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“Project NEO” to kickstart Green Hydrogen baseload power in NSW

Australian Green Hydrogen specialist Infinite Blue Energy (IBE) has unveiled a bold new plan to transition large users of fossil fuel based electricity in NSW to Green Hydrogen by 2027.

The initial target for Project NEO (Greek for “new”) is 1000 MW (1 Gigawatt) of 100% Green Hydrogen reliable baseload power via a combination of Solar PV, Wind Turbines & Hydrogen Fuel Cell Technology. Project NEO is initially focused on providing 1000 MW, but the concept is scalable, and potentially able to provide a significant proportion of the region’s electricity requirement. According to the latest figures from AER, the NSW wholesale market for electricity was worth AUD $6.55 billion. Traditionally this level of electricity generation has only been achievable using coal or gas fired power stations, but Green Hydrogen is now a viable alternative.

Project NEO, which will commence with a feasibility study and detailed design over the next 18 months, is focused on transitioning the traditional reliance on coal fired and/or gas fuelled electricity to Green Hydrogen generated baseload electricity. A traditional weakness with solar and wind energy is the variability associated with a reliance on natural seasonal changes and conditions. By converting the solar and wind energy into Green Hydrogen, it is possible to provide electricity when there is no wind, a cloudy day or limited to zero sun exposure at night via its Fuel Cell Technology.

“The vision at IBE is to show the world, first and foremost, that Australia has the technology, skills and entrepreneurial mindset to be a true leader in the development of Green Hydrogen plants,” IBE CEO Stephen Gauld said.
“We are currently in robust negotiations with major electricity users in the NSW Hunter Region that have confirmed their intentions to transition to Green Hydrogen baseload Electricity this decade. IBE is negotiating over 1000 MW of electricity currently generated by coal and natural gas to a source of Green Hydrogen baseload electricity,” he said.

Project NEO, which is estimated to cost a total of $2.7 billion AUD when built, generates Green Hydrogen with renewable wind and solar energy. The Green Hydrogen is then stored before being converted into electricity by fuel cells.

With its commitment to regional communities and encouraging further jobs through skills diversification, Infinite Blue Energy anticipates that a significant proportion of the workforce required for Project NEO will be drawn from the existing coal fired power stations in NSW, since many of the skills are similar.

“Another really exciting aspect of Project NEO is the capacity of the renewable generation which will be around 3.5GW of energy delivered from the plan,” said Infinite Blue Energy CEO Stephen Gauld.

“The scale and sheer potential of it is immense. To put things into perspective, that is 2.5 times greater in energy production than the recently-announced project in Western Australia by one of Australia’s largest oil and gas companies – one that’s seeking to have 1.5 gigawatts of new wind and solar capacity in Geraldton. And we are only just at the beginning.”

IBE’s base design of Project NEO is to link sites with high generation efficiencies together into an IBE distributed generation model. This allows the generation sites to blend in with existing land users with minimal impact. The potential also exists for mine voids to be used to minimise visual impact on adjacent landowners.

Key benefits of Green Hydrogen

- Direct substitute for diesel (reduced CO₂ emissions, energy security)
- Direct substitute for coal in power generation (reduced CO₂ emissions, energy security, reduced environmental impact)
- Can be used for Australian based manufacturing (local jobs, supply chain security)
- Can be sourced from plants located in regional Australia (local jobs, sustainable regions, energy security)
- Potential to become an additional export stream (local jobs, sustainable regions, sustainable Australia)

How will it be used?

The introduction of additional baseload electricity generation could be used to stabilise the National Electricity Network and reduce the likelihood of catastrophic collapse.

The Green Hydrogen can then be used to generate electricity, or used as input to other industries. The production of steel is one identified industry that can use Green Hydrogen to reduce carbon debt. Green Hydrogen can also be used in electronics, glass and fertiliser manufacturing. This will support existing Australian companies in their efforts to de-carbonise, and potentially allow new industries and manufacturing to be established across NSW.
Project NEO is finalising planning, development studies and offtake agreements

In Australia, 52% of CO2 emissions are from stationary energy (e.g. power stations), with the majority coming from traditional coal and natural gas. Every tonne of brown coal generates 260kg of carbon. The use of Green Hydrogen to generate baseload electricity generates no carbon debt and is a key strategy in reducing Australia’s carbon emissions.

IBE CEO Stephen Gauld said the interest from Australian and international investment groups actively working with IBE to fund Australian-based Green Hydrogen Power plants and infrastructure was “compelling”.

“Project NEO will produce local and indirect employment, allow existing industries to de-carbonise, and facilitate the establishment of new industries. It will localise manufacturing, give a 100% green supply of power to NSW, fuel the reduction of the state’s carbon emissions and can therefore play a pivotal role in ultimately helping Australia become leaders in carbon emission reduction,” Gauld said.

Key Facts

- **Huge opportunity:** Project NEO aims to completely transform baseload power in NSW
- **Large-scale:** Total of 235 large scale wind turbines are required
- **Residential impact:** Over 2 million homes stand to benefit from the combined Green Electricity produced from Project NEO
- **Significant land:** Total of approximately 1,250 hectares of land required for the project’s solar demand
- **Future-proof:** Offtake agreements will be over $7.5 billion on deals in long term agreements
- **Long-term life cycle:** Modular design easily maintained, set to last 30 years

Further commentary, interviews and images available upon request.

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**ABOUT INFINITE BLUE ENERGY**

As the leader in Australian Green Hydrogen, Infinite Blue Energy is passionate about fuelling the future for all Australians. We stand by our absolute belief that Green Hydrogen is the most practical fuel for powering Australia. With our pedigree and proven alliances with an extensive network of technology partners, IBE is able to deliver commercial scale projects that deliver renewable energy safely and economically to evolving domestic and international markets. Our mission is to enable a sustainable Green Hydrogen future from water, solar and wind energy with no carbon debt, using the best of Australian innovation, design and experience.

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