

Centre Energie - Centre for Energy

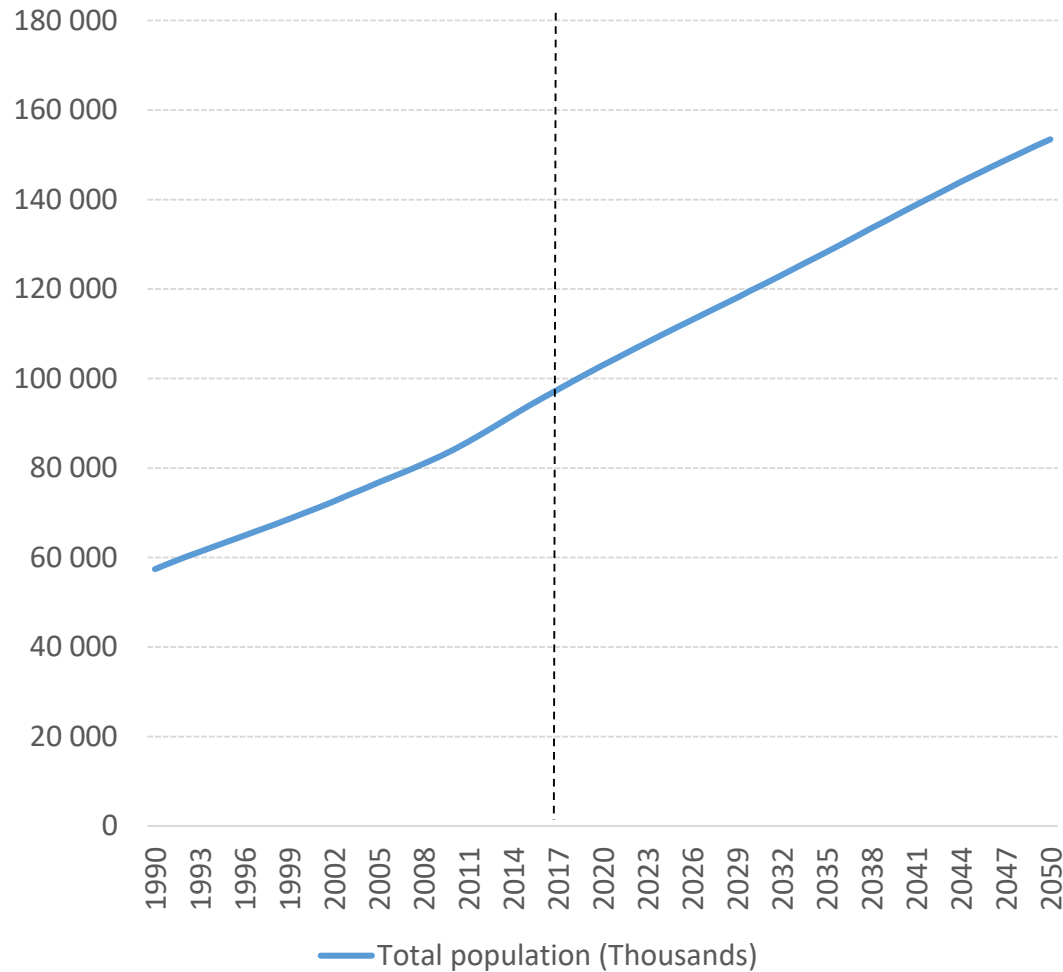
East Mediterranean gas: key factor of stability?



Marc-Antoine Eyl-Mazzega, Director
European Parliament, Strasbourg, 11 Septembre 2018

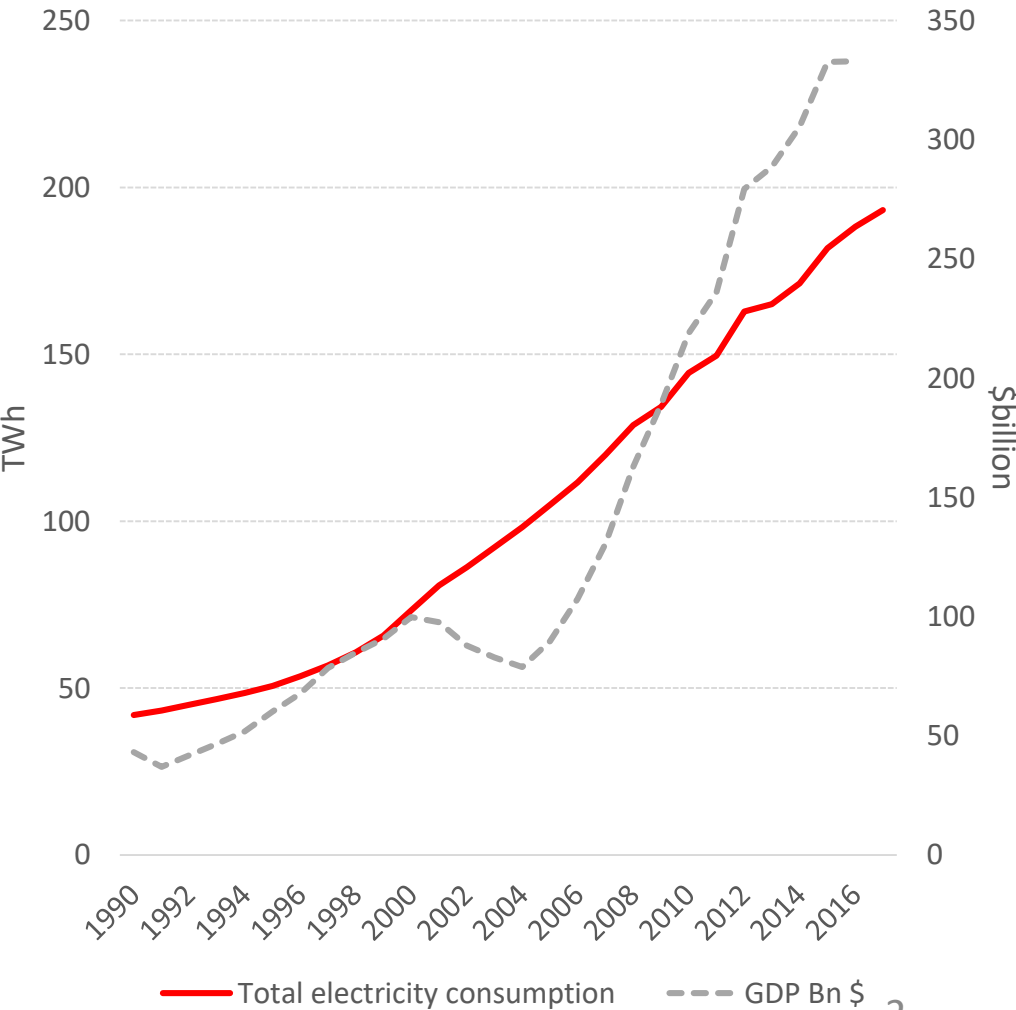
Egypt's population is booming, so is electricity demand, fueling energy insecurity in past years

Evolution of Egypt's population, 1990-2050e



Source: UN. World Population Prospects 2017

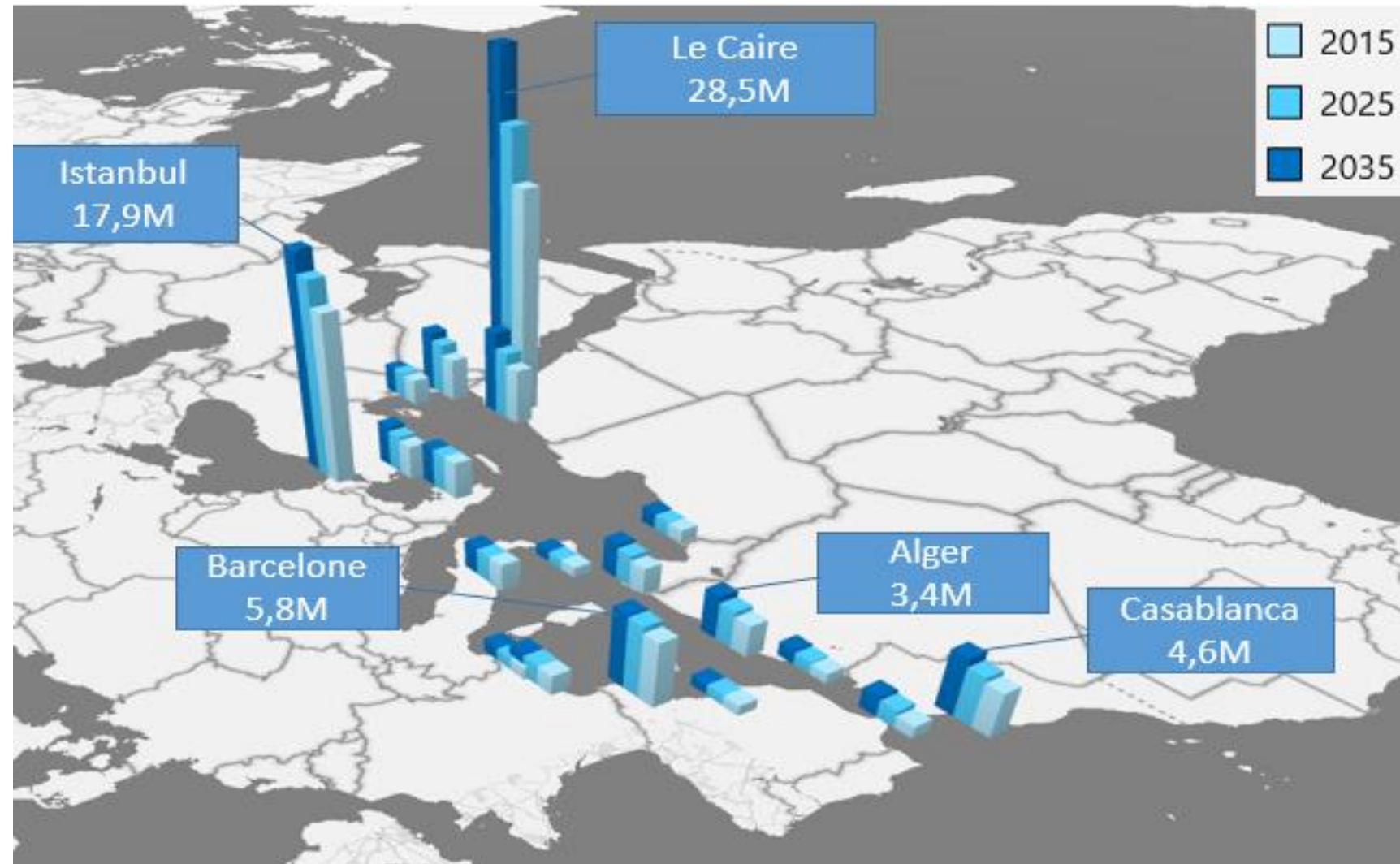
Total Electricity Consumption (TWh) & GDP (\$Bn)



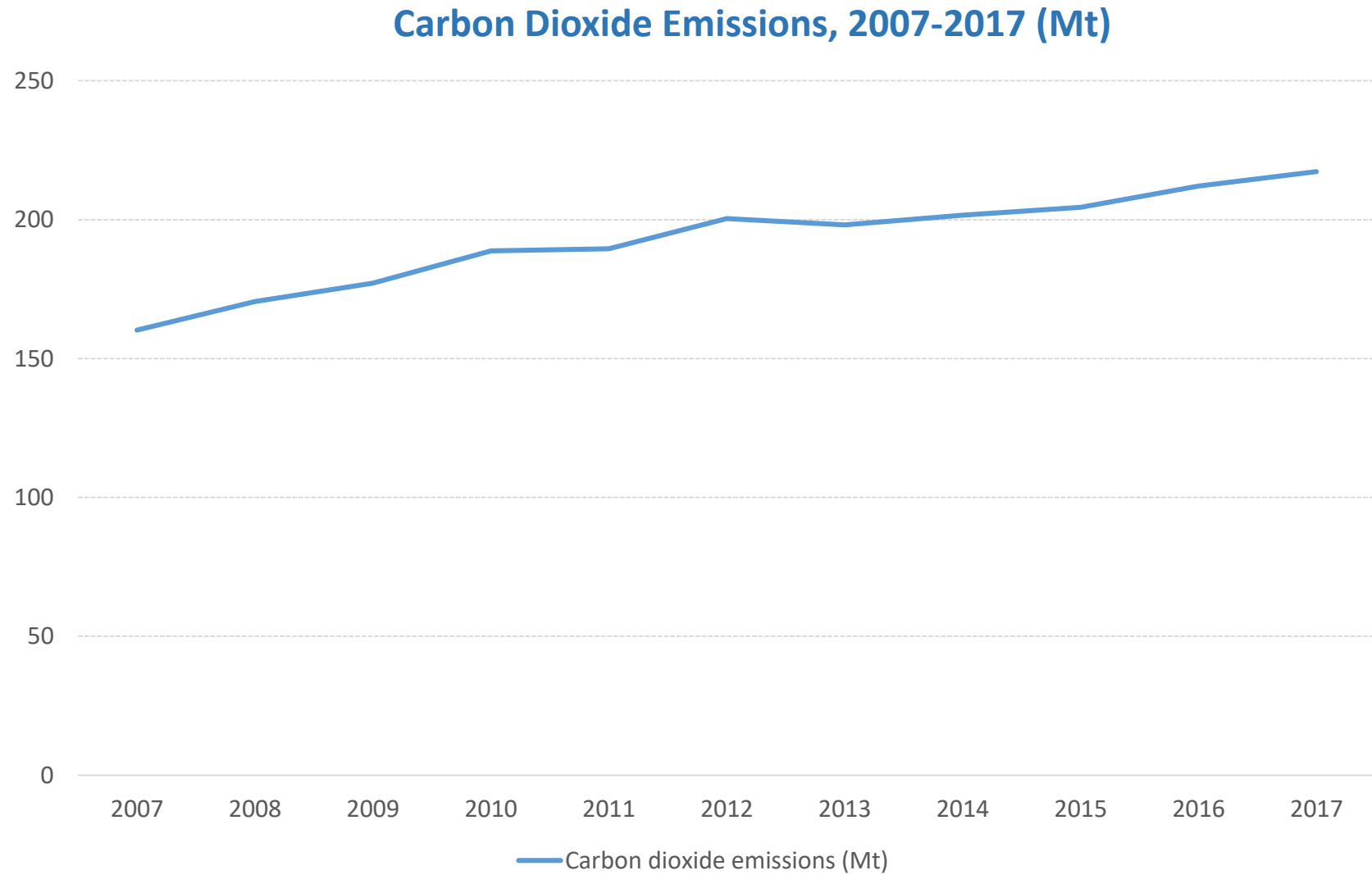
Source: IEA, World Bank

Booming urban population: challenge of sustainable cities

Population in 2015, 2025 and 2035e (in million)

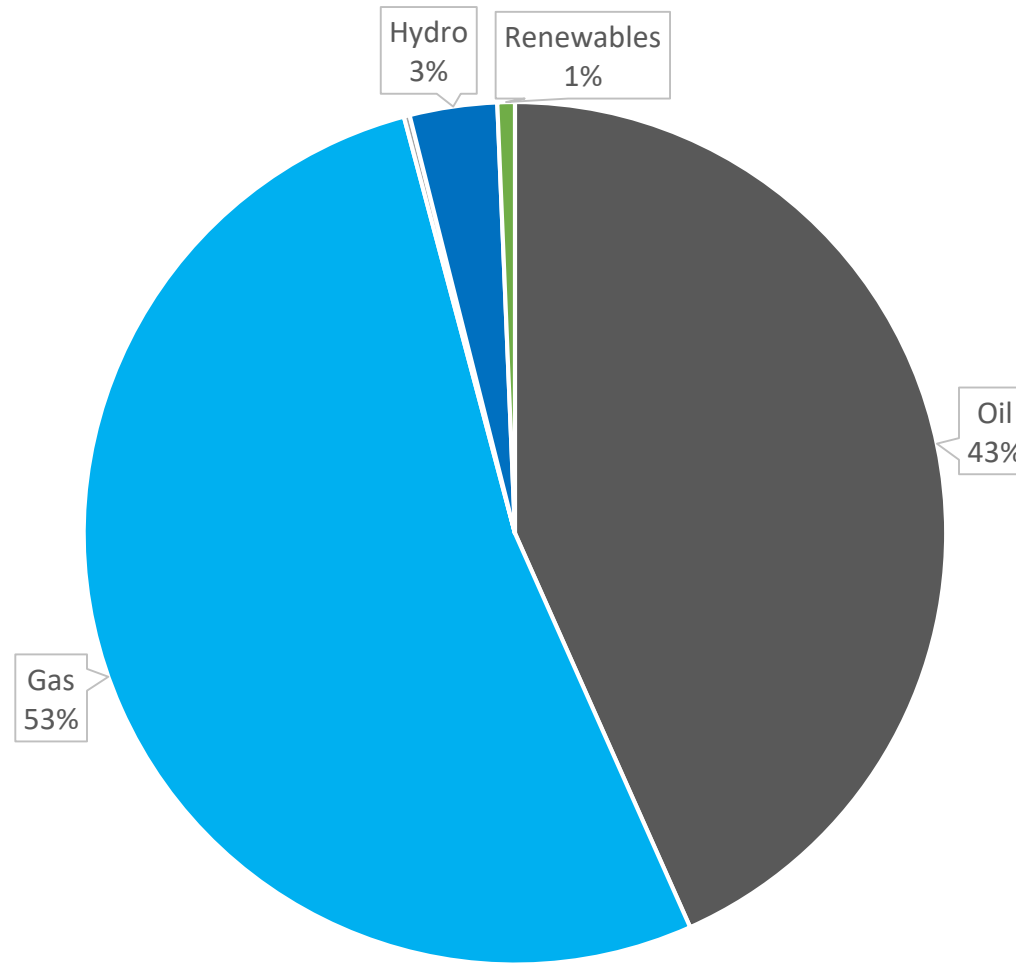


Egypt's CO2 emissions rising...



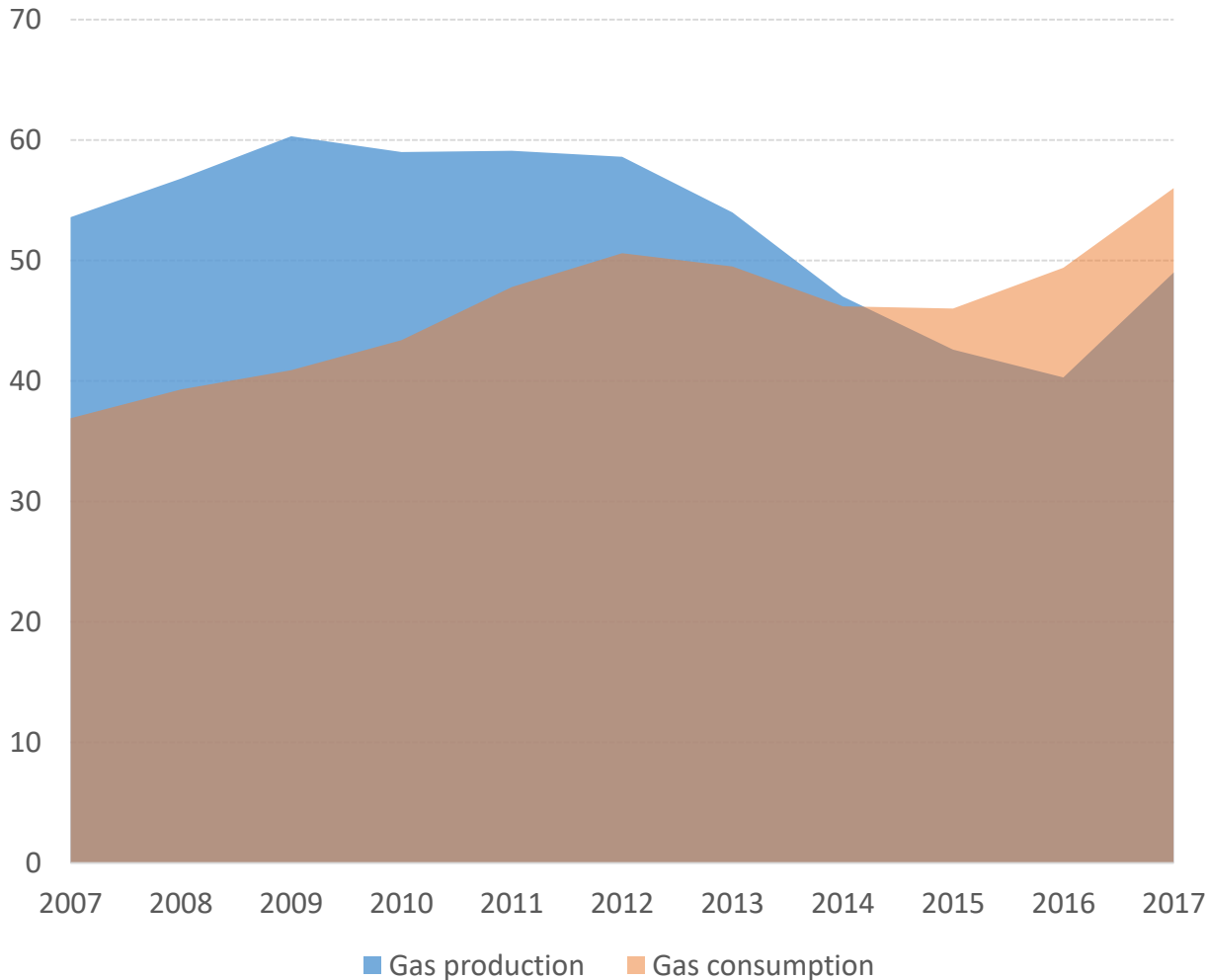
Energy mix dominated by oil and gas, based on domestic resources and some imports

Egypt's energy mix (Mtoe), 2017

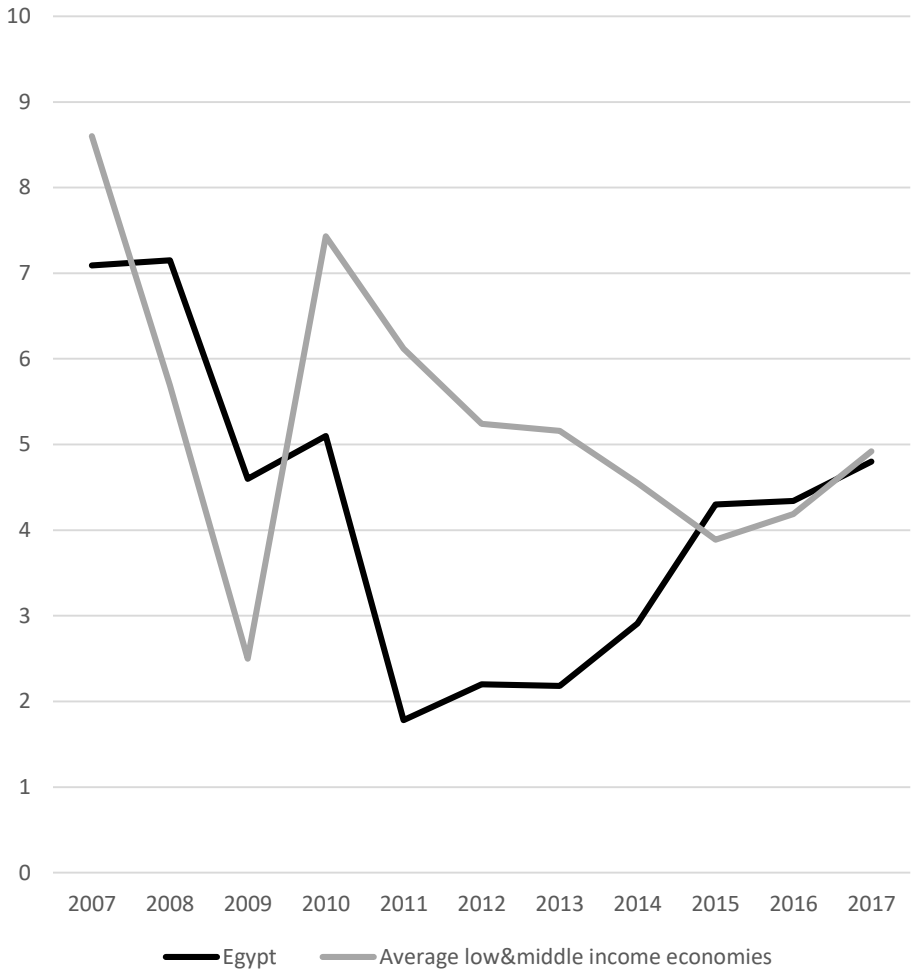


Egypt suffered from the decline in domestic oil and gas production

Egypt's gas production and consumption trends, 2007-2017 (Bcm)



Comparison of Egypt's and emerging economies GDP growth (%), 2007-2017

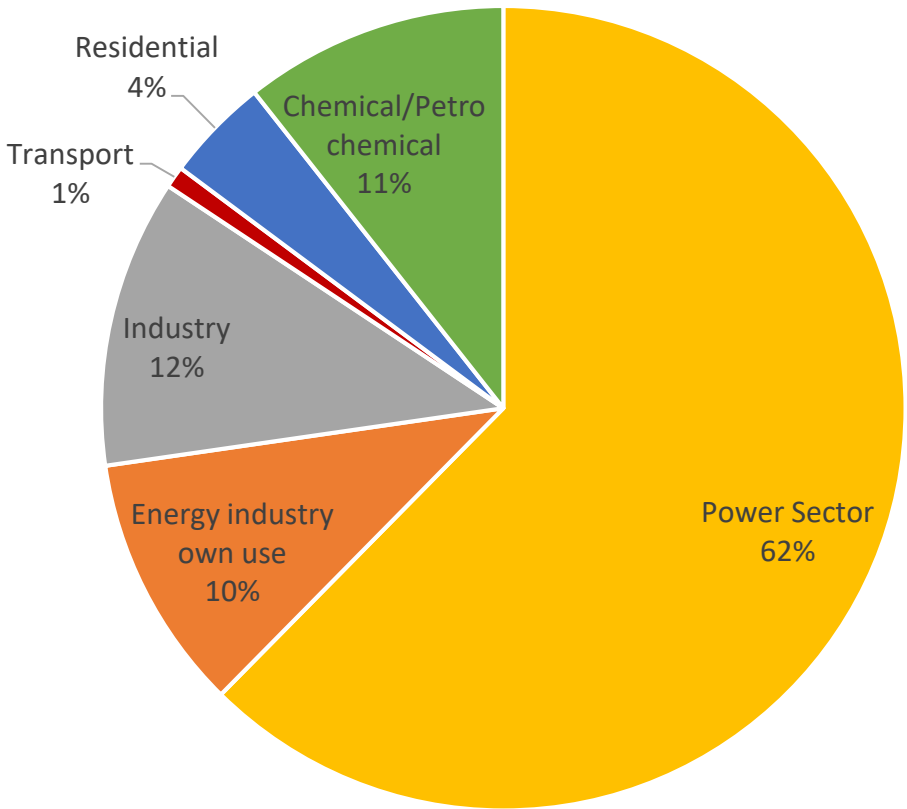


Source: BP Statistical Review June 2018

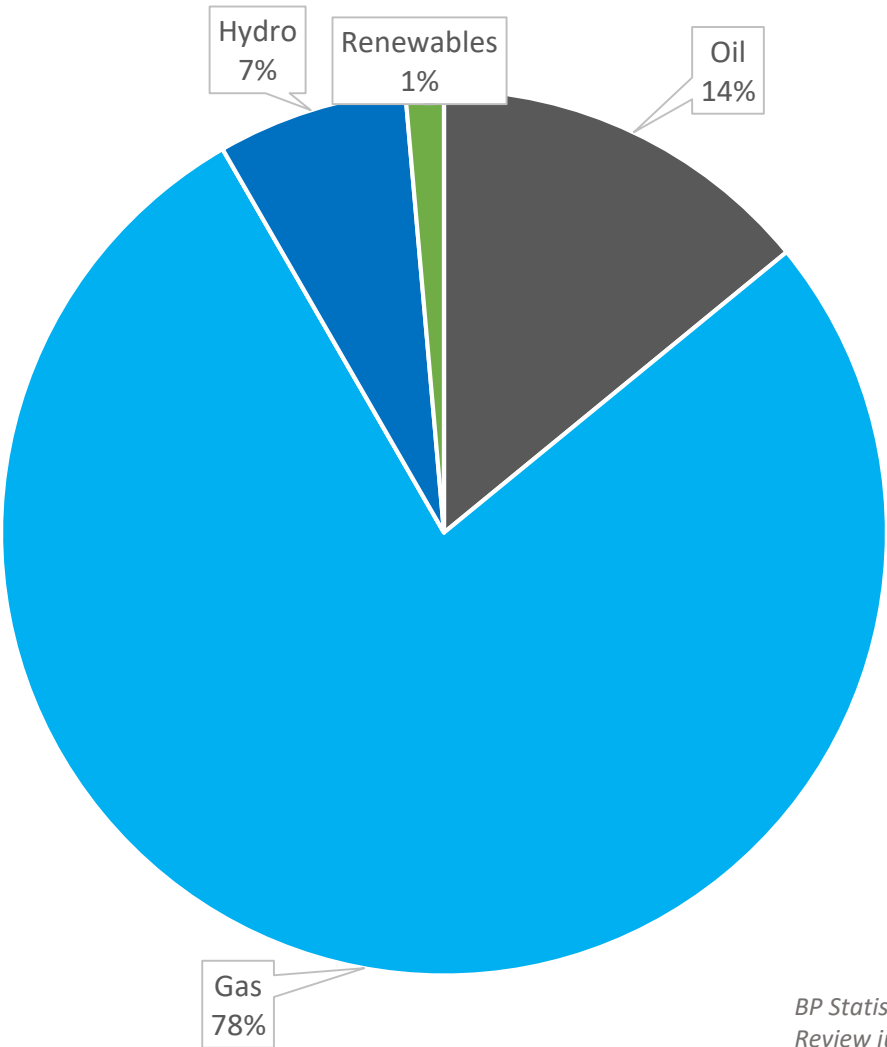
Source: World Bank

Gas-dominated electricity mix key challenge as Egypt became net importer of gas

Split of natural gas consumption by sector, 2016

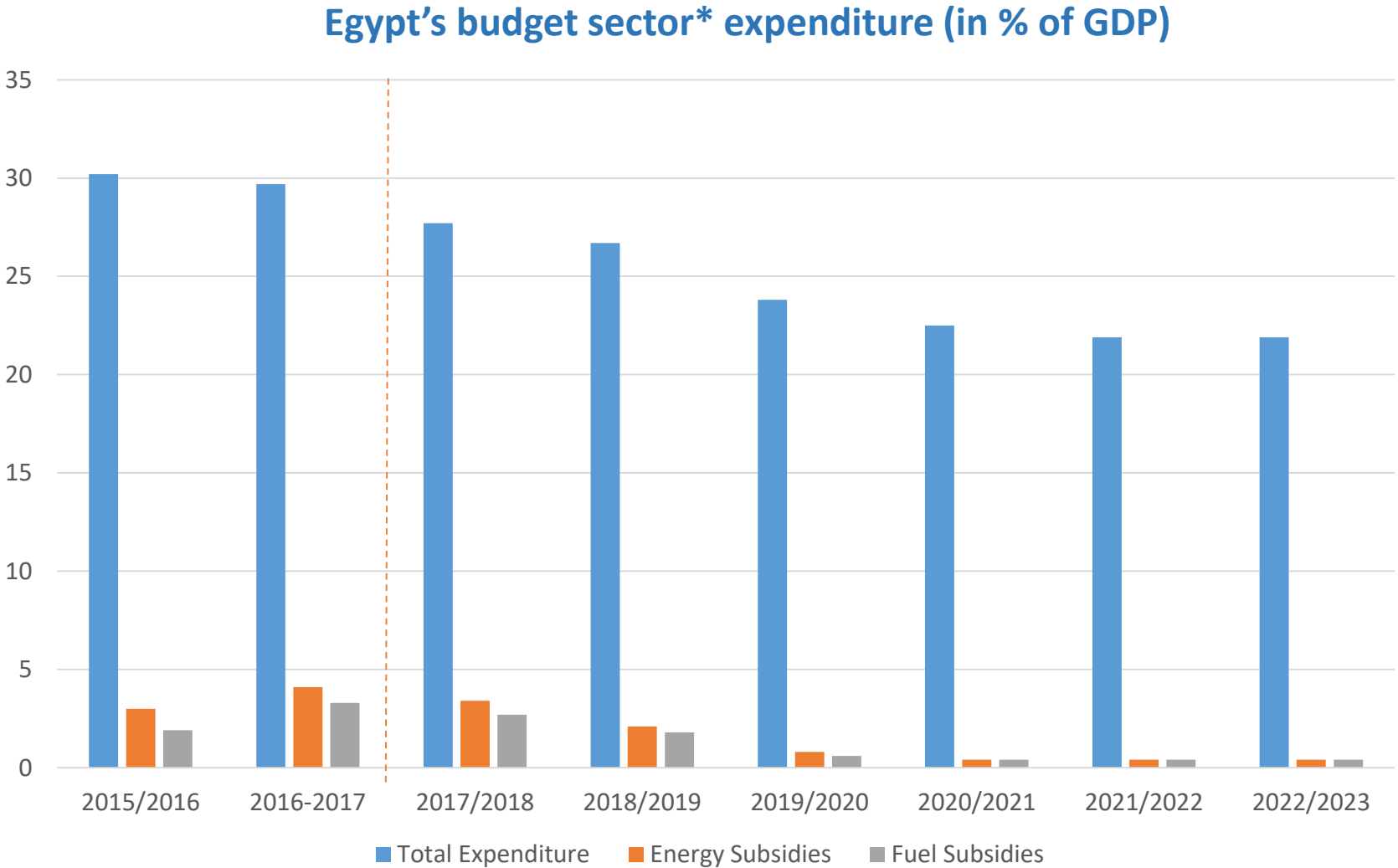


Egypt's Electricity Mix (TWh), 2017



Egypt's power sector consumed 33 bcm in 2017, similar to Italy's power sector

Egypt undergoing painful but necessary economic reforms, including progressive removal of energy subsidies

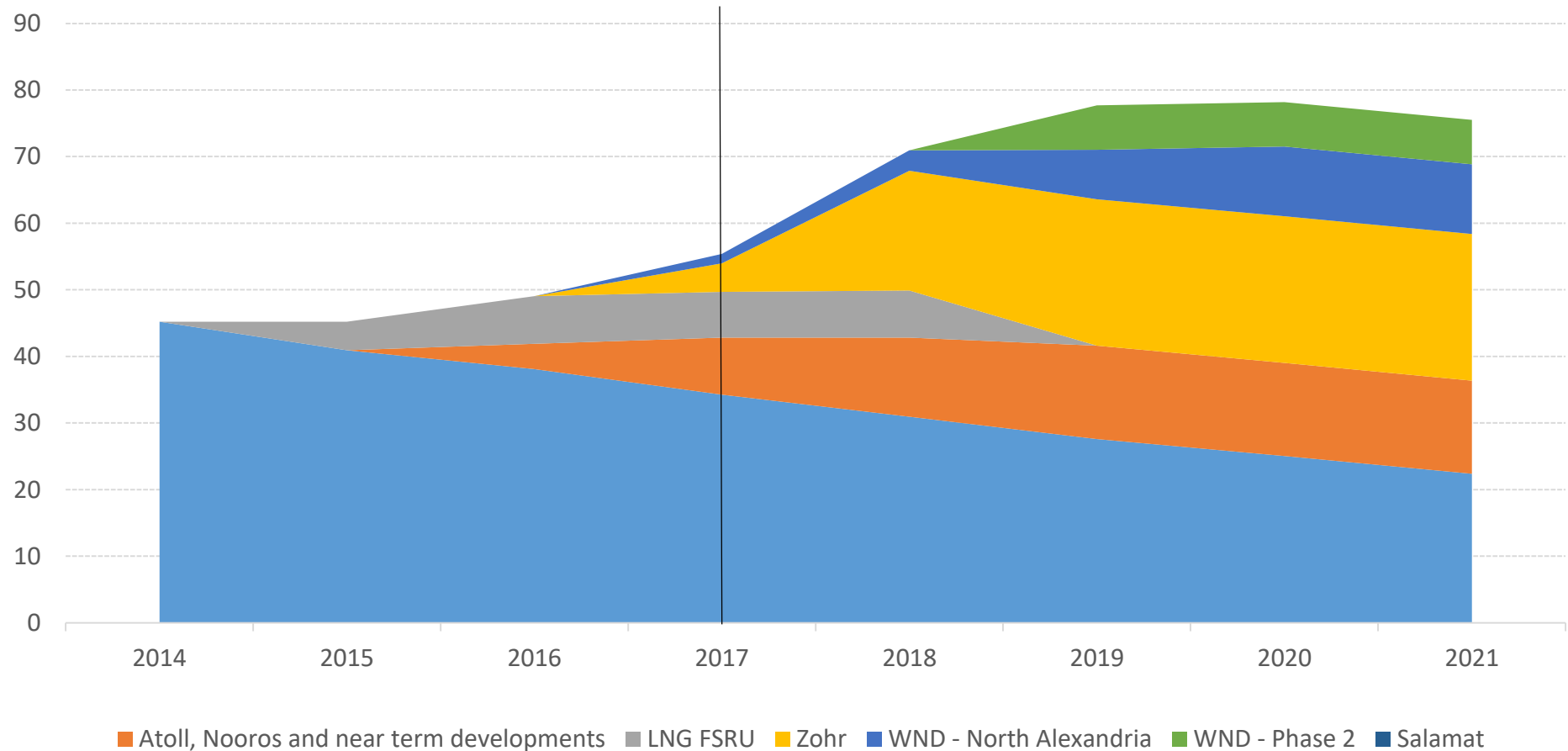


*Budget sector comprises central government, local governments, and public corporations
 Fuel subsidies: gasoline, diesel, kerosene, LPG and fuel oil;

Source: IMF Country Report No. 18/213

Gas output could nearly double following key ENI and BP projects, LNG imports will stop, providing economic relief

Egypt's gas supplies (excluding pipeline imports), 2014-2021e (bcm)

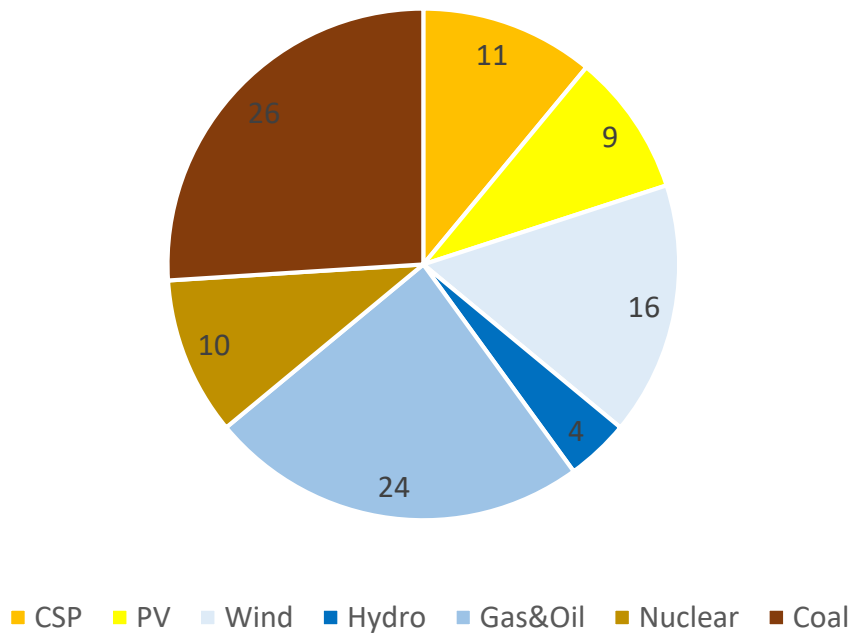


ENI's possible Noor discovery, if confirmed, would be another game changer for Egypt and the region

Source: Ifri, BP, ENI, Gafney Cline & Associates

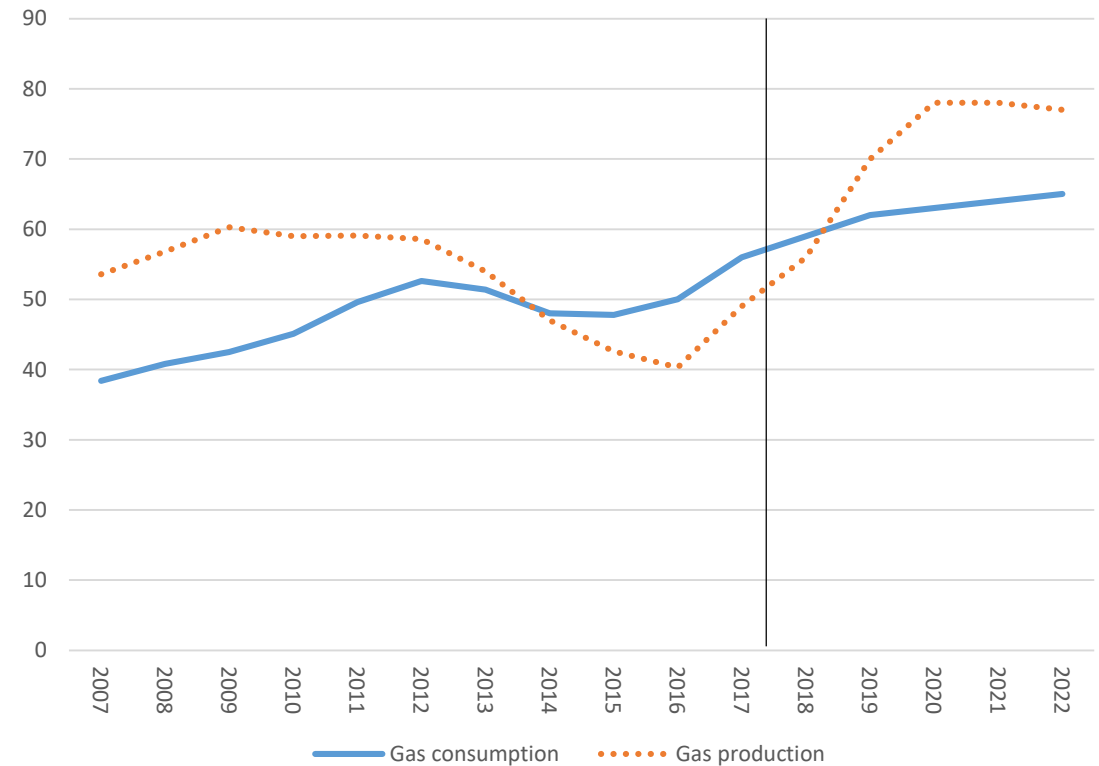
Egypt working to add coal, nuclear & renewables capacities, gas demand for power & industry continues to grow

Electricity Mix « Updated Optimal Scenario » 2029/2030 (%)



Source: Ministry of Electricity and Renewable Energy

Gas demand/supply balance, 2007-2022^E (bcm)

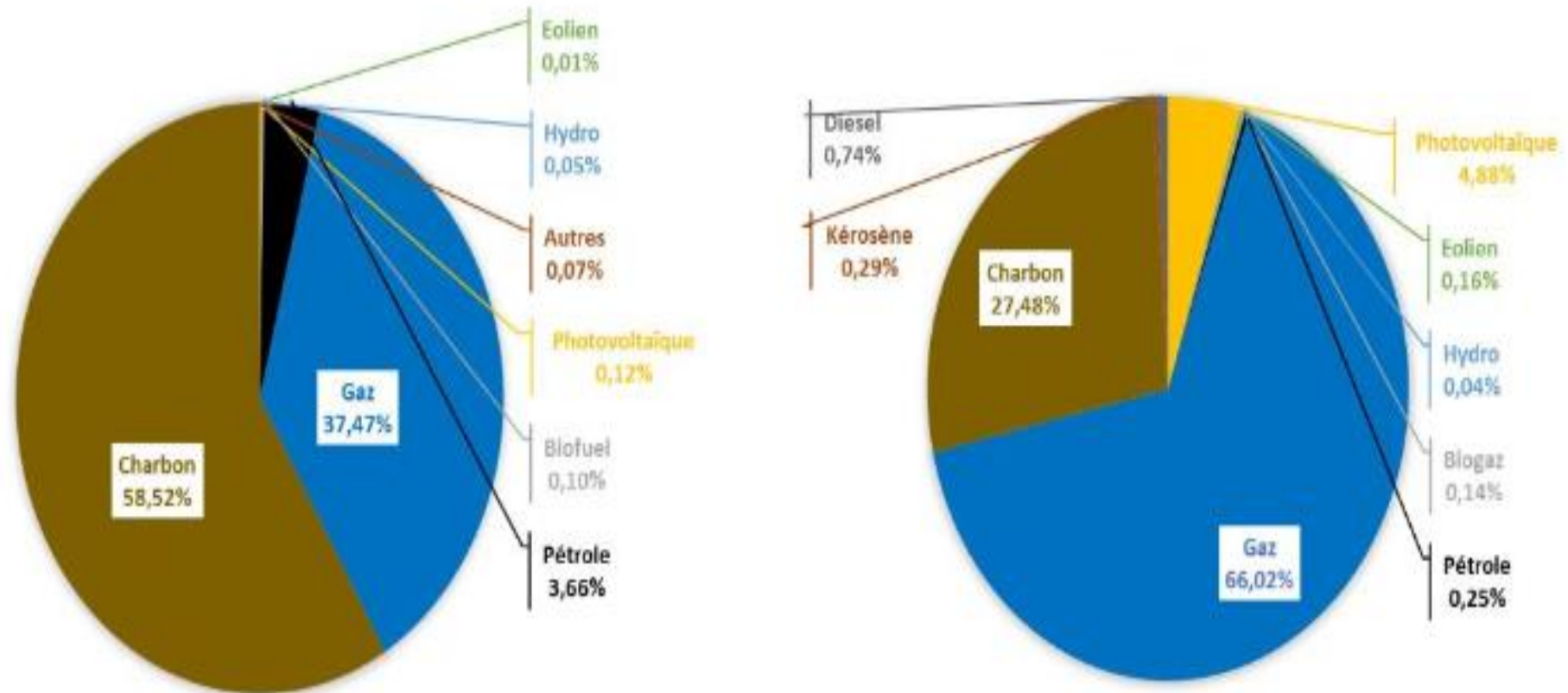


Source: BP2018, Ifri estimates

Inefficient thermal plants could be phased out and the 14,4 GW Siemens turbines are super efficient, however gas demand will still grow as gas fired plants will offer a back up to meet peak demand, will offset oil plants and will provide a reserve to compensate for potential delays in the development of other projects. This will constain the gas export potential.

Israel another gas winner: electricity mix cleaner & more secure, surpluses exported to Jordan and Egypt

Israel's electricity mix in 2010 and 2016

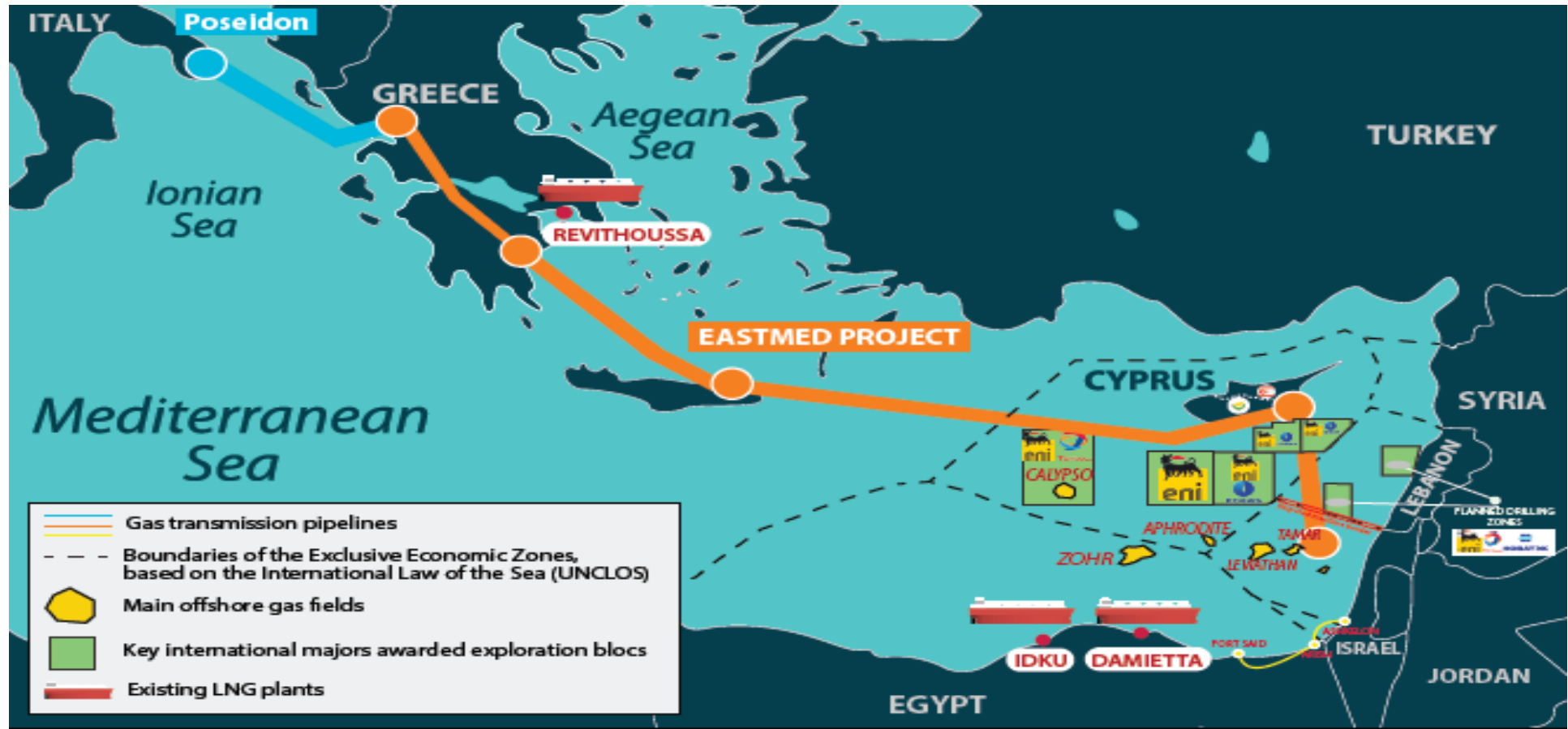


Source: Ifri

Israel will phase out coal by 2030 and gas will meet growing domestic demand for power and in the transport sector. A second export wave > 2025 is possible... if Leviathan phase 2 is developed

Egypt will become a gas hub in the Eastern Mediterranean as infrastructure is already in place

East Mediterranean gas infrastructure and projects



Offshore gas projects are not cheap, Egypt is a growing & attractive market, sunk cost infrastructure or small new investments likely to be privileged for selling gas. LNG exports from Egypt based on Israeli or Egyptian gas to Europe likely though in the short term.

Cyprus' gas potential promising, exploration ongoing (Calypso...), synergies with Israeli/Egyptian infrastructure...





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