

Why Is ADNOC Building a Private 5G Network?

The Abu Dhabi National Oil Company (ADNOC), which is the state-affiliated fossil fuel company, has announced it will be building the energy industry's largest 5G network. At its completion, the network will span some 11,000m² and will facilitate the delivery of extremely high bandwidth across all of its onshore and offshore operations, thus streamlining its processes.

Work is scheduled to begin on the project imminently and is expected to be completed by the end of 2024. By allowing the company to remotely monitor its operations and automate optimisations, it is expected to deliver economic value to the tune of \$1.5 billion in the first five years of its operation.

The biggest 5G network of its kind

The rollout of the company-wide 5G network will make it the largest the energy industry has ever seen and enable ADNOC to integrate AI solutions into even its remotest outposts and facilities. Sensors will be embedded into more than 12,000 wells and pipelines to monitor performance, with the information relayed to a central database on a real-time basis.

This will allow those in charge to see an overview of how the company is performing in all of its operations, as well as take decisions to maximise efficiency and minimise waste. It will also help to digitalise all of the company's physical assets and increase their lifetimes in the field as much as possible.

The project is being undertaken with the help of the UAE government-owned telecommunications company e&. With a market cap of over \$41 billion and revenues totalling \$14.6 billion in 2022, the company is one of the largest telecoms outfits in the world in terms of the number of global subscribers. It has a heavy presence in the Middle East, Asia and Africa.

Expanding operations

The development of the 5G network is one just of ADNOC's plans for scaling up its operations. Last month, ADNOC Offshore penned a contract worth \$733 million to build and develop three new offshore island rigs. These will tap into the Zakum field, one of the biggest offshore reserves in the world, thus maximising extraction capacity from it.

Meanwhile, ADNOC also gave the green light for the development of facilities in the Belbazem block around 120km north of Abu Dhabi in March of this year. Comprising the fields of Belbazem, Umm al Dholou and Umm al Salsal, the block is expected to provide a significant contribution towards the UAE's target of reaching production capacity of five million barrels per day by 2027.

Despite the expansion of its oil and gas industries, the UAE is not neglecting its environmental obligations. Significant investment into sustainable technologies aimed at reducing the carbon footprint of the fossil fuel industries has been made in recent years, with green hydrogen viewed as a particularly promising means of reducing the emissions associated with hard-to-abate sectors such as transport and heavy industry.