



J.B. BRACIC & ASSOCIATES
TRADE REMEDY ADVISORS

PO Box 3026
Manuka, ACT 2603
Mobile: +61 499 056 729
Email: john@jbracic.com.au
Web: www.jbracic.com.au

19 July 2019

Director Operations 1
Anti-Dumping Commission
GPO Box 2013
Canberra ACT 2601

**Dumping investigation into HDPE exported from
Korea, Singapore, Thailand and the USA**

Dear Director

This submission is made on behalf of the Martogg Group of Companies (Martogg) in response to the application for the publication of dumping duties on high density polyethylene (HDPE) exported from Korea, Singapore, Thailand and the United States of America (USA)

1. The applicant has failed to provide such information as the form requires

The application is a statutory form which sets out specific statutory requirements for information and the form in which the information is to be provided. The applicant cannot simply ignore these requirements and provide its own version of the form.

It is noted that the approved form requests that the injury indices at A-8.2 be provided for each 'model, type, grade of goods'. It is apparent that the applicant has ignored this requirement and simply provided consolidated data for all HDPE like products. The omission of injury data for each grade or type of HDPE is a critical deficiency given the applicant's own explanation of the differing market characteristics for the different types of HDPE.

At page 10 of the application, a table provides an overview of the different grades of HDPE and categorises them according to their relevant market sectors and applications. This includes:

- Blow-moulding;
- Film;
- Injection moulding;
- Pipe;
- Tape and mon-filament; and
- Wire and cable.

The applicant responds to the question at A-3.10 which seeks to understand whether different models exist within the parameters of the goods subject of the application by explaining:

There are a range of grades of HDPE manufactured and sold by Qenos. Grades of HDPE are differentiated by the melt index and density of the HDPE. Blow moulding and injection moulding

grades of HDPE typically have selling prices at the lower end of the spectrum, with film grades selling at a premium to blow/injection mould grades. A further premium is evident for pipe grades of HDPE due to higher performance, as well as the addition of additives in these grades.

The applicant also confirms that it *'has included the costs associated with all grades of HDPE in Appendix A6.1. Domestic sales listed in Appendix A4 identify the goods by grade.'*

Given that the grade of HDPE is acknowledged by the applicant to be critical for identifying the various models, and the applicant appears to have provided the required cost and sales data on a model basis, it is unsatisfactory then for the applicant to simply choose not to comply with the approved form's requirement for the injury indices at section A-8 and omit indexed trends for each grade of HDPE. The Commission ought to be holding the applicant to the same standard for complying with the information requirements in its application, as it does of importers and exporters in completing their respective questionnaires.

The need for indexed trends across each of the injury indicators is important given the Commission's 2009 investigation into other polymer products manufactured by the applicant (linear low density polyethylene exported from Canada and the USA). In terminating its investigation on the basis of negligible injury, the Commission observed that¹:

Interested parties, including Qenos, have advised that LLDPE manufactured for one application cannot be substituted for another application. For example, film LLDPE cannot be used in rotational moulding applications and vice versa. This is due to different melt indexes required for the different end use applications.

We noted that this is generally accepted by all interested parties and we also accept this premise. We therefore took this market demarcation into account when assessing injury and causation in the rest of the SEF.

We also noted that while Qenos produces injection moulding LLDPE, we were not aware of any being imported from Canada or the USA during the investigation period.

The market demarcation found to exist within the LLDPE grades, are equally evident amongst the different HDPE grades consumed in the Australian market today. This is supported by the applicant's explanation of the price tiers between the various grades of HDPE.

Therefore, Martogg urges the Commission to request the applicant to prepare revised injury indices for each HDPE grade produced and/or sold. This would provide interested parties with a reasonable understanding of the injury claims being made and allow them to properly respond to the market characteristics of relevant sectors in which they are familiar. This is particularly essential in circumstances where an importer imports only one grade of HDPE and is therefore only able to provide commentary on the market dynamics within its relevant market sector.

2. Injury claims by applicant

It is somewhat disingenuous for Qenos to be claiming that imports of HDPE are contributing to reduces sales volumes and reduced market share when other known factors are the primary cause of its volume related injury.

a) Capacity constraints

¹ TM Report No. 146, page 21

It is well known in the Australian market that Qenos has recently introduced allocations for customers of pipe and blowing grade HDPE. This can be confirmed directly with Qenos and/or its main customers of both grades. It is unreasonable in these circumstances for Qenos to claim that volume injury is evident by the increase in imports at the expense of its own sales, at the same time as it restricts the volumes that domestic customers are able to purchase.

Whilst the decision to impose pipe and blowing HDPE allocations is a recent one, the Australian market has been aware of Qenos' capacity constraints since 2017/18. This is evident by Qenos' decision to sell imports of HDPE which are either directly or indirectly sourced from Saudi Arabia. This is confirmed in its application where it states that it has *'an arms-length relationship with the [Country] supplier [name] for some limited volumes of HDPE [type] grade resin in 2017/18. Similarly, Qenos does not have a relationship with an importer of the goods'*². It is also noted that Qenos has completed Appendix A-5 of the application, which requests sales of imported goods.

In these circumstances, the Commission must seek to understand the cause and trigger for Qenos' decision to offer imported HDPE to the Australian market, whilst at the same time placing domestic customers on allocations.

b) Sharp increase in local gas costs incurred by Qenos

Martogg contends that the primary cause of production constraints experienced by Qenos is the well documented sharp increase in local gas costs, coupled with limited gas supply, at a time when US and Middle East polyethylene producers are experiencing reduced gas feedstock and power costs and oversupply. This is directly supported by the following public statements made by Qenos management.

In 2016 we paid \$8 million dollars for electricity and in 2018 we paid \$18 million dollars," he said. "That's just for the commodity; that doesn't include network charges and other costs.

"We've taken more than \$60 million of cost increases over that time. We can't pass a dollar of that on to our customers because our competition, who all come from overseas, don't have any of those increased costs."

The gas shortage is a long way past being a theoretical problem. Qenos has let go of 15 per cent of its workforce in just the past year-and-a-half. [emphasis added]

Source: ABC News (refer to **Non-confidential appendix A**)

Trade-exposed industrial gas users are already suffering a "slow burn" of job losses as they chase ways to absorb higher energy costs that can't be passed through to customers, said Mr Clancy, who says ChemChina's Qenos plants in Altona and Botany are suffering not only gas price hikes but shortages of their key feedstock, ethane.

...

ChemChina invested \$200 million several years ago to expand its Altona plant by 20-30 per cent, but instead had suffered a 20-30 per cent shortfall in ethane supply, which has cut output, he said

² EPR Record no. 1, section A-2.8, page 8.

Source: AFR (refer to **Non-confidential appendix A**)

"The issue is not enough supply and as a consequence domestic consumers and industrial buyers are being asked to pay prices that I don't believe are sustainable for heavy industry," Qenos chief executive Stephen Bell told The Australian.

Source: The Australian (refer to **Non-confidential appendix A**)

Mr Bell said Qenos, which has polyethylene plants in Altona in Melbourne and Port Botany in Sydney, had been battling hard to boost productivity following increases of up to \$60 million a year in its gas and electricity expenses, but was now being forced to lay off staff.

...

Mr Bell said Australia had gone from having some of the cheapest energy in the world to being a country with the most expensive. Gas prices in the US had come down dramatically in recent years while prices in Australia had more than doubled, he said.

"In Australia we were paying \$4 a gigajoule a few years ago for gas but in recent times the costs are between \$10 and \$15 a gigajoule," he said.

Source: The Australian (refer to **Non-confidential appendix A**)

"We are facing more increases and clearly we can not absorb them or pass them on to our customers," Mr Bell said. "We have to find efficiencies and our overseas competitors are not facing this problem. They can buy (ethane) at the international price."

Source: AFR (refer to **Non-confidential appendix A**)

"I can't sack enough people to offset that \$60m because I still need to run a business. So I'm looking at all the variables: revenues, margins, efficiencies, quality, production as well as cost," Mr Bell told The Weekend Australian.

...

"My shareholders in a \$200m expansion in Altona gave the go ahead on the basis that gas would turn up at a competitive price," said Mr Bell. "And now we've got a situation where the whole investment has been undermined by the fact we've can't buy competitively priced gas any more."

With its main petrochemical competitors in the Middle East and the US able to tap cheap gas, Qenos is hopeful price relief will arrive and enable it to commit to new investments.

Source: The Australian (refer to **Non-confidential appendix A**)

There is no doubt then that Qenos has become internationally uncompetitive through no fault of its own or imports of HDPE. Domestic gas costs have increased sharply since 2017, which is confirmed by Qenos in its application – '[t]he applicant experienced an increase in the unit cost to produce HDPE due

to energy cost increases coinciding with oil price increases driving catalyst and chemical input costs in 2018/19.³ It is also supported by the indexed trends in HDPE unit costs which showed a 22 percentage point increase in 2018/19 from the index period of 2015/16.

c) Australian HDPE price benchmarked to South East Asian regional prices

Faced by the increased gas costs since 2017, it is worth noting that Qenos management have stated on several occasions that they are unable to pass on the higher energy costs to its domestic customers. This is due entirely to the decision by Qenos to benchmark its selling prices to regional South East Asian HDPE Extrusion Blow Mould (EBM) prices. Given the contrasting trend in power costs facing Qenos and its overseas competitors, there has been a clear divergence in Qenos' actual HDPE costs and corresponding regional HDPE EBM prices.

Qenos customers are aware that its prices are based on a regional parity price model which takes account of:

- the South East Asian HDPE EBM price;
- rate of exchange;
- into-store importation costs; and
- a local price premium.

This is supported by chart 1 below (refer to **Confidential Appendix B** for source data) which compares the movement in Martogg's HDPE prices offered by Qenos, and an equivalent delivered duty paid price based on Platts SE Asian HDPE EBM USD/t CFR midpoint. It demonstrates that the Qenos HDPE price has staunchly and historically followed the nominal delivered import price since June 2004.

[CONFIDENTIAL CHART REMOVED]

Chart 1: Qenos HDPE vs DDP (Platts SE Asian HDPE EBM), from 2004.

[CONFIDENTIAL CHART REMOVED]

Chart 2: Qenos HDPE vs DDP (Platts SE Asian HDPE EBM), from 2017

As shown in chart 2 above, the strong correlation between Qenos HDPE prices and delivered import prices based on Platts SE Asian HDPE EBM prices is also evident during recent years when Qenos was more acutely experiencing the increase in its energy and gas feedstock costs.

It is worth noting that the Commission has confirmed in previous polyethylene related dumping investigations, that prices are generally formula based with a key component being a South East Asian benchmark price. For example, in terminating the 2011 investigation into LLDPE exported from Canada, Korea and the USA⁴, the Commission stated:

Customs and Border Protection established that prices for film grade LLDPE sold into the Australian market were generally formula based and have been for at least ten years. Most major customers of the Australian industry and Dow Australia in the film market were on formula based monthly pricing. One of the key components of the formulas is a benchmark South East Asian reference price for butene LLDPE published weekly by ICIS.

³ Ibid., section A-8.2, page 21.

⁴ TM Report No. 165, pages 26-27.

...

Suppliers add to the benchmark price a notional margin for importation costs to bring the price up to an equivalent into-store price. Finally, the formula may also include an additional premium to reflect the type of resin being sold and the additional performance properties of the resin. This built up price is then converted to Australian dollars.

Therefore, it is the case that all selling prices in the Australian market show a strong positive correlation to SE Asian HDPE EBM prices. That is, all other factors being equal, import and Qenos HDPE prices will move consistent with, and to the same degree as SE Asian HDPE EBM prices. This explains why Qenos has been unable to pass on the sharp increases in its energy and gas feedstock costs to its domestic customers, as its selling prices are benchmarked to movements in the SE Asian HDPE EBM prices. This also confirms that the primary driver and determinant of Qenos' selling prices is the SE Asian HDPE EBM benchmark prices, and not import prices, which are themselves driven by the same benchmark pricing.

d) Injury caused by Asian regional prices cannot be attributed to imports into Australia

Martogg wishes to address an expected counterclaim by Qenos in response to the impact of SE Asian HDPE EBM prices on Qenos HDPE selling prices. In investigation 165, the Commission found that Asian regional benchmark prices played an integral role in determining Qenos' own domestic selling prices. In responding to this view, Qenos made the following statements⁵:

- if prices aren't competitive with the South East Asian regional export price for LLDPE, its customers will source LLDPE from import sources rather than from the Australian industry;
- the South East Asian regional prices are impacted by excess supply of product in the region meaning that the prices are dumped prices;
- North American and Korean LLDPE exports were sold into the South East Asian region at dumped prices;
- the requirement for Qenos to match these South East Asian dumped prices means that the Australian industry is competing against injurious prices.

Qenos essentially argued that oversupply conditions in North America and Korea led exporters from those countries to dump product into third countries within the Asian region. Qenos then claimed that the third country dumping led to depressed South East Asian prices which ultimately flowed through to lower prices in the Australian market. The Commission rejected Qenos' causal link premise, primarily on the basis that 'dumping' and dumped goods *'are defined as any goods exported to Australia that are determined to have been dumped (that is, where the export price of the goods is less than the corresponding normal value).'*⁶

This is reinforced by subsection 269TAE of the *Customs Act 1901* (the Act) which outlines the relevant factors that the decision maker may have regard to. This includes:

- margin of dumping of goods exported to Australia;
- volume of goods exported to Australia; and
- export price of the goods exported to Australia.

⁵ Ibid., page 27.

⁶ Ibid., page 28.

Therefore, the causal link assessment must only seek to attribute injury caused by the subject goods exported to Australia, and not as Qenos has previously argued, by attributing injury to third country exports from the subject countries.

It is also worth noting that Qenos management have themselves highlighted that overseas producers have benefited from reduced energy and gas feedstock costs. This includes North American producers achieving a competitive advantage following the rapid growth of US shale gas production from 2007, which saw natural gas spot prices fall sharply. Chart 3 below shows natural gas spot prices fell by 85% from the peak of December 2015 (US\$15.39/million Btu) to June 2019 (US\$2.33/mill Btu) (refer to **non-confidential Appendix C** for source data).

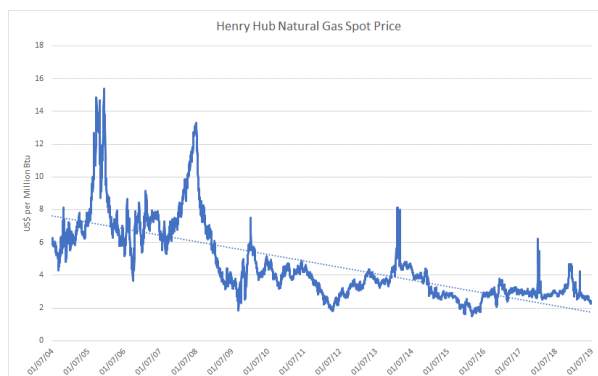
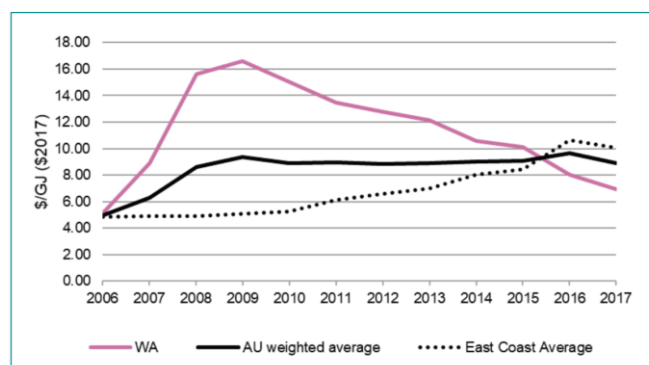


Chart 3: US Natural Gas spot prices

By contrast, the chart below shows that Australian east coast wholesale gas prices for large industrial users increased by approximately 100% between 2006 (A\$4/gigajoule) and 2017 (A\$10/gigajoule). As noted in the March 2019 Australian article, '[u]sers on the east coast now pay more than \$12 per gigajoule of gas, up to four times historical levels'.

Figure 2: Australian weighted average large industrial gas price (including transmission) for National weighted average, East Coast weighted average and the West Coast.



Source: Gas Price Trends Review 2017⁷

The observed falls in North American natural gas costs has led to reduced HDPE prices since March 2018, which has equally impacted on Asian regional HDPE prices. This is evident from published HDPE EBM prices (**Confidential Appendix B**) outlined in chart 4 below, which shows that South East Asian HDPE EBM prices fell approximately 24% across the investigation period, from the high of US\$1,400/t in May 2018 to US\$1060/t in March 2019.

[CONFIDENTIAL CHART REMOVED]

⁷ Oakley Greenwood – Gas Price Trends Review 2017, page 8.

Chart 4: Platts HDPE EBM prices

This further supports the public statements by Qenos that rising energy and feedstock costs in Australia, at a time when overseas producers are benefiting from reduced energy and feedstock costs, have been the primary driver for its lack of competitiveness. In addition, as its domestic selling prices are benchmarked against falling Asian regional prices during the investigation period, Qenos' experienced on suppression on its margin between selling prices and costs, which is evident from the index of profit variation outlined in its application and shown below.

Index of profit variations (model, type, grade of goods)

Period	2015/16	2016/17	2017/18	2018/19
Index	100	23.75	-19.32	-21.55

Notes:

1. Period is 1 April 2015 to 31 March 2019.
2. Data is from Line N58 of Confidential Appendix A6.1.

3. Martogg imports

In its application, Qenos identified that whilst direct import volumes from the USA were negligible, it was possible that total imports from the USA exceeded the 3% threshold as some consignments may have been transhipped via Singapore.

In its consideration report, the Commission noted⁸:

... that there appear to be goods which may have been classified under incorrect tariff subheadings, and the consignment has not been described in sufficient detail to assess the classification further. The Commission has also observed some consignments have been declared with volumes which are either over or understated (e.g. declared in kilograms rather than tonnes, and vice versa).

The Commission added⁹:

Whilst Qenos' application suggested that volumes exported from the USA accounted for approximately 2 per cent of all Australian imports, the Commission considers, based on the evidence it has gathered, that the volume imported during the investigation period exceeds that figure. Further noting the potential for the goods to have been misclassified and / or incorrectly declared in terms of volumes in the ABF import database, the Commission has concluded that there still appear to be reasonable grounds for the publication of a dumping duty notice with respect to exports from the USA.

Martogg has reviewed and compared its own import information to the Australian Border Force (ABF) import listing provided by the Commission. Martogg's total imports from the USA are accurately reflected in the import listing provided for the investigation period, which represent a mere ■% of the estimated total import volume at Table B-1.5 of Qenos' application.

Whilst Martogg is obviously unaware of the corresponding USA import volumes by other importers, the Commission's concern about the possible discrepancy in ABF import data provides legitimate concerns about the accuracy of the total import volumes from the USA, and whether the minimum 3% import threshold is achieved. Martogg therefore urges the Commission to contact all parties identified as importers of HDPE from the USA and confirm with them their precise import volumes of HDPE during the investigation period.

⁸ EPR Record no. 2, section 2.5.1, page 10.

⁹ Ibid., page 17.

4. Non-injurious price

The non-injurious price (NIP) is the minimum price necessary to prevent injury caused to the Australian industry by dumping. The NIP is derived from the unsuppressed selling price (USP), a price that the Australian industry could be expected to achieve in a market unaffected by dumping.

The Commission also utilises the NIP as an additional test to establish whether there is a causal link between the alleged dumping and material injury. For example if the NIP is below the determined export prices, those export prices, whether dumped or not, must be non-injurious. Likewise, if the USP is at or below the Australian industry's actual selling prices during the investigation period, this is a strong indicator that industry's prices are suppressed by factors other than dumping.

Martogg contends that given Qenos' prices are referenced against Asian regional HDPE prices and those regional prices are impacted by heavily reduced energy and feedstock prices in North America and the Middle East, there is no scope for Qenos to claim that its prices would have been higher in the absence of subject imports. For this reason, Martogg submits that the Commission should establish the USP on the basis of the current formula utilised by Qenos. This is consistent with the Commission's previous approach in investigation 165, where the Commission considered¹⁰:

... that it is appropriate to construct an unsuppressed selling price using the industry's current formula. This would involve using the published ICIS price converted to Australian dollars plus an amount for into store costs and a premium to reflect the hexene grades produced by the Australian industry.

A USP calculated in this way would demonstrate that Qenos' prices are largely determined by factors outside of its control, being Asian regional HDPE prices, exchange rates and into-store costs. The only item directly within its control is the value of the local supplier premium that it adds to its formula pricing.

However, as demonstrated in chart 1 above, the spread between Qenos' delivered HDPE prices and Asian regional delivered HDPE prices, which essentially represents the local premium achieved by Qenos, has been maintained since 2004. In any case, the Qenos CEO has publicly stated that it is unable to adjust its prices sufficiently to account for the sharp increase in incurred energy costs. Therefore, it is reasonable to conclude that a contemporary USP which takes account of Qenos' HDPE pricing formula, would continue to be unprofitable when compared to Qenos' actual fully absorbed cost to make and sell.

In these circumstances, Martogg contends that irrespective of the dumping margins determined during the investigation period, the Commission ought to terminate the investigation promptly on the basis of negligible injury caused by subject imports pursuant to subsection 269TDA(13) of the Act, or recommend that the Minister not impose duties pursuant to subsection 269TL(1) of the Act.

The current unfettered discretion under s.269TL of the Act allows the Minister to take account of the public interest when circumstances warrant broader matters be considered. Martogg notes that the Productivity Commission (PC) review of Australia's dumping system proposed that anti-dumping measures should automatically not be imposed where one of five criteria was met. The PC's report¹¹ highlights three specific circumstances:

¹⁰ SEF Report No. 165, section 10.4, page 41.

¹¹ Productivity Commission Inquiry Report No. 48 – 18 December 2009; pages 72-73.

‘where measures would not be effective in removing injury being experienced by the applicant industry, and hence where the ensuing costs for others in the community would be needlessly incurred:

- *The imposition of measures equivalent to the assessed dumping margin (or the benefit from a countervailable subsidy) would result in an import price still well below local suppliers’ costs to make and sell.*
- *‘Like goods’ could be readily obtained from an un-dumped source at a comparable price, meaning that the imposition of measures would simply lead to substitution into un-dumped imports with little or no benefit for competing local suppliers.*
- *Dumped or subsidised imports may be a contributing factor to the material injury being experienced by a local industry, but are not the major cause*

Whilst the PC’s recommendation was not ultimately accepted, the Government responded¹² by highlighting that the Commission *‘already examines the effect on the market in determining the causes of injury to the industry and in determining the non-injurious price.’*

As detailed in this submission, Martogg considers that all three of the circumstances highlighted by the PC are applicable in the case of HDPE exports, and therefore warrant termination in the first instance, or a recommendation to the Minister that measures not be imposed on the grounds that they will be ineffective at removing injury suffered by the applicant.

¹² Streamlining Australia’s Anti-Dumping System, Section 6.2, page 26.



Gas exports blamed for soaring electricity prices and job losses

By business reporter Daniel Ziffer

Updated Fri 17 May 2019, 12:47pm

Australians are reeling from electricity prices that have soared more than 130 per cent since 2015. Among the reasons for the rocket-rise: profiteering by wholesalers and the so-called 'gold-plating' of the electricity distribution network. But the real culprit? Gas.

"It's the gas price that determines electricity price on the east coast, but neither [political] party wants to own up to that because they've both been culpable in allowing this situation to develop," MacroBusiness economist David Llewellyn-Smith said.

Gas is a vital part of the electricity generation market.

But the "situation" Mr Llewellyn-Smith is referring to is that Australia is on track to overtake Qatar this year and become the world's largest gas exporter.

Australia is now exporting so much gas there is not enough available at a reasonable cost to create electricity domestically or for it to be used by industry. That is causing huge problems for anyone who pays a power bill, as well as local manufacturers.

Electricity price 'set by gas'

As ageing coal power stations have closed and renewables been subsidised to help them grow in strength, gas-fired power plants have played a vital role in what is called "smoothing" demand for energy, and meeting the fluctuating daily needs of the national electricity market.

But massive projects begun a decade ago to export liquefied natural gas, or LNG, have meant domestic prices have risen to meet global ones, so the price of producing power using gas has soared.

"Since 2014, 2015 all the price rises we've seen in both gas and electricity have resulted from this crazy situation where we're exporting gas," Mr Llewellyn-Smith said.

"Gas sets the marginal cost of electricity in the east coast power market. So when you switch on your light you're paying a price that's set by gas. If the gas price goes up, your power price goes up."

It has. Gas that was \$4 a gigajoule in 2015 spiked to nearly \$20 two years ago. A flooded market in Asia means gas sells for \$7.50 in Japan but \$10 here.

Manufacturers lay off staff because of power price surge

Exacerbating the problem, locked-in contracts to ship gas to Asia have meant scant supply here and steep price rises for companies such as petrochemical manufacturer Qenos.

Chief executive Stephen Bell said the power bill at just one of its plants, at Port Botany in New South Wales, provided a sense of the problem.

"In 2016 we paid \$8 million dollars for electricity and in 2018 we paid \$18 million dollars," he said.

"That's just for the commodity; that doesn't include network charges and other costs.

APPENDIX A

"We've taken more than \$60 million of cost increases over that time. We can't pass a dollar of that on to our customers because our competition, who all come from overseas, don't have any of those increased costs."

The gas shortage is a long way past being a theoretical problem. Qenos has let go of 15 per cent of its workforce in just the past year-and-a-half.

"If we don't address the issue we're going to see a lot of jobs and a lot of industrial manufacturing disappear off the east coast of Australia," he said.

"It's a consequence of a failure of government policy at all levels — state and federal, Liberal and Labor — over a long period of time.

"We have plenty of gas in this country, we have an abundance of hydrocarbon, we're blessed and there's more than enough of those domestic and export customers."

The Australian Workers' Union said it was dealing daily with companies looking to cut employee numbers, pay or conditions because they could not secure gas.

"They can't get decent long-term prices and decent long-term contracts and, as a consequence, they're making some dire sacrifices which ultimately destroy Australian jobs and put further pressure on households," national secretary Daniel Walton told The Business.

"Australia has now become one of large largest exporters of gas in the world. But we're the only nation in the world that does not have a mechanism in place to keep a proportion of our gas here."

Gas reservation working for WA

The gas shortage is not an issue in Western Australia. Its state government reserved 15 per cent of the output from its new gas projects for domestic use.

It is now wooing companies on the eastern seaboard to set up their manufacturing bases in the west.

Economists, unions and manufacturers are demanding the Federal Government reserve gas for the rest of the nation.

In April 2017, then-prime minister Malcolm Turnbull imposed restrictions on exports, but the companies which export are ignoring the price they are meant to sell at.

Asked about policies on gas reservation, the Government said its restrictions had worked, and new gas projects would help further.

It is investing \$8.4 million to fast-track fracking in the Northern Territory's Beetaloo Basin.

Labor said it would assess new gas projects on the basis of their contribution to domestic supply, and introduce a price trigger to stem exports if prices rose too high.

'Insane', 'mad', 'crazy' plans to import local LNG to Australia

The situation has become so dire there are now proposals for LNG import terminals in both New South Wales and Victoria. If they are built, a mind-boggling situation might occur.

Gas drilled offshore in Bass Strait or onshore in Queensland would be refined and piped to Gladstone. There it would be frozen to -162 degrees Celsius, transforming it from a gas to a liquid for export.

Loaded on to a ship, it would exit Australian through the Great Barrier Reef and travel to Japan, where it would be taken onshore and turned back into gas.

Then it would be frozen again, shipped back to the new import terminals in Australia, turned back into a gas and re-inserted back into the national gas grid. Gas from WA and the USA may also use the import terminals.

"It's absolutely insane," Mr Llewellyn-Smith said, exasperated by the situation.

"The proposition is mad," Mr Walton added.

APPENDIX A

Like the others, Qenos boss Mr Bell has been warning about the issue for a decade, to no avail.

"Well it seems crazy a country like Australia, with so much hydrocarbon, is in a situation where we've got boats going out of Gladstone loaded up with LNG and they're passing boats coming into Australia loaded up with LNG to meet our domestic market requirements," he said.

Topics: oil-and-gas, electricity-energy-and-utilities, manufacturing, federal-government, australia

First posted Fri 17 May 2019, 5:02am

Contact Daniel Ziffer

AFR - 1 October 2017

Business Energy Gas

Jobs 'still at risk' despite gas plan

Angela Macdonald-Smith *Senior Resources Writer*



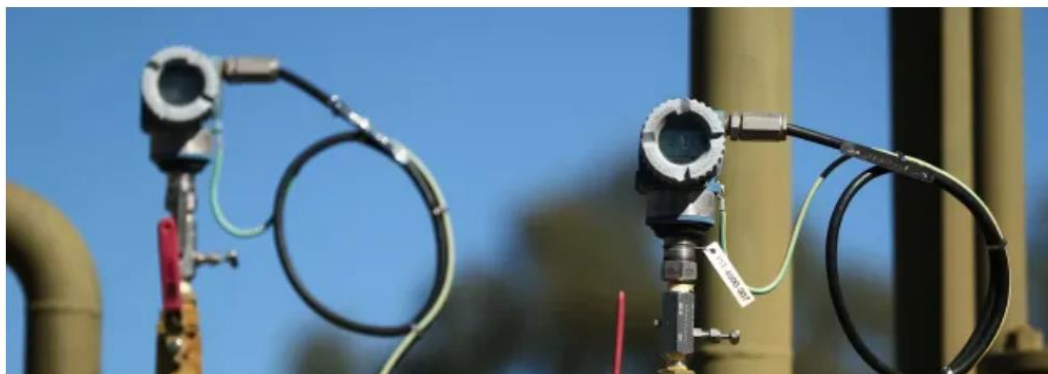
Oct 1, 2017 — 11.45pm



International chemical industry investors have warned the gas supply deal does not address the soaring prices that are putting tens of thousands of jobs at risk and are calling for a national energy policy that would help open up onshore gas in Victoria and NSW.

Senior executives at ChemChina, owner of basic plastics manufacturer Qenos, and US giant Dow Chemical say jobs and investment to keep plants in operation are being threatened by the squeeze in east coast gas. They want a policy that prioritises energy supply to domestic industry and onshore drilling restrictions lifted in the southern states.

Dow Chemical's Australasian head Louis Vega says that [last week's deal struck by the Prime Minister with Queensland's LNG exporters to fill the 2018 gas shortfall](#), which is due to be finalised on Tuesday, still leaves a "huge gap" to be filled between asking prices for gas and what chemical makers can afford to pay.



<https://www.afr.com/business/energy/gas/chemical-makers-in-gas-plea-to-fix-desperate-urgent-crisis-20171001-gys1tm>



Gas isn't much good unless it comes at an affordable price, chemical producers say. **Bloomberg**

Gas prices for industrial users have tripled from the recent \$5 a gigajoule levels and can be double the international price, the chemical industry association Chemistry Australia says, citing the \$10-\$16 a gigajoule prices revealed last week by the competition regulator.

But many chemical makers need gas closer to \$6 levels so a short-term gas supply deal won't help unless prices also fall and supply can be guaranteed for the longer term, the executives say.

The Turnbull government has backed a plan, reported in *AFR Weekend*, [to reduce GST payments to states, such as Victoria and NSW, that block coal seam gas extraction](#) in a move to help resolve the east coast gas crisis.

"Supply at all costs isn't fixing the very desperate urgent crisis that we're in," said Mr Vega, who noted the chemical maker's energy costs have doubled in each of the last two years. Dow is paying "nearly double" the benchmark prices cited as reasonable by the Australian Competition and Consumer Commission.

Mr Vega said the industry will "have to wait and see" on the impact of the Prime Minister's agreement and "whether it has the effect on prices that we all were hoping for".

The industry says removing restrictions on onshore gas – such as the moratoria and other constraints in Victoria, NSW and the Northern Territory – are vital to avoid the premium on gas prices that manufacturers in Victoria will be increasingly forced to pay as [the state becomes more reliant on supplies from Queensland with the decline of the Bass Strait](#).

"Anything the states can do to help the country through its crisis right now would serve the citizens of Australia well," Mr Vega said.

Jonathan Clancy, responsible for Australian government relations at ChemChina, said developing onshore gas in Victoria and NSW could make the difference between a manufacturer being able to survive or not, given the at-least \$2 a gigajoule extra cost for piping gas south from Queensland.

"It's fundamentally important to have the gas made available near the markets," Mr Clancy said.

"If there's gas that is at a price that is barely affordable today having gas made available on-site near infrastructure ... means that \$2 makes all the difference between whether a company can use energy and remain profitable and have a cash flow-positive outlook or not."

Jobs on pyre

Trade-exposed industrial gas users are already suffering a "slow burn" of job losses as they chase ways to absorb higher energy costs that can't be passed through to customers, said Mr Clancy, who says ChemChina's [Qenos plants in Altona and Botany are suffering not only gas price hikes but shortages of their key feedstock, ethane](#).

He said the Chinese state-owned company, which has had to provide Qenos with several hundred millions of dollars of financial support over the last several years, has found it "very, very difficult to comprehend" how it has been completely exposed because of a failure in domestic energy policy.

ChemChina invested \$200 million several years ago to expand its Altona plant by 20-30 per cent, but instead had suffered a 20-30 per cent shortfall in ethane supply, which has cut output, he said.

"They certainly have a major question mark around why the government policy has failed in an environment where there's the suggestion that Australia is becoming the leading exporter of LNG that there's not been policy issues to look at a national interest position first and foremost," said Mr Clancy, who is also chairman of chemical industry association Chemistry Australia.

Industrial gas users are facing price demands in new contracts of \$10-\$16 a gigajoule or higher, in some cases three times more expensive than expiring

contracts. The Australian Competition and Consumer Commission last week issued "benchmark prices" for industrial users based on LNG spot prices in Asia,

<https://www.afr.com/business/energy/gas/chemical-makers-in-gas-plea-to-fix-desperate-urgent-crisis-20171001-gys1tm>

APPENDIX A

signalling that Queensland users should only be paying about \$5.87 a gigajoule, while Victorian manufacturers would have to pay at least \$2 more to cover the cost of transporting Queensland gas south.

That leaves a large price gap and creates headaches for industrial users such as chemical makers, some of which need gas at \$5 or \$6 to keep their operations viable, said Chemistry Australia chief executive Samantha Read.

She pointed to a 2014 Deloitte study that forecast losses of 14,500 manufacturing jobs between 2014 and 2021 if gas prices reached \$8-\$10/GJ. But at current prices the impact on jobs and the economy is set to be "much greater", she said.

Mr Vega said Australia appeared to stand alone in not prioritising its domestic energy needs, in contrast to Canada, the US and Argentina, for example.

"Most countries around the world see energy as part of their national security and restrict pieces of it to ensure that their domestic economy and supply is served before they allow it to go offshore," he said.

"That's what Dow ... and others are advocating as part of a national energy strategy."

The Australian - 27 March 2019

THE AUSTRALIAN

National gas supply warning intensifies, with shortages forecast

By **PERRY WILLIAMS**, SENIOR BUSINESS WRITER
11:00PM MARCH 27, 2019 •  67 COMMENTS

NSW, Victoria and South Australia have been told they will experience gas shortages on peak demand days from 2023 in a shock warning that big users fear may force heavy industry and local manufacturers to shut operations.

A continuing fall in Victoria's offshore production may lead to restrictions being placed on the state's gas supply and the curtailment of gas-fired power for electricity generation on peak winter days from 2023, according to the Australian Energy Market Operator.

The gas crisis could then be extended to both NSW and South Australia, with both states facing their own shortfalls by 2023 if above-average gas demand for power use coincides with Victoria's own peak winter needs, when average consumer demand is three times more than in summer.

If new reserves are not developed and plans for LNG import terminals stall, southern and southeastern Australia face an overall gas supply shortage from 2024 onwards.

"In Victoria, the continued reduction in gas production resulting from depleting reserves in offshore gas fields translates to a reduction in gas exports from Victoria to NSW, South Australia and Tasmania," AEMO chief system design and engineering officer Alex Wonhas said. Victorian gas supply for NSW and South Australia "could be limited if a high-demand winter day coincides with a significant amount of unplanned thermal generator outages".

The stark warning, foreshadowed by *The Australian* on Wednesday, flips AEMO's declaration just nine months ago that the east coast gas crisis was over, which was met with scepticism by some users feeling the pinch of high gas prices.

Concerns over critical gas shortages and elevated tariffs also underline the challenge ahead for the federal government as it seeks to ensure sufficient gas flows from Queensland's LNG export

projects to domestic users against a backdrop of stuttering local exploration due to moratoriums in NSW and Victoria.

Australia's largest petrochemical producer, Qenos, says it is concerned about the gas outlook and how it will be able to source large supplies of competitively priced gas and ethane at its Altona facility in Victoria and Botany operation in NSW, where it manufactures polyethylene, the raw material used in many common household plastic products.

"The issue is not enough supply and as a consequence domestic consumers and industrial buyers are being asked to pay prices that I don't believe are sustainable for heavy industry," Qenos chief executive Stephen Bell told *The Australian*.

"Bad government policy settings have created this problem and it's going to require government intervention to solve it."

Gas users have been bracing for official recognition of the crisis after experts warned last month gas shortages on the east coast could emerge in just three years with prices to remain high for the next decade. Orica this month said it was weighing the future of its Newcastle ammonia plant with up to 300 jobs at risk as the high price of gas renders its Kooragang Island facility uncompetitive. A raft of other at-risk producers may also be pressured into abandoning their local operations after years of absorbing gas bills and power bills up to four times the level of other countries, the ACCC warned.

LNG exporters escaped the threat of government intervention last year after signalling the extension of a deal to offer uncontracted gas for domestic use before export and agreeing to make gas available at peak demand periods for the power grid.

Gas players recommitted to the Australian Domestic Gas Security Mechanism, which gives the government power to limit gas exports if it anticipates a domestic shortfall the following year. Labor has also pledged to introduce a separate gas export price trigger that would curb supplies of LNG exports, raising fears among producers about the risk of retrospective moves that could disrupt Australia's second-biggest export earner.

Energy Minister Angus Taylor said that with southern production likely to decline sharply, energy users in Victoria and NSW will be increasingly reliant on Queensland gas to meet their winter peaks.

APPENDIX A

“States with moratoria in place are effectively locking themselves into a future of importing gas from Queensland, which requires significant transportation costs, or shipping LNG from overseas — to meet demand,” Mr Taylor said. “The government strongly urges all state and territory governments to remove blanket bans on conventional and unconventional gas exploration. This will help gas customers to secure a better deal and reduce the cost of transporting gas while supporting much-needed investment.”

A raft of five planned LNG import terminals could provide a short-term answer, according to AEMO, but even if they manage to sate the supply squeeze, costs may remain high given their link to international LNG pricing.

Annual production from the Gippsland Basin is forecast to drop 22 per cent from 2019 to 2023 compared with the 38 per cent reduction in last year’s update helping Victoria to have sufficient gas production to supply all forecast demand over the five-year period.

But the 150 petajoules of annual Victorian gas supplies, which NSW, South Australia and Tasmania rely on for their own needs, will dwindle to just 23 petajoules in 2023.

The Australian - 29 December 2017

THE AUSTRALIAN

Qenos lay-offs start as energy costs hit

EXCLUSIVE

By **GLENDIA KORPORAAL**, CHINA CORRESPONDENT

11:00PM DECEMBER 29, 2017 •  NO COMMENTS

Manufacturing company Qenos is being forced to lay off 15 per cent of its 700-strong workforce as it battles to cope with higher energy prices, chief executive Stephen Bell said yesterday.

Mr Bell said Qenos, which has polyethylene plants in Altona in Melbourne and Port Botany in Sydney, had been battling hard to boost productivity following increases of up to \$60 million a year in its gas and electricity expenses, but was now being forced to lay off staff.

“We have taken a lot of action working on every aspect of the business to improve our competitiveness, but it can only partially mitigate the impact,” he said.

“We are having to take out 15 per cent of our workforce at the moment.

“We have already started with a number of people over the last few weeks and it will continue into the New Year. We are doing it with great reluctance but we have a business to run. We have to take action to keep the business viable.”

Mr Bell said the manufacturing industry in Australia was “facing the very real prospect of further job losses” because of the impact of higher energy prices.

“I just don’t see how large industrial companies can continue (with) the sorts of cost increases we have sustained without having to take action.

“There is a very real prospect that some businesses might not be able to remain viable. With the prices we are seeing now for gas and electricity, some are just not sustainable.

“The rise in energy prices is a big issue for us, and for all large users of energy.”

Mr Bell said electricity prices at the company’s plant in Sydney had more than doubled since last year. He said he was also worried about the effect of rising energy prices on his company’s

APPENDIX A

customers. “We are a very domestically focused business.

“We add value to local resources,” he said.

“I worry about our customers. They are consumers of energy and the dramatic escalation of energy costs is putting them under enormous pressure.

“It is a real issue for the whole value chain.”

Mr Bell said Australia had gone from having some of the cheapest energy in the world to being a country with the most expensive. Gas prices in the US had come down dramatically in recent years while prices in Australia had more than doubled, he said.

“In Australia we were paying \$4 a gigajoule a few years ago for gas but in recent times the costs are between \$10 and \$15 a gigajoule,” he said.

“For most large industrial users, this is not competitive.”

He said the big fall in energy prices in the US had encouraged more manufacturing to move back to America while manufacturing in Australia was under pressure.

“We are competing against the world.

“We are going to see more industries go offshore.”

He said this would have long-term effects on Australia’s economy.

“Manufacturing is a sector which employs an enormous number of people,” he said.

GLEND A K O R P O R A A L, CHINA CORRESPONDENT

Glenda Korporaal has been covering business and finance in Australia and around the world for more than thirty years. She has worked in Sydney, Canberra, Washington, New York, London, Hong Kong and Singapore an... [Read more](#)

AFR - 15 September 2017

Qenos looks at job cuts to ease gas price shock

Ben Potter *Senior Reporter*



Updated Sep 15, 2017 — 5.11pm,
first published at 2.54pm



Chinese-owned ethylene maker Qenos is looking at making cuts to its 1000-strong workforce at Altona and Port Botany to help it absorb soaring gas and electricity costs.

Chief executive Stephen Bell said the company had suffered a 60-70 per cent increase in energy costs this year and seen no material improvement in either the cost or the volume of gas on offer under contract since [the Turnbull government announced a new domestic gas security trigger in April](#).

The domestic gas trigger could see liquefied natural gas exports curtailed if the domestic market is declared short of gas and Mr Bell said if the government didn't use the power and nothing changed, people would wonder what was the point of the exercise.

<https://www.afr.com/news/qenos-looks-at-job-cuts-to-ease-gas-price-shock-20170915-gyicup>



The Age, News 18/04/2017, picture by Justin McManus. Opposition Leader Bill Shorten visiting Qenos in Altona who is a manufacturer of polyethylene and relies on gas to power its plant. Shorten speaking with CEO Stephen Bell on a tour of the plant. **Justin Mcmanus**

The company has 700 direct employees and 300 contractors. It uses natural gas to heat boilers and ethane - a gas liquid fuel - as a feedstock for its ethylene "crackers". Ethylene is used to make polythene, a basic plastic building block.

"We are facing more increases and clearly we can not absorb them or pass them on to our customers," Mr Bell said. "We have to find efficiencies and our overseas competitors are not facing this problem. They can buy (ethane) at the international price."


The Australian – 21 July 2018

THE AUSTRALIAN

Struggle to keep the lights on as gas pressure mounts

EXCLUSIVE

By **PERRY WILLIAMS**, SENIOR BUSINESS WRITER

12:00AM JULY 21, 2018 •  361 COMMENTS

In the outer Melbourne suburb of Altona, amid a maze of pipelines and furnaces, Australia's largest petrochemicals producer finds itself at a crossroads.

After being forced to sack 15 per cent of its 750-strong workforce due to a doubling of gas prices, Qenos chief executive Stephen Bell admits he's running out of ideas for the company to remain viable after a \$60 million annual increase in its gas and power prices.

"I can't sack enough people to offset that \$60m because I still need to run a business. So I'm looking at all the variables: revenues, margins, efficiencies, quality, production as well as cost," Mr Bell told *The Weekend Australian*. "What I do know is we can't sit here and do nothing. If we ignore it we don't have a sustainable business and I'm not prepared to put up with that."

Qenos, owned by chemical giant ChemChina, relies on sourcing large supplies of competitively priced gas and ethane at its Altona and Botany operation in NSW to manufacture polyethylene, the raw material used in many common household plastic products.

While the manufacturing chief acknowledges the federal government is taking action to address spiralling energy prices, he says heavy industry on the nation's east coast continues to struggle with wholesale gas costs remaining stubbornly high. Gas costs remain between \$10 and \$15 a gigajoule, according to Qenos. That's an improvement from \$20-a-gigajoule records last year but remains more than double the price earlier this decade when investments in Altona were sanctioned. "We don't have a sustainable business on those prices," he said. "And the other problem you've got is industrial users can't get contracts for the longer-term."

"Probably the best you can get is a 12-month contract, or if you're very lucky a two-year contract. "How do you invest millions of dollars that require certainty of supply and price over a long period of time on the basis of a 12-month contract?"

APPENDIX A

In Canberra, the predicament of Qenos, and other large industrial users, serves as a stark - reminder of the challenge it faces in re-setting Australia's lopsided markets to solve an "energy - trilemma" of high prices, carbon emissions and system unreliability.

Both wholesale and retail power prices in the National Electricity Market are surging and reliability is falling as coal-powered generators close, gas prices have tripled in recent years as exports have been boosted in Queensland, and the proportion of less-reliable clean energy has also increased — adding planning challenges for operators of the coal-dominated national grid.

The government's energy reform blueprint — the national energy guarantee — has received the backing of much of the nation's big business as a practical solution to help end decade-long policy paralysis on energy.

Even so, price remains a sticking point.

The plan to make Australia's biggest energy consumers responsible for the reliability of electricity supply emerged this week as one of the biggest concerns of industry, which remains anxious it will have to foot the bill and absorb new costs.

That requirement may now be scrapped. Energy Minister Josh Frydenberg has held meetings with many industrial power users about how the reliability obligation would affect them and is understood to be open-minded to the possibility of changes.

Two other energy blueprints released this month serve to emphasise both the scale of the immediate task at hand and the immense structural changes which will reshape power markets in the next two decades.

The competition watchdog urged radical reform of the National Electricity Market to bring down prices following a review, claiming the gouging of households and business consumers has reached an "unacceptable" level with widespread abuse of market power by the larger energy companies.

And just days later the nation's independent energy market operator underlined the investment task ahead for corporate Australia, with the cost of replacing the east coast's coal-dominated generation capacity estimated at up to \$27 billion by the mid-2030s.

The Australian Competition & Consumer Commission and Australian Energy Market Operator reports back the Turnbull government's national energy guarantee and a technology-neutral

APPENDIX A

approach to addressing the energy supply and pricing crisis. But both also warned a repeat closure of a large coal-fired plant like Victoria's Hazelwood facility could up-end the power supply and cause fresh price pressure for consumers and large users alike.

Mr Frydenberg maintains the Turnbull government's intervention on multiple fronts is helping producers like Qenos in terms of price and supply.

He points to its showdown last year with the three large Queensland LNG projects — represented by Santos, Shell and Origin Energy, who committed to fill any domestic shortfall after forecasts showed gas exports were leaving domestic customers empty-handed.

"The Turnbull government's intervention in the gas market has resulted in more than 70 additional petajoules coming into the domestic market instead of going for export," Mr Frydenberg told *The Weekend Australian*. "It's a significant amount of additional supply."

Gas prices have since declined by up to 50 per cent, Mr Frydenberg added, referencing figures from the ACCC.

"We will continue to do what is necessary to ensure there is no shortfall in the energy market," he said, while noting the long-term solution is for states to open up their gas reserves to boost domestic supplies.

For big gas users like Qenos, the stakes could barely be higher.

Australia's gas-intensive industries, including petrochemical and fertiliser companies, would struggle to compete with their international rivals on costs in the early to mid-2020s as gas prices increased further, consultancy Wood Mackenzie said this week.

A supply shortage, driven by depleting east coast reserves from areas including the Bass Strait, would be exacerbated by a new pricing mechanism linking the domestic market with the international liquefied natural gas sector.

Mr Bell, the Qenos boss, backs Mr Frydenberg's call to open new areas for gas exploration but says more needs to be done.

Additional supplies are becoming available but Mr Bell says that has yet to work its way through to more affordable prices.

APPENDIX A

“My shareholders in a \$200m expansion in Altona gave the go ahead on the basis that gas would turn up at a competitive price,” said Mr Bell. “And now we’ve got a situation where the whole investment has been undermined by the fact we’ve can’t buy competitively priced gas any more.”

With its main petrochemical competitors in the Middle East and the US able to tap cheap gas, Qenos is hopeful price relief will arrive and enable it to commit to new investments.

PERRY WILLIAMS, SENIOR BUSINESS WRITER

Perry Williams joined The Australian in 2018. Previously he was Asia energy reporter for Bloomberg News and prior to that held senior roles at the Australian Financial Review including resources editor and dep... [Read more](#)

FINANCIAL REVIEW

Business Energy Gas

Qenos feels hit as Bass Strait ethane supply falls short

Angela Macdonald-Smith *Senior Resources Writer*



Updated Oct 2, 2017 — 6.31pm,
first published at 11.12am

Basic plastics maker Qenos has been hit by a major shortfall in supplies of its key feedstock from the Esso-BHP Billiton Gippsland Basin joint venture, which owner ChemChina says is severely eroding profitability.

Supplies of ethane gas from the Gippsland venture were 20 to 30 per cent lower than expected, undermining a recent \$200 million expansion project at Qenos's Altona plant in Victoria, said Jonathan Clancy, responsible for government relations at ChemChina in Australia.

He said the problem has arisen because the Gippsland venture has redirected output from the Bass Strait to address shortages that Santos has experienced at its GLNG export project in Queensland, and to support the Sydney market through the Eastern Gas Pipeline.

APPENDIX A

"We never received the promised volume for the expansion project," Mr Clancy said.

"Such a large supply shortfall of ethane is having a significant impact on capacity to service the domestic market with products that keep food fresh, milk safe and transport and store water, ultimately dramatically eroding profitability."

An Esso spokesman in Melbourne wouldn't comment on "details of individual commercial matters".

"As a key supplier to the domestic gas market, the GBJV [Gippsland Basin Joint Venture] works hard to manage the needs of all of its various customers and maximise production across all of its products," the spokesman said, noting the east coast market is "in transition".

Gas buyers are already struggling with soaring prices and a scarcity of supply offers in the tight east coast market, where production has failed to keep up with demand from Queensland's LNG export industry.

The heads of Queensland's three LNG export ventures are due to meet with Prime Minister Malcolm Turnbull again on Tuesday in Canberra [to finalise a deal to head off a forecast shortfall in east coast gas in 2018](#).

[Qenos has also been hit by an increase in price for natural gas](#).

Mr Clancy said ChemChina invested in the Altona plant in expectation of expanding by 20 per cent but had seen production drop instead because of a lack of ethane, putting future investment by the Chinese player in Australia in doubt.

APPENDIX A

He noted that as ethane typically makes up 7-10 per cent of liquids-rich gas, its supply is an "imprecise science" and sales contracts are structured accordingly.

"They'll only ever commit to what they call a 'reasonable endeavours' contract, and that provides a lot of wriggle room for the interpretation of what that definition means for the supplier," Mr Clancy said.

"Unfortunately it also means that if they can stand in front of you and say we've got a gas contract that's a firm commitment that we're obliged to meet the volumes of, and therefore we're required to meet those ones first."

Qenos, the country's only user of ethane, has also suffered issues with supply to its Botany plant south of Sydney from the Cooper Basin, because Santos has been prioritising production of standard gas and has redirected much of that to GLNG.

[A contract for supply to Qenos from Cooper Basin partners Santos and Origin Energy was revised last month to include a higher price.](#) The Cooper Basin's production of ethane slumped by 20 per cent in the June quarter from a year earlier, according to consultancy EnergyQuest.

Industry sources said newer fields in the Bass Strait hold lower volumes of ethane, while in the Cooper Basin, Santos has been focusing drilling in areas to maximise natural gas instead.

"Qenos has always been in a difficult position with how much longer they'll be able to get ethane," said Graeme Bethune at EnergyQuest.