



Poland's climate and energy policy

Are we moving in the same direction?

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What do others think of us?

18 Jun 2012
Poland blocks EU's zero-carbon plan

18 Sep 2014
Poland's carbon emissions billions to be spent on coal, cutting budget deficit

12 Dec 2014
EU court nails Austria, Poland over breaches to green energy rules

11 Jul 2012
Poland demands free carbon allowances for ghost coal plants

24 Sep 2014
Polish miners block trains with cheap Russian coal

14 Oct 2015
Expected Polish election winner urges EU climate deal renegotiation

25 Sep 2013
Greens outraged over Polish 'clean coal' push at UN climate summit

10 October 2014
Poland says will cooperate on climate change – for a fee

28 Oct 2015
Polish president says won't ratify Kyoto carbon-cutting pact

23 Jul 2014
Germany, UK have most polluting coal plants

23 October 2014
Sweden's Ambassador to Poland: 'On climate, I hope our children won't blame us for inaction'

3 November 2015
Europe must support Polish decarbonisation



What do others think of us?

28 June 2019

German environment chief seeks dialogue with Poland over climate neutrality

19 July 2019

Poland set to delay EU deal on 2050 'climate neutrality' target

19 July 2017

Poland's cherry picking of EU energy rules makes no sense

25 September 2019

Macron points the finger at Poland ahead of UN climate talks

2 July 2019

Financing the energy transition in Poland

17 October 2019

Poland wants fresh EU money to back climate neutrality goal

Source: EURACTIVE



Important aspects affecting energy policy

- Poland's energy policy is dominated by „coal para dogma”
- Traditional strong support of the people for coal based energy policy
- Long lasting lack of political wish to make deep reforms in coal sector – „political correctness”
- Deep disbelieve in climate change combat results – not seeing potential benefits but costs only
- Strong political position of trade unions in coal sector
- Unfinished reform in coal sector, despite some positive results, e.g. one succesfully privatised coal mine
- Political and economic power of energy sector
- Imbalance between government and energy sector's resources
- Unwillingness of the energy sector to free market reforms
- Capacity market (2017)
- Creation of the the Ministry of Climate (2019)



Dogmas

Energy security is based on the following dogmas:

- EU climate policy is against our national interests – „we support, but...”
- Political wish to rely on own energy carriers, predominantly on coal and lignite – „coal is our national gold”
- Political dream of having „cheap energy”
- Wish to get less energy dependent from Russia – „energy security has no price”
- Considering energy diversification as the only effective means of energy security, while neglecting other aspects, e.g. energy efficiency, RES – „no better solution”
- Loosely defined plans to build nuclear power sector – „nuclear energy will solve our problems in the future”
- RES yes but to a certain level – „limited potential, technical problems, high costs”
- Energy efficiency is not considered in terms of energy security – „everybody supports verbally”
- Reluctant approach to small scale technologies – „they are unable to secure reliable operation”



the share of coal in electricity production is going down to 60% in 2030



the first nuclear power plant is planned for 2033 with a capacity of 1-1.5 GW. 6 nuclear units to be built by 2043 with a total capacity of 6-9 GW



the share of RES will grow to 27% in 2030 in electricity production. Full exploitation of the potential of the off-shore wind in the Baltic Sea and of the photovoltaics can provide up to 30 GW in total by 2040



rapid diversification and growth of installed capacity and energy production generation will lead to the reduction by 50% of CO₂ emissions in energy sector by 2040

Krzysztof Tchórzewski – Minister of Energy

Source: <https://en.euractiv.eu/wp-content/uploads/sites/2/infographic/Towards-Polands-2040-Energy-Mix-1.pdf>

In which area of climate policy action is Poland pushing the hardest?

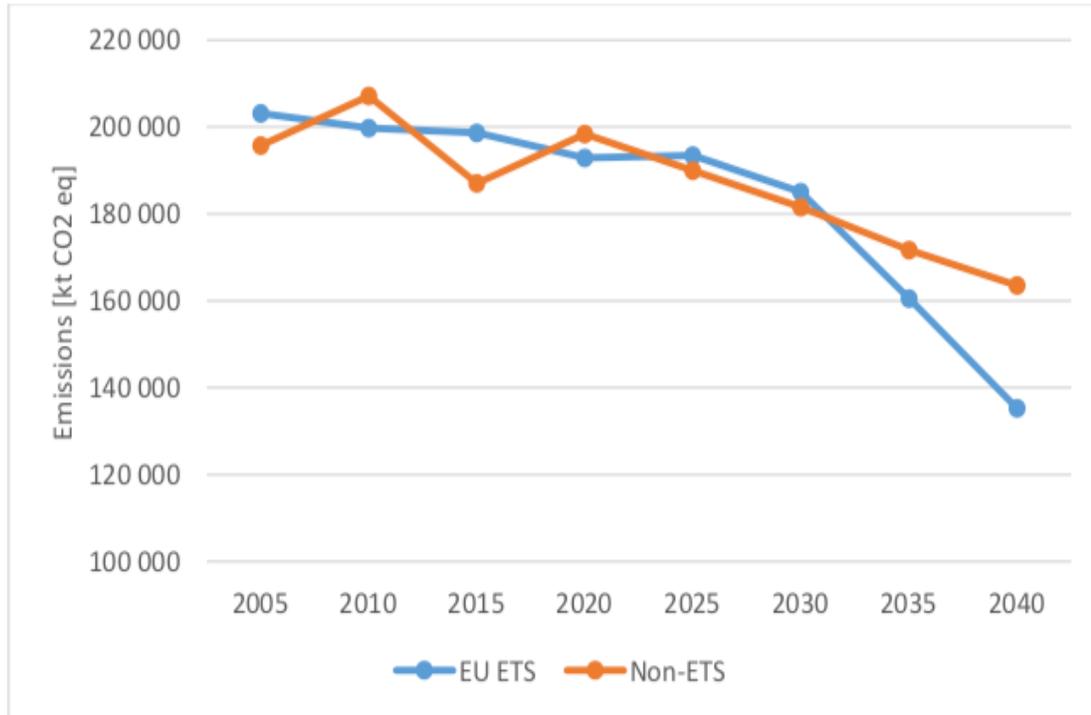


Figure 4 Projections of greenhouse gas emissions broken down into ETS and non-ETS for the WAM scenario

Most emission reductions are expected through EU ETS sectors, in particular the energy sector

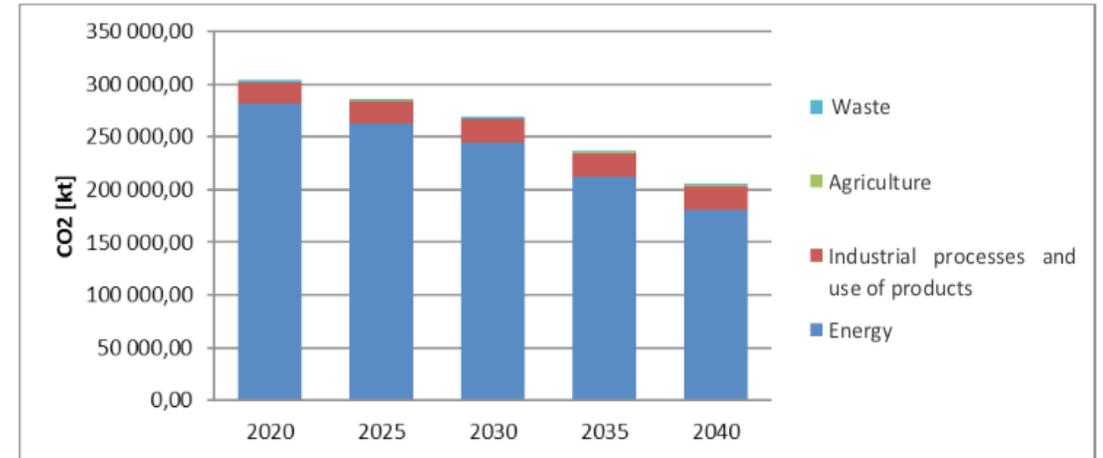


Figure 5 CO2 emissions by sector for the WAM scenario, without the LULUCF

As a result, emissions in 2040 reach around 290 million tons of CO2eq (including LULUCF), which means a reduction in 2005-2040 period by about 18%

What is the current state and timeline for implementation of reforms?

- Which sectors are being addressed?
Mainly the energy sector.

	2016-2020	2021-2025	2025-2030	2031-2035	2036-2040	2016-2040
Expenditures in the energy sector	80 147	79 330	78 284	74 543	69 683	381 988

Projected capital investments for energy purposes in the national economy [EUR million'2016]

CAPEX alone which is needed to finance the energy transition in Poland to comply with EU climate policy targets is estimated at ca. EUR 60 billion by 2030 and ca. EUR 140 billion by 2045 according to our recent analysis.

Investment potential of the four biggest polish power companies is currently ca. EUR 28 billion which can increase to ca. EUR 48 billion in 2030. This is way below what is needed to finance the energy transition.

Source: <https://www.euractiv.com/section/energy/opinion/financing-the-energy-transition-in-poland/>

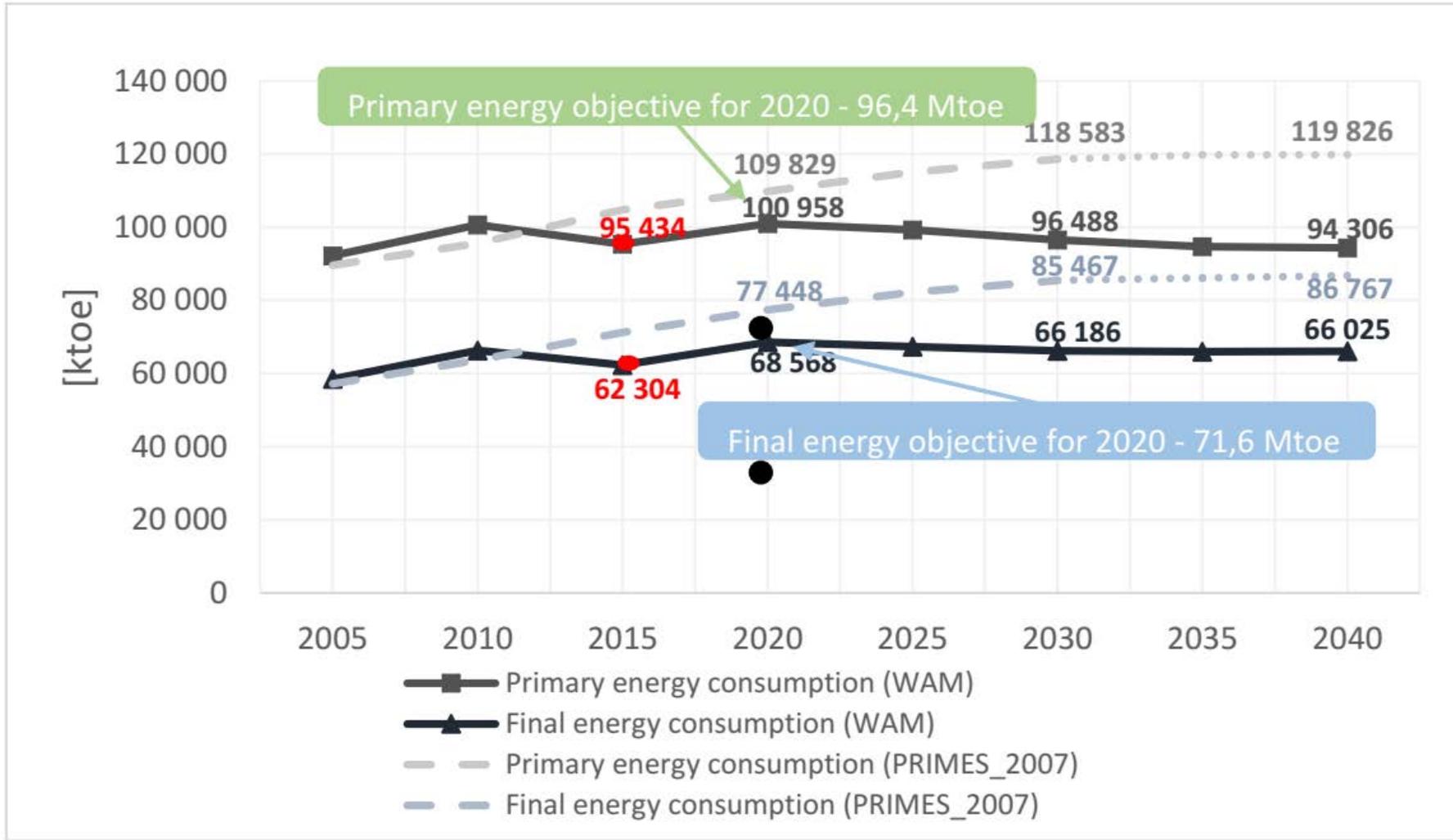
Which instrument mix is pursued: Carbon pricing, specific measures – what is the „philosophy“ of the envisaged policy mix?

The main philosophy of the CO₂ emission reduction in the energy sector in Poland is to combine the following 4 activities:

- replacing low-efficiency coal-fired power plants by new high-efficiency plants meeting strict environmental standards concerning pollution emissions;
- increasing the use of renewable energy sources and developing reserve gas sources in connection with it;
- implementing nuclear power projects;
- increasing energy efficiency.

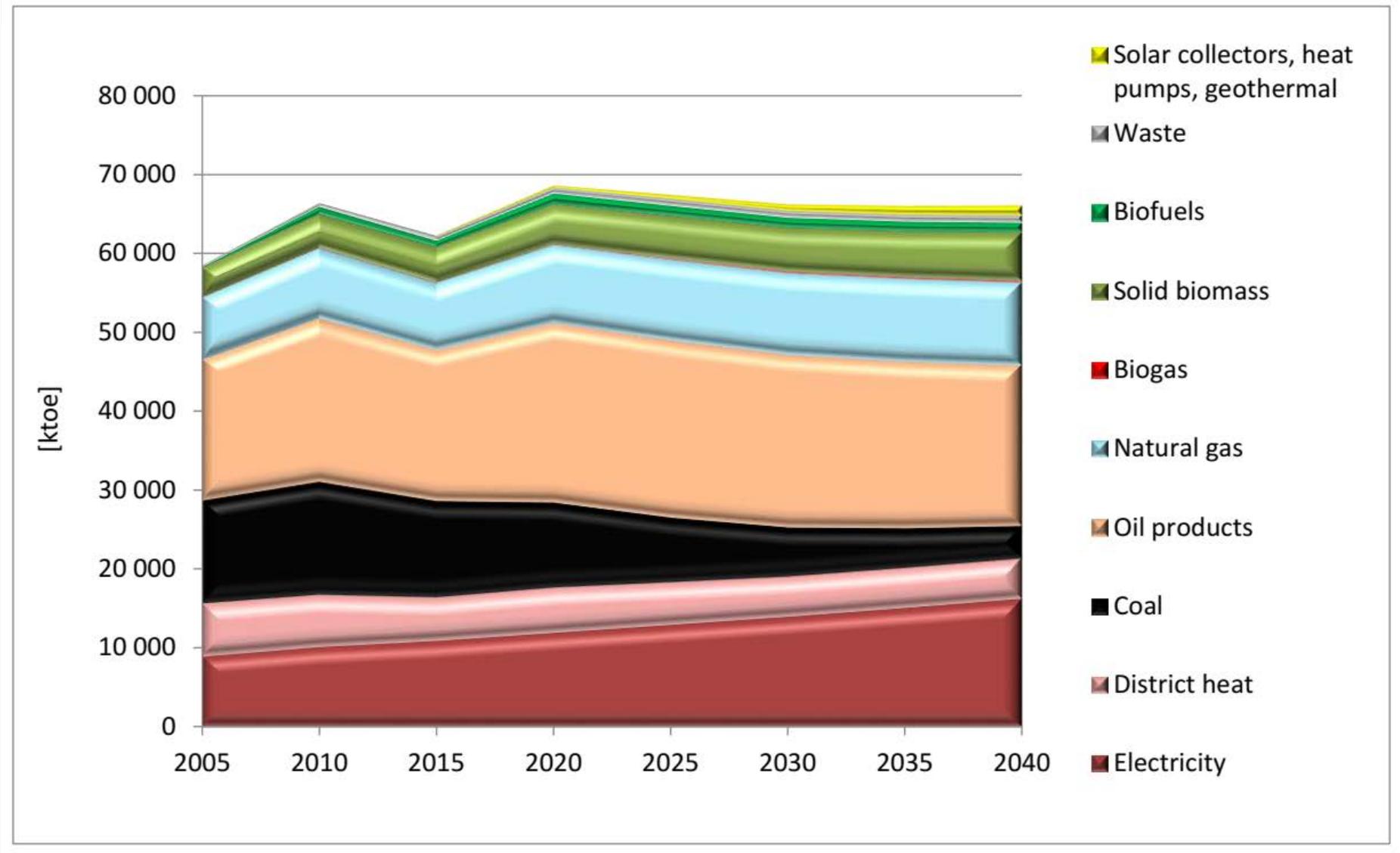
Is the national climate policy strategy bound to (a) be integrated into and (b) influence EU climate policy?

- **In terms of power systems:** The development and enhancement of transmission capacities of cross-border connections in Europe is crucial for future energy security. Poland intends to continue active cooperation with neighbouring countries in this regard. A second line between Poland and Lithuania for full synchronization (so called “Harmony Link”) is planned to ensure full synchronization of the Baltic states with the electricity system of continental Europe.
- **In terms of gas systems:** To increase the possibilities of import and export, Poland strives to build or expand connections with its neighbours:
 - Slovakia - up to the import capacity of 5.7 bcm and export 4.7 bcm annually
 - Lithuania - up to the import capacity of 1.7 bcm and export of 2.4 bcm annually
 - Czech Republic - up to the import capacity of 6.5 bcm and export of 5 bcm annually
 - Ukraine - for the import capacity of 5 billion m³ and exports 5 billion m³ per year
- **In terms of nuclear power:** Nuclear energy is important in Polish energy policy which was emphasized in the document "Energy Policy of Poland until 2030", and then in the draft of "Energy Policy of Poland until 2040" published in November 2018.



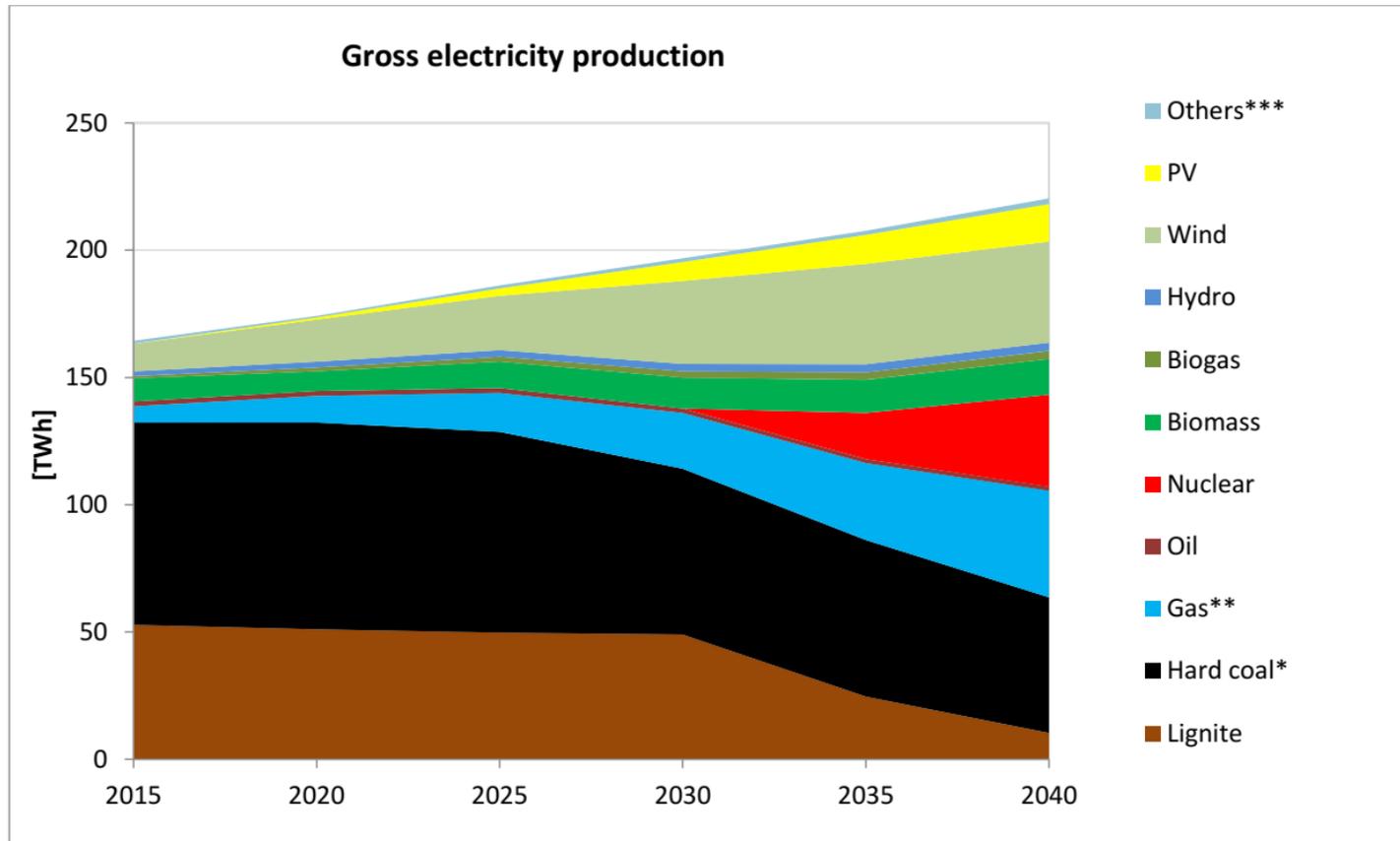
Forecasted primary and final energy consumption compared to the 2007 PRIMES scenario projections

Source: Extract of Annex 2 of NECP of Poland - Impact assessment of planned policies and measures



Final energy consumption divided into fuels and carriers

Source: Extract of Annex 2 of NECP of Poland - Impact assessment of planned policies and measures



In the future, the **share of coal** (hard coal and lignite) in the generation structure is expected to decrease from around 80% in 2015 to around 60% in 2030.

The role of **gas units** (new units will be mainly high efficiency cogeneration steam-gas blocks and condensing units after 2025) increases with time from approx. 3.9% in 2015 to approx. 8% in 2030, and then up to approx. 19% in the perspective of 2040

Gross electricity production in Poland, broken down by fuel

A very important element of CO2 reduction policy is the development of nuclear energy in Poland.

It is expected that the first unit of the nuclear power plant will be launched by 2033, two more in the years 2035-37, the fourth block - around 2040. In 2035, nuclear generation will reach approx. 18 TWh, while in 2040 approx. 36 TWh

The share of RES in electricity production in 2015 (13%, 23 TWh) will increase significantly - in 2030 it will be approx. 29.5%, and in 2040 it may reach 34.6%, most of which is production from wind farms, but also photovoltaic and biomass units

Source: Extract of Annex 2 of NECP of Poland - Impact assessment of planned policies and measures

RES

- **In the years 2020-2030, the share of RES in this sector grows at a rate of more than 1 percentage point annually, to a level of approx. 29.5% in 2030, and in 2040 can reach approx. 34%.**

According to the presented projections for the WAM scenario, **the share of energy from RES in the heating and cooling sector increases from 14.5% in 2015 to 25.2% in 2030.** This means an increase of 10.7 percentage points.

- **In the transport sector in 2030, the share of renewable energy is expected to reach 15.5%.**



Infrastructure. Power sector

- A large part of Polish energy infrastructure is ageing and in need of replacement
- Significant investments in energy sector are in progress, mostly based on fossil fuels
- Plans include construction of two nuclear power plants, first expected to be commissioned by 202X.
- Legal act enabling „energy corridors” (2015).
- Authorities should ensure a proper and timely adoption of the measures stemming from Regulation 347/2013 on the trans-European energy infrastructure.
- Active participation in Projects of Common Interest.
- Employment of EU’s Cohesion Fund in infrastructure up-grading (Distribution networks).
- Interconnector between Poland and Lithuania (LitPol link).
- Well developing smart metering pilot projects
- Power market (2017)
- Revitalisation of 200 MW blocks



Will nuclear power sector in Poland ever start?

Poland stopped the NPS building in "Żarnowiec" 17 December 1990 r.
The first NPS should start its operation 2022...2026...2028...2030?

Plans to build power plant 2x1600 MW

Grenpeace Polska, 2014 survey: 50,5 % against nuclear energy, in favour 39,7%.

- What solution could improve the current energy model in Poland? **6% pointed out nuclear energy**
- What is the most important trend in the energy policy of Poland? **4% pointed out nuclear energy**
- What changes in the energy model in Poland could the most improve your quality of life?
5% pointed out nuclear energy



Conclusions

- Political consensus over long-term climate and Energy policy is required
- Process of economy decarbonisation has been progressing
- Coal phase-out is a fact despite political propaganda
- Political decisions shall be supported by analytical works
- Dialog with the EC and our neighbours is essential
- Energy sector requires financial support from the EU – radical energy efficiency improvements and RES development should be attractive offer in the bargaining