

FORTUM – For a cleaner world

Investor / Analyst material

October 2018

Disclaimer

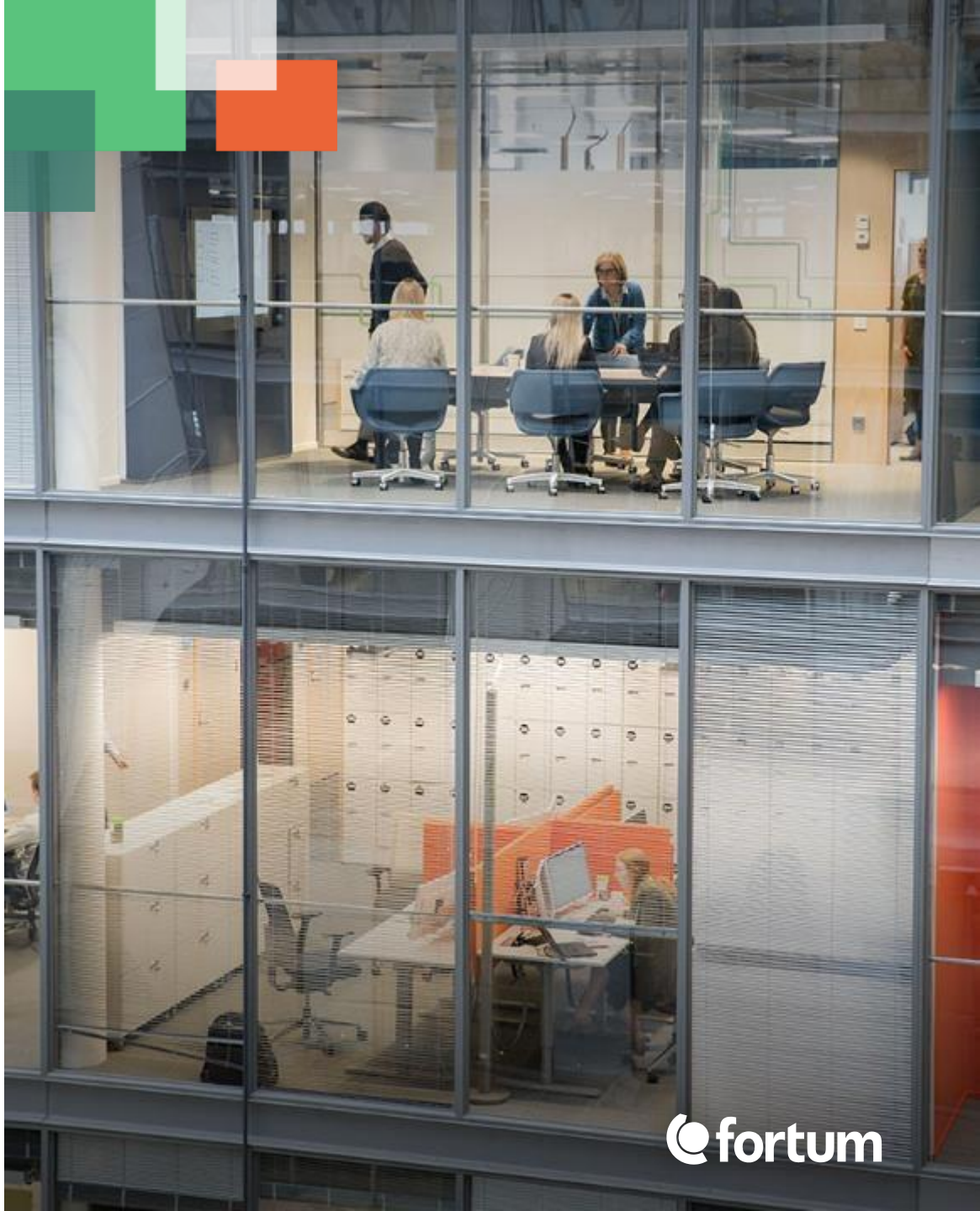
This presentation does not constitute an invitation to underwrite, subscribe for, or otherwise acquire or dispose of any Fortum shares.

Past performance is no guide to future performance, and persons needing advice should consult an independent financial adviser.

Any references to the future represent the management's current best understanding. However the final outcome may differ from them.

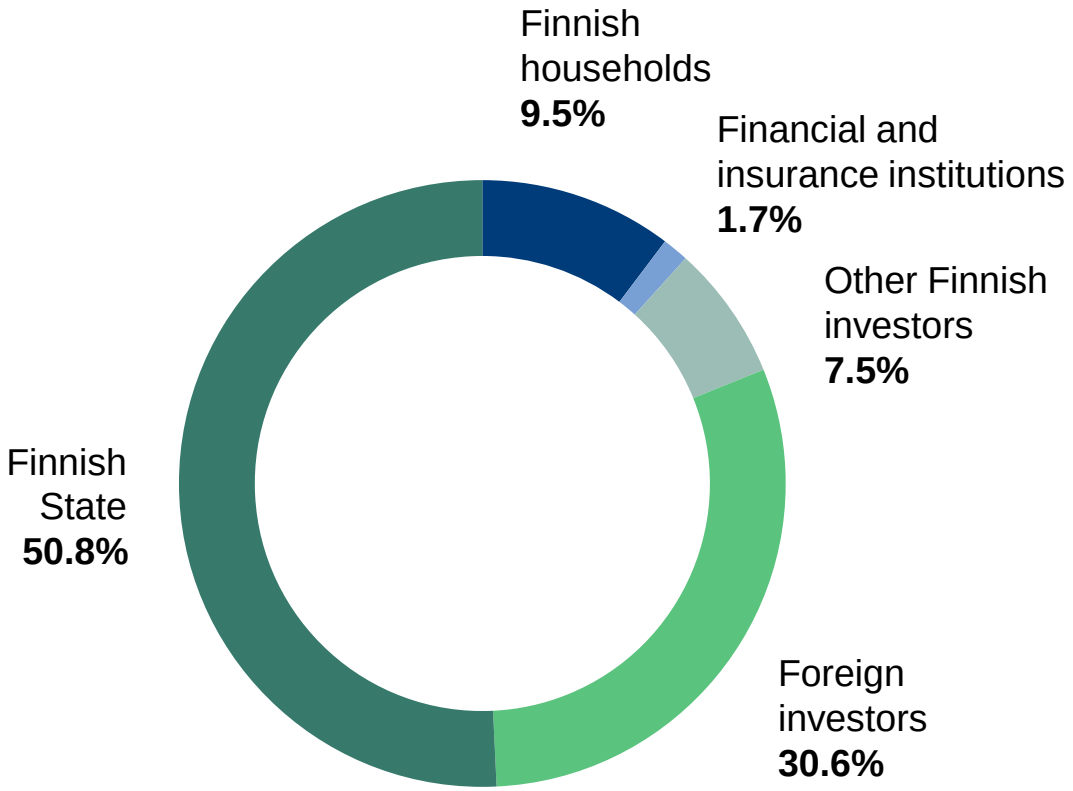
Content

Fortum today	4 – 18
European and Nordic power markets	19 – 28
Fortum’s nuclear fleet	29 – 32
Russia	33 – 35
Thermal capacity in Russia	35
Historical achieved prices	36
Interim Report Jan-Sep 2018	37 – 54
Debt portfolio as of 30.9.2018	55
IR contacts	56



Appr. 123,000 shareholders

- Power and heat company in the Nordic countries, Russia, Poland and the Baltics
- Listed at the Helsinki Stock Exchange since 1998
- Among the most traded shares on the Nasdaq Helsinki stock exchange
- Market cap ~17 billion euros



30 September 2018

Capital returns: 2017 EUR 1.10 per share ~ EUR 1 billion

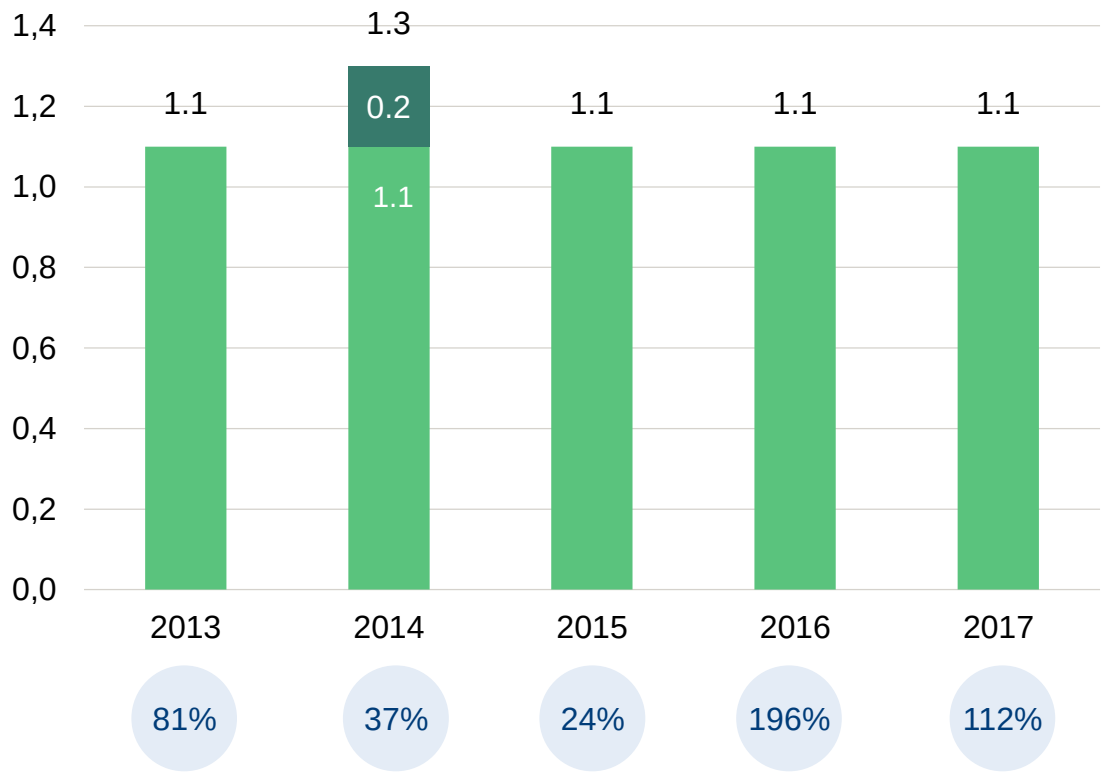
Fortum's dividend policy is based on the following preconditions:

- The dividend policy ensures that shareholders receive a fair remuneration for their entrusted capital, supported by the company's long-term strategy that aims at increasing earnings per share and thereby the dividend.
- When proposing the dividend, the Board of Directors looks at a range of factors, including the macro environment, balance sheet strength as well as future investment plans.

Fortum's target is to pay a stable, sustainable and over time increasing dividend of 50-80% of earnings per share excluding one-off items

Fortum has since 1998 annually paid dividends in total ~14,580 MEUR

5 year dividend per share (EUR) history



Fortum – For a cleaner world

Megatrends

Climate change and resource efficiency
Urbanisation
Active customers
Digitalisation, new technologies



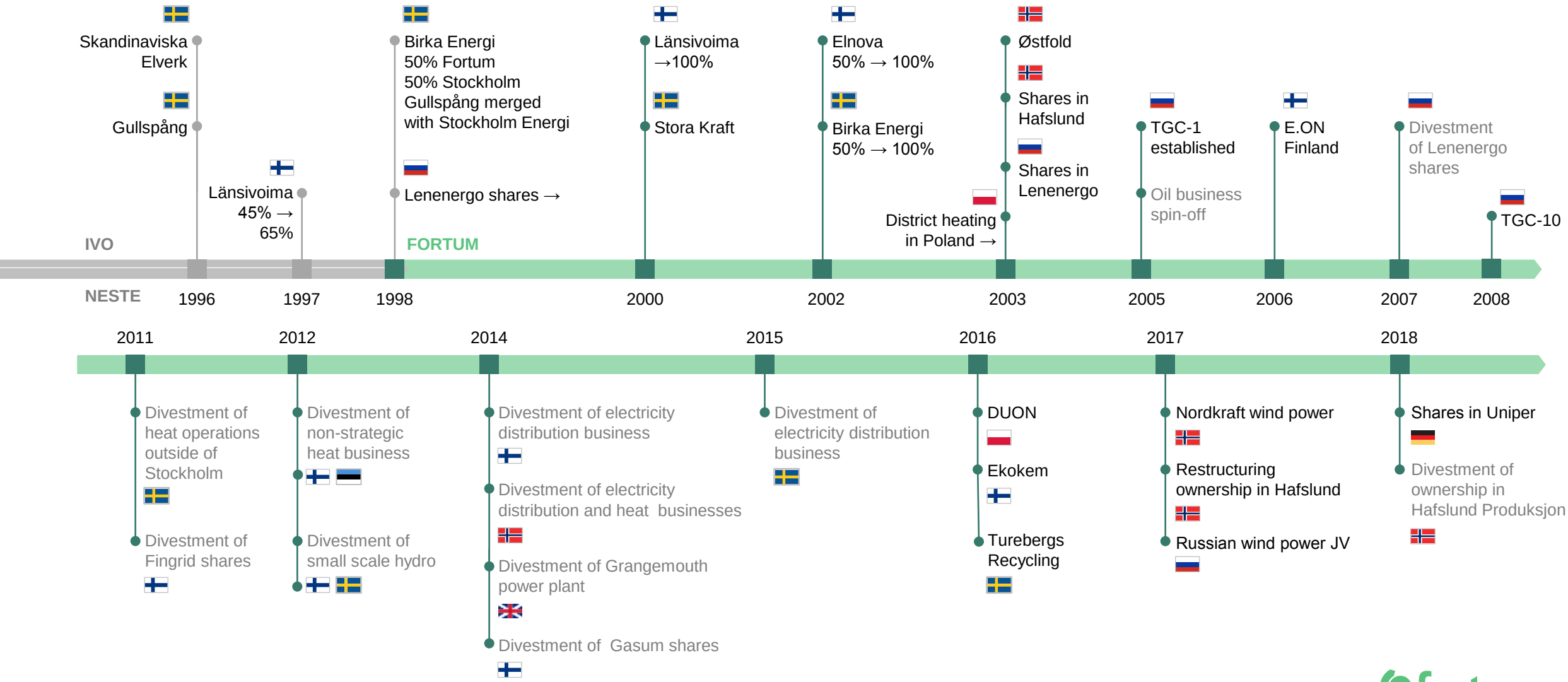
Mission

We engage our customers and society to drive the change towards a cleaner world. Our role is to accelerate this change by reshaping the energy system, improving resource efficiency and providing smart solutions. This way we deliver excellent shareholder value.

Strategy

- Drive productivity and industry transformation
- Grow in solar and wind
- Create solutions for sustainable cities
- Build new energy ventures

Our strategic route



Our current geographical presence



NORDIC COUNTRIES

Power generation
45.4 TWh

Heat sales
5.0 TWh

Electricity customers
2.4 million



RUSSIA

PAO Fortum

Power generation
26.3 TWh

Heat sales
19.8 TWh

KEY FIGURES 2017

Sales	**EUR 4.5 bn**
Comparable operating profit	**EUR 0.8 bn**
Balance sheet	**EUR 22 bn**
Personnel	**8,800**



POLAND

Power generation
0.5 TWh

Heat sales
3.7 TWh



BALTIC COUNTRIES

Power generation
0.7 TWh

Heat sales
1.4 TWh



INDIA

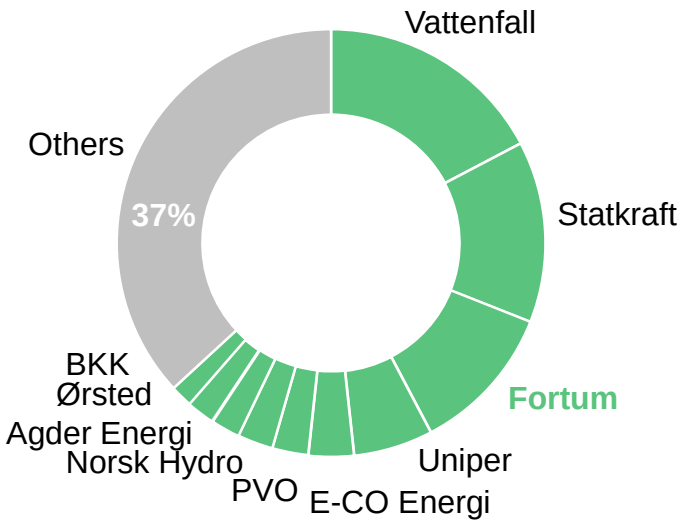
Power generation
0.3 TWh

fortum

Still a highly fragmented Nordic power market
Fortum has largest electricity customer base in the Nordics

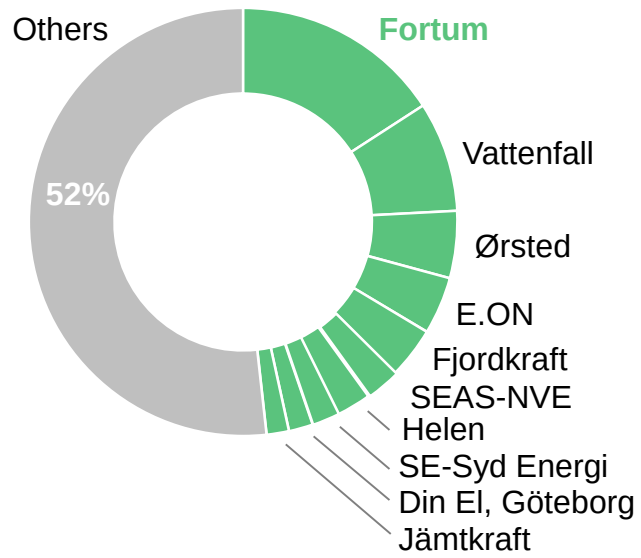
Power generation in 2017

402 TWh
>350 companies



Electricity retail

15 million customers
~350 companies

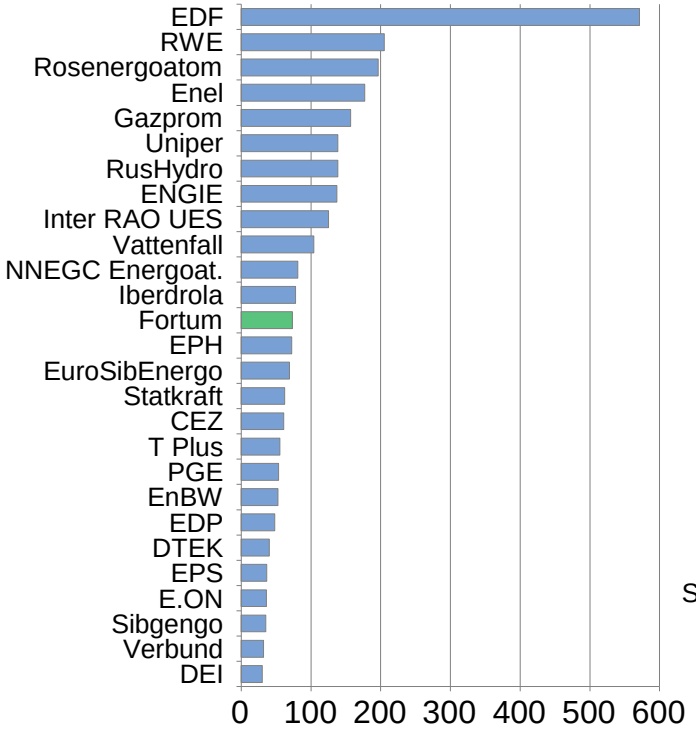


Source: Fortum, company data, shares of the largest actors, pro forma 2017 figures

Fortum mid-sized European power generation player; major producer in global heat

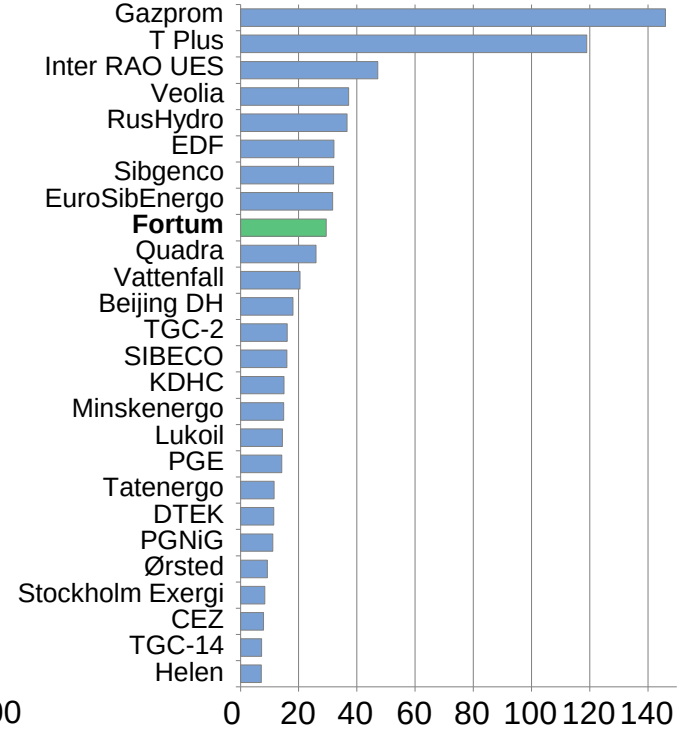
Power generation

Largest producers in Europe and Russia, 2016
TWh



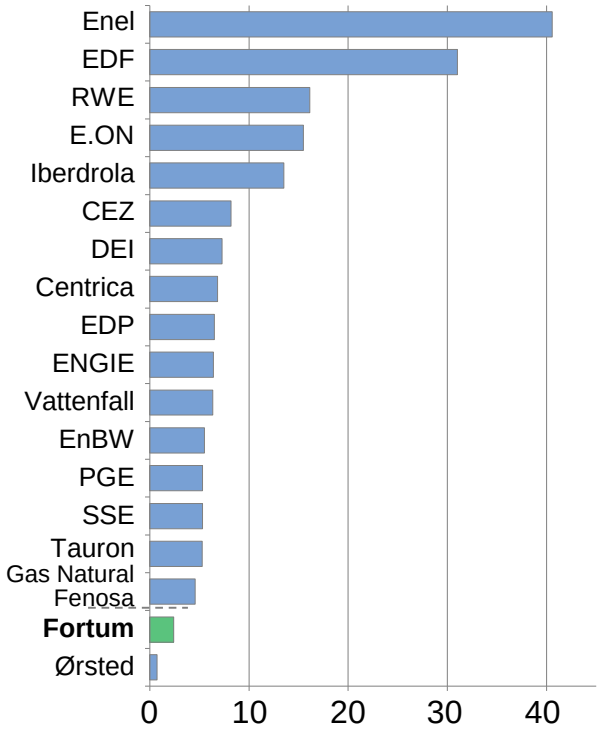
Heat production

Largest global producers, 2016
TWh



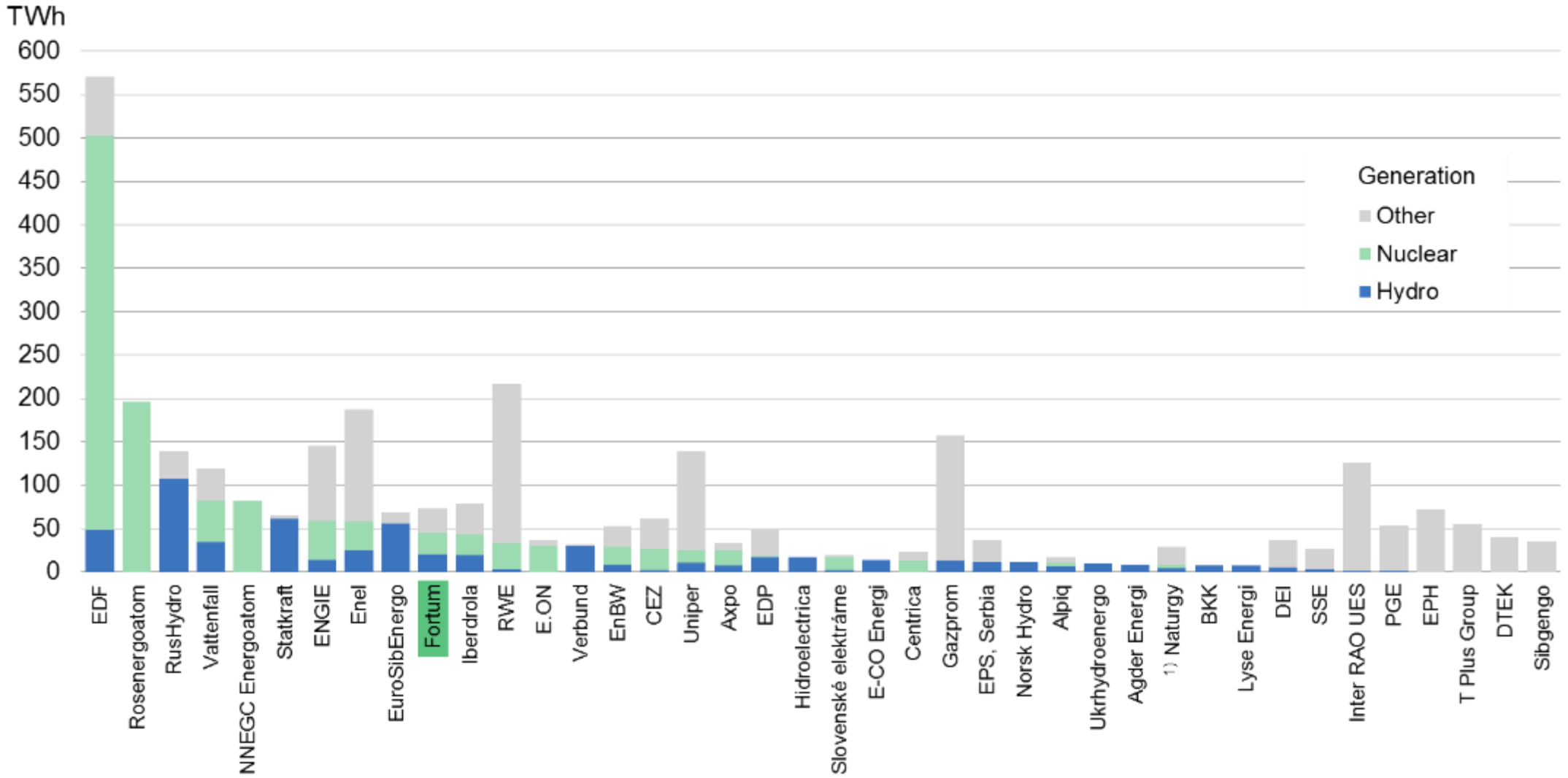
Customers

Electricity customers in EU, 2016
Millions



Source: Company information, Fortum analyses, 2016 figures pro forma

Biggest nuclear and hydro generators in Europe and Russia



1) Formerly Natural Gas Fenosa

Source: Company information, Fortum analyses, 2016 figures pro forma

Fortum in the Nordic electricity value chain



Power generation

fortum

NORD POOL

Nordic wholesale market

Nasdaq

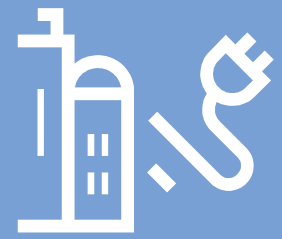
Power exchange and bilateral agreements

Large customers

Retail customers

Private customers, small businesses

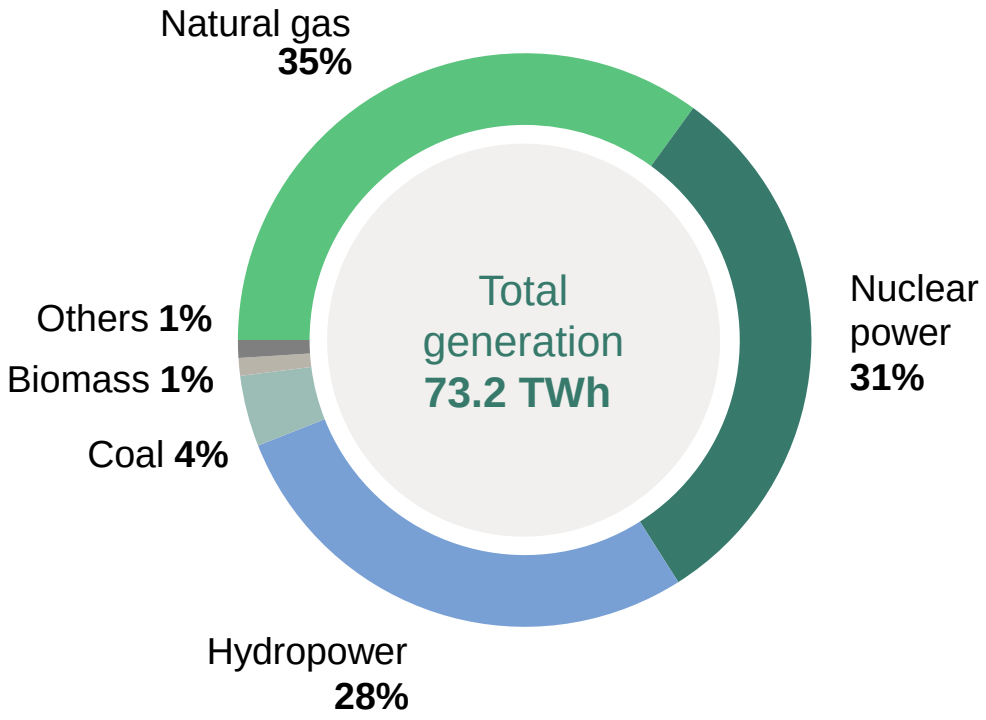
fortum



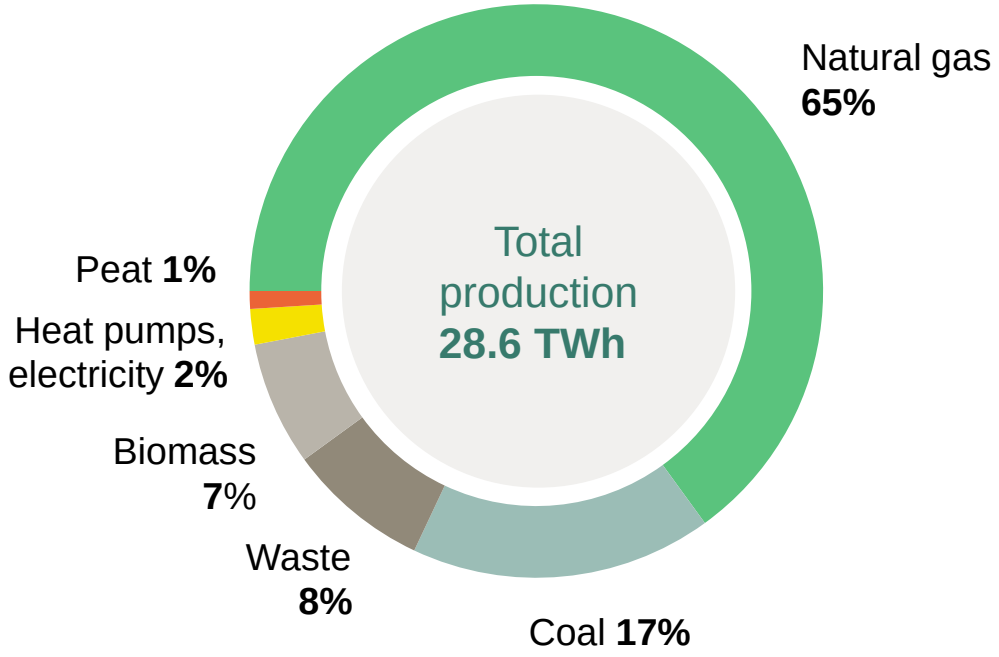
fortum

Fortum's power and heat production by source

Fortum's power generation in 2017



Fortum's heat production in 2017

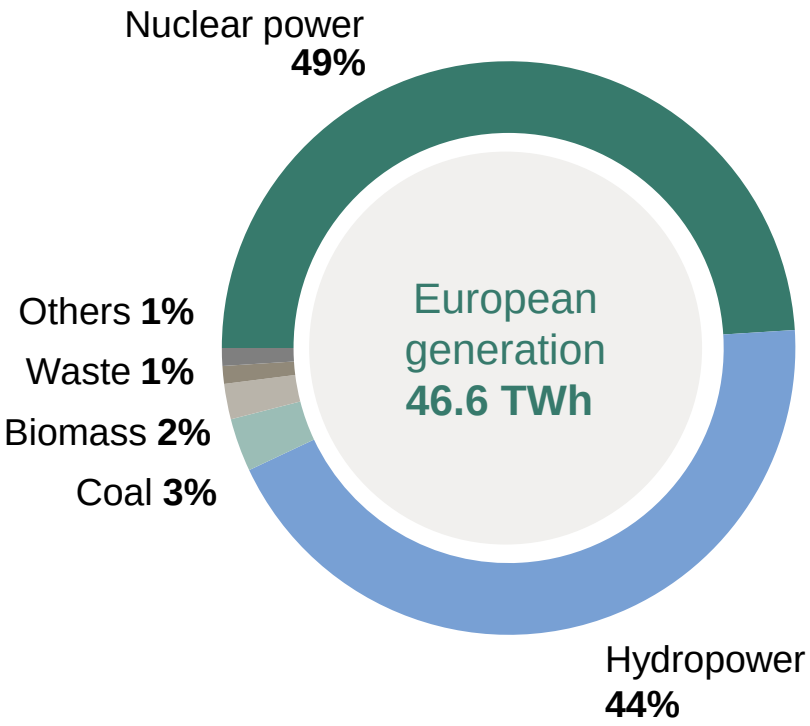


Note: Fortum's power generation capacity 13,722 MW and heat production capacity 14,765 MW

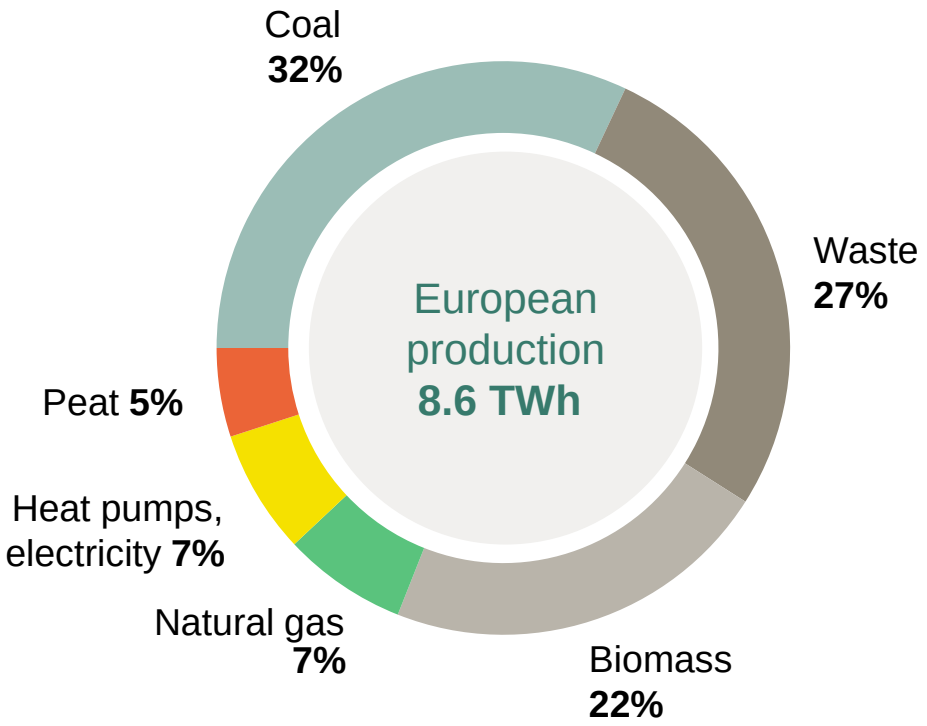
Fortum's European power and heat production by source



Fortum's European power generation in 2017



Fortum's heat European production in 2017

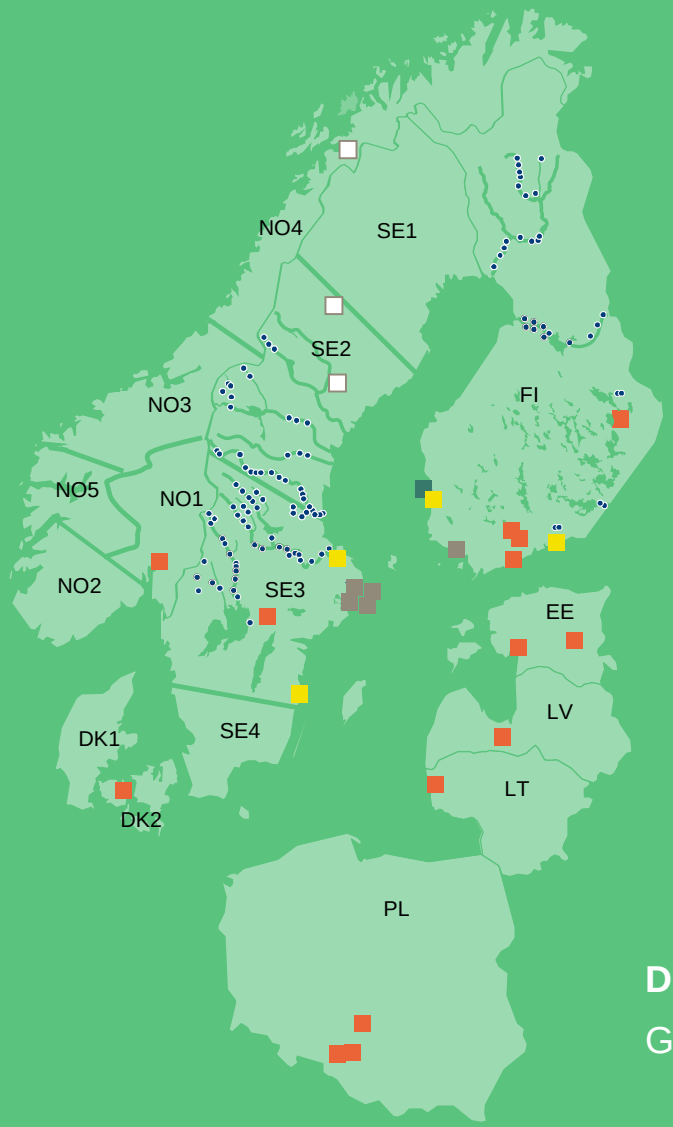


Note: Fortum's European power generation capacity 8,743 MW and heat production capacity 4,671 MW

Fortum’s Nordic, Baltic and Polish generation capacity

GENERATION CAPACITY	MW
Hydro	4 672
Nuclear	2 814
CHP	774
Other thermal	376
Wind	107
Nordic, Baltic and Polish generation capacity	8 743

Figures 31 December 2017



Associated companies’ plants (not included in the MWs) Stockholm Exergi (Former Fortum Värme), Stockholm; TSE, Naantali

NORWAY	MW
Price areas	
NO4, Wind	32
NO1, CHP	19
Generation capacity	51

SWEDEN	MW
Price areas	
SE2, Hydro	1 550
SE2, Wind	75
SE3, Hydro	1 575
SE3, Nuclear	1 334
SE3, CHP	9
Generation capacity	4 543

DENMARK, DK2	MW
Generation capacity, CHP	16

FINLAND	MW
Hydro	1 547
Nuclear	1 480
CHP	451
Other thermal	376
Generation capacity	3 854

BALTICS AND POLAND	MW
Generation capacity, CHP	
in Estonia	49
in Latvia	26
in Lithuania	18
in Poland	186

Fortum a forerunner in sustainability

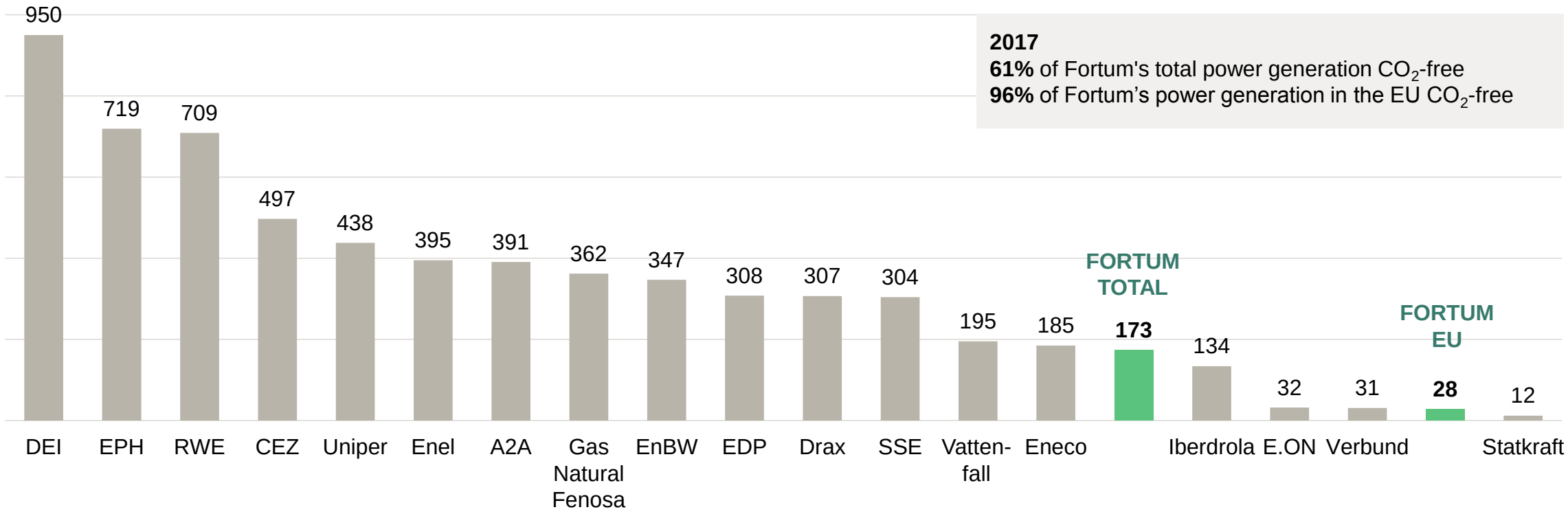
We engage our customers and society to drive the change towards a cleaner world. Our role is to accelerate this change by reshaping the energy system, improving resource efficiency and providing smart solutions. This way we deliver excellent shareholder value.

Fortum is listed in several sustainability indexes:

- CDP Nordic rating
- STOXX® Global ESG Leaders indices
- ECPI® Indices
- ISS-oekom
- OMX GES Sustainability Finland index
- Euronext Vigeo Eurozone 120 index

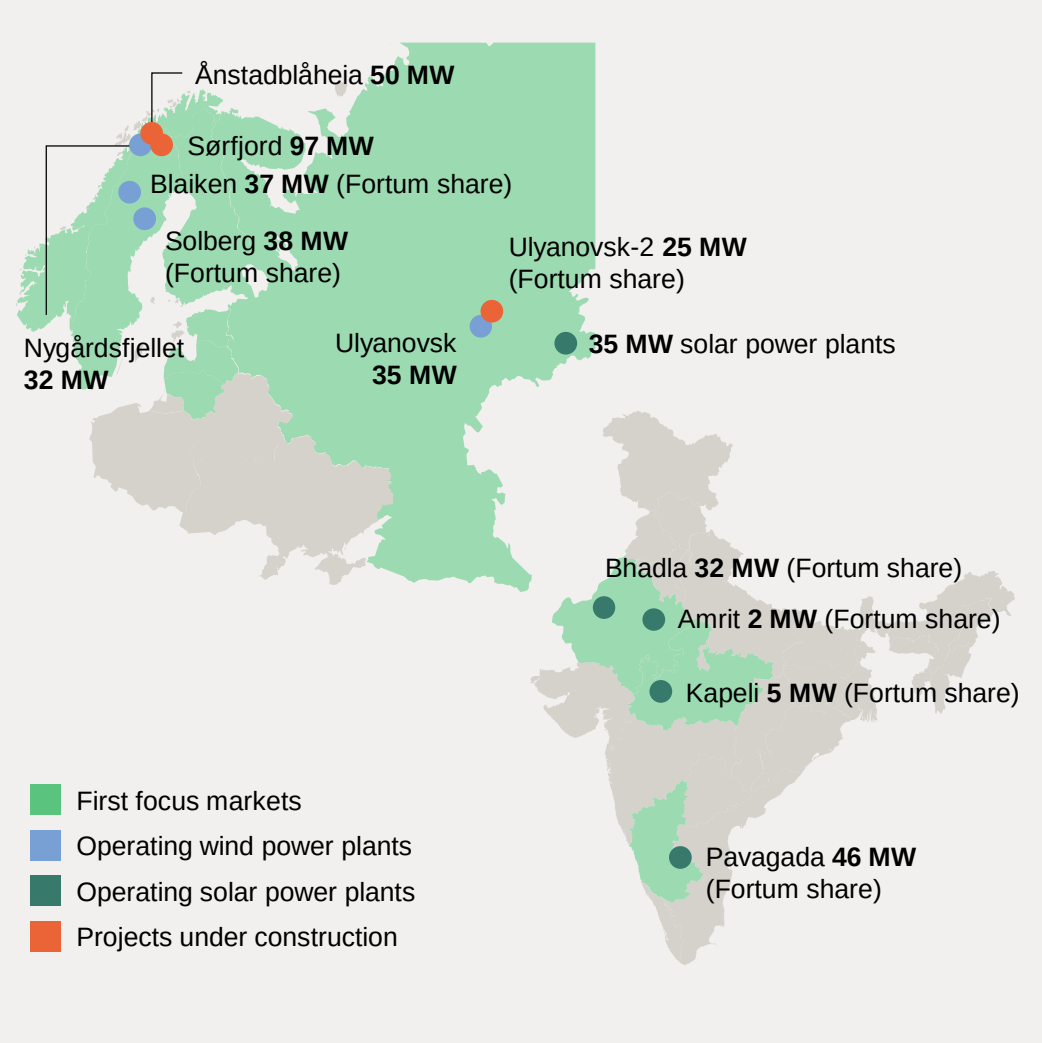
Fortum's carbon exposure among the lowest in Europe

g CO_2/kWh electricity, 2016



Note: All figures, except "Fortum total", include only European power generation.
Fortum's specific emissions of the power generation in 2017 in the EU were 28 g/kWh and in total 174 g/kWh, same as in the previous year.
Source: PwC, December 2017, Climate Change and Electricity (including those companies with data for power generation available only), Fortum

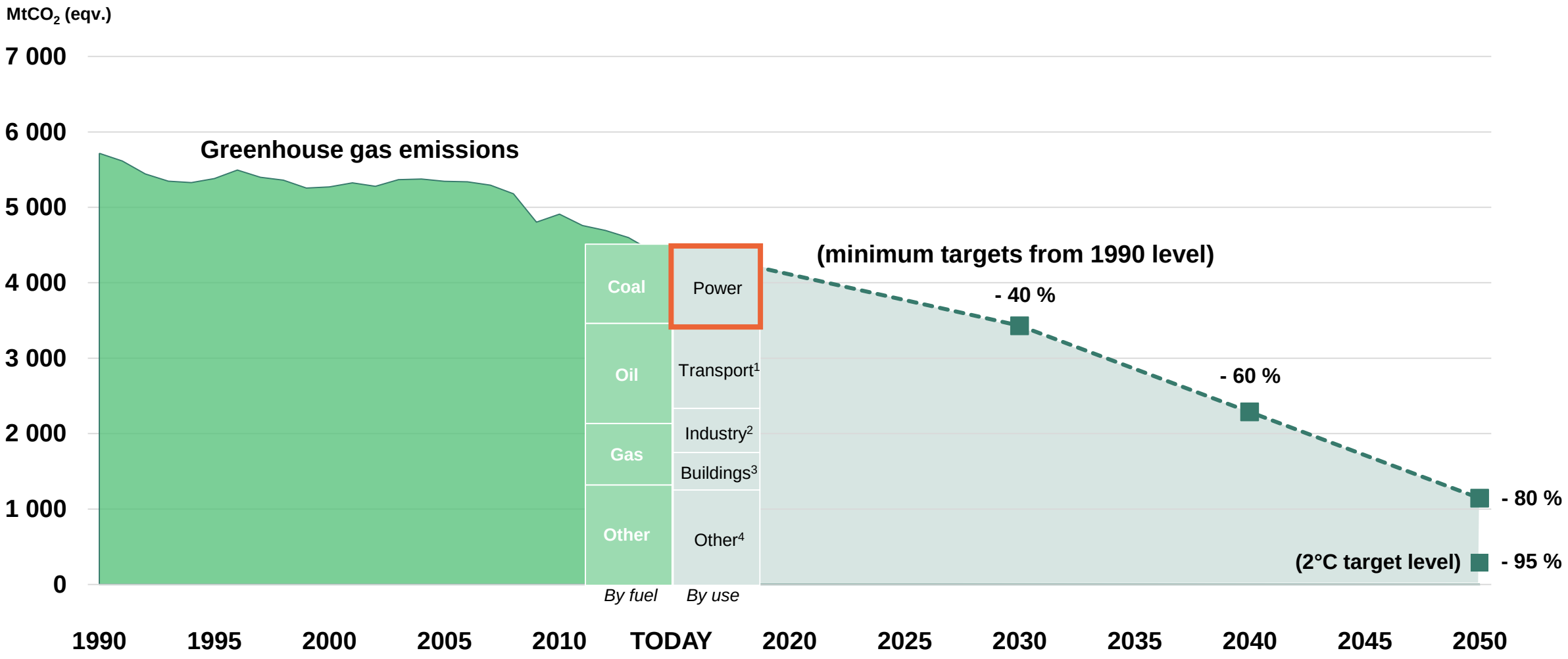
Fortum is growing towards gigawatt scale target in solar and wind power production



PORTFOLIO	TECHNOLOGY	STATUS	CAPACITY MW	FORTUM SHARE, MW	SUPPLY STARTS/ STARTED
NORWAY			**179**	**179**	
Nygårdsfjellet	Wind	Operational	32	32	2006 and 2011
Ånstadblåheia	Wind	Under construction	50	50	2018
Sørfjord	Wind	Under construction	97	97	2019
SWEDEN			**323**	**75**	
Blaiken	Wind	Operational	248	37 (15%)	2017*
Solberg	Wind	Operational	76	38 (50%)	2018
RUSSIA			**2 003**	**1 092**	
Bugulchansk	Solar	Operational	15	15	2016-2017
Pleshanovsk	Solar	Operational	10	10	2017
Grachevsk	Solar	Operational	10	10	2017
	Solar	Under development	110	110	2021-2022
Ulyanovsk	Wind	Operational	35	35	2018
Ulyanovsk-2	Wind	Under construction	50	25 (50%)	2019
Rusnano JV	Wind	Under development	1 773	887 (50%)	2018-2023
INDIA			**435**	**335**	
Amrit	Solar	Operational	5	2 (46%)	2012
Kapeli	Solar	Operational	10	5 (46%)	2014
Bhadla	Solar	Operational	70	32 (46%)	2017
Pavagada	Solar	Operational	100	46 (46%)	2017
Pavagada	Solar	Under development	250	250	2019
TOTAL PORTFOLIO			**2 941**	**1 681**	
		Under development	2 133	1 247	
		Under construction	197	172	
		Operational	611	262	

*) Blaiken last stage IV inaugurated in 2017. NOTE: All figures in MWac and rounded to nearest megawatt. Additionally, target to invest 200 – 400 million euros in India solar and create partnership for operating assets.

European emissions need to decrease drastically beyond power and industry in order to reach the 2050 targets



Source: IEA World Energy Outlook 2017, Eurostat, Fortum Industrial Intelligence

[1] including international aviation and marine

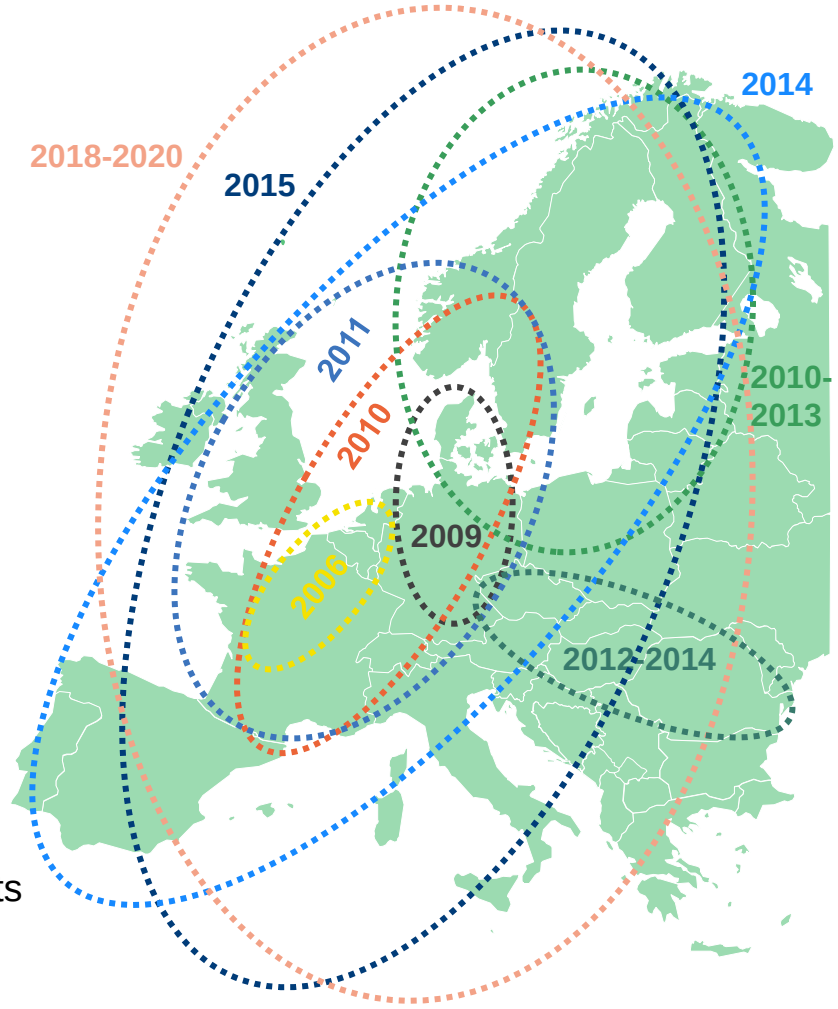
[2] iron & steel and chemicals are among the biggest contributors

[3] residential and commercial heating & cooling

[4] non-energy related emissions: industrial processes and product use, waste management, agriculture, fugitive emissions

Market coupling milestones – Cross-border power flows optimised by power exchanges

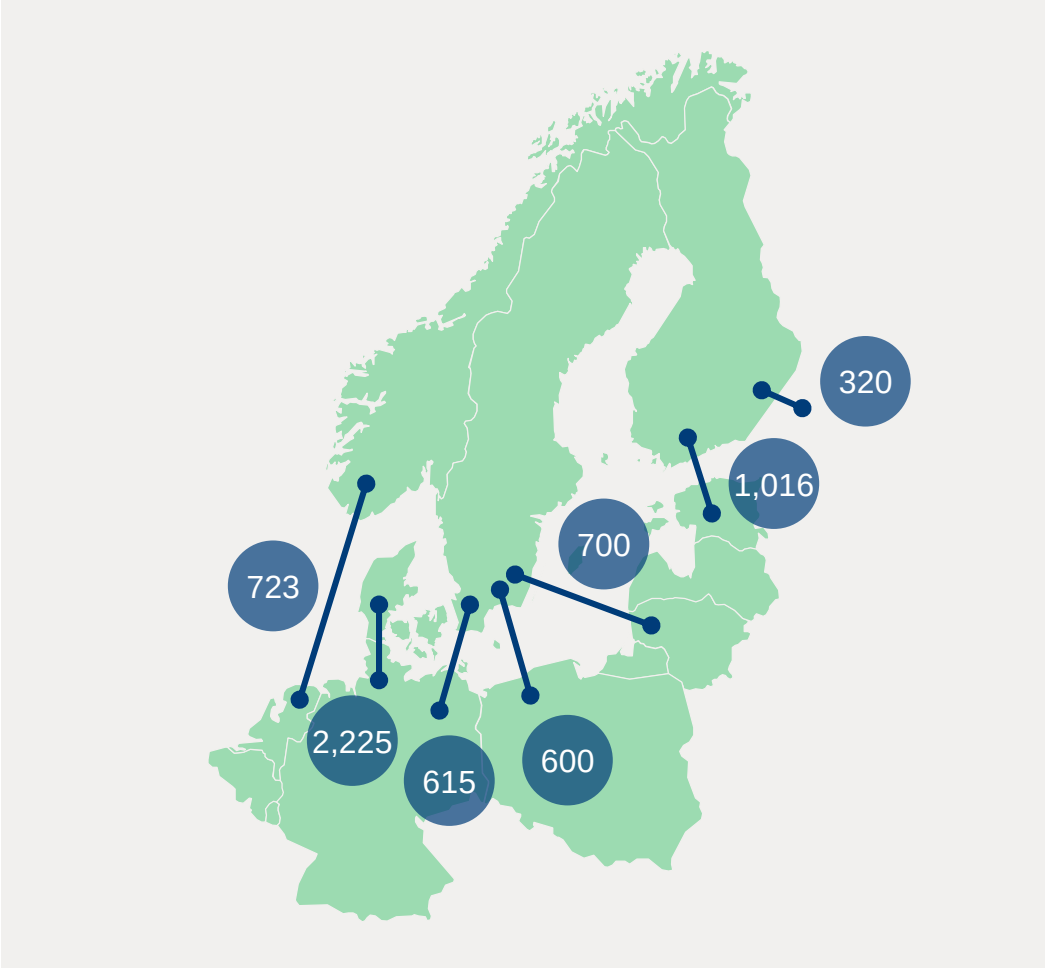
- Day-ahead market coupling between NL, BE and FR since 2006
- Germany – Nord Pool coupling started 11/2009
- Market coupling for Central Western Europe (DE, FR, NL, BE) since 11/2010 with a continued coupling with Nord Pool. NorNed (NO-NL) and BritNed (UK-NL) included in 2011
- Nord Pool price area for Estonia in 2010, Lithuania in 2012 and Latvia in 2013. Poland coupled with Nord Pool since 2010
- Czech, Slovakia and Hungary coupled together since 2012. Romania joined in 2014
- A common market coupling for the whole western Europe was started in 2014. Italy and Slovenia joined in 2015, Croatia in June 2018 and Ireland in October 2018
- Flow-based cross-border capacity allocation for further trade optimisation taken into use in May 2015 for the CWE region. Nordic flow-based implementation planned for 2021
- CEE (Central Eastern Europe) market coupling region to join possibly in 2020 with flow-based capacity allocation. Switzerland waiting for agreement with the EU
- In addition to day-ahead coupling, European-wide intraday market coupling has started with Nordic, Baltic and Continental Western European markets in June 2018
- Balancing market integration under development as well, based on both regional projects and the EU Guideline on Electricity Balancing, in force since 18 December 2017



Current transmission capacity from Nordic area is over 6,000 MW

COUNTRIES	TRANSMISSION CAPACITY MW	
	From Nordics	**To Nordics**
Denmark - Germany	2,225	2,100
Sweden - Germany	615	615
Sweden - Poland	600	600
Sweden - Lithuania	700	700
Norway - Netherlands	723	723
Finland - Estonia	1,016	1,016
Finland - Russia	320	1,300
Total	**6,199**	**7,054**

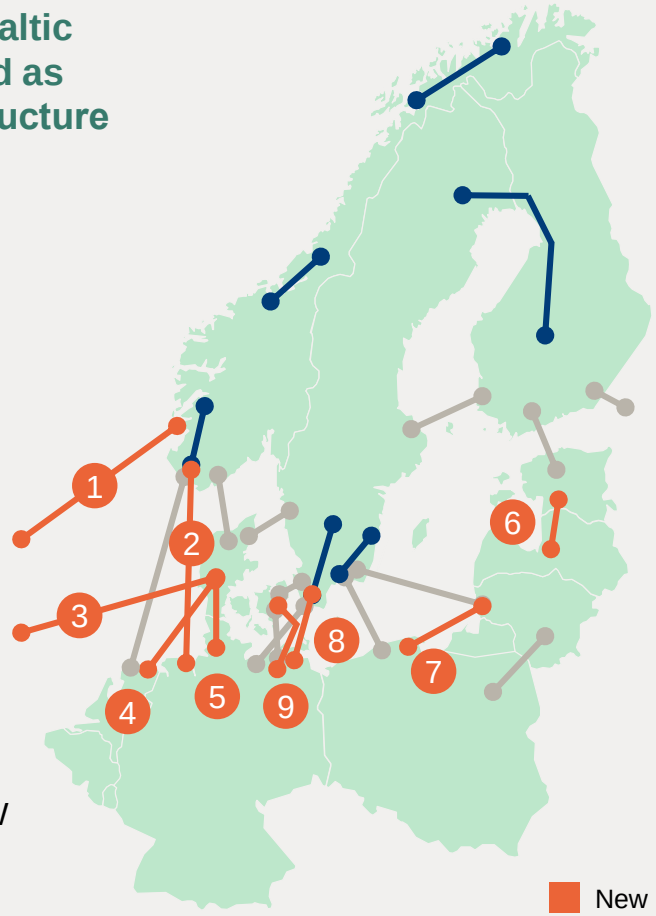
- Theoretical maximum in transmission capacity ~40 TWh per annum, but restrictions especially between DK & DE
- Net export from the Nordic area to Continental Europe and Baltics during year 2017 was 15 TWh
- Net export was 18 TWh in 2015 and 10 TWh in 2016
- Approximately 25 TWh of net export is now reachable



Nordic, Baltic, Continental and UK markets are integrating – Interconnection capacity will double by 2023

The Northern Seas Offshore Grid and the Baltic Energy Market Integration Plan are included as priority electricity corridors in EU's Infrastructure Guidelines, approved in April 2013

1. Two 1,400 MW NO-UK links as EU Projects of Common Interest: NSL to England due to be ready in 2021, NorthConnect to Scotland under debate in Norway and not yet permitted
2. 1,400 MW NordLink as first direct NO-DE link is being built by 2020
3. 1,400 MW DK-UK Viking Link under final permitting in the UK, with commissioning timetable to be determined during 2018
4. 700 MW COBRAcable from DK to NL due to be ready during Q3/2019
5. Jutland – DE capacity planned to grow by 860 MW in 2020, with further 1,000 MW increase in 2022



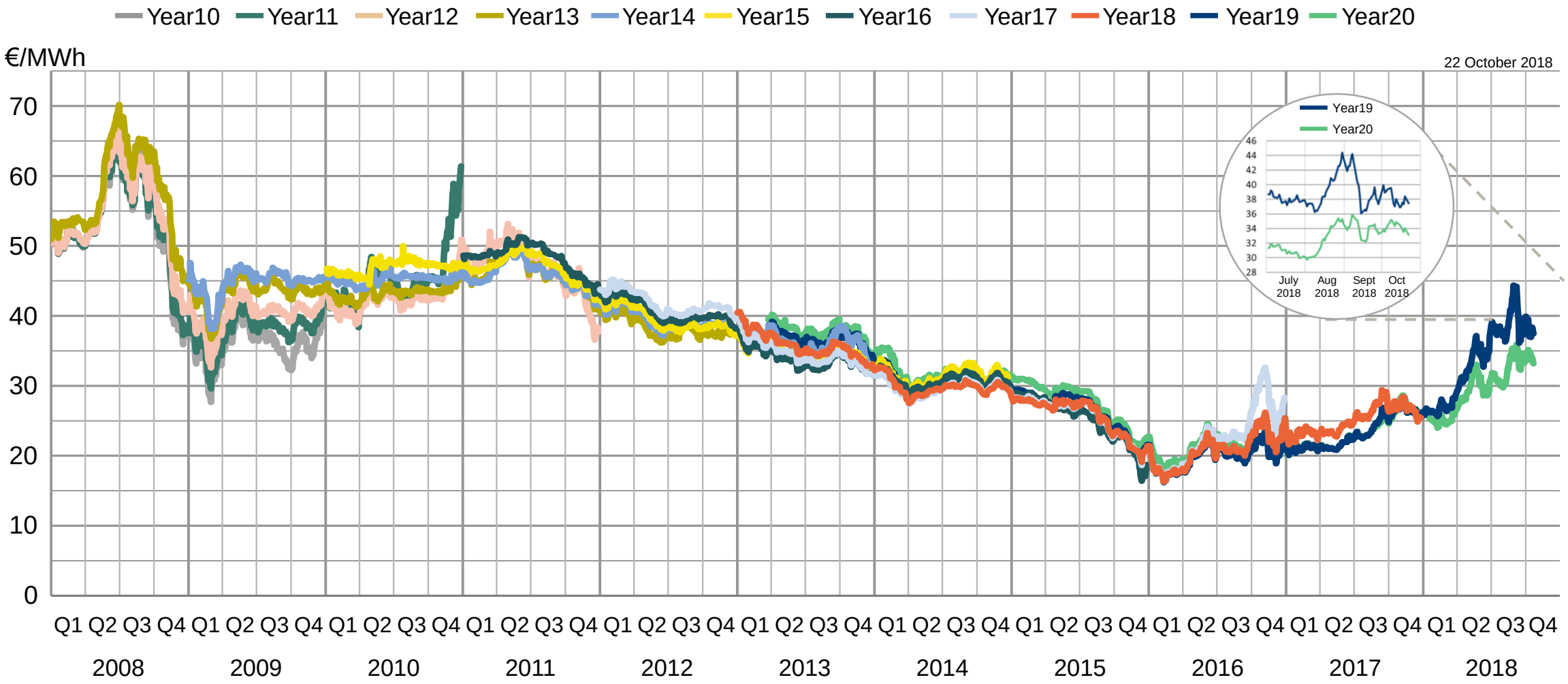
New interconnections will double the export capacity to over 12,000 MW by 2023

- New internal Nordic grid investments provide for increased available capacity for export to the Continent and Baltics
6. EU's Connecting Europe Facility co-financing 3rd EE-LV transmission line, due to be ready in 2020
7. Baltic synchronisation roadmap in June 2018 prioritised a DC sea cable as the required additional PL-LT interconnection by 2025
8. Svenska Kraftnät and 50Hertz signed 1/2017 a cooperation agreement on building the 700 MW Hansa PowerBridge DC link between Sweden and Germany by 2025/26
9. New 400 MW Zealand – DE connection via Kriegers Flak offshore wind area by May 2019

New interconnectors | New Nordic lines | Existing interconnectors

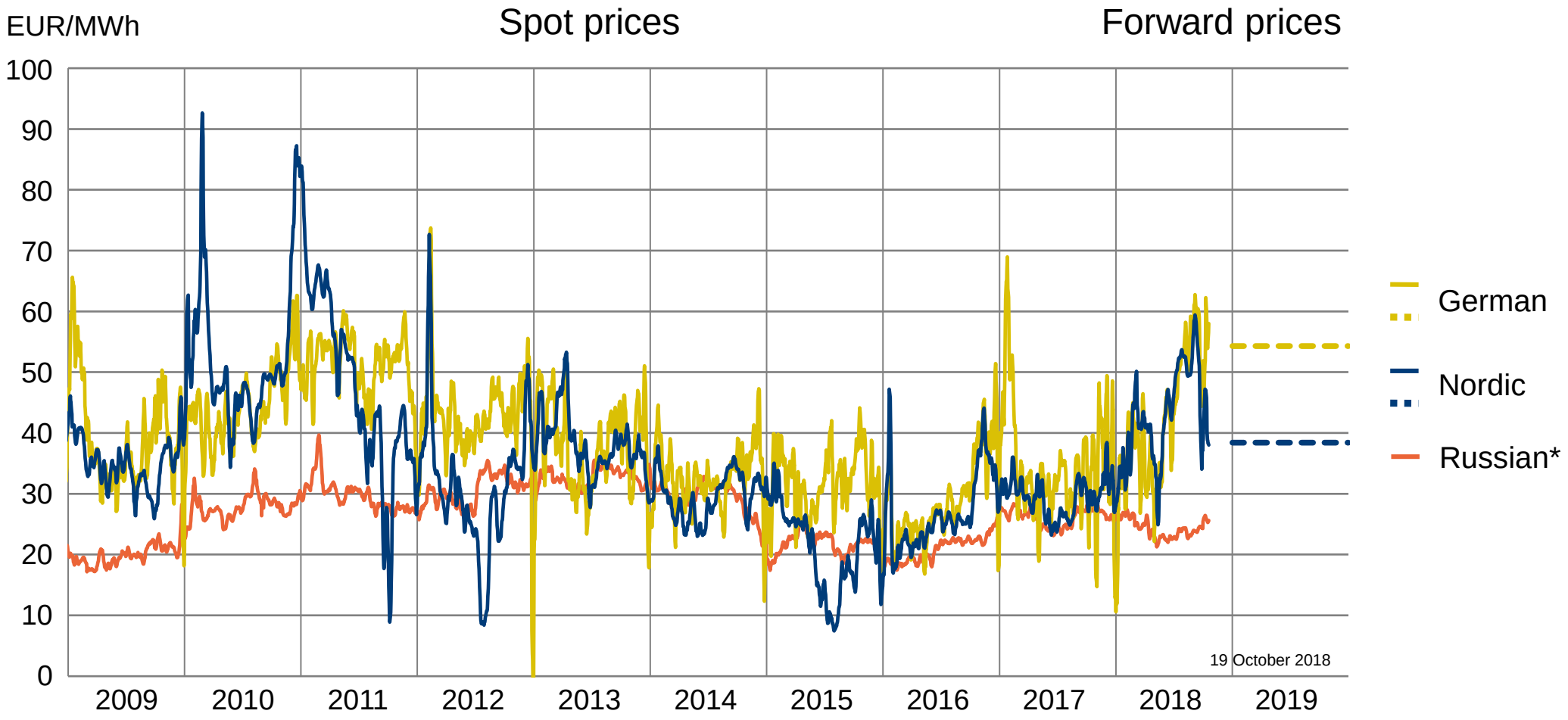
fortum

Nordic year forwards



Source: Nasdaq Commodities, Bloomberg

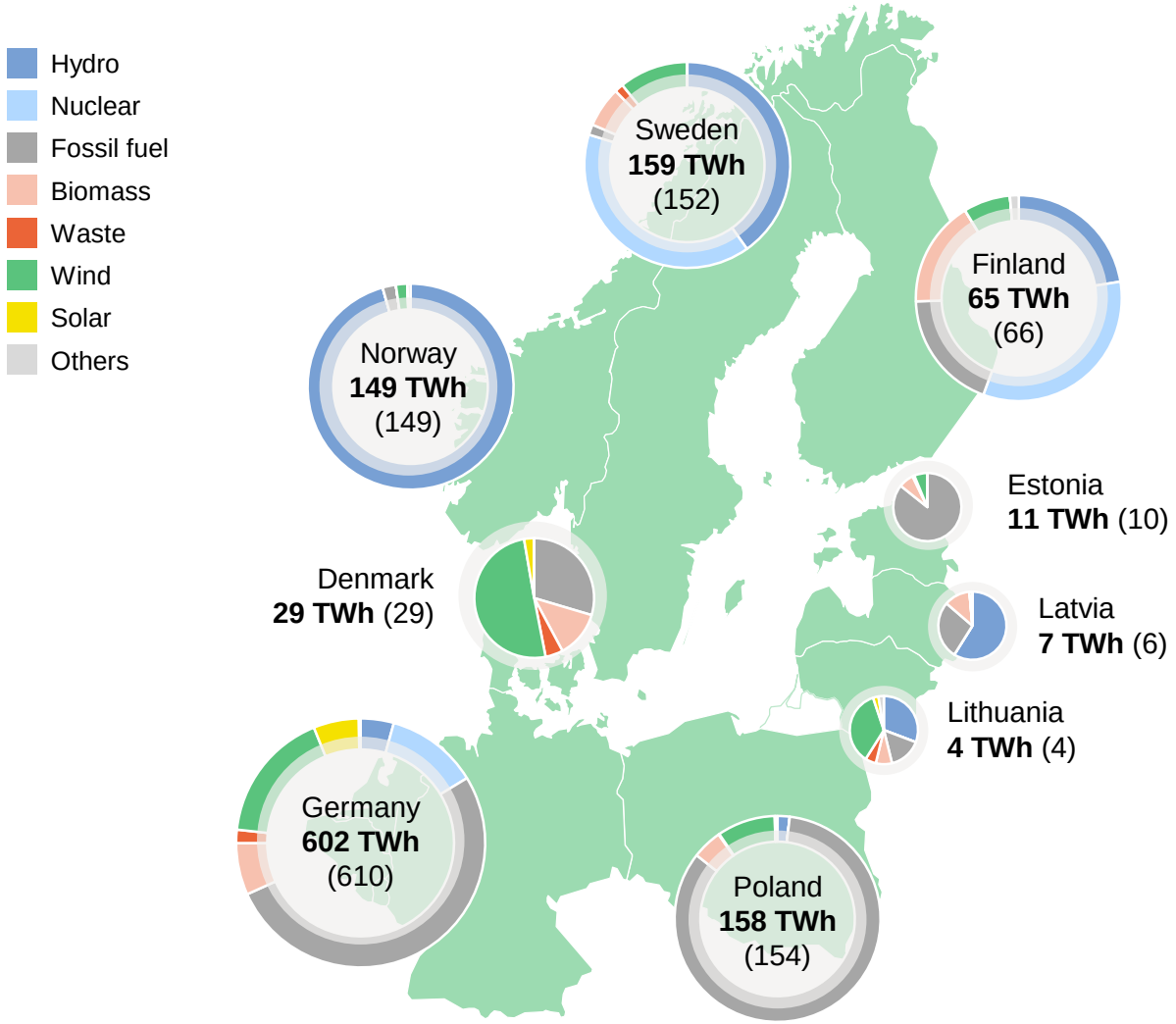
Wholesale power prices



* Including weighted average capacity price

Source: Nord Pool, Nasdaq Commodities, Bloomberg Finance LP, ATS, NP “Market Council”, Fortum

Power Generation in the Baltic Rim in 2017 (2016)



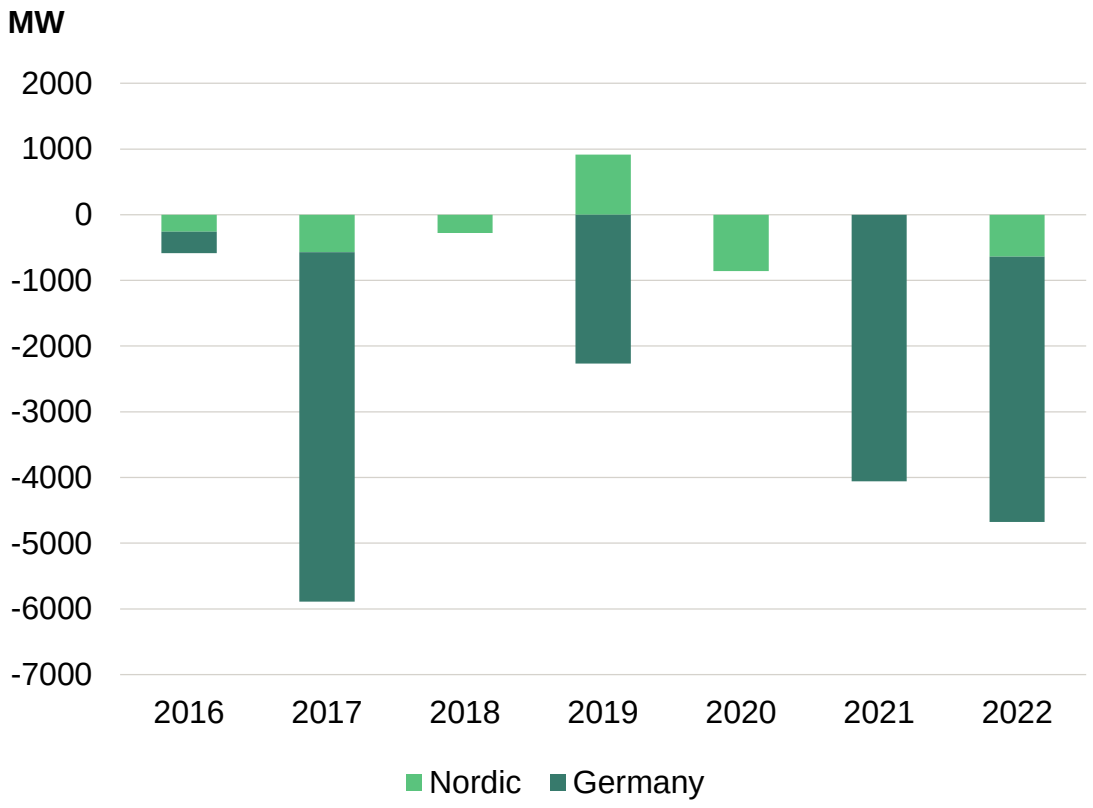
	NORDICS		BALTICS	
2017	TWh	%	TWh	%
Hydro	*221	55	6	25
Nuclear	85	21	-	-
Fossil fuel	26	7	12	55
Biomass	24	6	2	9
Waste	4	1	0	1
Wind	40	10	2	10
Solar	1	0	0	0
Others	1	0	0	0
Total generation	402	100	22	100
	Net export **9 TWh**		Net import **6 TWh**	

*) Normal annual Nordic hydro generation 200 TWh, variation +/- 40 TWh.

Source: ENTSO-E Statistical Factsheet
Graph sizes are illustrative.

Northern European conventional capacity decreasing

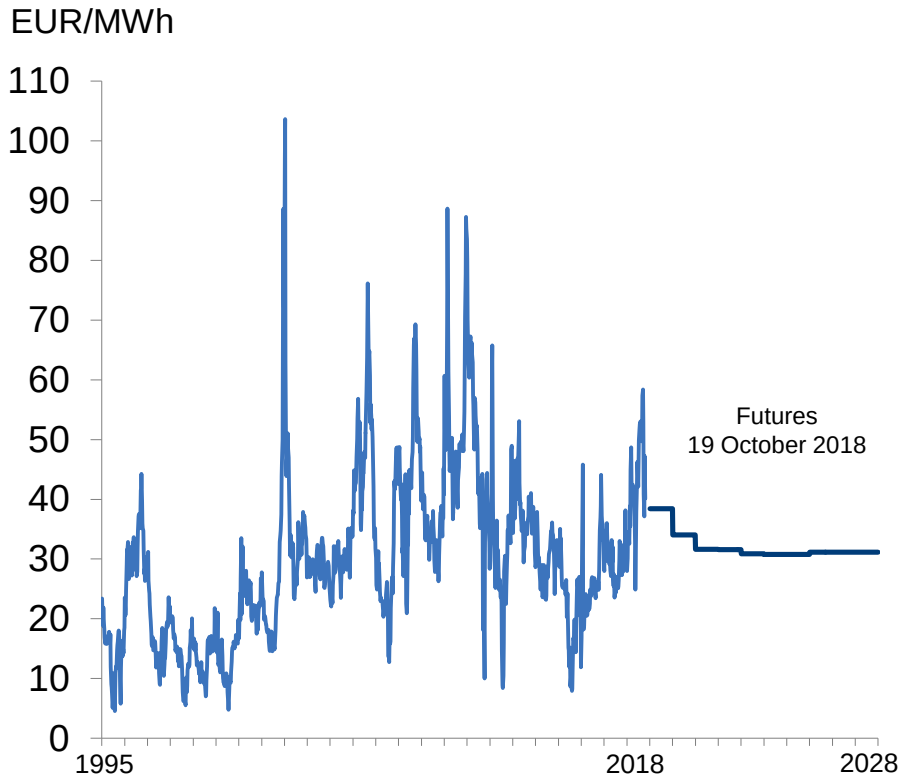
Estimated annual net changes in nuclear and thermal capacity



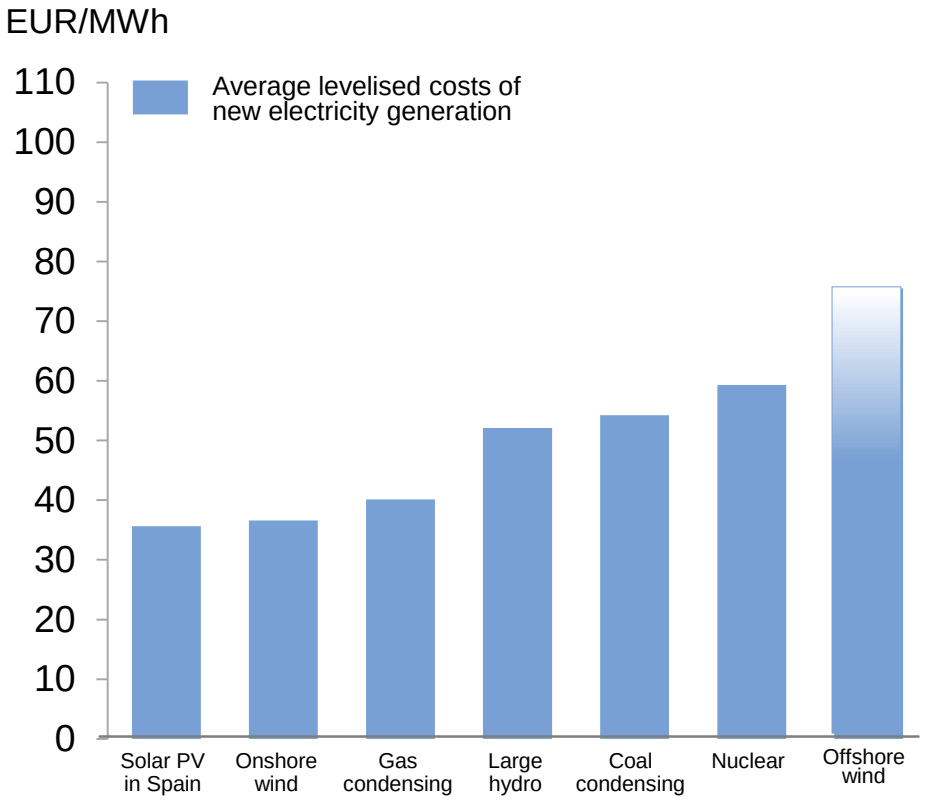
DATE	CAPACITY	AREA	UNIT/ TRANSMISSION	COMMENT
1.10.2017	-562 MW	DE	Frimmersdorf P & Q	Moved to ”Lignite reserve” for 4 years, operational within 10 days notice period. Decommissioning in 1.10.2021.
31.12.2017	-1344 MW	DE	Gundremmingen B	Decommissioning; German nuclear phase-out
1.12.2017	+1200 MW	SE3-SE4	Transmission	Commissioning Sydvästlänken in two steps between, Dec 2017 and Mar 2018. Project is significantly delayed, further delays possible.
1.1.2018	≈ 500 MW	DK1-DE	Transmission	Lowest available capacity will be increased to 700 MW, available capacity during last years has been ca 200 MW
during 2018	+ 1100 MW	DE	Datteln 4	Uniper’s coal condensing unit; targeted commissioning mid-2018.
1.10.2018	- 1100 MW	DE	Lignite reseve	Niederaußem E & F and Jänschwalde F moved to lignite reserve
31.12.2018	-280 MW	NO2	Mongstad CHP	The CHP at Mongstad is phased out following several years of unprofitable operations.
31.12.2018	+0-400 MW	DK2-DE	Kriegers Flak	Offshore connection between DK2 and DE used for both grid connection of offshore wind farms and interconnection.
31.5.2019	+ 1600 MW	FI	Olkiluoto 3	The previously announced commissioning date in the end of 2018 has been delayed to May 2019.
30.3.2019	+700 MW	DK1-NL	Transmission	Cobra cable: trial operation of the interconnector is expected to begin in Q1 2019
30.6.2019	-854 MW	SE3	Ringhals 2	Decommissioning
14.6.2020	-856 MW	SE3	Ringhals 1	Decommissioning

Estimated capacity changes based on publically announced information from various stakeholders

Wholesale electricity price too low to attract investments



Source: Nord Pool, Nasdaq Commodities

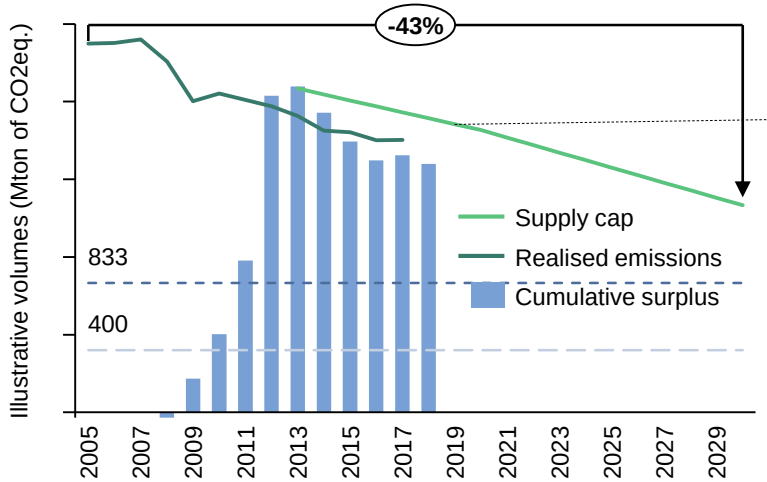


Commodity prices are forward prices as of April 2018, extended with inflation

NOTE: The presented figures are calculated based on data from recent public reports and do not represent Fortum's view. Average achieved price (€/MWh) for the production type depends on availability and flexibility. There are large variations in the cost of hydro, wind and solar depending on location and conditions.

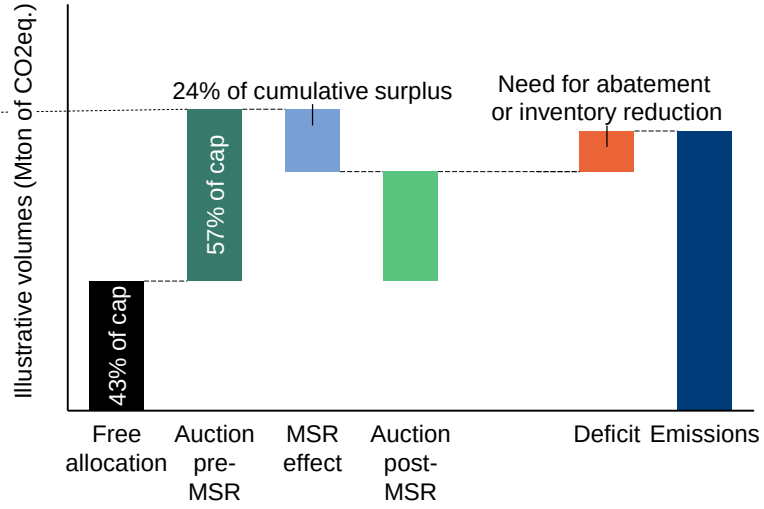
The MSR introduces tightness to carbon market – so far coal to gas switching has been modest due to high gas price

Linear reduction factor (LRF) tightened



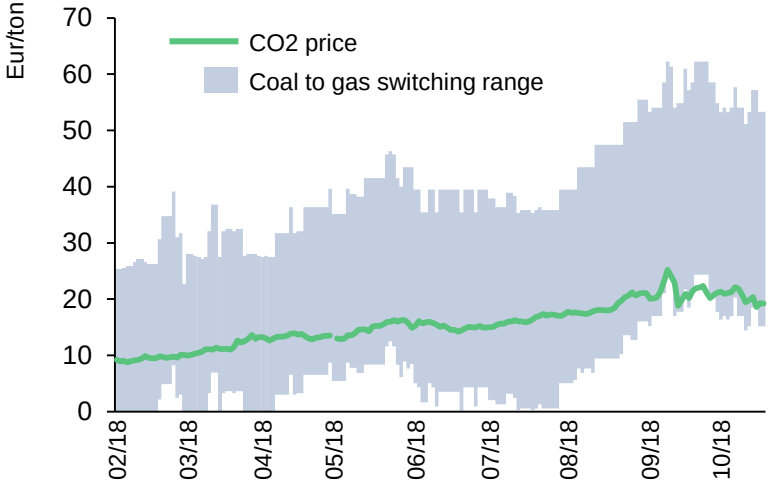
- Linear reduction factor (LRF) reduces the annual supply of allowances (cap) in the ETS from the amount of allowances in 2008-2012[1] by
  - 1.74% in 2013-2020
  - 2.2% in 2021-2030
- In total, supply will decrease by 43% by 2030 vs. 2005 baseline
- Current cap is compatible with the EU 2030 GHG reduction target of 40%, but not with the Paris Agreement or the 1.5ºC ambition level
- The cumulative surplus of allowances is currently about 1.6 billion
- Next LRF review is scheduled in 2024

Market stability reserve restores scarcity by reducing future auction volumes



- When TNAC[2] > 833 Mt, MSR deducts 24% of the TNAC from the auction volume each year placing them into the reserve during 2019-2023
  - MSR rate is 12% during 2024-2030
- When TNAC < 400 Mt, MSR releases 100 million EUAs annually from the reserve adding them to future auctions
- 900 million backloaded allowances from 2014-2016 will be transferred into the MSR in 2019-2020
- As from 2023, allowances in MSR above the total number of allowances auctioned during the previous year will be cancelled
- Next MSR review is scheduled in 2021

Abatement from coal to gas switching depends on coal and gas prices



- Carbon price has developed positively due to the tightening impact of MSR
- However, abatement from coal-to-gas switching depends on relative coal and gas short-run marginal costs which carbon price affects
- Gas price has been very strong in Europe, leaving coal competitive despite carbon price increase
- More switching happens if gas price decreases, or coal and/or carbon price increases further

Efficiency assumptions in switching range;
low-end gas 58% and coal 35%; high-end gas 50% and coal 45%

[1] average annual total quantity of allowances in the period from 2008 to 2012

[2] TNAC = total number of allowances in circulation = supply – (demand + allowances in the MSR). According to the latest publication May 15, 2018 the TNAC corresponds to 1655 million allowances.

Efficiency assumptions in switching range;
low-end gas 58% and coal 35%;
high-end gas 50% and coal 45%

Fortum’s nuclear fleet






	LOVIISA	OLKILUOTO	OSKARSHAMN	FORSMARK
Commercial operation started	Unit 1: 1977 Unit 2: 1981	Unit 1: 1978 Unit 2: 1980 Unit 3: (Under construction)	Unit 1: 1972 (out of oper.) Unit 2: 1974 (out of oper.) Unit 3: 1985	Unit 1: 1980 Unit 2: 1981 Unit 3: 1985
Generation Capacity Fortum’s share	Unit 1: 507 MW Unit 2: 502 MW **Total: 1009 MW**	Unit 1: 880 MW Unit 2: 890 MW (Unit 3: 1,600 MW) **Total: 1,770 MW (3,370)** 27% 470 MW	Unit 1: 473 MW Unit 2: 638 MW Unit 3: 1,400 MW **Total: 1,400 MW** 43% 602 MW	Unit 1: 984 MW Unit 2: 1,120 MW Unit 3: 1,167 MW **Total: 3,271 MW** 22% 727 MW
Yearly production Fortum’s share of production	8 TWh 8 TWh	13 TWh 4 TWh	9 TWh 4 TWh	24 TWh 5 TWh
Share of Fortum’s Nordic production	19%	9%	11%	13%
Majority owner Fortum’s share	Fortum	Pohjolan Voima 26.6%	Uniper 43.4%	Vattenfall 22.2%
Operated by	Fortum	Teollisuuden Voima (TVO)	OKG Aktiebolag	Forsmarks Kraftgrupp

RESPONSIBILITIES

Loviisa: Fortum is the owner, licensee and operator with all the responsibilities specified in the Nuclear Energy Act, Nuclear Liability Act, and other relevant nuclear legislation

Other units: Fortum is solely an owner with none of the responsibilities assigned to the licensee in the nuclear legislation. Other responsibilities are specified in the Companies Act and the Articles of Association and are mostly financial.

Fortum's nuclear power in the Nordics

LOAD FACTOR (%)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Oskarshamn 1*	80	51	63	85	68	77	72	1	12	74	60	81	82
Oskarshamn 2	90	78	76	86	75	90	77	81	33	0	0	0	0
Oskarshamn 3	85	95	88	70	17	31	68	69	77	75	79	83	77
Forsmark 1	85	76	81	88	88	93	79	88	87	94	79	95	88
Forsmark 2	94	72	85	79	64	38	94	82	89	89	91	75	82
Forsmark 3	95	92	88	69	86	81	85	93	88	83	58	82	86
Loviisa 1	95	93	94	86	96	93	94	84	92	92	93	88	93
Loviisa 2	95	88	96	93	95	89	94	91	93	89	92	93	93
Olkiluoto 1	98	94	97	94	97	92	95	90	97	94	96	91	93
Olkiluoto 2	94	97	94	97	95	95	91	96	93	97	89	94	81

Source: Fortum
*) O1 was shut down for decommissioning earlier as originally announced, starting 17.6.2017.



Finnish units world class in availability

Overview of production and consumption:
www.fortum.com/investors - energy related links

Variety of technologies and ages

UNIT	MWE (NET)	SHARE (%)	SHARE (MWE)	COMMERCIAL OPERATION	AGE	TYPE/ GENERATION [1)]	SUPPLIER
Loviisa 1	507	100,0	507	1977-05-09	40	PWR / 1	AEE (Atomenergoexport)
Loviisa 2	502	100,0	502	1981-01-05	36	PWR / 1	AEE (Atomenergoexport)
Olkiluoto 1	880	26,6	234	1979-10-10	38	BWR / 3	Asea-Atom / Stal-Laval
Olkiluoto 2	890	26,6	237	1982-07-10	35	BWR / 3	Asea-Atom / Stal-Laval
Olkiluoto 3	(1,600)	25,0	(400)	(May 2019)		PWR / 3	Areva / Siemens
Oskarshamn 1	473	43,4	205	1972-02-06	45	BWR / 1	Asea-Atom / Stal-Laval
Oskarshamn 2	638	43,4	277	1975-01-01	42	BWR / 2	Asea-Atom / Stal-Laval
Oskarshamn 3	1,400	43,4	607	1985-08-15	32	BWR / 4	Asea-Atom / Stal-Laval
Forsmark 1	984	23,4	230	1980-12-10	37	BWR / 3	Asea-Atom / Stal-Laval
Forsmark 2	1,120	23,4	262	1981-07-07	36	BWR / 3	Asea-Atom / Stal-Laval
Forsmark 3	1,167	20,1	236	1985-08-18	32	BWR / 4	Asea-Atom / Stal-Laval

[1)] Generation refers to technical resemblence based on KSU classification and not to reactor design generations. All reactors are of Generation II except Olkiluoto-3 (EPR) which is of Generation III.

Planned capacity increase:

- Forsmark 1, potential capacity increase of total ~110 MW in 2018-2020.

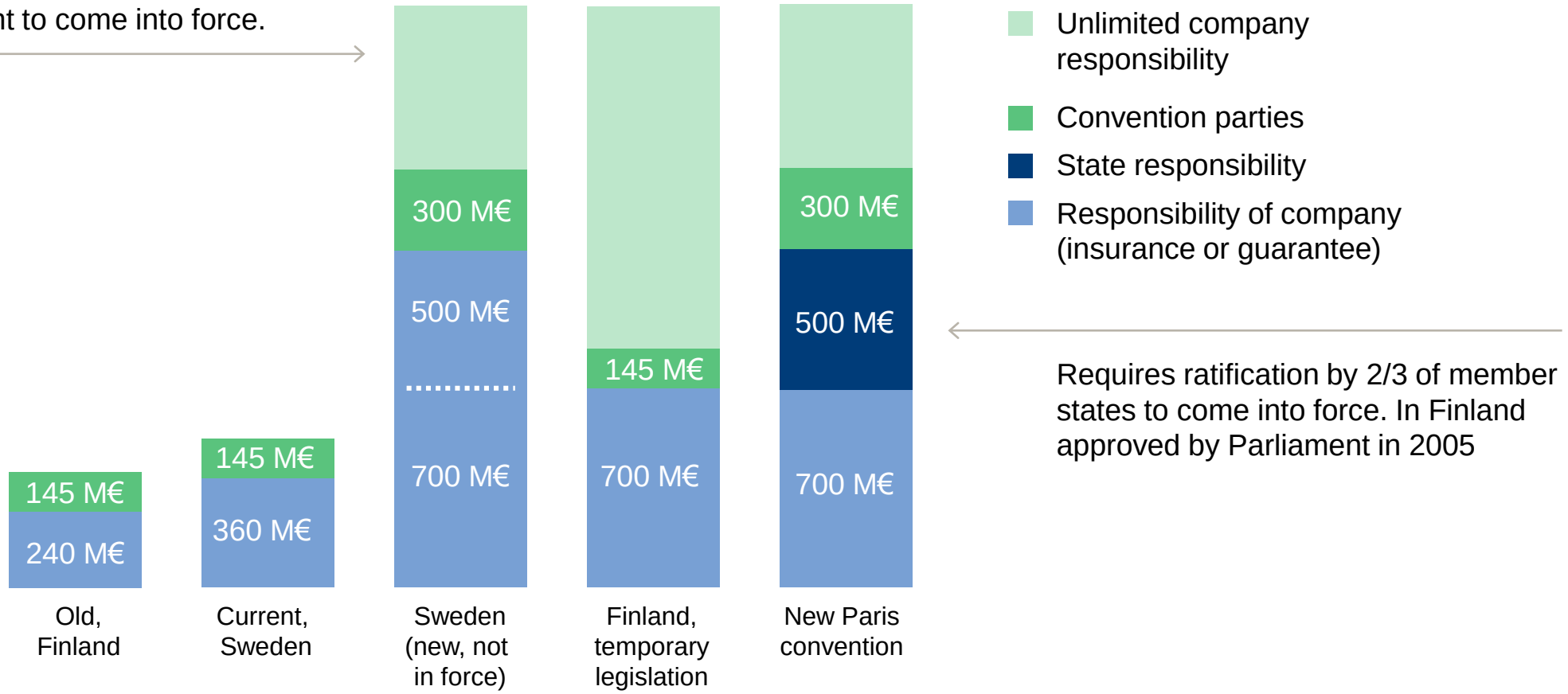
Closing of the units:

- OKG AB's Extraordinary shareholders' meeting decided on 14 October 2015 on the closure of Oskarshamn nuclear power plant units 1 and 2 in Sweden.
- Unit 1 was taken out of operation on June 17, 2017. Unit 2 has been out of operation since June 2013 due to an extensive safety modernisation, and it will not be put back into operation. The closing process for both units is estimated to take several years.
- PWR = (Pressurized Water Reactor) The most common reactor type in the world (e.g. all French units, most US units). Also the Loviisa units are PWRs, but based on Russian design. High pressure prevents water from boiling in the reactor. The steam rotating the turbine is generated in separate steam generators.
- BWR = (Boiling Water Reactor) Similar to the PWR in many ways, but the steam is generated directly in the reactor. Popular reactor type e.g. in Sweden, the US and Japan.

Third party nuclear liability in case of severe accident

Law approved by Parliament in 2010, requires separate decision from Government to come into force.

In force since 1 January 2012



Requires ratification by 2/3 of member states to come into force. In Finland approved by Parliament in 2005

Fortum - a major player in Russia

PAO Fortum (former TGC-10)

- Operates in the heart of Russia's oil and gas producing region, fleet mainly gas-fired CHP capacity
- 26 TWh power generation, 20 TWh heat production in 2017 Investment programme to add 85%, almost 2,200 MW to power generation capacity

TGC-1

- 29.5% of territorial generating company TGC-1 operating in north-west Russia
- ~7,000 MW electricity production capacity (more than 40% hydro), ~27 TWh electricity, ~29 TWh heat in 2017
- In December 2014, Fortum and Gazprom Energoholding signed a protocol to start a restructuring process of TGC-1. Currently Gazprom Energoholding owns 51.8% of the TGC-1 shares and Fortum 29.5%. As part of the restructuring, Fortum will establish a joint venture together with Rosatom to own the hydro assets of TGC-1, while Gazprom Energoholding continues with the heat and thermal power businesses of TGC-1. By utilising its present stake in TGC-1, Fortum would obtain a 75-plus-percent ownership in the new hydro power company, and Rosatom a 25-minus-percent minority holding.
- In October 2015, Fortum announced that the discussions related to the potential restructuring of TGC-1 will continue, and it is not possible to estimate the time schedule or outcome of the discussions.



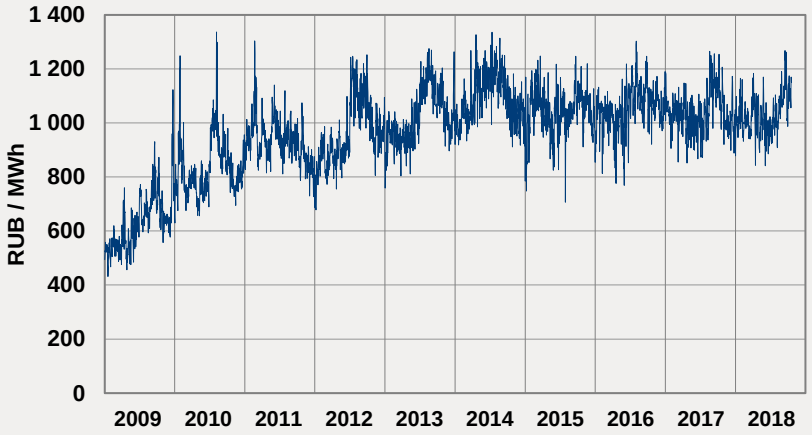
Day ahead wholesale market prices in Russia

Key electricity, capacity and gas prices in the PAO Fortum area

	III/18	III/17	I-III/2018	I-III/2017	2017	LTM
Electricity spot price (market price), Urals hub, RUB/MWh	1,059	1,080	1,025	1,042	1,041	1,0258
Average regulated gas price, Urals region, RUB 1000 m^3	3,812	3,755	3,774	3,661	3,685	3,769
Average capacity price for CCS, tRUB/MW/month	138	139	144	145	148	147
Average capacity price for CSA, tRUB/MW/month	993	808	1,033	870	899	1,021
Average capacity price, tRUB/MW/month	556	484	585	521	535	583
Achieved power price for Fortum in Russia, RUB/MWh	1,884	1,790	1,854	1,801	1,813	1,852
Achieved power price for Fortum in Russia, EUR/MWh	24.8	25.8	25.4	27.6	27.5	25.8

Day ahead power market prices for Urals





Source: ATS
In addition to the power price generators receive a capacity payment.

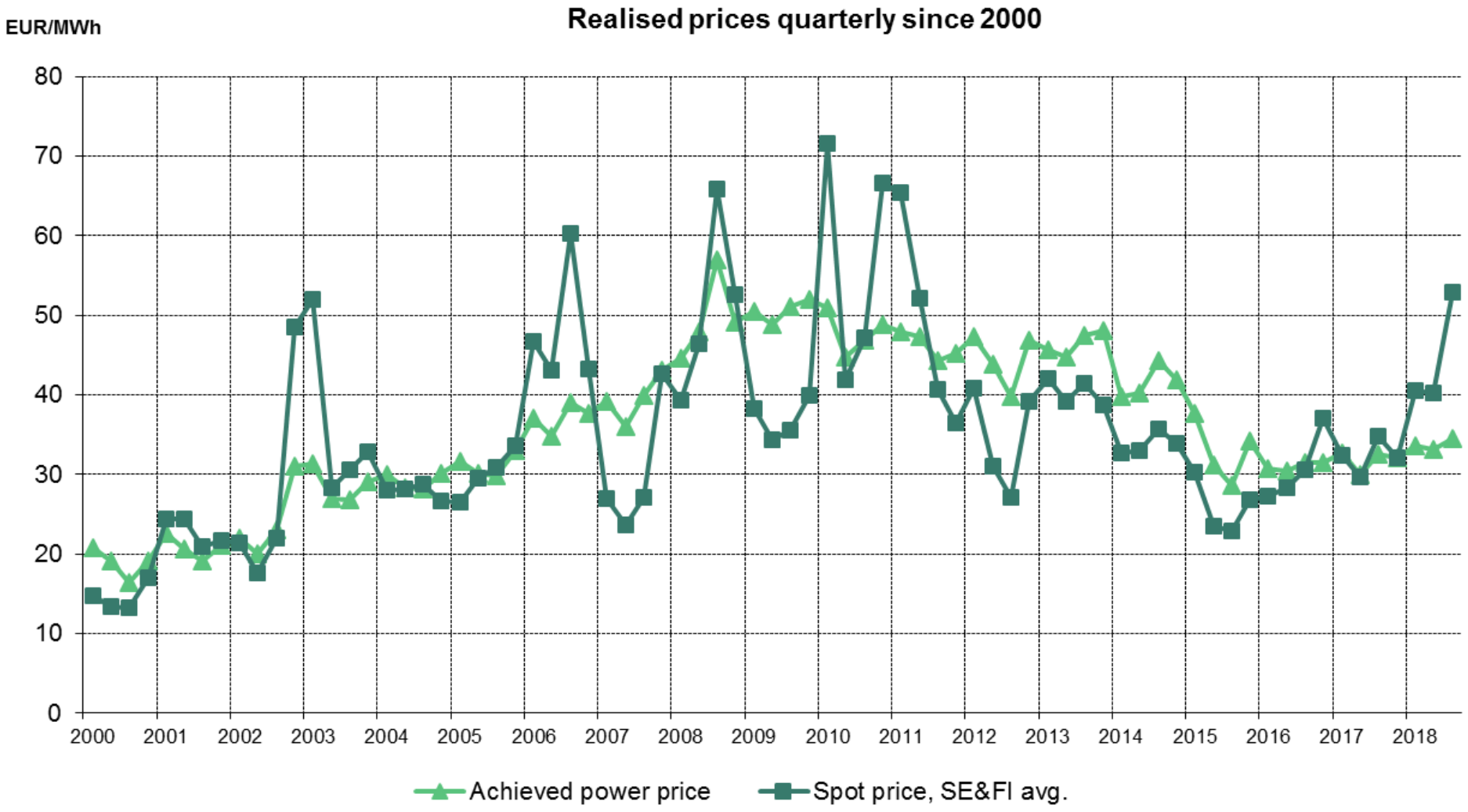
Thermal power generation capacity in Russia at 31.12.2017

YEAR	SUPPLY STARTS	POWER PLANT	FUEL TYPE	CCS CAPACITY	CSA CAPACITY	PRODUCTION TYPE	TOTAL CAPACITY
< 2011		Tyumen CHP-2	Gas	755		CHP/Condensing	755
		Chelyabinsk CHP-2	Gas, coal	320		CHP/Condensing	320
		Argayash CHP	Gas, coal	195		CHP/Condensing	195
		Chelyabinsk CHP-1	Gas, coal	134		CHP/Condensing	134
2011	Feb/2011	Tyumen CHP-1	Gas	450	210	CHP/Condensing	660
	Jun/2011	Chelyabinsk CHP-3	Gas	360	233	CHP/Condensing	593
	Oct/2011	Tobolsk CHP*	Gas	452	213	CHP/Condensing	665*
2013	Apr/2013	Nyagan 1 GRES	Gas		453	Condensing	453
	Dec/2013	Nyagan 2 GRES	Gas		453	Condensing	453
2015	Jan/2015	Nyagan 3 GRES	Gas		455	Condensing	455
	Dec/2015	Chelyabinsk GRES	Gas		247	CHP/Condensing	247
2016	Mar/2016	Chelyabinsk GRES	Gas		248	CHP/Condensing	248
2017	Dec/2017	Chelyabinsk GRES	Gas	248		CHP/CCGT	248
				2,462 MW	**2,298 MW**		**4,760 MW**

*) Tobolsk power plant was sold in Q1/2016

fortum

Hedging improves stability and predictability - principles based on risk mitigation



2009 onwards thermal and import from Russia excluded



Interim Report January-September 2018

Fortum Corporation

24 October 2018

Low hydro volumes partly offset by higher prices

- Nordic power price volatile during the quarter, but significantly up from Q3 2017
- Low hydro reservoir levels
- Volatile commodity and CO_2 prices
- Comparable EBITDA at EUR 230 million, +10%
- Comparable operating profit at EUR 96 million, +2%
  - Profit of EUR 26 million from sale of Indian solar stake
- EPS at EUR 0.05 (0.40)
  - Items affecting comparability EUR -0.01 (0.34)
- Balance sheet discipline with focus on cash flow continues





CHP in Zabrze, Poland

New solar and wind to be built in Russia and India

Markus Rauramo to Uniper Supervisory Board

Multi-fuel CHP inaugurated in Zabrze, Poland

Arun Aggarwal joins Fortum Executive Management

Kivenlahti heat-only boiler investment decision

Solberg wind park in Sweden inaugurated

Fincumet acquisition to expand recycling

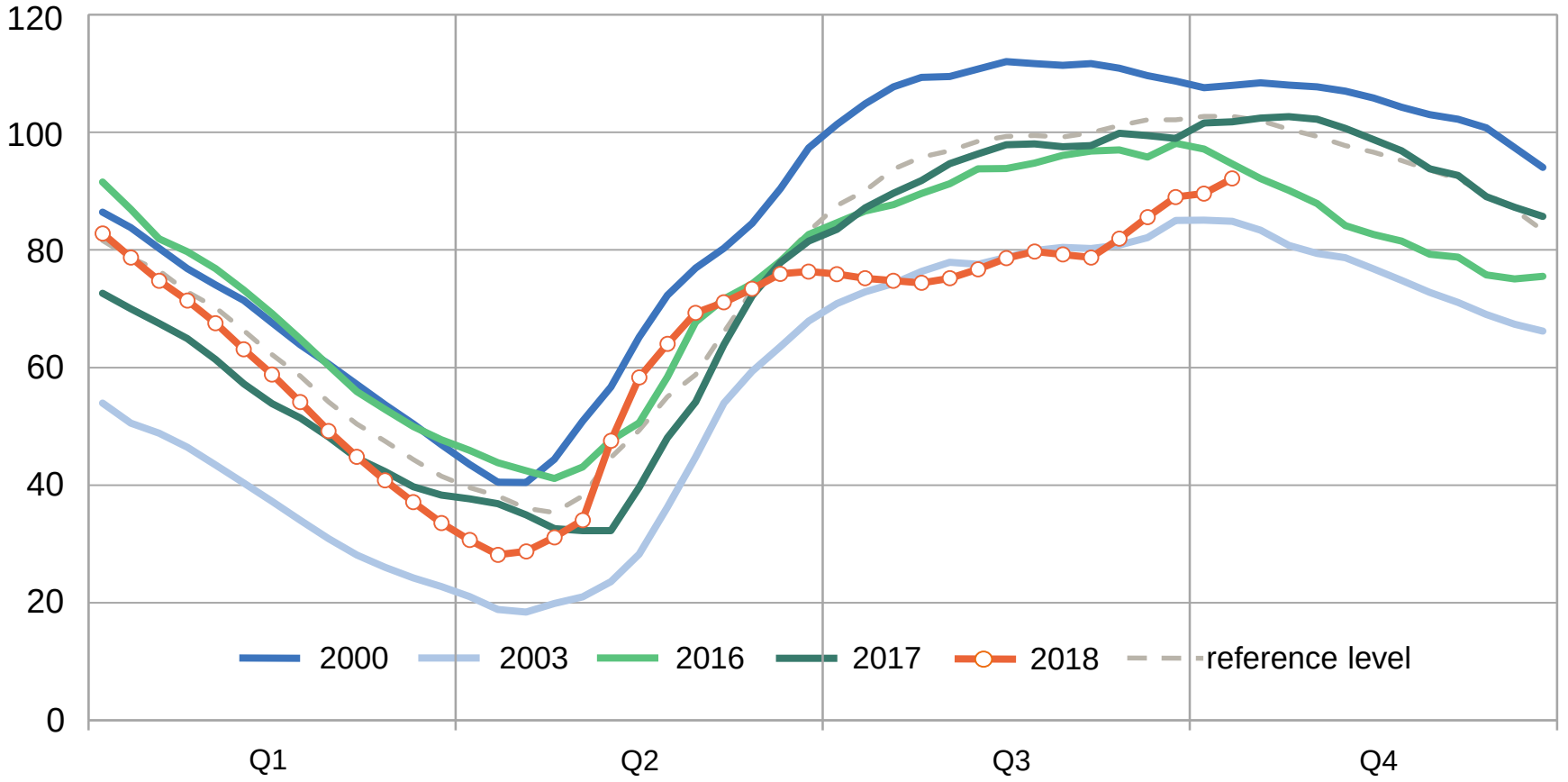
IPCC: Staying below 1.5°C requires “rapid and far-reaching transition” – Fortum calls for an ambitious EU climate strategy

- We need to reach global carbon neutrality by 2050
- The power sector should reduce emissions by 100% well before 2050
- 70-85% of electricity should come from renewables and nuclear will play a bigger role

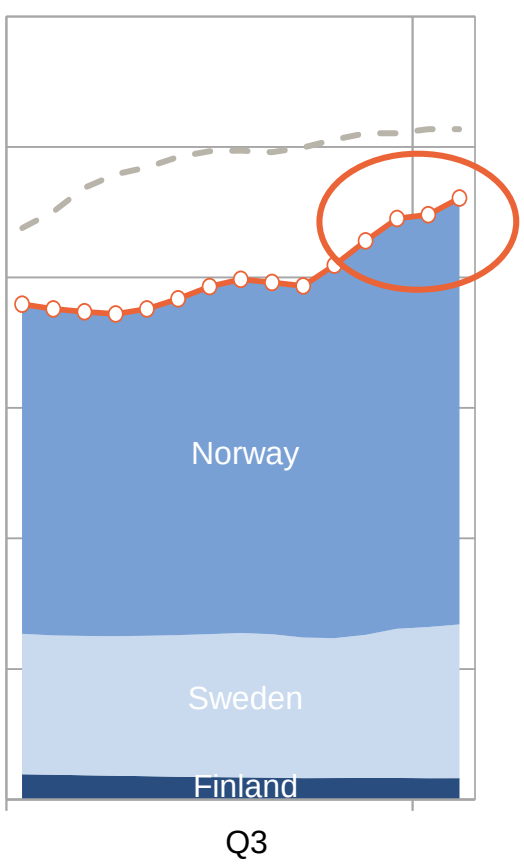
- We believe electrification will be an enabler for decarbonisation
- We ask for s stable, visionary, and long-term political framework
- Carbon pricing should be the key for reaching carbon neutrality and market mechanisms developed to reward CO_2 removal

Nordic water reservoirs clearly below normal level – dry Q3 in the Nordics, increase only in Norway

Reservoir content (TWh)



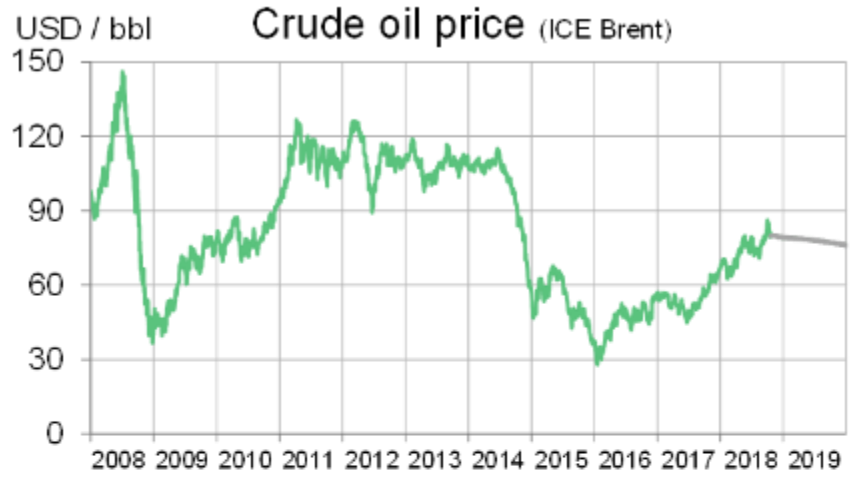
Q3 2018 by country

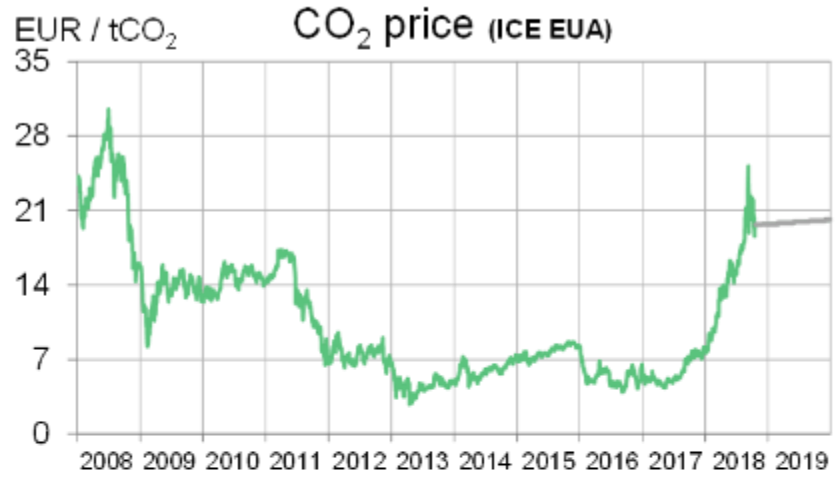


Source: Nord Pool

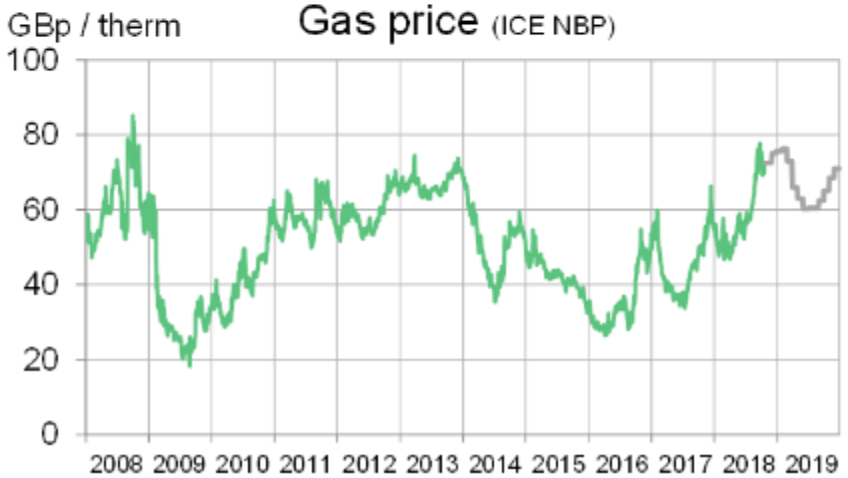
fortum

Volatile commodity and CO_2 emissions prices







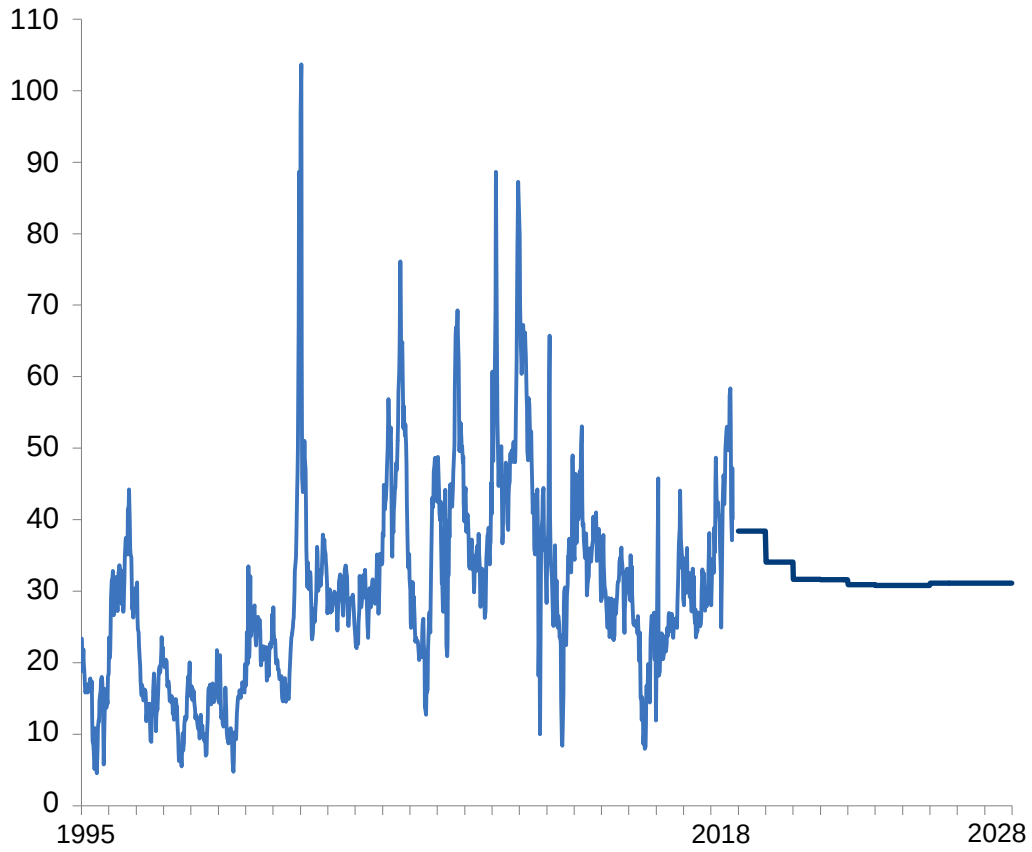


Source: ICE, Thomson Reuters

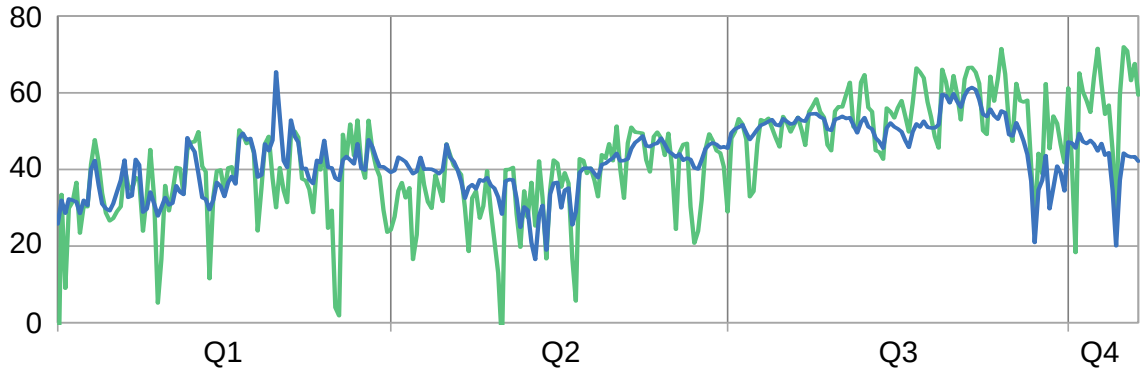
Market prices 19 October 2018; 2018-2019 future quotations

Wholesale power price volatility driven by changing hydrological situation during the quarter

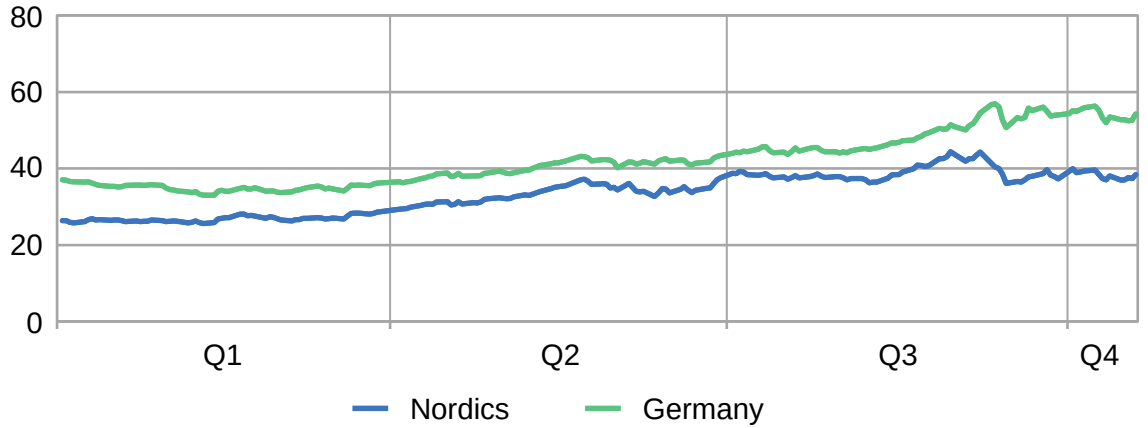
EUR/MWh Nordic spot and forward prices



EUR/MWh Nordic and German daily spot prices in 2018



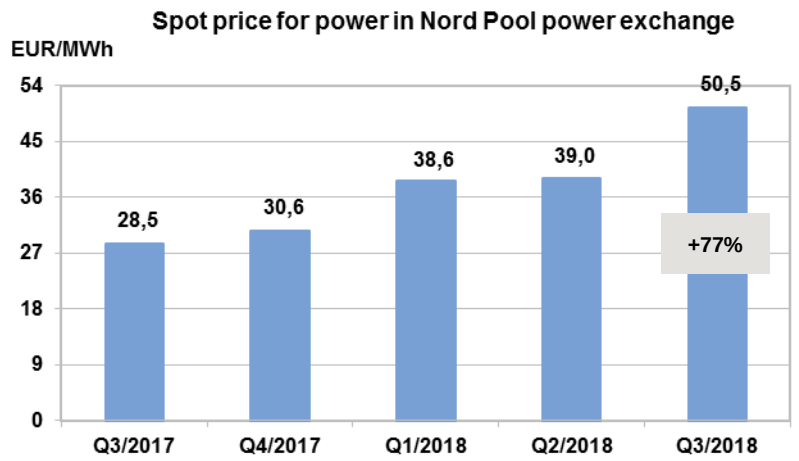
EUR/MWh Nordic and German year 2019 forwards in 2018

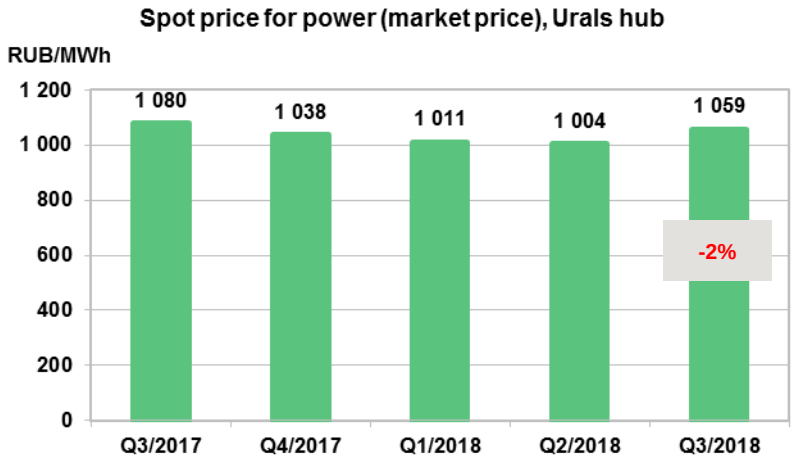


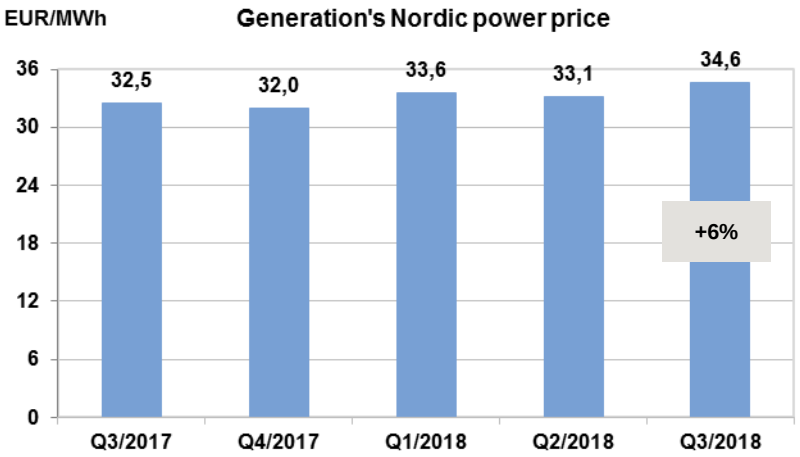
Prices 19 October 2018
Source: Nord Pool, Thomson Reuters, Nasdaq Commodities

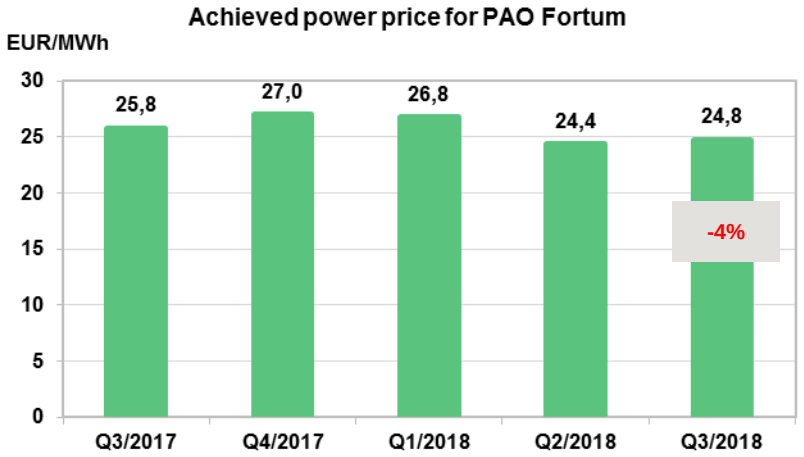
fortum

Clearly higher power prices in the Nordics









Changes refer to year-on-year difference (Q2 2018 versus Q2 2017)
NOTE: Achieved power price (includes capacity payments) in roubles increased by 5%

Key figures

MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Sales	971	919	3,643	3,088	4,520	5,075
Comparable EBITDA	230	210	1,051	852	1,275	1,474
Comparable operating profit	96	94	654	516	811	949
Operating profit	91	387	829	843	1,158	1,144
Share of profits of associates and joint ventures	12	21	82	114	148	116
Profit before income taxes	45	351	779	811	1,111	1,079
Earnings per share, EUR	0.05	0.40	0.73	0.70	0.98	1.01
Net cash from operating activities	133	185	767	699	993	1,061

Generation

- Lower comparable operating profit in Q3
  - All-time low hydro production 2.9 (5.0) TWh due to very low inflows and reservoir levels
  - Higher achieved power prices and lower taxes in Sweden
- Nuclear annual planned outages done
- Higher comparable operating profit in Q1-Q3, +39%
  - Higher achieved power prices and lower taxes in Sweden partly offset by lower hydro and nuclear volumes

MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Sales	359	367	1,282	1,243	1,677	1,716
Comparable EBITDA	103	134	538	412	603	729
Comparable operating profit	70	104	442	317	478	603
Comparable net assets			5,912	5,727	5,672	
Comparable RONA %					8.4	10.3
Gross investments	47	141	123	207	264	180



City Solutions

- Warm weather lowered heat volumes, -10%
- Comparable operating loss in Q3
  - Lower heat and power volumes, change in seasonal heat pricing in Finland
  - Consolidation of Fortum Oslo Varme EUR -11 (-6) million
- Improved comparable operating profit in Q1-Q3, +19%
  - Good result in Q1, positive impact of EUR 19 (-6) from Fortum Oslo Varme partly offset by lower heat and power volumes and weaker result in recycling and waste business in Q2

MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Sales	174	179	736	674	1,015	1,077
Comparable EBITDA	21	21	171	152	262	281
Comparable operating profit	-22	-20	44	37	98	105
Comparable net assets			3,688	3,705	3,728	
Comparable RONA %					5.5	5.0
Gross investments	59	422	142	485	556	213



Consumer Solutions

- Higher sales in Q3 and Q1-Q3 driven by the Hafslund consolidation
  - High competition and customer churn in the Nordics continued
- Slightly higher comparable operating profit in Q3
  - Hafslund result impact of EUR 4 million
- Increased comparable operating profit in Q1-Q3, +57%
  - Consolidation of Hafslund had a positive impact of EUR 24 million
  - Profitability burdened by lower sales margins and the amended service agreements for the divested electricity distribution companies

MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Sales	332	238	1,204	644	1,097	1,657
Comparable EBITDA	22	10	79	32	57	104
Comparable operating profit	7	5	36	23	41	54
Comparable net assets			631	661	638	
Customer base, million			2.47	2.48	2.49	
Gross investments	12	488	33	491	493	35



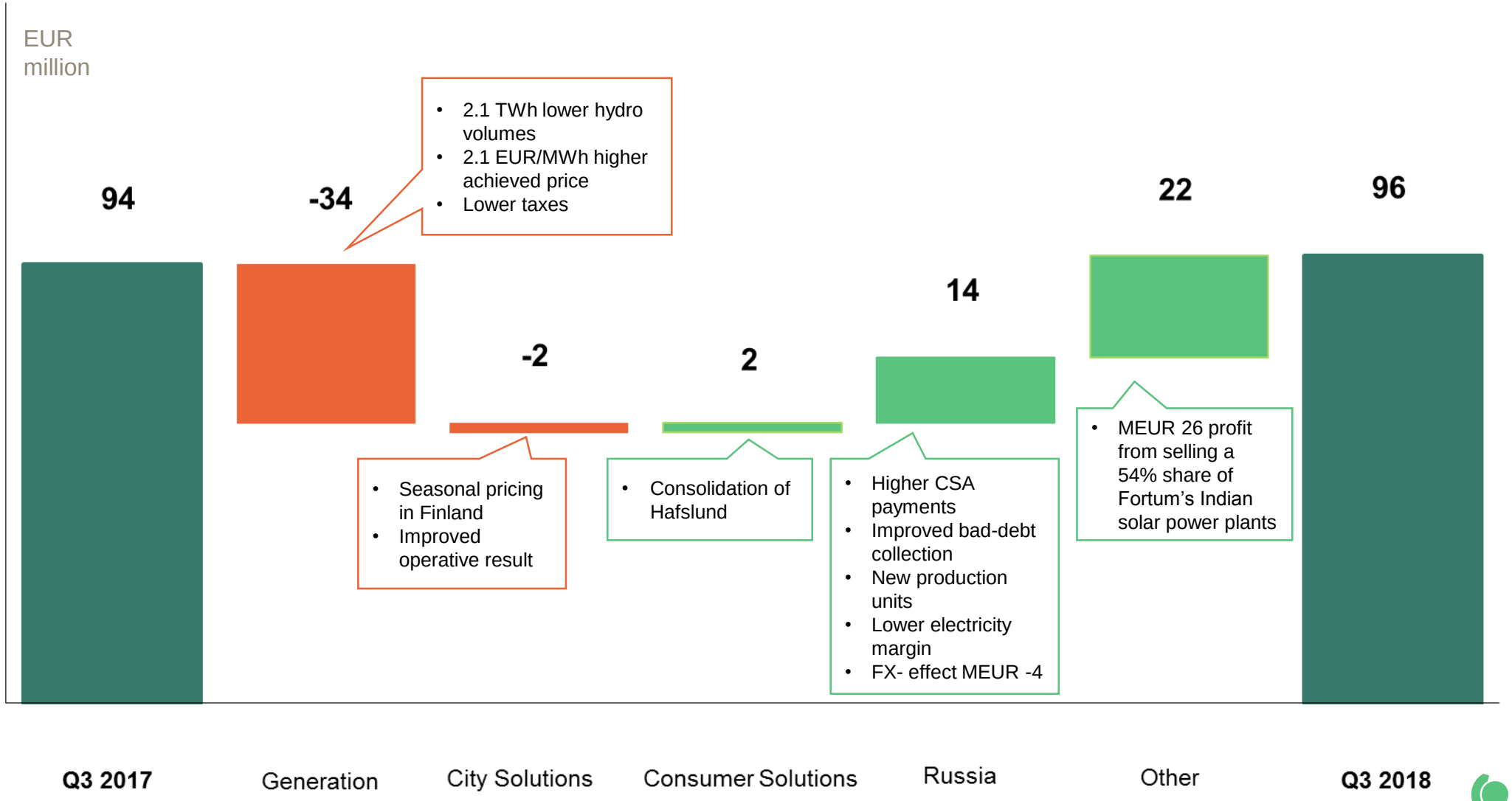
Russia

- Increased comparable operating profit in Q3, +54%
  - Positive impact from higher CSA payments (Nyagan 1 and Nyagan 2), improved bad-debt collection and contribution from new production units
  - Weaker rouble EUR -4 million
- Lower comparable operating profit in Q1-Q3, -14%
  - New units and higher CSA payments offset by negative impact from weakened rouble EUR -22 million, bad debt provisions and lower electricity margins

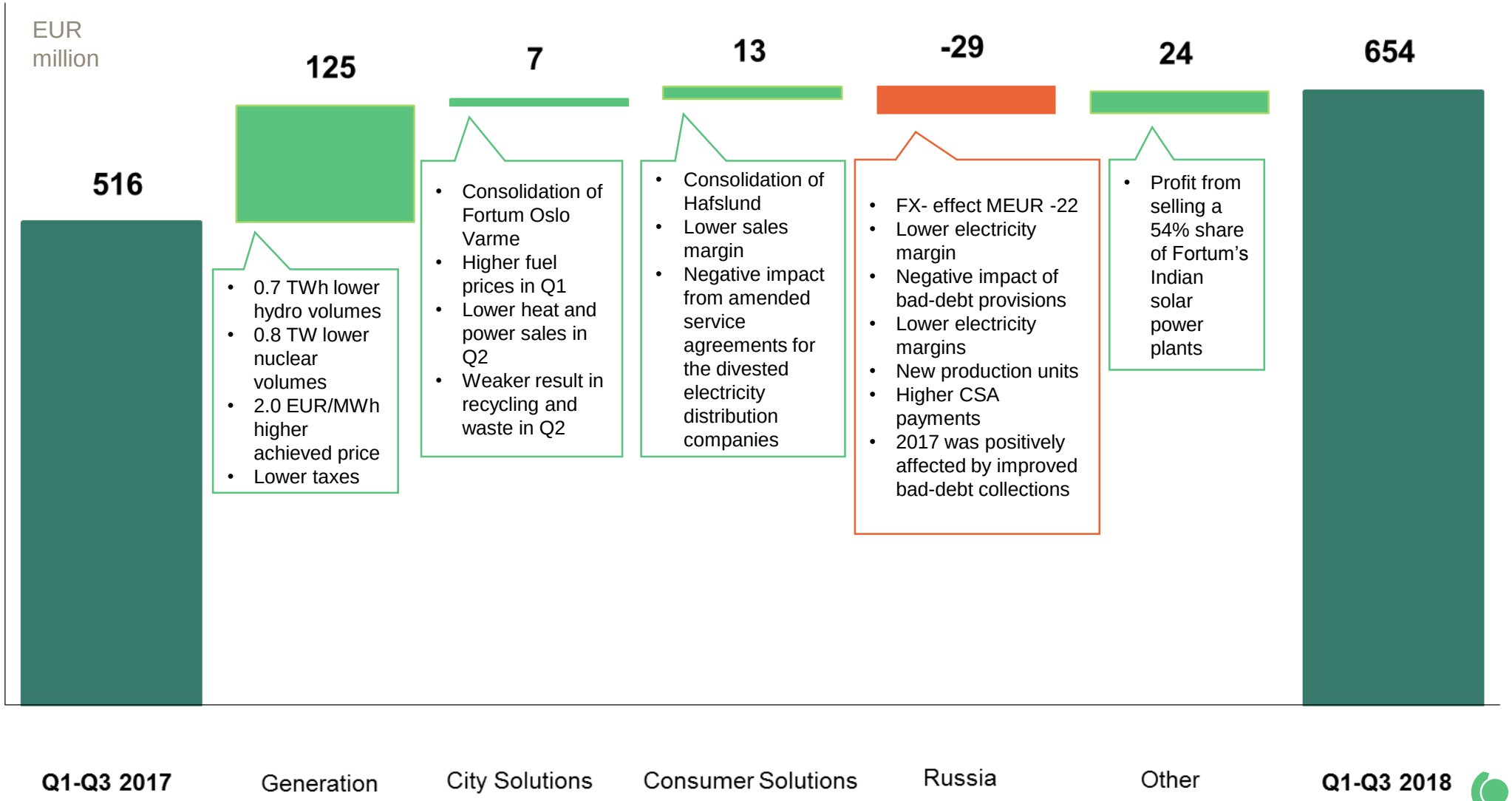
MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Sales	200	200	764	786	1,101	1,079
Comparable EBITDA	76	61	291	317	438	412
Comparable operating profit	40	26	182	211	296	267
Comparable net assets			2,853	3,117	3,161	
Comparable RONA %					10.1	10.1
Gross investments	11	37	51	110	277	218



Q3 2018 – All-time low hydro volumes, profit from sale of solar stake and improved operative result in Russia



Q1-Q3 2018 – Comparable operating profit positively impacted by higher hydro volumes and higher achieved price



Cash flow statement

MEUR	Q3 2018	Q3 2017	Q1-Q3 2018	Q1-Q3 2017	2017	LTM
Comparable EBITDA	**230**	**210**	**1,051**	**852**	**1,275**	**1,474**
Realised FX gains/losses	72	-8	205	-72	-83	194
Paid net financial costs, income taxes and other	-80	-78	-226	-207	-281	-299
Change in working capital	-89	61	-263	126	81	-308
of which change of settlements for futures	*-8*	*30*	*-298*	*124*	*141*	*-281*
Net cash from operating activities	**133**	**185**	**767**	**699**	**993**	**1,061**
Capital expenditures	-142	-162	-394	-470	-657	-581
Acquisitions of shares	-163	-878	-3,913	-929	-972	-3,956
Divestments of shares	88	740	258	740	741	259
Change in cash collaterals and restricted cash	89	-97	-87	-24	-3	-66
Other investing activities	-19	-15	29	72	85	41
Cash flow from investing activities	**-147**	**-412**	**-4,107**	**-611**	**-807**	**-4,303**
Cash flow before financing activities	**-14**	**-227**	**-3,340**	**88**	**187**	**-3,241**
Paid dividends			-977	-977	-977	-977

- Increased net cash from operating activities due to improved EBITDA
- Positive impact of EUR 277 million due to realised FX compared to Q1-Q3 2017
- More cash tied to the daily cash settled futures and cash collaterals for forwards hedging power price
- Uniper PTO was financed with existing cash resources of EUR 1.95 billion and bridge loan financing of EUR 1.75 billion
- Nasdaq Clearing default fund loss of EUR 20 million as financial cost
- Payment of dividend EUR 977 million

fortum

Ongoing actions to deleverage with aim to optimise cash flow and maintain financial flexibility

	LTM	2017	TARGET
Comparable EBITDA, MEUR	1,474	1,275	
Interest-bearing net debt, MEUR	5,244*	988	
Comparable net debt/EBITDA ratio	3,6x	0.8x	Around 2.5x
Return on capital employed (ROCE), %	7.0	7.1**	At least 10%

*) As per 30.9.2018
**) Includes capital gains of Hafslund transactions

Higher debt and lower cash due to payment of the Uniper investment in Q2 2018

Liquid funds EUR 0.7 billion

Committed credit lines of EUR 1.8 billion

Disciplined agenda to continue:

1. Capex prioritisation
2. Business focus and cash flow optimisation
3. Overall efficiency improvements

Outlook

Hedging

For remainder of 2018:
~80% hedged at EUR 30 per MWh
(75% at EUR 29)

For 2019:
~65% hedged at EUR 30 per MWh
(60% at EUR 28)

For 2020:
~35% hedged at EUR 28 per MWh
(not disclosed earlier)

2018 Estimated annual capital expenditure, including maintenance and excluding acquisitions

EUR 600-700 million

Targeted cost synergies of Hafslund transaction EUR 15-20 million gradually materialising 2019-2020

City Solutions:
EUR 5-10 million

Consumer Solutions:
~EUR 10 million

Taxation

Effective tax rate for 2018 for the Group 19-21%

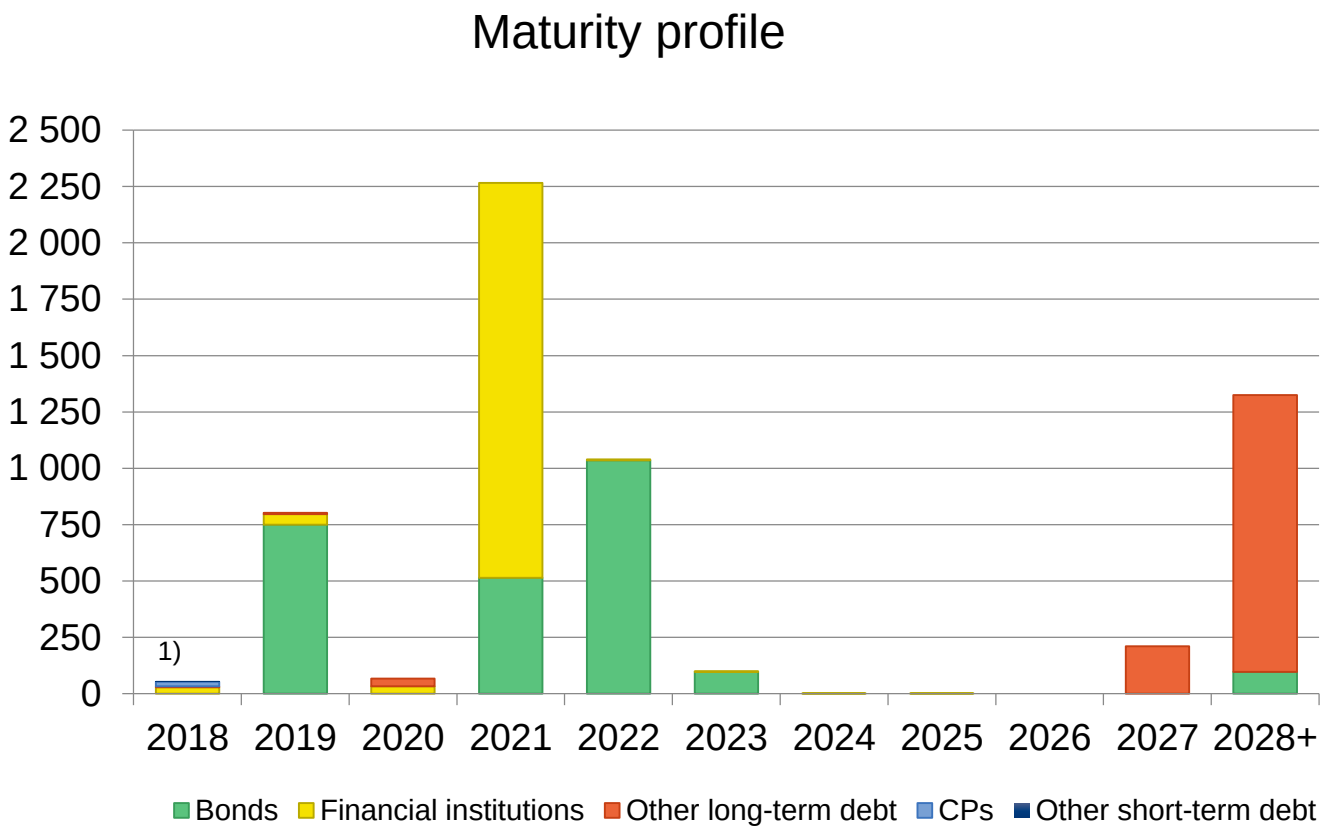
In Sweden nuclear capacity tax abolished from 2018 and hydro assets' real estate tax rate to decrease over a four-year period (2017-2020)

Demand growth

Electricity demand in the Nordics is expected to grow by ~0.5% on average

fortum

Debt portfolio and average interest rate
September 30, 2018



- **Total interest-bearing debt EUR 5,975 million**
  - Average interest 2.4% (2017: 3.6%)
  - Portfolio mainly in EUR and SEK with average interest cost 1.6% (2017: 2.4%)
  - EUR 716 million (2017: 773) swapped to RUB, average interest cost including cost for hedging 7.9% (2017: 9.5%)

[1)] In addition Fortum has received EUR 106 million based on Credit Support Annex agreements with several counterparties. This amount has been booked as a short term liability.

Next events:

CMD on 13 November 2018
FY 2018 results on 1 February 2019
The AGM on 26 March 2019
Q1/2019 results on 26 April 2019
Q2/2019 results on 19 July 2019
Q3/2019 results on 24 October 2019

To subscribe Fortum's releases, please fill out the subscribtion form on our website
https://www.fortum.com/about-us/media/media-room/subscribe-press-releases

For more information,
please visit **www.fortum.com/investors**

Fortum Investor Relations and Financial Communications

Ingela Ulfves
Vice President,
Investor Relations and
Financial Communication
+358 (0)40 515 1531
ingela.ulfves@fortum.com

Rauno Tiihonen
Manager
+358 (0)10 453 6150
rauno.tiihonen@fortum.com

Måns Holmberg
Manager
+358 (0)44 518 1518
mans.holmberg@fortum.com

Pirjo Lifländer
IR Specialist
+358 (0)40 643 3317
pirjo.liflander@fortum.com

Meeting requests:
Pia Lilja
Executive Assistant
+358 (0)50 553 5529
pia.lilja@fortum.com

Follow us on:

www.twitter.com/Fortum
www.linkedin.com/company/fortum
www.youtube.com/user/fortum
Fortum ForEnergy blog at
fortumforenergyblog.wordpress.com

Join the change

fortum