



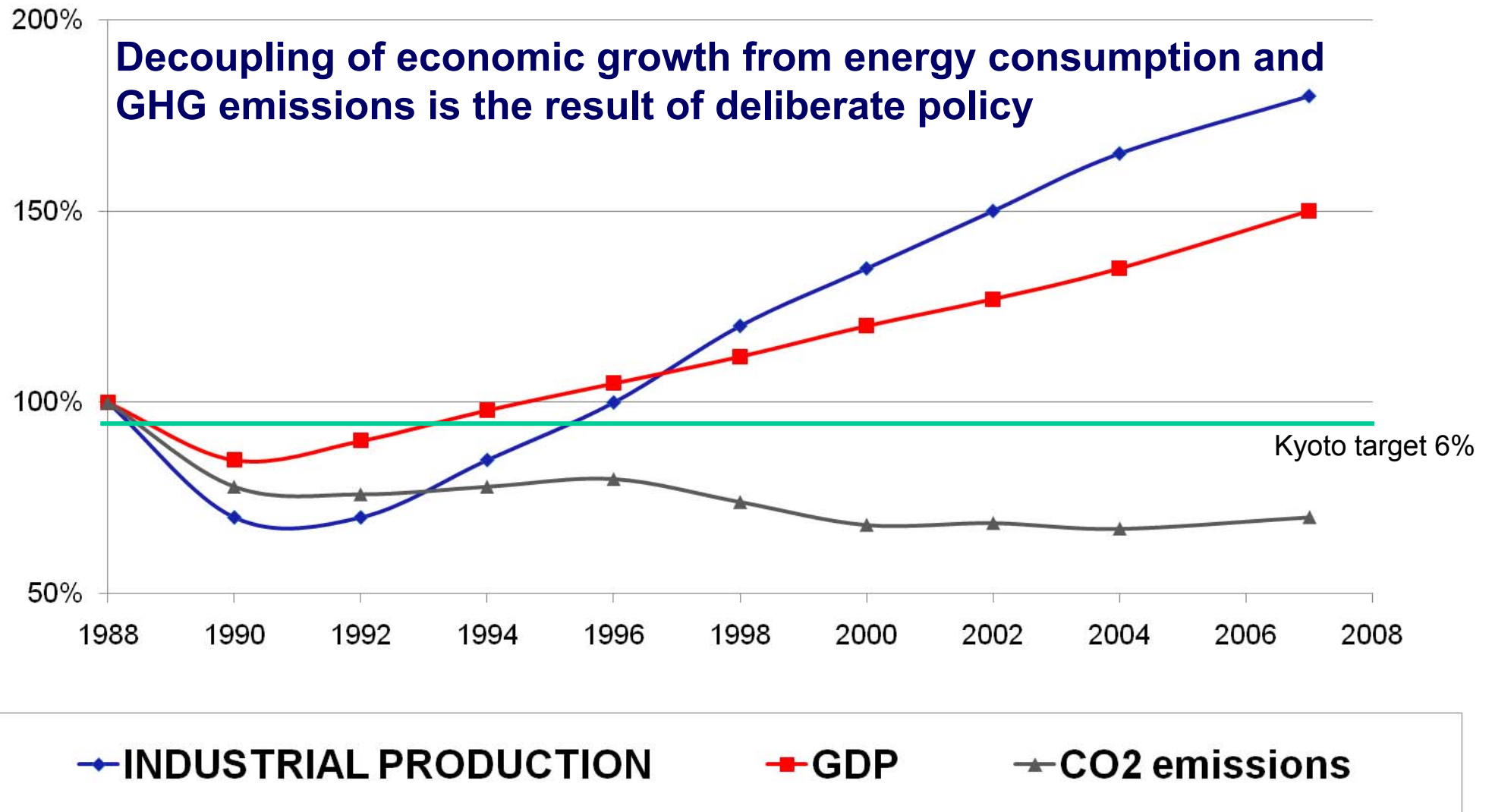
GHG Emission mitigation in Poland

Bangkok, 3 April 2011

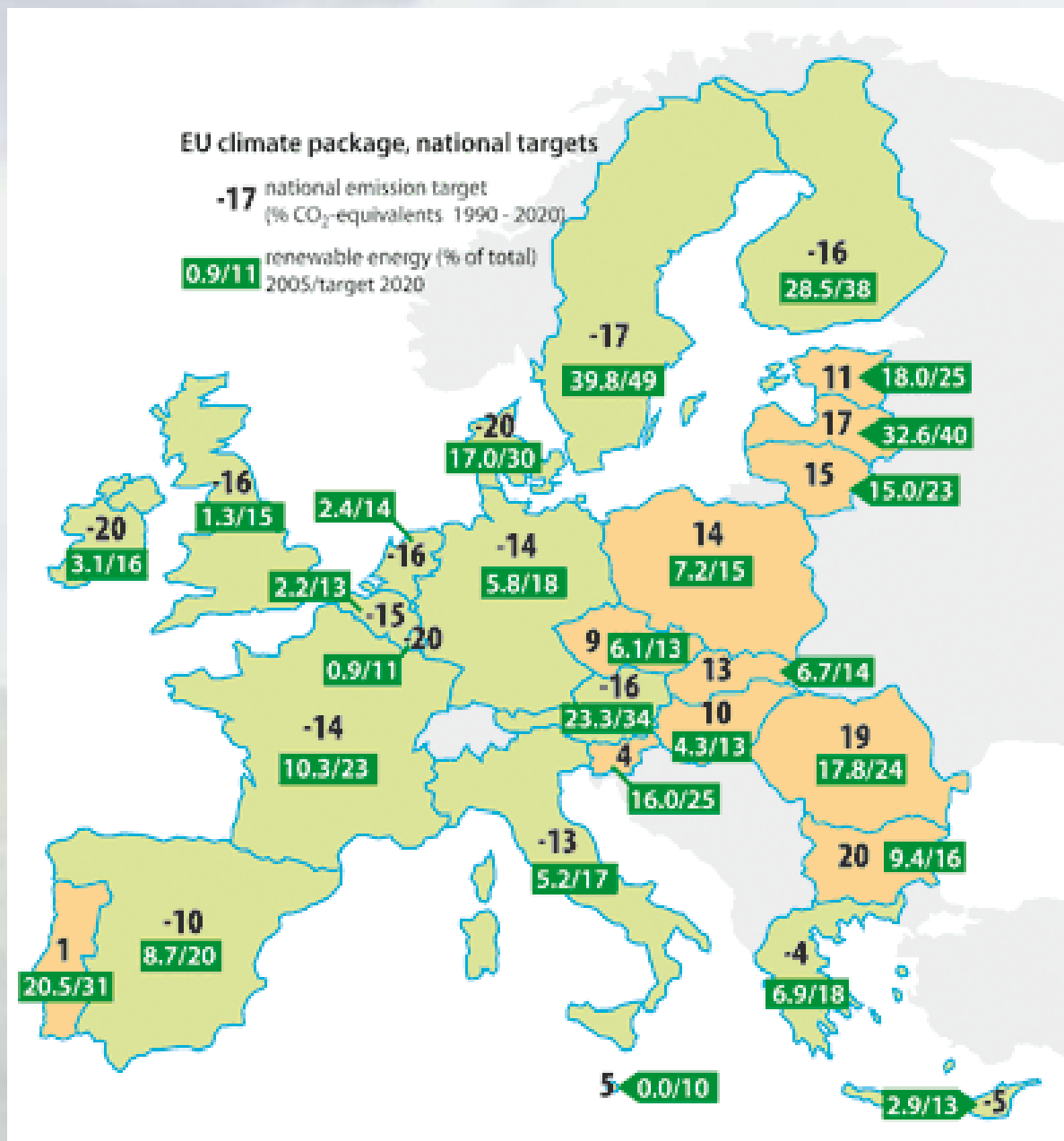
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INDUSTRIAL PRODUCTION, GDP AND CO₂ EMISSION IN POLAND 1988 – 2008



POLAND IS A PART OF THE EUROPEAN UNION



EU Climate–Energy Package

- 20% of CO₂_{eq} less
- 20% of energy efficiency more
- 20% of energy from renewables
- 10% of bio-fuels

These are EU-wide goals for 2020

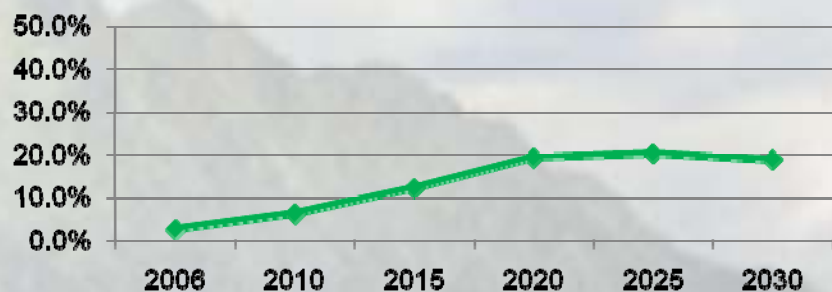
Poland must achieve 15% share of renewable energy in its primary energy consumption by 2020

ENERGY POLICY OF POLAND UNTIL 2030

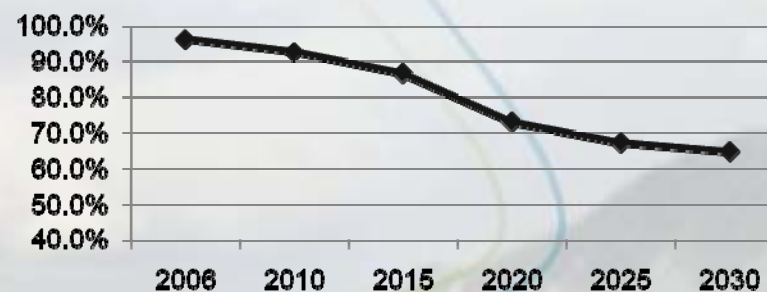
Electricity generation – fuel mix [TWh] (Energy Policy of Poland until 2030)

	2006	2010	2015	2020	2025	2030
Hard coal	86,1	68,2	62,9	62,7	58,4	71,8
Lignite	49,9	44,7	51,1	40	48,4	42,3
Natural gas	4,6	4,4	5	8,4	11,4	13,4
Oil	1,6	1,9	2,5	2,8	2,9	3
Nuclear	0	0	0	10,5	21,1	31,6
RES	3,9	8	17	30,1	36,5	38
Water peak-pump	0,97	1	1	1	1	1
Waste	0,6	0,6	0,6	0,6	0,7	0,7
Total	147,7	128,7	140,1	156,1	180,3	201,8
Share RES [%]	2,6%	6,2%	12,1%	19,3%	20,2%	18,8%
Share fossil [%]	96,3%	92,6%	86,7%	73,0%	67,2%	64,7%
gas in fossil [%]	3,2%	3,7%	4,1%	7,4%	9,4%	10,3%

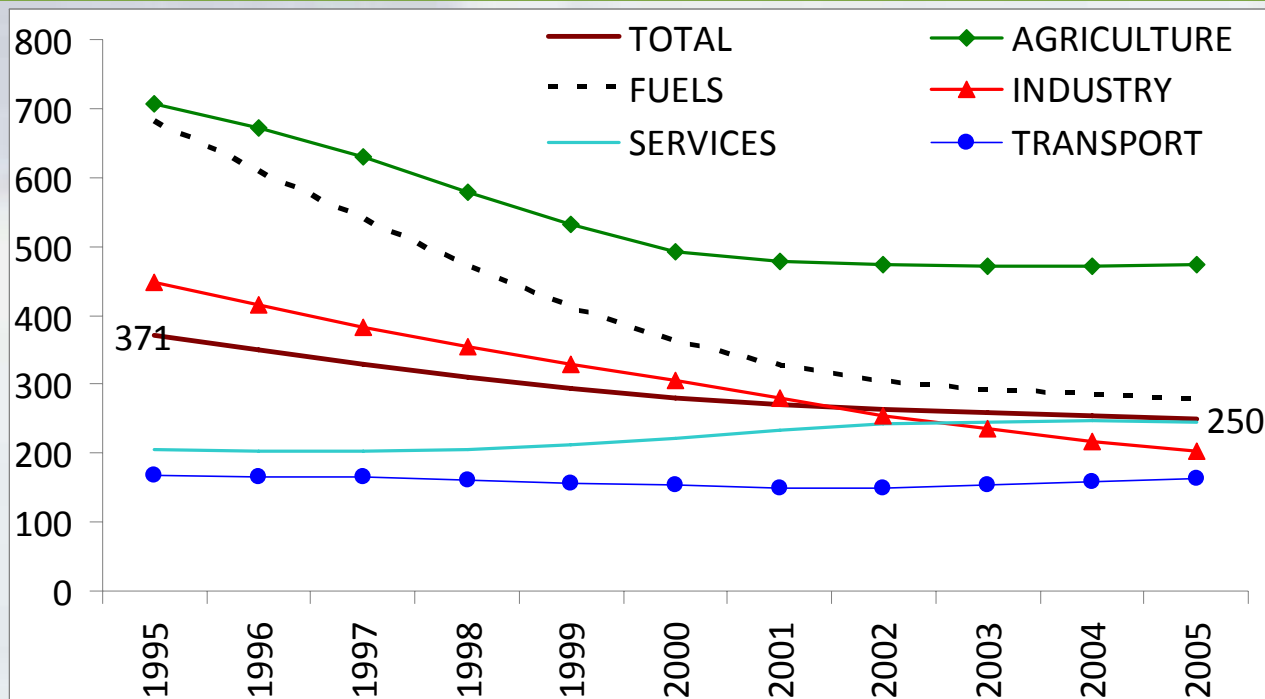
Share RES [%]



Share fossil [%]



POLAND WILL DEVELOP LOW EMISSION ECONOMY

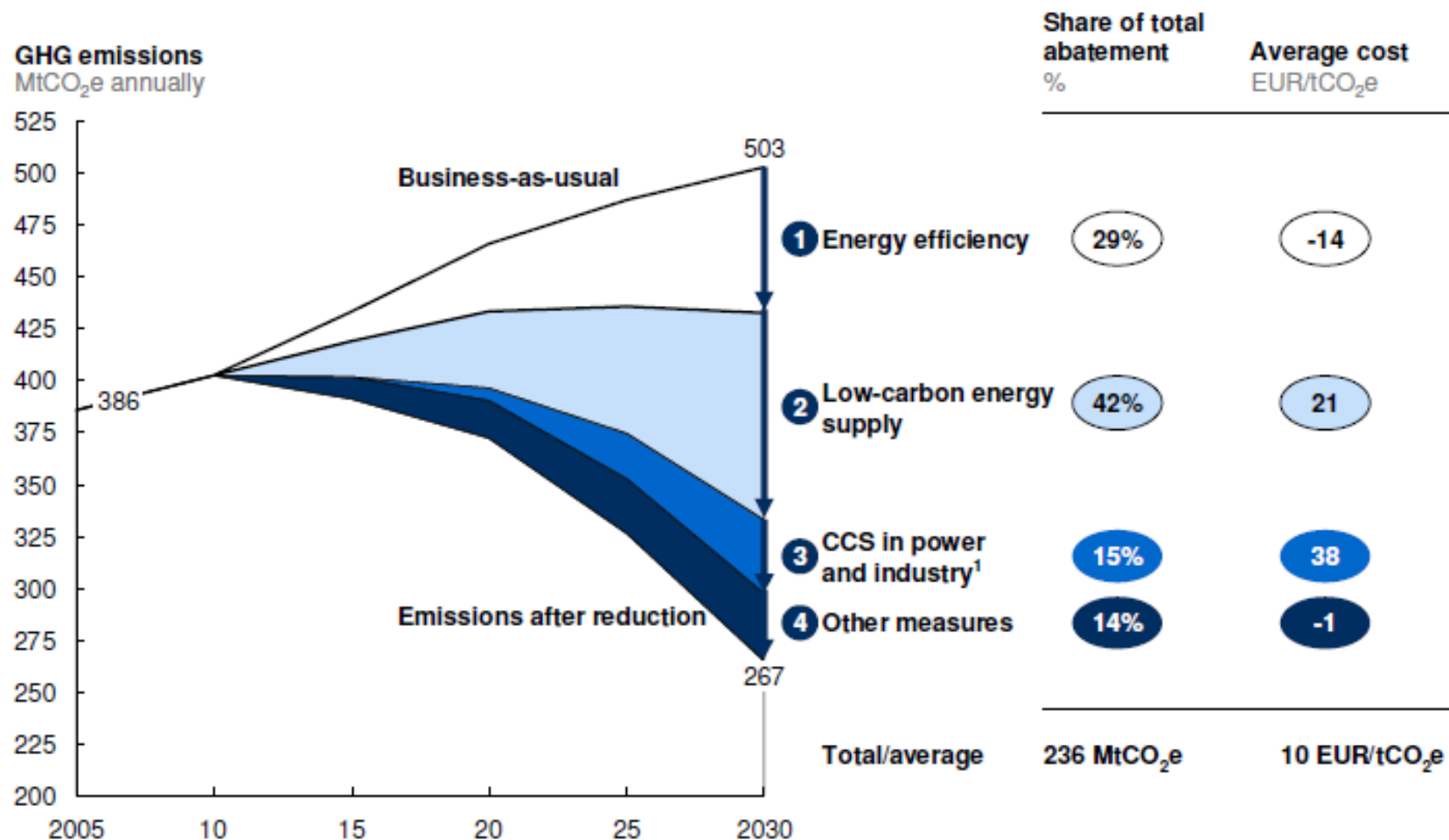


Energy intensity of Poland as a percentage of the EU15 level

Source: World Bank based on Eurostat.

1. Number of independent reports analysed the economy wide emission reduction potential:
 1. McKinsey Report – Assessment of GHG Emissions Abatement Potential in Poland
 2. World Bank Report – Transition to a low emission economy
 3. International Energy Agency Study of Energy and CO2 emissions scenarios of Poland
2. Energy efficiency is the most cost effective and environmentally sound measure

GHG abatement Potential in Poland in 2030 by category

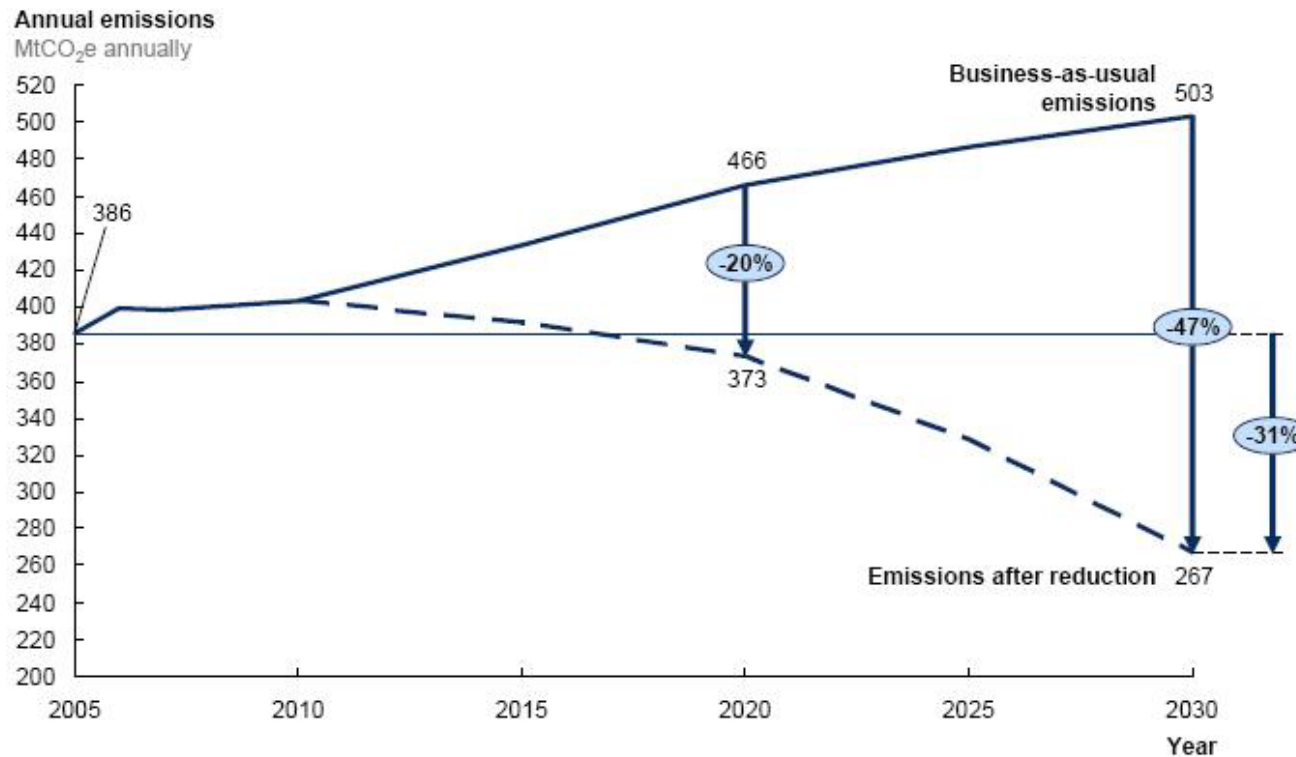


¹ Abatement opportunity of CCS in Industry (Chemicals, Iron & Steel, Petroleum & Gas, and Cement) amounts to ~16 MtCO₂e with an average cost of ~46 EUR/tCO₂e; in Power the abatement opportunity of CCS amounts to ~20 MtCO₂e with an average cost of ~32 EUR/tCO₂e

SOURCE: Poland GHG Abatement Cost Curve; KASHUE; National Inventory Report

Source: McKinsey Poland.

POLAND WILL DEVELOP LOW EMISSION ECONOMY



Emission reduction potential relative to BAU

Source: McKinsey study (op.cit)

Institutional arrangements aimed at achieving energy efficiency improvement

1. National Fund for Environmental Protection and Water Management
2. Green Investment Scheme
3. Green and yellow/red certificates to drive development of RES and highly energy efficient co-generation

Raising public awareness.