Greece looks out to sea for gas wealth salvation

BY OLEG VUKMANOVIC & STEPHEN JEWKES

OFFSHORE natural gas could dramatically change Greece's fortunes, should early estimates of $600bn worth of reserves be confirmed, according to a study presented to Prime Minister Antonis Samaras in June and seen by Reuters.

The study, collating existing scientific data, says that geological similarities indicate that reserves offshore Crete may match the prolific Levantine Basin where recent Israeli and Cypriot discoveries are clustered. It points to strategically significant reserves in Greek waters south of Crete in the range of 3.5 trillion cubic meters (tcm), enough to cover over six years of EU gas demand, and the equivalent of about 1.5 billion barrels of oil.

While it will take years to explore and develop any offshore gas sector, Greece has launched a licensing round and has commissioned a seismic survey company to pin down the extent of hydrocarbon deposits. The results are expected in mid-2013.

Presenting their findings, study authors Antonis Foscolos, Elias Konofagos and Nikos Lygeros said they expected the reserves to generate $599bn in state earnings over 25 years. "We feel this is a very conservative figure," Konofagos, whose Athens-based company Flow Energy informally advises the government on energy strategy, said.

Foscolos, professor emeritus at the Technical University of Crete and the Canadian Geological Survey, said that subsea methane emissions and the presence of gas hydrate mounds on the seabed indicate the presence of large reservoirs. Another study published in the Journal of Environmental Science and Engineering in June estimated that Greece had 4 tcm of gas and a further 3 billion barrels of crude oil.

Taking into account savings from fuel imports - Greece spends five percent of GDP on energy imports - discoveries on the scale envisaged could clear the country's debt and bring billions in annual cost savings.

Geologists say that the little-explored region, riven by converging tectonic plates that form folds or petroleum traps, displays promising geology that now requires surveying to confirm any actual deposits.

One of the world's biggest seismic surveyors, Petroleum Geo-Physical (PGS), which recently won a tender to scan Greek waters, told the country's Department of Energy and Climate Change during a sales pitch in July 2011 that waters south of Crete had significant hydrocarbon potential.

"Hydrocarbon analyses of mud from ODP (Ocean Drilling Programme) cores suggests the presence of an active hydrocarbon system at depth," according to a presentation seen by Reuters. PGS goes on to say that there are also potential analogues to proven hydrocarbon provinces in the Mediterranean, including Libya.

PGS suggests that the Mediterranean Ridge near to Crete is a productive accretionary prism. Exploration successes in Albania could also be replicated in waters to the west of Greece, PGS adds, a licensing area that was recently opened to bidding by the government. With its potential wealth, Greece could also become a transit hub for gas to Europe if it establishes an exclusive economic zone allowing it to legally extract hydrocarbons, which it currently lacks south of Crete and in other areas. Finds off Israel, Cyprus and Lebanon have spurred a broader prospecting frenzy across the region, and there are now plans to combine exports via a pipeline to Europe.

The head of the ITGI pipeline, which lost out in the race to carry Caspian supplies to Europe, hopes to convert his project into a conduit linking East Mediterranean discoveries with the gas-thirsty continent.

Despite high hopes, geologists caution that estimates alone mean nothing, and that only drilling can determine the facts. Poland, which slashed its wildly optimistic estimates of shale gas reserves this summer, saw its hopes of achieving energy self-sufficiency in tatters.

Comparisons between the East Mediterranean and the North Sea may be vindicated if reserve estimates turn out to be accurate, petroleum geologist David Peace said. Total gas volumes in the East Mediterranean Sea are estimated at over 10 trillion cubic meters, according to U.S. Geological Survey estimates but excluding south of Crete, enough to meet Europe's gas demand for more than 15 years.

That could breathe new life into Mediterranean Europe's flagging, mostly onshore, oil and gas industries as harsh economic realities rekindle interest in domestic exploration long neglected by policymakers.

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