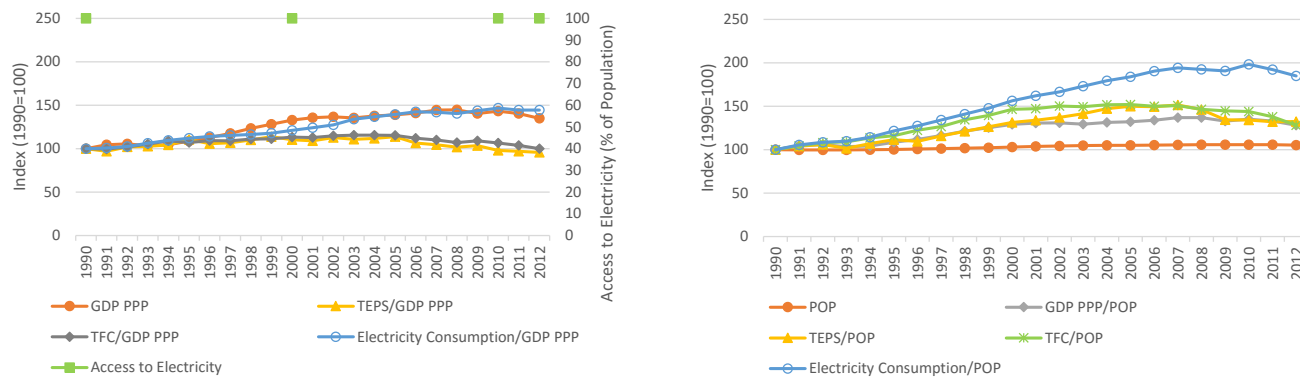
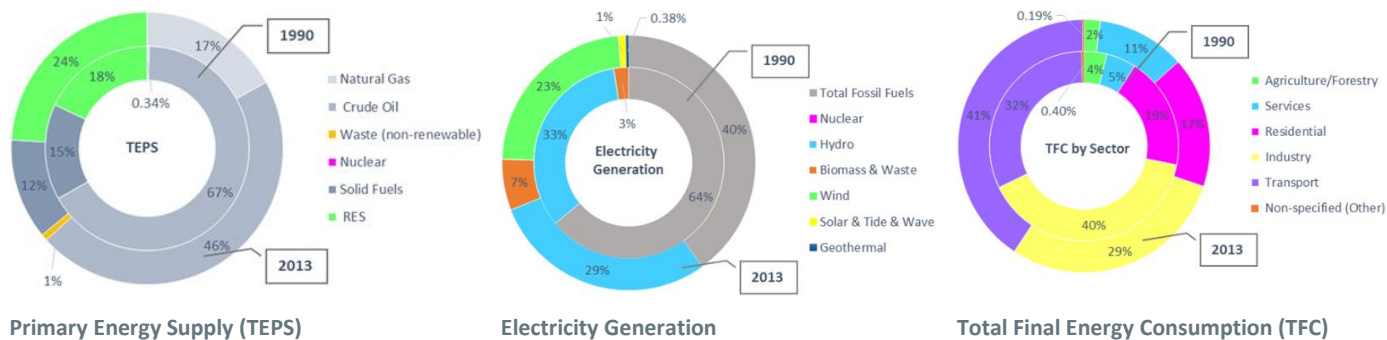


KEY METRICS: Economy Wide Indicators



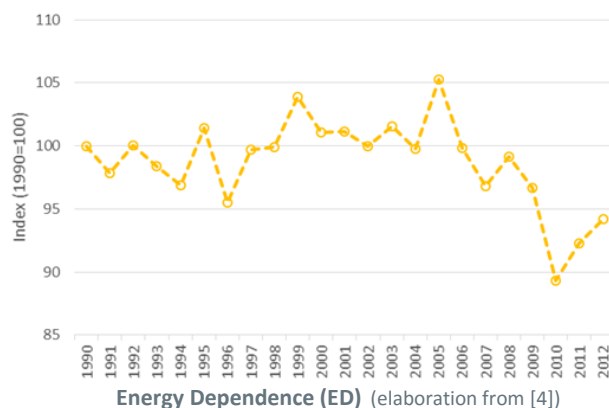
Main Energy and Emission Drivers (elaboration from [1]-[3])

KEY METRICS: Energy System Dynamics



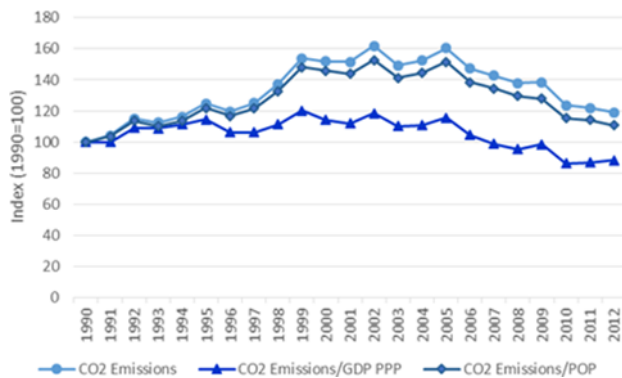
(elaboration from [2], [4])

KEY METRICS: Energy System Indicators

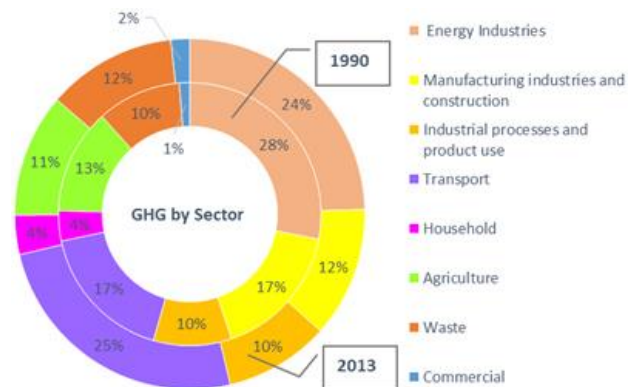


(elaboration from [4])

KEY METRICS: Energy – Related Carbon Emissions



CO₂ Emissions from Fossil Fuel Combustion Trends



Greenhouse Gas (GHG) Emissions (elaboration from [2], [4])

Energy and Climate Change Policy Scope

- Portugal has scarce fossil fuel resources, therefore is largely dependent on external sources. Decrease of external energy dependence resulted from increase in RES (hydro, wind, solar, geothermal and biomass)[5].
- As a member of the European Union and signatory of the Kyoto Protocol, Portugal has a number of climate and energy plans in place.
- Main national strategies consist of the National Renewable Energy Action Plan (NREAP) for the period of 2013-2020 and National Energy Efficiency Action Plan (NEEAP) for the period of 2013-2016.
- This tool constitutes the main lines to mitigate climate change; reduce energy dependence; ensure energy security and increase energy efficiency while contributing for economic competitiveness [6].
- The EU 20-20-20 target framework, is reflected in the national energy and climate strategy and goals. By 2020 Portugal aims to reduce primary energy consumption by 25%, with a specific target (30%) for public administration. As part of the plan to use energy from RES, Portugal aims to promote 31% of final gross energy consumption and 10% of energy for transport from renewable sources. Other targets at sectoral level, comprehend a share of 30.6% in heating and cooling sector and 60% in the electricity sector [6].
- Between 2013 and 2020, Portugal should limit the increase of GHG emissions from sectors not covered by European Emission Trading Scheme (EU-ETS) to 1.0% above its 2005 levels by 2020 [6], [7]. Beyond 2020 period, Portugal also committed to a 27% share of RES in final energy consumption; 27% improvement in energy efficiency by 2030.
- A reduction of 80 to 95% in GHG emissions, comparatively to 1990 levels, is targeted by Portugal and other developed countries by 2050 [8].
- Other key instruments to comply with national and international climate pledges are the National Climate Change Programme (PNAC), the Portuguese Carbon Fund, the National Adaptation Climate Change Strategy (ENAAC), and the National Low Carbon Roadmap (RNBC).

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