		4.2	9.8	10.9	12.3	30.1	23.8	36.3	32.9	0.4	0.1	0.0	160.8

¹ Impairment of goodwill

² Impairment of assets and goodwill

Wind & Solar - Installed capacity (MW¹) Q1 2020

	Solar	Onshore	Offshore	Total
United Kingdom	5	391	687	1.083
Denmark	0	237	565	802
The Netherlands	29	341	108	478
Sweden	0	244	110	355
Germany	3	19	636	658
Total (MW)	37	1.232	2.106	3.375



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
■ Näsudden	10

Installed capacity (MW) 355

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
■ Ejlsing (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 Alexia	122
■ Wieringermeer	101
■ Slufterdam	29
■ Eemmeerdijs	17
■ Irene Vorrink	17
■ Hoofdplaatpolder (70%)	10
■ Reynndersweg (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	12

Installed capacity (MW) 478

¹ Capacity in operation: total capacity of the wind farms that Vattenfall has an ownership in.
Minority shares included as 100%

Pipeline of key wind farms in our 5 core countries

	Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
Construction	DK	Kriegers Flak	605	FIT	X	50.000hrs	100	2021	Under construction
	NL	Wieringermeer	185	SDE+	X	15 yrs	100	2019/2020	Commissioning ongoing
	NL	Wieringermeer ext.	118	SDE+	X	15 yrs	100	2020	Under construction
	NL	Moerdijk	27	SDE+	X	15 yrs	100	2021	Under construction
	NL	Haringvliet	22	SDE+	X	15 yrs	100	2020	Under construction
	NL	Nieuwe Hemweg	19	SDE+	X	15 yrs	100	2021	Under construction
	NL	Jaap Rodenburg	38	SDE+	X	15 yrs	100	2021	Procurement
	SE	Blakliden + Fäbodberget	353	Certs	N/A	-	30	2022	Under construction
Total 1367 MW									
	Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
Development	UK	South Kyle	240	-	N/A	-	100	2022	Construction starting 2020
	DK	NK II	~150	-	N/A	-	100	2021	Permitting phase
	DK	Nørre Økse Sø	~40	-	N/A	-	80%	2021	Permitting phase
	NL	Hollandse Kust Zuid 1-4	~1.500	-	X	-	100	2022/2023	Procurement
	DK	Vesterhav projects	344	FIT	X	50.000hrs	100	2023	Consenting
	UK	Thanet Extension	272	CFD		15 yrs	100	2024	Early planning, application for a Development Consent Order submitted
	UK	Norfolk projects	3.600	CFD		15 yrs	100	2027	Early planning, application for a Development Consent Order submitted
	Total >5GW								

 Offshore
 Onshore

Solar & batteries

Large scale solar & batteries pipeline under construction

Large Scale Solar

Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
NL	PV@Heat	10	SDE+	X	15 full-load yrs	100	2018 / 2019	In operation
NL	Coevorden	6.5	SDE+	X	15 full-load yrs	100	2019	Handover to O&M
NL	Haringvliet	37.9	SDE+	X	15 full-load yrs	100	2020	Construction started
Total 54.4 MW								

Decentral solar Commissioned

Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
DE	Tenant electricity/ Mieterstrom	0.9	EEG (small scale)	X	20 years	100	2018 / 2019	Program finalized
DE	PV@VF sites	1.1	EEG (small scale)	X	20 years	100	2019	Program finalized
DE	B2B customers – direct sale	0.4	EEG / own consumption	X	20 years	0	2019	Program finalized
NL	B2B customers – direct sale / Leasing	12.1	SDE+		15 Full-load yrs	0	2019	Program 2019 finalized
Total 14.5 MW								

Decentral solar Construction

Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Ownership (%)	Commissioning	Current status
DE	PV@VF sites	6.7	EEG	X	20 years	100	2020	
NL	Direct sale / Leasing	18.9	SDE+	X	15 Full-load yrs	0	2020 / 2021	Contracts signed
Total 25.6 MW								

Solar & batteries

Large scale solar & batteries pipeline under construction

Batteries	Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Owner-ship (%)	Commissioning	Current status
	DE	NEW 4.0	1	Funding in R&D operation and FCR	Weekly for PFC	1-3 yrs funding 4-15 yrs FCR	100	2018	Operating
	DE	Jungheinrich	1	No support scheme → Peak shaving			100	2018	Operating
	SWE	Åre	1	No support scheme → Peak shaving			0	2019	Operating
	UK	Battery @ PyC	22	EFR and CM	X	1-4 yrs EFR 5-15 CM	100	2019	Operating
	NL	Battery @ Alexia	3	FCR	weekly	15 years	100	2019	Operating
	DE	Hafenbatterie	1	Cooperation with BMW and Bosch, FCR	weekly		100	2019	Commissioning phase
	SWE	Networks	1	No support scheme			0	2019	Project finalized
	NL	E-Mobility	0.25	No support scheme			0	2019	Project finalized
	DE	Ingredion	0.5	No support scheme → Peak shaving			0	2019	Operating
	NL	Battery @ Haringvliet	12	FCR			100	2020	Construction started
Total 42.5 MW									
PFC – Primary Frequency Control			FCR - Frequency Response Regulation			CM – Capacity Mechanism		EFR – Enhanced Frequency response	