

South eastern European countries were traditionally dependent on coal for electricity generation and gas is set to play a larger role in the energy mixes of these countries. In order to get to fuel cleaner energy future, Greece and Bulgaria now invest in infrastructure to diversify their gas supply routes.

Greece's 10-year national energy and climate plan (NECP) submitted to the European Commission by the country's centre-right, pro-business Mitsotakis administration, which assumed power in July 2019, sees gas playing a bigger role in backing up the country's renewables expansion.

A target of c.4GW of coal-fired power capacity coming offline by 2023 would represent all of the country's lignite plants currently in operation being shut in, as both the EU emissions trading system and expensive retrofitting requirements under revised EU environmental regulations bite into the economic viability of the heavily polluting fuel. In May this year, the country passed its first lignite-fired generation-free day since the 1950s.

There is a slightly bizarre exception where Ptolemaida V, a new 660MW lignite plant in northern Greece, is expected to come online in 2021 or 2022. But it will be allowed to run only until 2028, one of the shortest-ever lifetimes for a plant of that size.

The NECP projects that Greece's gas-fired power capacity will be 6.9GW by 2030 compared with a current 5.2GW. Greek conglomerate Gek Terna's 650MW plant in Komotini and utility Elpedison's 790MW project in Thessaloniki are among new plants that will contribute to this planned capacity.

Greece's heating, industry and transport sectors will also be gas demand growth drivers. According to the NECP, gas use in final consumption sectors should increase by at least 50pc in 2030 compared with 2017 levels. Greece's demand, which has grown by 2bn m³/yr since 2015 to stand at 5.1bn m³/yr, according to the latest *BP Statistical Review of World Energy*, may thus rise to as much as 8bn m³/yr.

Diversifying supply

Russia's Gazprom still supplies a large chunk of Greece's gas needs through a long-term contract with the country's dominant gas firm Depa that does not expire before 2026. Depa also has a contract with Turkey's Botas and an LNG supply deal with Algeria's Sonatrach, currently feeding its 6.9bn m³/yr Revithoussa terminal, both of which expire next year.

The new EU-backed, 5.5bn m³/yr Alexandroupolis floating storage and regasification unit will bolster Greece's LNG import options when it enters operations in 2022. And the 10 bn m³/yr Trans-Adriatic Pipeline (Tap) will give Greece access to Caspian gas when it arrives by the end of this year. However, a more ambitious pipeline project—the EastMed link between

Greece and gas fields offshore Cyprus and Israel—looks much more speculative. Plans are also underway to build the country's first underground storage facility, the 1bn m³ South Kavala project.

Bulgarian link

Another EU-backed infrastructure scheme, the 3bn m³/yr Interconnector Greece-Bulgaria project, which could potentially be expanded to 5 bn m³/yr and even 10 bn m³/yr—is due into service later this year, increasing both countries' supply flexibility. Bulgaria will get access to Greece's LNG terminals and will also import 1bn m³/yr of Tap's Caspian gas via Greece. On the other hand, Bulgaria may also receive Russian gas via TurkStream 2 in the future, which is less of a fit in weaning itself of over-dependence on its traditional supplier.

The country currently consumes only 3 bn m³/yr of gas, having also relied on its domestic lignite, which currently fuels c.50pc of power output, and nuclear plants. But its NECP also foresees more gas in both the electricity and industrial sectors. As in other member states, the EU's €40bn Just Transition Fund will help support the transition away from coal.

"Natural gas is a critical opportunity for a low-carbon future for Bulgaria. The societal case for conversion from lignite to gas is strong, particularly as new supply routes open up. Previous concerns over Russian supply dominance are beginning to fade," says Jayesh Parmar, partner at consultancy Baringa.

"Flexible [combined-cycle gas turbines] are better placed than lignite to support a renewables expansion due to their flexibility. The NECP shows that the government is beginning to recognise the potential for fuel switching," he adds.

Bulgaria also plans a 1.8bn m³/yr interconnector with Serbia, which could come onstream by mid-2022. It is also part of the Bulgaria-Romania-Hungary-Austria pipeline project, which will bring additional Romanian production to market. The first 1.75bn m³/yr phase is due onstream later this year.

Source: petroleum-economist.com