



Hydrogen and Ammonia Plant Announced for the UAE

The UAE's Petrolyn Chemie has announced it has signed a deal with three South Korean companies to build a green ammonia and hydrogen plant worth \$1 billion. Built in two phases, the plant will eventually achieve a capacity of 200,000 tonnes of green hydrogen and ammonia per annum, significantly boosting the country's environmental credentials.

As a source of power that is generated without producing greenhouse gas at any stage of the process, green hydrogen is viewed as a key means of transitioning to more sustainable means of energy. The UAE has long been focused on future-proofing its energy portfolio and the newly announced plant will go some way to making that vision a reality.

An historic deal

The project will be undertaken by Emirati energy companies Petrolyn and Chemie Tech and their South Korean counterparts. The three firms named are the electric utility company Korea Electric Power (KEPCO), power and supply trading conglomerate Korea Western Power and construction and engineering outfit Samsung C&T. It marks the first time that South Korea has embarked on such a venture outside of its own borders.

The site for the construction of the plant has been earmarked as the KIZAD Industrial Area on the outskirts of Abu Dhabi and is expected to take place in two stages. The first phase will yield some 35,000 tonnes of green ammonia upon completion, before the second phase takes the plant up to full capacity.

What are green ammonia and green hydrogen?

Historically speaking, hydrogen has been produced by using fossil fuels to pass electricity through water and split the hydrogen from the oxygen molecules. This creates environmental challenges not only for hydrogen itself, but [also for ammonia](#), which is largely derived from hydrogen.

However, green hydrogen seeks to circumvent this issue by using only renewable energy in the process. As such, there are no emissions generated during the



production process, and none at the point of combustion, either. As such, green hydrogen and green ammonia are being touted as the fuel sources of the future.

Part of the masterplan

It's unsurprising that the UAE has announced such an ambitious plan, since it has made no secret of its eagerness to achieve a net-zero economy by 2050. This has included ramping up its efforts to develop renewable means of energy, including the Noor Abu Dhabi solar farm, which is the largest single installation of its kind in the world.

Meanwhile, the Emirati government has also recently signed a Memorandum of Understanding (MoU) with their Dutch counterparts to further their knowledge on clean hydrogen generation. At the same time, the state-owned oil company Abu Dhabi National Oil Company (ADNOC) has penned a deal on clean hydrogen projects with British Petroleum (BP), signalling the intent of both public and private entities within the UAE.