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BUSINESS 1NEWS

# Beer, bread, burgers - impact of CO2



Bottles of CO2. (Source: 1News)



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## by the multibillion-dollar Todd Corporation.

**P** An ammonia leak forced New Zealand's only domestic supplier of the gas to shut down suddenly in December — causing a drastic shortage.

Some prices skyrocketed more than 500% in a week, and supplies later dropped 50 to 60% below demand.

Businesses reliant on the CO2 have had to stop making products ranging from chicken nuggets, infant formula and beer for weeks at a time.

And documents released under the Official Information Act to 1News now show a government agency deliberately withheld details of the ammonia leak, and officials faced a litany of complaints about the CO2 shortages.

The plant in Taranaki supplied 2000 tonnes of liquid CO2 a month that is used for healthcare, dairy products, engineering, food packaging, carbonating beverages, pulp and paper processing, in greenhouses and meatworks.

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#### Beer brewers fear CO2 shortage may cripple industry

October 6, 2022

Kapuni has been New Zealand's only domestic supplier since Marsden Point was shut down in April last year.

**Q** But imported CO2 can cost 10 times as much due to shipping, overseas production costs and demand — and has a much longer lead time and transport chain, often taking months to arrive in the country.

## The shutdown

WorkSafe documents state that a toxin siren was set off by ammonia discharge at the plant, and leaked for 30 minutes before a staff member wearing a respirator was able to shut off a faulty valve.

The site was immediately shut down by Todd Energy.



The information was in bullet points titled "for us internally — not to be sent" — foreshadowing what ultimately became a five-month repair job.

An ammonia leak forced NZ's only domestic supplier of the gas to shut down suddenly in December - impacting numerous industries.  
(Source: 1News)

WorkSafe said this information was "commercially sensitive" — despite later having to release it under the OIA.

Customers reliant on the gas soon received letters from retailer BOC in January, showing prices would dramatically rise, supplies would be rationed, and if people could not sign forms to pay the new costs their deliveries would be suspended.

Rationing ensured critical services such as Fire and Emergency and water treatment plants had secure supply.

Todd Energy said the plant repairs are now in their final stages and it will be at full capacity again by June 1.

The plant has been ramping up production since February after reopening at severely reduced capacity.

During the shutdown, 16 government agencies were part of the response to manage risk to supply chains, businesses and services — including the Ministry of Business, Innovation and Employment, National Emergency Management Agency and Ministry for Primary Industries.

Some officials met with UK counterparts to learn how to manage the crisis, after the UK experienced similar supply chain disruptions.

## Business interruptions





General manager of Waitoa Beer Mark Davey. (Source: 1News)

The shutdown caused production halts and scaling back for small and large businesses nationwide.

About 17 million litres of craft beer is brewed in New Zealand a year and Waitoa in Wellington supplies a small portion of that — normally 200,000 to 250,000L.

But the shutdown was enough to cause close to \$100,000 in losses for the business that had to stop brewing for more than six weeks.

General manager Mark Davey told 1News Waitoa was still feeling the effects and playing catch up.

It was a "kick in the guts" after losses during the Covid-19 pandemic, he said, especially when the business couldn't capitalise on busier summer demand.

Supply agreements could not be met and overall trading is 30% down since the shutdown.

"So that was really disappointing... It was 100%, due to the fact that we just couldn't get any CO2."

He said the uncertainty had been "extreme".



Kapuni's breakdown has been so disruptive Waitoa has stopped getting gas from New Zealand and has instead set up more expensive monthly orders from South East Asia with a small group of other breweries — who had all had no idea when their orders would show up, if at all, after Kapuni broke down.

"If there is another seal leak in one of the valves at Kapuni, then it's going to be all over again, and everyone will be back in that same boat."

Other breweries have had to stop production and could not get beverages to retailers, or take new orders.

This impacted staffing rosters and employment of both factory workers and distribution network operators.

Dry ice was in such short supply that prices rose from \$3 per kilogram to \$25.

Freight forwarders had to import it from Australia to meet contracts to export products back overseas and shortages also meant some shipments were cancelled, causing a "crisis situation".

Dry ice is needed for transporting fresh produce, milk and cheese product samples, vaccines, and even bees.

Logistics company Kuehne and Nagel imported dry ice from Australia to then freight products like fresh meat, milk and fish back across the Tasman, or further afield to countries such as China.

New Zealand managing director Simon Dedman said it couldn't get dry ice at all at times — and it was going to the highest bidder — which became financially untenable at times.

He estimated that in some weeks 40 to 50 shipments were disrupted.

"We've had to cancel orders, or we've had to delay orders into key markets like China. There's not the same amount of money being exported.

"But if you think about it from a New Zealand Inc standpoint, there is also an inability for us to be able to get New Zealand primary produce on the shelves in large consumer markets like China. And then other markets will be able to fill that."





Todd Energy's Kapuni plant. (Source: 1News)

This meant some freight requests had to be turned down — and the company is still feeling the effects of the dry ice shortage — especially nervousness.

"We were all importing CO2 from Australia, and then Australia started seeing depletion of CO2, and there wasn't enough CO2 within Australia to support their own domestic demands. So now we're importing CO2 from the likes of China, Malaysia, [and] Singapore."

Dairy companies have voiced concerns throughout the shortage to government agencies such as MPI and MBIE — particularly when production lines halted for items such as canned infant formula.

One unnamed dairy company spokesperson said there was a "severe shortage [of required CO2] with very little visibility" and the dates of their next scheduled deliveries had become "very vague" meaning exports were "severely affected".

"Without CO2 we are dead in the water" they said, worrying customers would seek alternative products from the likes of China and Europe instead.

Packing products for export also posed new safety problems.

One company described "very dangerous" moments where products made with less



MBIE and MPI reported two dairy manufacturers had no CO2 supplies for two weeks, forcing some production to cease. At least one product was taken offline.

Tegel also had to stop producing chicken nuggets due to the inability to access CO2.

It is also used as a coolant for sausages and flushes oxygen from packaged goods to keep them fresh.

Tegel said at the start of this year CO2 supplies had been severely rationed.

Chief executive Egbert Segers told 1News this week the company had been "severely impacted" and chicken nugget production had been "significantly down".

The company now has a new production process that "takes longer, it's less efficient and raises our costs but it had to be done" in response to CO2 uncertainties.

The Heavy Engineering Research Association also contacted MBIE to say the shortage had been a "very real threat" to the steel industry and it was a struggle to increase work volumes.

Fabricators had a 400 to 500% cost increase from the closure, the costs of CO2 went "from five figures well into six figures" for some.

It is critical for welding, steel construction and maintenance. The association warned the Government of cost implications for building roads, buildings, and ports.

Oji Fibre had to reduce the production of containerboard and food packaging products.

It told officials it needed 70 tonnes of CO2 per month and was in "uncharted territory" without it.

It reduced production to honour domestic contracts but had to forgo exports — that are more profitable — at a "significant cost".

It called for Government intervention to stop the supply uncertainties and rank business' needs.





Chicken nuggets being made. (Source: 1News)

A bread producer told MPI it was having to do a "live experiment" in production to find a new way to make bread with less CO<sub>2</sub> and had very short warning of supply problems.

A pork producer said the shortage had "greatly reduced shelf life" of food and the company was in daily negotiations to find supplies, experiencing "significant price increases", with "frustration", "complexity" and delays.

This was also a problem for producers of mince, meatballs and burger patties who reported shelf life had reduced by up to half without the use of CO<sub>2</sub> in food processing and packaging.

And tomato growers reported back that the inflated price of CO<sub>2</sub> was one of the things driving retail prices up further.

A crown research institute also told officials it had to stop some research as it couldn't access the processed gas.

## Tensions at government departments

Other documents released to 1News from the Energy Efficiency and Conservation





Emails from EECA show staff were concerned they were giving a "talk to the hand response" to businesses needing help and later when MBIE became the lead agency, one EECA staff member emailed others saying "MBIE has not added anything tangible re potential assistance as we suggested they should".

Emails between EECA staff suggested an example from brewers wanting help with the shortage was "ridiculous" and some expectations of EECA's ability to help industries were misaligned.

EECA compared the expectations to wanting EECA to "have resolved the GIB shortage by funding new plants in NZ so plasterboard didn't need to be imported".

In a subsequent statement to 1News EECA said this reflected "the natural progression of that discussion".



## "Talk to the hand response"

— EECA STAFF |

Meanwhile, the seriousness of the significant supply shortages became clear in EECA briefings that noted if Wellington could not get enough CO2 water would not be safe to drink.

MPI said 350,000 people would likely have boil water notices in Wellington and 59,000 in New Plymouth, both for a month, if those treatment plants couldn't get the CO2 they needed.

It also said NZ Blood would not be able to transport blood and hospitals would not be able to keep organs cool or use CO2 for anaesthesia, leading to potential loss of life, if orders weren't honoured.

Documents from Energy Minister Megan Woods and MBIE show government support similar to the Covid response was considered, but there were "no regulatory levers" to steer where supplies would go, without changing New Zealand law.

MBIE also said intervening could "set a precedent" — but it noted the "sizeable and prolonged" shortage throughout 2023 would worsen the cost of living and inflation.



However, the MBIE incident management team did manage to ensure Customs prioritised shipments of CO2 into New Zealand over general cargo and it set up a hotline in case this was not honoured at ports.

Officials even asked CRIs and the NZDF if there was any spare CO2 that could be rediverted to others in need.

It was rationed to dairy companies, who then expressed concern back to MBIE about reputational damage to New Zealand brands if product quality deteriorated.

When MBIE was preparing an email response to media questions, a drafted line saying the shortages had "highlighted a weakness" in the domestic CO2 market was taken out.

MBIE has since told 1News the situation did highlight a weakness — and removing this line was "a style choice".

MPI called its response Operation Bubble and officials across government departments made a risk register that identified resourcing constraints, disagreements between agencies or ministers and inconsistent messaging, as problems that could lead to lost credibility and confidence from stakeholders and ministers.

They were concerned also about stockpiling, port strikes and a Cabinet reshuffle hindering the response.

OIA documents also showed MPI was not consulted before Marsden Point closed about the impacts of a potential CO2 shortage that could arise — this was noted retrospectively in a briefing to then Food Safety Minister Meka Whaitiri.

There will be a WorkSafe inspection at Kapuni in the next month.

Todd Energy declined an interview request but said in a statement the plant repair process has been complicated "due to the lack of modern instrumentation" and it took "some time" to source parts from overseas and install them.

When asked if Todd could give any assurances there will not be another shutdown and sudden supply chain problem again this year, the corporation said: "Todd will always put safety before production."

Todd has brought in extra parts so it does not have to wait weeks to address a



BOC — which sells compressed gas in tanks and dry ice from Kapuni CO2 — says rationing has now stopped and supply pricing is stabilising ahead of the plant returning to full capacity.

MBIE told 1News: "We expect the CO2 shortage will ease significantly when Kapuni returns to full capacity, however imports will continue to be used to meet demand."

## Government working to build supply chain resilience

When asked if the Government could give any assurances Aotearoa could avoid another major supply shortage next time Kapuni needed to shut, Energy Minister Megan Woods said: "I think probably the last three years has taught everyone about what that kind of crystal ball gazing looks like."

"But what I can say is that Government has done what it can to work with our industries to make sure that we are building that resilience into a supply chain."

This included "getting a greater number of suppliers into New Zealand".



Energy Minister Megan Woods. (Source: 1News)

She said: "We've actually got some of our big users of CO2, that are now looking at additional contracts with suppliers that we didn't really even have operating in New

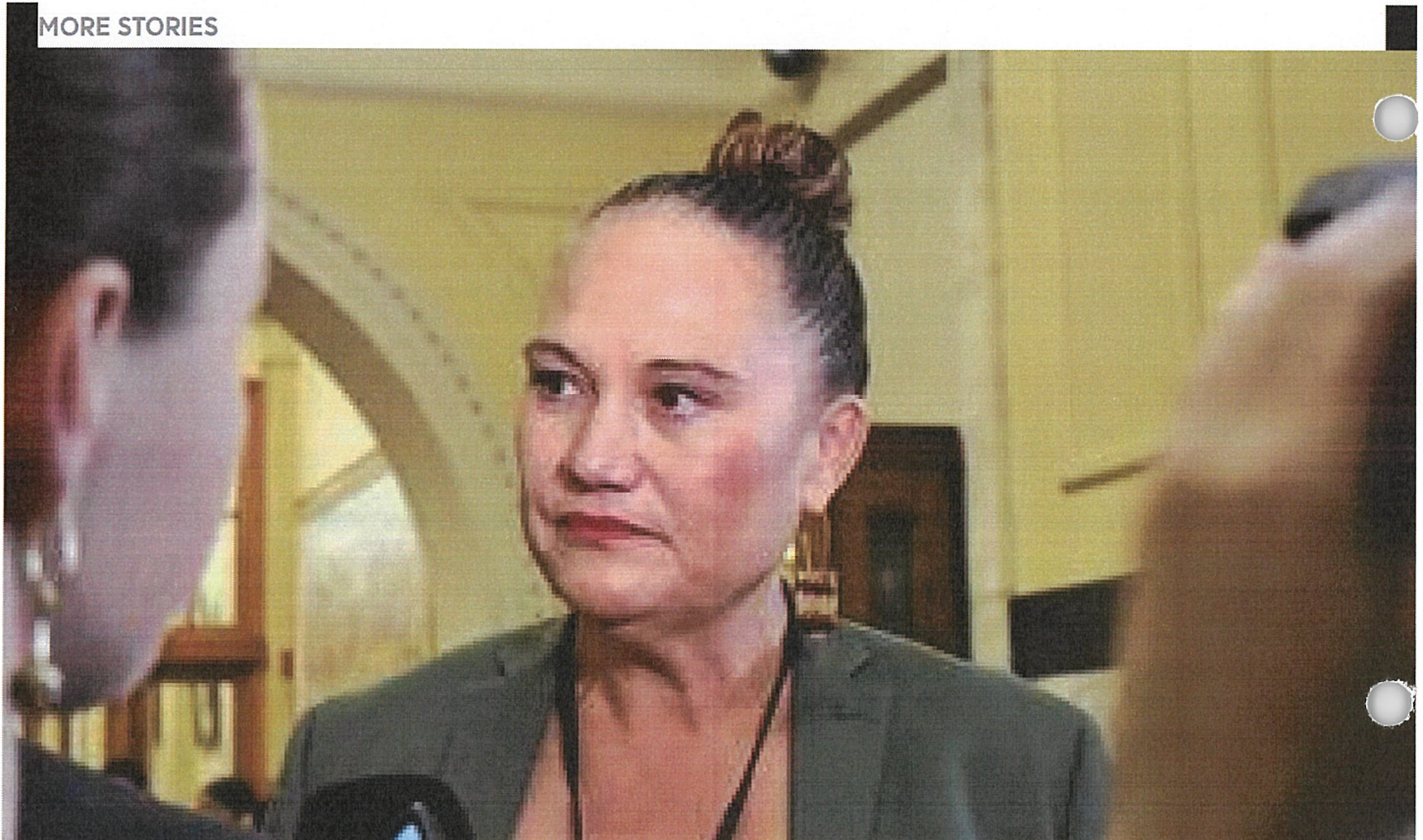


commercial arrangements that are in place that actually the Government is not part of. So I think probably what we've learned is also about how it is we need to make sure people who have contracts in place [and] how they're being communicated [with] from the people they're buying the gas from — and that is not the Government."

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Under the public register, companies earning more than \$20 million a year in revenue would need to report how they tackled exploitation risks in their operations and supply chains.

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