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The Outlook for Azerbaijani Gas Supplies to Europe: Challenges and Perspectives *Executive Summary*

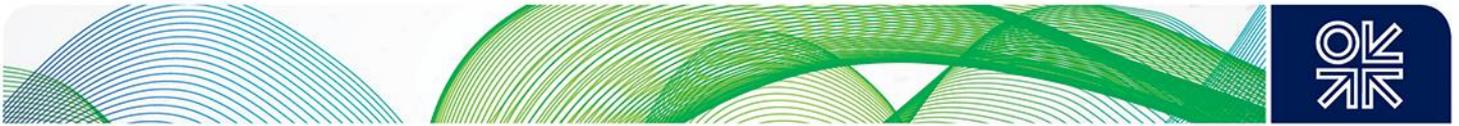
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As the birthplace of the oil and gas industry, Azerbaijan's long and rich history is intertwined with hydrocarbon production, with oil drilling pre-dating activity in Pennsylvania by 13 years. The Soviet era precluded further international investment, but saw a dramatic growth in gas production commencing in the 1920s. The 1990s witnessed the return of the IOCs with the Azeri-Chirag-Guneshli (ACG) field (oil and associated gas) and the Shah Deniz (gas and condensate) field developments reversing the trend of production decline and creating an export surplus in both oil and gas.

The paper provides a comprehensive analysis of the challenges which were surmounted in the development of the Shah Deniz field, not least of which related to establishing export pipelines and marketing arrangements in Turkey, and (for Phase 2) Europe. This next phase of development of the field will increase the plateau by some 17 bcm/a, to a total of more than 26 bcm/a from both phases from late 2018. This major gas upstream project required new export infrastructure. The South Caucasus Pipeline (SCP), currently has up to 8 bcm/a capacity, and transports gas from Azerbaijan through Georgia to Turkey. This pipeline will be expanded to 26 bcm/a to accommodate natural gas from the next phase of Shah Deniz and from future fields in Azerbaijan that are under different stages of development.

Apart from the currently producing Shah Deniz field, SOCAR has its own gas production from fields that are mature and past their peak production. The company has launched a strategy of investing to increase recovery and production from these fields. Despite this, given the maturity of its existing fields, SOCAR will be looking more to production from within the joint ventures such as ACG, Shah Deniz, Umid; also from the resources offshore the Caspian Sea.

Azerbaijan's future natural gas supply growth will derive from two Groups of reserves and resources and, when developed, will show a growing surplus of un-contracted free gas potentially available for new exports. In this paper, Group 1 refers to gas fields, (Commercial reserves) that are in production, and also discoveries which are the subject of further appraisal which we consider to be contenders for development in the near to medium term (i.e. within 15 years), (Probable Developments). Group 2 refers to Resources (prospective structures, and so called technical reserves), which are either prospects which have not yet been the subject of (sufficient) exploration drilling or those accumulations which have not been demonstrated to be commercially viable at the present time. Exploration is now focused on the offshore sector where large prospects are located. There are a number of promising fields and prospective structures in the Azerbaijani sector of the Caspian Sea, such as Absheron, Umid/Babek, ACG Deep layer gas etc. that can add significant amounts of gas for export in the future. At the moment, the biggest challenge for exploration, appraisal and development drilling is the availability of drilling rigs; it is impossible to transport them, fully assembled, into the Caspian Sea due to the width restrictions of the Volga-Don Canal.



The country has the capability to provide additional gas export volumes beyond Shah Deniz phase 1 and 2 developments from 2021-22 onwards, when the Absheron field will come on-stream. Significant surplus and uncommitted gas volumes will require more export transport capacity than the SCP can provide. For that the SCP expansion and construction of a new expandable infrastructure – TANAP is envisaged. The Turkish market seems to be the most commercially viable for Azerbaijani gas due to its relative proximity, growing demand and suitable price. However depending on one single market does not meet the strategic need of the gas producing companies seeking to diversify market risk. The European market is the second most suitable market. We assume that at least half of the gas available for export in the 2020s (7 bcm/a) could be delivered to Turkey and the rest transported to the EU market. There can be a ready market for Azerbaijani gas in the countries of the SEE, Central Europe and the Balkans as these are keen to diversify away from Russian supplies in the 2020s when some of their legacy long term contracts expire.

About the Author

Gulmira Rzaveva joined the Oxford Institute for Energy Studies as a Research Associate in 2013. She is a Senior Research Fellow at the Center for Strategic Studies (SAM) under the President of the Republic of Azerbaijan. Her areas of expertise include the energy policy of Azerbaijan, Black Sea/Caspian region energy security and the Turkish domestic natural gas market. Ms Rzaveva has published articles on Azerbaijan's gas strategy and Azerbaijan's energy efficiency policy, and previously worked at the Moscow Carnegie Center as a Visiting Research Fellow and the Aleksanteri Institute of the University of Helsinki. She has a BA in International Relations from the Baku Slavic University and an MA in Global Affairs from the University of Buckingham, UK.

