

Energy trends in the Central and Eastern Europe

19th International Joint Conference at VŠE

24. 05. 2019

Jiří Mlynář

e-on

When we mention Energy sector what do you recall?

dynamically changing environment

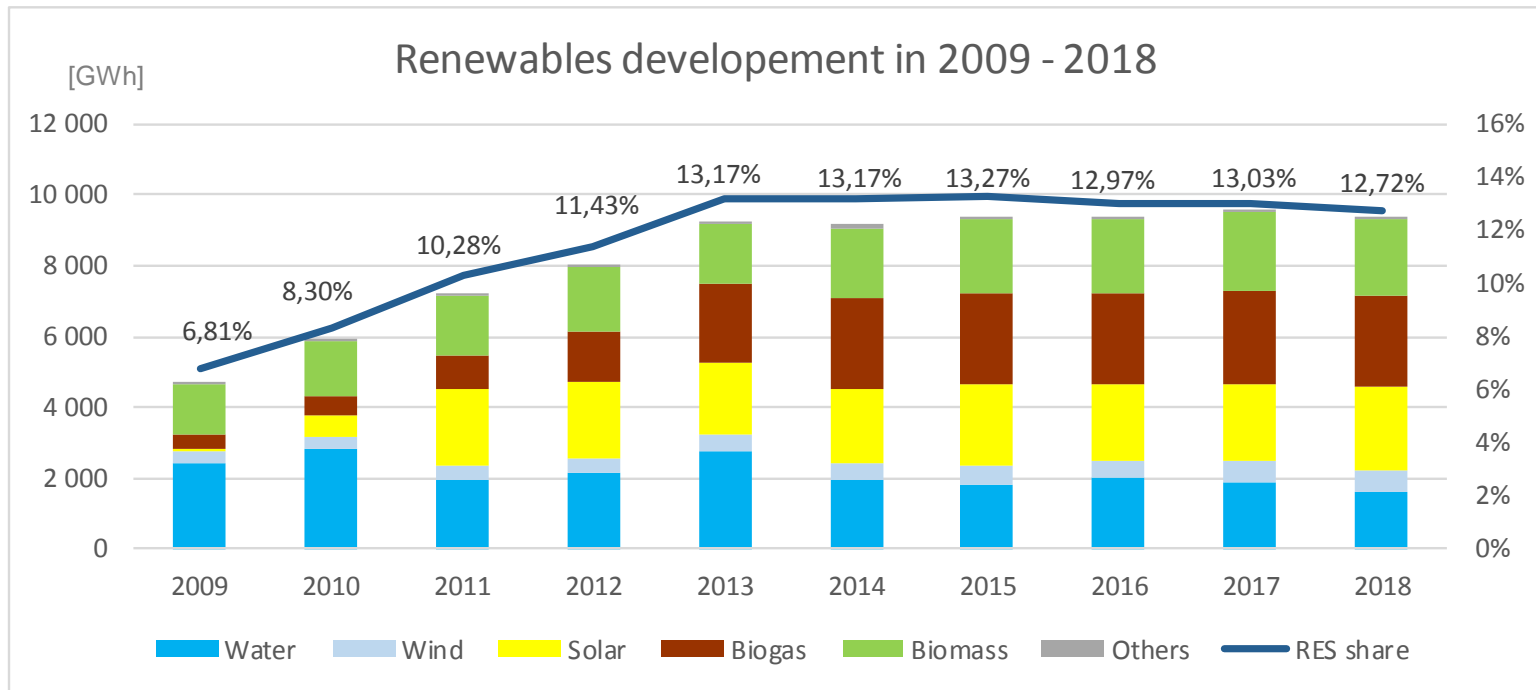


or

stable sector developing in long-term horizon

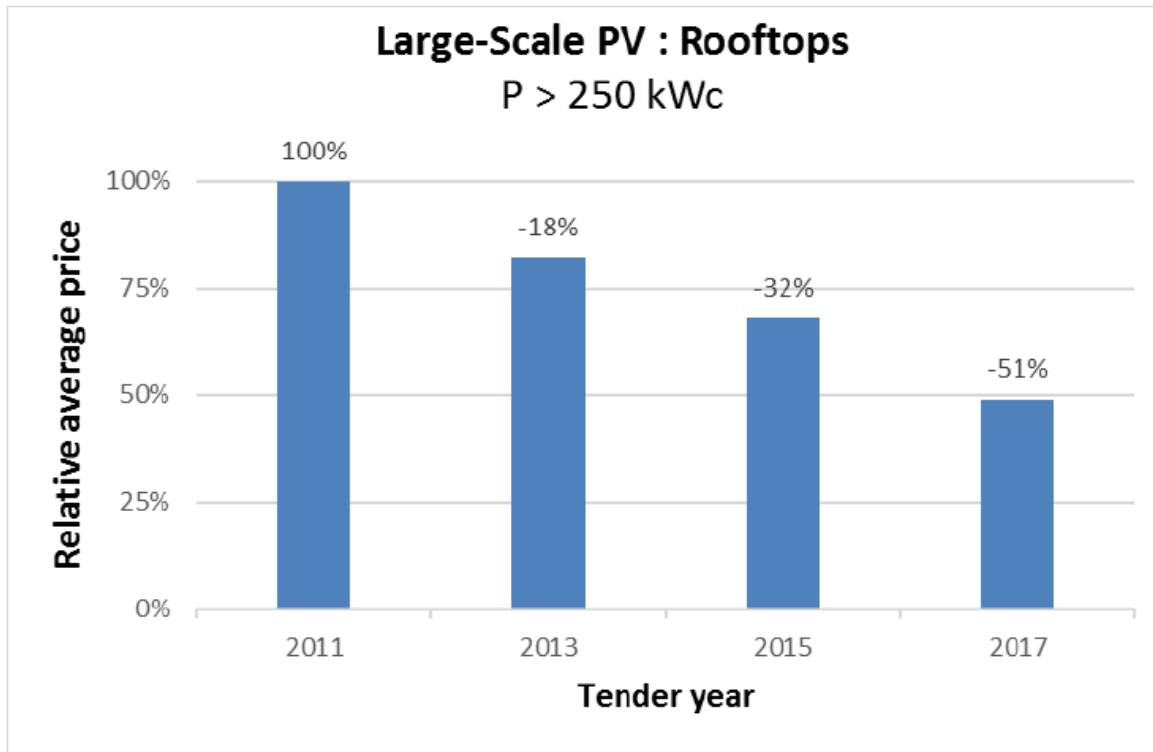


Production of electricity from renewable resources in CZ increased two times in 4 years, now stagnates



- renewable gas (biomethan) production and support scheme under discussion
- E.ON Energie is sources over 20% of electricity from renewable resources

Price for construction and operation of renewable electricity production decreased massively



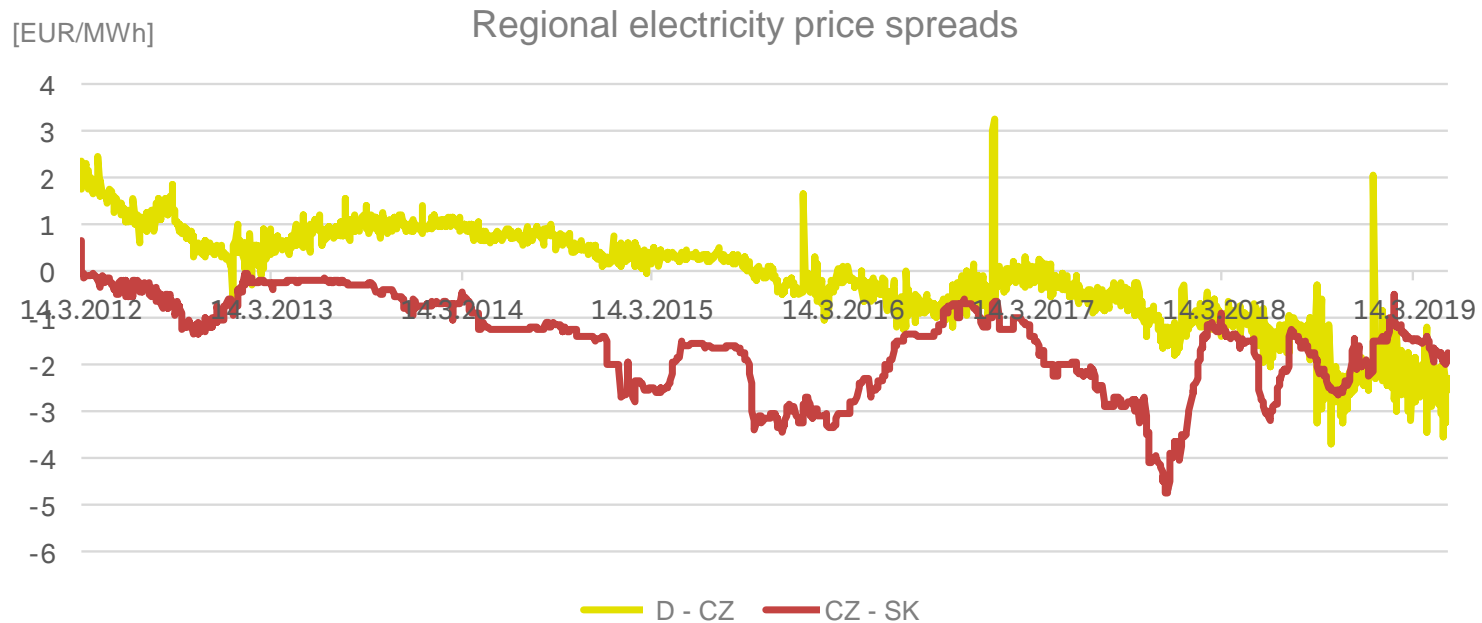
- decrease of solar installations decreased by about 50% in EU (here France)
- new RES installation auction premia around 60 EUR/MWh in Germany 2019

Commodity price volatility is high



- price movements of CO₂ allowances are driven by emission regulation
- commodity price of electricity decreased actually over the 10Y period

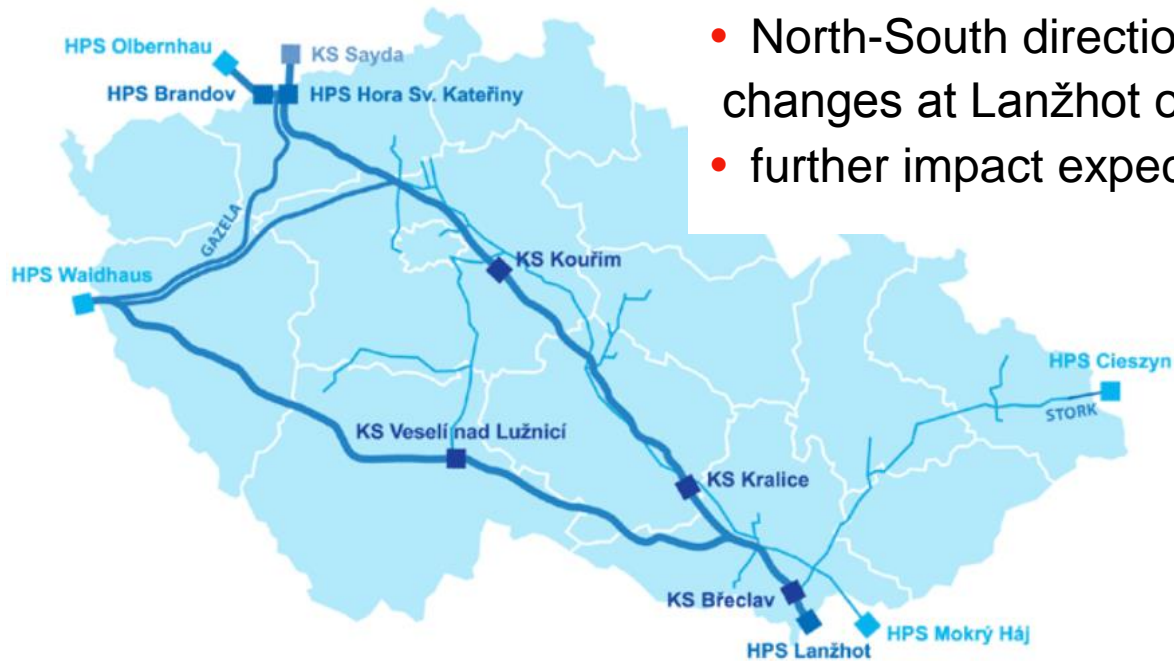
Cross-border electricity price spreads increase



- recently changing electricity flows increase the regional price differences
- single market in commodities it far from complete

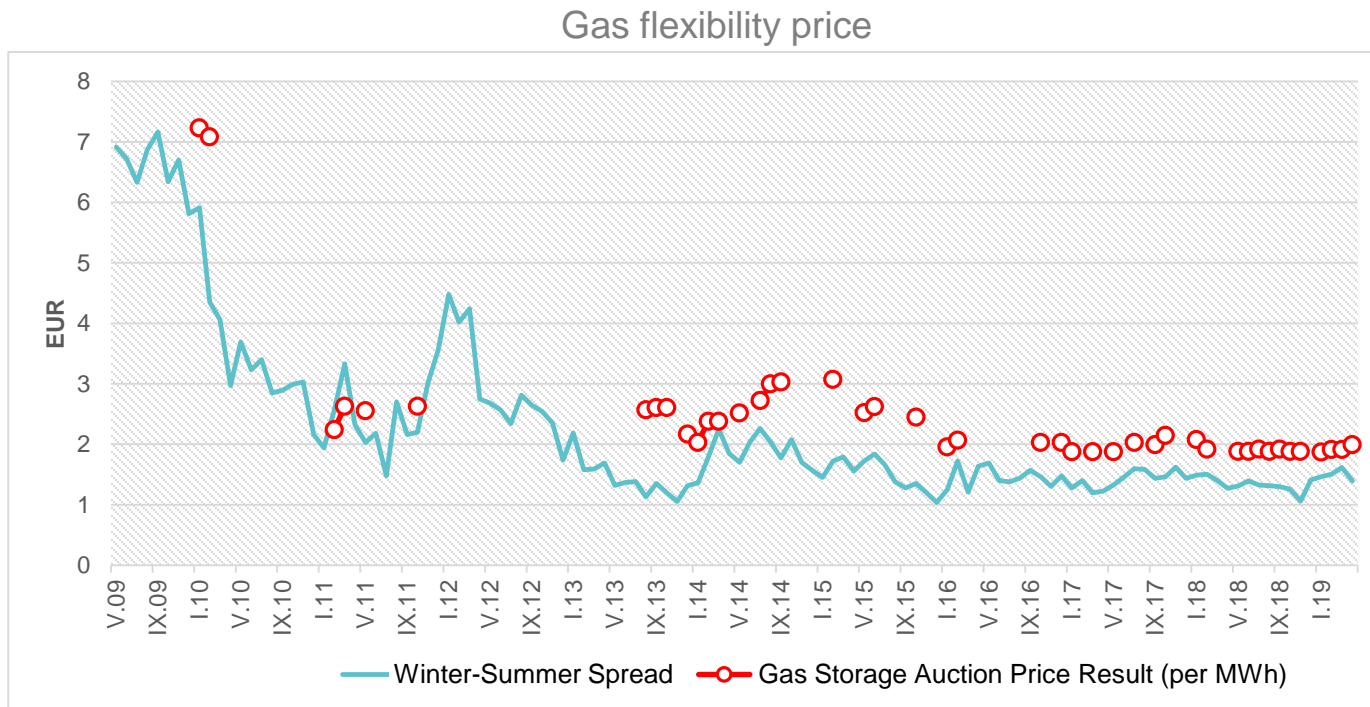
Change in gas transmission flows through CZ

[net flow in bil. m ³]	2011	2012	2013	2014	2015	2016	2017	2018
Brandov [D north]	1 215	10 890	23 528	25 315	27 092	26 748	28 059	31 798
Hora svaté Kateřiny [D north]	-1 897	-609	-2 963	356	1 020	-1 108	-460	-510
Lanžhot [SK]	27 506	10 842	6 542	-8 926	-10 922	-1 028	-3 113	-2 164
Olbernhau [D north]	814	5 878	5 262	8 744	6 631	5 530	6 679	6 597
Waidhaus [D south]	-18 236	-19 012	-23 309	-17 818	-16 332	-22 013	-22 157	-27 345



- North-South direction prevails, but changes at Lanžhot occur
- further impact expected by Nord Stream 2

Large transmission and LNG infrastructure investments helped to decrease value of gas flexibility



- it was supported by EU gas consumption decrease since 2010



What are the upcoming challenges?

How to balance short term price fluctuations and need for long term investments?

- In order to increase energy business competition unbundling, liberalisation and deregulation has taken place since 2000
(in some of the countries in the region it is far from complete)
- ✓ Infrastructure business (TSO, DSO) regulated and incentivizing long-term investments
- ? Commercial area including large production exposed to large price risk between short-term price fluctuations and need for long-term investments

New challenging trends

Decentral Energy

- motivated by renewables and self sufficiency reducing the need to use the transmission/distribution grid, providing e.g., virtual power plants
- raises questions about future grid development and remuneration

Smart Metering (and large data)

- to improve system steering and knowledge about individual energy offtake
- large investments needed and small customer tangible benefits uncertain

Clean Mobility

- to improve transportation business energy sustainability
- large need for investments not only in cars and cells, but charging infrastructure

Renewables financing experience → importance of costs and their distribution

Thank you for your attention.

Jiří Mlynář

Head of Energy Purchase

M +420 739 535 810

E jiri.mlynar@eon.cz

E.ON Energie, a.s.

F.A.Gerstnera 2151/6

370 01 České Budějovice

www.eon.cz