



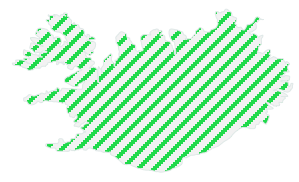
KOHLEUSSTIEG OSTEUROPA MIT FOKUS POLEN

Felix Reitz, M.Sc.

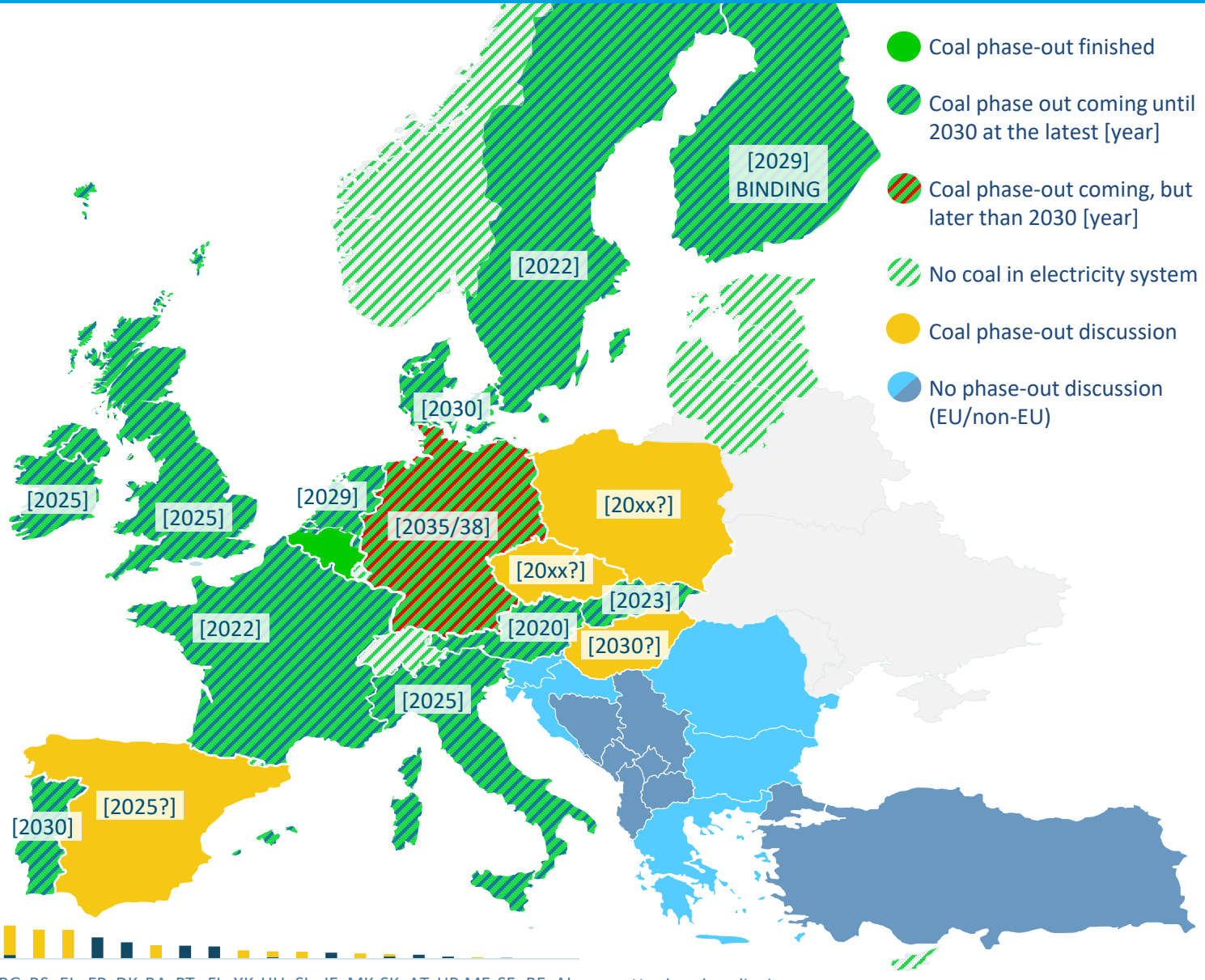
Strommarkttreffen Berlin, 2. August 2019

Status of coal national coal phase-outs in Europe

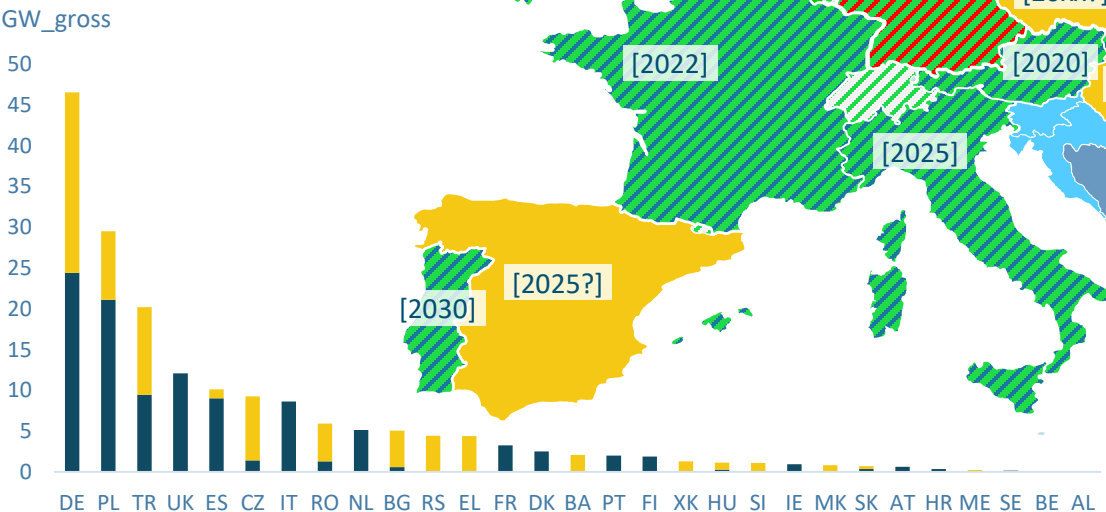
Discussions in Eastern Europe picked up speed recently



- Coal phase-out finished
- Coal phase out coming until 2030 at the latest [year]
- Coal phase-out coming, but later than 2030 [year]
- No coal in electricity system
- Coal phase-out discussion
- No phase-out discussion (EU/non-EU)



Coal operational (incl. standby)



Source: Europe Beyond Coal, status: July 2019

Key facts for Eastern European countries

| Country/ Region | Coal operational GW gross 2019 | Coal share power generation 2018 | Capacity >30 yrs | New Capacity Planned* GW | Non-hydro RES share power generation 2018 |
|--------------------|--------------------------------------|--|------------------|--------------------------------|--|
| Poland | 29.5 | 74 % | 64 % | 3.6 + 1.0** | 12 % |
| Czech Rep. | 9.2 | 56 % | 80 % | 0.1 | 11 % |
| Romania | 5.9 | 25 % | 85 % | 0.6 | 14 % |
| Bulgaria | 5.0 | 52 % | 74 % | - | 8 % |
| W. Balkans | 8.8 | 0 - 97 % | 87 % | 6.6 | n.a. (low!) |
| Slovenia | 1.1 | 30 % | 44 % | - | 3 % |
| Hungary | 1.1 | 11 % | 100 % | 0.5 | 7 % |
| Slovakia | 0.7 | 9 % | 90 % | - | 8 % |
| Croatia | 0.3 | 9 % | 37 % | - | 11 % |
| TOTAL | 60 GW | ~ 60% | 72 % | 11.4 | ~ 10 % |

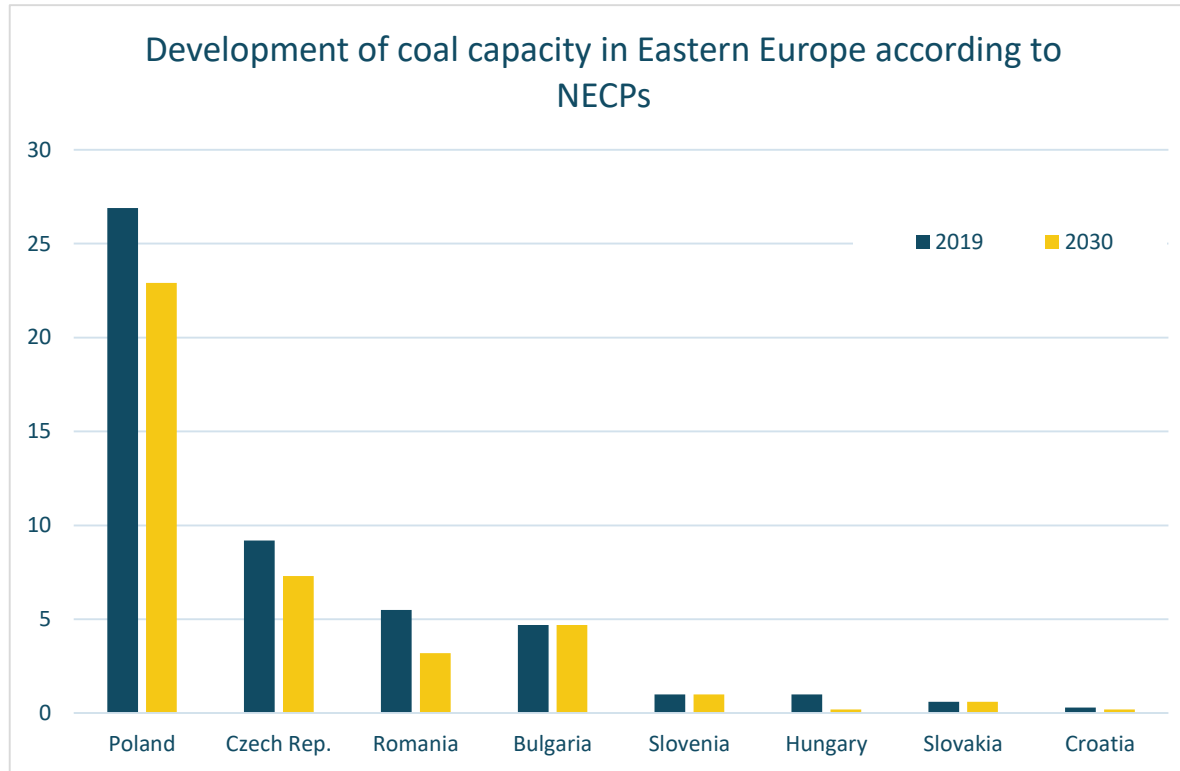
- ⇒ **Significant coal shares cannot be sustained with an ageing coal fleet**
- ⇒ **Actors must make decisive steps to reduce coal power**

* Without plants under construction.

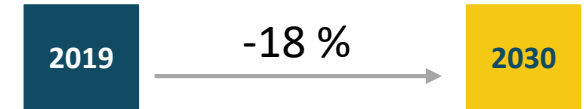
**Ostroleka C (1,000 MW): officially under construction, in reality construction not started yet.

Source: Europe Beyond Coal database (07/2019), Sandbag (2019)

Actual Planning in Eastern Europe: Governments anticipate limited reductions in coal



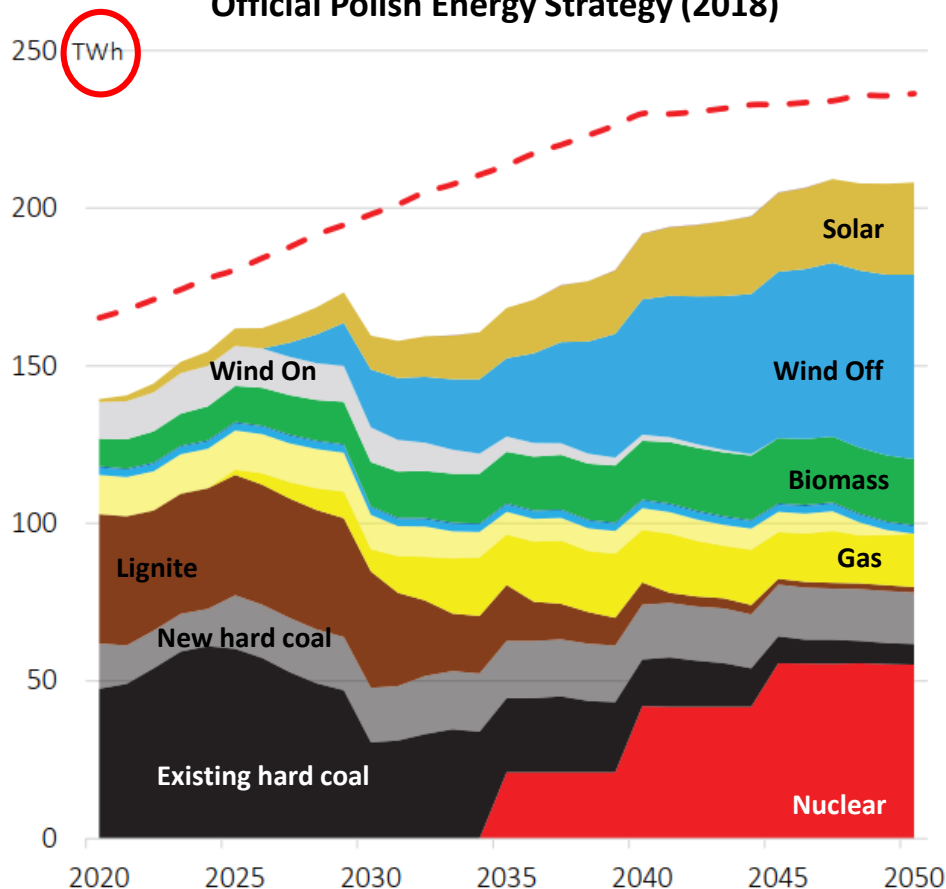
Governmental indicative intentions:



The obvious inconsistencies between (i) planned availability of coal capacity in NECPs and (ii) age structure & decreasing profitability of coal fleets indicates that **governments are not transparent or aware of transformation which is to be expected over the next years.**

Focus Poland: The future according to the Gov't

Official Polish Energy Strategy (2018)



- Replace lignite w/ nuclear (in 10 years)
- Partially replace old hard coal with new hard coal
- Phase-out wind onshore
- Get some renewables to cover rising demand

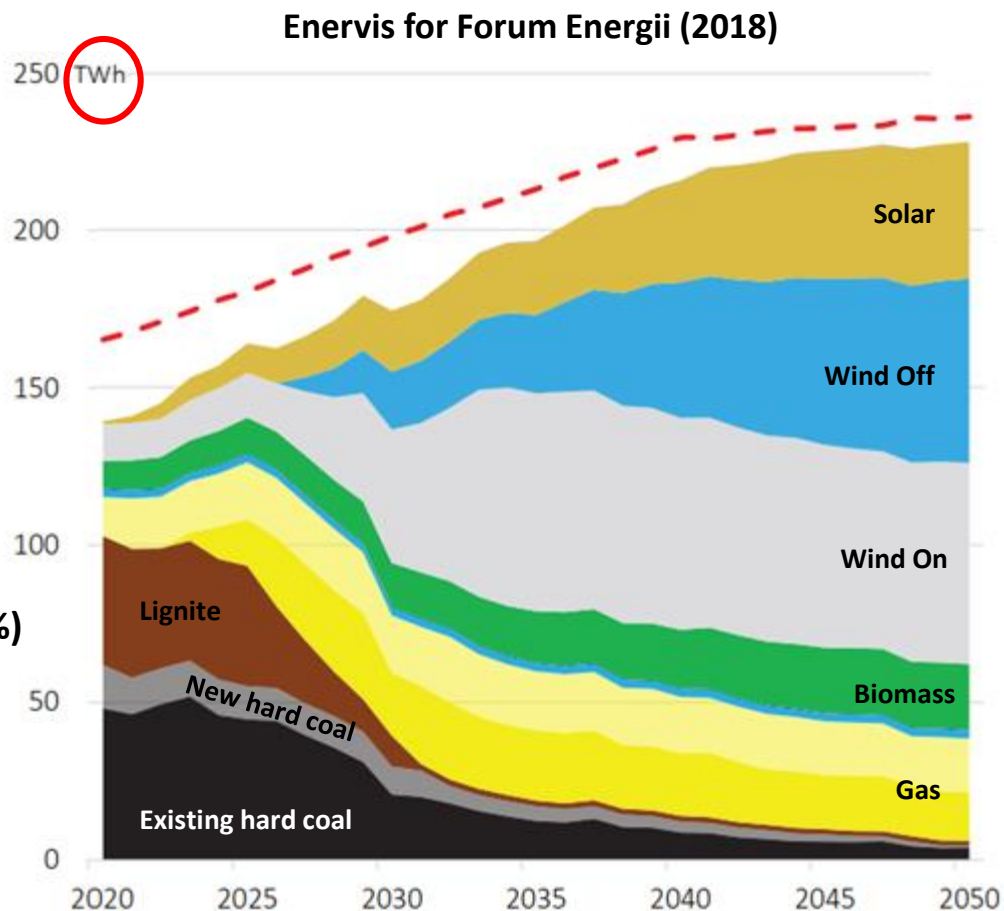
Concrete steps:

- Introduction capacity market
- Exceptions for 550 rule in capacity market design
- Construction of new coal plants (Ostroleka C*, ...)
- Preparation of price caps for households against rising power prices

*Officially under construction since 2018, but nothing has happened yet. Lacks financing despite success in CM auction. On 1 Aug 2019 a district court annulled the building permit.

An alternative pathway for the energy transition

- Coal phase-out scenario
- 50% reduction by 2030, another 50% by 2035
- Wind and Solar
- Gas backup
- Demand as in official Energy Strategy (2040: +47%)

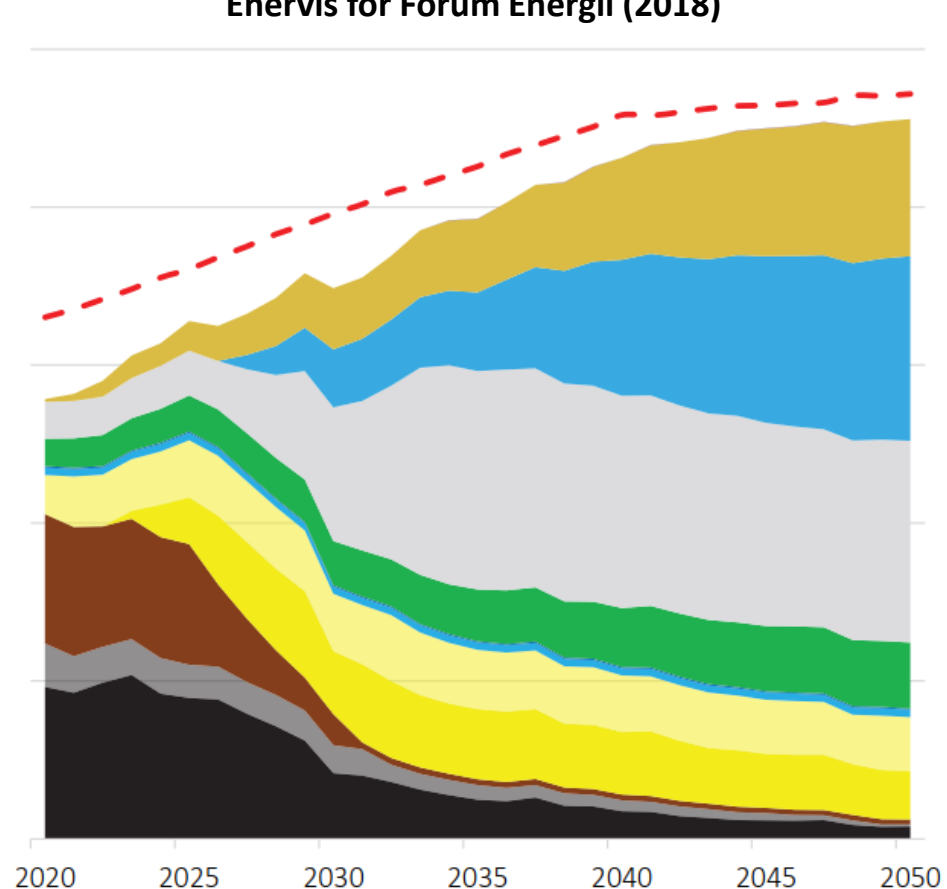
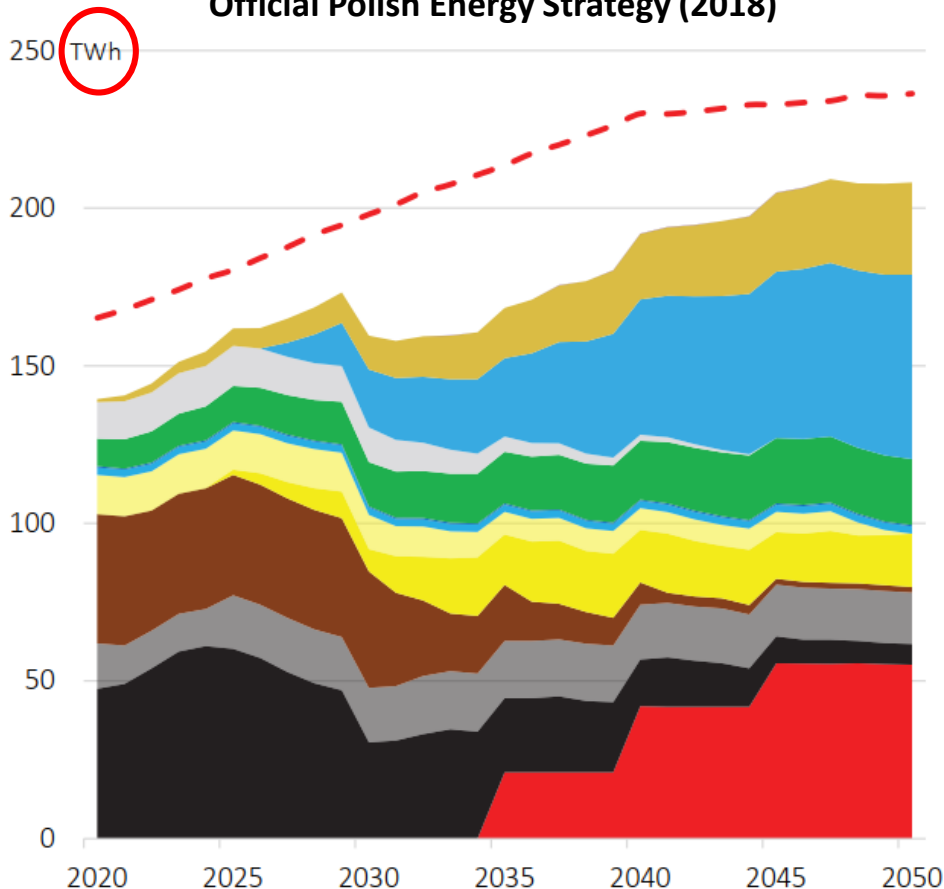


Focus Poland

Large variety of views

Official Polish Energy Strategy (2018)

Enervis for Forum Energii (2018)

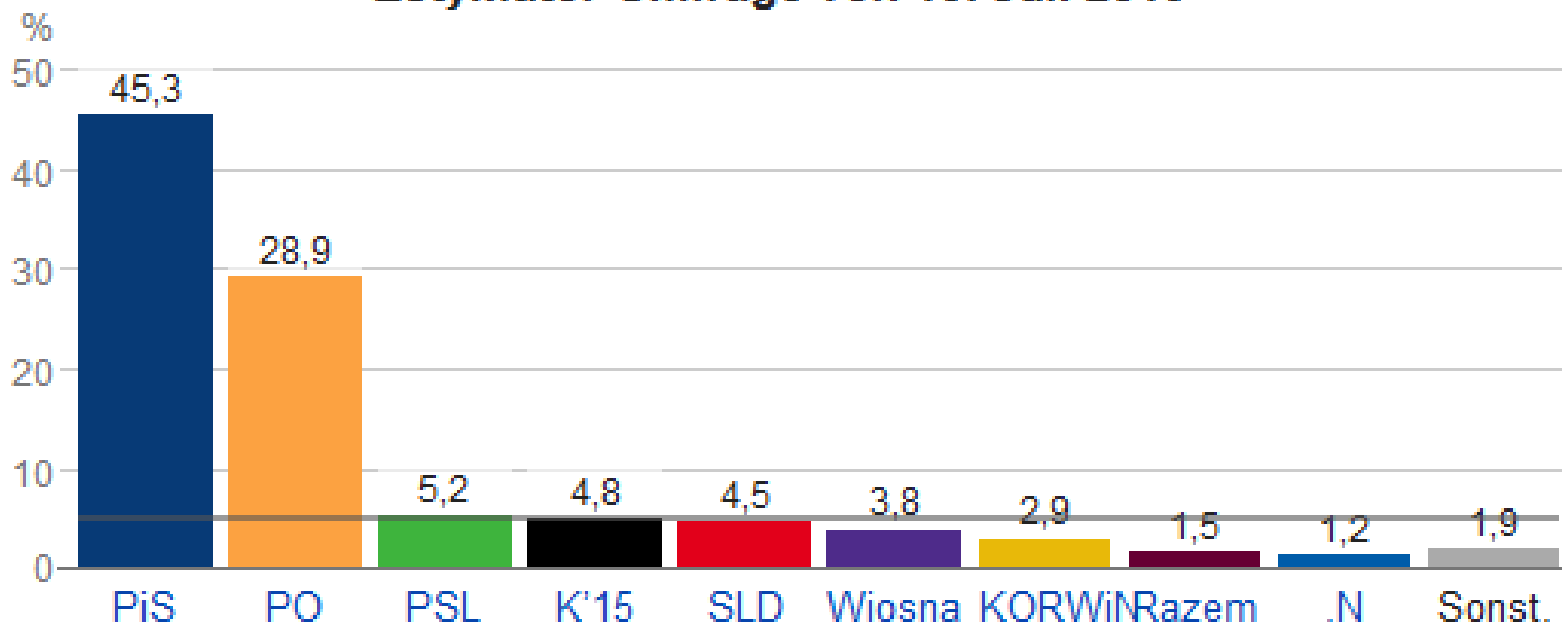


- “Keep it central” (Old world + Offshore)

- “From coal to Renewables”

Ahead of PL elections 2019: Coal phase-out is actively debated

Estymator-Umfrage von 19. Juli 2019^[1]



“We will keep coal in the Polish energy mix by 2040 and possibly beyond”

(Piotr Naimski, PiS, govt's adviser energy infrastructure)

„End coal by 2030 (individual heating), 2035 (district heating), 2040 (power sector)“

„End coal by 2035“

Election Date:
still tbd, but
sometime
between mid-Oct
and mit-Nov

What next with coal in Poland?

- Increasing awareness of urgency related to climate change, continued air pollution, rising prices for consumers & diminishing margins for utilities show that the country needs to turn away from coal (power and heat)
- ETS article 10c: PROBABLY no more free allowances for power generation in phase 4 (draft was published recently) – *deadline for notification to EC is 30 Sept 2019*
- ETS article 10a: free allowances for heat in CHP plants continues to decrease to zero until 2027
- Significant investments needed for sustainable solutions: EU modernisation fund (financed by 2% of issued allowances) to assist Eastern European countries w/ transition
- Investments in RES vs. Nuclear: don't bet on the wrong horse...
- Transition is too slow: acceleration needed



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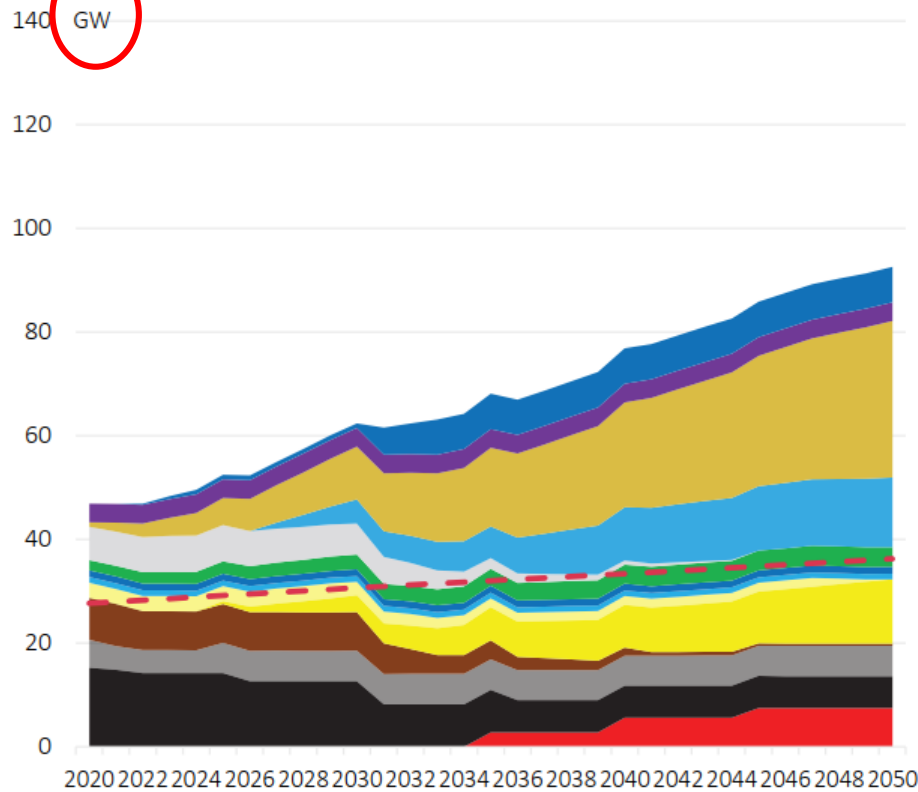
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Danke für die Aufmerksamkeit!

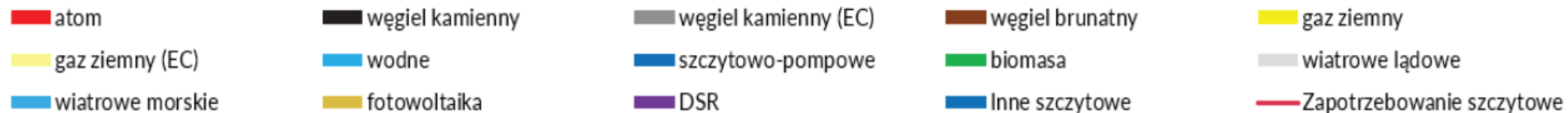
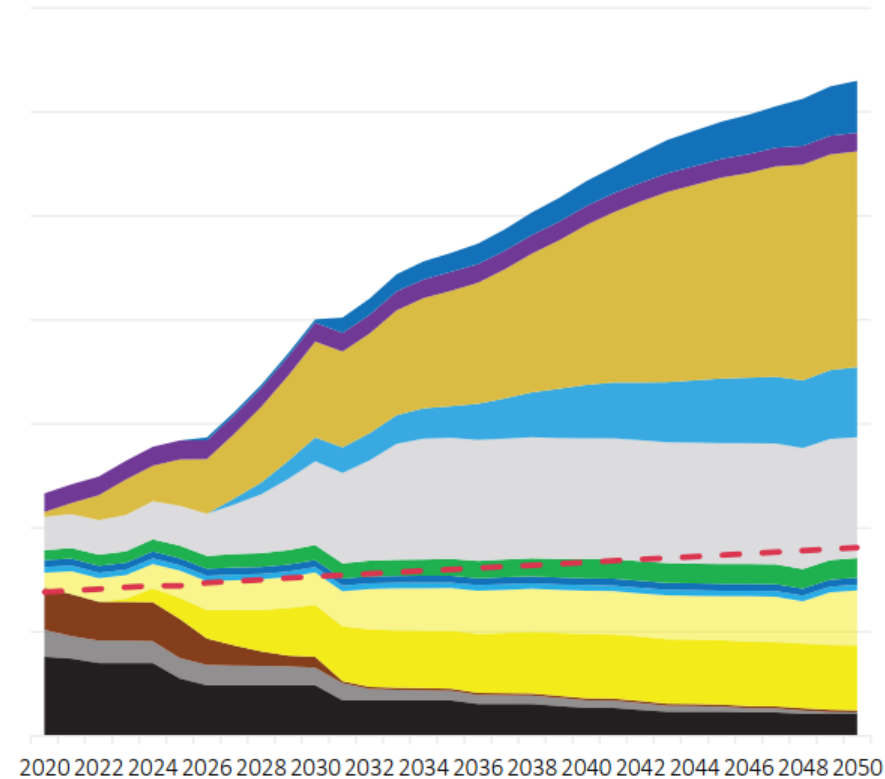
www.beyond-coal.eu

Backup: Capacity in the PL energy scenarios

PEP2040 (e)



Scenariusz alternatywny



Backup: Development of power futures as carbon price increases



Current price level in DE and PL similar, but
carbon price rose another 40%