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Carbon Reduction Plan for the Kwinana Industrial Area

The major KIC companies who make up the membership of the Kwinana Industries Council (KIC) have embarked on a bold two-stage carbon reduction plan for the Kwinana Industrial Area.

KIC is the industry association representing the collective interests of the major industries located within the Kwinana Industrial Area (KIA).

In 2020 the KIC Board and its members initiated an important Project that formalises and pursues the coordination of collective efforts in the ongoing reduction in carbon emissions intensity from industry. The KIA is believed to be the only complex major industrial area within Australia where a collective of individual industrial enterprises have come together in a proactive self-coordinated manner to develop, formalise and apply a collegiate process and plan for the reduction of carbon.

The KIA, which is a major part of Perth's Western Trade Coast Strategic Industrial Area, pumps around \$16Bn into WA's economy annually and is responsible for employing a direct and indirect workforce of around 30,000 personnel.

While society's journey to Net Zero Carbon by 2050 requires all parties within a society to take action, it is recognised by the KIC Board and its members that reducing carbon is incredibly challenging for a heavy industrial area like the KIA and working together as a collective leverages each others' knowledge and expertise, enables more robust ideas to be developed, allows for more efficient take up and implementation of changes necessary, and reduces duplication of effort.

Key considerations relating to the KIC carbon reduction project have been:

- KIC members have independently made their own carbon reduction and sustainability commitments.
- Much work has been done by many KIC members already to reduce their individual GHG emission profiles, and it is acknowledged there is a very big task ahead.
- The technical merits of implementation of carbon sequestration techniques, carbon harvesting and offsetting are all on the agenda, as is the introduction of green energy technologies including wind and geothermal power, and remotely-generated solar power.
- The exploration and introduction of new technologies and new ways of thinking will be essential on the carbon reduction journey.

- Reduction strategies will not need to be confined to the actual footprint of any individual KIC member organisation, or even within the KIA. Individual members may choose to act independently to implement some strategies beyond the confines of their site, or even the industrial area itself, and collectively on other strategies to achieve reduction targets.
- The competitive advantage of the industrial area comes from its original co-location of industry together allowing uniquely efficient cross-boundary material flows and synergies to occur. These interactive collective reliance between neighbouring industries are internationally recognised. The quality of working relationships and trust between member industries developed over decades enables a collective approach by resident companies co-located in a complex industrial estate to work together, and the KIC Board recognises this unique important characteristic and members have agreed to leverage this in pursuing the reduction of carbon as a collective workstream.
- The collectively reported greenhouse gas equivalents of KIC members' Scope 1 (definition below) is around 7.2 million tonnes per annum, with around another one million tonnes for Scope 2 emissions.

The KIC project has three phases:

- Gathering data from publicly available information and formulating the inventory – completed.
- Identification of potential broad-based and practical mitigation projects – in process.
- Implementation by KIC members, individually and/or collectively of projects they may decide to initiate.

The special aspect of this approach creates a novel precedent for an industrial cluster; resident industries are taking on a policy implementation role as a collegiate, to move toward achieving their own targets against the internationally adopted climate policy framework.

Importantly, the KIC's work will not replace the climate policy work or commitments of its individual members. Rather it seeks to leverage each member's effort in support of others seeking to achieve the same and support each other's success and pace of reducing carbon emissions.

KIC Key Messages

Attributable to KIC Director, Mr Chris Oughton.

"This initiative is a great example of co-located industry voluntarily working together to achieve international climate change objectives."

"Members' customers are located in the State's agricultural and mining areas, as well as nationally and internationally, making industries in Kwinana a part of the supply chain for national and international trade. Members will need to demonstrate the extent of their green credentials in order to be able to supply their customers in the

future. Achieving 'green credentials' will therefore be essential to for their corporate sustainability."

"On a market supply and demand basis the debate about climate change becomes somewhat moot, because industry around the world is already setting milestone targets and moving toward achieving net zero carbon credentials as their customers are increasingly demanding this before they buy. And the customer is always right, so they say."

"As an example of this, if a country eventually commits to the use of green hydrogen to achieve its 'net zero carbon' goals for the production of, for example, steel or electricity, then there will no longer be a market for coal to that country. No market means no coal mining. This is how internationally-based market forces are already in advance of government climate change policy."

"Climate change policy comes from governments, and a clear policy direction is absolutely needed, but it is most likely to be international supply and demand forces that will determine the pace of change in a company's emissions profile."

"It is extremely rare internationally, and probably unique in Australia, that an industrial ecosystem has created its own collective approach to decarbonisation."

"The KIC member-industries in Kwinana are to be commended for their approach to international climate change policy, and we hope that what is happening in Kwinana can become a benchmark process to be shared amongst complex industrial areas around the globe."

Carbon reduction and sustainability commitments

In accordance with the National Greenhouse Reporting Scheme (NGER) scheme, Scope 1 and 2 emissions are reported on the Clean Energy website along with net energy consumption.

The inventory of publicly available company greenhouse gas (GHG) reporting to NGER indicates approximately 7.23 million tonnes of Scope 1 CO₂ equivalent emissions, and a further 0.97 million tonnes from Scope 2 emissions. The total emissions profile is therefore 8.2 million tonnes. The KIC project focuses on Scope 1 emissions.

Background information.

- Scope 1 emissions are generally defined as all direct emissions from an entity under their control. This Scope includes emissions from manufacturing, fugitive emissions such as methane emissions from a coal mine, fuel combustion, on site such as gas boilers, air-conditioning leaks and fleet vehicles. Emissions from burning a diesel fuel in trucks or production of electricity by burning coal.

- Scope 2 emissions are indirect emissions from electricity, heat or steam purchased and used by the reporting entity.
- Scope 3 emissions are all other indirect emissions from the activities of an organisation, occurring from the sources that they do not own or control but within the value chain.

The KIC Carbon Reduction Report can be viewed at www.kic.org.au/library

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