Liquefied natural gas imports

Natural gas imports are principally divided into natural gas pipeline imports and liquefied natural gas (LNG) imports. As China borders many of the major natural gas producing countries, natural gas imports look to have relatively big prospects. Many natural gas pipeline projects are already in construction or are in the negotiation process, but whether these projects will be ultimately successful is still very uncertain.

Trajectory 1

In this scenario, over the next 40 years China's LNG imports will barely feature in natural gas contracts and at the same time will be affected by instability in Iran as well as unpredictable disturbances and Iran's natural gas projects will be suspended. Under these circumstances, at the beginning of 2015, China's LNG imports will be 17.6 million tons and this will remain constant until 2050.

Trajectory 2

In this scenario, over the next 40 years China will not sign any further LNG import contracts, but projects arising from contracts that have already been signed will all be completed. Currently, China has already signed contracts for projects that will supply 20.6 million tons of gas, among which is the SP11 block project with Iran. Pre-2015 gas import contracts also include a China National Offshore Oil Corporation project in Qatar, a PetroChina project in Australia and a Sinopec Papua New Guinea project. As such, from 2015 China will import 27.85 million tons of LNG, an amount that will remain constant until 2050.

Trajectory 3

In this scenario, further to the situation portrayed in trajectory 2, after 2015, aside from its Australian project, the PetroChina will sign contracts for further projects for LNG imports totalling 15 million tons. Additionally, the China National Offshore Oil Corporation projects will all be implemented and after 2020, new LNG imports will reach 100 million tons. Furthermore, in 2020 Sinopec's projects will start to expand in scale, increasing LNG imports to 10 million tons. In this scenario, there will be 40.6 million tons of LNG imported in 2015, rising to 55.6 million tons after 2020, which will stay constant through to 2050.

Trajectory 4

In this scenario, further to the situation portrayed in trajectory 3, after 2020, PetroChina's new LNG imports will reach 20 million tons, China National Offshore Oil Corporation projects will reach 20 million tons and between 2020-2030, Sinopec will import 15 million tons of LNG. In this scenario, there will be 50.6 million tons of LNG imported to China in 2015, rising to 75.6 million tons after 2020, which will stay constant through to 2050.

Natural gas pipeline imports

Natural gas imports are principally divided into natural gas pipeline imports and liquefied natural gas (LNG) imports. As China borders many of the major natural gas producing countries, natural gas imports look to have relatively big prospects. Many natural gas pipeline projects are already in construction or are in the negotiation process, but whether these projects will be ultimately successful is still very uncertain.

Trajectory 1

In this scenario, over the next 40 years natural gas will only be imported to China via a pipeline from Turkey with a capacity for transporting 30 billion m3 of gas per annum, of which around 13 billion m3 will come from the right bank of the Amu Darya river, with a purchase contract providing 17 billion m3 valid until 2040, with this scenario assuming that the contract will be renewed after the initial period of validity. This being so, after 2015 pipeline gas imports will reach 30 billion m3, remaining constant until 2050.

Trajectory 2

In this scenario, China's pipeline gas imports will be sourced from the central Asia-China pipeline and the Burma-China pipeline. As we hypothesise that little headway will be made on the current Russia-China western pipeline and Russia-China eastern pipeline negotiations and with the potential of these two projects to drastically alter future statistics, this scenario does not include these two projects. In this scenario, China's total pipeline gas imports will be 57 billion m3 of which 45 billion m3 will be provided via the Central Asia-China pipeline, and 12 billion m3 will be piped via the Burma-China pipeline.

Trajectory 3

In this scenario, China's pipeline gas imports will be sourced from the central Asia-China pipeline, the Burma-China pipeline and the Russia-China western pipeline, providing a total of 87 billion m3. Of this, the central Asia-China pipeline will provide 45 billion m3, the Burma-China pipeline will provide 12 billion m3 and the Russia-China western pipeline will provide 30 billion m3. In this scenario, 2015 will see 71 billion m3 of pipeline gas imports, and 2020 will see 87 billion m3 of pipeline gas imports, a figure that will remain constant to 2050.

Trajectory 4

In this scenario, China's pipeline gas imports will be sourced from the Central Asia-China pipeline, the Burma-China pipeline, the Russia-China western pipeline and the Russia-China eastern pipeline, providing a total of 125 billion. Of this, the Central Asia- China pipeline, the Burma-China pipeline and the Russia-China western pipeline will provide the same amount of gas as in trajectory 3, but in addition the Russia-China eastern pipeline will provide a further 38 billion of gas. In this scenario, 2050 will see 71 billion m3 of pipeline gas

imports, and after 2020 this will rise to 125 billion m3, a figure that will remain constant to 2050.