



MURCHISON GREEN HYDROGEN

July 2024 Webinar - Questions and Answers

On Tuesday 30 July 2024 the Murchison Green Hydrogen (MGH) project team hosted an online webinar for community and stakeholders.

Webinar attendees heard about recent updates and the benefits of the project from the project's CEO, Shohan Seneviratne. There was also a question and answer session, however due to time limitations not every question was able to be answered.

We wanted to share with you answers to all of the questions we received, both addressed during the webinar and those we ran out of time to cover.

Would green hydrogen be purely used in Australia or exported as well?

The project is being designed for the export of green hydrogen in the form of green ammonia to key offtake markets. While MGH is open to the production of green hydrogen for use in Australia, the market for green hydrogen is not yet established in Australia. Currently, highly industrialised economies, especially in South East Asia, have high energy demands, see the need to decarbonise and are at the forefront of establishing an import market to buy and use clean, alternative fuels, such as green hydrogen.

Due to our natural resources (combined wind and solar), land availability and proximity to large export markets, Western Australia will play an important role in Australia's decarbonisation journey, as well as that of our international trading partners'.

Could you shed some light on offtake agreements? How are discussions progressing and who might be interested in buying your hydrogen?

The offtake agreement discussions are primarily focused on South East Asia, with Japan and South Korea as two of the five largest importers of fossil fuels currently in the world. Both countries have incentive packages to promote the use of clean hydrogen and clean ammonia in their economy. In South Korea the package is called the Clean Hydrogen Production Standard (CHPS) system and in Japan it is called the Contract for Difference (CfD).

Together with Singapore, these countries are the three markets of greatest focus for offtake agreements.

The project would be open to offtake into Australia, however the present issue is that there is no demand or market for clean hydrogen and clean ammonia. We do expect that this may change during the life of the project and that there would be opportunity for domestic offtake as well.

Will the town benefit directly from using ammonia as a fuel for the town microgrid or from electricity generated by wind or solar turbines, considering the several power outages that occur each year?

The project team is aware of the power outages that occur in Kalbarri as we have experienced them for ourselves during our community engagement sessions.

There are two aspects to the answer to this question. Firstly, green ammonia is unlikely to be used as a fuel in Kalbarri simply because there is a lack of facilities required to properly utilise it.

However, as part of our Community Benefits Sharing Framework and Plan, we are looking at opportunities to augment the existing microgrid to provide the Kalbarri community with a very stable power grid as part of the project.

Do you have plans to export liquid hydrogen or sustainable aviation fuel (SAF) or is it just going to be green ammonia?

The MGH project is designed for and will be exporting green ammonia and not liquid hydrogen or SAF.

The primary reason for this is that the process for liquefying green hydrogen requires temperatures of minus 253 degrees Celsius, which makes it economically unfeasible right now. This is not expected to change for at least another 5 to 10 years.

Are you connecting to the current local power grid?

The local Kalbarri community will be relieved to know that the answer is 'No'. Murchison Green Hydrogen is completely off-grid.

All of the power and energy requirements for the project will be generated by the solar and wind farms. Our backup supply will come in the form of a battery, which will also be supplied through onshore wind and solar power generation.

We will not be connecting to the current, local power grid or using the valuable electrons required by the local community to power the project.

How much ammonia has been transported globally through the proposed marine solution?

Each year, approximately 180 million tonnes of ammonia is produced and approximately 20 million tonnes of ammonia is shipped around the world.

The first phase of the MGH project will produce up to 950,000 tonnes of green ammonia per year, while full project production will see approximately 2 million tonnes of green ammonia exported per year.

Will this project be built in line with the European Union's (EU) specifications for Renewable Fuels of Non-Biological Origin (RFNBOs)?

The project is being designed in line with industry best practice, including the EU's RFNBOs, and utilising the latest in renewable energy technology.

What was process in which land was secured by the project and is it going to be a long-term lease?

MGH will be located on Murchison House Station—a single parcel of land. This land was secured through negotiation with the lease holders as part of a private lease agreement.

Will Kalbarri be seen as a future industrial precinct for collaboration across regional partners?

MGH is seeking planning and development approvals associated with the project. The submitted amendment to the Town Planning Scheme is linked to this project exclusively and is for a small portion of Murchison House Station only. As such, there is no intention on the part of the project to develop Kalbarri into a future industrial precinct.

Are there any sacred sites on the land proposed for use on the project?

All sacred site and heritage monitoring will be taking place in consultation with the Nanda Aboriginal Corporation.

What provisions are being made for clean-up should there be a fire or hailstorm or cyclone?

The strictest safety and design standards will be applied to all aspects of the project's design, construction, and operations.

These facilities will be monitored at all times, incorporate risk mitigation design (including for risks associated with fires, hailstorms or cyclones) and be regulated by the State safety regulator.

Have you ascertained where you will source water for construction?

The aim of the project is to use desalinated water for all purposes, including construction and operation. This is due to the project site's coastal location and, therefore, access to sea water.

We believe we will be able to achieve this.

When will the detailed environmental plan and supporting documents for the project be available for review?

The project's environmental studies are ongoing. We have informational resources available on our website with more details regarding what studies have taken place, what is currently taking place and the expected availability of outcomes of some of these studies.

For other studies that are still underway, information will be made available in due course through our website, at community drop-in sessions and through our other communication channels.

The Environmental Review Document (ERD), which is the final document that's being provided for approval to the regulator, is expected to be submitted at the end of this year. There will be a Public Review Period (PER) following this submission which is likely to commence in January 2025. During the PER, all documents will be publicly available for review.

Will the front-end engineering design (FEED) and project be tendered as a single package, or will it be split into renewables and production/export facilities?

Ideally, we would like to have it tendered as one package. However, due to the scale of the project, it is very unlikely that it will be undertaken in a single package.

The generation asset (wind, solar and battery energy storage systems) is likely to be one of multiple packages, the PtX plant (electrolysis, ammonia plant and storage) is likely to be another package and the electrolysis facility and stage components—may be one or multiple packages. The marine export facility may be combined with the PtX package or an independent and standalone package.

We are probably looking at three or more contract packages.

How can we access procurement opportunities for the project?

A large portion of the procurement for a project of this scale will be undertaken through engineering, procurement and construction (EPC) contractors. Once we have finalised our selection of contractors, we will make sure that procurement opportunities are made available.

Please register with our Industry Capability Network (ICN) Gateway via the link on our website. That way we can be aware of the services you are able to provide and will ensure that our EPC contractors have your details.

Can the name of the appointed of FEED EPC Contractor be shared?

Procurement for the FEED EPC contractor has not yet begun.

The appointment of relevant contractors will be shared through our various communication channels, including our website and project email newsletters. You can receive these emails by signing up via our website.

Who is managing your feasibility study?

Procurement for the feasibility study has not yet begun.

Contractors who may be interested in tendering for any opportunities on the project should register via the ICN Gateway link on our website.

Can you confirm if the number of jobs mentioned during the presentation was 24,500?

The project will create 24,300 full time jobs across Western Australia at the height of construction. There will be approximately 3,600 jobs during construction and approximately 600 permanent local jobs during operations.

Will local jobs be prioritised during the construction and production phases?

The short answer is yes. Local jobs will be prioritised. Prioritisation will then flow to regional Western Australia (WA), the rest of WA and then Australia. Copenhagen Infrastructure Partners (CIP) has a policy to ensure that the local communities in and around which we operate and develop projects benefit from those same projects.

However, we need to also be very transparent about the fact that there are some technologies and some jobs for which we won't be able to find resources in WA right now and for which we will need to look at potential international opportunities.

Will workers be housed in worker accommodation or in houses in Kalbarri? If worker accommodation is built, will this be in town or out at Murchison House Station?

The project will create 3,600 full time jobs during the peak of the construction. This construction workforce cannot be catered for in Kalbarri and will require a dedicated camp to be built as part of the project activities.

The ongoing operations workforce will more likely be living in the region of Kalbarri and Northampton. The construction camp may also be used as a transitional accommodation around the start of the project.

Could you please expand on your policy, priorities, processes and timelines for local procurement?

The project is currently in the permitting and approvals phase, having just completed pre-FEED.

As such, the full policy outlining priorities, processes, and timelines for local procurement have yet to be determined. Additionally, our Jobs Guide will be developed with ICN WA and the necessary training programs will be developed through engagement with local TAFEs, universities and other education institutions.

Will representatives from the project be onsite outside of engagement sessions so contractors can be made aware of how the system works?

As the project progresses further along towards procurement and construction, we will be exploring opportunities to have locally-based representatives and local content officers to assist with local procurement and contractors.