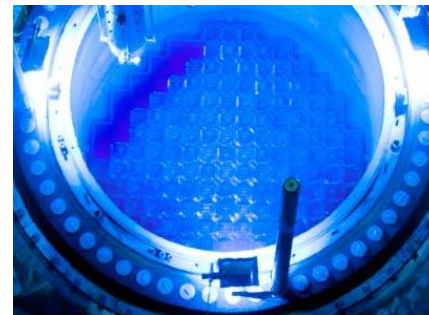




VATTENFALL PRESENTATION

Analyst meeting SEB 2017-09-28

WE EXIST TO...



Power
Climate
Smarter
Living

Vattenfall will help customers reduce the need for fossil fuels and enable the next generation to live fossil free. This is the core of Vattenfall's new guiding principle for the future that has now been presented by the Group management.

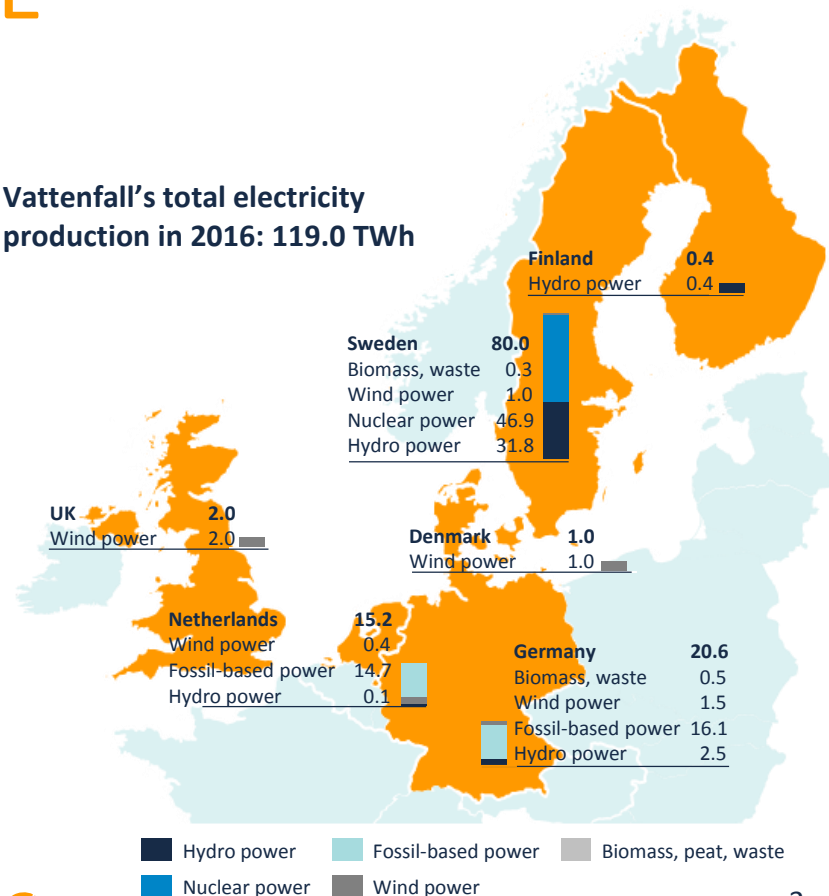
VATTENFALL AT A GLANCE

- 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
profit¹ in 2016: SEK 22bn**

Vattenfall's total electricity production in 2016: 119.0 TWh



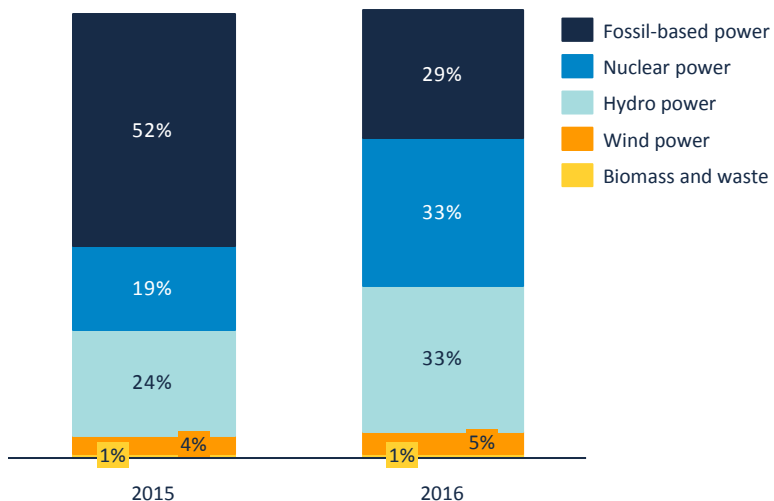
1) Operating profit (EBIT) excluding items affecting comparability

A NEW VATTENFALL IS TAKING SHAPE

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

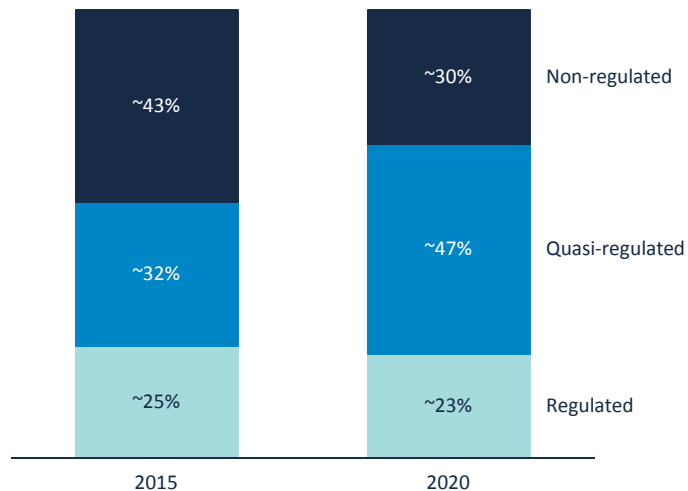
Vattenfall has moved from a heavy fossil-based production towards a more sustainable portfolio in 2016

Vattenfall production mix 2015-2016



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

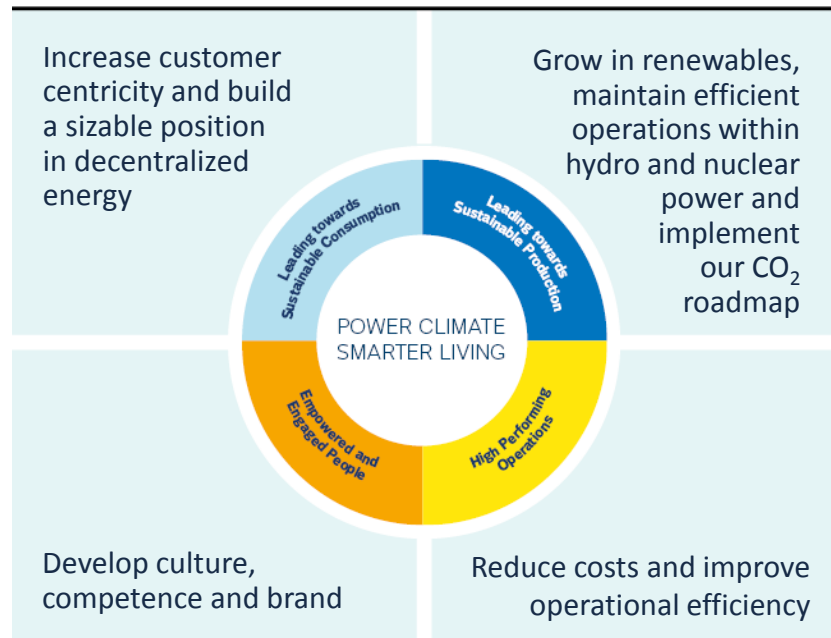
Vattenfall future value pools - EBITDA



STRATEGY AND STRATEGIC TARGETS

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

Our strategic objectives and prioritised areas



Strategic targets to 2020

Strategic targets to 2020		30 June 2017
1	Customer engagement, NPS +2 (Net Promoter Score)	+3
2	Aggregated commissioned new renewables capacity 2016-2020: ≥2,300 MW	597
3	Absolute CO ₂ emissions, pro rata, continuing operations: ≤21 Mtonnes	11.8
4	ROCE: ≥9% (continuing operations)	4.2
5	Safety as LTIF (Lost Time Injury Frequency): ≤1.25	1.3
6	Employee Engagement Index: ≥70% ¹	...

1) Only updated on an annual basis

OUR CONTRIBUTION TO UN'S SUSTAINABLE DEVELOPMENT GOALS

Vattenfall focuses on six of the 17 sustainable development goals on a group level. On a local level, we are also contributing to five additional sustainable development goals¹.



- Vattenfall operates 2.8 GW of renewables capacity as of H1 2017
- Strategic target to commission 2.3 GW of new renewables capacity 2016-2020



- Enabling our customers to produce and consume their own renewable energy
- Launch of Powerpeers to trade locally generated renewable electricity



- Charging solutions for electric vehicles
- Zero-CO₂-cement with Cementsa, Fossil-free-steel with SSAB and LKAB, Green hydrogen with Preem



- Vattenfall aims at being climate neutral by 2050 and by 2030 in the Nordics
- Contributing to electrification of transportation, heating and the industry



- City partnerships with Uppsala, Berlin, Hamburg and Amsterdam to help achieve ambitious climate goals



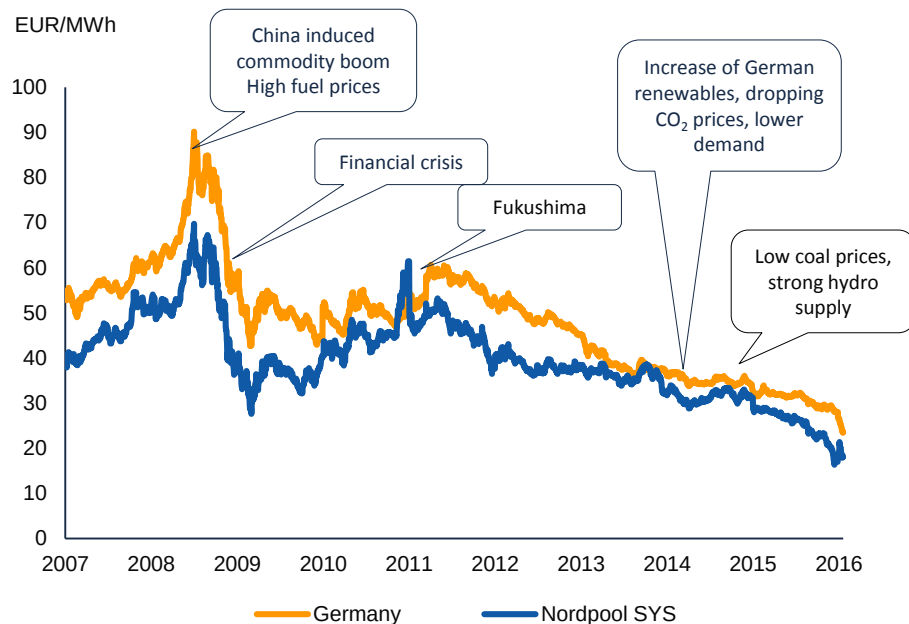
- Vattenfall is active in partnerships with both cities and corporates

1) Gender equality, clean water and sanitation, decent work and economic growth, life below water and life on land

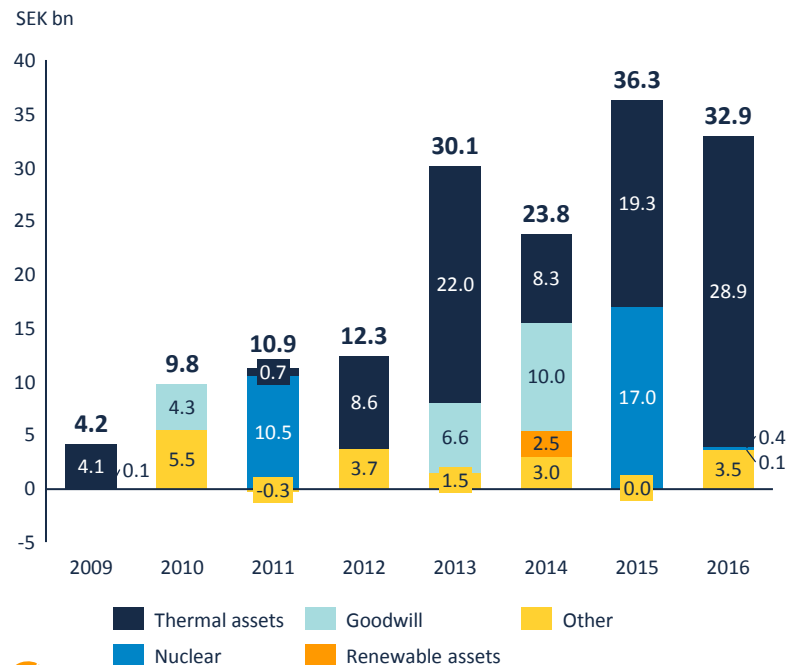
CHALLENGING MARKET CONDITIONS, BUT...

Challenging market conditions with depressed electricity prices has led to impairments

Front year contract price (EUR/MWh)



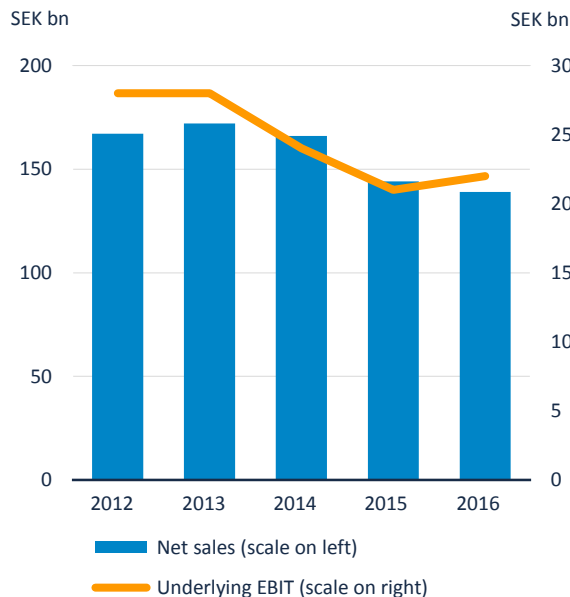
Total impairments of SEK 160.3bn



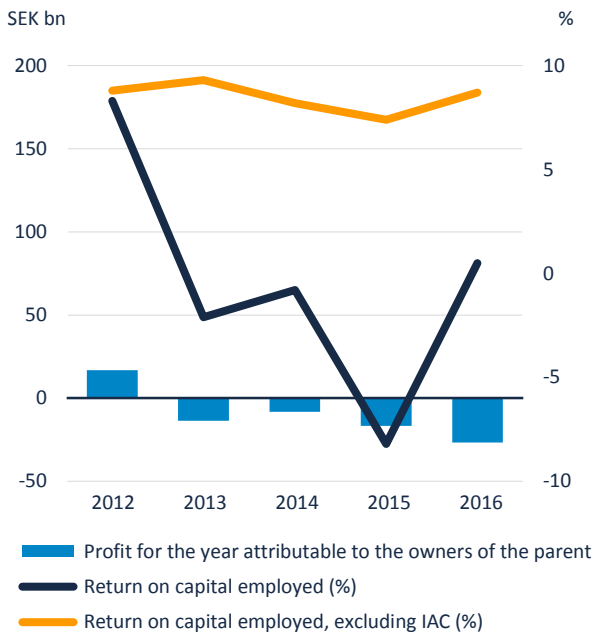
...STABILISED FINANCIAL DEVELOPMENT

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

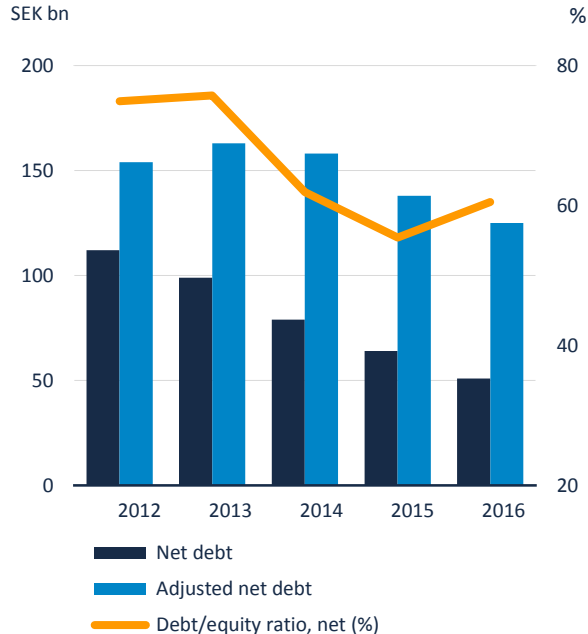
Sales and underlying EBIT



Earnings and return



Debt



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 tax¹ 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 tax² 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 through **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 & 2: Approx. SEK 3 billion respectively for Vattenfall in 2015

WE ARE RESHAPING OUR ASSET BASE TO MEET NEW MARKET REQUIREMENTS

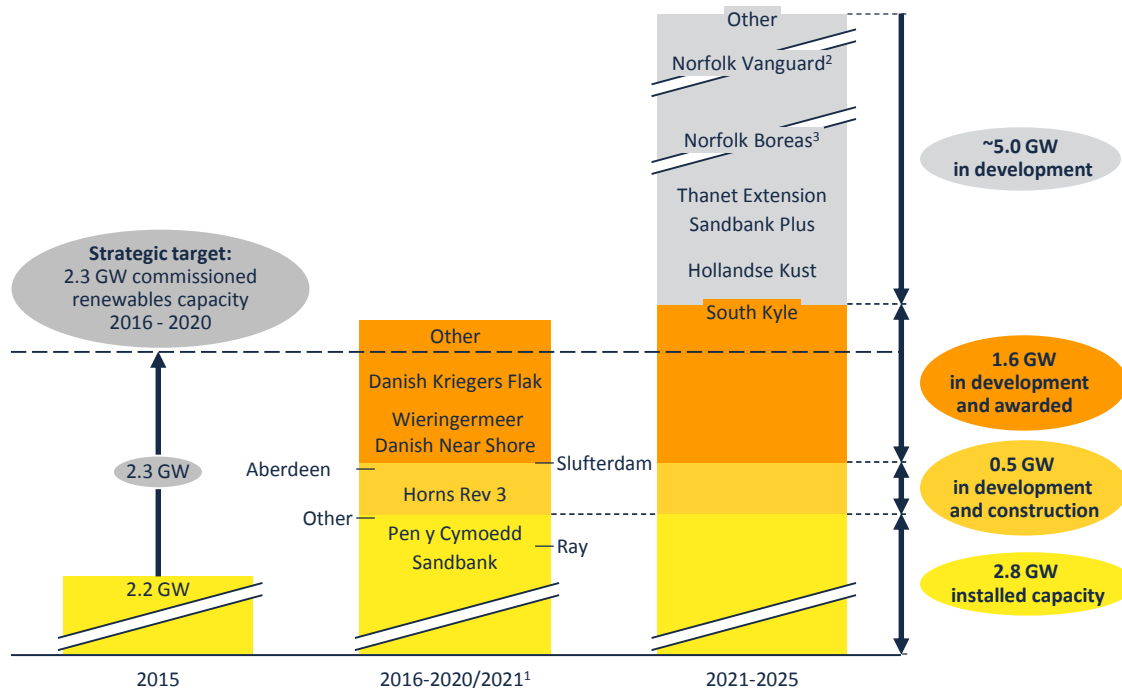
	Central Production	Grids	Wholesale markets	Commodity sales and decentralized solutions
Grow  ✓ Customer attractiveness ✓ Long term viability ✓ Strong Vattenfall capabilities ✓ Attractive returns	• Wind • Solar • District heating	• Regulated • Non-regulated • Services	• Trading • Aggregation Optimization 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 • Lignite			

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

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

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 H1 2017

- ✓ Commissioning of UK-onshore wind farms Pen y Cymoedd (228 MW) and Ray (54 MW) and Sandbank in Germany (288 MW)
- ✓ Investment Decision Slufterdam (29 MW)
- ✓ Newly established business unit (within BA Wind) for PV and Batteries to increase growth in those areas
- ✓ More than one third of all capex in the first half of 2017 was invested in new renewables (wind, solar, biomass), in total SEK 2.7 bn

1) Danish Kriegers Flak expected commissioning 2021

2) Commissioning expected in 2025-2027

3) Commissioning TBD

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



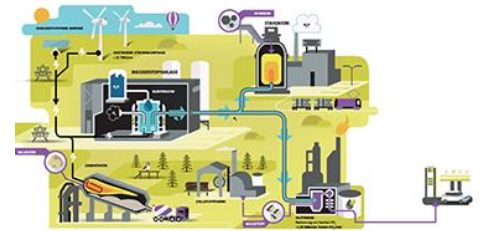
- Supports e-mobility growth with resulting reduction of CO₂ as well as solving pollution and noise issues

Electrification of heating



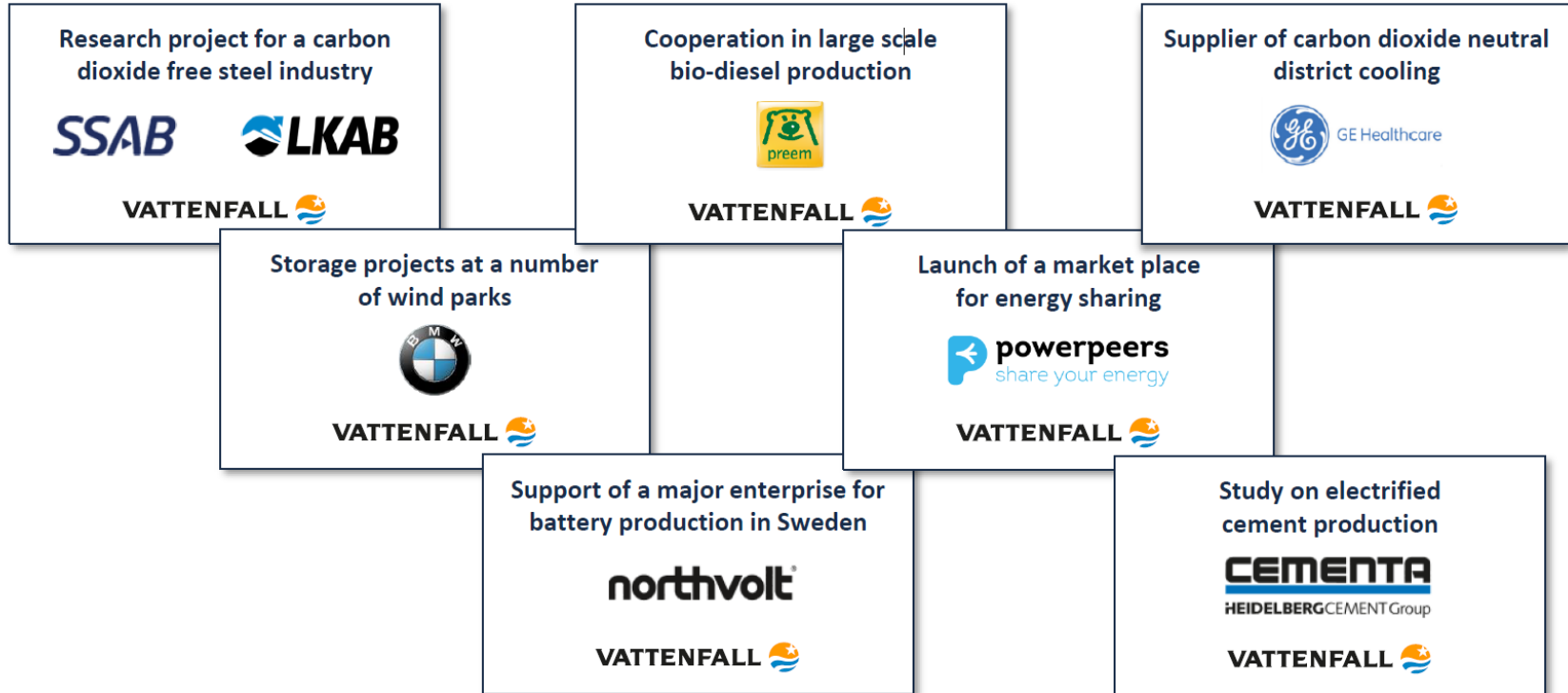
- Energy efficiency achieved by switching from gas, oil or electric boilers to heat pumps or district heating
- Power to heat is an attractive solution to reduce the cost of heating

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

ATTRACTIVE PARTNER IN THE ENERGY TRANSITION



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.

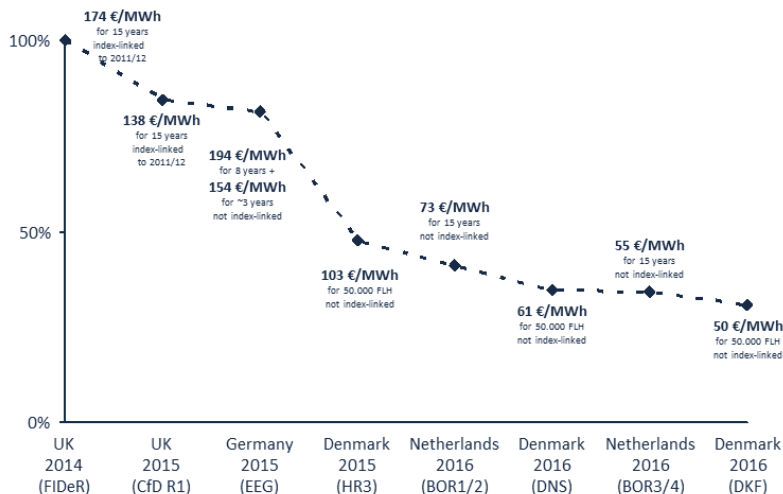
Strategic fit with Vattenfall's purpose and strategy

- ✓ 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.



INDUSTRIALISATION DRIVES COSTS AND REVENUES TO SUSTAINABLE LEVELS

Decreasing revenue levels¹



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

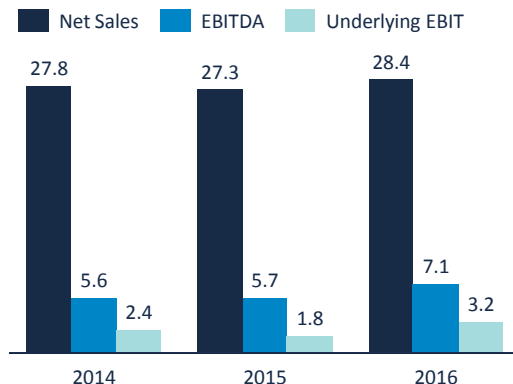
Vattenfall's competitive advantage is based on three pillars: fast adaptation to the tender landscape, ability to decrease O&M costs applying latest business standards, lean and agile organisation set-up

VATTENFALL HEAT IN NUMBERS

Highlights

- Solid, semi-regulated, revenue streams
- A growing customer base with low churn
- An accelerating contribution to climate smartness
- An established platform to tap into new decentral heat businesses

Financial development (SEK bn)¹



Key data

>2m end customers
measured in dwelling equivalents²

Growth by 50k new customers
in 2016

20.3 TWh Heat sold
in 2016

3,790 employees
in 2016

Vattenfall is a European leader in district heating

¹ Including condensing

² Based on average household heat consumption

THREE CORE MARKETS WITH DIFFERENT CHARACTERISTICS

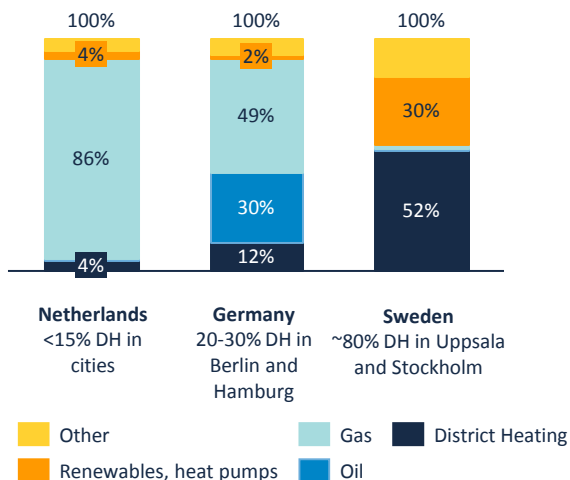
Market characteristics (all market players)	 Germany	 Netherlands	 Sweden
Total (space) heating market size (TWh) ¹	712	203	83
Dominating fuel	gas/coal/waste	gas/waste	wood/waste/el. no gas grid
Share of renewables in District Heating (DH) ¹	10%	1%	68%
Average customer heat price €ct/kWh	8	10	7
Number of customer equivalents	1,7m	210k	230k
Vattenfall's market position	#1	#1	#3
	Growing German market	Young Dutch Market	Mature Swedish market

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

¹ Source: Vattenfall analysis

HEAT: POTENTIAL FOR PROFITABLE GROWTH

Residential heat market structure¹



Our (current) footprint



Sweden – mature DH market

- Strong growth in metropolitan areas expected (esp. Stockholm, Uppsala)
- District heating providing CO₂-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

POSITIVE DEVELOPMENTS IN GERMAN NUCLEAR OPERATIONS IN H1 2017

Vattenfall has significantly reduced its business risks related to German nuclear operations

Four positive developments

- ✓ EU has approved the new law regarding obligations for interim and final storage of nuclear waste
- ✓ SEK 17.2 bn payment made on 3rd July (event after Q2) to the public fund, thereby releasing Vattenfall from obligations for interim and final storage of nuclear waste
- ✓ De-fueling of the nuclear power plant Brunsbüttel: 300 MSEK provisions released
- ✓ Decision of German constitutional court: SEK 1.8 bn nuclear tax refund for the 20%-share in nuclear power plant Brokdorf
- Note: Decision unrelated to the arbitration proceedings at the ICSID¹, where a decision is expected later in 2017.



1) ICSID: International Centre for Settlement of Investment Disputes (ICSID)