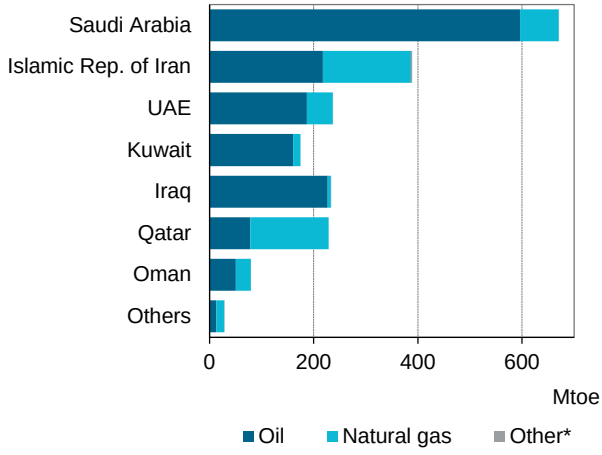
Middle East

With energy production more than 2.5 times as large as its demand, the Middle East has the highest energy self-sufficiency ratio in the world. The region produced nearly 15% of global energy in 2016, an increase from just over 13% for the previous five years. This growth is largely driven by oil and gas, where the Middle East produced 34% of global oil, and nearly 17% of the world's gas. The Middle East's global share of natural gas production has increased every year since 1997.

Figure 52. Energy production in 2016
Middle East



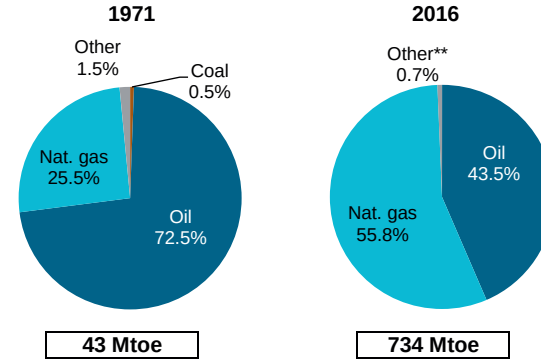
* Includes coal, nuclear, hydro, other renewables, biofuels and waste

Saudi Arabia was still by far the largest oil producer in the region with 39%, followed by Iraq and Iran, with 15% and 14% respectively (Figure 52). With 33% of the Middle East's natural gas production, Iran maintained its position as the region's largest producer of natural gas in 2016, closely followed by Qatar at 30% of the regional production. Iran's natural gas production increased by 9% in 2016, indicating faster growth compared to the 5% increase seen in 2015. Meanwhile natural gas production in Qatar was fairly steady with 1% growth in 2016 compared to 3% in 2015.

In 2016, the major growth in oil production was seen in Iran and Iraq, with 33% and 28% respectively. Other notable growth in oil production was seen in Kuwait and Qatar, each with 4%. Oil production continued to decline in Syria (-5%) in 2016, though not as drastically as in 2015 - with a nearly 40% decline. Similarly, Yemen also saw a dramatic deterioration of oil production, with a 39% drop due to political unrest and the halting of oil and gas activities in 2015.

Alongside increasing its production, the Middle East is also the fastest growing region in terms of TPES. Over the period from 1971 to 2016, TPES grew on average by 7% per year. In 2016, this supply is almost exclusively based on oil and natural gas (Figure 53). Natural gas has partially displaced oil, more than doubling its share between 1971 and 2016.

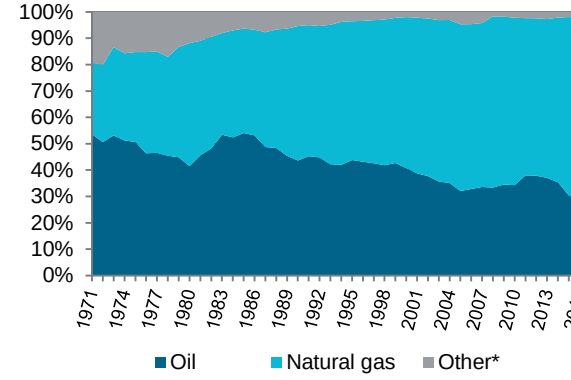
Figure 53. Total primary energy supply* by fuel
Middle East



* Excluding electricity trade.
** Includes coal, nuclear, hydro, other renewables, biofuels and waste

Key factors driving the rapid development of natural gas in the Middle East are power generation and the petrochemical sector. This is illustrated by the share of oil in electricity production continuing to shrink, starting with 54% in 1971 and reaching 28% in 2016 (Figure 54).

Figure 54. Electricity generation by source
Middle East



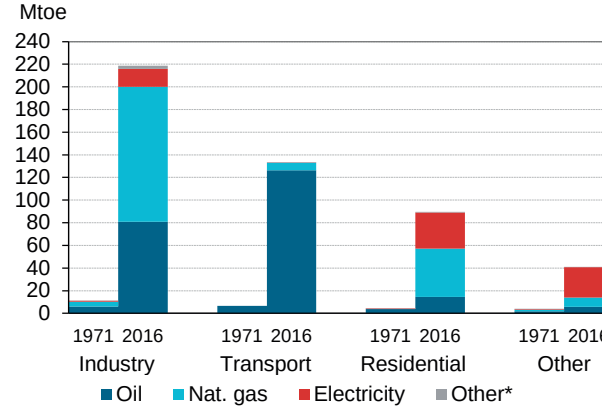
* Includes coal, nuclear, hydro, other renewables, biofuels and waste.

In contrast, the share of natural gas in electricity production continually increased, from 27% to 69% in the same period. In 2016, natural gas continued to provide almost all the electricity generated in Bahrain, Qatar, the United Arab Emirates, and in Oman. In Iran and Jordan, natural gas's share in electricity generation

reached over 80% in 2016. In Jordan, this change has come swiftly, with natural gas generating just 48% of the electricity in 2015, as a result of the government promoting the fuel swap.

Over the last four decades, total final consumption expanded in all sectors, particularly industry and transport, which increased twenty fold. In 2016 oil accounted for 95%, 37% and 16% of final consumption in transport, industry and residential, respectively (Figure 55). Oil is responsible for 47% of total energy consumption in the Middle East. Also in 2016, natural gas met 55% and 47% of final consumption in industry and residential, respectively. Electricity tripled its share in final energy consumption from 5.6% in 1971 to 15.5% in 2016.

Figure 55. Total final consumption by sector and fuel Middle East



* Includes coal, other renewables, biofuels and waste