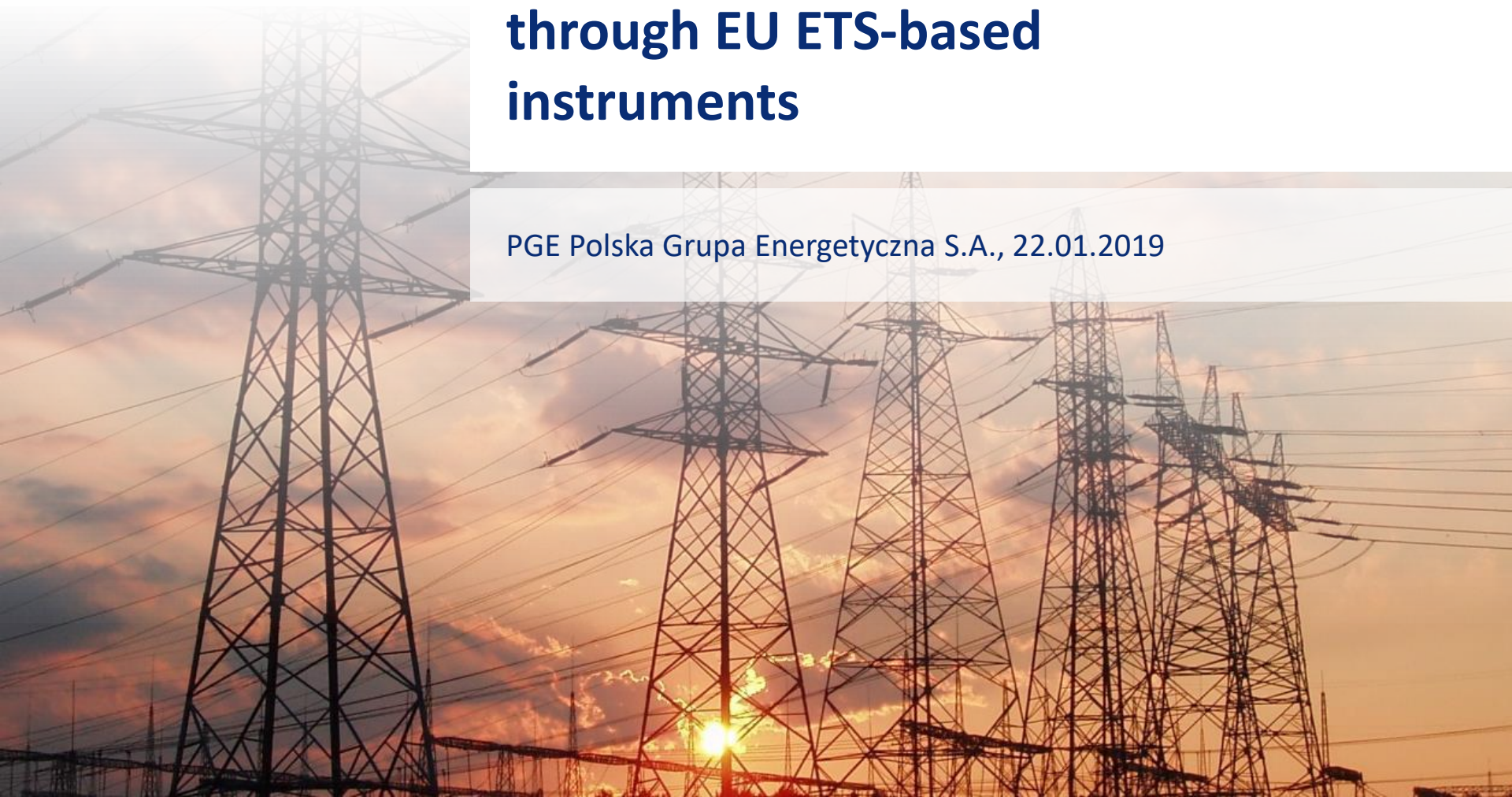


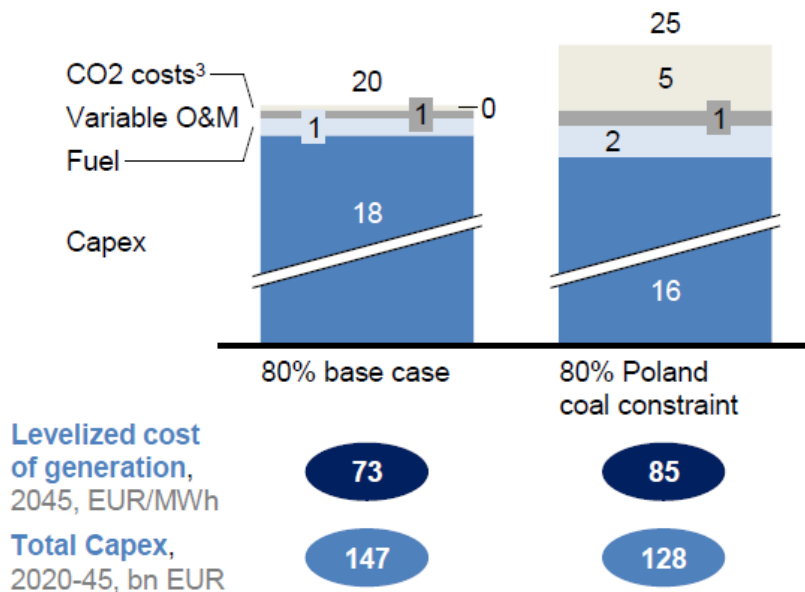
Modernising energy systems through EU ETS-based instruments

PGE Polska Grupa Energetyczna S.A., 22.01.2019



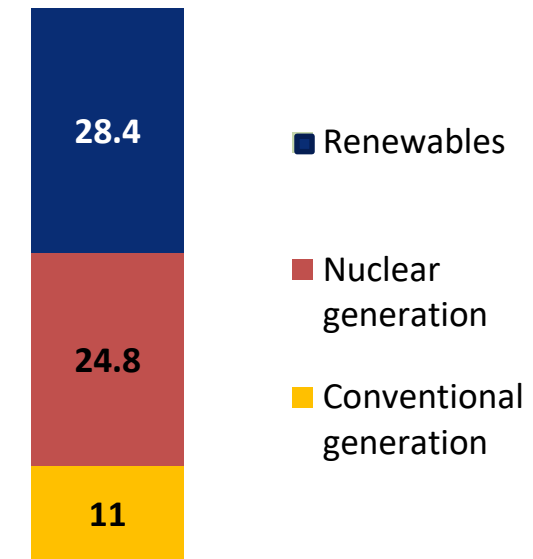
Investment needs in generation assets

Annualized cost of generation¹,
2045, bn EUR



Source: McKinsey, 2018

EUR 64.2 bn

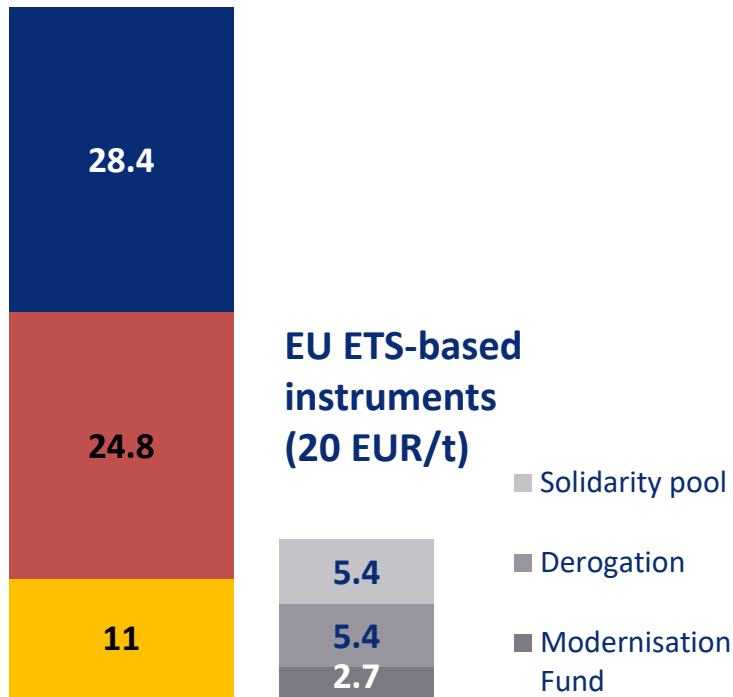


Integrated National Energy and
Climate Plan (2020-2040)

- According to the McKinsey study the Polish power sector underpinning 80% electrification of the economy would require investments of EUR 128-148 bn into generation assets alone by 2045.
- CAPEX following from the draft of the Integrated National Energy and Climate Plan (2020-2040) is estimated to reach ca. EUR 64.2 bn by 2040.
- EUR 68-85 bn of CO2 costs would need to be borne by the sector in 2020-2045.

The priority projects with the highest decarbonisation potential

Investment outlays
ca. EUR 64.2 bn



- The priority areas should be focused on the **biggest projects in terms of installed capacity in parallel with costs of avoided CO2 emissions**;
- The lack of sufficient external support may postpone the key decisions and implementation of the most cost-intensive projects:
 - **Off-shore power plants** – 1050 MWe, **ca. EUR 4 bn** – in operation by 2026;
 - **New gas-fired units in Dolna Odra power plant** – 1400 MWe, **ca. EUR 1 bn** – in operation by 2024.
- By 2030 the total estimated CAPEX for the abovementioned projects is equal to **EUR 5 bn**.

To address investment needs the Polish share of the Modernisation Fund should be increased from the baseline scenario covering ca. 135m of EUAs (ca. EUR 2.7 bn) up to ca. 724m EUAs (ca. EUR 14.5 bn).

MF should be increased by the combination of the Article 10c derogation and solidarity pool

The EU ETS Directive gives the possibility to transfer to the Modernisation Fund the Article 10c Derogation (ca. 294m EUAs) and the solidarity pool (ca. 272m EUAs) – to cover under one financial tool all EU ETS-based instruments.

Modernisation Fund

1. Fast-track selection process:

- eligible for a wide category of projects (including RES, heating and electric networks etc...);
- **100 % eligible costs covered;**
- Member States responsible for the selection process;
- **70% of the total amount of the Modernisation Fund dedicated to the fast-track investments.**

2. MF governance to be specified via Implementing Act;

3. Coal-dedicated support to be excluded;

4. Not only the energy sector is eligible, but the primary aim of the MF is to **modernise energy systems.**

contact: maciej.burny@gkpge.pl

