How Are the UAE & Germany Collaborating on Hydrogen?

The Emirati renewable energy company Masdar is joining forces with German utilities firm Uniper SE with a view to producing green hydrogen in the UAE. Together, the two businesses plan to construct a green hydrogen facility that will be commissioned within the next three years and will be powered by almost 1.3GW of solar power.

The announcement is the latest concrete collaboration between the two countries, with the pair having officially entered into an energy partnership as far back as 2017. Both nations are committed to transitioning towards cleaner sources of power and view green hydrogen as an integral part of the solution, with Germany hoping to import the commodity from the UAE at some point in the future.

A green solution

Created when the two constituent parts of water (hydrogen and oxygen) are separated, hydrogen has the potential to be a revolutionary fuel source going forwards. That's because the process involves the emission of zero greenhouse gases if it is powered using renewable means (normally solar or wind power), hence why it's named green hydrogen.

At present, green hydrogen is too prohibitively expensive to make it economically competitive with fossil fuels. However, as has already occurred with other sustainable technologies such as photovoltaic (PV) solar panels, its costs are expected to come down in the future, making it a crucial component of the transition towards renewable energy.

Mutually beneficial

The proposed green hydrogen plant, therefore, will be advantageous to both parties involved in its construction. Masdar have cultivated a reputation as one of the leading renewable firms in the UAE and are already capable of producing 20GW of clean energy, though they aim to increase that figure fourfold by the end of the century and the green hydrogen plant will help meet that target.

Through the partnership, Masdar will benefit from Uniper's experience and expertise in handling energy transitions, but Germany will also profit from the partnership. By getting in at the ground floor now, they will be in pole position to import the clean energy source when the plant becomes operational in 2026. What's more, the cooperation can only help the German government's objective of importing more liquid natural gas (LNG) from the Middle East to replace its diminished supplies from Russia.

UAE leading by example

The oil rich nations of the Middle East have traditionally built their economic and energy independence on fossil fuels, but with growing concerns over climate change, a regional shift in attitudes is now taking place. A range of countries in the Gulf, including Egypt, Oman and Saudi Arabia, are all investing billons of dollars in renewable technologies, with both blue and green hydrogen prominent in their planning.

The UAE is, of course, no exception. With a well-developed infrastructure to process, store and distribute energy, abundant solar energy and plentiful space in the country, it's ideally positioned to become a global leader in green hydrogen. Indeed, by the end of the decade, Masdar is aiming to manufacture one million tonnes of green hydrogen and its derivatives (such as ammonia, green methanol and sustainable aviation fuel) and the deal with Uniper is a significant step in that direction.