

1 Abstract

Natural gas consumption in Portugal and Spain is increasing strongly and the natural gas supply depends predominantly on imports. The Iberian natural gas infrastructure needs to be adjusted to this development in order to secure the future supply of natural gas for power generation as well as for industrial and residential use. Currently the natural gas storage capacity is relatively small compared to the European average. It is based on 3 pore storages in Spain, 1 cavern storage in Portugal and 6 LNG peak shaving facilities.

This paper compares the distribution of Iberian underground salt deposits with the existing natural gas infrastructure to find out whether there is a coincidence revealing potential for the future construction of further flexible natural gas storage caverns in the Iberian Peninsula. A preliminary evaluation of the salt deposits in the Lusitanian Basin, the Pyrenees, and the Betic Cordillera seems to highlight options for possible cavern storage construction although Iberian salt deposits are structurally complicated and in part contain high amounts of insolubles as well as intrusions of basic dykes. This possibly leads to additional efforts e.g. for exploration and the proof of suitability for natural gas cavern storage construction and operation. Nevertheless the Iberian Peninsula is among other countries a region where the strong demand for additional flexible storage capacity despite an assumed lack of ideal salt formations may lead to an economic construction and operation of future cavern storages.