

FORTUM – For a cleaner world

Investor / Analyst material

March 2019

Disclaimer

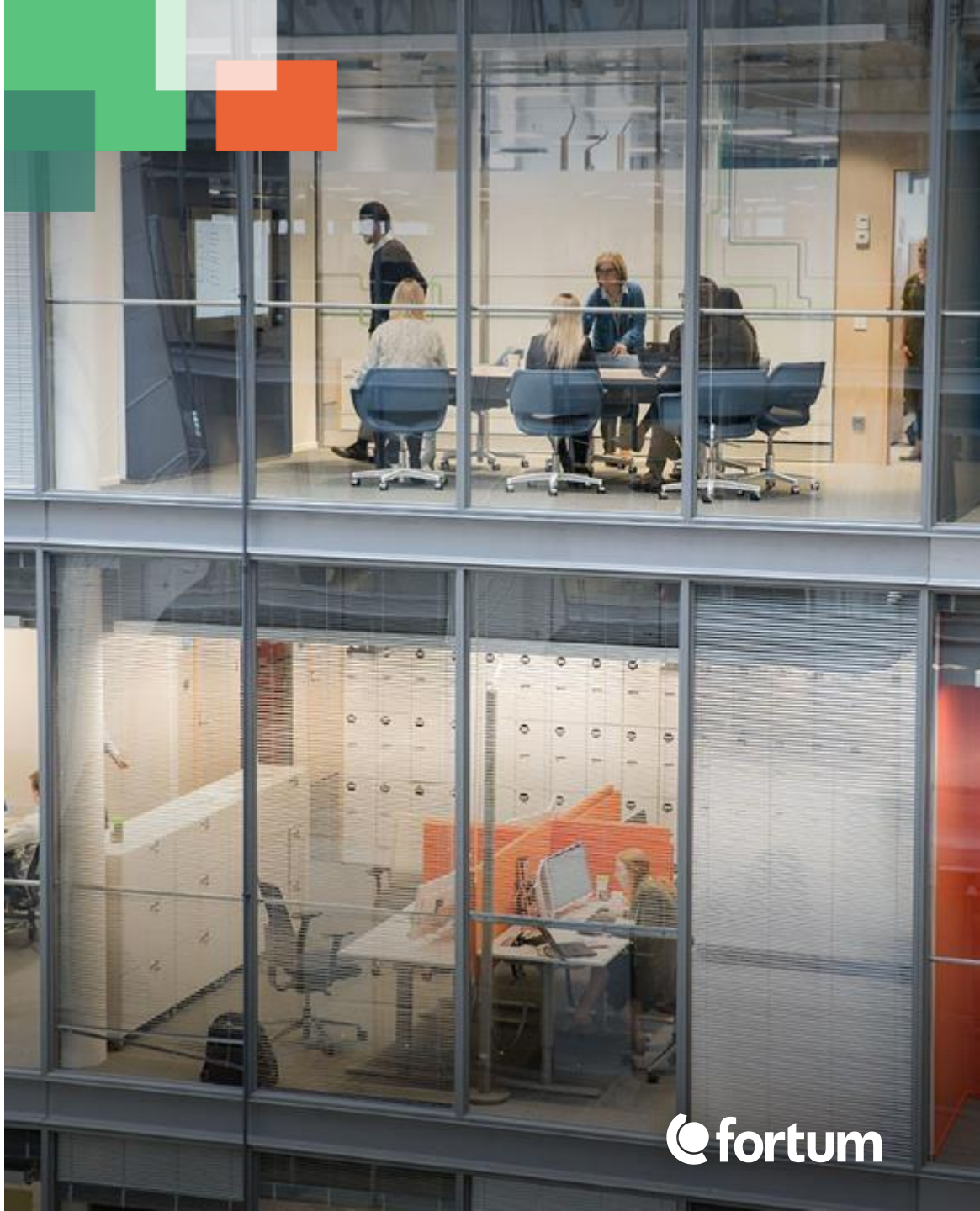
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Past performance is no guide to future performance, and persons needing advice should consult an independent financial adviser.

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

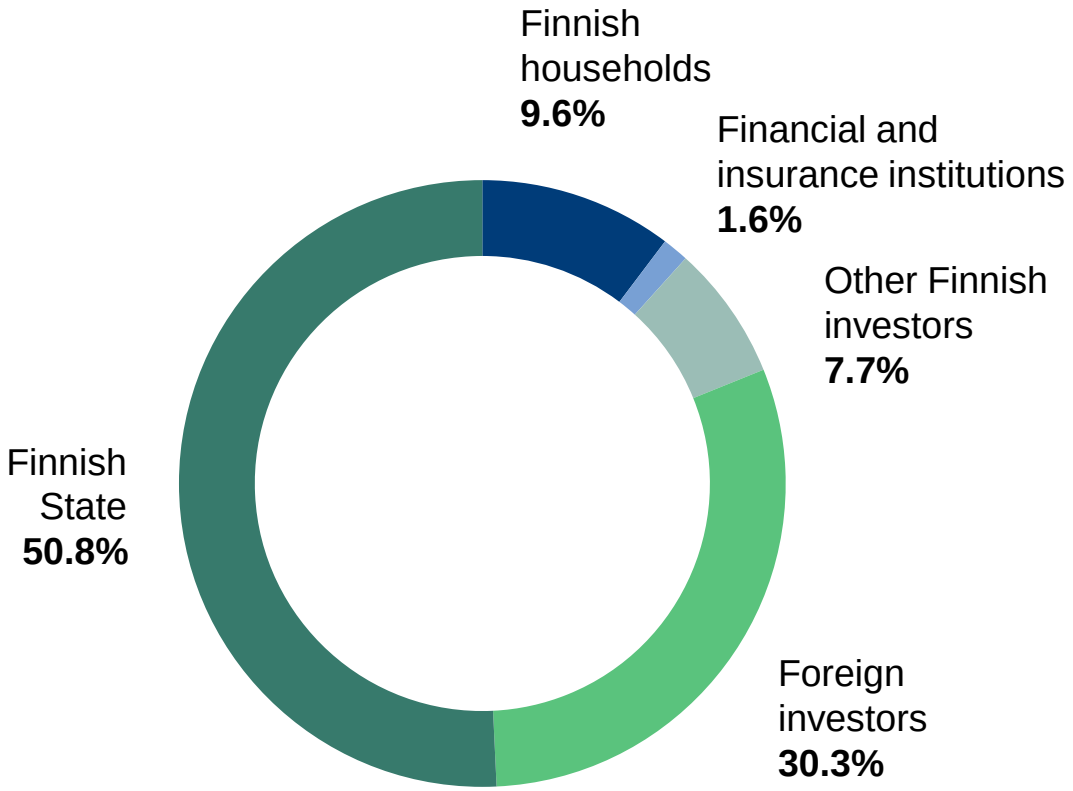
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Appr. 125,000 shareholders

- 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



Capital returns: 2018 EUR 1.10 per share ~ EUR 1 billion*

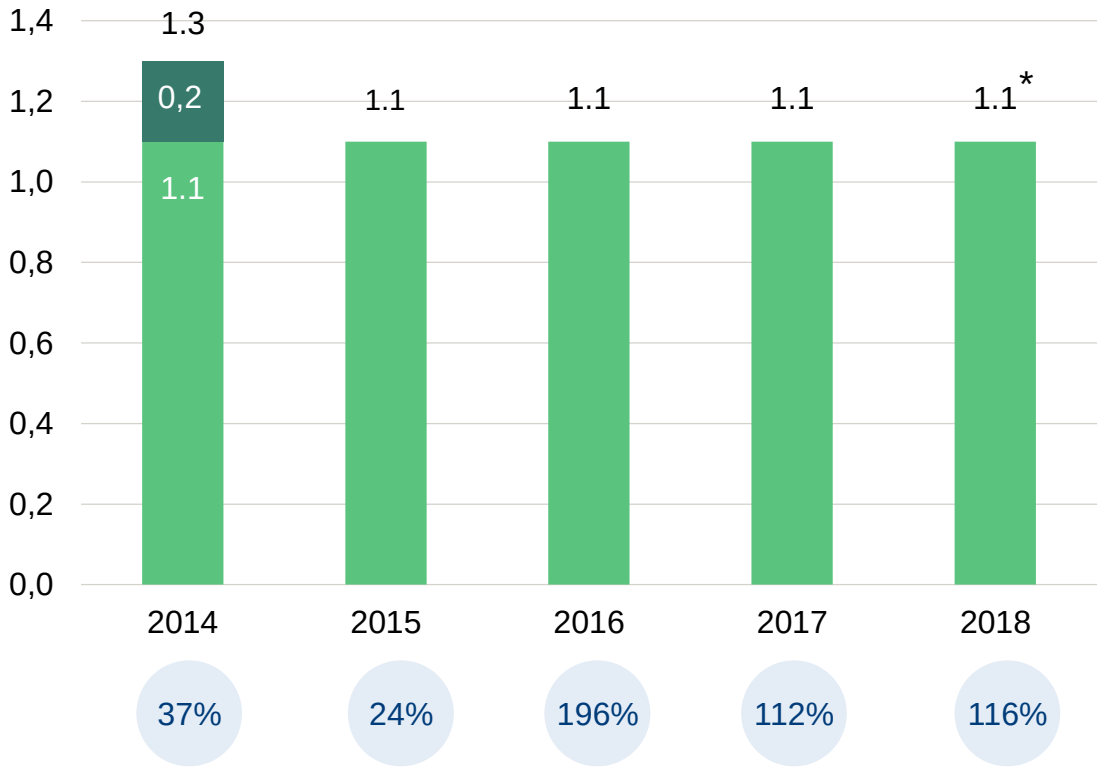
Fortum's dividend policy is based on the following preconditions:

- 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

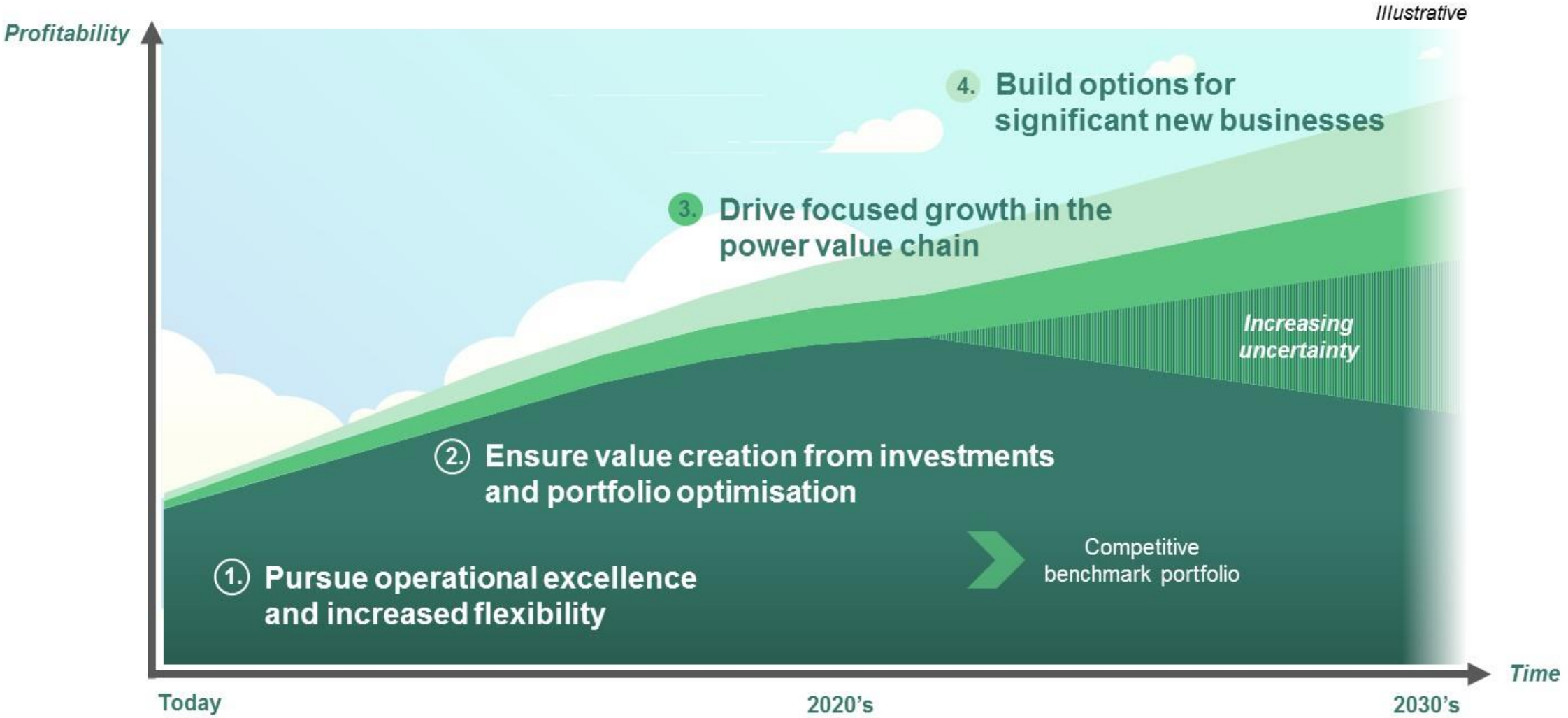
Fortum has since 1998 annually paid dividends in total ~15,557 MEUR

5 year dividend per share (EUR) history



*The BoD proposal for the AGM

Positioning Fortum for the decade of electricity – *For a cleaner world*



Fortum’s strategic priorities in a changing energy market

1. Pursue operational excellence and increased flexibility

- Ensure benchmark performance
- Focus on cash flow and efficient use of balance sheet

2. Ensure value creation from investments and portfolio optimisation

- Increase shareholder value from Uniper
- Optimise portfolio to fit the changing business environment

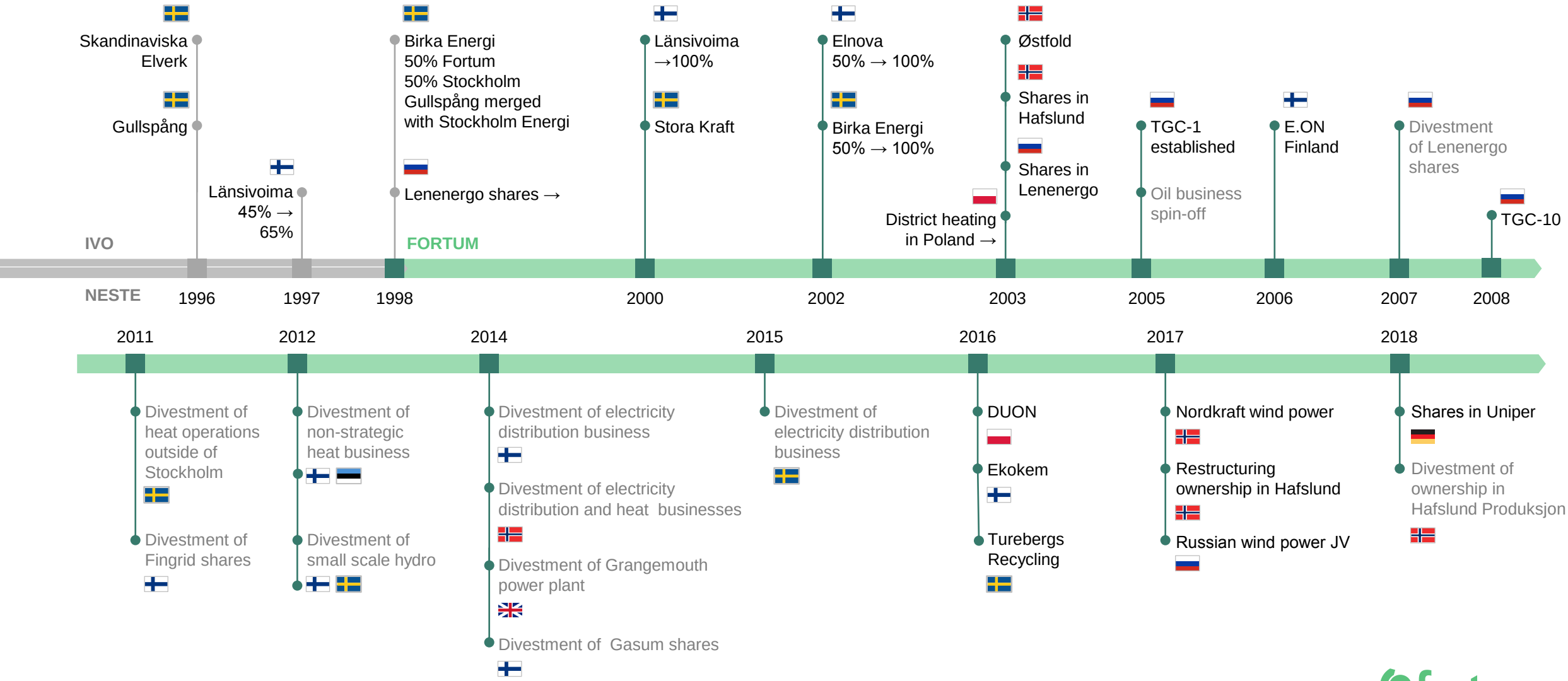
3. Drive focused growth in the power value chain

- Grow in CO_2-free power generation
- Develop value-adding offerings and solutions for customers

4. Build options for significant new businesses

- Create new sizeable profit contributor independent of power prices
- Build on industrial logic and synergies with current businesses and competences

Our strategic route



Our current geographical presence



NORDIC COUNTRIES

Power generation
43.5 TWh

Heat sales
5.9 TWh

Electricity customers
2.4 million



RUSSIA

PAO Fortum

Power generation
29.5 TWh

Heat sales
20.7 TWh

KEY FIGURES 2018

Sales	**EUR 5.2 bn**
Comparable operating profit	**EUR 1.0 bn**
Balance sheet	**EUR 22 bn**
Personnel	**8,300**



POLAND

Power generation
0.6 TWh

Heat sales
3.5 TWh



BALTIC COUNTRIES

Power generation
0.7 TWh

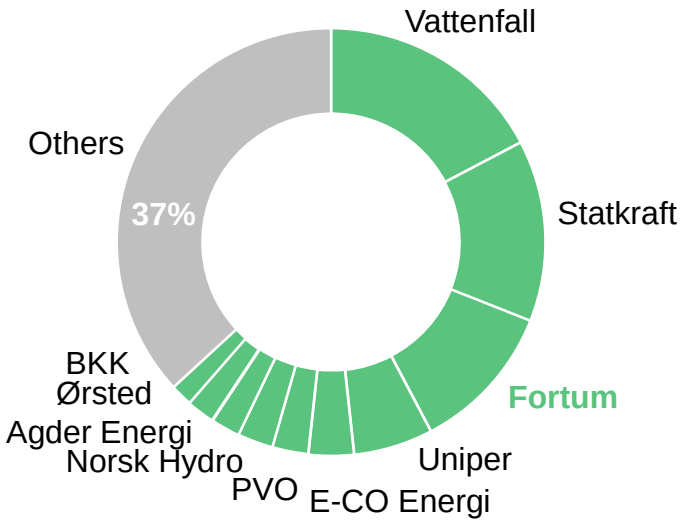
Heat sales
1.4 TWh

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

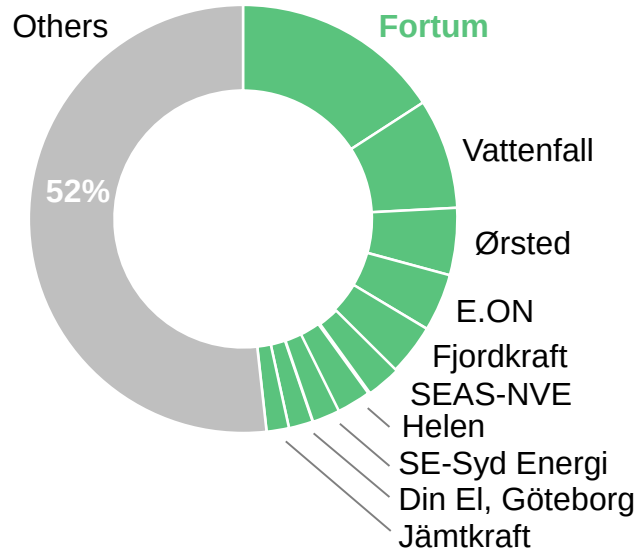
Power generation in 2017

402 TWh
>350 companies



Electricity retail

15 million customers
~350 companies

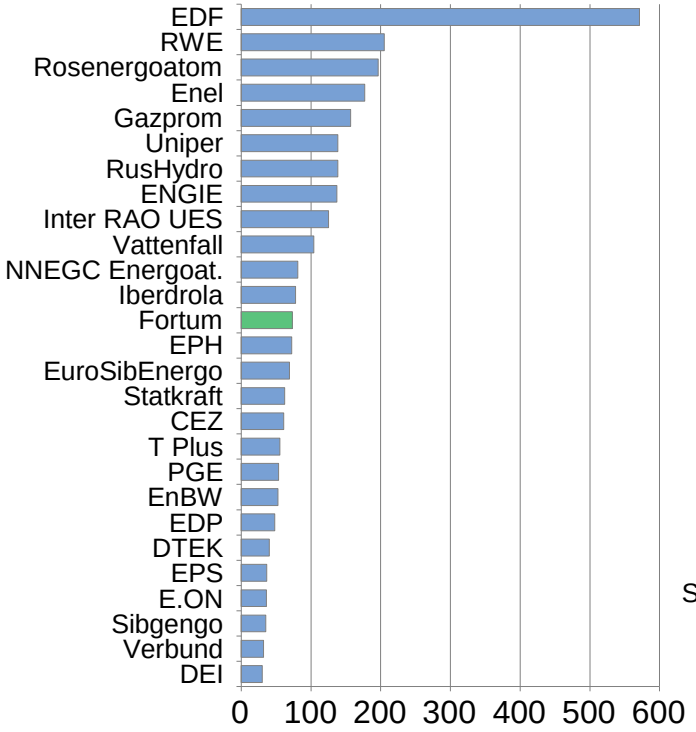


Source: Fortum, company data, shares of the largest actors, pro forma 2017 figures

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

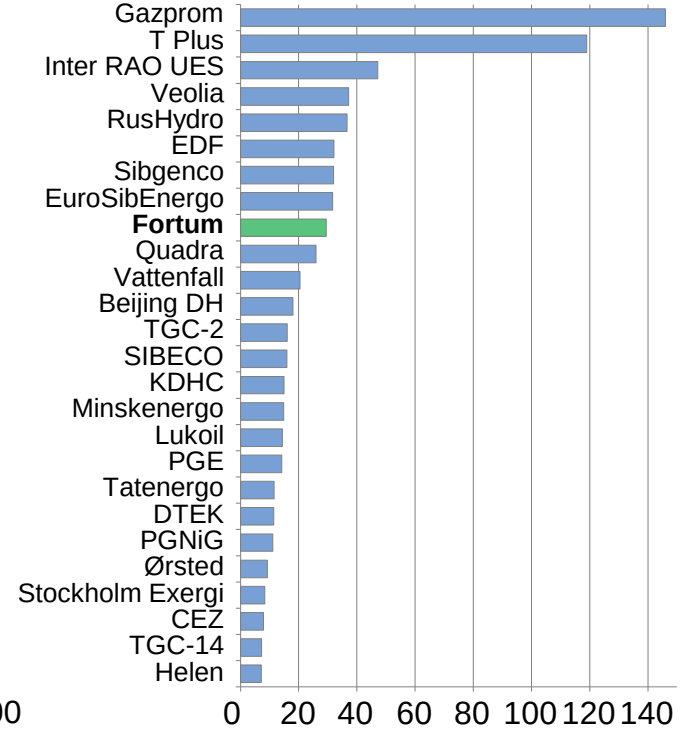
Power generation

Largest producers in Europe and Russia, 2016
TWh



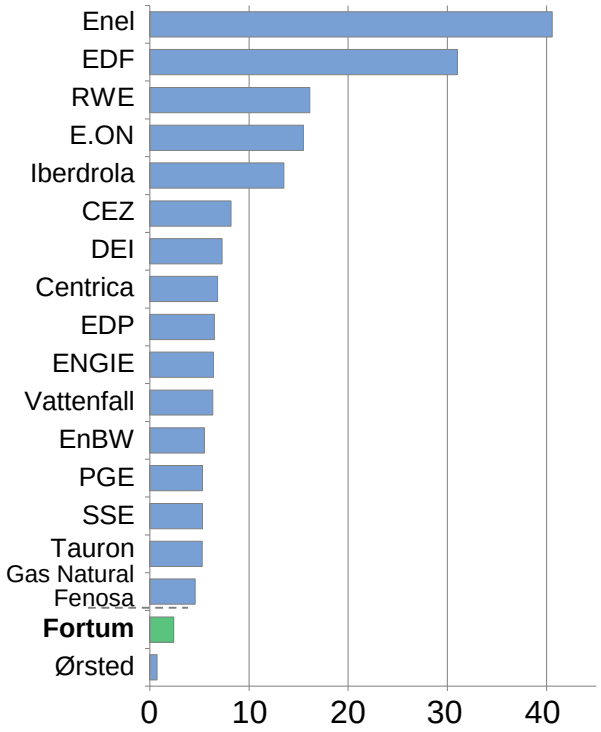
Heat production

Largest global producers, 2016
TWh



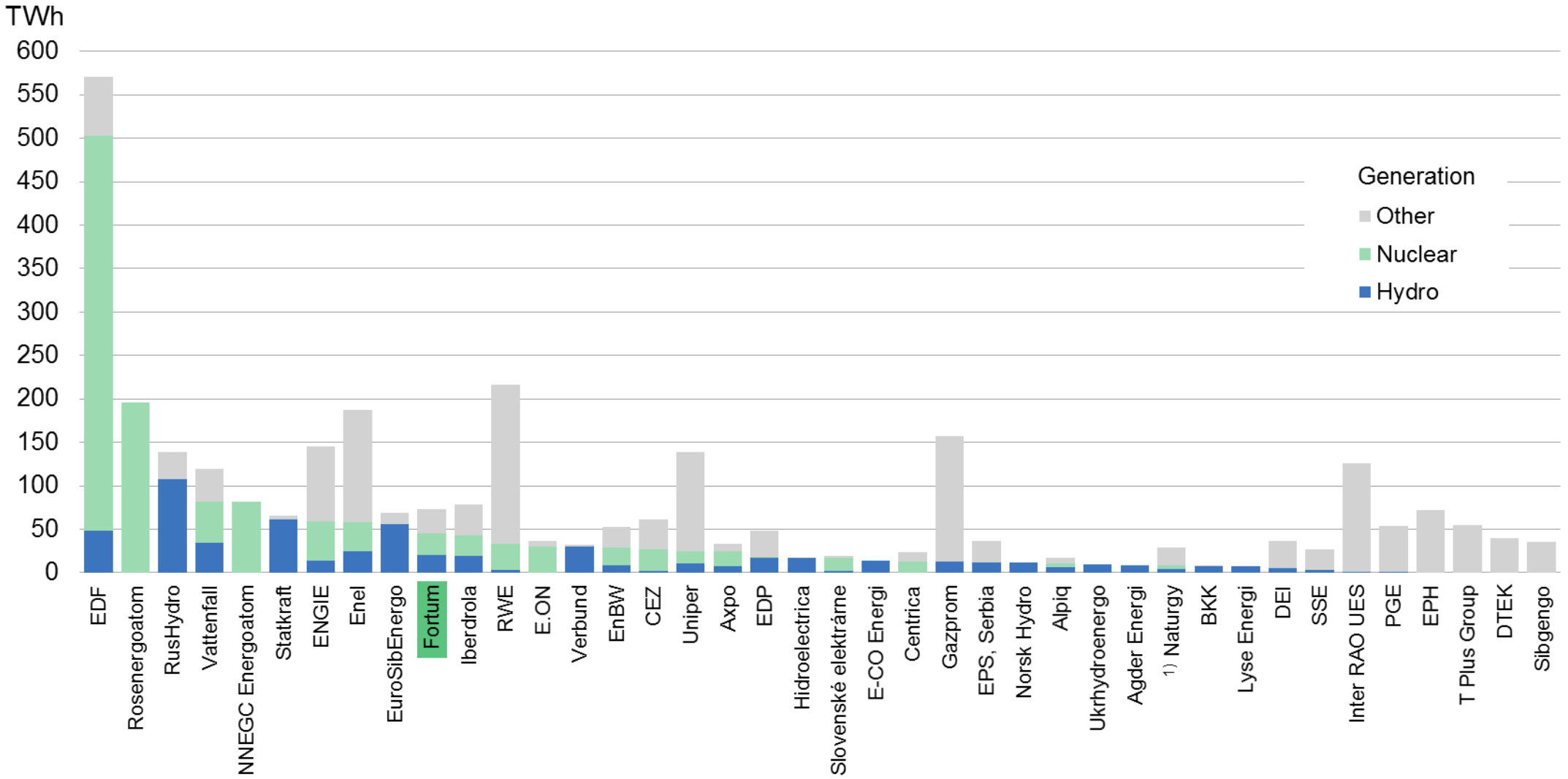
Customers

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

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NORD POOL

Nordic wholesale market

Nasdaq

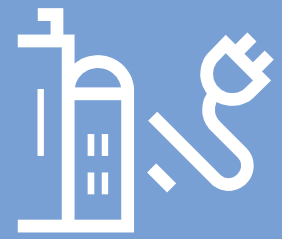
Power exchange and bilateral agreements

Large customers

Retail customers

Private customers, small businesses

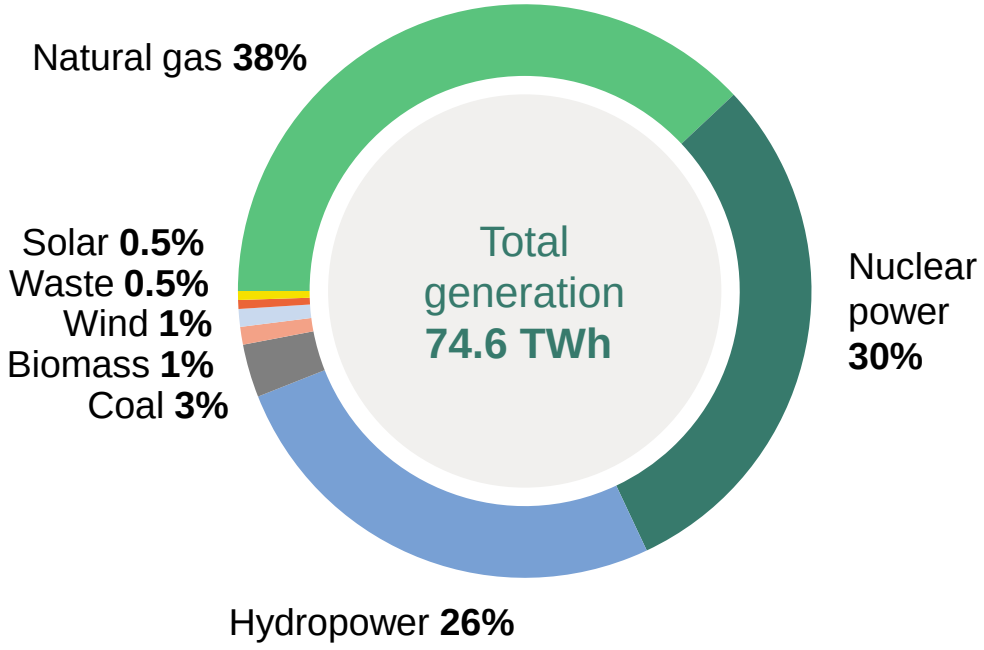
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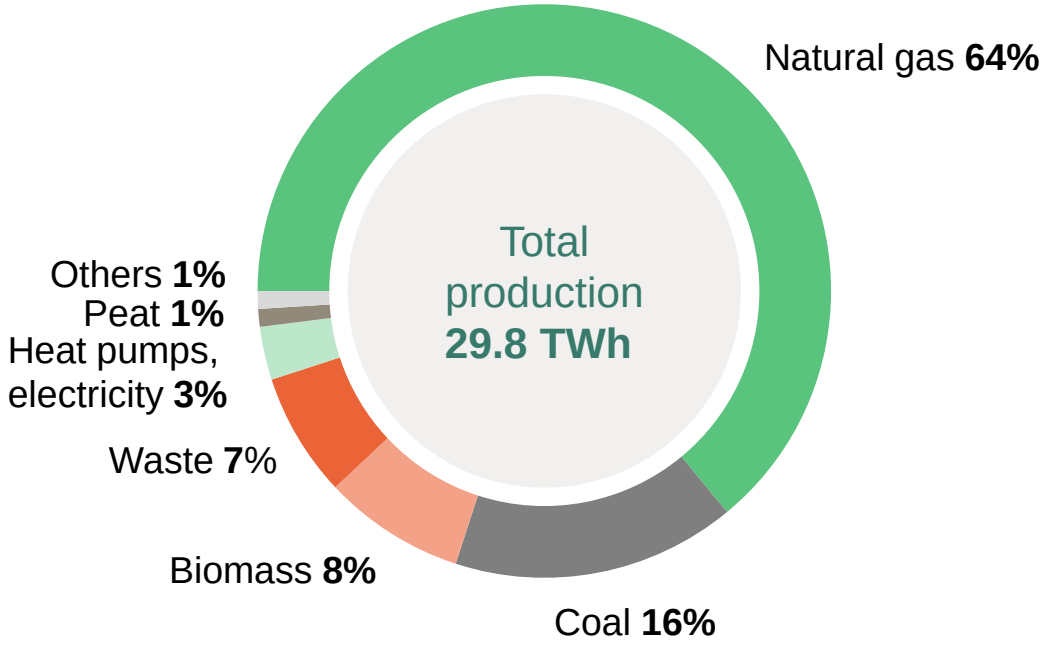
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Fortum's power and heat production by source

Fortum's power generation in 2018



Fortum's heat production in 2018

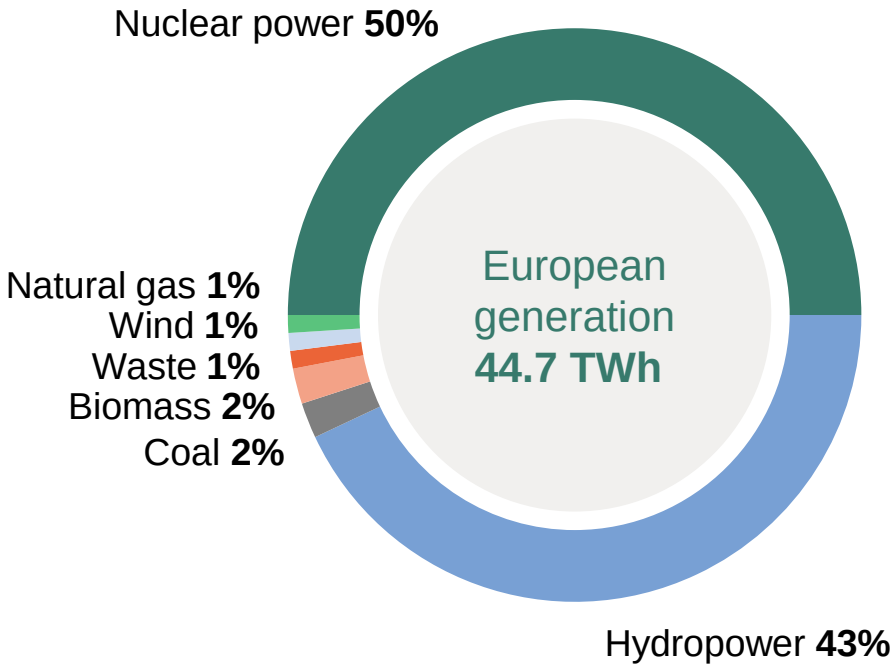


Note: Fortum's power generation capacity 13,724 MW and heat production capacity 15,009 MW

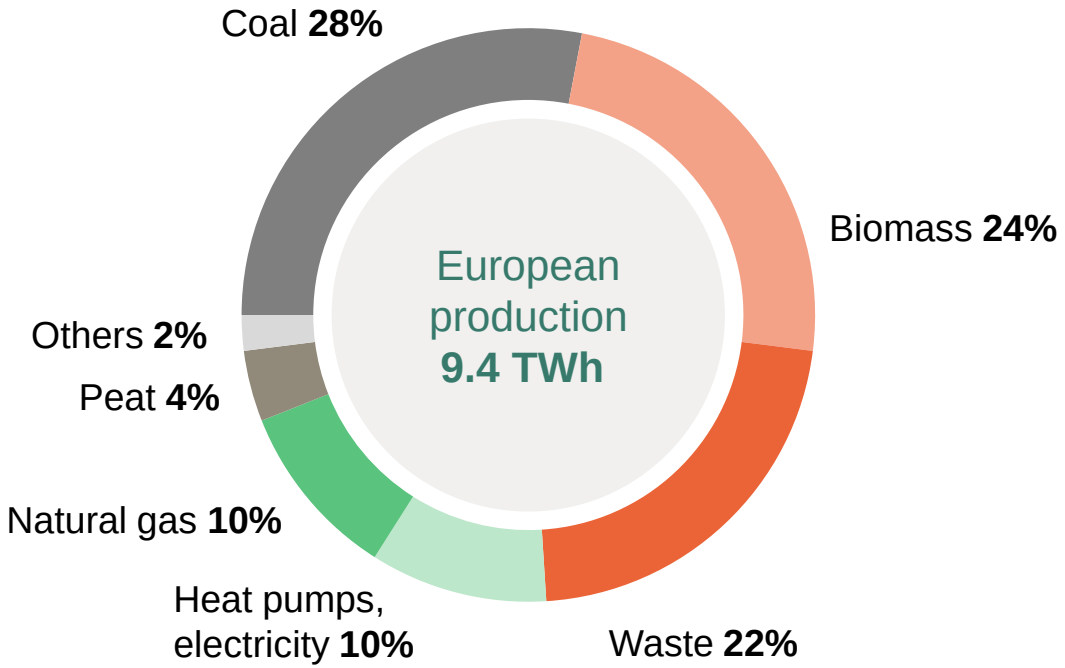
Fortum's European power and heat production by source



Fortum's European power generation in 2018



Fortum's heat European production in 2018

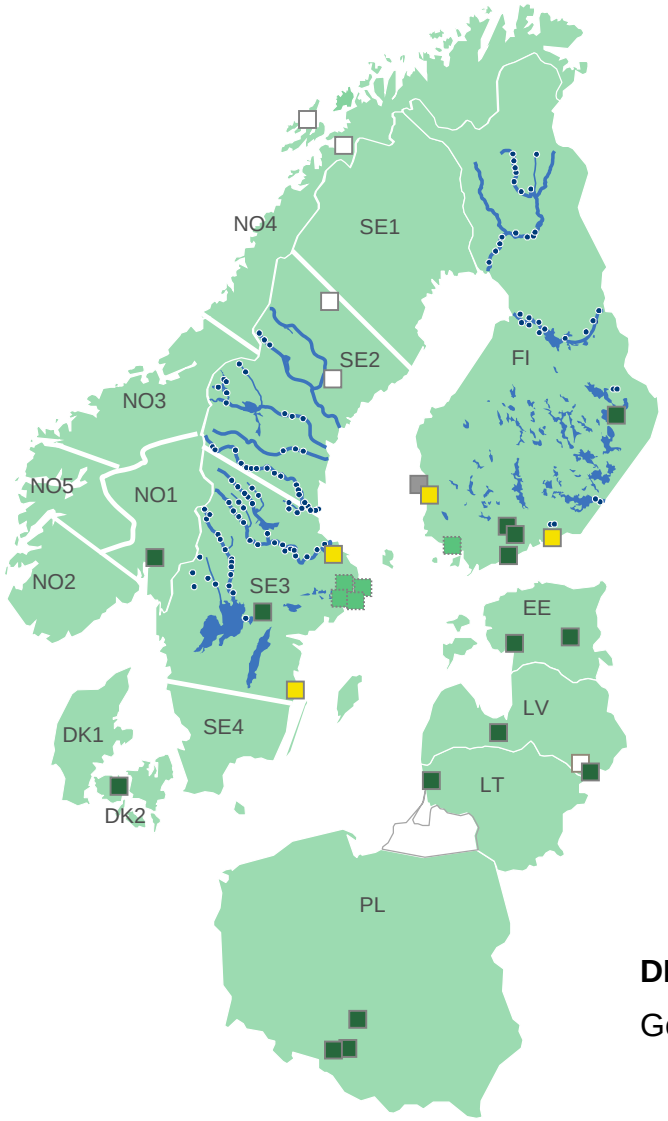


Note: Fortum's European power generation capacity 8,811 MW and heat production capacity 4,780 MW

Fortum’s Nordic, Baltic and Polish generation capacity

GENERATION CAPACITY	MW
Hydro	4,672
Nuclear	2,819
CHP	785
Other thermal	376
Wind	159
Nordic, Baltic and Polish generation capacity	8,811

Figures 31 December 2018



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

NORWAY	MW
Price areas	
NO4, Wind	82
NO1, CHP	20
Generation capacity	102

SWEDEN	MW
Price areas	
SE2, Hydro	1,550
SE2, Wind	75
SE3, Hydro	1,574
SE3, Nuclear	1,334
SE3, CHP	9
Generation capacity	4,542

DENMARK, DK2	MW
Generation capacity, CHP	16

FINLAND	MW
Hydro	1,548
Nuclear	1,485
CHP	451
Other thermal	376
Generation capacity	3,860

BALTICS AND POLAND	MW
Generation capacity,	CHP
in Estonia	49
in Latvia	34
in Lithuania	20
in Poland	186
in Latvia, Wind	2

Fortum a forerunner in sustainability

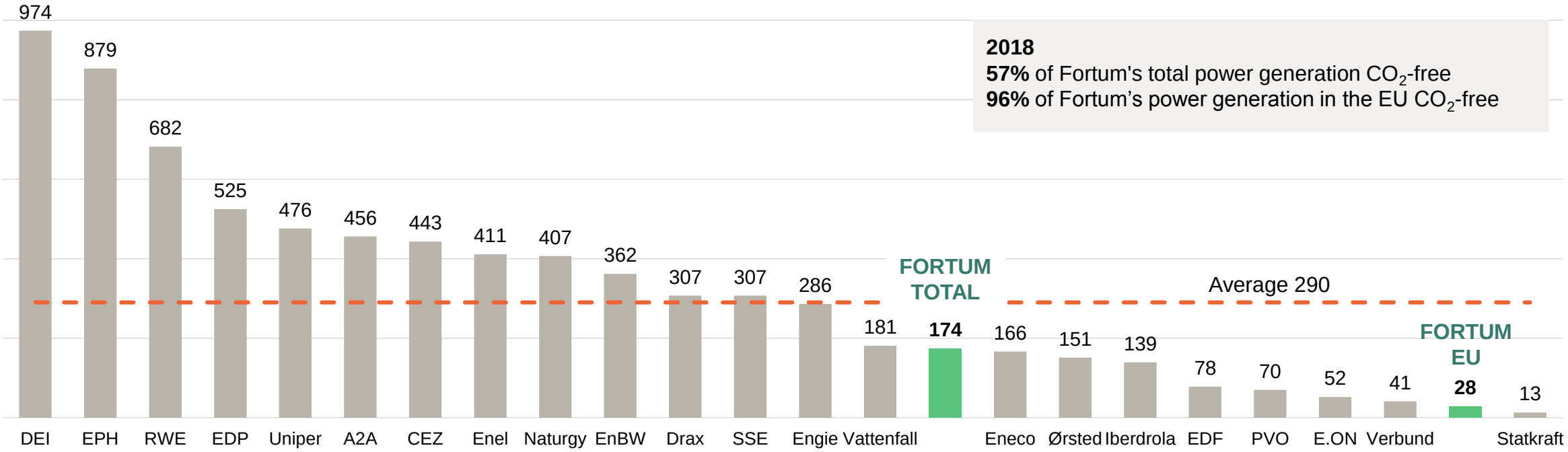
We engage our customers and society to drive the change towards a cleaner world. Our role is to accelerate this change by reshaping the energy system, improving resource efficiency and providing smart solutions. This way we deliver excellent shareholder value.

Fortum is listed in several sustainability indexes and ratings:

- CDP Climate Change
- STOXX Global ESG Leaders
- ECPI®
- ISS-oekom Corporate Rating
- Euronext Vigeo Eurozone 120 and Euronext Vigeo Europe 120
- MSCI
- OMX Sustainability Finland Index
- Equileap Gender Equality

Fortum's carbon exposure among the lowest in Europe

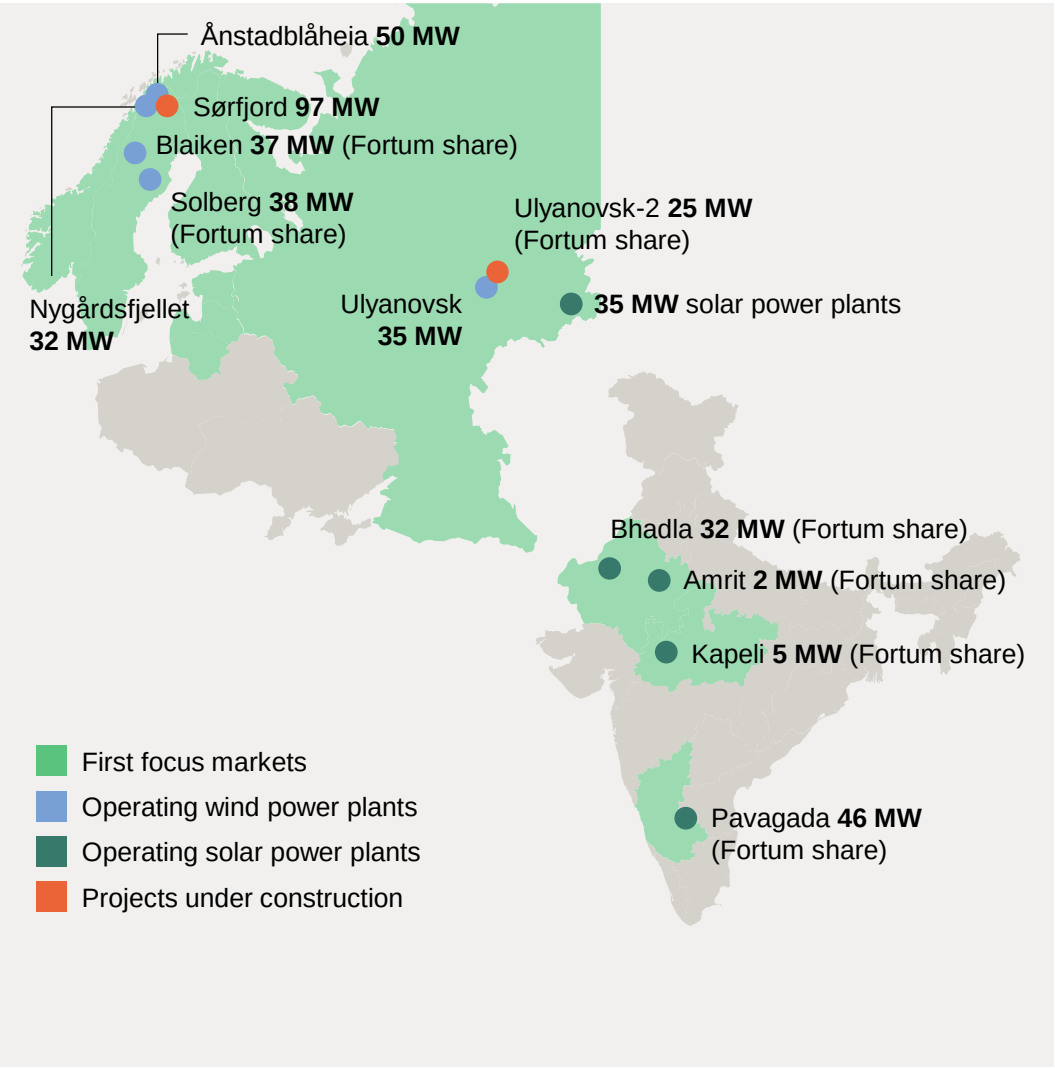
g CO_2/kWh electricity, 2017



2018
57% of Fortum's total power generation CO_2-free
96% of Fortum's power generation in the EU CO_2-free

Note: All figures, except "Fortum total", include only European power generation. .
Source: PwC, December 2018, Climate Change and Electricity, Fortum

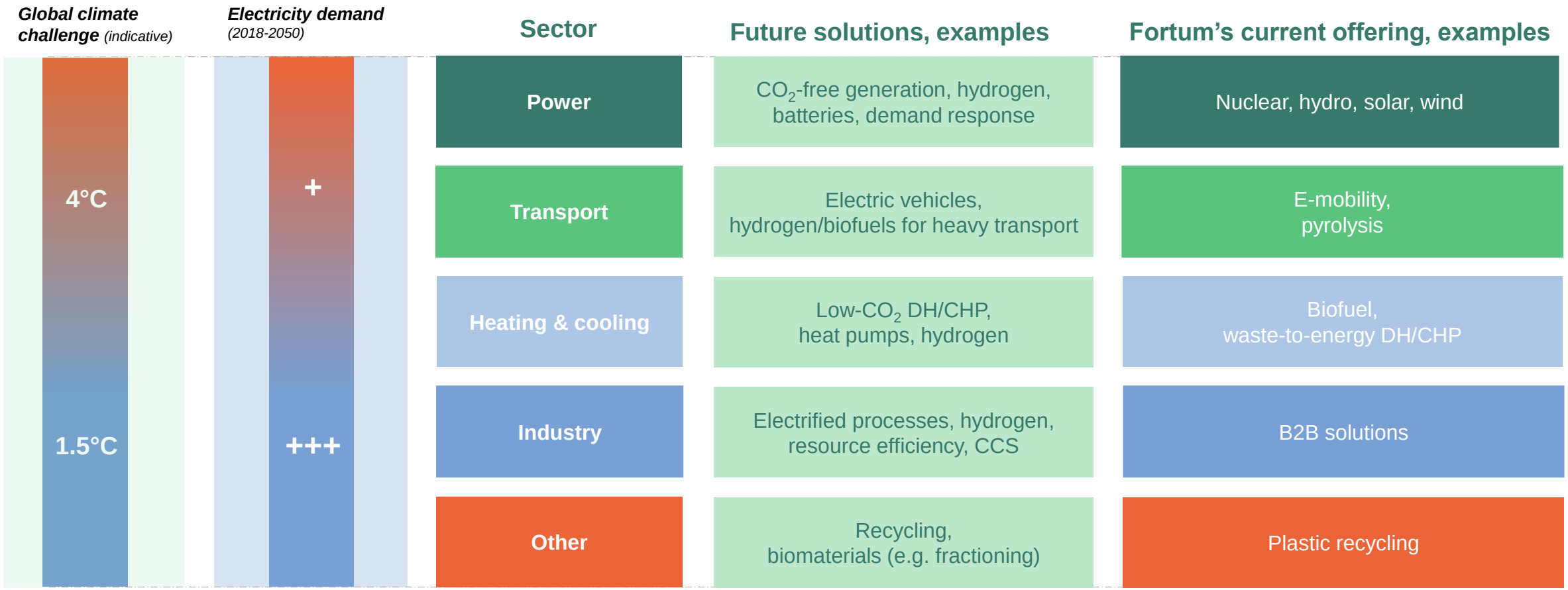
Fortum is growing towards gigawatt scale target in solar and wind power production



PORTFOLIO	TECHNOLOGY	STATUS	CAPACITY MW	FORTUM SHARE, MW	SUPPLY STARTS/ STARTED
NORWAY			**179**	**179**	
Nygårdsfjellet	Wind	Operational	32	32	2006 and 2011
Ånstadblåheia	Wind	Operational	50	50	Q4 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	Operational	50	25 (50%)	1.1.2019
Rusnano JV	Wind	Under construction	200	100 (50%)	H1 2020
Rusnano JV	Wind	Under development	1 573	787 (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
Rajasthan	Solar	Under development	250	250	Q4/2020
TOTAL PORTFOLIO			**3 191**	**1 931**	
		Under development	1 933	1 147	
		Under construction	597	447	
		Operational	661	337	

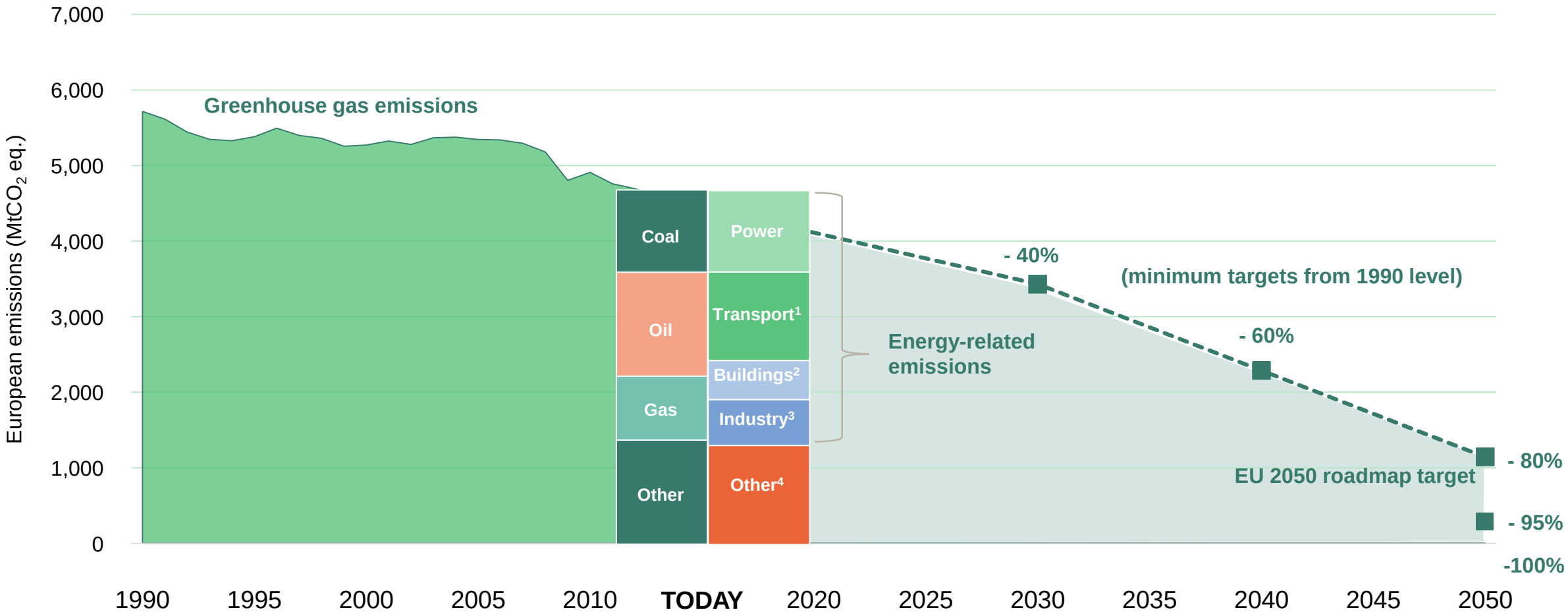
*) Blaiken last stage IV inaugurated in 2017. NOTE: Table numbers not accounting; tells the size of renewables projects. All not consolidated to Fortum capacities. All figures in MW and rounded to nearest megawatt. Additionally, target to invest 200 – 400 million euros in India solar and create partnership for operating assets. Under construction includes investment decisions made

The decades of electricity will affect several sectors – and Fortum is well positioned for decarbonisation



DH/CHP = District heating/combined heat and power
CCS = Carbon capture and storage

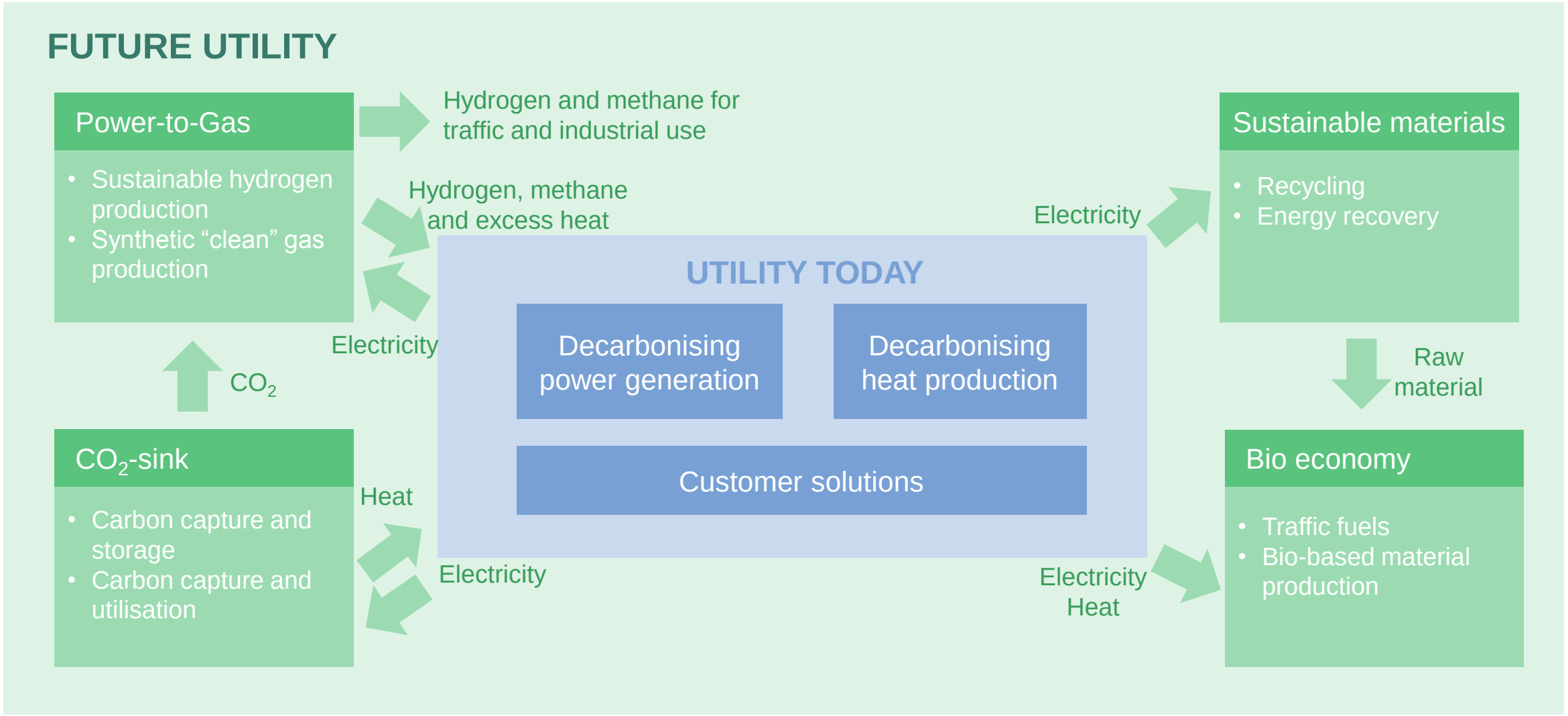
Europe needs to eliminate CO_2 emissions to reach climate goals



[1] including international aviation and marine
[2] residential and commercial heating & cooling
[3] iron & steel and chemicals are among the biggest contributors
[4] non-energy related emissions: industrial processes and product use, waste management, agriculture, fugitive emissions
Source: IEA World Energy Outlook 2017, Eurostat, Eurelectric, Fortum Industrial Intelligence

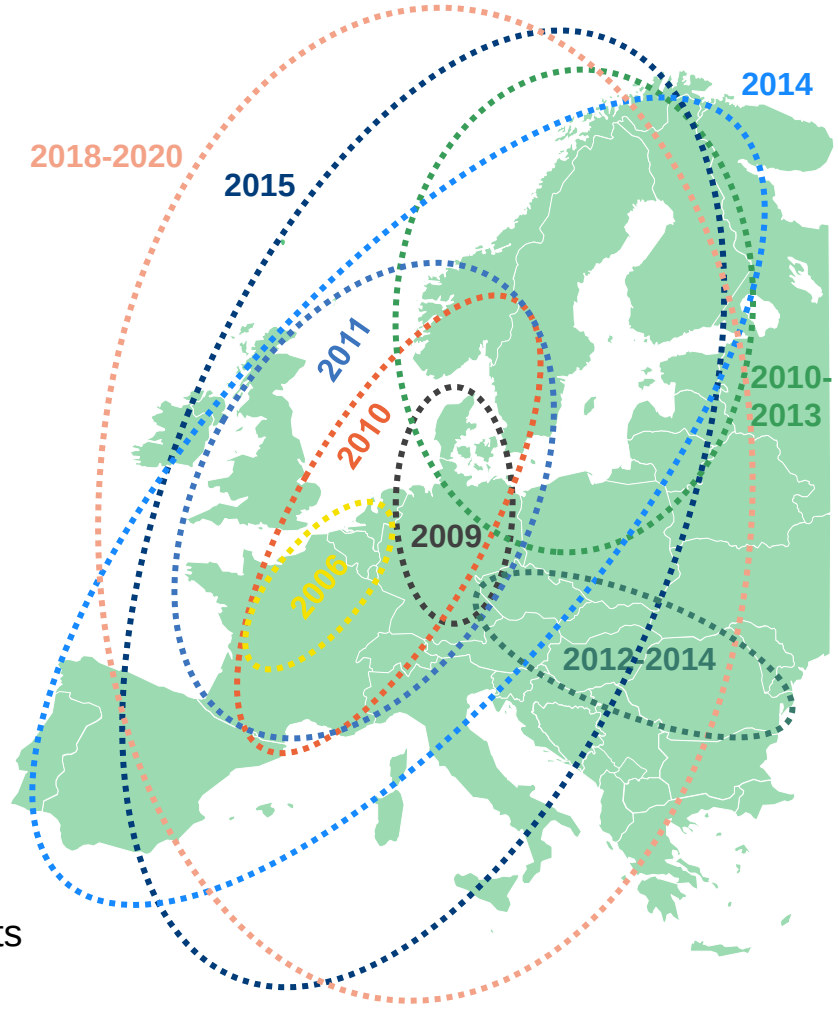
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Building the utility of the future



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

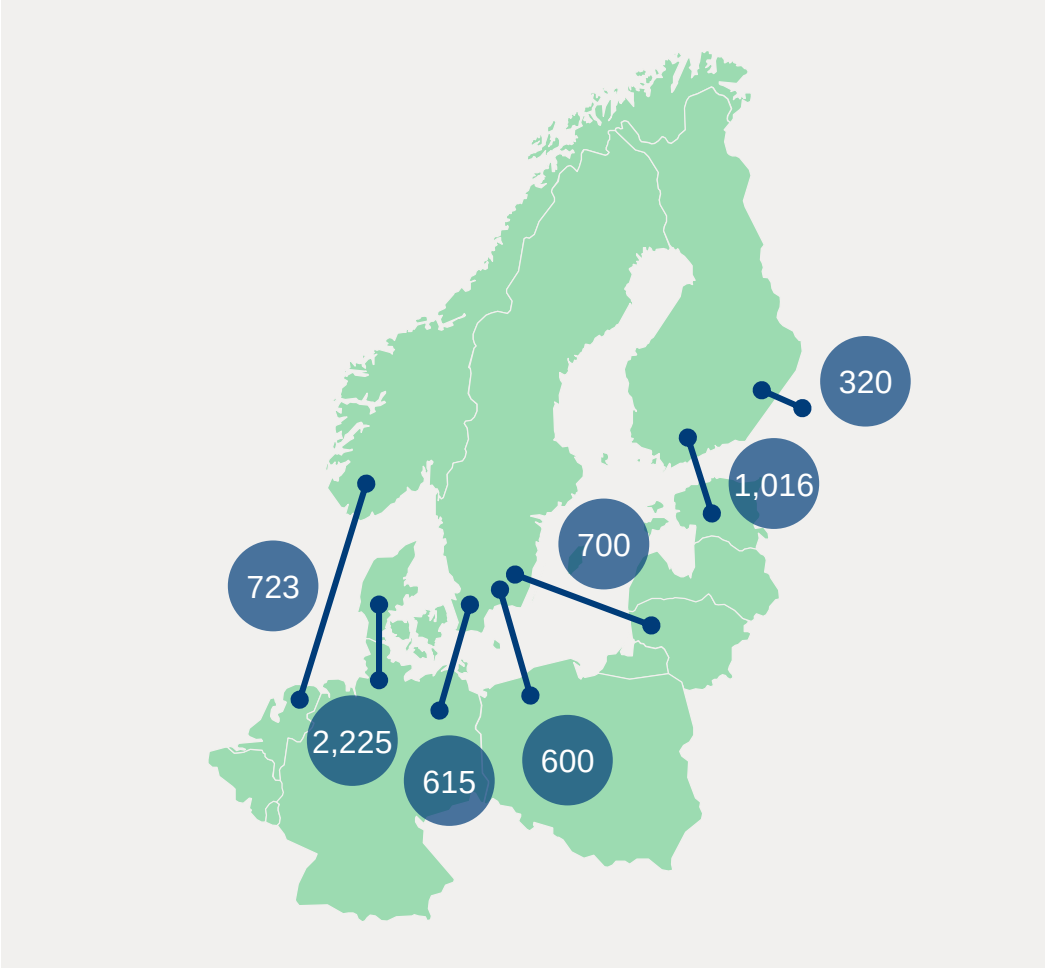
- Day-ahead market coupling between NL, BE and FR since 2006
- Germany – Nord Pool coupling started 11/2009
- Market coupling for Central Western Europe (DE, FR, NL, BE) since 11/2010 with a continued coupling with Nord Pool. NorNed (NO-NL) and BritNed (UK-NL) included in 2011
- Nord Pool price area 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 is 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. Intraday coupling further to central eastern Europe is planned for summer 2019
- 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**

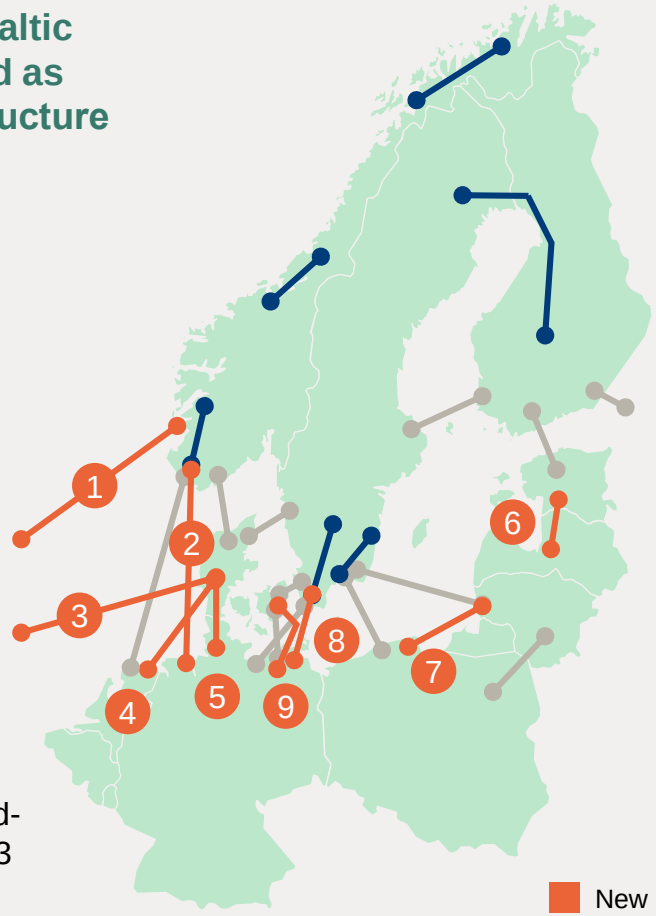
- Theoretical maximum in transmission capacity ~40 TWh per annum, but restrictions especially between DK & DE
- Net export from the Nordic area to Continental Europe and Baltics during the year 2018 was 10 TWh
- Net export during the relatively wet year 2017 was 15 TWh
- Approximately 25 TWh of net export is now reachable



Nordic, Baltic, Continental and UK markets are integrating – Interconnection capacity will double by end-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 due to start commercial operation in March 2021
3. 1,400 MW DK-UK Viking Link has got its final permits and is to be built by end-2023
4. 700 MW COBRAcable from DK to NL is due to be ready during Q3/2019
5. Jutland – DE capacity will grow by 860 MW by end-2020, with further 1,000 MW increase by end-2023



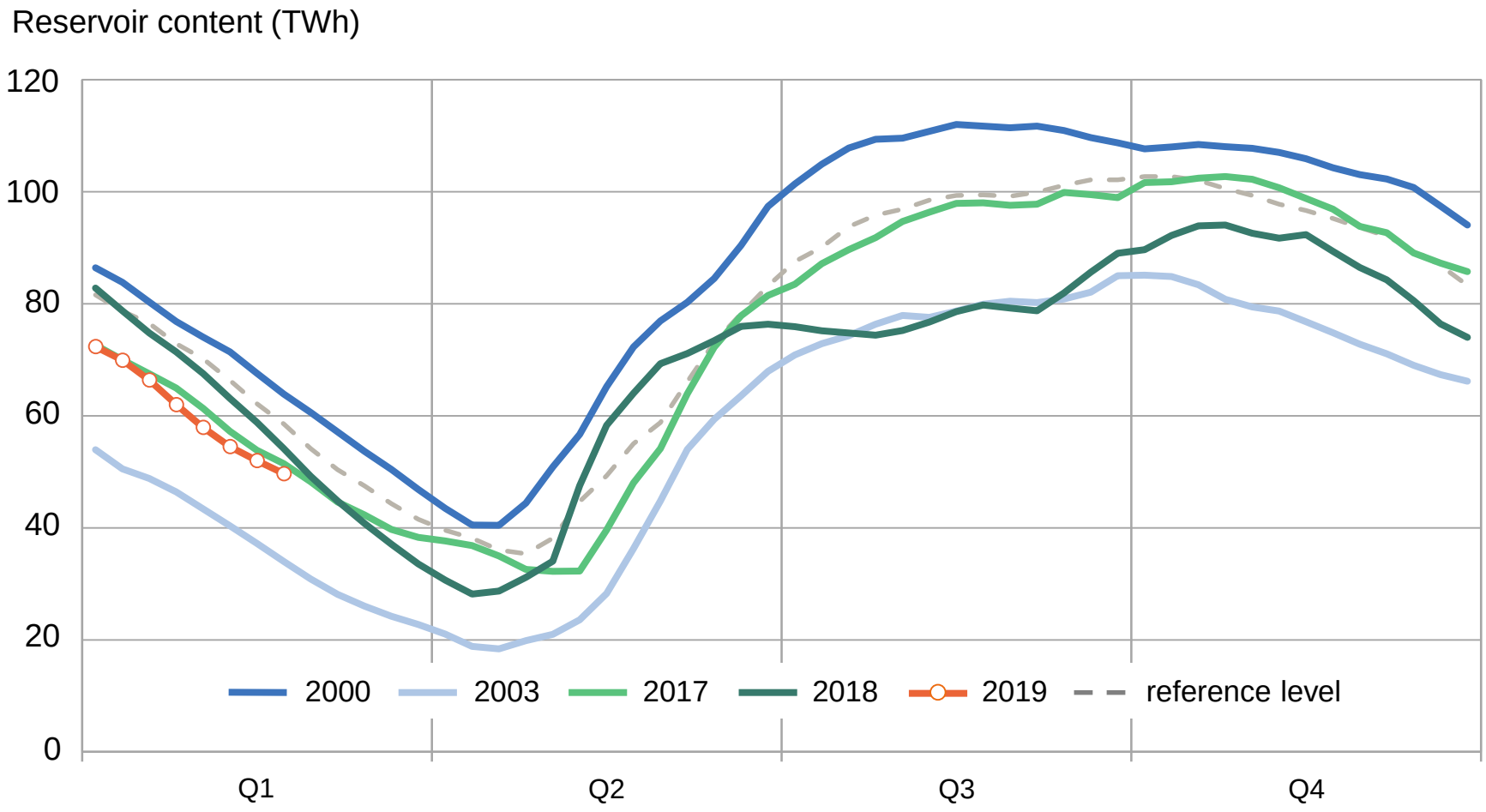
New interconnections will double the Nordic export capacity to over 12,000 MW by end-2023

- 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 ready in Q3/2019

New interconnectors | New Nordic lines | Existing interconnectors

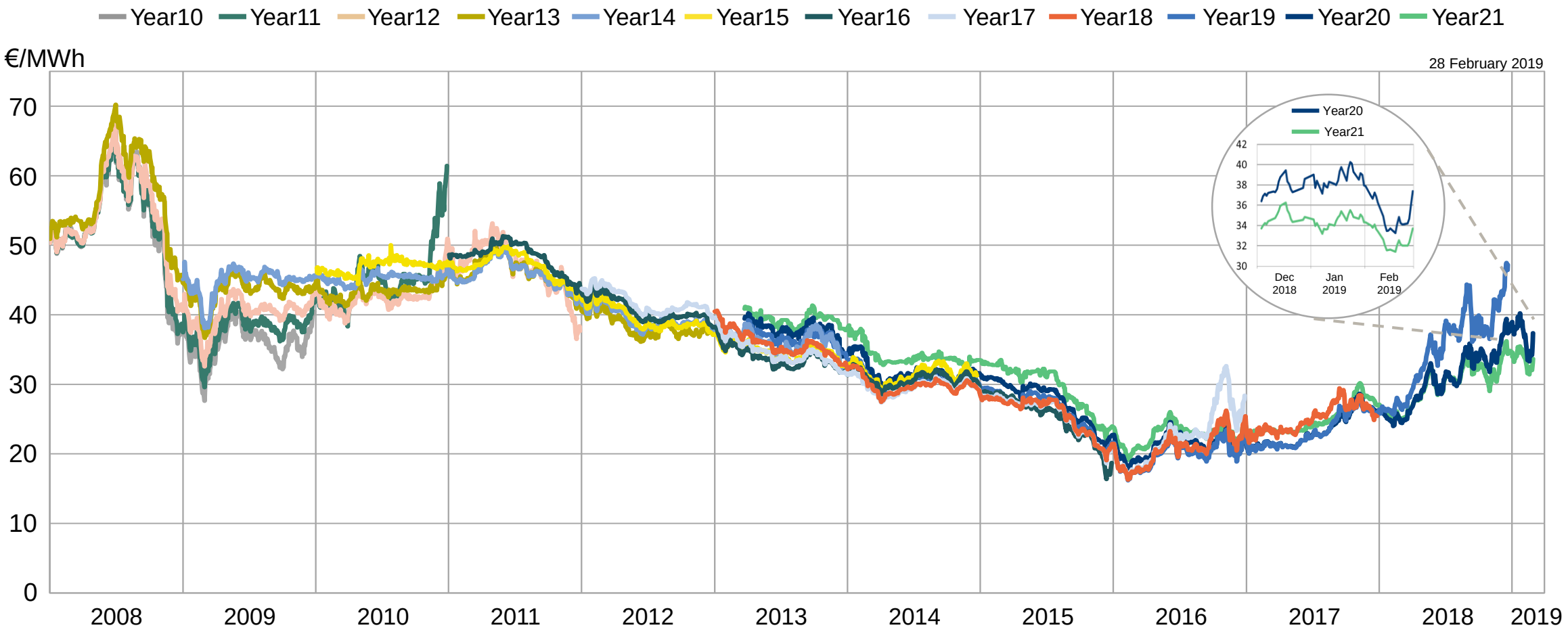
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Nordic water reservoirs



Source: Nord Pool

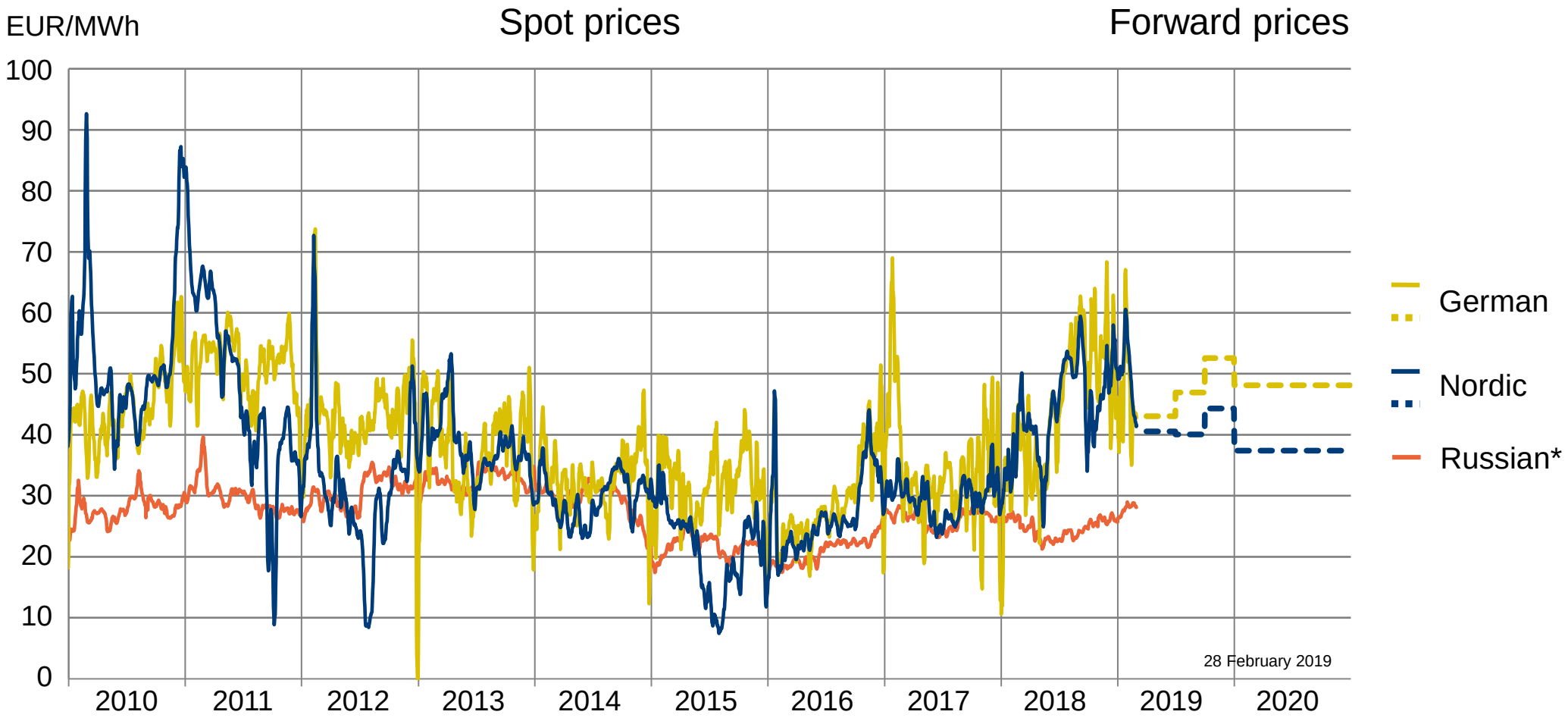
Nordic year forwards



Source: Nasdaq Commodities, Bloomberg

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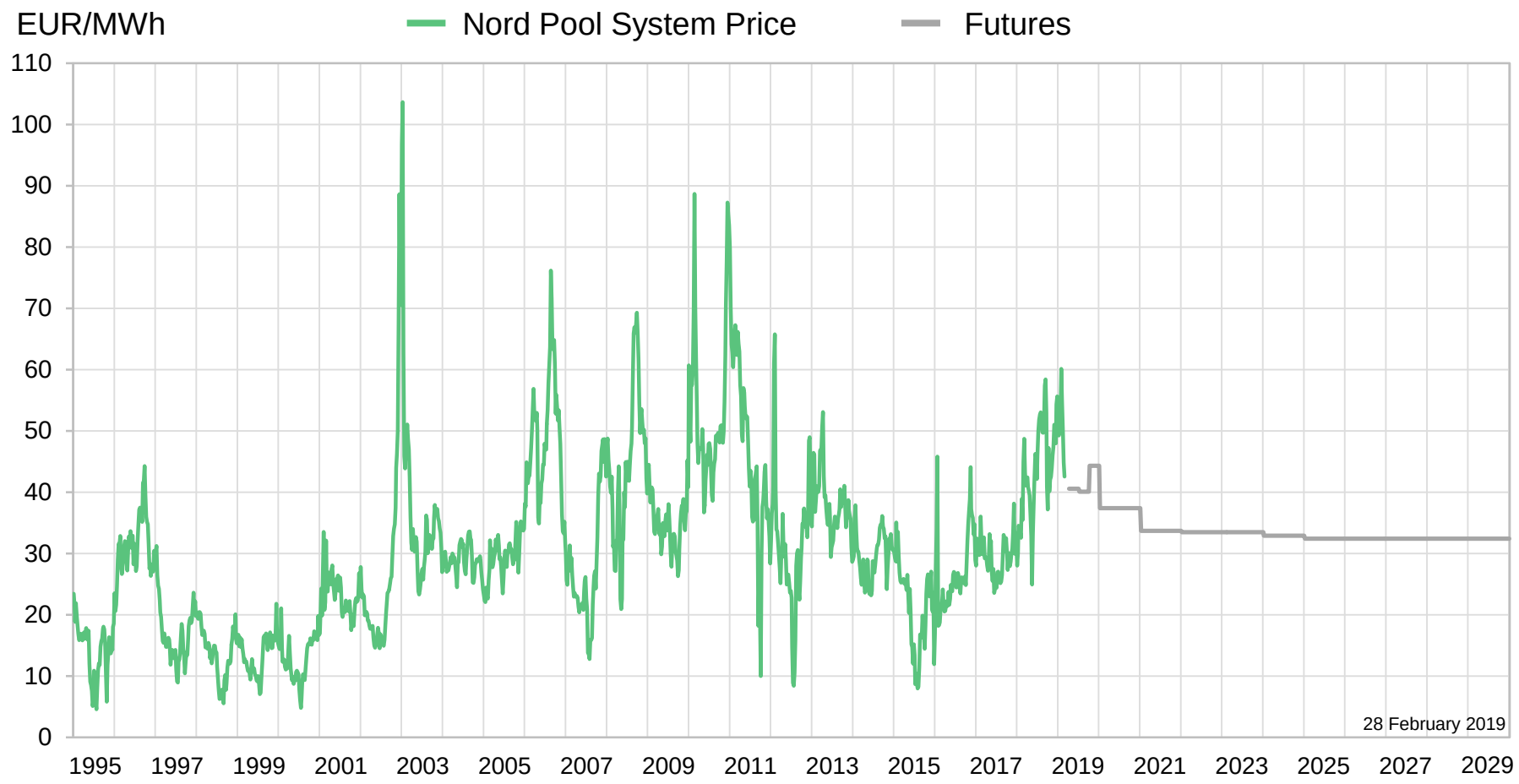
Wholesale power prices



* Including weighted average capacity price

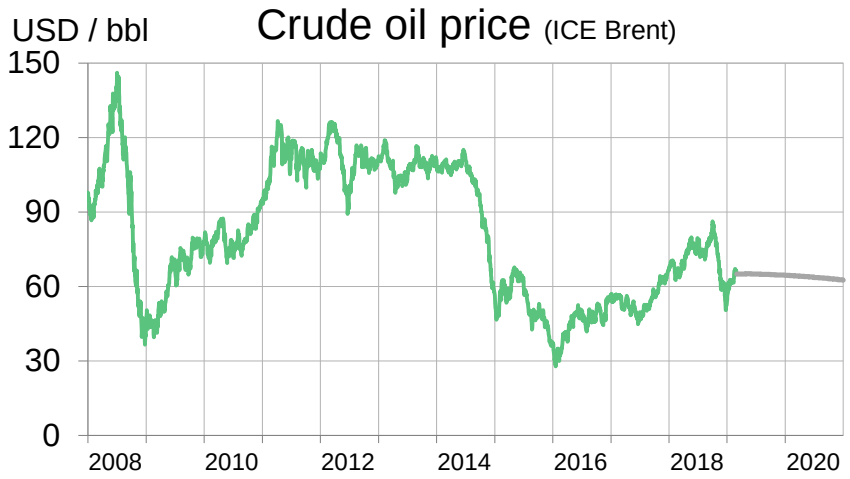
Source: Nord Pool, Bloomberg Finance LP, ATS, NP “Market Council”, Fortum

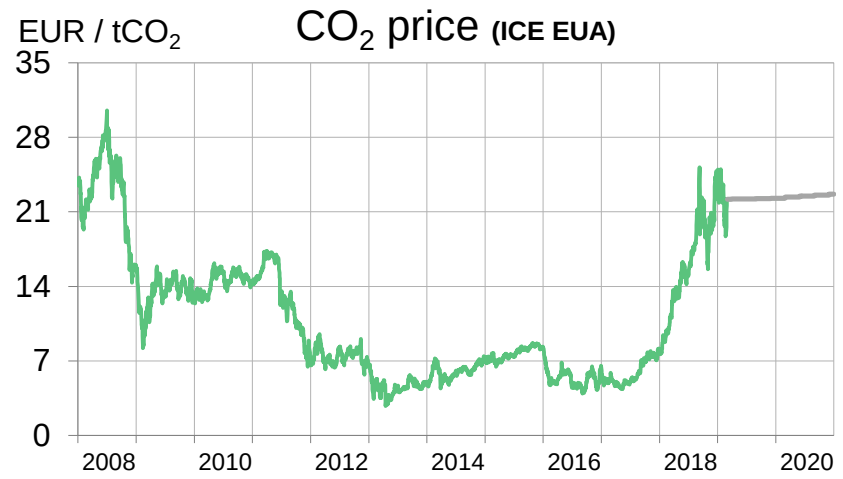
Wholesale power price

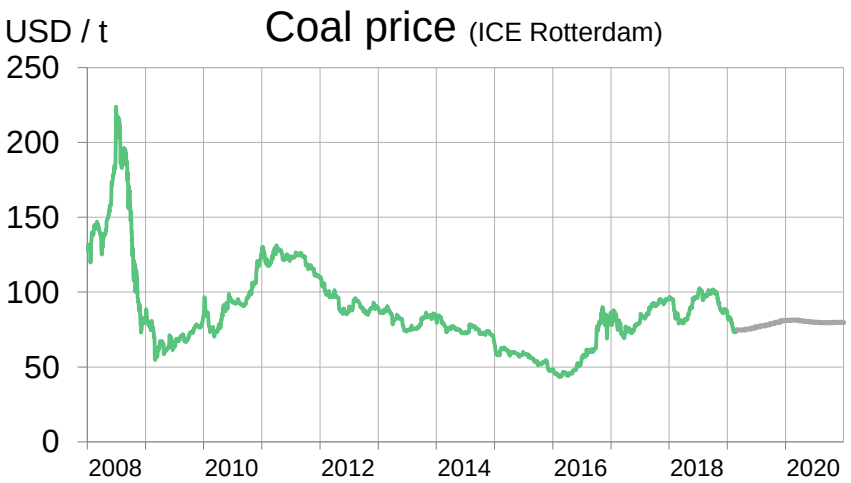


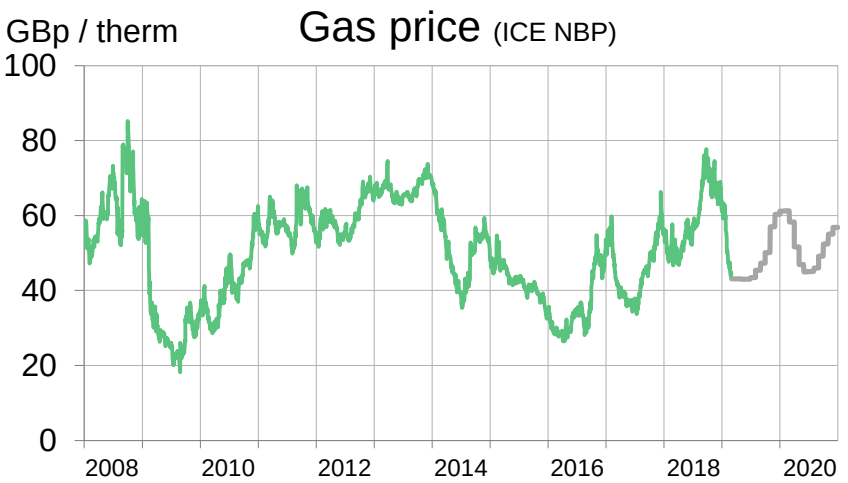
Source: Nord Pool, Nasdaq Commodities

Fuel and CO_2 allowance prices





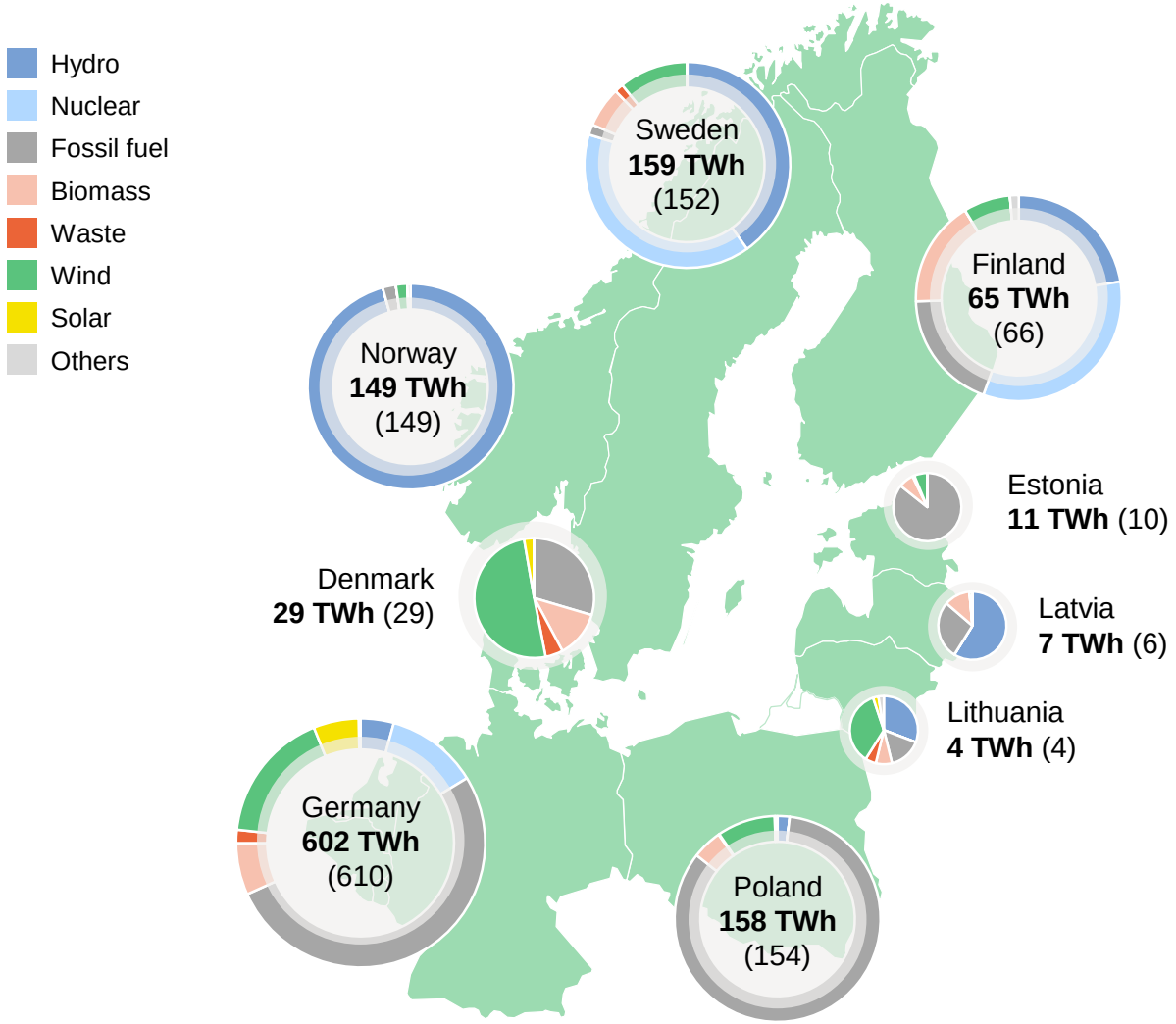




Source: ICE, Thomson Reuters

Market prices 1 March 2019; 2019-2020 future quotations

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**	

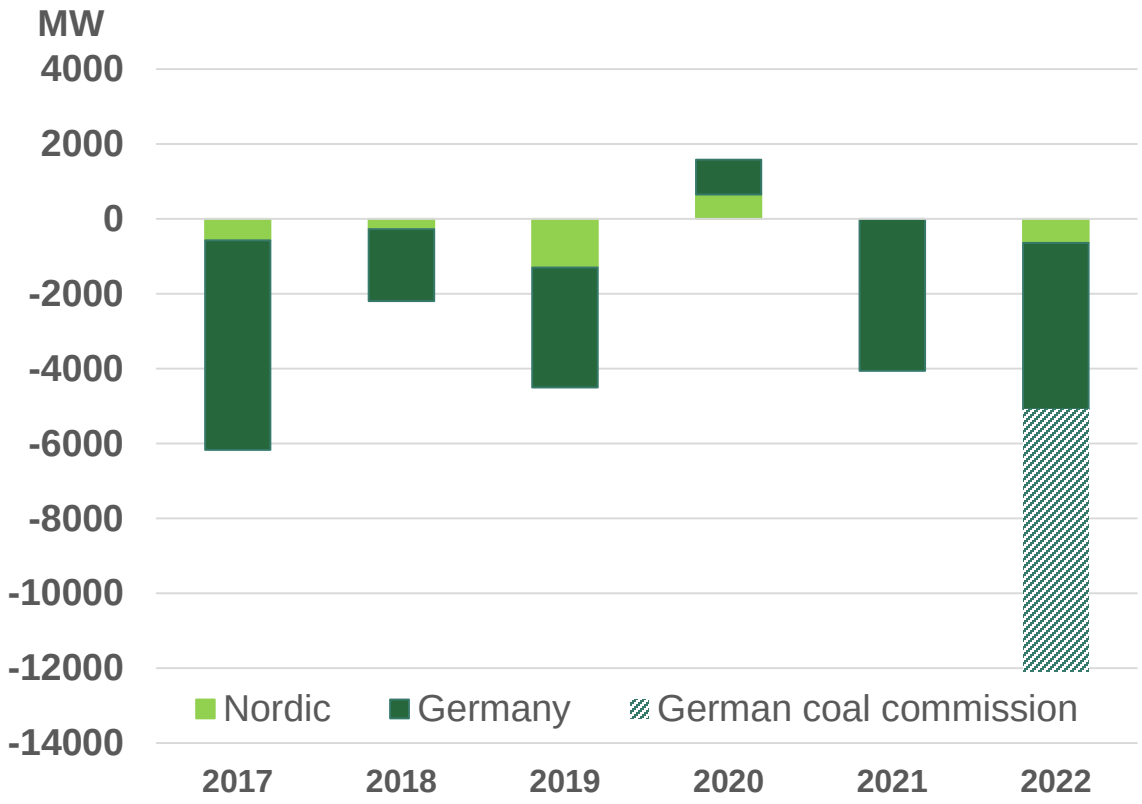
*) Normal annual Nordic hydro generation 200 TWh, variation +/- 40 TWh.

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

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Northern European conventional capacity decreasing

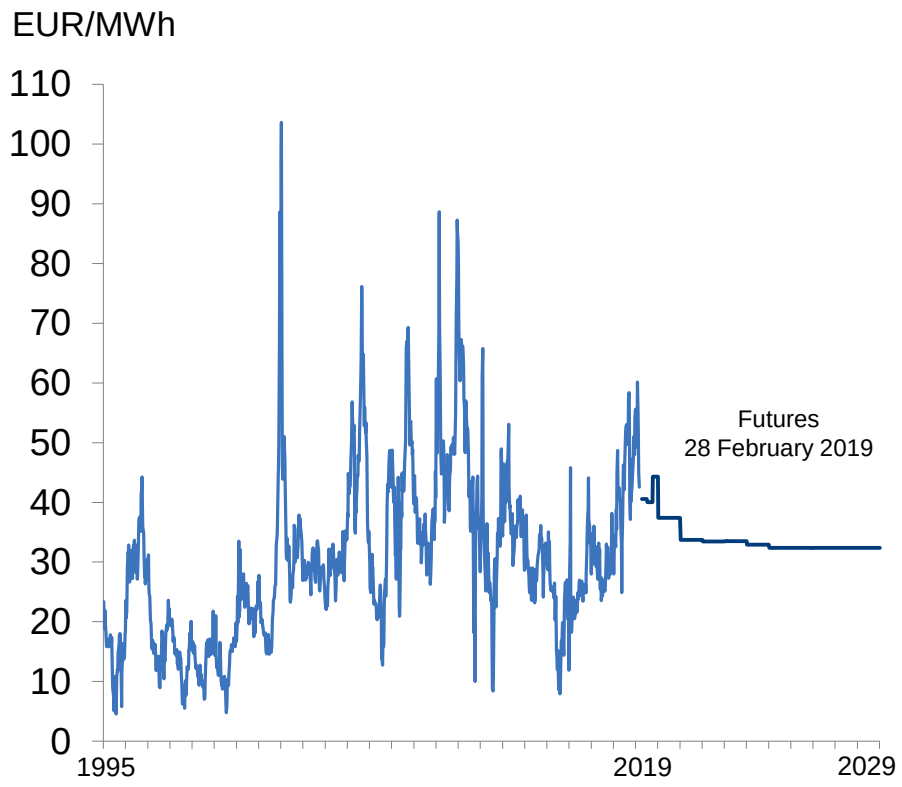
Estimated annual net changes in nuclear and thermal capacity



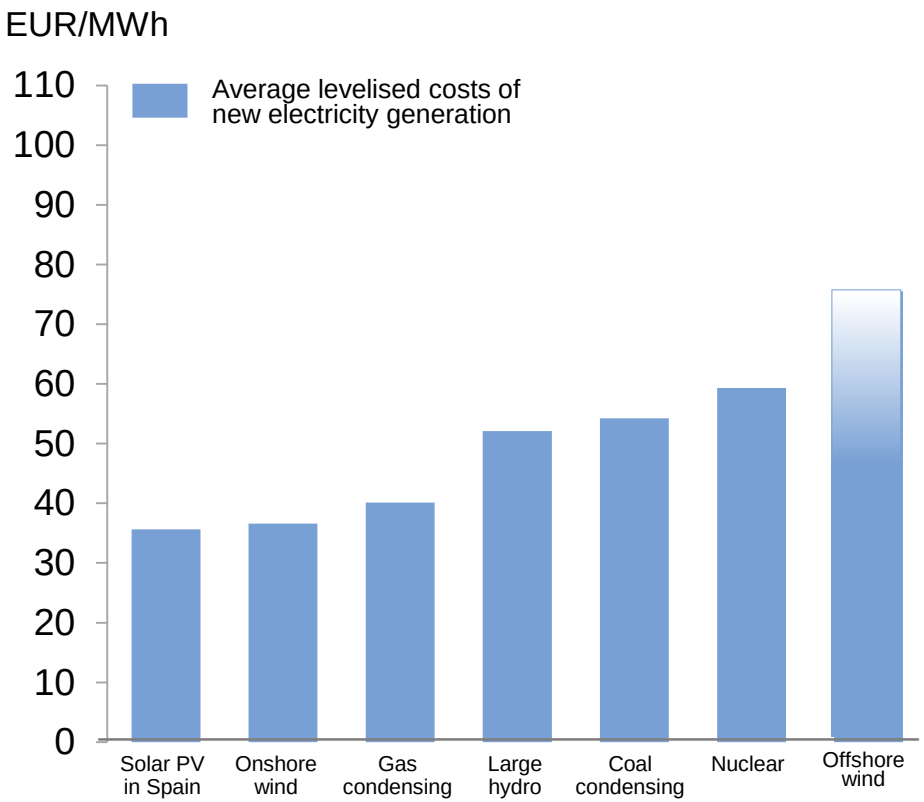
DATE	CAPACITY	AREA	UNIT/ TRANSMISSION	COMMENT
1.10.2018	- 1100 MW	DE	Lignite reseve	Niederaußem E & F and Jänschwalde F moved to lignite reserve
31.12.2018	- 473 MW	DE	Coal	Lünen 6&7, decommissioning
31.3.2019	- 937 MW	DE	Coal	Gersteinwerk, Kiel-Ostufer, decommissioning
during 2019	- 619 MW	EE	Oil shale	Closure of four older units in Estonia
1.9.2019	+ 700 MW	DK1-NL	Transmission	Cobra cable: trial operation expected to begin in Q3-19
1.10.2019	- 800 MW	DE	Lignite reserve	Jänschwalde E, Neurath C
1.10.2019	+ 0-400 MW	DK2-DE	Kriegers Flak	Offshore connection between DK2 and DE used for both grid connection of offshore wind farms and interconnection.
31.12.2019	- 1470 MW	DE	Phillipsburg 2	Nuclear unit, decommissioning
31.12.2019	- 850 MW	SE3	Ringhals 2	Decommissioning
1.1.2020	+ 1600 MW	FI	Olkiluoto 3	Start of regular electricity production expected in January 2020.
31.3.2020	- 100 MW	DK	Amagerværket 3	250 MW coal replaced by 150 MW biomass
during 2020	+ 1100 MW	DE	Datteln 4	Uniper's coal condensing unit; targeted commissioning mid-2020.
31.12.2020	- 856 MW	SE3	Ringhals 1	Decommissioning
31.12.2021	- 4060 MW	DE	Nuclear	Decommissioning Brokdorf, Grohnde, Gundremmingen C
31.12.2022	- 4040 MW	DE	Nuclear	Decommissioning Isar 2, Emsland, Neckarwestheim 2
By end of 2022	- 7000 MW	DE	Coal commission	German Coal Commission proposes 7 GW additional reduction of lignite/hard coal

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.

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* Unit 2: 1974* Unit 3: 1985	Unit 1: 1980 Unit 2: 1981 Unit 3: 1985
Generation Capacity	Unit 1: 507 MW Unit 2: 507 MW **Total: 1,014 MW**	Unit 1: 890 MW Unit 2: 890 MW (Unit 3: 1,600 MW) **Total: 1,780 MW (3,380 MW)**	Unit 1: 473 MW* Unit 2: 638 MW* Unit 3: 1,400 MW **Total: 1,400 MW**	Unit 1: 984 MW Unit 2: 1,116 MW Unit 3: 1,159 MW **Total: 3,259 MW**
Fortum’s share	100% 1,014 MW	27% 473 MW	43% 602 MW	22% 724 MW
Yearly production Fortum’s share of production	8 TWh 8 TWh	14 TWh 4 TWh	11 TWh 5 TWh	25 TWh 6 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

*Out of operation; on decommissioning phase

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	2018
Oskarshamn 1*	80	51	63	85	68	77	72	1	12	74	60	81	82	0
Oskarshamn 2*	90	78	76	86	75	90	77	81	33	0	0	0	0	0
Oskarshamn 3	85	95	88	70	17	31	68	69	77	75	79	83	77	87
Forsmark 1	85	76	81	88	88	93	79	88	87	94	79	95	88	94
Forsmark 2	94	72	85	79	64	38	94	82	89	89	91	75	82	87
Forsmark 3	95	92	88	69	86	81	85	93	88	83	58	82	86	81
Loviisa 1	95	93	94	86	96	93	94	84	92	92	93	88	93	91
Loviisa 2	95	88	96	93	95	89	94	91	93	89	92	93	93	85
Olkiluoto 1	98	94	97	94	97	92	95	90	97	94	96	91	93	87
Olkiluoto 2	94	97	94	97	95	95	91	96	93	97	89	94	81	94

Source: Fortum
*) Out of operation; on decommissioning phase



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	41	PWR / 1	AEE (Atomenergoexport)
Loviisa 2	507	100,0	507	1981-01-05	37	PWR / 1	AEE (Atomenergoexport)
Olkiluoto 1	890	26,6	234	1979-10-10	39	BWR / 3	Asea-Atom / Stal-Laval
Olkiluoto 2	890	26,6	237	1982-07-10	36	BWR / 3	Asea-Atom / Stal-Laval
Olkiluoto 3	(1,600)	25,0	(400)	(Jan 2020)		PWR / 3	Areva / Siemens
Oskarshamn 1	473	43,4	205	1972-02-06	46	BWR / 1	Asea-Atom / Stal-Laval
Oskarshamn 2	638	43,4	277	1975-01-01	43	BWR / 2	Asea-Atom / Stal-Laval
Oskarshamn 3	1,400	43,4	607	1985-08-15	33	BWR / 4	Asea-Atom / Stal-Laval
Forsmark 1	984	23,4	230	1980-12-10	38	BWR / 3	Asea-Atom / Stal-Laval
Forsmark 2	1,116	23,4	261	1981-07-07	37	BWR / 3	Asea-Atom / Stal-Laval
Forsmark 3	1,159	20,1	233	1985-08-18	33	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.

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.

Planned capacity increase:

- Forsmark 1, potential capacity increase of total ~110 MW in 2019-2021.

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.

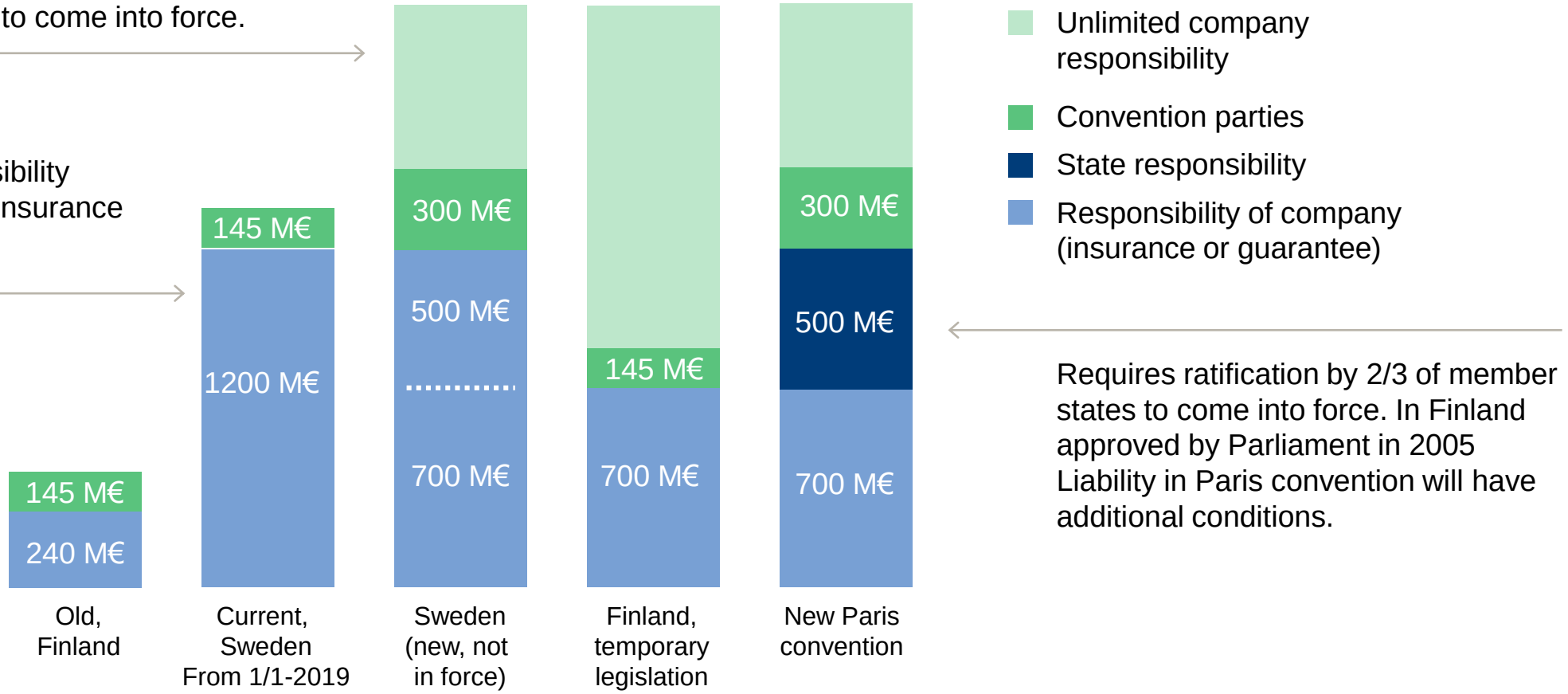
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Third party nuclear liability in case of severe accident

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

In force since 1 January 2012

Company responsibility requires 3rd party insurance coverage.



Requires ratification by 2/3 of member states to come into force. In Finland approved by Parliament in 2005 Liability in Paris convention will have additional conditions.

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

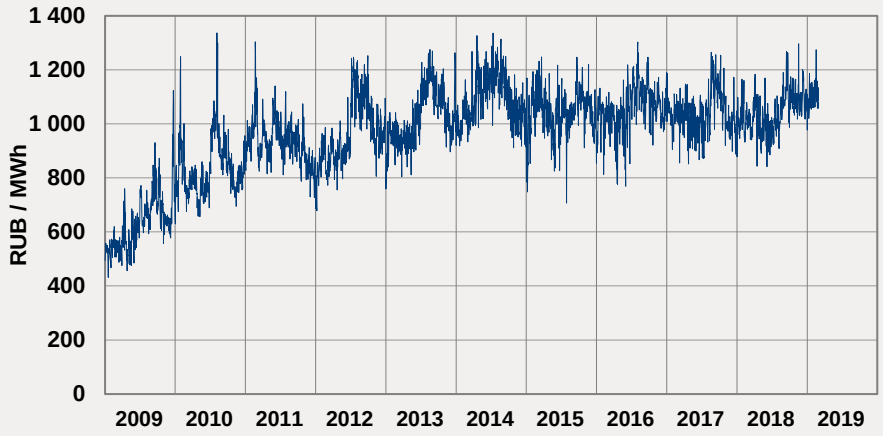
Key electricity, capacity and gas prices in the PAO Fortum area

	IV/18	IV/17	2018	2017
Electricity spot price (market price), Urals hub, RUB/MWh	1,099	1,038	1,043	1,041
Average regulated gas price, Urals region, RUB 1000 m^3	3,883	3,755	3,801	3,685
Average capacity price for CCS, tRUB/MW/month	158	157	148	148
Average capacity price for CSA, tRUB/MW/month	1,196	983	1,075	899
Average capacity price, tRUB/MW/month	682	577	609	535
Achieved power price for Fortum in Russia, RUB/MWh	1,982	1,845	1,888	1,813
Achieved power price for Fortum in Russia, EUR/MWh	26.0	27.0	25.6	27.5

Day ahead power market prices for Urals

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





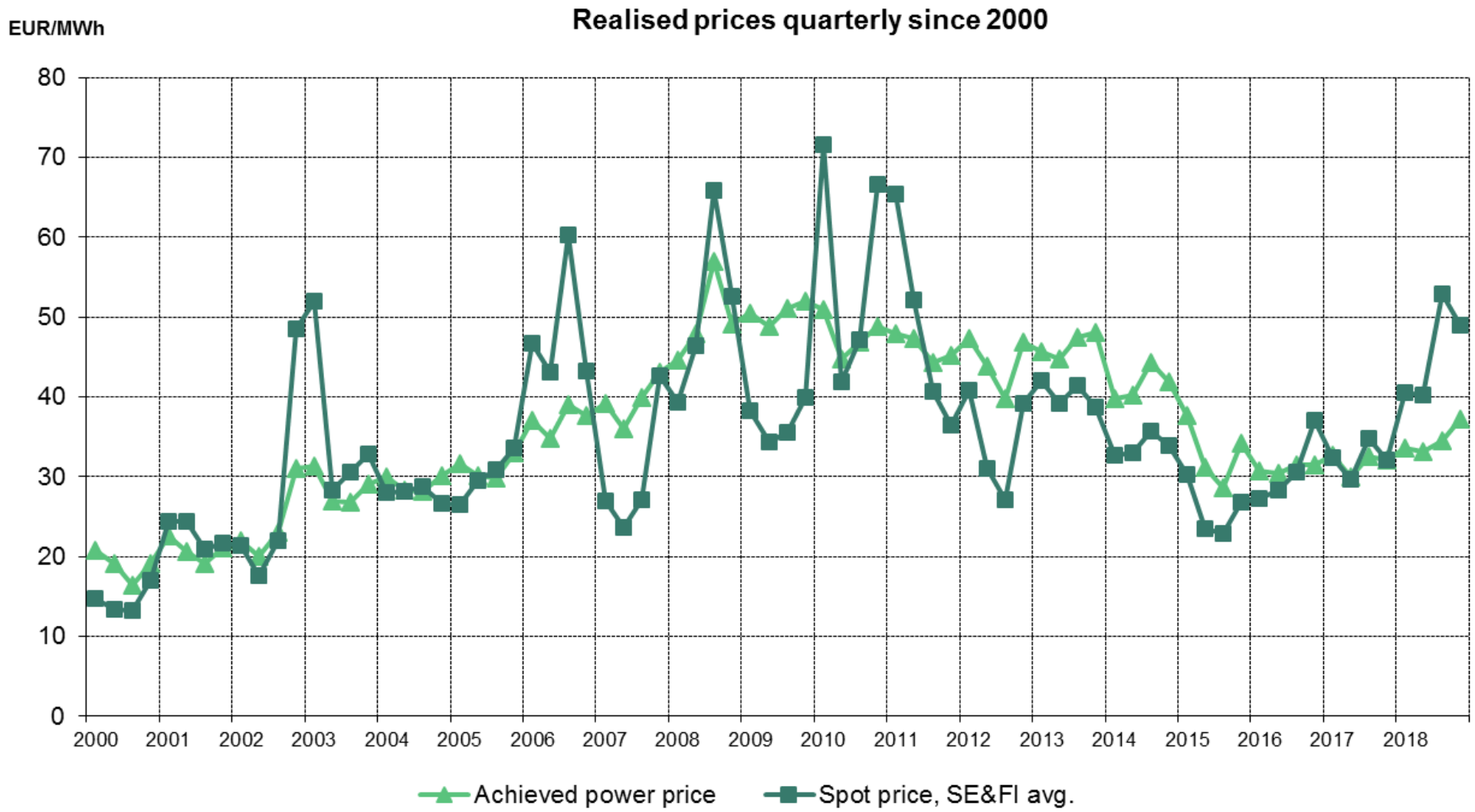
Thermal power generation capacity in Russia on 31 Dec 2018

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	256		CHP/Condensing	256
		Chelyabinsk CHP-1	Gas, coal	134		CHP/Condensing	134
2011	Feb/2011	Tyumen CHP-1	Gas	472	210	CHP/Condensing	682
	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
				2,545 MW	**2,299 MW**		**4,844 MW**

*) Tobolsk power plant was sold in Q1/2016

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Hedging improves stability and predictability - principles based on risk mitigation



2009 onwards thermal and import from Russia excluded



Financial Statements 2018

Fortum Corporation

1 February 2019

2018 Highlights

- Strategy updated – financial targets and dividend policy unchanged
- Uniper as an associated company
  - Year-end ownership 49.99%
- Higher Nordic power price in 2018
- Low hydro inflows and reservoir levels
- Volatile commodity and CO_2 prices
  - CO_2 price tripled during the year
- Comparable EBITDA at EUR 1,523 million, +19%
- Comparable operating profit at EUR 987 million, +22%
- EPS at EUR 0.95 (0.98)
  - Items affecting comparability EUR 0.15 (0.38)
- Balance sheet discipline with focus on cash flow continues

- The Board of Directors proposes dividend for 2018 unchanged at EUR 1.10 per share



Q4 2018 – Higher achieved price and nuclear volumes partly offset by lower hydro volumes

- Nordic power price up +56% in Q4 Y/Y
- Low hydro inflows and reservoir levels
- Volatile commodity and CO_2 prices
- Comparable EBITDA at EUR 473 million, +12%
- Comparable operating profit at EUR 333 million, +13%
- EPS at EUR 0.22 (0.28)
  - Items affecting comparability EUR -0.02 (0.01)
- Cash flow from operating activities totalled EUR 38 (295) million
  - Mainly due to change in working capital (including change of settlements for futures)



Q4 2018 Highlights

Strategy updated - Financial targets unchanged

Fortum and Lidl signed agreement to utilise excess heat

50 MW wind commissioned in Ånstadblåheia, Norway

Operation of 50 MW wind at Ulyanovsk site (JV in Russia) started

Decision to install Nordic's biggest battery (5 MW)

Valo Ventures with Google Capital co-founder - EUR 150 million

Construction of 250 & 100 MW wind in Russian JV started

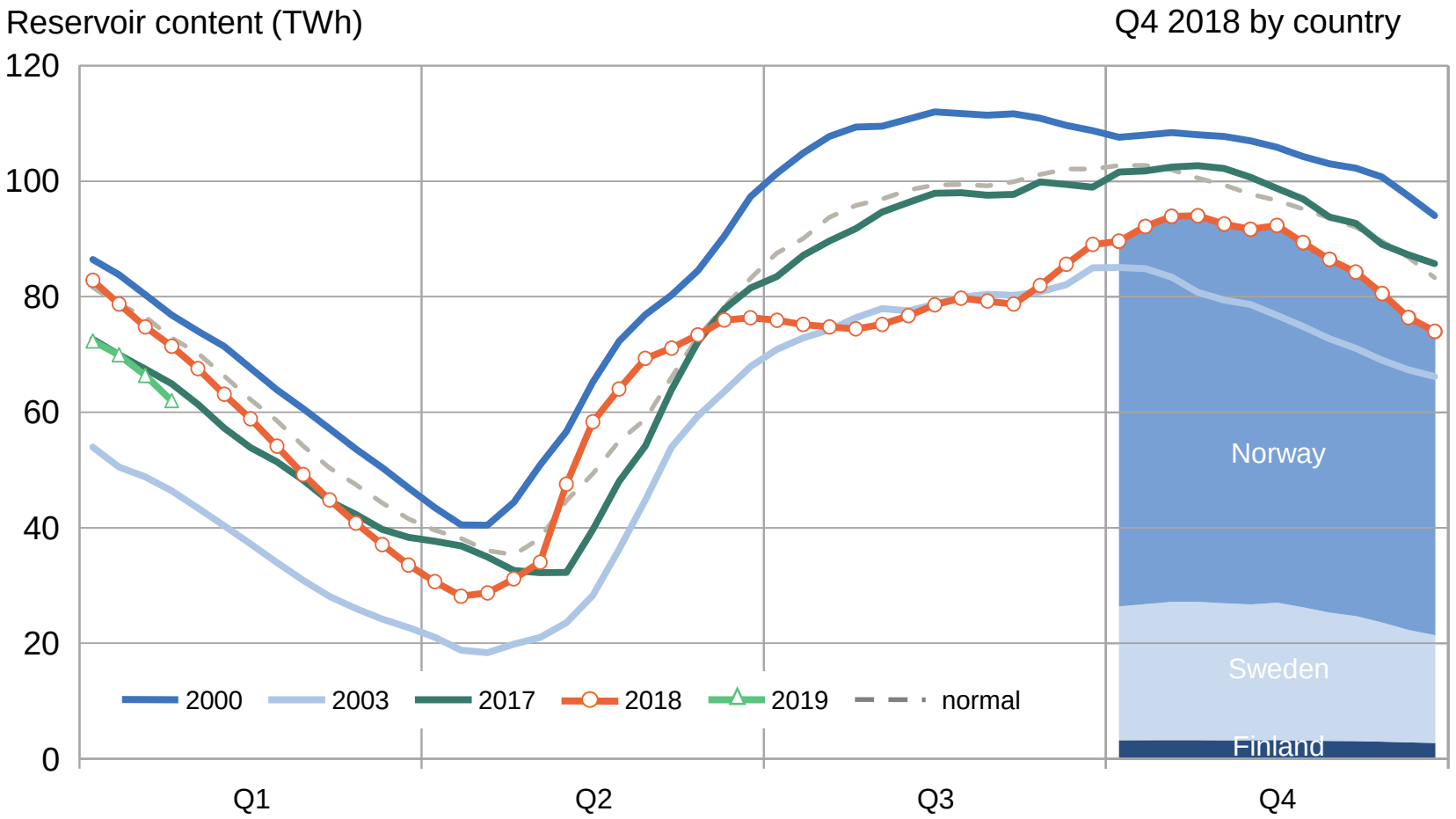
Uniper's result as an associated company from Q4 2018 onwards

Modernisation of Loviisa NPP automation successfully completed

Ånstadblåheia

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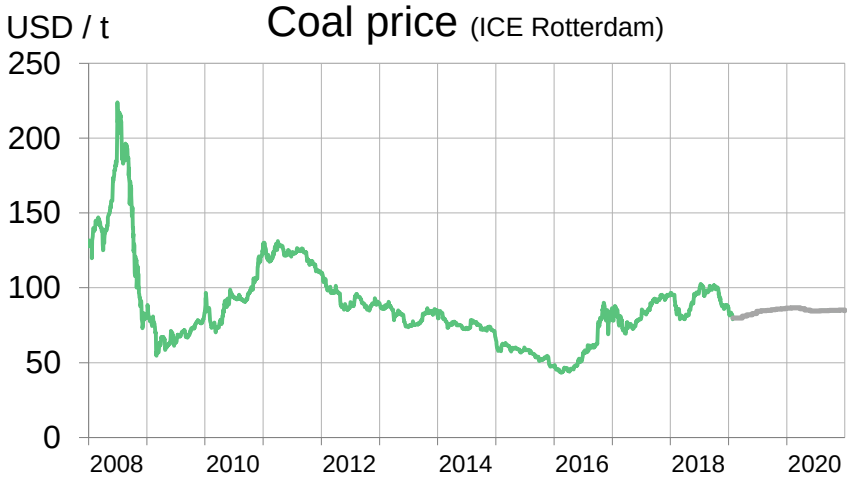
Nordic water reservoirs in Q4 below reference and 2017 levels – some improvement since the historically low levels in Q3

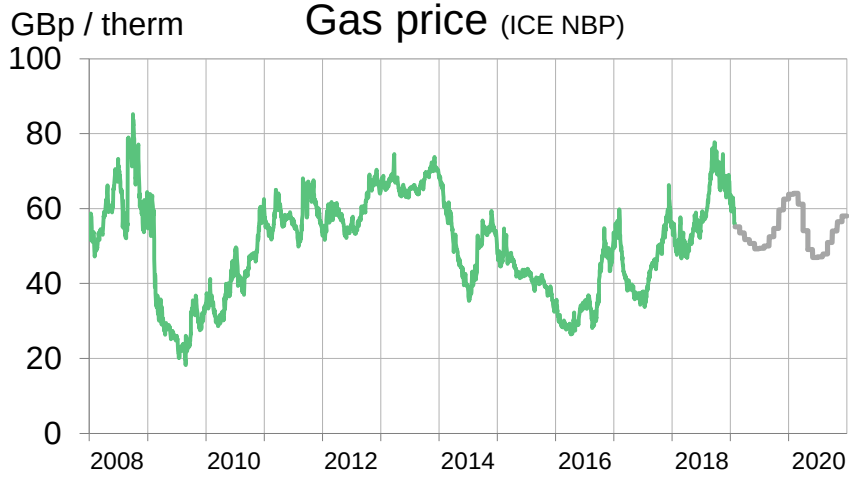


- Year 2018 was characterised by very dry first half and high precipitation during the fall
- Earlier and more rapid than normal spring flood increased reservoirs temporarily above normal levels
- Record rains in Norway in August-September increased the water reservoir levels closer to the normal level rapidly
- November-December were again dry, thus reservoir declined versus the normal and ended 9 TWh below the normal and 12 TWh below last year

Source: Nord Pool

Volatile coal and gas prices





The global coal market was supported by continued strong demand growth in China in the first half of the year, requiring strong import volumes from the international market

- However, China's macroeconomic outlook began to weaken towards the end of the year, which put the coal market into a wait-and-see mode
- The wider financial market sell-off lowered prices in the coal market in October,
- In 2018, Chinese power generation from coal rose by some 6%, still indicating strong demand growth, but domestic production has also showed signs of rebound towards the end of the year, with official data suggesting a 5.2% Y/Y production increase in 2018 overall

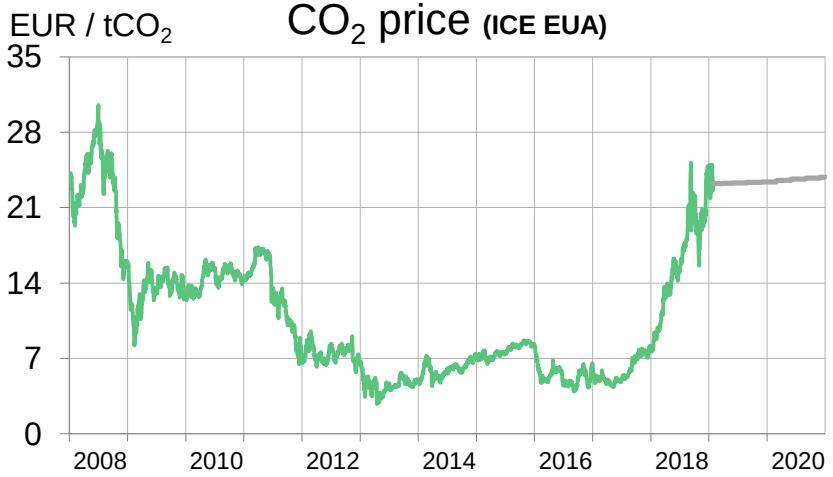
The European gas market was very bullish in 2018 despite a decrease in overall gas consumption

- Internal: low storage levels due to cold end of winter led to high storage injection demand during the summer
- Northwest Europe decreased summer gas-for-power demand in order to make room for the injections, as supplies were tight
- External: the strong EUA market supported the gas price, signalling more power sector demand for the fuel, leading to a circle where EUAs and gas chased each other upward

Source: ICE, Thomson Reuters

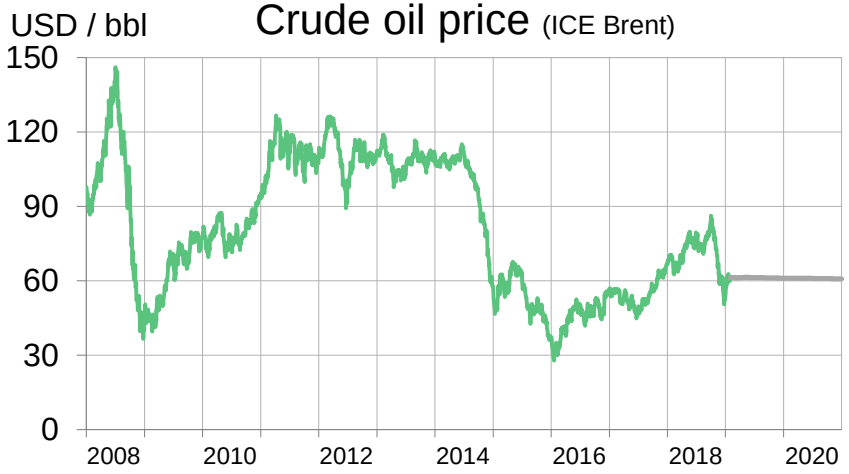
Market prices 29 January 2019; 2019-2020 future quotations

CO_2 price tripled in 2018



The EU ETS experienced a major upheaval as the market digested the effects of the Market Stability Reserve, started in 2019 to virtually eliminate the surplus of allowances by 2023

- The EUA price tripled during 2018 anchored in the European coal-to-gas switching range, connecting the EUA price onto the wider fuel complex
- Part of the EUA strength was triggered by the rising gas prices, which made the needed fuel-switching more expensive



Crude oil markets were characterised by demand growth well above long-term averages in 2018, which made the OPEC+ production cuts very effective in increasing prices

- Oil prices strengthed until October despite continued strong gains in US crude oil production, with an overall Y/Y increase reaching 20%
- In October, the sentiment in the financial markets radically shifted and oil declined sharply on the back of weaker demand and inflation expectations

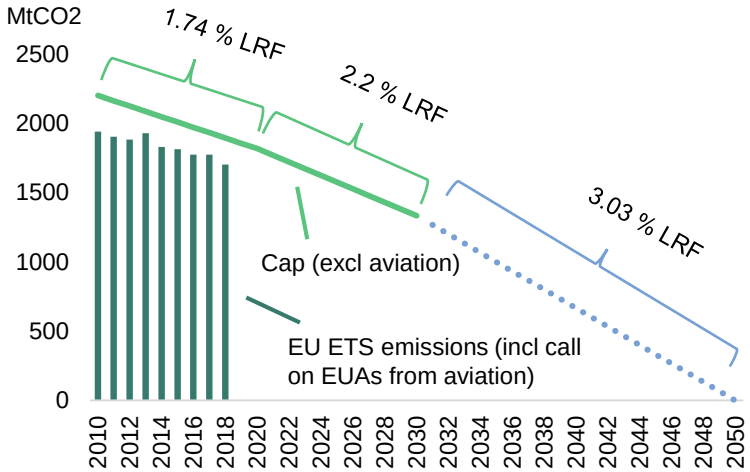
Source: ICE, Thomson Reuters

Market prices 29 January 2019; 2019-2020 future quotations

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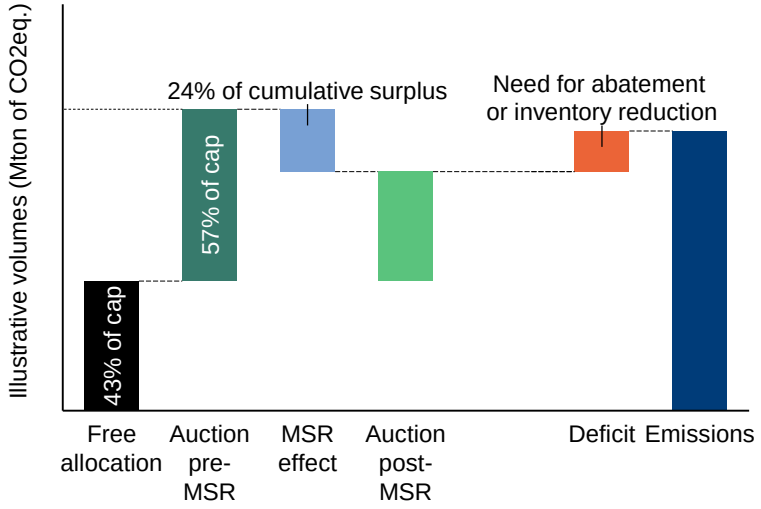
The MSR introduces tightness to carbon market – in 2018 coal-to-gas switching was modest due to high gas price

Linear reduction factor (LRF) tightens the market



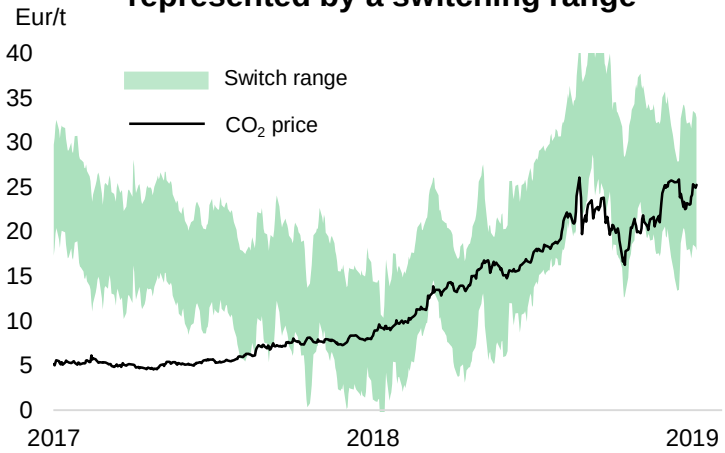
- Linear reduction factor (LRF) is the percentage of baseline supply[1] by which the annual supply of allowances (cap) is reduced every year. LRF is set at
  - 1.74% for 2013-2020 (equals to a reduction of 38 $MtCO_2$/year)
  - 2.2% for 2021-2030 (equals to a reduction of 48 $MtCO_2$/year)
- In total, emissions are set to decrease by 43% by 2030 vs. 2005
- Next LRF review is scheduled for 2024
  - 3.03% LRF from 2030 onwards would deliver net zero emissions by 2050

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, together represented by a switching range



- CO2 price has more than tripled since November 2016, when the final decision was reached on the future EU ETS rules, including the intake rate of the Market Stability Reserve, which became operational in January 2019
- The EUA market is in a process of finding the appropriate price at which enough fuel-switching occurs in order to balance supply and demand
  - This price is heavily dependent on the prices of gas and coal, illustrated by the coal-to-gas switching channel
- In practice, then, the gas/coal price relationship has become a major price anchor for the EUA

[1] Average annual total quantity of allowances released in 2008-2012.

[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; at low-end: gas 52% and coal 34%; at high-end: gas 49% and coal 36%. O&M cost assumptions apply.

Regulatory update

- COP24 agreed on the operational rules for the Paris Agreement
  - Rules on market mechanisms and global carbon markets still pending
- The EU 2050 climate strategy sets the long-term framework
  - Targets and policy measures for 2030-2050 to follow
- The German Coal Commission report published
  - Closing both nuclear and coal underlines the importance of gas during the transition phase
  - Detailed rules still to be developed - for company-specific assessment
- Sustainable financing rules affect the entire EU financing sector
  - Technology neutral and market-based taxonomy system required
- Brexit
  - The impact of no-deal Brexit on the EU energy market not expected to be significant
  - Hard Brexit would lead to a sudden UK exit from the EU ETS



German Coal Commission hands over its proposal to the government - Coal to be phased out in 2038 at the latest

- Holistic and responsible approach to phasing out coal-fired generation – government now to enforce
- Roadmap for capacity closures agreed
  - 12.5 GW by 2022 (compared to 42.5 GW in 2017)
  - Additional 13 GW by 2030
  - Latest 2038 all remaining capacity
- Affected companies and regions to be compensated
  - Level of compensation to power plant operators remains open
  - Coal regions would receive EUR 40 billion during the next 20 years to mitigate negative structural changes
  - EUR 2 billion annual compensation to customers in lower grid fees and/or taxes proposed to reduce impact of expected hike in power price
- Respective amount of CO_2 allowances to be cancelled in the EU Emission Trading Scheme (ETS)

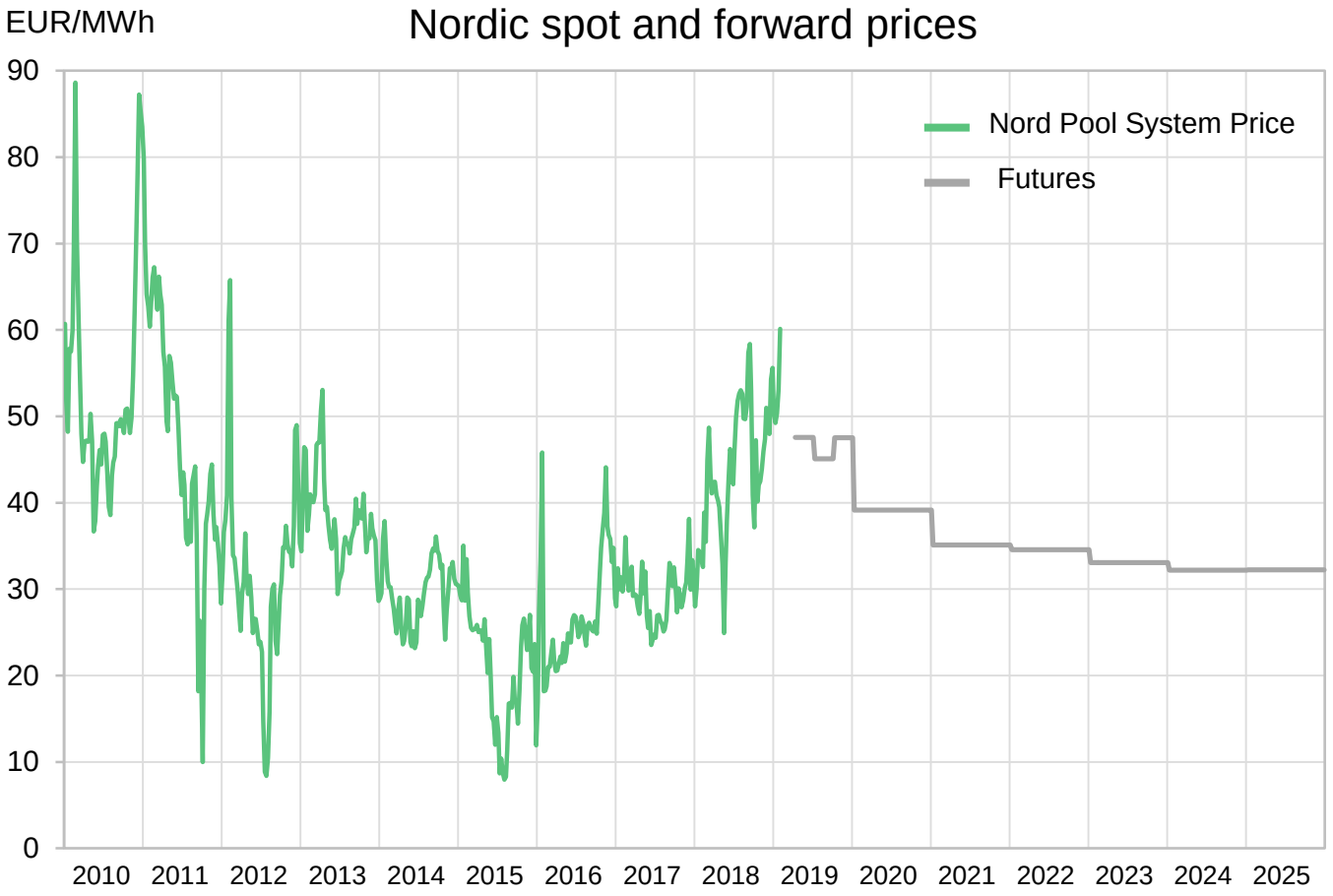
”We welcome the Coal Commission’s proposal and hope that the government will swiftly address the details necessary for the implementation.

The proposal highlights the importance of gas during the transition towards a fully decarbonised energy system and underlines the need for every utility to have a solid decarbonisation strategy.”

- Fortum

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Nordic power price recovery continued



- In 2018, the average system spot price in the Nord Pool was 44.0 EUR/MWh (29.4), the average area price in Finland was 46.8 EUR/MWh (33.2) and in Sweden (SE3, Stockholm) 44.5 EUR/MWh (31.2)
- In Q4 2018, the average system price in the Nord Pool was 47.6 EUR/MWh (30.6), the average area price in Finland was 49.6 EUR/MWh (33.0) and in Sweden (SE3, Stockholm) 48.2 EUR/MWh (31.1)
- The main reasons for the increasing spot price, both for the full year and Q4 2018, compared to year 2017, were clearly higher cost of coal condense and drier hydrology

29 January 2019
Source: Nord Pool, Nasdaq Commodities

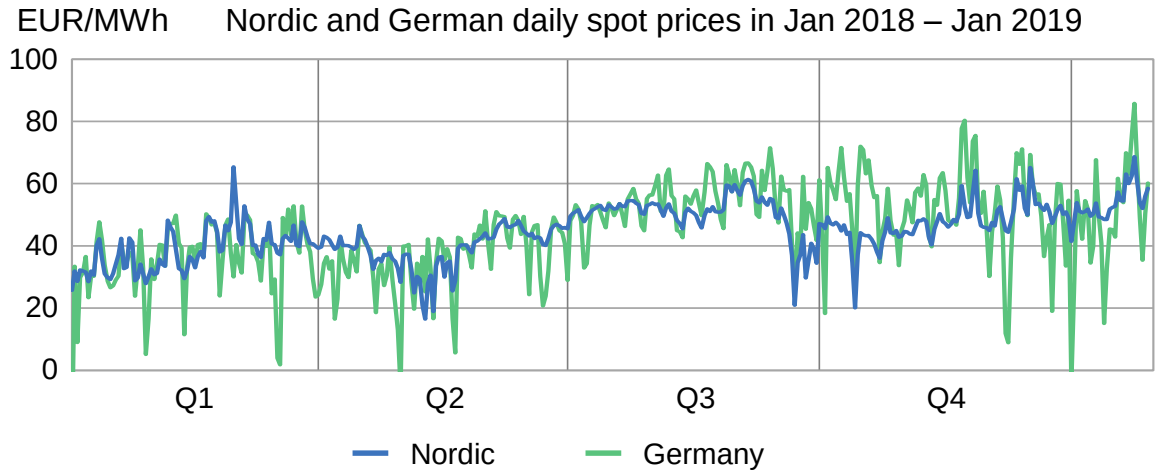
German – Nordic price spread

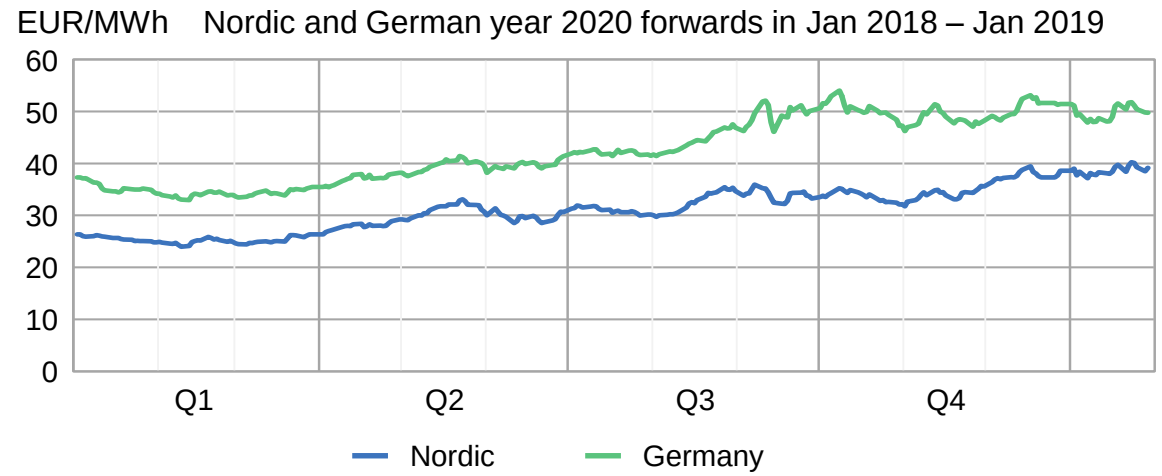
SPOT PRICE

- In 2018, the spread was 0.5 EUR/MWh with the Nordic system price at 44.0 EUR/MWh and German price at 44.5 EUR/MWh
- During 2012-2018, the average realised German-Nordic spot spread was 4.6 EUR/MWh, varying in the range of -1-15 EUR/MWh on an annual level
- Realised German-Nordic spread is influenced by realised supply and demand fundamentals in the Continental Europe and Nordic areas

FORWARD PRICE

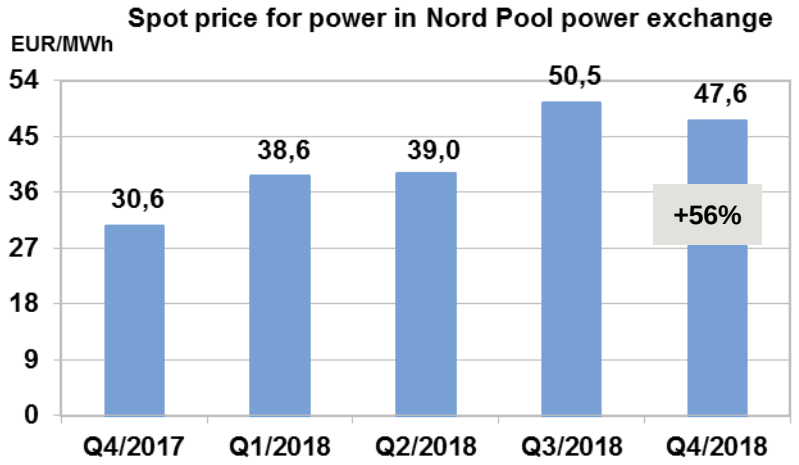
- During 2018, the spread for 2020 delivery traded in the range 6.8-19.3 EUR/MWh, avg. 11.4 EUR/MWh.
- Expected supply/demand balance in the Nordic area and in Continental Europe has an effect on the spread: investments in new interconnector capacity, growth of demand and new renewables as well as amount of exiting nuclear and coal capacity all play a role
- The spread has increased as at the same time both price levels have increased

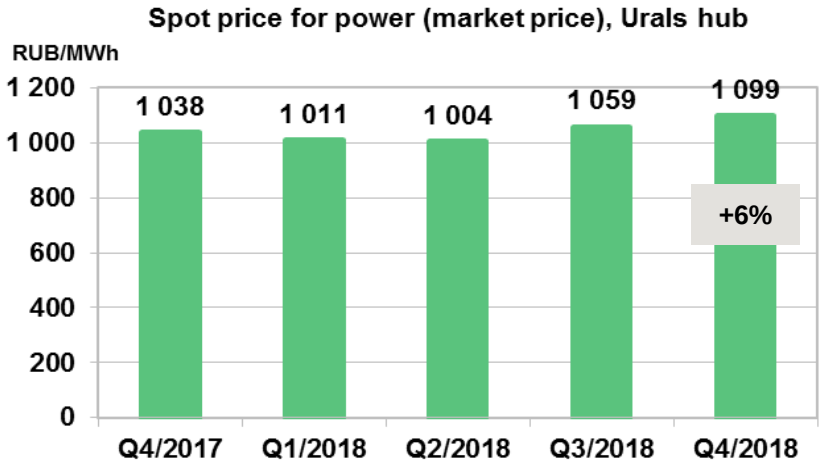


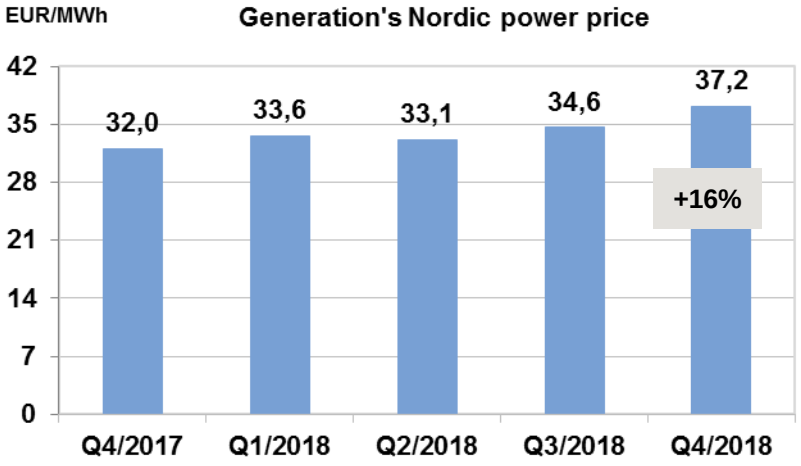


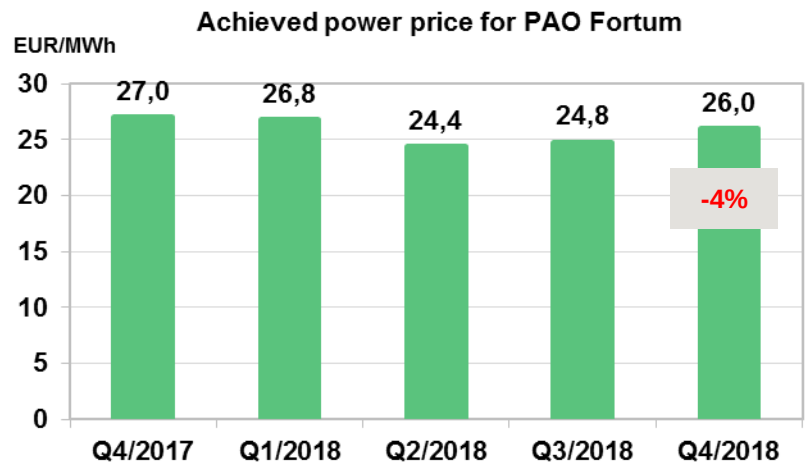
29 January 2019
Source: Nord Pool, Bloomberg

Nordic power prices on a rising trend in 2018 – Fortum price up 16% on Q4, price in Russia impacted by weaker rouble







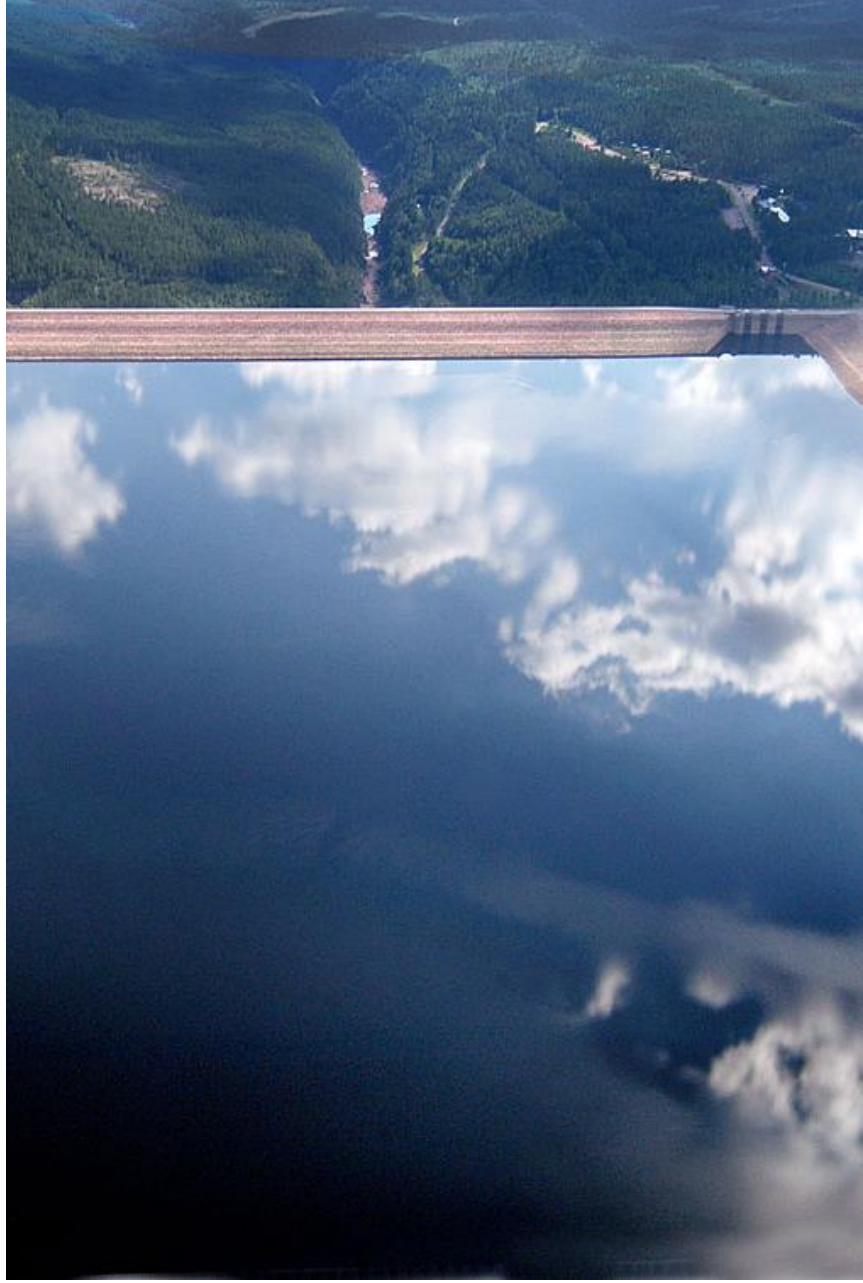


Changes refer to year-on-year difference (Q4 2018 versus Q4 2017)
NOTE: Achieved power price (includes capacity payments) in roubles increased by 7%

Generation

- Higher comparable operating profit in Q4, +18%
  - Higher nuclear, but lower hydro generation
  - Higher achieved power prices and lower taxes in Sweden
- Higher comparable operating profit in 2018, +32%
  - Higher achieved power prices and lower taxes in Sweden partly offset by lower hydro and nuclear volumes
- Loviisa automation project finalised; focus to maintain cost efficiency and benchmark performance, drive flexible clean energy

MEUR	Q4 2018	Q4 2017	2018	2017
Sales	555	433	1,837	1,677
Comparable EBITDA	224	191	762	603
Comparable operating profit	189	160	631	478
Comparable net assets			6,295	5,672
Comparable RONA %			11.2	8.4
Gross investments	71	55	194	264



City Solutions

- Higher comparable operating profit in Q4, +11%
  - Higher power sales volumes and price, positive impact of change to seasonal heat pricing in Finland
  - Partly offset by the weaker result in recycling and waste business
- Improved comparable operating profit in 2018 +15%
  - Positive impact of EUR 37 (15) from Fortum Oslo Varme partly offset by the weaker result in the recycling and waste business
- Hafslund integration, development and expansion of recycling and waste business

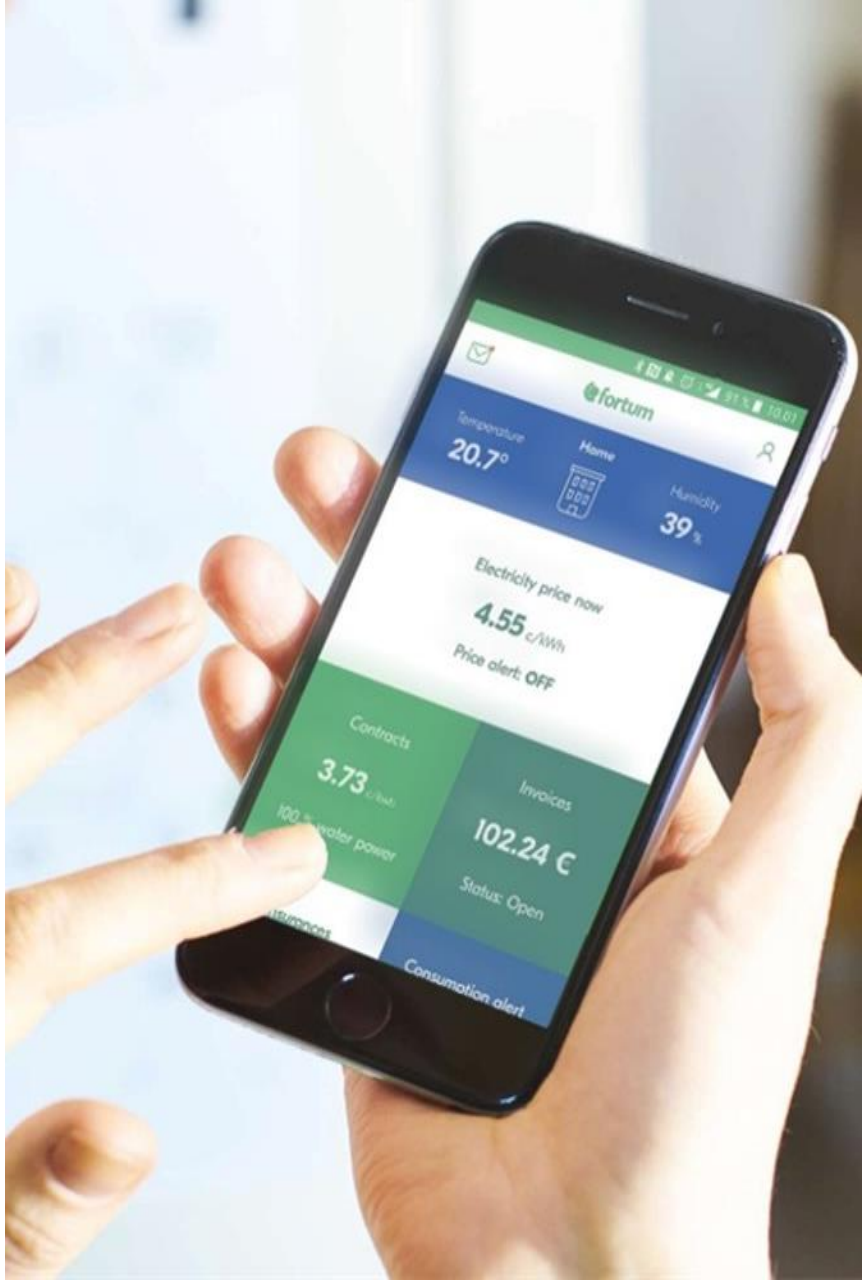
MEUR	Q4 2018	Q4 2017	2018	2017
Sales	358	340	1,094	1,015
Comparable EBITDA	113	110	284	262
Comparable operating profit	68	61	113	98
Comparable net assets			3,743	3,728
Comparable RONA %			5.0	5.5
Gross investments	79	69	222	556



Consumer Solutions

- Higher sales in Q4 driven by higher spot prices
  - Continued tough competition and customer churn in the Nordics
- Marginally lower comparable operating profit in Q4
- Increased comparable operating profit in 2018, +29%
  - Hafslund positive contribution of EUR 18 million
  - Profitability burdened by lower sales margins and the amended service agreements for the divested electricity distribution companies
- Hafslund restructuring, integration and development of product offerings

MEUR	Q4 2018	Q4 2017	2018	2017
Sales	555	453	1,759	1,097
Comparable EBITDA *)	31	25	110	57
Comparable operating profit	17	18	53	41
Comparable net assets			648	638
Customer base, million			2.47	2.49
Gross investments	14	3	47	493



*) Implementation of IFRS 15 positive effect due to capitalisation of sales commissions in 2018: Q4 2018 EUR 9 million and 2018 EUR 32 million

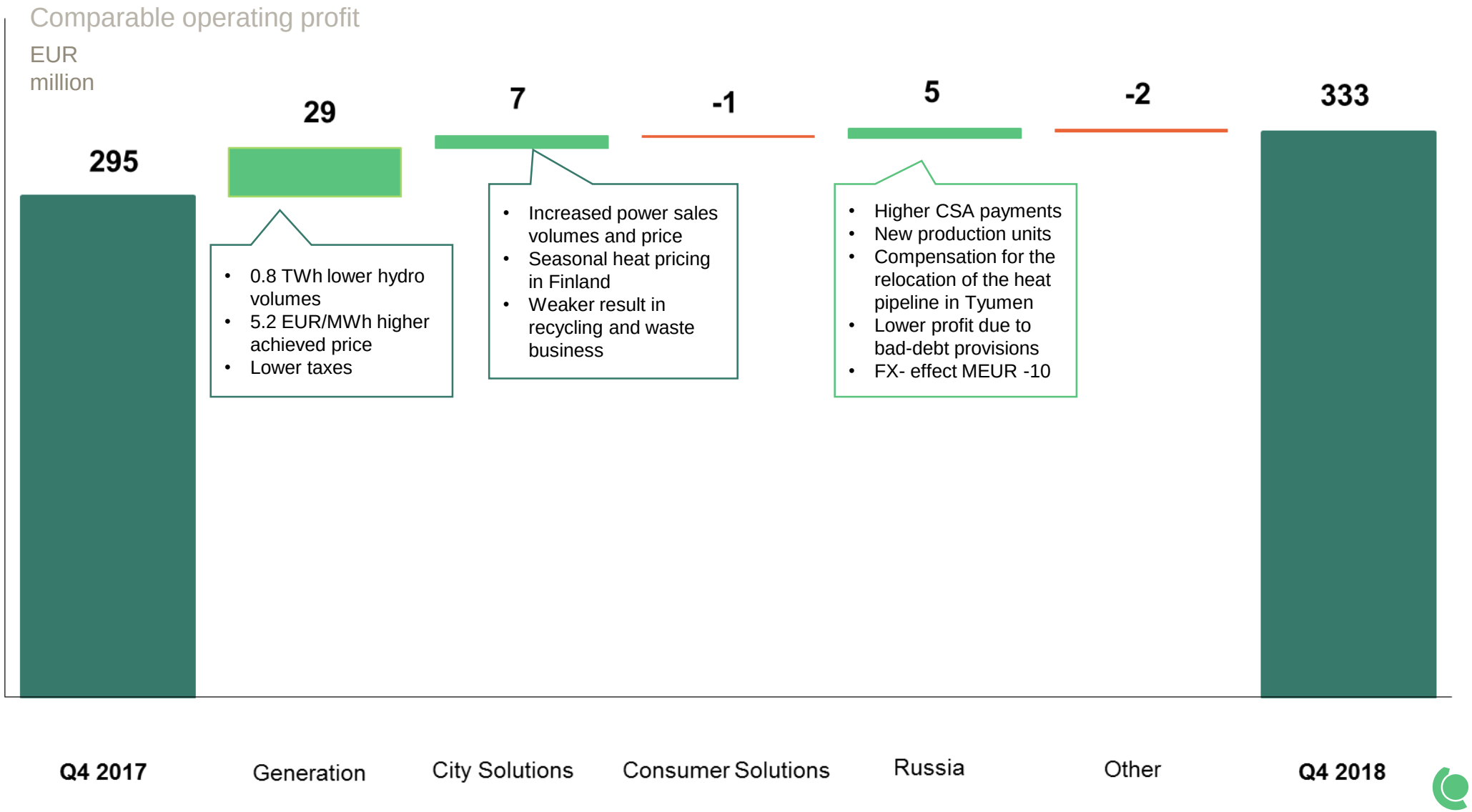
Russia

- Increased comparable operating profit in Q4, +6%
  - Positive impact from higher CSA payments (Nyagan 1&2), contribution from new production units and compensation for the relocation of heat pipeline in Tyumen
  - Offset by weaker rouble EUR -10 million and bad debt provisions
- Lower comparable operating profit in 2018, -8%
  - New units and higher CSA payments offset by negative impact from weakened rouble EUR -32 million, bad debt provisions and lower electricity margins
- Growth in solar and wind

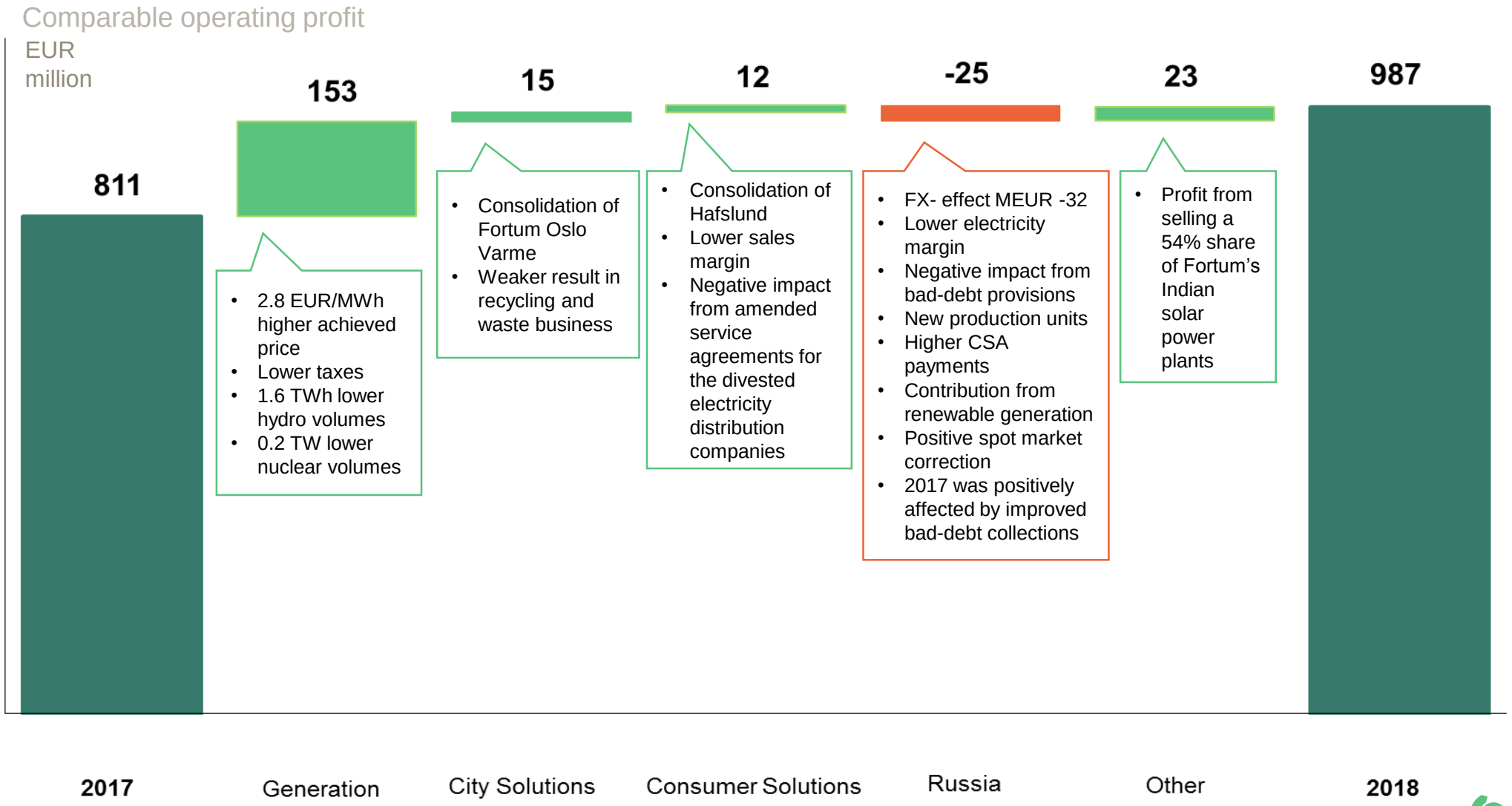
MEUR	Q4 2018	Q4 2017	2018	2017
Sales	305	314	1,069	1,101
Comparable EBITDA	127	121	417	438
Comparable operating profit	89	84	271	296
Comparable net assets			2,789	3,161
Comparable RONA %			10.3	10.1
Gross investments	66	167	117	277



Q4 2018 – Higher achieved power price in Generation



Year 2018 – Clear improvement in the Generation segment



Key financials

MEUR	Q4 2018	Q4 2017	2018	2017
Sales	1,599	1,432	5,242	4,520
Comparable EBITDA	473	424	1,523	1,275
Comparable operating profit	333	295	987	811
Operating profit	309	315	1,138	1,158
Share of profits of associates and joint ventures	-44	34	38	148
Profit before income taxes	261	300	1,040	1,111
Earnings per share, EUR	0.22	0.28	0.95	0.98
Net cash from operating activities	38	295	804	993

- Higher comparable operating profit due to higher power prices and acquisitions
- Share of profits from associates impacted by co-owned nuclear-related adjustments and divestments
- EPS for Q4 2018 negatively impacted by items affecting comparability and share of profits from associates (full year 2017 Swedish tax case -0.14 EUR)
- More cash tied to the daily cash settled futures reflecting higher power prices

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Income statement

MEUR	Q4 2018	Q4 2017	2018	2017
Sales	1,599	1,432	5,242	4,520
Other income	41	29	130	55
Materials and services	-870	-747	-2,795	-2,301
Employee benefits	-119	-122	-459	-423
Depreciations and amortisation	-139	-128	-536	-464
Other expenses	-178	-168	-594	-576
Comparable operating profit	**333**	**295**	**987**	**811**
Items affecting comparability	-24	20	151	347
Operating profit	**309**	**315**	**1,138**	**1,158**
Share of profits/loss of associates and joint ventures	-44	34	38	148
Finance costs - net	-4	-49	-136	-195
Profit before income tax	**261**	**300**	**1,040**	**1,111**
Income tax expense	-64	-43	-181	-229
Profit for the period	**197**	**257**	**858**	**882**

- Sales and comparable operating profit increased due to higher power prices and Hafslund acquisition
- Share of profits from associates impacted by co-owned nuclear-related adjustments and divestments
- Finance costs positively impacted by nuclear-related adjustments and lower interest costs
- Income taxes for 2017 negatively impacted by Swedish tax case
- Net profit impact from nuclear-related adjustments was close to zero

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Cash flow statement

MEUR	Q4 2018	Q4 2017	2018	2017
Comparable EBITDA	**473**	**424**	**1,523**	**1,275**
Realised FX gains/losses	26	-12	231	-83
Paid net financial costs, income taxes and other	-55	-72	-280	-281
Change in working capital	-406	-45	-670	81
of which change of settlements for futures	*-226*	*17*	*-524*	*141*
Net cash from operating activities	**38**	**295**	**804**	**993**
Capital expenditures	-185	-187	-579	-657
Acquisitions of shares	-175	-44	-4,088	-972
Divestments of shares	2	1	259	741
Change in cash collaterals and restricted cash	51	21	-36	-3
Other investing activities	15	14	46	85
Cash flow from investing activities	**-292**	**-195**	**-4,398**	**-807**
Cash flow before financing activities	**-254**	**99**	**-3,594**	**187**
Paid dividends			-977	-977

- Increased net cash from operating activities due to improved EBITDA
- Positive impact of EUR 314 million from realised FX compared to 2017
- More cash tied to the daily cash settled futures hedging power price
- Acquisition of shares, mainly Uniper
- Uniper PTO was financed with existing cash resources of EUR 1.95 billion and bridge loan financing of EUR 1.75 billion
- Dividends paid EUR 977 million

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

	2018	2017	TARGET
Comparable EBITDA, MEUR	1,523	1,275	
Interest-bearing net debt, MEUR	5,509	988	
Comparable net debt/EBITDA ratio	3.6x	0.8x	Around 2.5x
Return on capital employed (ROCE), %	6.7	7.1*	At least 10%

*) Includes capital gains of Hafslund transactions

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

Liquid funds EUR 0.6 billion

Committed credit lines of EUR 1.8 billion

Deleveraging towards the target:

1. Prioritising capital expenditure
2. Improving business performance through operational excellence and increased flexibility
3. Optimising business portfolio

Outlook

Demand growth

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

Hedging

For 2019: ~75% hedged at EUR 31 per MWh (Q3: 65% at EUR 30)

For 2020: ~45% hedged at EUR 29 per MWh (Q3: 35% at EUR 28)

2019 Estimated annual capital expenditure,

including maintenance and excluding acquisitions

EUR 600-650 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 2019 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)

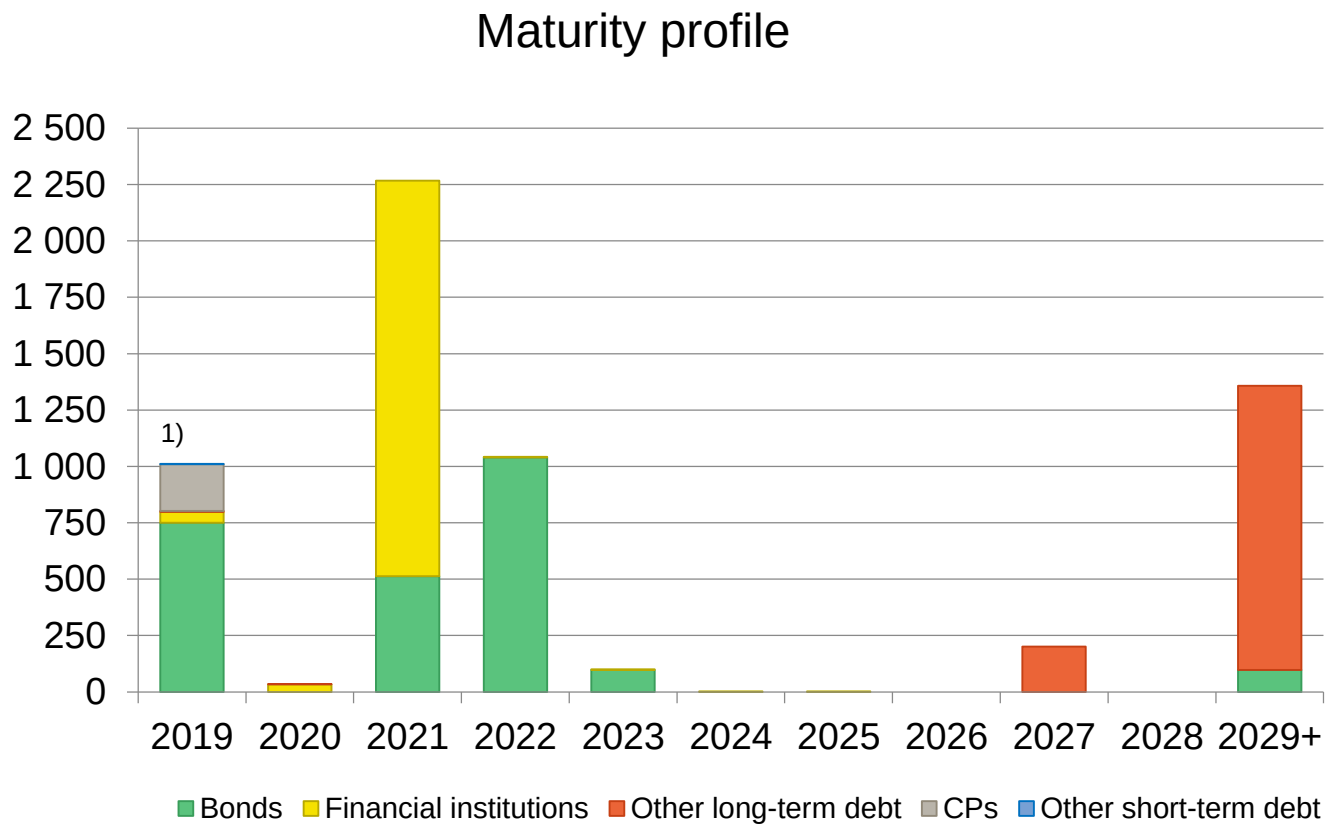
Annual General Meeting 2019 and dividend distribution proposal

- Fortum's Annual General Meeting 2019 will take place on 26 March 2019 at 11:00 am EET
  - At the Finlandia Hall in Helsinki
- The Board of Directors proposes a dividend of EUR 1.10 per share, unchanged
- Dividend-related dates planned for 2019:

– Ex-dividend	27 March 2019
– Record date for dividend payment	28 March 2019
– Dividend payment date	4 April 2019



Debt portfolio and average interest rate
December 31, 2018



- **Total interest-bearing debt EUR 6,093 million**
  - Average interest 2.4% (2017: 3.6%)
  - Portfolio mainly in EUR and SEK with average interest cost 1.7% (2017: 2.4%)
  - EUR 686 million (2017: 773) swapped to RUB, average interest cost including cost for hedging 8.3% (2017: 9.5%)

[1] In addition Fortum has received EUR 75 million based on Credit Support Annex agreements with several counterparties. This amount has been booked as a short term liability.

Next events:
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

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