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THE east coast gas market is on a potential path to collapse, with consultancy EnergyQuest warning that estimates of commercial gas reserves to service Queensland's new Gladstone-based LNG industry and the local gas market have been oversold.

Haydn Black (/author/profile/888c32d3-3646-4857-be37-825277f70940/haydn-black)
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EnergyQuest principle Dr Graeme Bethune said that with current investment in new supply the amount of gas available is "nowhere near sufficient".

The findings include a warning that, in the absence of any federal government action to help solve the gas supply challenges, affected states may take matters into their own hands, leading to the "unravelling" of the national gas market.

EnergyQuest looked at the energy market for the March quarter, and found LNG exports surged 48.7% over 2016 for total LNG exports of 45.2 million tonnes, with Australia's LNG exports hitting a monthly record of $2 billion in January this year.

Dr Bethune has forecast an east coast supply gap of around 172 petajoules of gas by 2020 building to 205PJ by 2025, exacerbated by easing output in the Gippsland, Otway and Bass basins.

His figures are more alarmist than government figures, but following a detailed bottom-up analysis of CSG production, which will dominate future total production in the east coast gas market.

Dr Bethune said that CSG, which comprises 91% of stated east coast reserves, has clearly been oversold, with potential reserves risk at alarming levels.

EnergyQuest compared the 2P gas volumes and compared them to its own assessment of statistics for 8000 wells, stated reserves for 50 gas exploration permits, 250 production licences and a decade of production data.

He found that the Gladstone plants are being fed by booked 2P reserves but substantial reserves are booked in areas that have not yet demonstrated any commercial production.

That was compounded by the fact that the east coast's conventional gas fields are now mature and face increasing output challenges.

"While there is some investment underway in new east coast gas supply, it is nowhere near sufficient and this reinforces the growing concern about gas supply security on the east coast," he said.

"It is not an issue of short-term security. With 3500 terajoules per day of gas production in Queensland from numerous plants, the east coast is better protected against any short-term supply emergency. The concern is more for longer-term security."

He said the Queensland LNG projects had been approved on an optimistic view of 2P reserves, not the typical level of 1P reserves that usually support LNG developments the world over.

He said 2P reserves were assumed to be sure things, whereas they considered risky given that 2P reserves are defined as being 50% certain, and 3P and 2C numbers were even less certain, further restricting the likely expansion of future expansions.

He said half of CSG reserves are immature and outside the best gas production areas, exposing the east coast to significant elevated reserves risk.

The risk in the east is exacerbated by drilling bans in onshore Victoria, a ban on most CSG exploration in New South Wales - both under-explored areas with significant gas exploration risk - and a moratorium on fraccing in the Northern Territory, where is are the earliest stages of production potential recognised.

Dr Bethune noted that notwithstanding the east coast's total 44,000PJ of 2P gas reserves, sufficient in theory for 20 years, meeting the market's LNG and domestic consumption demands would depend on success across all categories of CSG reserves and resources, including those with no proven production history.

"The evidence is plain: east coast gas has been oversold and there is a potential for increased market tightness or shortfall in the near-to-medium term," Dr Bethune said.

"The bottom-line is that pretty soon, meeting demand will rely on successful production from CSG permits away from the ‘sweet spots' with no production history."

He noted that while there was likely to be some domestic supply from LNG projects to meet seasonal demand peaks, it is unlikely they will sign significant new domestic gas contracts in a situation where they are likely to face enough difficulty supplying their own LNG contracts.

"Accordingly, in the absence of significant gas imports or major cheap discoveries that can be brought quickly to market, wholesale gas prices will ultimately be driven by the costs of new field developments," he said.

"Our analysis points to price estimates for gas into Sydney of around $14 per gigajoule from 2024 - with obvious implications for affordability and demand."

Dr Bethune said it was not surprising to see debate emerging on establishing LNG import facilities in Australia with sites in SA, NSW and Victoria under consideration as alternatives to the high cost of piping gas over long distances.

A refurbished regasification plant could cost as little as US$80-120 million and be available in less than two years - but any such project would most likely need long-term offtake contracts, he said.

AGL has previously suggested regasification could cost up to $300 million.

Gladstone LNG plant owners Santos, Origin Energy and Shell had not responded to a request for comment on the EnergyQuest report this morning.