

FOOTPRINT

Gladstone 2.0: Industry interest grows in hydrogen and renewables

Monday, 06 April 2020 12:11pm

Heavy industry in Gladstone is positioning itself to quickly take advantage of new forms of energy, says renewables advisor and solar farm developer Simon Currie.

Formerly global head of energy with law firm Norton Rose, Currie subsequently founded advisory firm Energy Estate and solar farm developer Renew Estate.

Industrial facilities located at Gladstone include Australia's largest aluminium smelter and cement works, two alumina refineries, and three LNG projects, as well as Orica's ammonium nitrate plant, and the regional city accounts for about a third of Queensland's electricity load.



Simon Currie: Rapid transition possible

With that industrial mix, Gladstone might seem an unlikely flagbearer for a "just transition" away from emissions-intensive production, but Currie is enthusiastic about the potential to repower its industrial base and plug it into the hydrogen economy.

And he told *Footprint* it could occur at an unprecedented pace.

"We could get 3GW to 4GW of new renewable generation up around Gladstone," he noted, adding that the existing 1,680MW coal-fired Gladstone power station could potentially instead provide energy storage services and generate electricity using hydrogen.

It's not unrealistic to think that within five years the region could have large-scale capacity to manufacture green ammonia, he noted.

"We are optimistic about how quickly this can happen."

Currie said Gladstone's many large industrial players and infrastructure owners, as well as their workers, are showing strong interest in "green electrons" and the hydrogen economy.

Hydrogen developments

On the hydrogen front, he noted that Hydrogen Utility (H2U) in February announced it would establish a green hydrogen and ammonia facility in the Gladstone State Development Area.

Sumitomo, which has a stake in Rio Tinto's aluminium smelter in Gladstone, is also investigating a hydrogen project in Gladstone.

LNG producers, including Origin and Conoco, and are starting to consider how they can start putting "green gas feeds" into their existing production facilities, he added.

In addition, the Australian Gas Infrastructure Group is planning a production facility that will allow up to 10% blended hydrogen to be injected into the gas network that services the city's residents and small businesses.

Currie pointed out that companies in the region already had experience in rapidly building new infrastructure, noting that the three Curtis Island LNG facilities were built at "incredible" speed.

"Not many places in the world have that amount of concentrated development all at once," he said.

However, there were also lessons to be learnt from that process, he said, including the need to work collaboratively and share facilities, rather than having each company "fighting it out for their project".

300MW solar farm

Meanwhile, Currie is actively involved in Gladstone's energy transition, through his solar farm development company Renew Estate.

Last week, the energy business reached a significant milestone for one of its projects, after network business Powerlink issued it with a notice to proceed on its 300MW Rodds Bay solar farm about 50 kilometres south of Gladstone.

The solar farm, which will be coupled with an on-site 82MW/164MWh battery, isn't the most perfect location from an irradiance point of view, Currie told *Footprint*.

But the slight compromise on irradiance is massively outweighed by the site's advantages, he said, including its location in an "incredibly robust part of the grid".

"Who wants to be out on a capillary when you can be on an artery."

Gladstone also has a large labour force, a major port with capacity to expand, and hosts major engineering and construction contractors such as Monadelphus and Lendlease, he noted.

That is "so different to 300 kilometres inland where you are really by yourself with a solar farm – there is nothing else around you," he said.

Currie said Rodds Bay will be one of the first renewable energy projects near the regional city, with construction expected to start this year, "and will play a pivotal role in enabling Gladstone to become the future energy capital of Australia".

Acciona's 250MW Aldoga solar farm is another nearby project, with construction now slated to start in 2022.

There are also several wind farms under development in central Queensland, inland from the city.

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