



# VATTENFALL PRESENTATION

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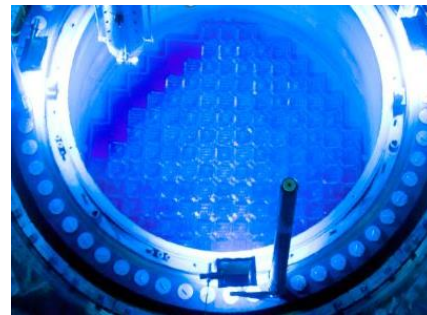
Credit Suisse Energy & Corporate Hybrids Conference, London, 6 June 2017



# AGENDA

1	Company overview + strategy
2	Selected deep dives in Business Areas
3	Financials

# WE POWER CLIMATE SMARTER LIVING



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

# VATTENFALL'S VALUE CHAIN

We are striving to provide reliable and innovative energy solutions to meet our customers' needs. Vattenfall's ambition is to make a positive impact across its value chain.

## Production

Vattenfall produces electricity from hydro power, nuclear power, coal, natural gas, wind power, solar power, biomass, and waste. Vattenfall is investing in more renewable generation and is phasing out fossil-based production.

## Electricity distribution

Vattenfall operates electricity distribution networks in Sweden and Germany and has ongoing development of smart grid solutions which ensure security of supply. We enable customers to feed self-generated power into the network, becoming so-called "prosumers". Electricity distribution is a regulated monopoly business monitored by national authorities.

## District heating

We are one of Europe's largest producers and distributors of district heating, supplying households and industries in metropolitan areas. In partnership with cities and regions, we are driving the transformation towards fossil-free heating solutions.

## Sales of electricity, heat and gas

Vattenfall sells electricity, heat and gas to consumers and business customers. We focus on optimising the customer experience by offering different price and service models and by giving customers opportunities to reduce their environmental impact.

## Energy services and decentralised generation

Vattenfall offers energy services, such as charging solutions for electric vehicles, solar panels, heat pumps and smart control of energy consumption. We also provide wholesale energy market services and access to marketplaces for customers that enable them to buy and sell electricity.



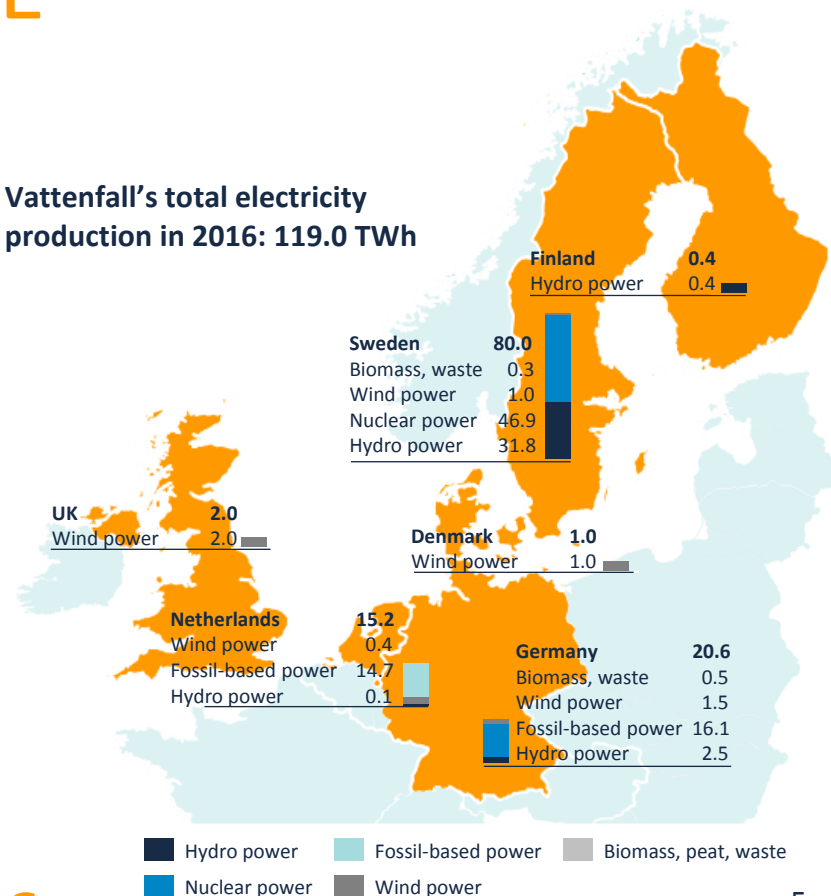
# VATTENFALL AT A GLANCE

- 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

**Net sales in 2016:  
SEK 139bn**

**Underlying operating  
profit<sup>1</sup> in 2016: SEK 22bn**

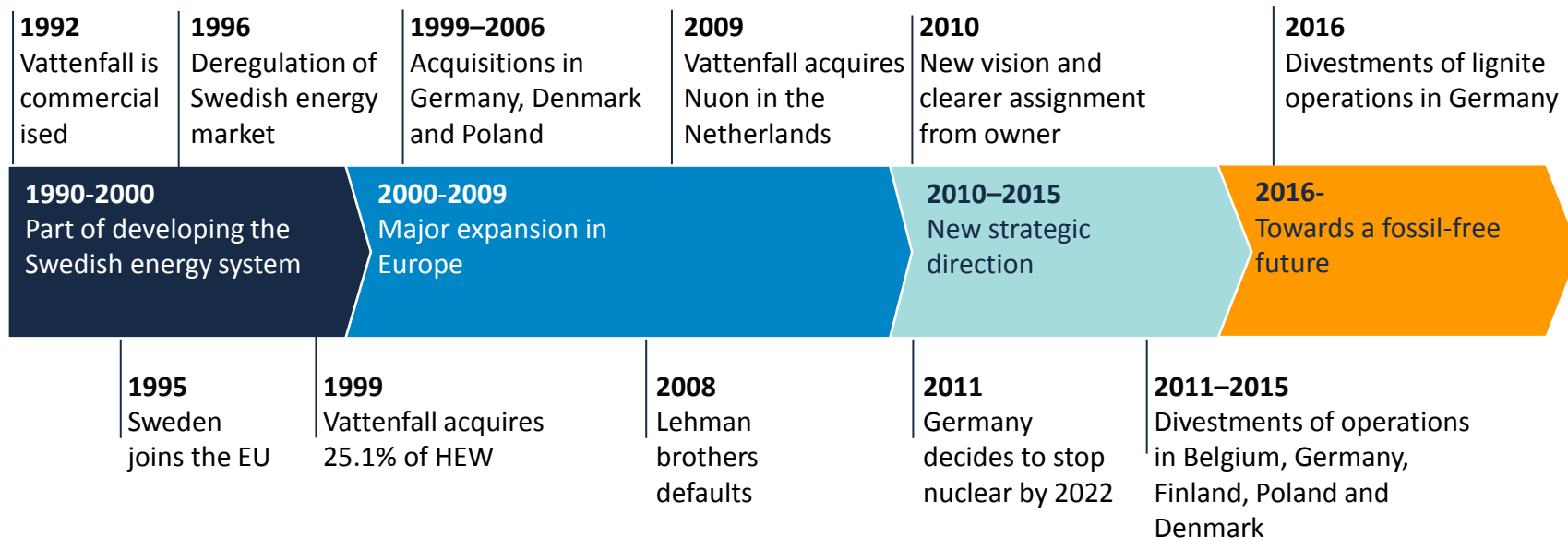
## Vattenfall's total electricity production in 2016: 119.0 TWh



1) Underlying operating profit excluding items affecting comparability

# VATTENFALL'S HISTORY

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



# THE EVOLVING ENERGY LANDSCAPE

1

## Customer centricity and sustainability will be key

- Gradual shift towards differentiated energy solutions to customers

### Vattenfall opportunity/action:

- Digital offerings
- Focus on customer journey

2

## Further electrification key enabler for reducing CO<sub>2</sub> emission

- Climate goals drive electrification of transport, industry and heat

### Vattenfall opportunity/action :

- Infrastructure electrical vehicles
- Fuel switching within the heating sector

3

## Central and decentral energy solutions

- Technological trends drive integration of renewables, decentralised generation and storage

### Vattenfall opportunity/action :

- Small-scale generation
- Energy storage
- Smart grids

4

## Lean operations prerequisite for value creation and growth

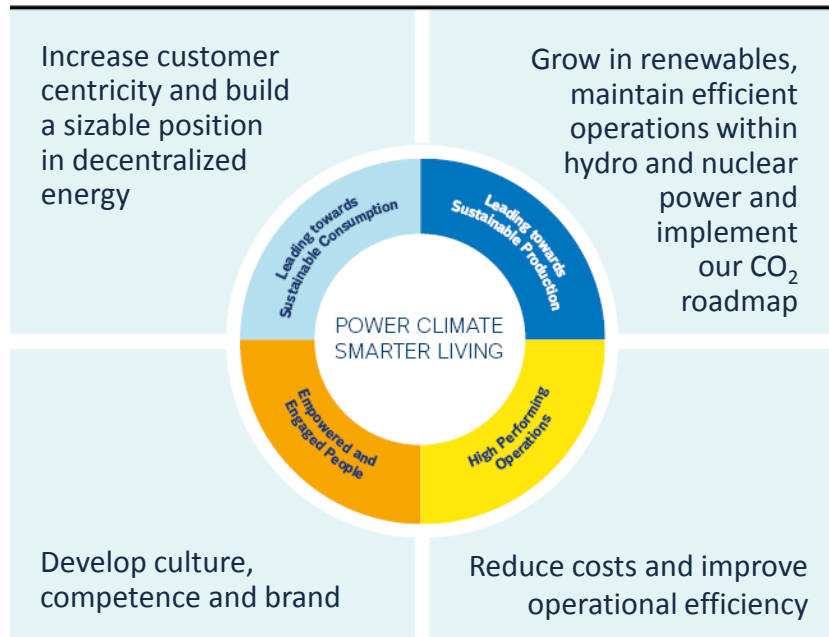
- Pressure on wholesale markets remains
- Increasingly competitive environment put pressure on margins

### Vattenfall opportunity/action:

- Digitalisation
- Efficiency improvements

# STRATEGY AND STRATEGIC TARGETS

## Our strategic objectives and prioritised areas



## Strategic targets to 2020

	FY 2016
1 Customer engagement, NPS +2 (Net Promoter Score)	+7
2 Aggregated commissioned new renewables capacity 2016-2020: $\geq 2,300$ MW	297
3 Absolute CO <sub>2</sub> emissions, pro rata, continuing operations: $\leq 21$ Mtonnes	23.2
Absolute CO <sub>2</sub> emissions, pro rata, Total Vattenfall (incl. lignite)	67.6
4 ROCE: $\geq 9\%$ (continuing operations)	0.5
ROCE: $\geq 9\%$ (Total Vattenfall)	-8.5
5 Safety as LTIF (Lost Time Injury Frequency): $\leq 1.25$	2.0
6 Employee Engagement Index: $\geq 70\%$	57



# WE SEE MANY GROWTH OPPORTUNITIES

Actions	Central Production	Grids	Wholesale markets	Commodity sales and decentralised solutions
<b>Grow</b> <ul style="list-style-type: none"> <li>✓ Customer attractiveness</li> <li>✓ Long term viability</li> <li>✓ Strong Vattenfall capabilities</li> <li>✓ Attractive returns</li> </ul>	<ul style="list-style-type: none"> <li>• Wind</li> <li>• Solar</li> <li>• District heating</li> </ul>	<ul style="list-style-type: none"> <li>• Regulated</li> <li>• Non-regulated</li> <li>• Services</li> </ul>	<ul style="list-style-type: none"> <li>• Trading</li> <li>• Aggregation</li> <li>• Optimization</li> <li>• Marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Electricity retail</li> <li>• Decentralised solutions**</li> <li>• Storage</li> </ul>
<b>Keep and develop</b> <ul style="list-style-type: none"> <li>✓ Long term viability</li> <li>– Limited growth opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Hydro</li> <li>• Nuclear</li> <li>• Gas condensing</li> <li>• Hard coal CHP*</li> </ul>			<ul style="list-style-type: none"> <li>• Gas retail</li> </ul>
<b>Non core</b> <ul style="list-style-type: none"> <li>– Limited long term viability</li> <li>– Not supporting the transition</li> </ul>	<ul style="list-style-type: none"> <li>• Hard coal condensing</li> <li>• Lignite</li> </ul>			

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

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

# OUR CONTRIBUTION TO UN'S SUSTAINABLE DEVELOPMENT GOALS



= Local contribution (example)

# CORNERSTONES TOWARDS CLIMATE NEUTRALITY

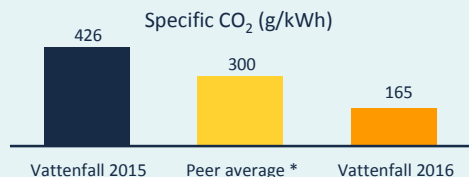
## Portfolio transformation

Major shift in 2016 following lignite divestment

from  
**50%**  
fossil power

to

Climate neutrality 2050  
Climate neutrality Nordic 2030



## Continued CO<sub>2</sub> phase out

Ongoing initiatives support the targeted ambition

- ✓ Phase out of coal, e.g., Klingenberg conversion
- ✓ Efficient gas-fired CHPs
- ✓ New smart energy and heat solutions

## Supporting our partners

Enabling partners to reach climate targets

- ✓ Electrification of industrial processes and transport
- ✓ Life Cycle Analysis and Environmental Performance Declarations
- ✓ Cooperate with partners, suppliers cities and customers to set joint CO<sub>2</sub> targets

Preliminary numbers for 2016 (incl. heat). Vattenfall absolute CO<sub>2</sub> 2015:

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

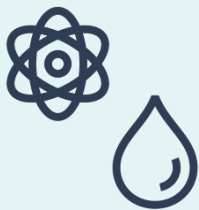
# BUSINESS AREAS

## Customers & Solutions



... a supplier of a full range of energy management products and services to B2B and B2C customers

## Generation



... a leading operator of safe and efficient large-scale low CO<sub>2</sub> emitting production

## Markets



... a trusted provider of wholesale market services, and responsible trader

## Wind



... a leading developer and operator of wind power in our markets

## Heat



...the best partner for customers & communities where we jointly develop sustainable district heating solutions

## Distribution



... an operator of high quality networks with superior service to enable a sustainable energy society

# OUR CUSTOMER BASE IS GROWING (2016)



## Customers & Solutions

**+ 70,000 customers (2016)**

- ✓ Strong Net Promoter Score development
- ✓ Lowered Cost to Serve
- ✓ Innovative product launches



## Heat

**+ 29,000 customers (2016)**

- ✓ Less than 1% churn
- ✓ Strong political support
- ✓ Attractive growth potential with solutions orientation



## Distribution

**+ 20,000 customers (2016)**

- ✓ High quality focus
- ✓ Growth driven by urbanization
- ✓ Deployment of digital grid solutions for improved service, quality and more renewables

**6,340,000**  
electricity customers

**2,190,000**  
gas customers

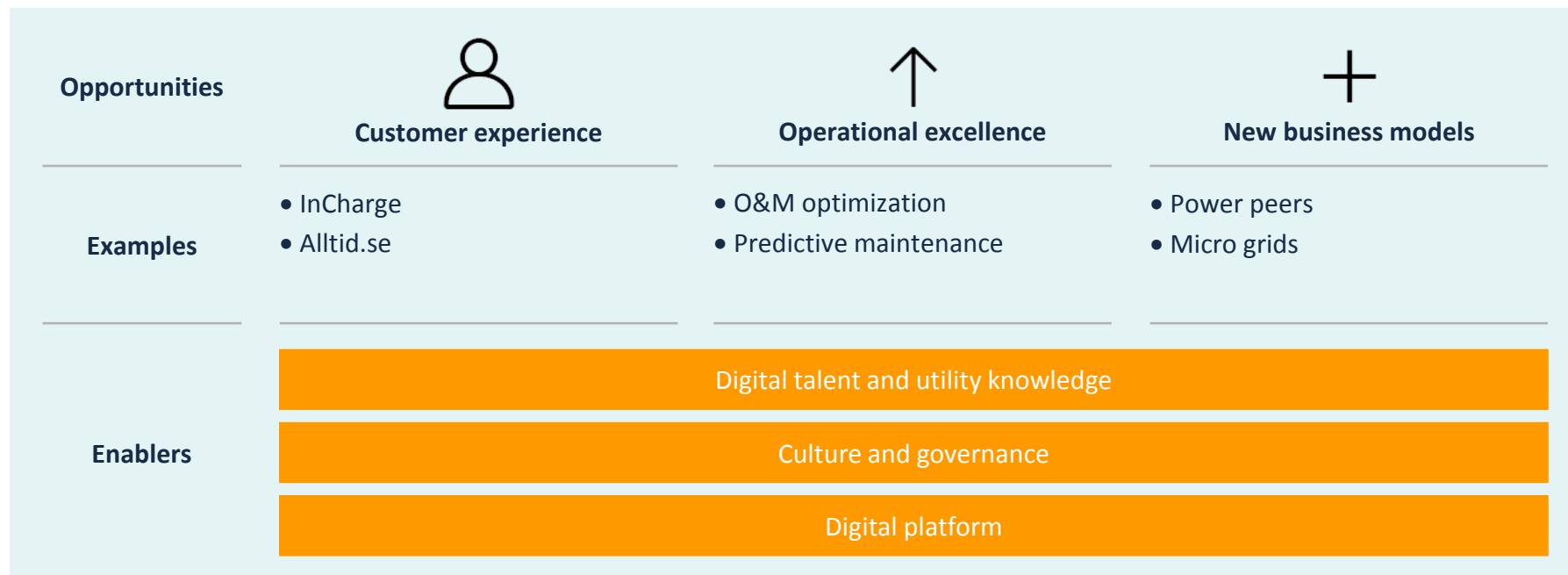
**2,040,000**  
heat customers

**3,270,000 electricity**  
network customers

# 3 AREAS WHERE DIGITALIZATION IS KEY

4

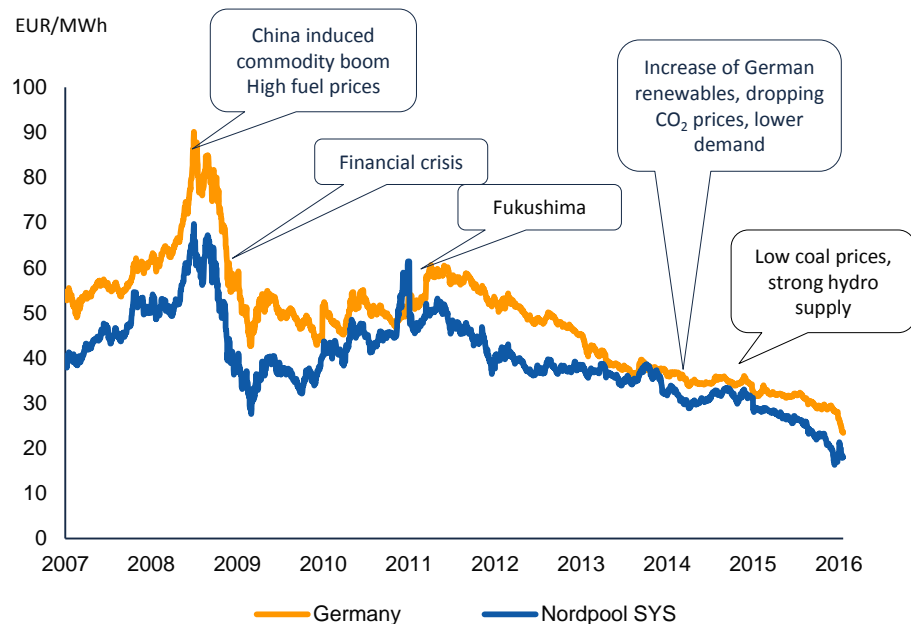
Lean operations prerequisite  
for value creation and growth



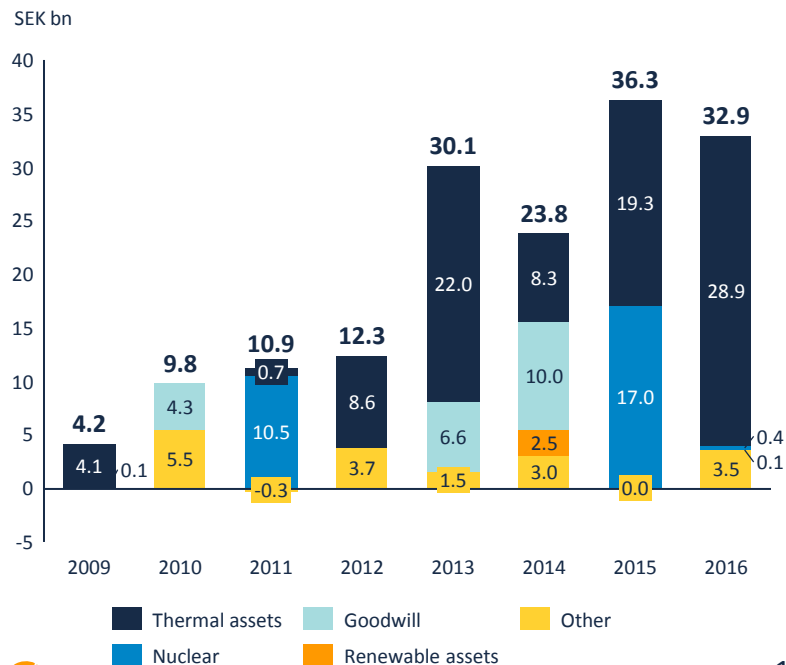
# CHALLENGING MARKET CONDITIONS

Challenging market conditions in previous years, with depressed electricity prices, has lead to impairments.

## Front year contract price (EUR/MWh)

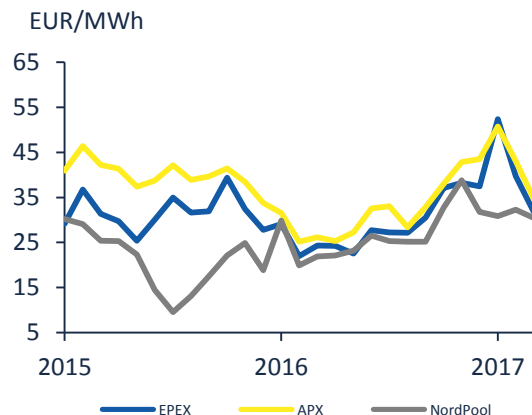


## Total impairments of SEK 160.3bn

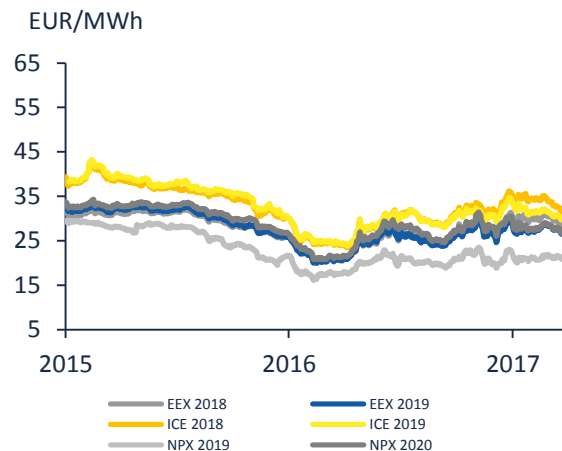


# IMPROVED RECENT PRICE DEVELOPMENT DRIVEN BY STRONGER FUEL PRICES

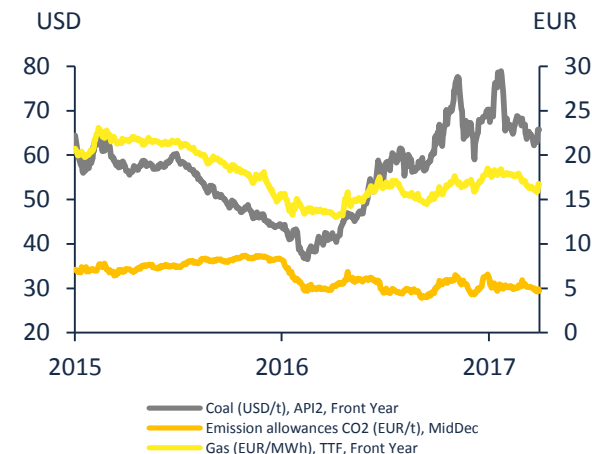
## Spot power prices average



## Electricity futures



## Commodity prices



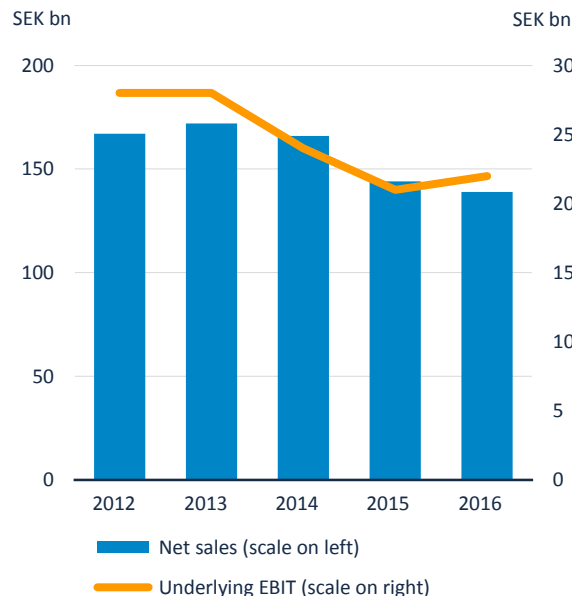
- Nordic spot prices 30% higher vs. Q1 2016 mainly owing to stronger fuel prices and a weaker hydrological balance
- Stronger fuel prices pushed German and Dutch spot prices to approx. 65% and 55% higher respectively vs. Q1 2016
- Electricity futures prices higher in all of Vattenfall's markets mainly owing to recovery in coal and gas prices
- Recovery of coal and gas prices, lower prices of CO<sub>2</sub> allowances



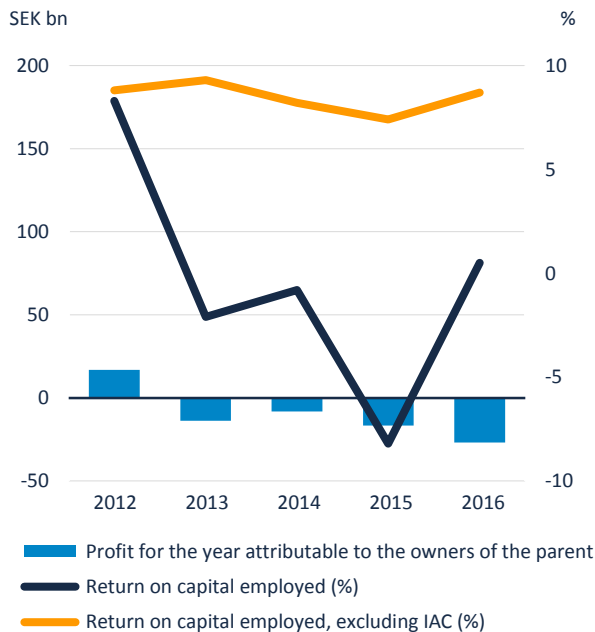
# STABILISED FINANCIAL DEVELOPMENT

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

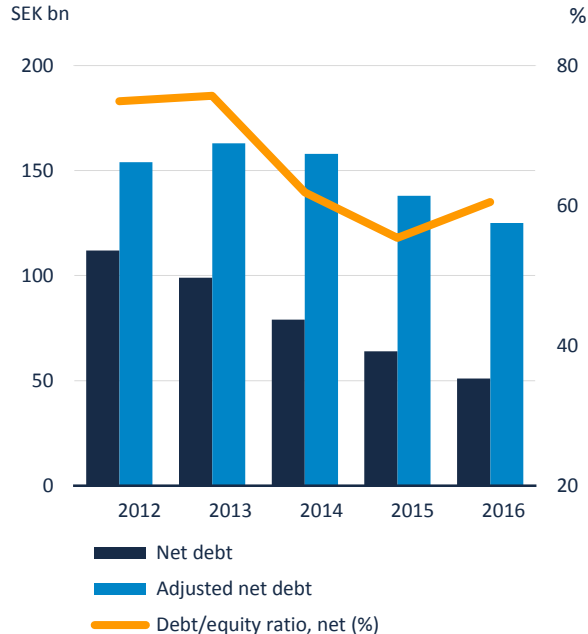
## Sales and underlying EBIT



## Earnings and return



## Debt



# THREE EVENTS HAS IMPROVED OUR RISK PROFILE

## Events in 2016

✓ **Lignite divestment**– reduced exposure to power prices, fossil-based generation and CO<sub>2</sub>.

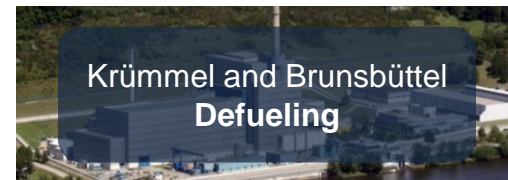
✓ **Swedish energy agreement** – The elimination of the nuclear capacity tax (EBITDA effect of ~SEK 3bn p.a.) and substantial reduction of the real-estate tax for hydro power plants (EBITDA effect of ~SEK 2bn p.a.) are essential for future competitiveness.

✓ **German nuclear fund**– regulatory clarity on the externalisation of liabilities for interim and final storage to be transferred to the state. Law passed by German parliament, EU approval pending.

## Key focus areas

- **Continued safe, reliable and efficient** nuclear and hydro power. Focus on operational excellence across the fleet. Continue modernization program in hydro.
- **Increase flexibility** in the power plants.
- **Responsible decommissioning and dismantling** of R1 (2020) and R2 (2019) and German nuclear (all German reactors to be closed by 2022).

## Highlights 2016

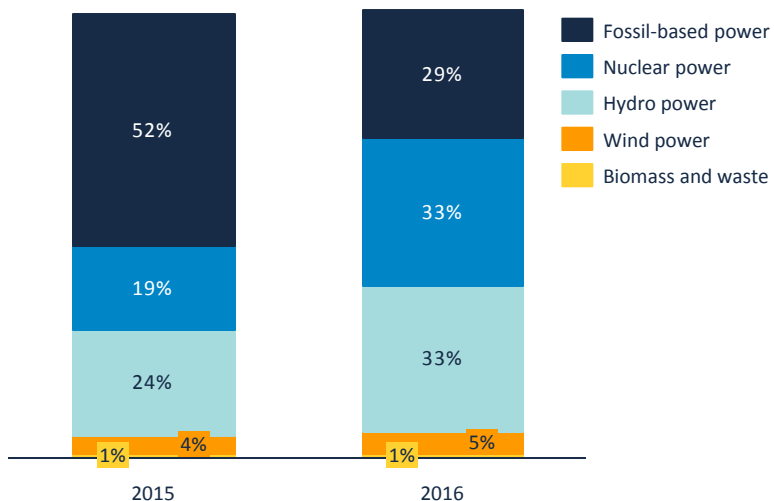


# A NEW VATTENFALL IS TAKING SHAPE

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

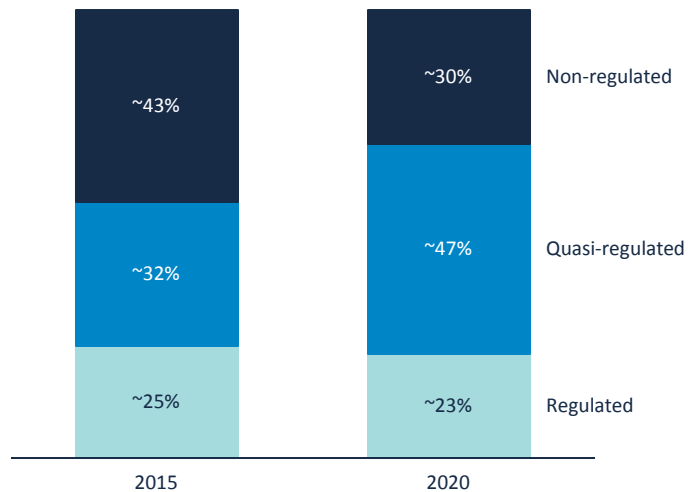
**Vattenfall has moved from a heavy fossil-based production towards a more sustainable portfolio in 2016**

Vattenfall production mix 2015-2016



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

Vattenfall future value pools - EBITDA



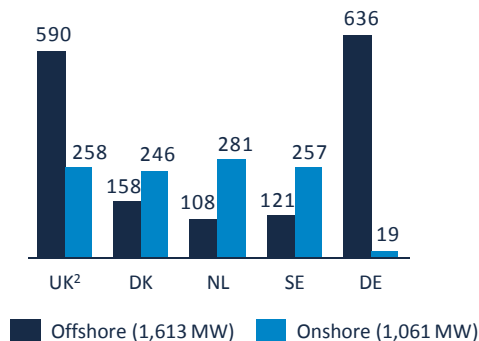
# AGENDA

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# WIND POWER – GEOGRAPHICAL FOOTPRINT

- Offshore project in operation
- Offshore project in development
- Number of onshore projects country wide

**2,674 MW**  
Operating capacity<sup>1</sup> Q1 2017

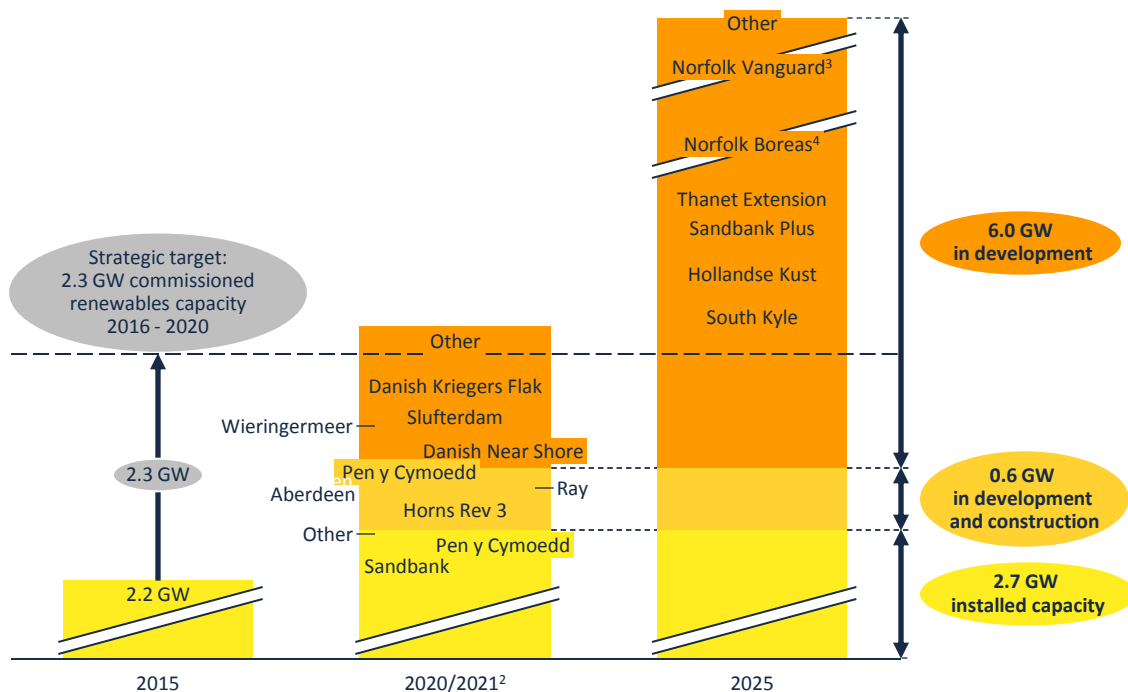


1) Total capacity of the wind farms that Vattenfall has an ownership in. Minority shares included as 100%.

2) Including 5 MW solar in onshore capacity

# SIGNIFICANT GROWTH IN RENEWABLES

A total of 2.7 GW capacity and more than 1,100 wind power turbines in operation. 1.5 GW of awarded project pipeline in offshore. Nearly to all capacity in development have underlying fixed support systems.<sup>1</sup>



## Highlights Q1 2017

- Full commissioning of offshore wind park Sandbank in Germany (288 MW)
- Partial commissioning of onshore wind park Pen y Cymoedd in the UK (144 MW out of total 228 MW)

1) Exceptions: South Kyle and Aultmore  
2) Danish Kriegers Flak expected commissioning 2021  
3) Commissioning expected in 2025-2027  
4) Commissioning TBD

# GROWING IN BOTH LARGE SCALE AND DECENTRALISED SOLAR PV

## Growth strategy in solar decided in Q1 2017, consisting of two pillars

1. Decentralized solar PV & storage  
Offering solutions for commercial and residential customers. Besides winning new customers Vattenfall will also leverage the existing customer base of 6 million.
2. Large-scale solar  
Installing solar PV at our wind farms or other existing sites offers synergies from using joint grid connections and infrastructure.

## Strategic fit with Vattenfall's purpose and strategy

- ✓ Solar PV powers climate smarter living
- ✓ Substantial experience in solar PV and storage already gained
- ✓ Attractive growth in our main markets, notably the Netherlands
- ✓ Leverage on synergies by installing solar PV at existing wind farms by using joint grid connection, infrastructure etc.

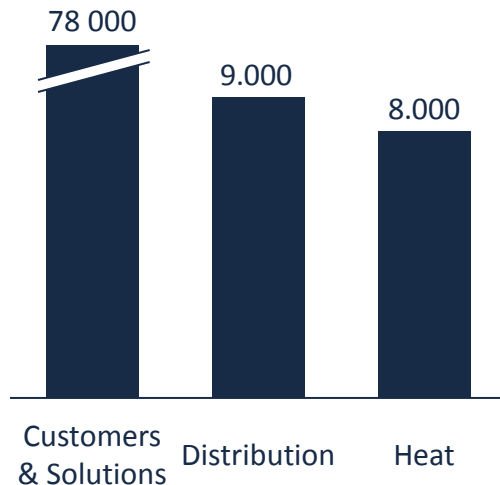


# MAKING PROGRESS IN CUSTOMER GROWTH AND SUSTAINABILITY RATINGS

## Highlights Q1 2017

- Gold rating for Vattenfall's sustainability performance by EcoVadis<sup>1</sup>
- Increase of customer base by ~95,000 contracts and strong NPS<sup>2</sup> value
- Vattenfall to provide CO<sub>2</sub> neutral district cooling to GE Healthcare in Uppsala
- Chinese high-tech company Canaan Creative chooses Vattenfall as energy supplier for a datacenter in Boden
- Vattenfall acquired 35% of BrainHeart Energy Sweden, largest supplier of geothermal solutions to private customers in Sweden

## Customer growth Q1 2017 (approx. number of customers)



1) EcoVadis methodology based on CSR standards such as GRI (Global Reporting Initiative), UN Global Compact and ISO 26000.

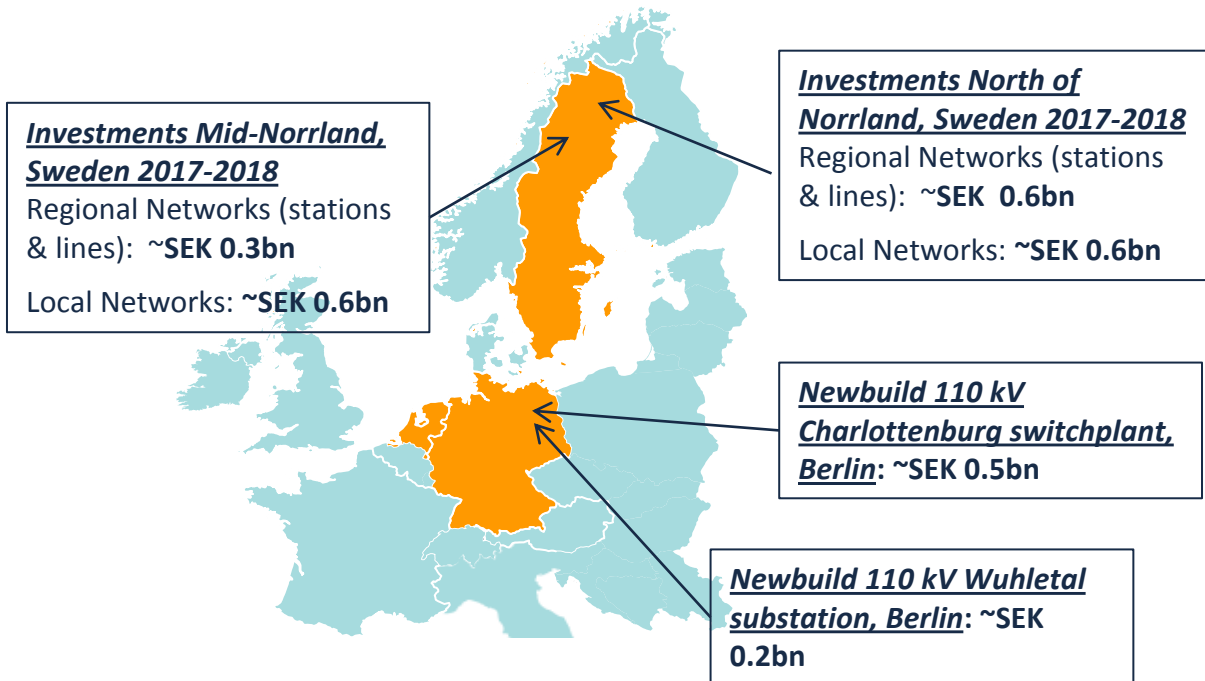
2) Net Promoter Score (NPS) is a score ranging from -100 to 100 that measures the willingness of customers to recommend a company's products or services to others.



# DISTRIBUTION: BUILDING THE INFRASTRUCTURE OF THE NEW ENERGY LANDSCAPE

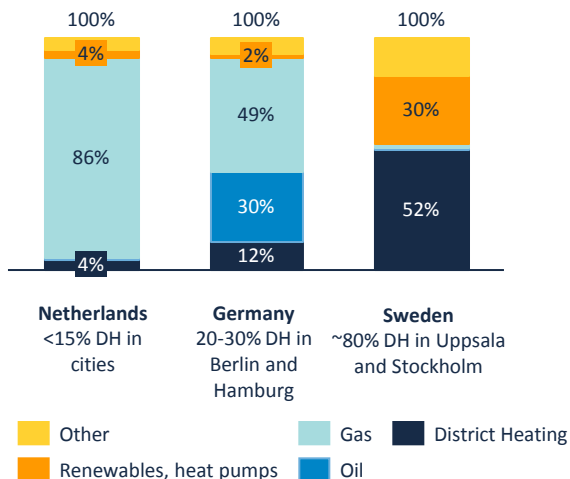
Significant upgrades are needed to modernize the grid and to allow for more renewable and distributed power in the system

- Total investments of SEK 12.4bn in 2017-2018, of which growth investments amount to SEK 5.6bn
- Investments in Sweden to improve quality of supply in the northern part of the country
- Majority of investments in Germany allocated to maintenance and modernisation of the distribution network



# HEAT: POTENTIAL FOR PROFITABLE GROWTH

## Residential heat market structure<sup>1</sup>



## Our (current) footprint



### Sweden – mature DH market

- Strong growth in metropolitan areas expected (esp. Stockholm, Uppsala)
- District heating providing CO<sub>2</sub>-free base supply, heat pumps taking larger market share

### Netherlands – young DH market

- Strong growth in Amsterdam and surroundings (+6% p.a.)
- Ambition to replace gas by 2050; an opportunity for district heating growth
- District heating with high usage of third party heat sources (waste, etc.), growth of heat pumps

### Germany – developing DH market

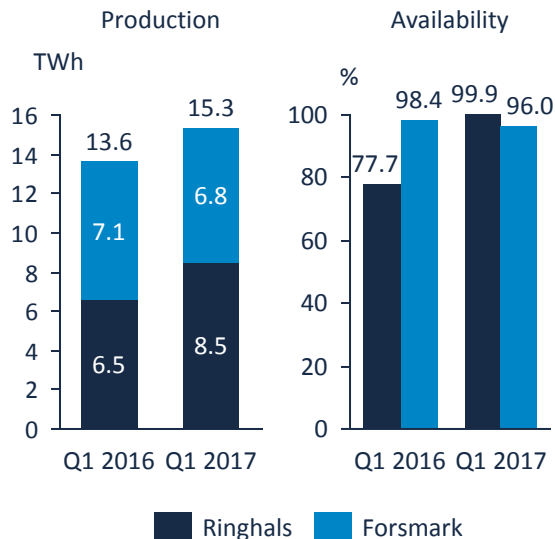
- Hamburg and Berlin “boom” towns of the future
- District heating based on climate neutral solutions in densely populated areas; modern decentralised solutions (gas based, heat pumps) replacing old oil and gas boilers elsewhere

**A well balanced market mix allows Vattenfall to capitalize on growth opportunities**

1) Source: Vattenfall analysis

# GENERATION: STRONG PERFORMANCE IN NUCLEAR AND IMPROVED REGULATIONS

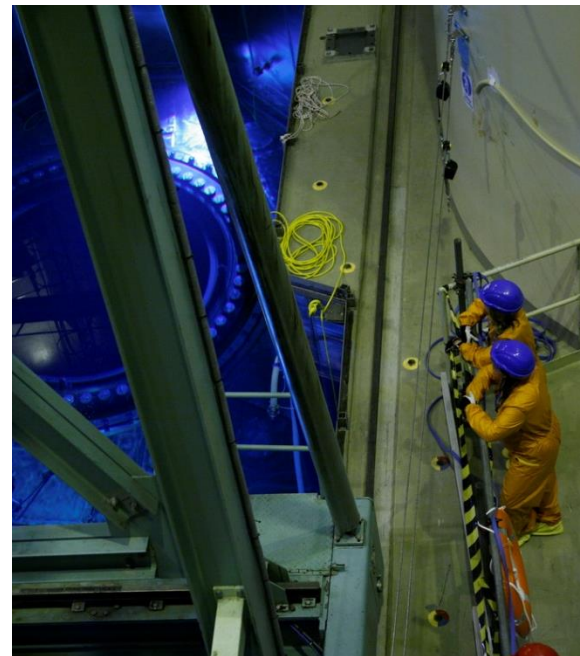
## Increase in nuclear production and high availability



## Positive regulatory developments

Swedish energy agreement concretized in the form of Government propositions to parliament

- ✓ Abolishment of capacity tax
- ✓ Payments to the nuclear waste fund over 50 years operational lifetime and broader investment mandate



# GENERATION: LIABILITY FOR NUCLEAR WASTE COSTS IN GERMANY

## Background

- Nuclear power operators to shift their liability for nuclear waste costs through payment into a public fund
- Approved law by German parliament
- EU approval of the law expected in Q2 2017
- Payment will happen once the fund has been implemented, not earlier than 1 July 2017
- Unrelated to the arbitration proceeding at the International Centre for Settlement of Investment Disputes (ICSID), where a decision is expected in mid 2017

## Financial consequences for Vattenfall

- Expected transfer of EUR 1.8bn (SEK 17.0bn)
  - Base amount EUR 1.3bn (SEK 12.3bn)
  - Risk premium + interest EUR 0.5bn (SEK 4.7bn)

## Impact in Vattenfall's accounts in Q4 2016

- Negative impact on earnings of SEK 5.4bn<sup>1</sup>, relating to the risk premium and interest
- Adjusted net debt increased by SEK 4.7bn<sup>1</sup>



1) The difference of SEK 0.7bn (5.4-4.7) is explained by the fact that EBIT effect includes 100% Brunsbüttel due to full consolidation, whereas adjusted net debt only considers the pro rata shares

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# RESULTS IN 2016

Key data <sup>1</sup> in SEK bn	2016	2016 (MEUR) <sup>2</sup>
Net Sales	139.2	14.6
Underlying EBIT <sup>3</sup>	21.7	2.3
EBIT	1.3	0.1
Profit for the year	-2.2	-0.2
Cash flow operating activities	28.6	3.0
Number of employees (FTE)	19,935	–
CO <sub>2</sub> emissions (Mtonnes) <sup>4</sup>	23.2	–
Electricity generation (TWh)	119.0	–
Sales of electricity (TWh)	193.2	–
Sales of heat (TWh)	20.3	–
Sales of gas (TWh) <sup>5</sup>	54.8	–

1) Pertains to continuing operations, i.e., excluding the lignite operations.

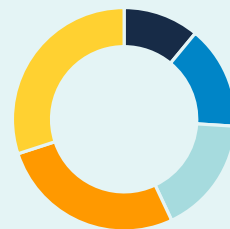
2) Exchange rate of SEK 9.5525/EUR. Values in EUR are shown only to facilitate comparisons between SEK and EUR.

3) Underlying operating profit, excluding items affecting comparability.

4) Pro rata basis, corresponding to Vattenfall's share of ownership.

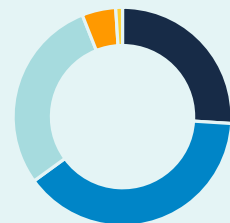
5) The value has been adjusted compared with information previously published in Vattenfall's 2016 year-end report and 2016 Annual and Sustainability Report.

## Operating segments – share of EBITDA<sup>1</sup>



- Customers & Solutions, 11%
- Power Generation, 15%
- Wind, 17%
- Heat, 27%
- Distribution, 30%

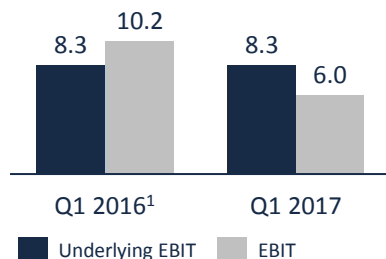
## Electricity generation<sup>1</sup>



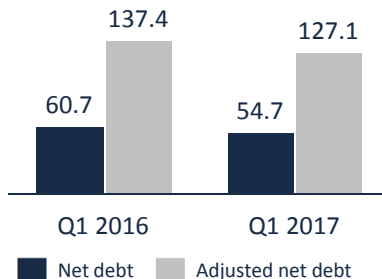
- Fossil-based power, 26%
- Nuclear power, 39%
- Hydro power, 29%
- Wind and solar power, 5%
- Biomass, waste, 1%

# Q1 2017 FINANCIAL HIGHLIGHTS

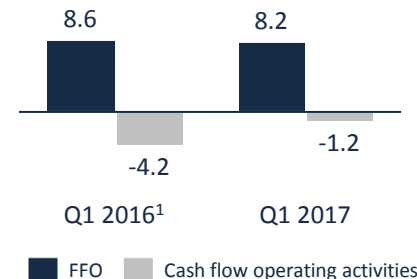
Stable underlying EBIT, SEK bn



Lower debt levels, SEK bn



Seasonal effects on cash flow, SEK bn



- Stable underlying EBIT development: lower production margins in the Power Generation operating segment was mitigated by higher earnings contribution from the wind and heat operations
- Lower reported EBIT mainly attributable to a one-time gain from divestments in Q1 2016 (SEK 1.8 billion) and lower valuation of derivatives (SEK -2.0 billion) and inventories (SEK -0.5 billion) in Q1 2017 as a result of weaker commodity prices (no cash effect)
- Lower net debt and adjusted net debt vs. Q1 2016
- Stable FFO adjusted for positive tax effect in Q1 2016. Cash flow from operating activities impacted by seasonally negative cash flow from changes in working capital
- Continued efficiency measures across the full operations + support units

1) Excluding lignite

# Q1 2017 FINANCIAL OVERVIEW

SEK bn	Q1 2017	Q1 2016 <sup>2</sup>
Net Sales	40.1	41.6
EBITDA	9.7	13.7
Underlying EBIT	8.3	8.3
EBIT	6.0	10.2
Financial items, net	-1.0	-1.6
Profit for the period	3.8	6.8
Cash flow (FFO)	8.2	8.6
Cash flow operating activities	-1.2	-4.2
Net debt	54.7	60.7
Adjusted net debt	127.1	137.4
FFO/adjusted net debt (%)	20.9 <sup>1</sup>	19.7 <sup>1</sup>
Adjusted net debt/EBITDA (times)	5.5 <sup>1</sup>	4.2 <sup>1</sup>

1) Last 12 months

2) Excluding lignite



# ITEMS AFFECTING COMPARABILITY

SEK bn	Q1 2017	Q1 2016 <sup>1</sup>
Capital gains	0.2	1.8
Capital losses	-	-0.1
Impairment losses	-	-
Reversed impairment losses	-	-
Provisions	-	-
Unrealised changes in the fair value of energy derivatives	-2.0	0.4
Unrealised changes in the fair value of inventories	-0.5	0.2
Restructuring costs	-	-0.3
Other items affecting comparability	-	-0.1
<b>Total</b>	<b>-2.3</b>	<b>1.9</b>

- Unrealized changes in the fair value of energy derivatives (SEK -2.0 billion) and inventories (SEK -0.5 billion) pertain mainly to temporary effects related to sourcing activities
- Capital gains of SEK 1.8bn in Q1 2016 pertain to the sales of the network services operations in Hamburg and the sale of property in Bramfeld

1) Excluding lignite

# UNDERLYING EBIT PER OPERATING SEGMENT

SEK bn	Q1 2017	Q1 2016 <sup>2</sup>
Customers & Solutions	0.7	0.8
Power Generation	2.6	2.9
Wind	0.9	0.7
Heat	2.2	2.1
Distribution	2.2	1.9
Other <sup>1</sup>	-0.1	-
Eliminations	-0.2	-0.1
<b>Total</b>	<b>8.3</b>	<b>8.3</b>

1) "Other" pertains mainly to all Staff functions, including Treasury and Shared Service Centres

2) Excluding lignite

- Customer & Solutions: Almost on par with previous year
- Power Generation: Lower production margins resulting from average lower prices achieved and lower production volumes in hydro. Higher realised result contribution from sourcing and trading activities
- Wind: New capacity added (Sandbank in Germany, Ray and Pen Y Cymoedd in the UK)
- Heat: Lower operating expenses and lower depreciation as a result of the impairments in 2016
- Distribution: Increased revenues as a result of lower number of power outages and higher network tariffs in Sweden and Germany

# FINANCIAL TARGETS

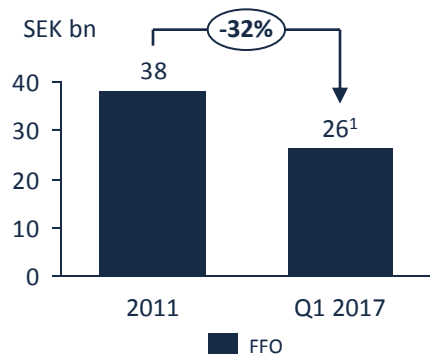
Financial metric	Target	Q1 2017	Q1 2016 <sup>2</sup>
Return on Capital Employed (ROCE) <sup>1</sup> (ROCE excl. items affecting comparability)	9%	-1.1 (8.6)	-1.0 (7.6)
FFO/adjusted net debt <sup>1</sup>	22-30%	20.9	19.7
Net debt/equity	50-90%	62.6	48.8
Dividend policy (% of the year's profit after tax)	40-60%	-	-

1) Last 12 months

2) Excluding lignite

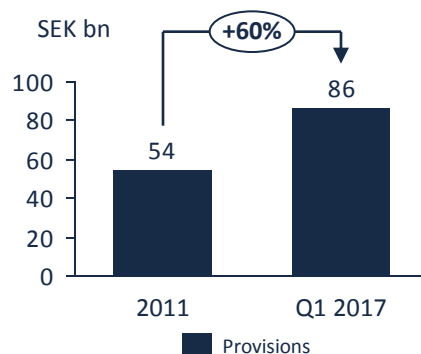
# SUCCESSFUL IN MANAGING LEVERAGE IN A TOUGH MARKET

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



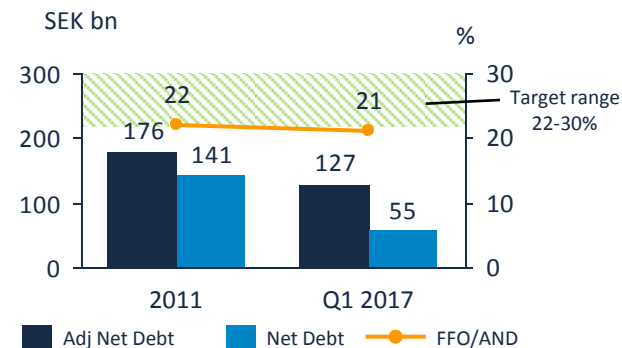
- Pressure on earnings as a result of weaker situation for merchant generation → FFO declining by SEK 12bn
- Higher share of regulated and contracted earnings will lower volatility going forward

...and increase of provisions...



- Declining discount rate environment and revised cost estimates → Provisions increased by SEK 32bn
- Reduced uncertainty in provision development going forward with the transfer of medium and long-term nuclear liabilities in Germany

...FFO/AND is today close to 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

# IMPAIRMENT HISTORY 2009 – Q1 2017

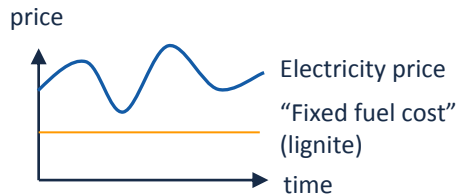
		2009	2010	2011	2012	2013	2014	2015	2016	Total
The Netherlands	Thermal assets		4.3 <sup>1</sup>	0.4 <sup>2</sup>	8.6 <sup>2</sup>	14.7	2.6		2.8	33.4
	Trading					6.5 <sup>1</sup>	10.0 <sup>1</sup>		0.7	17.2
	Other	1.2	1.2			1.5 <sup>2</sup>	1.9			5.8
Germany	Thermal assets			0.3		4.3	5.7	19.2	26.1	55.6
	Nuclear assets			10.5						10.5
	Transmission		5.1							5.1
	Other					0.1	1.1	0.3	2.3	3.8
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
<b>Impairments</b>		<b>5.5</b>	<b>11.1</b>	<b>11.3</b>	<b>12.3</b>	<b>30.1</b>	<b>23.8</b>	<b>36.8</b>	<b>33.8</b>	<b>164.7</b>
Reversed impairment losses		-1.3	-1.3	-0.4	0.0	0.0	0.0	-0.5	-0.9	-4.4
<b>Impairments (net)</b>		<b>4.2</b>	<b>9.8</b>	<b>10.9</b>	<b>12.3</b>	<b>30.1</b>	<b>23.8</b>	<b>36.3</b>	<b>32.9</b>	<b>160.3</b>

1) Impairment of goodwill

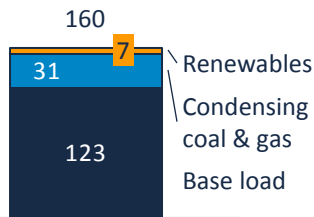
2) Impairment of assets and goodwill

# ADAPTING THE HEDGE STRATEGY TO CHANGING POWER PRICE EXPOSURE

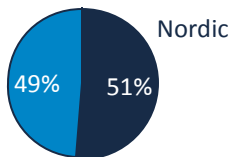
## Before lignite divestment



TWh 2016

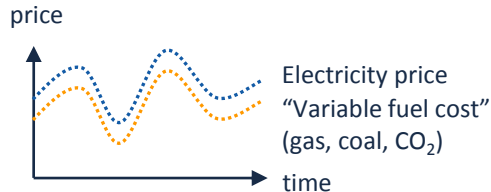


TWh 2016

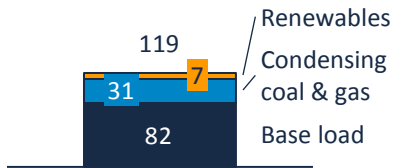


Continental/UK

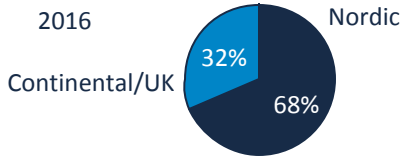
## After lignite divestment



TWh 2016



TWh 2016



VATTENFALL 

From fixed fuel to variable fuel dominated in Germany

Group base load production hours reduced by ~33%

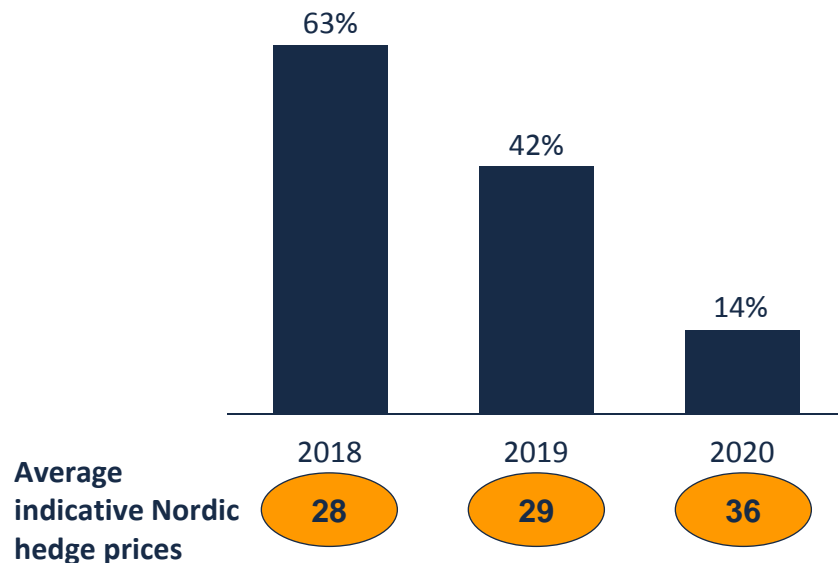
C/UK power production share reduced from 49% to 32%

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

# 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 hedge ratio (%) and indicative prices



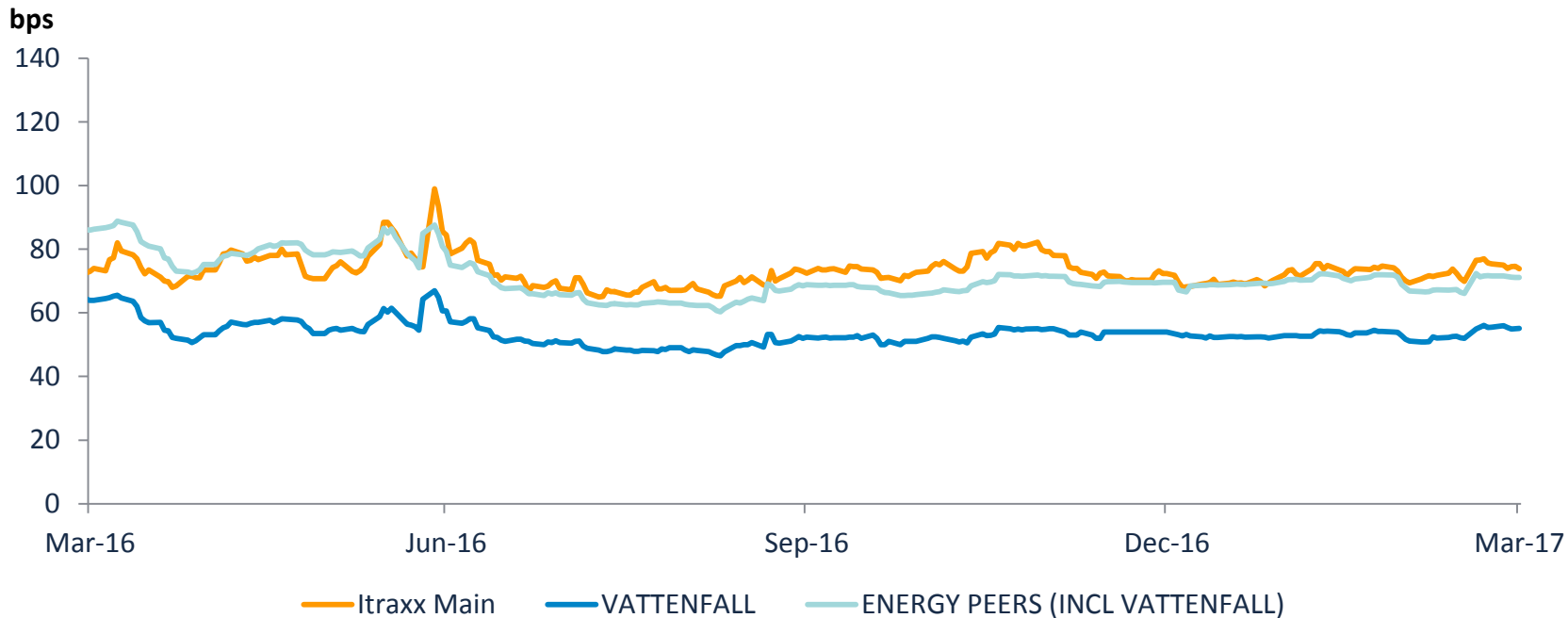
Sensitivity analysis – Continental portfolio

Market quoted	+/- 10% impact on future profit before tax, MSEK <sup>1</sup>			Observed yearly volatility
	2017	2018	2019	
Electricity	+/- 275	+/- 391	+/- 742	22% - 23%
Coal	-/+ 7	-/+ 221	-/+ 214	31% - 32%
Gas	-/+ 146	-/+ 395	-/+ 371	25% - 27%
CO <sub>2</sub>	-/+ 21	-/+ 59	-/+ 67	54% - 55%

1) The denotation +/- entails that a higher price affects operating profit favourably, and -/+ vice versa

# STABLE CDS SPREAD DEVELOPMENT

CDS spread 5-years





# CONTINUED STRONG LIQUIDITY POSITION

Group liquidity	MSEK
Cash and cash equivalents	18,010
Short term investments	21,298
<b>Reported cash, cash equivalents &amp; short term investments</b>	<b>39,308</b>
Unavailable liquidity <sup>1</sup>	-6,998
<b>Available liquidity</b>	<b>32,310</b>

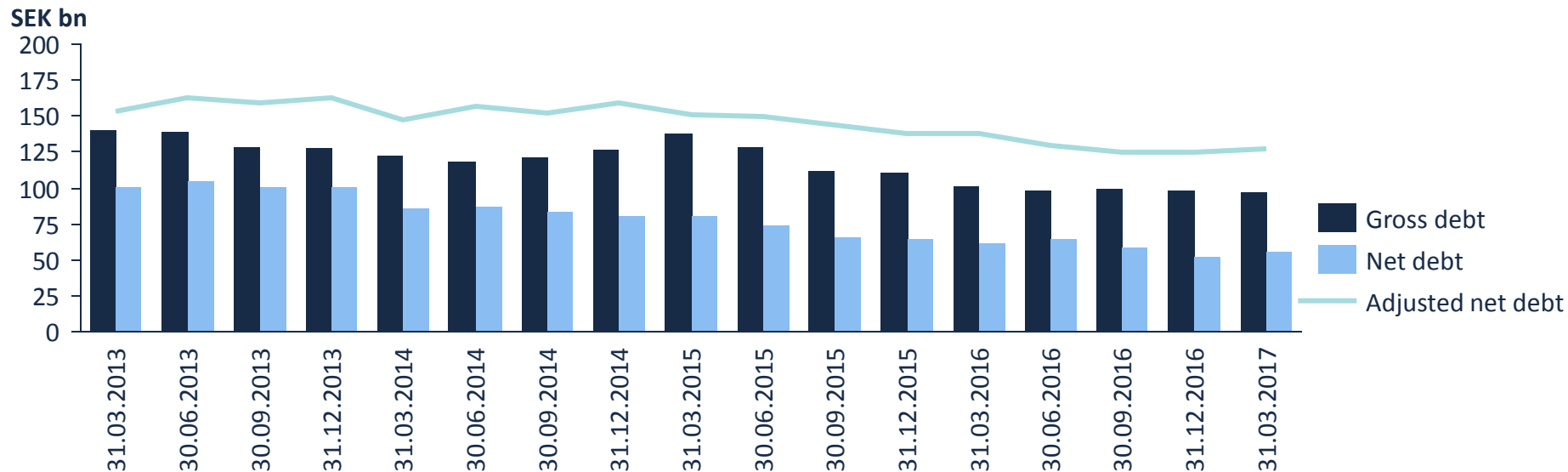
Committed credit facilities	Facility size	MSEK
RCF (maturity Dec 2021)	2,000 MEUR	19,064
Total undrawn		19,064
<b>Debt maturities<sup>2</sup></b>		<b>MSEK</b>
Within 90 days		5,352
Within 180 days		6,216

1) German nuclear "Solidarvereinbarung" 3,245 MSEK, Margin calls paid (CSA) 2,550 MSEK, Insurance "Provisions for claims outstanding" 1,202 MSEK

2) Excluding loans from minority owners and associated companies

# DEBT DEVELOPMENT

Net debt increased as a result of negative cash flow after investments. Adjusted net debt increased as a result of higher net debt, which was partly offset by lower amount of nuclear provisions.

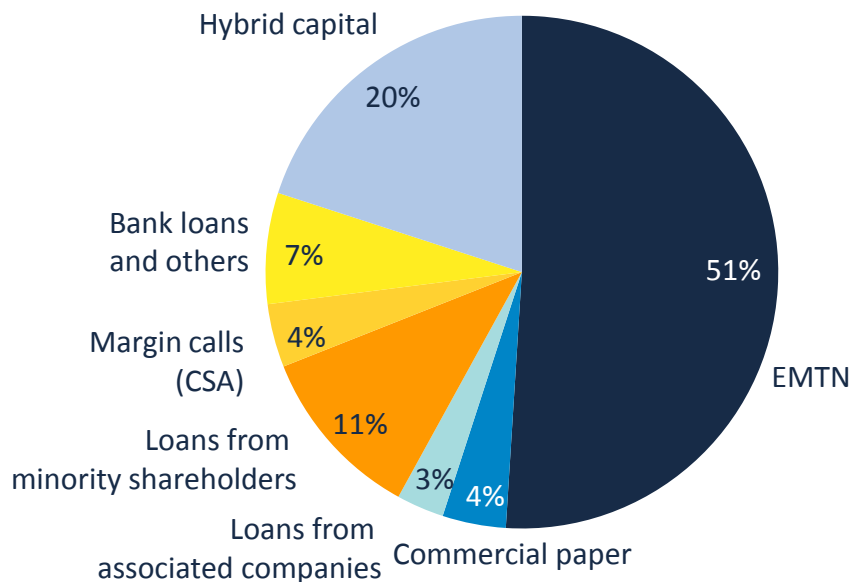


Net debt increased by SEK 4.0 billion compared with the level at 31 Dec. 2016. Adjusted net debt increased by SEK 2.3 billion, compared with the level at 31 Dec. 2016. For the calculation of adjusted net debt, see slide 32.

# BREAKDOWN OF GROSS DEBT

Total debt: SEK 96bn (EUR 10bn)

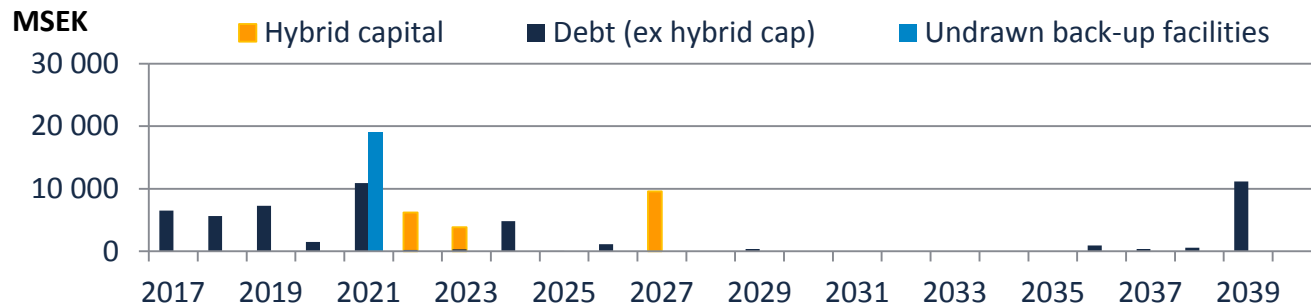
External market debt: SEK 83bn (EUR 9bn)



Debt issuing programmes	Size (MEUR)	Utilization (MEUR)
EUR 10bn Euro MTN	10,000	4,610
EUR 2bn Euro CP	2,000	415
SEK 15bn Domestic CP	1,574	0
<b>Total</b>	<b>13,574</b>	<b>5,025</b>

- 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

# DEBT MATURITY PROFILE<sup>1</sup>



	31 Mar. 2017	31 Dec. 2016
Duration (years)	5.6	5.6
Average time to maturity (years)	8.3	8.5
Average interest rate (%)	4.5	4.4
Net debt (SEK bn)	54.7	50.7
Available group liquidity (MSEK)	32,310	36,297
Undrawn committed credit facilities (MSEK)	19,064	19,105

1) 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

# REPORTED AND ADJUSTED NET DEBT

Reported net debt (SEK bn)	31 Mar. 2017	31 Dec. 2016
Hybrid capital	-19.1	-19.2
Bond issues and commercial papers and liabilities to credit institutions	-56.0	-55.8
Liabilities to associated companies	-3.1	-2.8
Liabilities to minority shareholders	-10.3	-10.1
Other liabilities	-7.5	-8.8
<b>Total interest-bearing liabilities</b>	<b>-96.0</b>	<b>-96.7</b>
Reported cash, cash equivalents & short- term investments	39.3	43.3
Loans to minority owners of foreign subsidiaries	2.0	2.7
<b>Net debt</b>	<b>-54.7</b>	<b>-50.7</b>

1) Of which: German nuclear "Solidarvereinbarung" 3.2, Margin calls paid (CSA) 2.6, Insurance  
"Provisions for claims outstanding" 1.2

Adjusted net debt (SEK bn)	31 Mar. 2017	31 Dec. 2016
Total interest-bearing liabilities	-96.0	-96.7
50% of Hybrid capital	9.5	9.6
Present value of pension obligations	-40.6	-40.6
Wind & other environmental provisions	-4.3	-4.4
Provisions for nuclear power (net)	-40.9	-41.9
Margin calls received	3.7	4.0
Liabilities to minority owners due to consortium agreements	9.2	9.0
<b>= Adjusted gross debt</b>	<b>-159.4</b>	<b>-161.0</b>
Reported cash, cash equivalents & short-term investments	39.3	43.3
Unavailable liquidity	-7.0 <sup>1</sup>	-7.0 <sup>1</sup>
<b>= Adjusted cash, cash equivalents &amp; short-term investments</b>	<b>32.3</b>	<b>36.3</b>
<b>= Adjusted net debt</b>	<b>-127.1</b>	<b>-124.7</b>

# NUCLEAR PROVISIONS

Reactor	Net capacity (MW)	Start (year)	Vattenfall share (%)	Vattenfall provisions, MSEK (IFRS accounting)	Vattenfall provisions, MSEK (pro rata)	Sw nuclear waste fund MSEK (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: 25,635</b>	<b>Total Ringhals: 25,635<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: 22,019</b>	<b>Total Forsmark: 14,533</b>	
<b>Total Sweden</b>	<b>6,974</b>	<b>-</b>		<b>47,884<sup>2</sup></b>	<b>40,398<sup>2</sup></b>	<b>30,985<sup>3</sup></b>
Brunsbüttel	771	1977	66.7	19,990	13,327	
Brokdorf	1,410	1986	20.0	0	5,634	
Krümmel	1,346	1984	50.0	12,948	12,948	
Stade <sup>4</sup>	640	1972	33.3	0	2,691	
<b>Total Germany</b>	<b>4,167</b>	<b>-</b>	<b>-</b>	<b>32,938</b>	<b>34,601</b>	
<b>Total SE &amp; DE</b>	<b>11,141</b>			<b>80,822</b>	<b>74,999</b>	

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

2) Total provisions in Sweden (IFRS accounting) include provisions of 230 MSEK related to Ågesta

3) Vattenfall's share of the Nuclear Waste Fund (book value). IFRS consolidated value is 36,943 MSEK.

4) Stade is being dismantled

# INVESTMENT PLAN 2017-2018

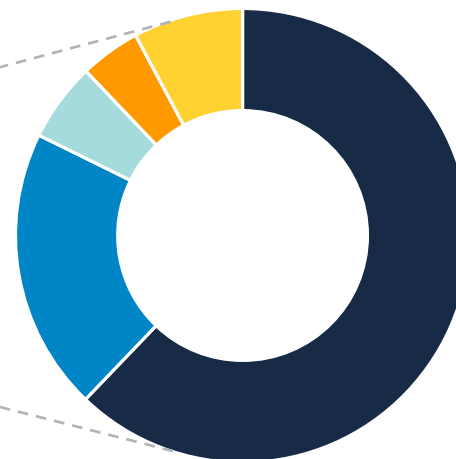
The investment plan reflects a clear shift in our strategy with a large part dedicated to growth investments, with the majority in wind power, solar power and distribution networks.

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%
- Other, 8%
- Heat grids, 4%

# CAPITAL EXPENDITURES

Continuing operations SEK bn	Q1 2017	Q1 2016	FY 2016
Electricity generation	1.7	1.9	13.1
CHP/Heat	0.4	0.5	3.1
Electricity networks	0.8	0.8	5.2
Other	1.1	0.2	0.5
<b>Total</b>	<b>4.0</b>	<b>3.3</b>	<b>21.9</b>
- of which maintenance and replacement	2.4	2.3	10.6
- of which growth	1.6	1.0	11.4