VATTENFALL PRESENTATION

Credit Update, Paris
2017-10-31

VATTENFALL

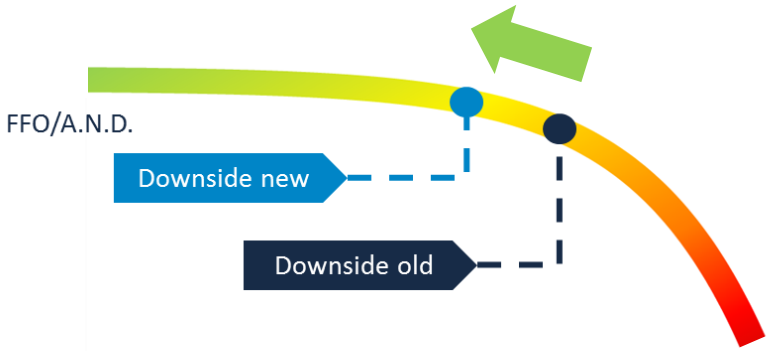
IMPROVED RISK PROFILE

The new Vattenfall is financially more resilient with a lower downside risk

Key contributing factors in 2016

- ✓ **Lignite divestment**
  - Reduced exposure to power prices, fossil generation and CO_2
- ✓ **German nuclear fund**
  - Regulatory clarity on the externalisation of liabilities for interim and final storage of nuclear waste
- ✓ **Swedish energy agreement**
  - Pending law change, capacity tax on nuclear to be abolished (~SEK 3bn EBITDA effect) and real-estate tax on hydro to be significantly reduced (~SEK 2bn EBITDA effect)

Risk on FFO/adjusted net debt (illustrative)



- The improved risk profile leads to a less utilized risk-bearing capability
- This allowed for a more risk tolerant hedge strategy implemented in autumn 2016, reducing cost and complexity

WE POWER CLIMATE SMARTER LIVING




We will help power our customers to live free from fossil fuels within one generation



VATTENFALL

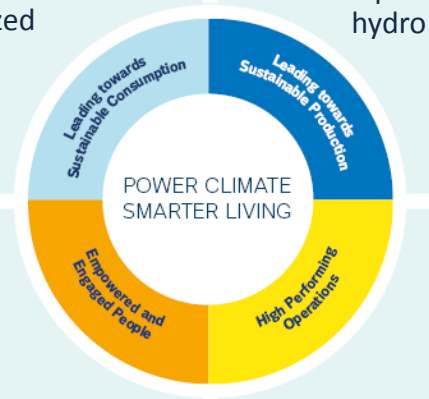
STRATEGY AND STRATEGIC TARGETS

Vattenfall is well on track to meet its strategic targets until 2020

Our strategic objectives and prioritised areas

Increase customer centricity and build a sizable position in decentralized energy

Grow in renewables, maintain efficient operations within hydro and nuclear power and implement our CO_2 roadmap



Develop culture, competence and brand

Reduce costs and improve operational efficiency

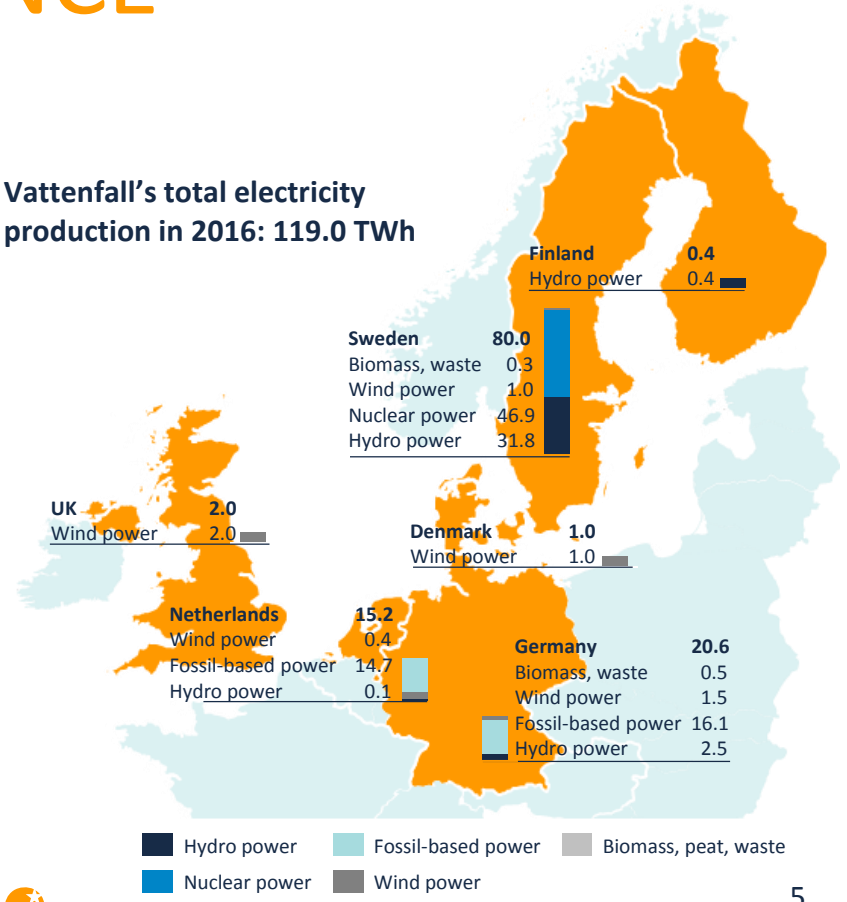
Strategic targets to 2020	30 Sept. 2017
1 Customer engagement, Net Promotor Score (NPS) relative +2	+5
2 Aggregated commissioned new renewables capacity 2016-2020: ≥2,300 MW	652
3 Absolute CO_2 emissions, pro rata, continuing operations: ≤21 Mtonnes	16.3
4 ROCE: ≥9% (continuing operations)	4.2
5 Safety as LTIF (Lost Time Injury Frequency): ≤1.25	1.2
6 Employee Engagement Index: ≥70%[1]	…

1) Only updated on an annual basis

VATTENFALL AT A GLANCE

- One of Europe's largest producers of electricity and heat
- 100% owned by the Swedish state
- Main products: electricity, heat, gas, energy services
- Main markets are Sweden, Germany, Netherlands, UK, Denmark and Finland
- 20,000 employees

Vattenfall's total electricity production in 2016: 119.0 TWh



Net sales in 2016: SEK 139bn

Underlying operating profit[1] in 2016: SEK 22bn

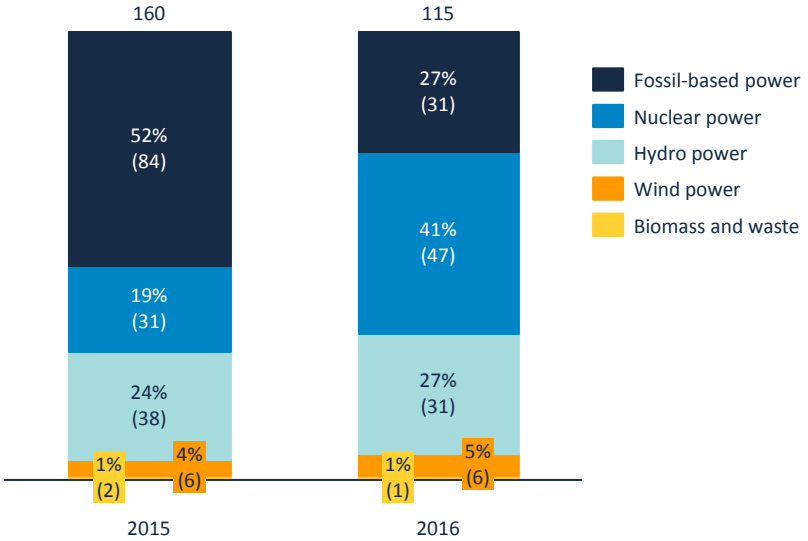
1) Operating profit (EBIT) excluding items affecting comparability

A NEW VATTENFALL IS TAKING SHAPE

A new Vattenfall is taking shape, both from a strategic and financial perspective.

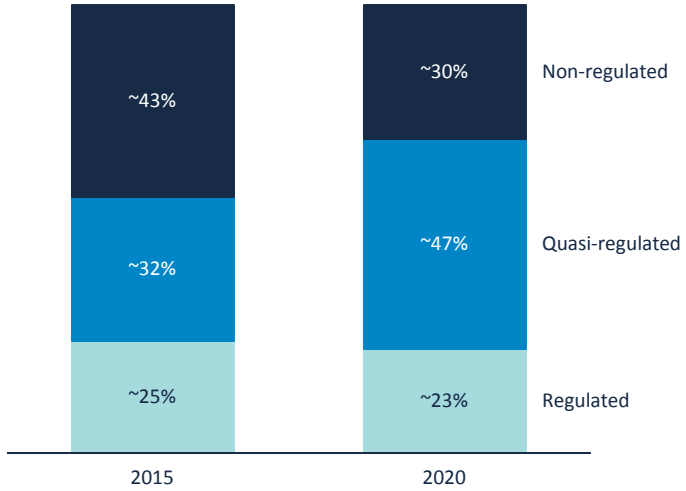
Vattenfall has moved from a heavy fossil-based production towards a more sustainable portfolio in 2016

Vattenfall production mix 2015-2016 (TWh)



… and are further moving towards more quasi-regulated business with more limited risk exposure going forward

Vattenfall future value pools - EBITDA



VATTENFALL

WE ARE RESHAPING OUR ASSET BASE TO MEET NEW MARKET REQUIREMENTS

	Central Production	Grids	Wholesale markets	Commodity sales and decentralized solutions
Grow ✓ Customer attractiveness ✓ Long term viability ✓ Strong Vattenfall capabilities ✓ Attractive returns	• Wind • Solar • District heating	• Regulated • Non-regulated • Services	• Trading • Aggregation Optimization Marketing	• Electricity retail • Decentralized solutions**
Keep and develop ✓ Long term viability - Limited growth opportunities	• Hydro • Nuclear • Gas condensing • Hard coal CHP *			• Gas retail
Non core - Limited long term viability - Not supporting the transition	• Hard coal condensing • Lignite			

* Hard coal CHP to be converted to gas end of economic life time

**E.g. aggregation services, heat pumps and solar panels

VATTENFALL

CORNERSTONES TOWARDS CLIMATE NEUTRALITY

Portfolio transformation
Major shift in 2016 following lignite divestment

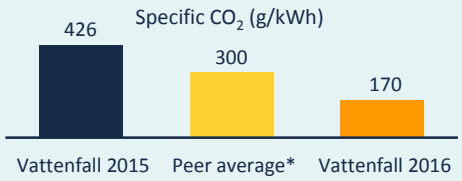
Continued CO_2 phase out
Ongoing initiatives support the targeted ambition

Supporting our partners
Enabling partners to reach climate targets

from
50%
fossil power

to

Climate neutrality 2050
Climate neutrality Nordic 2030



- ✓ Phase out of coal, e.g., Klingenberg conversion
- ✓ Efficient gas-fired CHPs
- ✓ New smart energy and heat solutions
- ✓ Partnerships for CO_2-free industry processes (e.g. steel, cement)

- ✓ Electrification of industrial processes and transport
- ✓ Life Cycle Analysis and Environmental Performance Declarations
- ✓ Cooperate with partners, suppliers cities and customers to set joint CO_2 targets

Vattenfall absolute CO_2 2015: 84 MT, 2016: 23 MT
*Source: Company reports 2015 –RWE, Enel, E.ON, EDP, EnBW, Iberdrola, DONG, Fortum, Centrica, EDF, Statkraft

ELECTRIFICATION IS AN ENABLER FOR SOLVING THE CLIMATE ISSUE

Vattenfall aims to play a leading role given our strong position in heating, renewable generation and our "Nordic" heritage coming from a low-emitting region

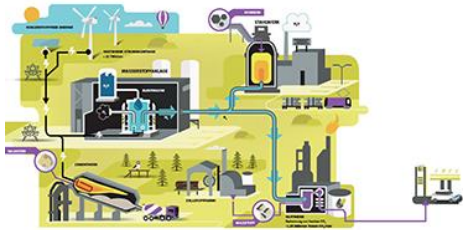
Electrification of the transport sector

- Supports e-mobility growth with resulting reduction of CO_2 as well as solving pollution and noise issues

Electrification of heating

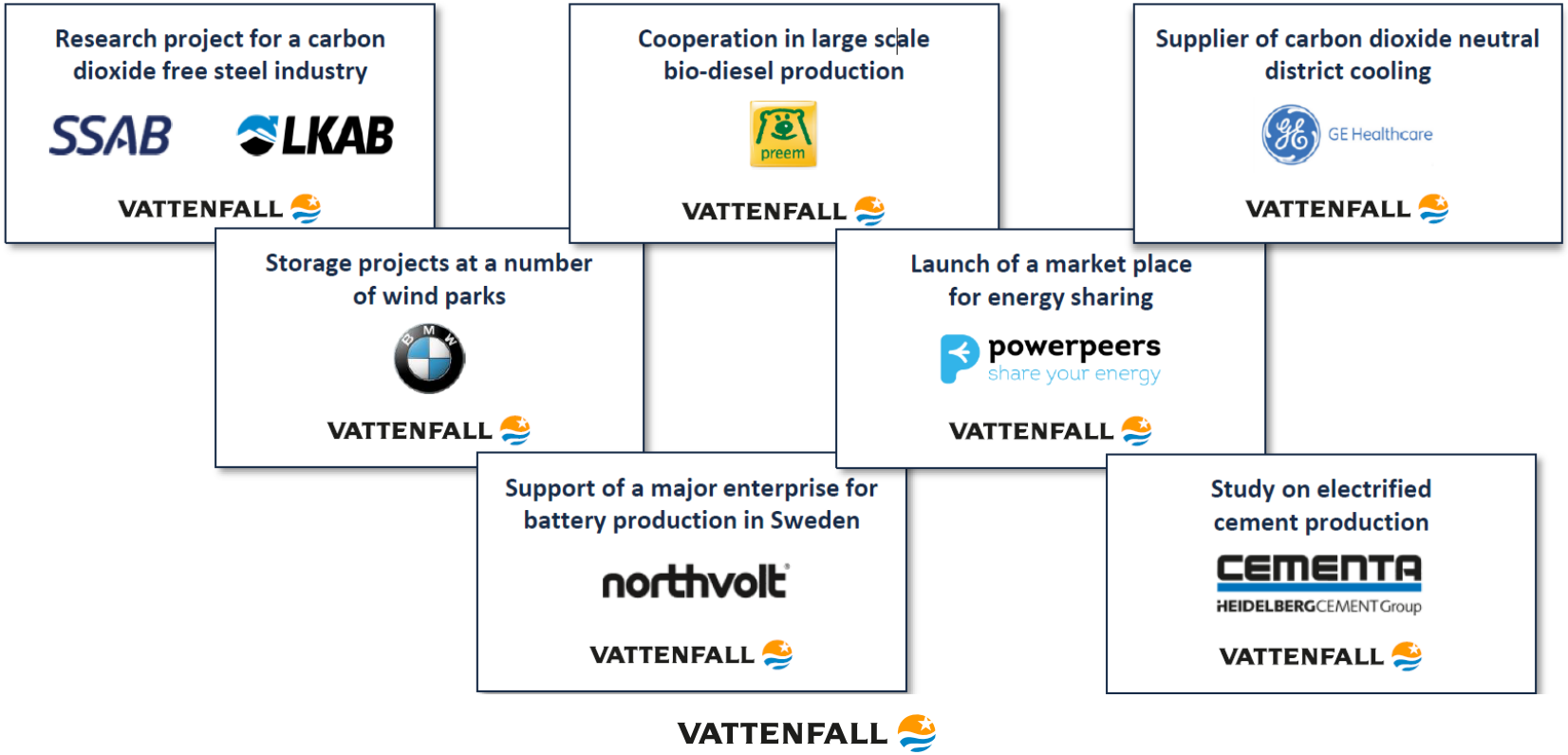
- Energy efficiency achieved by switching from gas, oil or electric boilers to heat pumps or district heating
- Power to heat is an attractive solution to reduce the cost of heating

Electrification of the industry



- Greater use of electricity by industry can lead to fossil free steel, green concrete and boost the production of non-fossil diesel

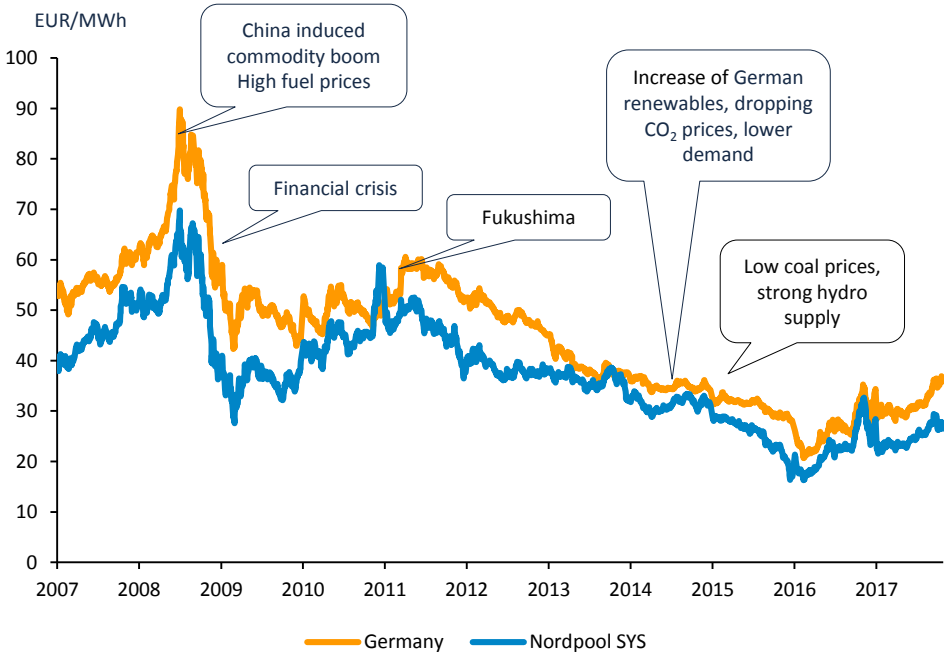
AN ATTRACTIVE PARTNER IN THE ENERGY TRANSITION



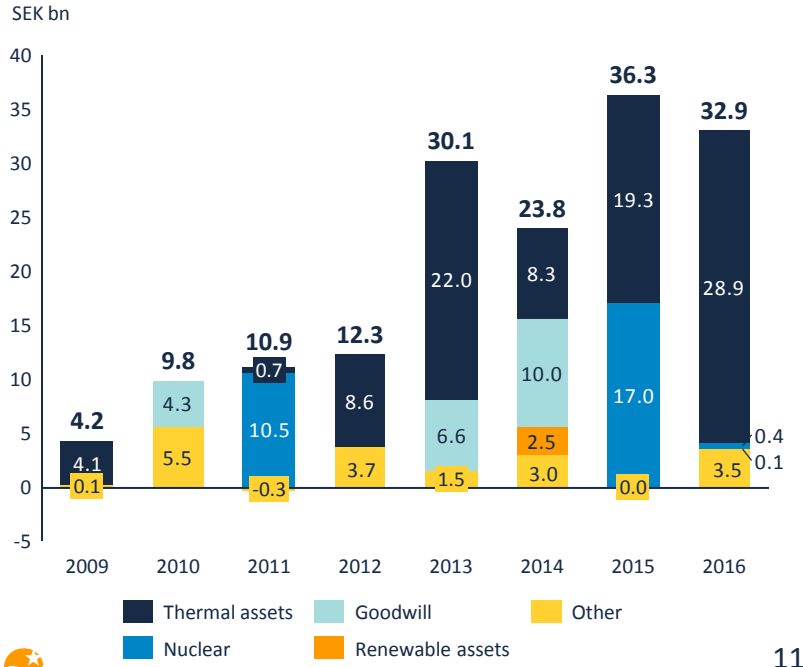
CHALLENGING MARKET CONDITIONS

Challenging market conditions with depressed electricity prices have lead to impairments

Front year contract price (EUR/MWh)



Total impairments of SEK 160.3bn

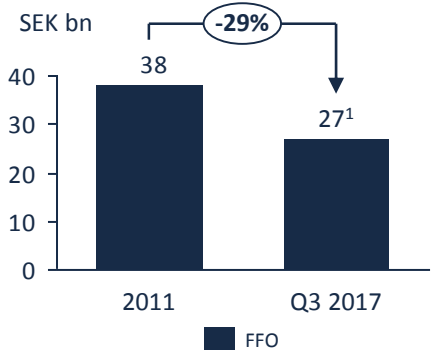


Source: Argus Germany, NPX Nordpool SYS

VATTENFALL

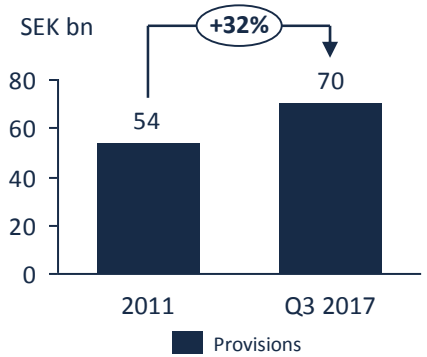
SUCCESSFUL IN MANAGING LEVERAGE IN A TOUGH MARKET

Despite drop in FFO due to declining market conditions...



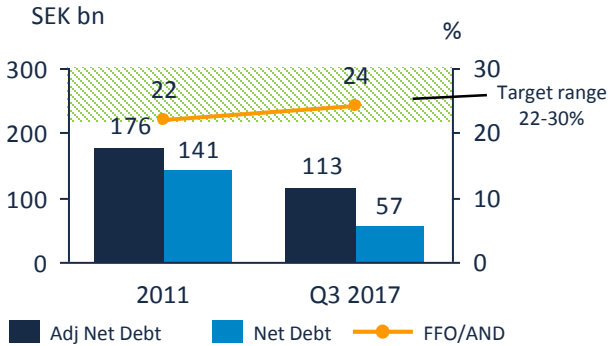
- Pressure on earnings as a result of weaker situation for merchant generation → FFO declining by SEK 11bn
- Higher share of regulated and contracted earnings will lower volatility going forward

...and increase of provisions...



- Declining discount rate environment and revised cost estimates → Provisions increased by SEK 16bn
- Reduced uncertainty in provision development going forward with the transfer of medium and long-term nuclear liabilities in Germany

...FFO/AND is today within our target range



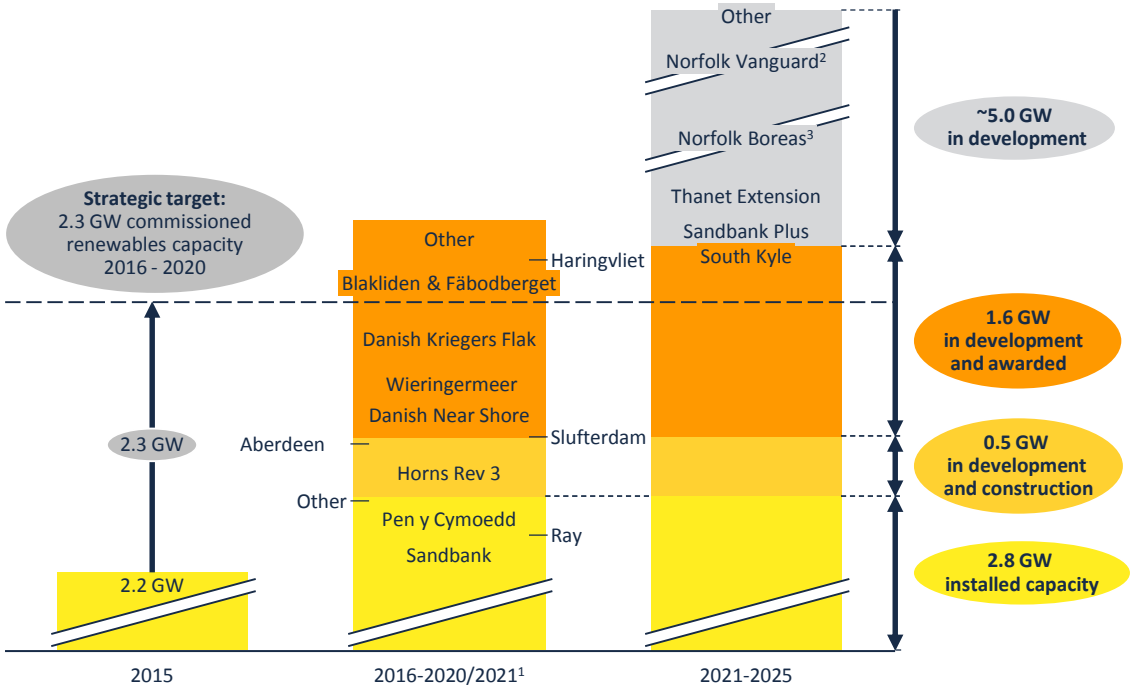
During the past 5 years, we have actively reduced the overall net debt position by SEK 86bn through:

- Cost reductions
- Reduced capex
- Divestments
- No dividend pay-out

1) Last 12 months value

SIGNIFICANT GROWTH IN RENEWABLES

A total of 2.8 GW are now in operation. With a further ~2 GW in development and construction or awarded, Vattenfall is well on track meeting its strategic long-term target on renewable capacity growth.



Highlights Q3 2017

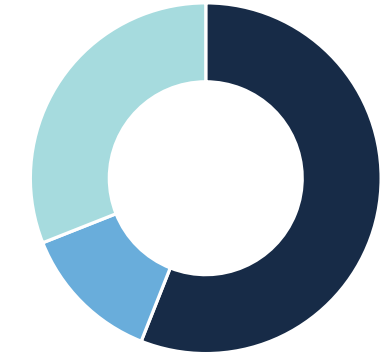
- FID for onshore wind farm Wieringermeer, 180MW, NL
- Acquired neighbouring project Wieringermeer Extention, 115 MW, NL
- BU Solar & Batteries constantly developing pipeline

1) Danish Kriegers Flak expected commissioning 2021
2) Commissioning expected in 2025-2027
3) Commissioning TBD

INVESTMENT PLAN 2017-2018

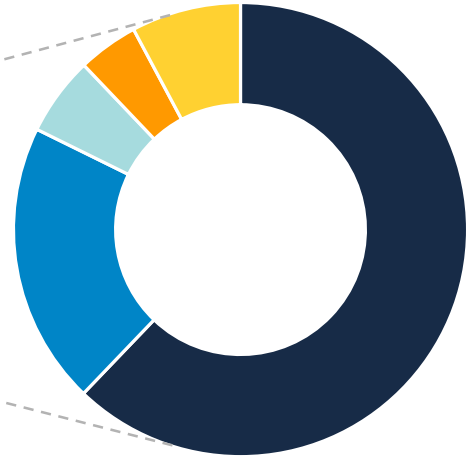
The investment plan reflects a clear shift in our strategy with a large part dedicated to growth investments, with the majority in wind power, solar power and distribution networks.

Investment split by type: SEK 50 bn



- Growth investments, 56%
- Replacement investments, 13%
- Maintenance investments, 31%

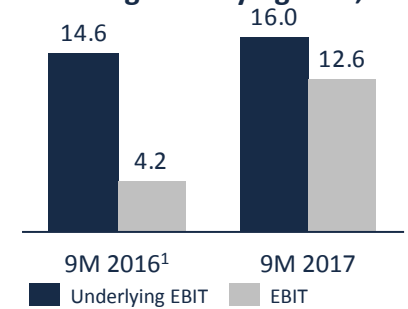
Growth investment by technology: SEK 28 bn



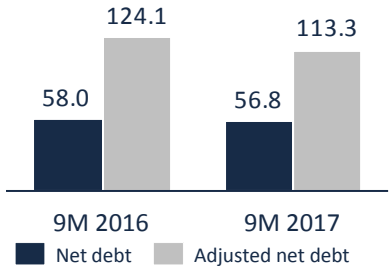
- Wind power, 62%
- Distribution grids, 20%
- Solar PV, 6%
- Heat grids, 4%
- Other, 8%

9M 2017 FINANCIAL HIGHLIGHTS

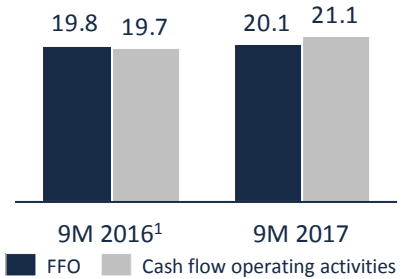
Increasing underlying EBIT, SEK bn



Reduced debt levels, SEK bn



Stable funds from operations, SEK bn



- Underlying EBIT increased by SEK 1.4 bn to SEK 16.0 bn due to increased earnings in heat, distribution and power generation
- Program launched to increase efficiency in staff functions (SEK 2 bn cost reduction target by 2020)
- FFO and debt levels stable, with FFO/adjusted net debt at 24.0%, above target of 22%
- Adjusted net debt improved with SEK 10.8 bn, mainly due to positive cash flow after investment, decrease in pension provisions and refund of nuclear fuel tax from the German government

1) Excluding divested lignite operations

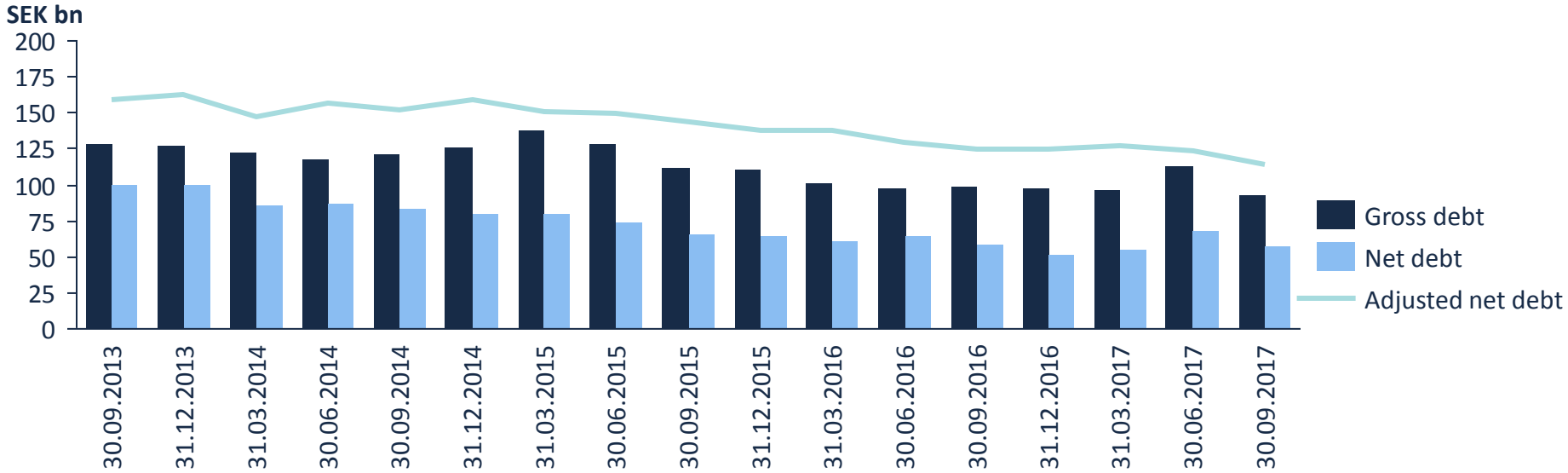
FINANCIAL TARGETS

On an underlying basis Vattenfall meets its financial targets

Financial metric	Target[2]	9M 2017	9M 2016[3]
Return on Capital Employed (ROCE)[1] (ROCE excl. items affecting comparability)	9%	4.2 9.8	3.1 8.4
FFO/adjusted net debt[1]	22-30%	24.0	23.9
Net debt/equity	50-90%	62.4	66.8
Dividend policy (% of the year's profit after tax)	40-60%	-	-

1) Last 12-months value
2) Financial targets are set and reviewed by the owner for a business cycle-period
3) Excluding divested lignite operations

DEBT DEVELOPMENT

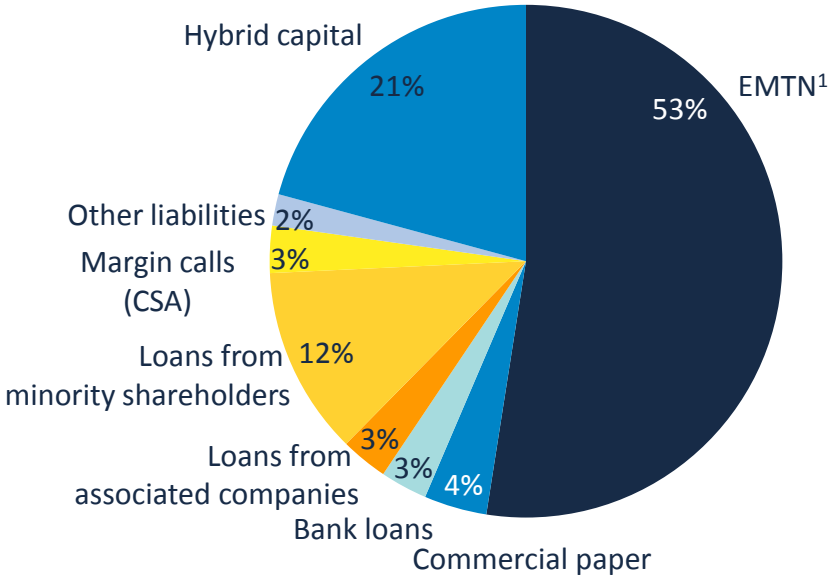


Net debt increased by SEK 6.1 bn compared with the level at 31 Dec. 2016. Adjusted net debt improved by SEK 11.5 bn, compared with the level at 31 Dec. 2016.

BREAKDOWN OF GROSS DEBT

Total debt: SEK 91.9bn (EUR 9.5bn)

External market debt: SEK 78.6bn (EUR 8.1bn)



Debt issuing programmes	Size (EUR bn)	Utilization (EUR bn)
EUR 10bn Euro MTN	10.0	4.6
EUR 2bn Euro CP	2.0	0.7
SEK 15bn Domestic CP	1.6	0
Total	**13.6**	**5.3**

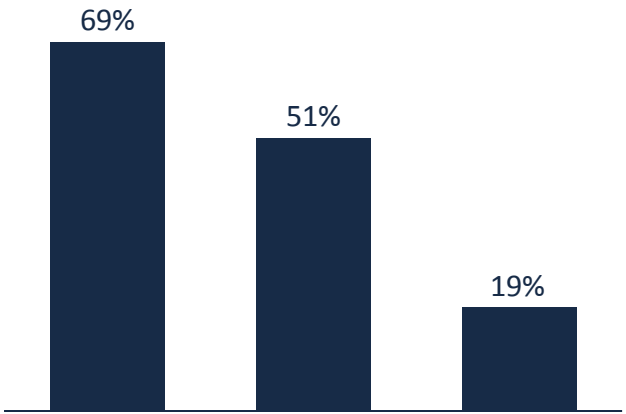
- All public debt is issued by Vattenfall AB
- The main part of debt portfolio has no currency exposure that has an impact on the income statement. Debt in foreign currency is either swapped to SEK or booked as hedge against net foreign investments.
- No structural subordination

1) EMTN = Euro Medium Term Notes

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[1] hedge ratio (%) and indicative prices



Average indicative Nordic hedge prices in EUR/MWh

2018	2019	2020
27	28	32

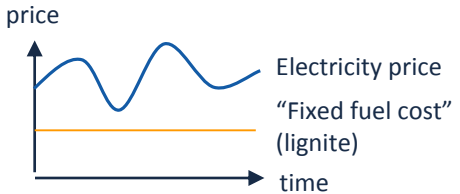
Sensitivity analysis – Continental[2] portfolio

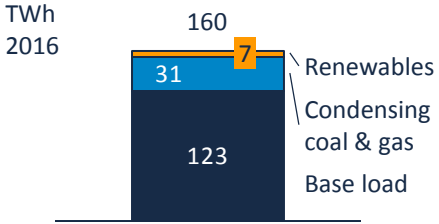
Market quoted	+/- 10% price impact on future profit before tax, MSEK[3]			Observed yearly volatility
	2018	2019	2020	
Electricity	+/- 789	+/- 1084	+/- 1084	20% - 26%
Coal	-/+ 286	-/+ 269	-/+ 257	28% - 31%
Gas	-/+ 678	-/+ 572	-/+ 565	15% - 27%
CO_2	-/+ 117	-/+ 125	-/+ 152	53% - 54%

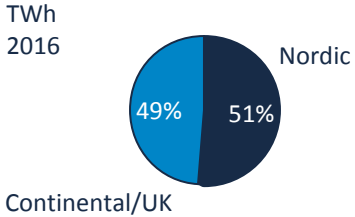
1) Nordic: SE, DK, NO, FI
2) Continental: GE, NL, UK
3) The denotation +/- entails that a higher price affects operating profit favourably, and -/+ vice versa

ADAPTING THE HEDGE STRATEGY TO CHANGING POWER PRICE EXPOSURE

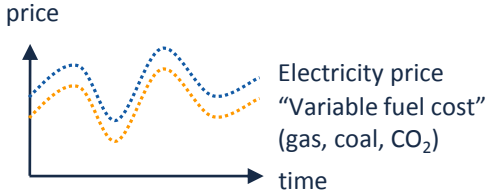
Before lignite divestment

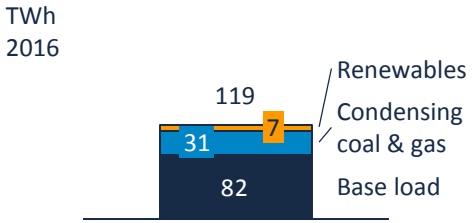


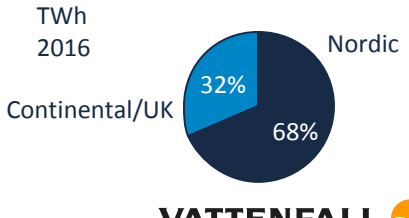




After lignite divestment







From fixed fuel to variable fuel dominated in Germany

Group base load production hours reduced by ~33%

C/UK power production share reduced from 49% to 32%

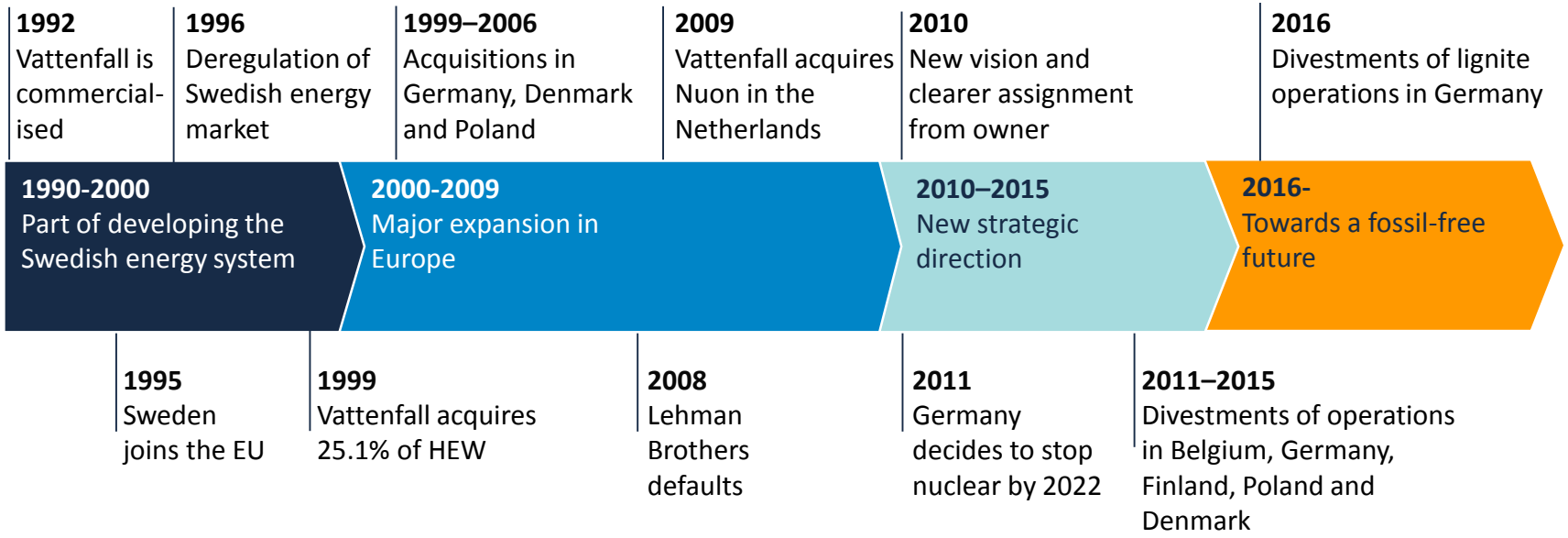
- Lower hedge ratio
- Hedging primarily Nordic exposure
- Hedging closer to delivery

VATTENFALL

APPENDIX

VATTENFALL'S HISTORY

From a domestic Swedish hydro power generator to an European energy company



THE ENERGY AGREEMENT – POSITIVE FOR VATTENFALL

Targets

- Target of **100% renewable production by 2040** (annual production level corresponding to domestic demand)
- Sweden should **have zero net emission of GHG by 2045**, implying further electrification
- A target for **energy efficiency** for 2020-2030 to be set

Nuclear

- **Capacity tax[1] abolished** over two years beginning 2017
- Adjustments to changes in **Nuclear Waste Fund payments** under investigation
- **No "political phase-out"** of nuclear
- **Permission to replace reactors** at existing sites can be given

Hydro

- **Real estate tax[2] reduced** to same level as other power plants (from 2.8% to 0.5% over a four year period starting 2017)
- Expansion of hydro power should in first hand occur trough **capacity increases in existing plants**. "Nationalälvarna" still protected.

Renewables

- El-certificate system prolonged - **18 TWh added 2020-2030**
- Connection charges for **offshore wind** discontinued
- Facilitation of **small-scale production and services** for energy efficiency, storage and sales of power

The energy agreement enables Vattenfall to take the lead in the transformation to a sustainability energy system in Sweden

1. Nuclear capacity tax ~SEK 3bn p.a.
2. Real-estate tax for hydro power plants ~SEK 2bn p.a.

GROWTH IN DECENTRALISED SOLUTIONS

Declining costs for solar and batteries together with a strengthened political framework enable new customer offerings

Launch of Vattenfall InHouse, SE

Launch of **InHouse**, to tenant-owner housing associations and property owners

- InHouse Heating
- InHouse Electricity
- InHouse Charging
- InHouse Smart

Launch of solar panels for tenant customers, DE & NL

New offering to tenant customers in Berlin and Hamburg to install solar panels on the roofs for self consumption → remaining demand from micro CHP

Launch of solar panels for private customers, NL & DE

Private customers to lease or buy solar panels for personal consumption trough new offering

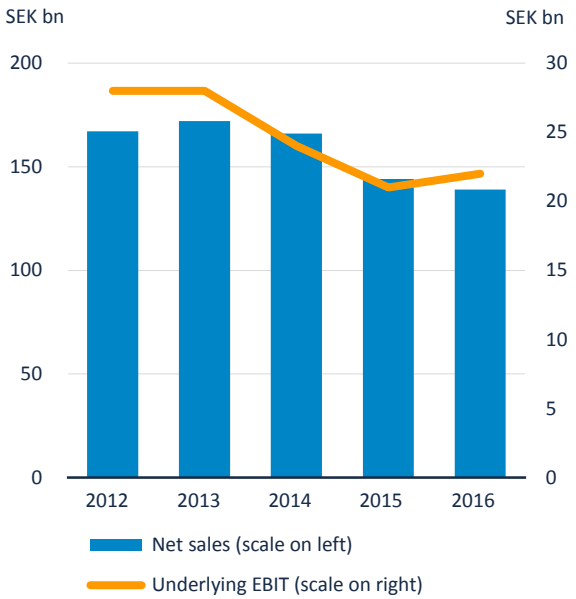
Joined the EV100 initiative

Vattenfall joined the initiative EV100 together with 9 other multinational companies → exchange the entire car fleet, 3500 cars, to electrical vehicles within the next five years

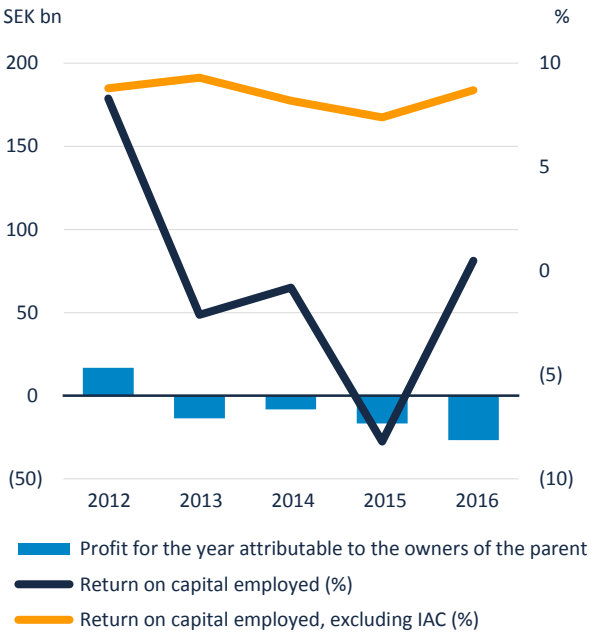
STABILISED FINANCIAL DEVELOPMENT

After several years of challenging market conditions leading to recognition of substantial impairment losses and pressure on profitability, profit levels have now stabilised

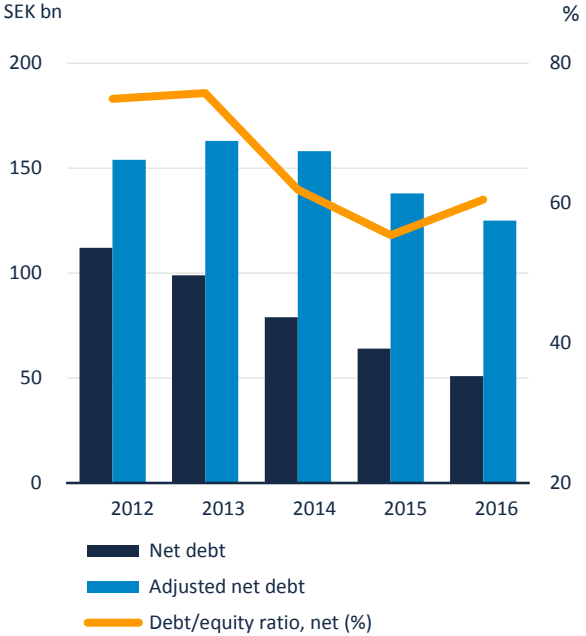
Sales and underlying EBIT



Earnings and return

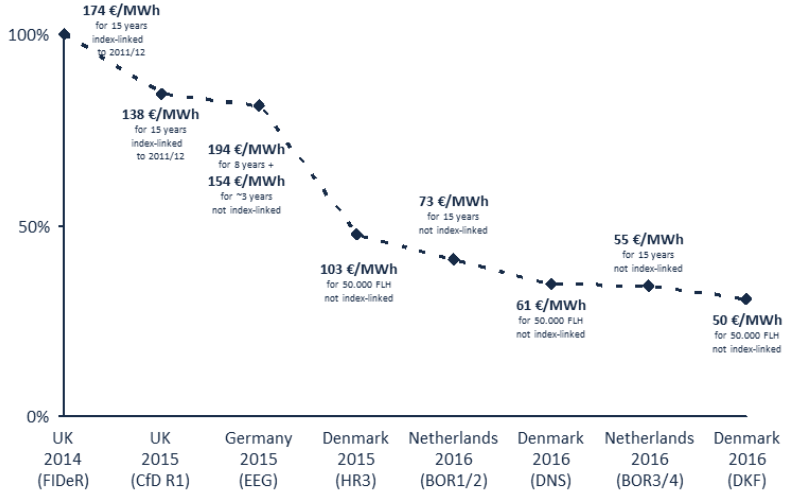


Debt



INDUSTRIALISATION DRIVES COSTS AND REVENUES TO SUSTAINABLE LEVELS

Decreasing revenue levels[1]



Key takeaways

- The industrialisation of offshore wind is rapidly changing the competitive environment
- Winning bid levels of 372 DKK/MWh (Vattenfall – Danish Kriegers Flak) and 54.50 EUR/MWh (Shell consortium – Borssele 3/4) considered new industry benchmarks
- Offshore wind is experiencing a learning curve similar to other renewable technologies, from learning to fine-tuning
- The development over the last years ensures offshore wind a long term position in the energy production mix, with benefits for the customers/consumers and the most competitive operators

Vattenfall's competitive advantage is based on three pillars: fast adaptation to the tender landscape, ability to decrease O&M costs applying latest business standards, lean and agile organisation set-up

VATTENFALL

1. Figures are only considering revenue streams and are not scope-adjusted, e.g., UK OFTO and grid charges. This might lead to 5-15% correction factor, which does not question the trend as such

WIND - INSTALLED CAPACITY Q3 2017

	Onshore[2]	Offshore	Total
United Kingdom	396	590	986
Denmark	245	158	403
The Netherlands	241	108	349
Sweden	255	121	376
Germany	19	636	655
Total (MW[1])	**1,156**	**1,613**	**2,769**

Onshore

Offshore

% Vattenfall ownership

United Kingdom – ROC scheme	
Thanet	300
Ormonde (51%)	150
Kentish Flats	90
Kentish Flats Extension	50
Pen Y Cymoedd	228
Ray	54
Edinbane	41
Clashindarroch	37
Swinford	22
Parc Cynog incl. Solar[2]	9
Pendine	5
Installed capacity (MW[1])	**986**

Sweden – certificate scheme	
Lillgrund	111
Utgrunden	10
Stor-Rotliden	78
Högabjär-Kärsås (50%)	38
Höge Väg (50%)	38
Hjuleberg (50%)	36
Juktan (50%)	29
Östra Herrestad	16
Näsudden	11
Hedeskoga	6
Other assets[3]	3
Installed capacity (MW[1])	**376**

Denmark – FIT scheme	
Horns Rev 1 (60%)	158
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
Nordjyllandsværket	6
Lyngmose	5
Vellingmærsk	1
Installed capacity (MW[1])	**403**

Germany – EEG scheme	
DanTysk (51%)	288
Sandbank (51%)	288
alpha ventus (26%)	60
Jänschwalde	12
Westküste (20%)	7
Installed capacity (MW[1])	**655**

The Netherlands – MEP/SDE(+)	
NoordzeeWind (50%)	108
Prinses Alexia	122
Eemmeerdijk	17
Irene Vorrink	17
Jaap Rodenburg	17
Windpoort (40%)	13
Hoofdplaatpolder (70%)	10
Reyndersweg (50%)	9
Echteld	8
De Bjirmen	6
Oom Kees (12%)	6
Oudendijk	5
Mariapolder	5
Hiddum Houw	4
Enkhuizen	2
Installed capacity (MW[1])	**349**

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

2) 5 MW Solar

3) Kulle (1 MW), Stenkyrka (1 MW), Ruuthsbo (1 MW)

VATTENFALL

PIPELINE OF KEY WIND FARMS

In construction

Country	Name	No. of Turbines	Capacity (MW)[1]	Support scheme	Awarded	Duration of support	Owner-ship (%)	Commissioning	Current status
UK	Aberdeen	11	92	ROC	X	20 yrs	100	2018	Under construction
DK	Horns Rev 3	49	407	FIT	X	50.000hrs	100	2019	Under construction
NL	Slufterdam	8	29	SDE+	X	15yrs	100	2018	Under construction

Total 528 MW

In development

Country	Name	No. of Turbines	Capacity (MW)[1]	Support scheme	Awarded	Duration of support	Owner-ship (%)	Commissioning	Current status
NL	Wieringermeer	50	180	SDE+	X	15 yrs	100	2019	Investment decision taken
NL	Wieringermeer ext.	32	~115	SDE+	X	15 yrs	100	2019	Procurement
SE	Blakliden + Fäbodberget	84	~350	Certs	N/A	15 yrs	100	2021	Procurement, preparing for grid investment decision
NL	Moerdijk	7	~28	SDE+	X	15 yrs	100	2019	Procurement
NL	Haringvliet	6	~21	SDE+	X	15 yrs	100	2019	Procurement
DE	Forst Briesnig	5	16	FIT (old EEG)	X	20 yrs	100	2018	Procurement
NL	Nieuwe Hemweg	6	~20	SDE+		15 yrs	100	2020	Applied for subsidy
UK	South Kyle	~50	~170	None	N/A	N/A	100	2021	Preparing for procurement
DK	NK II	40	~120	None	N/A	N/A	100	2020	EIA expected in March 2018
SE	Velinga	12	~40	Certs	N/A	15 yrs	100	2021	Procurement H1 2018
NL	Hollandse Kust	90	756	FIT		20 yrs		2023	Awaiting final tender rules
DK	Danish Near Shore	41	344	FIT	X	50.000hrs	100	2020	Tender won & concession signed
DK	Danish Kriegers Flak	72	605	FIT	X	50.000hrs	100	2021	Tender won & concession signed
DE	Sandbank Plus	~15	<250	FIT (new EEG)		20 yrs	100	2024	Participate in next tender
UK	Thanet Extension	34	340	CFD		15 yrs	100	2021	Concept/Early planning
UK	Norfolk Vanguard	120-180	1,800	CFD		15 yrs	100	2025-2027	Concept/Early planning
UK	Norfolk Boreas	120-180	1,800	CFD		15 yrs	100	TBD	Concept/Early planning

Total ~7GW

Onshore

Offshore

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

VATTENFALL

PIPELINE OF SOLAR AND BATTERIES

	Country	Name	Capacity (MW)	Support scheme	Awarded	Duration of support	Owner-ship (%)	Commissioning	Current status
In construction	NL	Battery @ Alexia	3	Primary Control Reserve (PCR)	weekly		100	2018	Preparing for commissioning
	UK	Battery @ PyC	22	Enhanced Frequency response (EFR) and Capacity Mechanism (CM)	X	1-4 yrs EFR 5-15 CM	100	2018	Construction
In development	UK	Ray	10	Enhanced Frequency response (EFR) and Capacity Mechanism (CM)	X	1-4 yrs EFR 5-15 CM	100	2019	Development ongoing, permit received
	NL	Velsen	2,0	SDE+	X	Full-load yrs	100	2018	Preparing for investment decision
	NL	Eemshaven	5,5	SDE+	X	Full-load yrs	100	2018	Preparing for investment decision
	NL	Hemweg	2,3	SDE+	X	Full-load yrs	100	2018	Preparing for investment decision
	NL	Haringvliet	36	SDE+		Full-load yrs	100	2019	Permit received, preparing for bid
	NL	Floriade	4	SDE+		Full-load yrs	100	2018 / 2019	Preparing for bid
	NL	Wieringermeer	28	SDE+		Full-load yrs	100	2019	Early development, preparing for permit
	NL	Oudendijk	20	SDE+		Full-load yrs	100	2019	Early development, preparing for permit
			Total 132,8						

Solar PV

Battery

VATTENFALL

IMPAIRMENT HISTORY 2009 – 9M 2017

SEK bn		2009	2010	2011	2012	2013	2014	2015	2016	9M 2017	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				5.8
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**	**165.1**
Reversed impairment losses		-1.3	-1.3	-0.4	0.0	0.0	0.0	-0.5	-0.9	0.0	-4.4
Impairments (net)		**4.2**	**9.8**	**10.9**	**12.3**	**30.1**	**23.8**	**36.3**	**32.9**	**0.4**	**160.7**

1) Impairment of goodwill
2) Impairment of assets and goodwill