

Country: Greece

Population: 10.9 mln GDP: €184.5 bln (2016) Unemployment rate: 23.6% (2016) Inflation Rate: 0.7% (as of Dec 2017) Net Power Consumption:

50,107 GWh (2016)

Net Power Generation:

41,556 GWh (2016)

Gas Demand:

3.83 bcm (2016)

LNG Imports:

0.58 mln t (2016)

Crude Oil Imports: 171.96 mln bbl (2016)

Sources: Bank of Greece, DESFA, EC, LAGIE, IMF



Infrastructure Update

- A Memorandum of Understanding for the East-Med natural gas pipeline was signed in Nicosia by the Energy Ministers of Greece, Cyprus, Israel and Italy, confirming their intention to cooperate on the implementation of the project. The next step will be the signing of an Intergovernmental Agreement in Crete within 2018.
- PPC Renewables plans to proceed rapidly with the development and operation of geothermal plants in four areas in Greece, namely: Methana, Lesvos, Nisyros and in the Milos-Polyaigos-Kimolos complex. One 8MW plant will be developed in Lesvos and three 5MW plants in the other locations. The total production is expected to reach about 190KMWH/year.

Regulation Update

- The Greek Parliament legislated the establishment and operation of the Energy Exchange, following a split from the Electricity Energy Market Operator, in order to reform the electricity market in line with the EU framework. Under the new structure, four separate markets will be traded in electricity, including next day sales, spot products, power derivatives and a load balance market.
- The Electricity Market Operator (LAGIE) has publicized the Codes for the Day-Ahead, Intra-Day and Forward markets. The Codes, under public consultation until 22 January 2018, describe the new legal framework for the operation of the Hellenic wholesale market, within the adoption of the Target Model.
- A Bill which introduces the legislation of "Energy Communities" is currently being discussed at the Greek Parliament and is expected to be ratified very shortly. The Bill allows local community members to partner up to invest and manage energy projects that concern their region.

Politics & Macroeconomic Update

- Greece's central government attained a primary budget surplus of almost 2 billion euros in 2017 above target due to lower spending, finance ministry data showed in Jan 2018.
- S&P Global Ratings upgraded Greece's long-term sovereign credit rating by one notch to B, up from B-, leaving it still below investment grade but with a positive outlook.
- European Commission (EC) has identified problems and delays concerning the competition in Greece's energy market and the progress of energy privatizations. EC stresses the importance of radical energy reforms with further liberalization of electricity and gas markets until the end of the Greek bailout program in the summer of 2018.

GEF Forward View

2018 has the potential to become a "milestone" year for the Greek energy market. In the electricity market, we should see the divestment of PPC lignite-fired units and the preliminary implementation of the Target Model. Regarding gas, while all customers are now open to competition, IGB pipeline and FSRU Alexandroupoli should be heading towards construction start and FID, respectively, and DES-FA's privatisation towards completion. On the upstream side, the 1st test drilling for decades should be taking place in W. Greece. Expectations are always different from facts but the majority of the aforementioned are well-positioned to turn into reality this year.

Market Update

- The international oil and gas tender for the Southwest and West of Crete area and the Ionian Sea was published in the Official gazette of the European Union on 2 December 2017. Investors, other than the consortium Total-Exxon Mobil-HELPE, who first submitted its interest, have 90 days from the date of publication to submit their offers to Hellenic Hydrocarbons Resources Management Company.
- A hydrocarbon block in Katakolo, off western Peloponnese, held by Energean Oil & Gas, has been certified to measure 10.7 million barrels. This is triple the amount of an initial estimate of 3 million barrels made by Greek authorities when staging an international tender for the block.
- Public Gas Corporation, which holds 51% of EPA Attiki, is close to a deal with Rothschild & Co, joined by Alpha Bank, to represent the Greek utility in its negotiations with Shell for the acquisition of its 49% in EPA Attiki, which is the ex-monopoly in gas supply in Athens.
- Greece's main power utility PPC, is looking to acquire EDS, an electricity trading company with a 320 MW portfolio in Fyrom, representing 40 percent of the neighboring market, and possessing a presence, through subsidiaries, in the Serbian, Slovak and Kosovo markets. In an attempt to strengthen its position in the region, PPC is also targeting stakes in Albania and Turkey.
- The customer base of the Greek gas retail market has become completely open to competition since 1 Jan 2018. This development has completed the conversion of all customers in Greece to "eligible" status, which means that every consumer has now the right to choose the supplier of their preference. Some private suppliers have already started offering energy "double-play" packages (electricity + gas) to their customers.

All individuals involved in the Greek Energy Forum - including the Management Committee, Branch Heads/Deputy Heads, Steering Committee, Project Managers, Associates, as well as standard members - are serving in their personal capacity. The analysis and opinions they express through the Greek Energy Forum are their own and do not reflect the view of their respective employers.

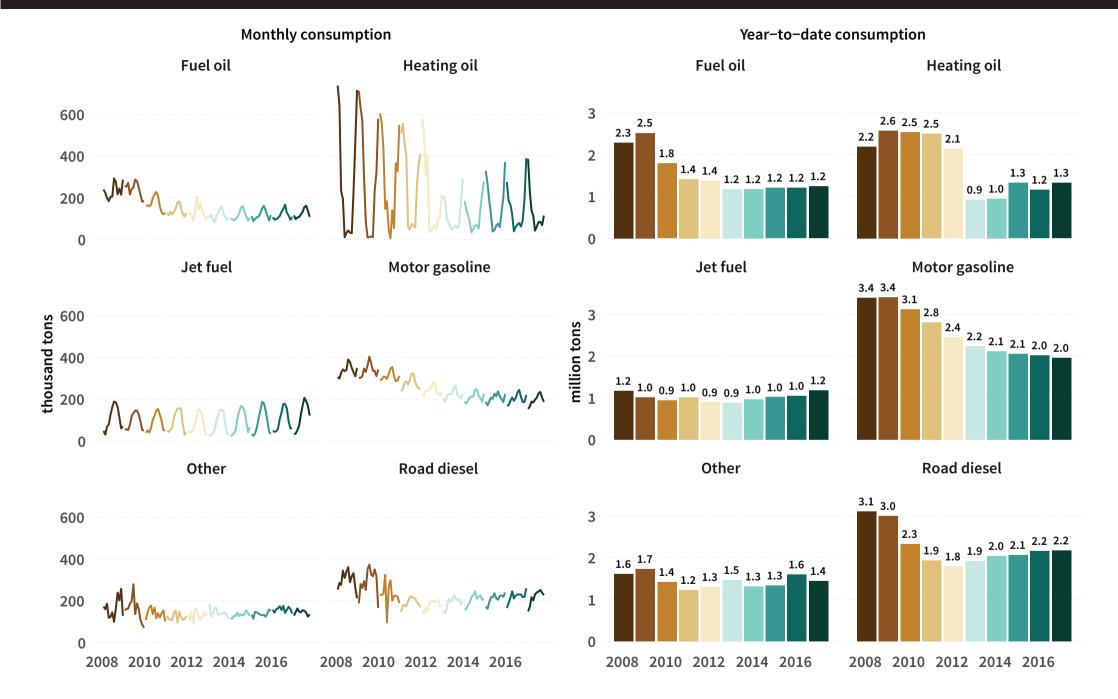


Greek energy market snapshot

January 2018

Greece: Oil consumption

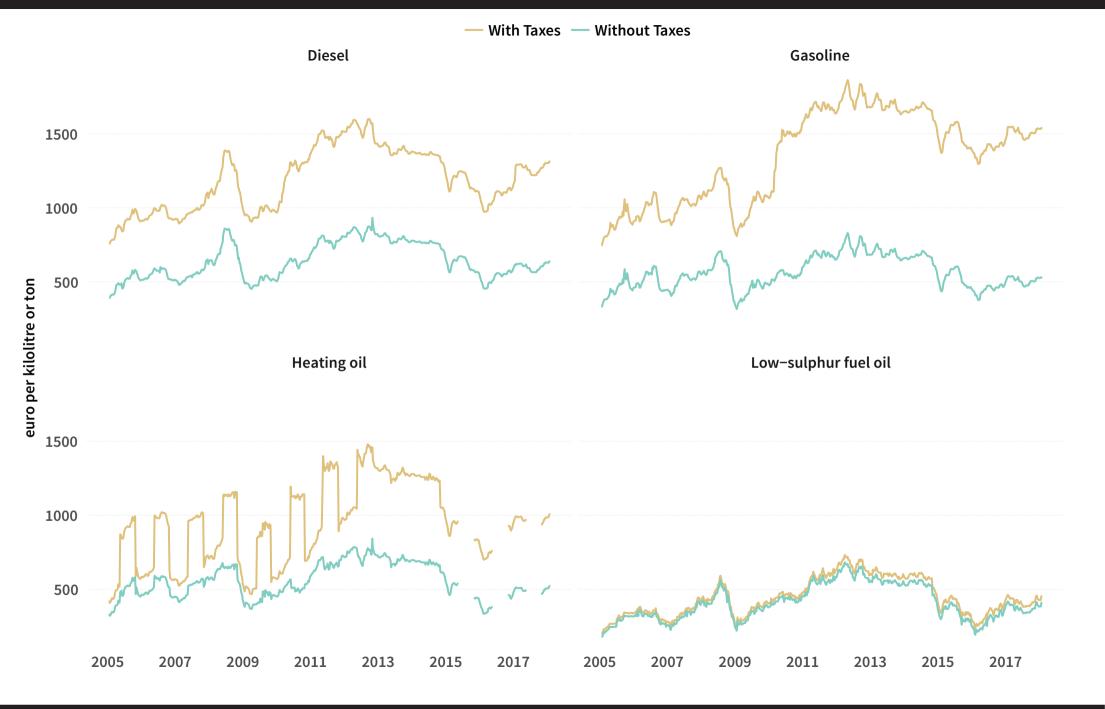
data through October 2017



Data from Eurostat, Supply and transformation of oil - monthly data (nrg_102m)

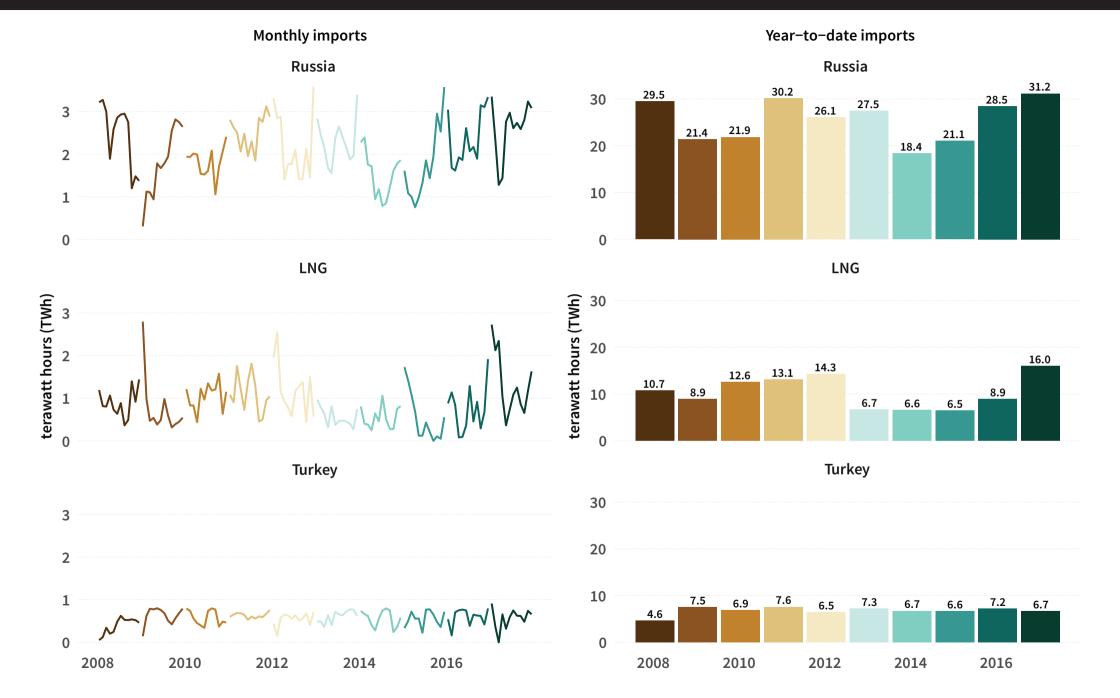


Greece: Oil prices



Greece: Gas imports

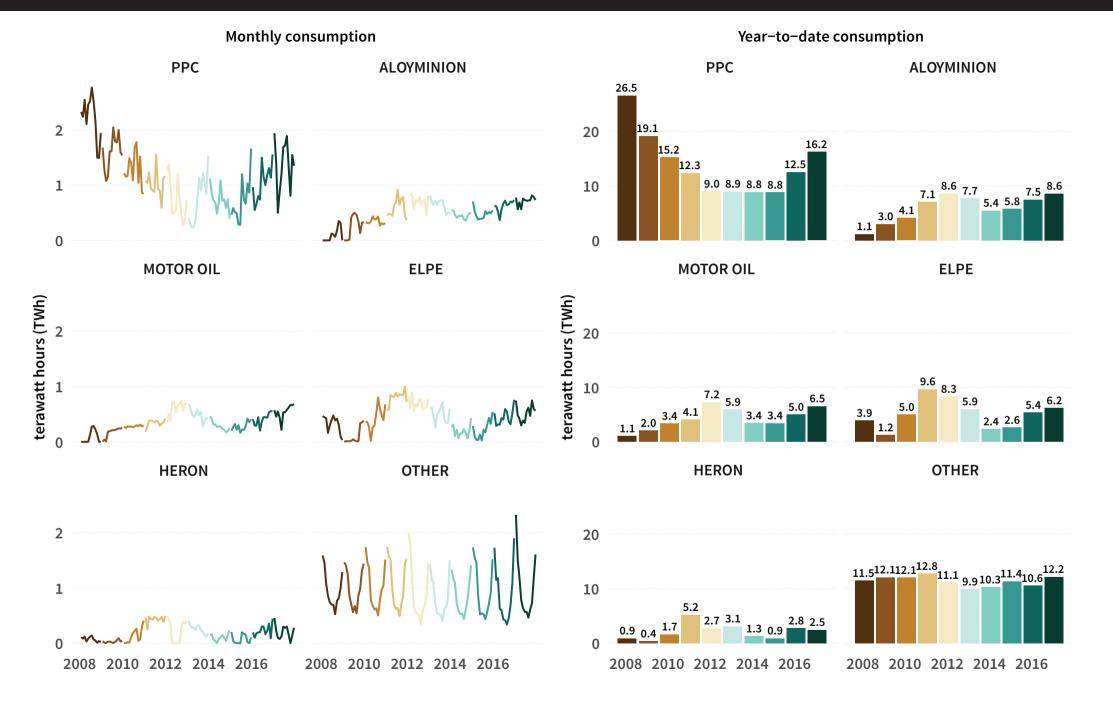
data through December 2017



Data from DESFA, Historical Data of Natural Gas Deliveries / Off – Takes

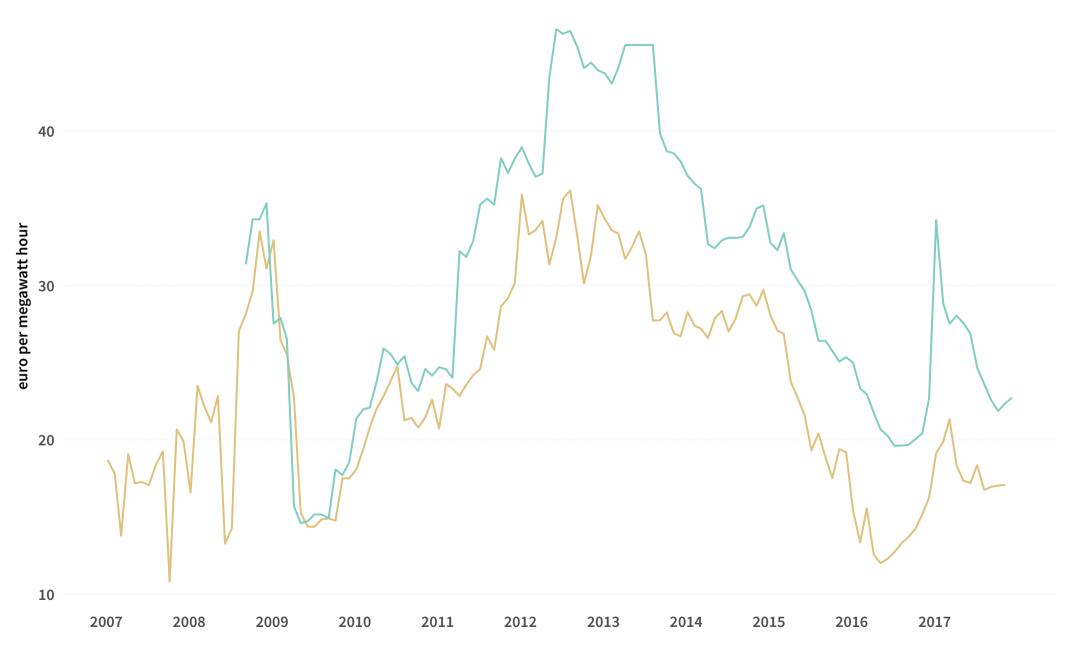
Greece: Gas consumption

data through December 2017



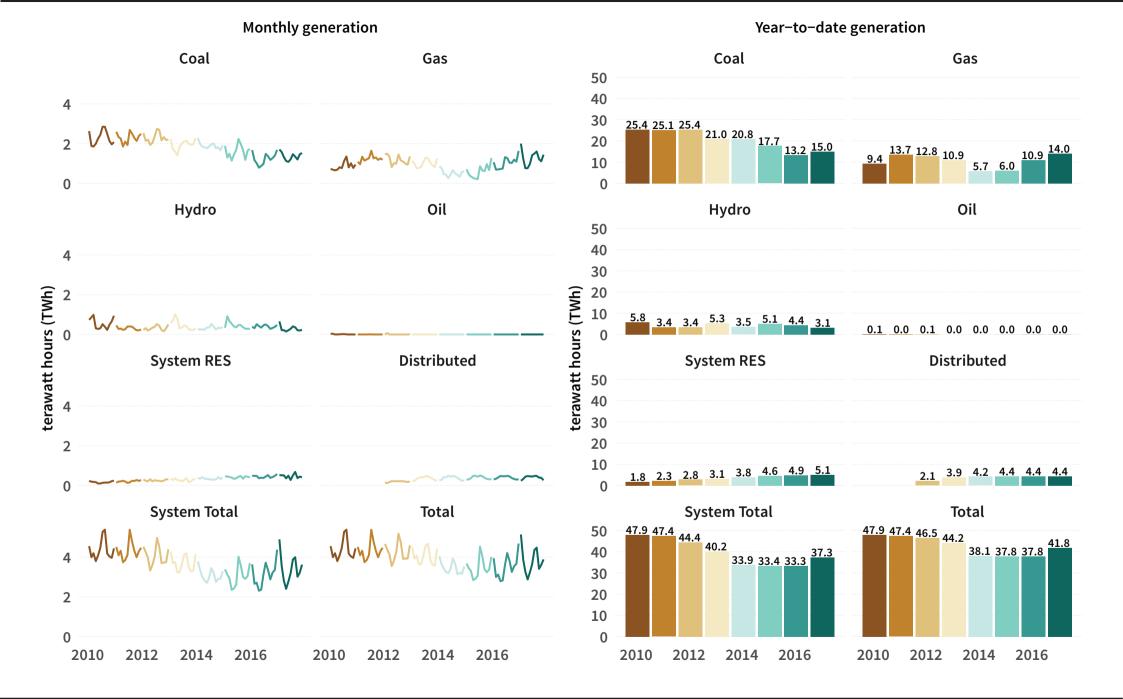
Data from DESFA, Historical Data of Natural Gas Deliveries / Off – Takes

Average import price — Gas balancing price (DESFA)

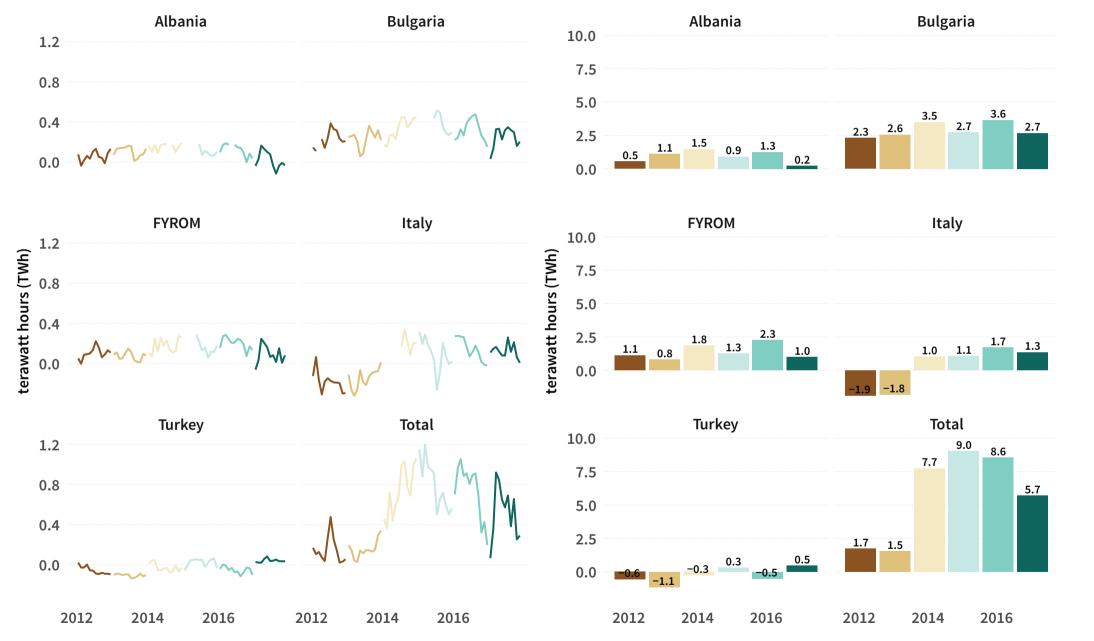


Greece: Power generation

data through November 2017



Data from ADMIE (Independent Power Transmission Operator), Monthly Energy Balance



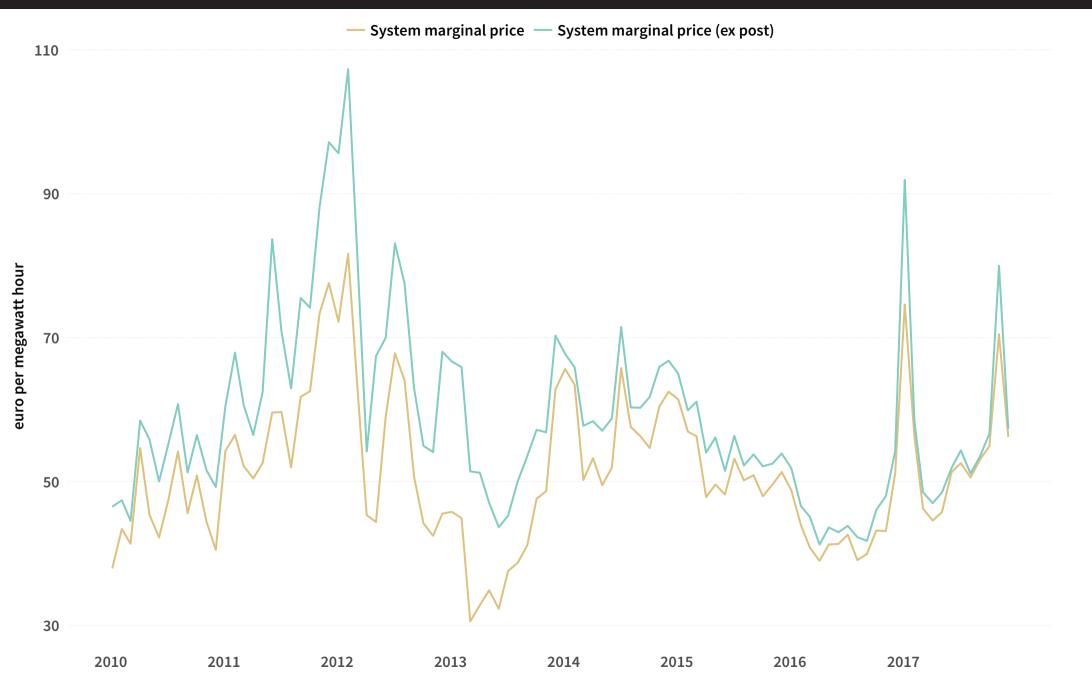
Monthly net imports

Year-to-date net imports



Greece: Power prices

data through December 2017



Data from ADMIE (Independent Power Transmission Operator), Electricity / Power Market Participation (Market Data) powered

Greek Energy Forum	Sources and notes
Oil consumption	Eurostat, Supply and transformation of oil - monthly data (nrg_102m) Parent URL: http://ec.europa.eu/eurostat/data/database File URL: http://ec.europa.eu/eurostat/estat-navtree-portlet-prod/Bulk- DownloadListing?sort=1&downfile=data%2Fnrg_102m.tsv.gz Other includes refinery gas, ethane, liquified petroleum gas (LPG), aviation gasoline, other kerosene, gasoline type jet fuel, naphtha, petroleum coke, other products. All fuels include blending with bio components. Jet fuel refers only to kerosense jet fuel (gasoline type jet fuel shown in other).
Oil prices	European Commission, Weekly oil bulletin Parent URL: https://ec.europa.eu/energy/en/data-analysis/weekly-oil-bulletin File URL: http://ec.europa.eu/energy/observatory/reports/Oil_Bulletin_Prices_History.xls
Gas balance	DESFA, Historical Data of Natural Gas Deliveries / Off – Takes Parent URL: http://www.desfa.gr/?page_id=2790⟨=en File URL: http://www.desfa.gr/wp-content/uploads/2017/12/Flows.xlsx For import locations: AGIA TRIADA is LNG, SIDIROKASTRO is Russia, and KIPI is Turkey. For domestic consumption: PPC includes ALIVERI, KERATSINI, KOMOTINI, LAVRIO, MEGALOPOLIS. ALOYMINION includes ALOYMINION, ALOYMINION II and ALOYMINION III. ELPE includes ELPE, ELPE HAR, and THISVI. HERON includes HERON II and HERONAS. MOTOR OIL includes MOTOR OIL and MOTOR OIL II. All other exit points grouped under OTHER.
Gas prices	DESFA, Daily gas balancing price Parent URL: http://www.desfa.gr/?page_id=2981⟨=en File URL (2017): http://www.desfa.gr/wp-content/uploads/2017/03/2017_EN_%CE%97%CE%A4%CE%91%CE%95.xlsx Import prices calculated from Eurostat, Com Ext database (available from http://ec.europa.eu/eurostat/data/database). Total calculated by adding all values under codes 27111100 and 27112100. Volumes are reported in terajoules; conver- sion from terajoules to megawatt hours based on a 1 KWh = 3,600 KJ rate.
Electricity balance	ADMIE, Electricity market report Parent URL: http://www.admie.gr/deltia-agoras/miniaia-deltia-energeias/
Electrictiry prices	ADMIE, System marginal prices Parent URL: http://www.admie.gr/leitoyrgia-dedomena/leitoyrgia-agoras-ilektrikis-energeias/anafores-dimosieyseis-agoras/