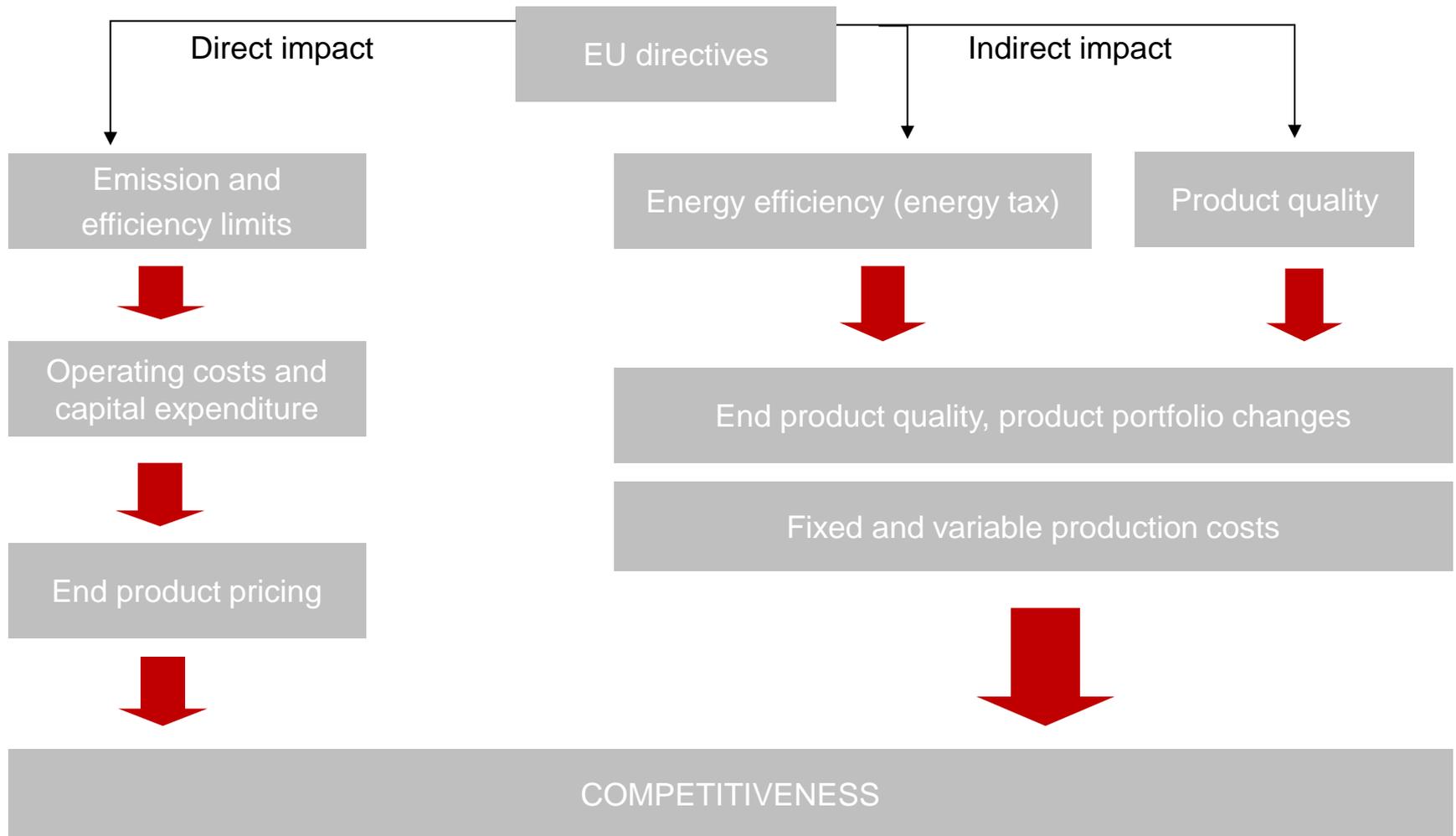




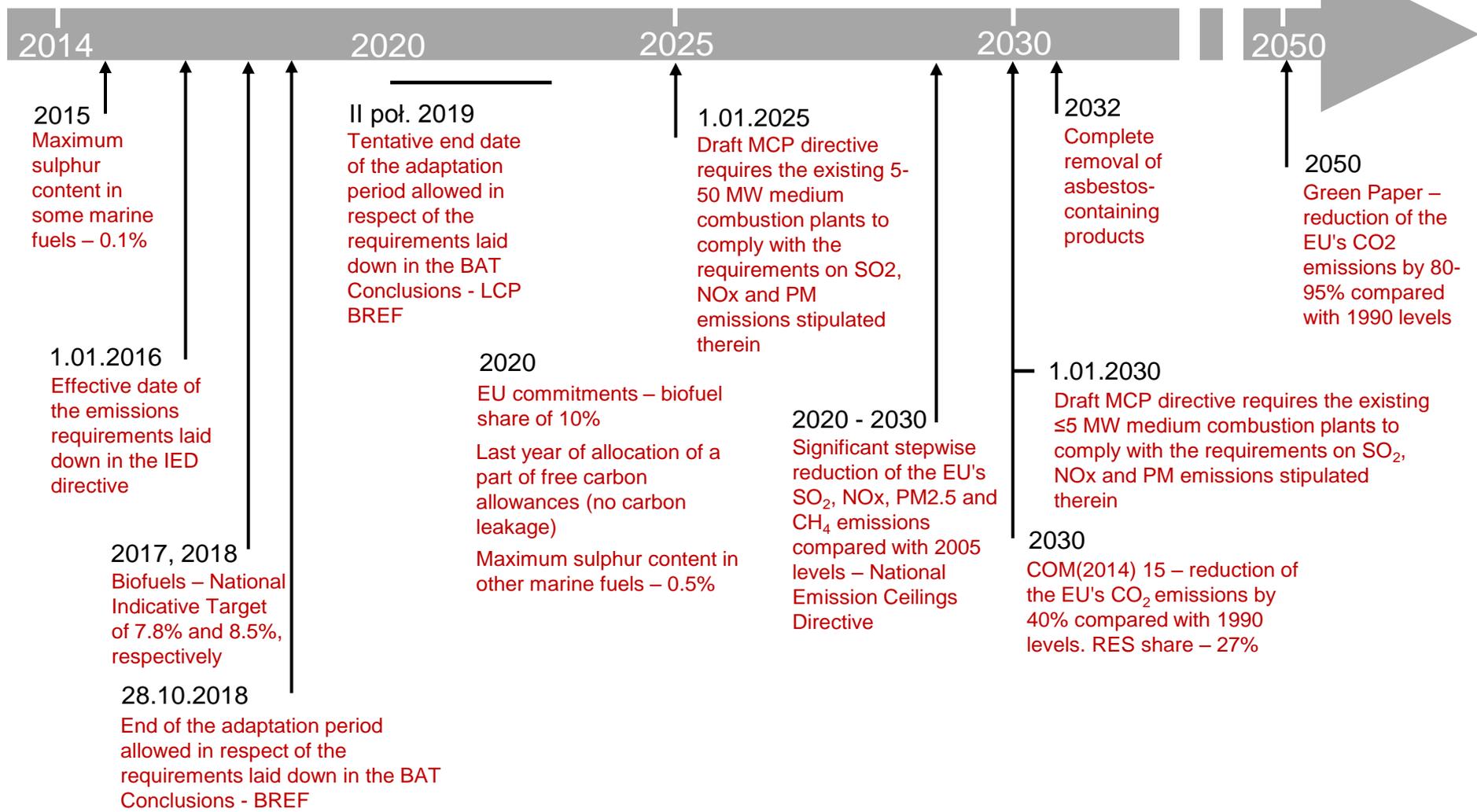
ORLEN

**ENVIRONMENT & POWER GENERATION
REGULATORY ENVIRONMENT**

Business and regulatory environment



Environmental and energy regulatory environment...



MARCPOL Convention – Annex VI and IMO Directive

Document/legislative act

Annex VI of the MARPOL 73/78 Convention (Regulations for the Prevention of Air Pollution from Ships)

Directive 2012/33/EU of the European Parliament and of the Council of November 21st 2012 amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels

Time horizon

2015 and 2020 (optionally 2025)

Description

MARPOL Convention provides for a phased reduction of the permitted sulphur content in marine fuels both within and outside Emission Control Areas (ECA), which replaced the previous SOx Emission Control Area (SECA).

The IMO Directive is based on the MARPOL Convention, and it provides that Member States are required to bring their respective national laws on the quality of marine fuels in compliance with the Directive by June 18th 2014.

Implications

Area	Limit on sulphur content in fuels (% m/m)					
	2000	2008	July 2010	2012	2015	2020
SOx (globally)	4,5%			3,5		0,5%
SOx (ECA/SECA)	1, 5%			1,0%		0,1%
SOx (UE ports)	2.0%	1.0%		0,1%		
California	1.5% (MGO) & 0,5% (MDO)			0,1%		

Equivalent methods of compliance are also permitted as an alternative to low-sulphur fuels, such as on-board exhaust gas cleaning systems or LNG-powered vessels.

Industrial emissions

Document/ legislative act

Directive 2010/75/EU of the European Parliament and of the Council of November 24th 2010 on industrial emissions (integrated pollution prevention and control).

Time horizon

In force

Description

The deadline for Member States to transpose the IED Directive into national legal systems **was January 7th 2013**. In Poland, the Directive was implemented by an amendment to the Environmental Protection Law of September 2014 and by amendments to regulations on emission measurement and emission standards

Implications

Art. 15 (3) of the IED Directive – **BAT conclusions** are binding with respect to the issuance of Integrated Permits. BAT Conclusions for mineral oil and gas refining were published on October 28th 2014, providing for a four-year adaptation period.

A **baseline report** is required for all installations for which an integrated permit or an amendment to an integrated permit is sought by the owner. The baseline report drafting process comprises a number of stages, including:

- Establishment of historical pollution
- Identification of pollutant types
- Preliminary assessment
- Detailed assessment

Industrial emissions

Document/ legislative act

Directive 2010/75/EU of the European Parliament and of the Council of November 24th 2010 on industrial emissions (integrated pollution prevention and control).

Time horizon

Jan 1 2016

Description

Special provisions for combustion plants (Chapter III). The provisions of Chapter III apply solely to combustion plants the total thermal input of which is equal to or greater than 50 MW, irrespective of the type of fuel used. If multiple combustion plants are connected to a single emitter (stack), their capacities are added up, and relevant limits apply to the emissions from that common stack. For the purpose of calculating the total capacity, combustion plants with a rated thermal input of below 15 MW are not considered.

These provisions do not apply to certain plants, including:

- Facilities for the conversion of hydrogen sulphide into sulphur (Claus plants)
- Plants in which the products of combustion are used for the direct heating, drying, or any other treatment of objects or materials
- Facilities for the regeneration of catalytic cracking catalysts, reactors used in the chemical industry

Implications

Annex V – The concentrations of SO₂, NO_x and dust in waste gases from each combustion plant with a total rated thermal input of 100 MW or more must be measured continuously; the concentration of CO in waste gases from each combustion plant firing gaseous fuels with a total rated thermal input of 100 MW or more must be monitored continuously.

Exemptions from the continuous measurement requirement:

- SO₂ and dust from combustion plants firing natural gas
- SO₂ from combustion plants firing oil with known sulphur content in cases where there is no waste gas desulphurisation equipment
- In other cases, measurements are required at least once every six months

Phase III of EU ETS

Document/ legislative act

Phase III of the EU ETS (2013-2020) and beyond

Time horizon

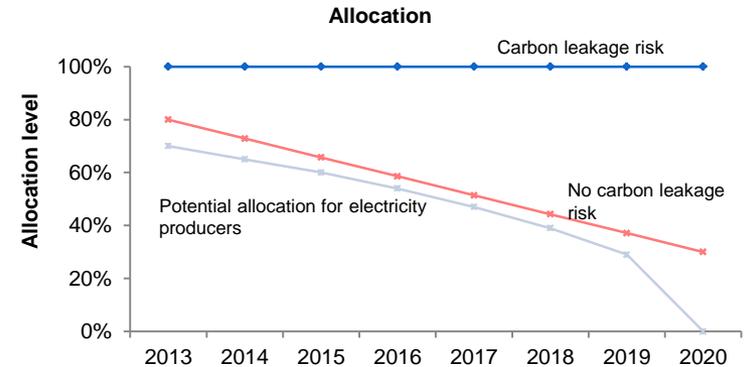
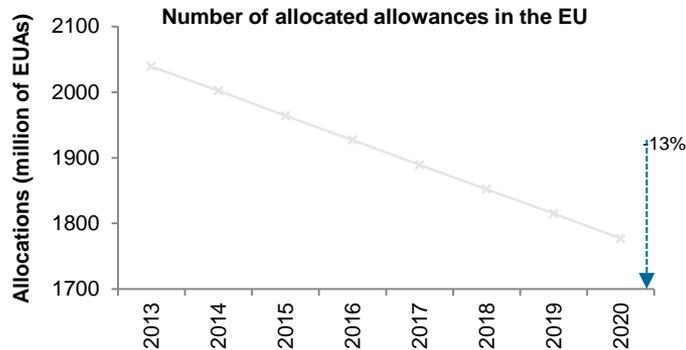
2020, 2027

Description

Since 2013, free allowances have been allocated to installations participating in the EU ETS based on emission performance standards (benchmarks), measured as tons of CO₂ per unit of product, and on historical output. In 2013, operators received 80% of their benchmarked allocations for free, a proportion that will decrease in linear fashion each year to 30% in 2020 (with a view to reaching 0% in 2027). **This allocation mechanism does not apply to installations at high risk of carbon leakage.**

In the case of Poland, the effect of the expiry of free allocations in the power sector as of 2014 has been mitigated by derogation.

Implications



In order to achieve the required emission reduction target for the EU ETS sector, the annual reduction in the cap on emissions will be raised from the current 1.74% **to 2.2% from 2020 onwards**; also, a temporary withdrawal of 900 million allowances from the market (backloading) has been agreed.

Commission Decision 2013/448/EU introduces a cross-sectoral correction factor, further contributing to a gradual reduction of free credit allocation.

The new climate and energy package

Document/ legislative act

October EU Council Summit

Time horizon

As of 2020

Description

In October 2014, the European Council **reached an agreement on the climate policy framework** to be implemented after the end of the third trading period of the EU ETS. The European Commission is also working on options for a structural **reform of the EU ETS** after 2020.

Implications

The binding target of a 40% reduction in greenhouse gas emissions compared with 1990 levels by 2030, expected to result in a 43% reduction of emissions in the EU ETS sector and a 30% reduction of emissions in the non-ETS sector compared with 2005 levels. The target for the non-ETS sector is to be divided up into regional targets for the individual member states.

A proposal to create a **market stabilisation reserve** to keep the price of emission allowances within a specified range. Implementation of a financial compensation for indirect CO₂ emissions.

The current rules for allocating free allowances to installations at risk of carbon leakage are to remain in force. The benchmarks for free allocations will be periodically reviewed in line with technological progress in the respective industry sectors. Both direct and indirect costs of emissions will be taken into account, in line with the EU state aid rules, to ensure equal operating conditions for all.

A 27% binding target at European level for renewable energy, with no national targets set for the individual member states.

In 2021-2030, the Polish power sector is to receive **free allowances** for around 282 million tonnes of CO₂ **and** a cash equivalent of allowances for around 135 million tonnes of CO₂ from a power sector modernisation fund.

CAFE Directive

Document/ legislative act

Draft directive on the reduction of national emissions of certain atmospheric pollutants and amending Directive 2003/32/EC

Time horizon

2020 – 2030

Description

The directive sets **national reduction objectives for SO₂, NO_x, NMLZO, NH₃, PM 2.5 and CH₄** for 2020-2024, 2025 (on the basis of a 2020-2030 linear reduction trajectory, unless this would require disproportionate costs) and from 2030 onwards, compared with 2005 levels.

A draft position statement prepared by the Polish government presents plans for reducing emissions of particular pollutants broken down by sector. The following pollutants have been taken into account in the case of the power and refining sectors: SO₂, NO_x, PM 2.5 and CH₄ (for the power sector only).

Implications

Simulation of the size of emission reductions at the Plock Plant in 2016 compared with 2005, including through CHP upgrades (IOS, SCR and electrostatic precipitators) and construction of a CCGT unit.

	% reduction - Plock Plant - 2016/2005	% reduction - Poland - 2020/2005	% reduction - Poland - 2030/2005	% reduction - sector - 2030/2005
SO ₂	-74,15%	-59,00%	-78,00%	-85,26%
NO _x	9,45%	-30,00%	-55,00%	-60,14%
dust PM _{2,5}	12,06%*	-16,00%	-40,00%	-37,92%
CH ₄	N/A	-	-34,00%	-37,46%

* No data available for PM2.5. The figure is given for PM10 dust

The reduction targets seem unattainable, even if advanced desulphurisation (wet lime), denitrification (SCR) and dust removal (ESP) technologies are used.

REACH

Document/ legislative act

Regulation (EC) 1907/2006 of the European Parliament and of the Council of December 18th 2006 concerning the registration, evaluation, authorisation and restriction of chemicals (REACH)

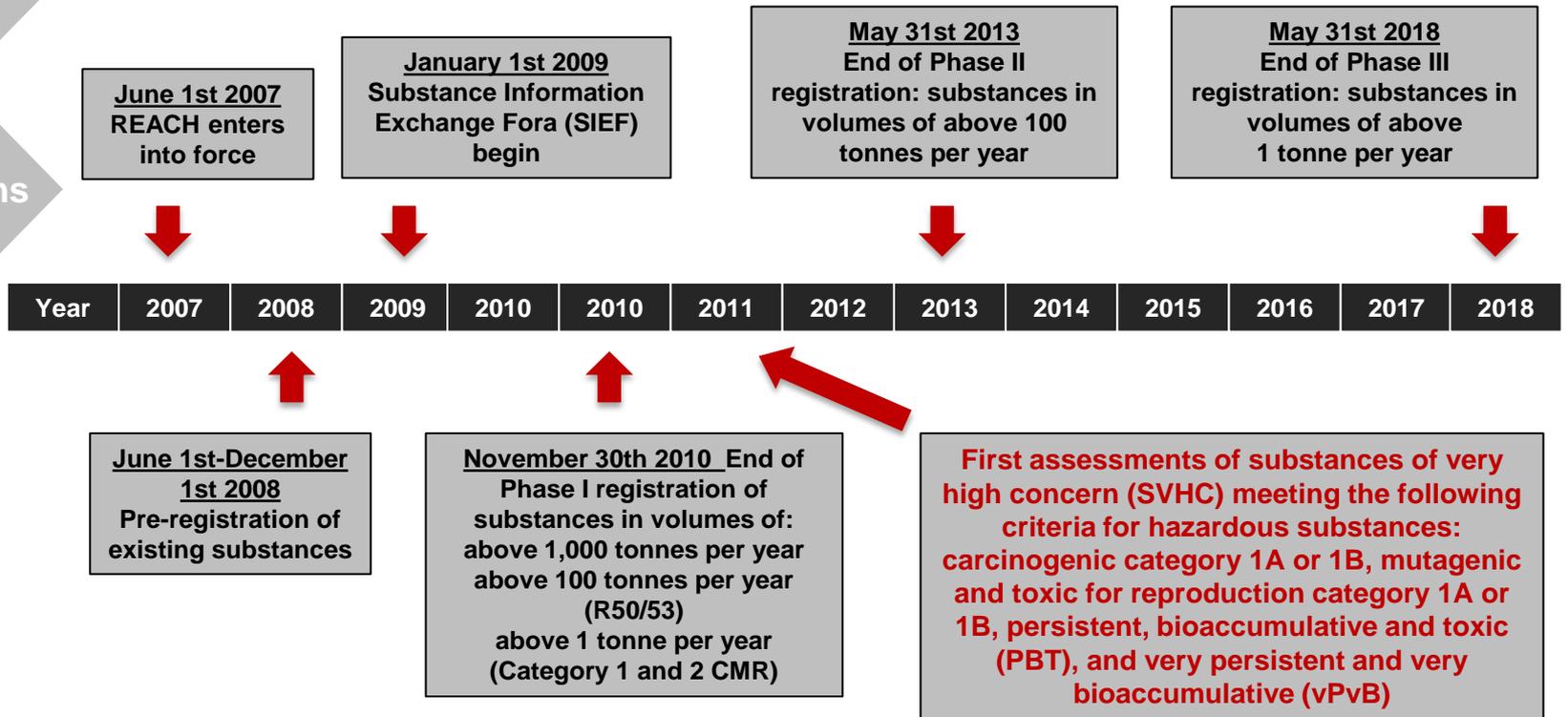
Time horizon

In force

Description

The REACH system is based on the principle that it is for **manufacturers, importers and downstream users to ensure that they manufacture, market or use such substances that do not adversely affect human health or the environment.**

Implications



Energy Law

Document/ legislative act

Polish Energy Law and secondary legislation

Time horizon

In force

