



## Australian Industry Verification Report

### Verification & Case Details

<b>Initiation Date</b>	24/06/2019	<b>ADN:</b>	2019/83
<b>Case:</b>	High density polyethylene - Dumping Investigation – Qenos Pty Ltd – Korea, Singapore, Thailand and USA		
<b>Case Number</b>	515		
<b>Company</b>	Qenos Pty Ltd		
<b>Location</b>	Melbourne		
<b>Verification from</b>	25/06/2019	<b>to</b>	27/06/2019, 12 & 17/07/2019
<b>Investigation Period</b>	01/04/2018	<b>to</b>	31/03/2019
<b>Injury Period</b>	01/04/2015	<b>to</b>	31/03/2019

THIS REPORT AND THE VIEWS OR RECOMMENDATIONS CONTAINED THEREIN WILL BE REVIEWED BY THE CASE MANAGEMENT TEAM AND MAY NOT REFLECT THE FINAL POSITION OF THE ANTI-DUMPING COMMISSION

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## 1 COMPANY BACKGROUND

### 1.1 Corporate Structure and Ownership

Qenos Pty Ltd (Qenos) is a private company incorporated in Australia in 1991. The parent entity is Qenos Holdings Pty Ltd. Qenos (formerly Kemcor Australia) was formed in 1999 as a joint venture between Orica (50%) and ExxonMobil (50%). In 2008, Qenos became a subsidiary of China National Bluestar (Group) Co. Ltd, a joint venture between China National Chemical Corporation (ChemChina) and the U.S. Blackstone Group. Currently, Qenos' ultimate parent entity and majority owner is ChemChina with 79.48% ownership, the other 20.52% is owned by Shandong International Trust Corporation. ChemChina is a state-owned enterprise and 100% owned by State-owned Assets Supervision and Administration Commission of the State Council (SASAC) of China. ChemChina is a chemicals company and owns numerous subsidiaries in China and around the world.

Qenos is a fully integrated polyethylene manufacturer and has manufacturing plants in Altona VIC and Botany Bay NSW. The Altona complex consists of three manufacturing plants being Qenos Olefins, Qenos Plastics and Qenos Resins. The Botany site consists of four plants, identified as Olefines, Alkatuff, Alkathene and Site Utilities. Qenos manufactures various grades of polyethylene including high density polyethylene (HDPE), low density polyethylene (LDPE), linear-low density polyethylene (LLDPE), and metallocene-LLDPE (mLLDPE).

Qenos is also a supplier of externally sourced products including resins, modifiers, rubbers and elastomers and copolymers.

### 1.2 Related Parties

The verification team examined the relationships between parties involved in the manufacture and sale of HDPE (the goods).

The verification team examined Qenos' ownership structure and found the Australian industry does not have any related party customers or suppliers of HDPE during the investigation period.

## 2 THE AUSTRALIAN INDUSTRY

### 2.1 Manufacturing in Australia

Qenos stated in its application that it is the sole manufacturer of high density polyethylene (HDPE or the goods) in Australia. The Australian industry produces HDPE in Altona VIC and Botany NSW. The Anti-Dumping Commission (the Commission) is not aware of any other producer of HDPE in Australia and therefore considers that the Australian industry for HDPE is represented by Qenos only.

#### 2.1.1 Production process

Qenos stated that approximately 90% of HDPE is produced at the Altona site with less than 10% of HDPE produced at the Botany site. The verification team completed an Australian industry verification visit to Altona and undertook a tour of Qenos' manufacturing plant. Qenos explained the production process and the tests that applied to each product.

As stated earlier, the Qenos Altona site comprises of three manufacturing plants, Olefins, Plastics and Resins. Qenos is a fully integrated manufacturer and manufactures both the ethylene and HDPE. The production of ethylene and HDPE are capital intensive manufacturing processes and the Altona site operates 24 hours a day, seven days a week. The plant has capacity to produce approximately 200k tonnes per annum of HDPE.

The main raw material for HDPE is ethylene which is manufactured by Qenos using ethane gas or liquid petroleum gas (LPG) as feedstock. For the Altona site, Qenos sources the ethane feedstock from Bass Strait (Esso Long Island Point) via a pipeline which is supplied by ExxonMobil Australia & BHP Billiton with whom they have a long term contract. The Long Island Point Plant is owned by Esso Australia Resources Pty Ltd<sup>1</sup> and BHP Billiton Petroleum (Bass Strait) Pty Ltd in a 50/50 joint venture. For the Botany site, the ethane feedstock is sourced from the Cooper Basin in South Australia, which is supplied by Santos and Origin Energy.

Qenos can also use propane and butane as feedstock sourced from the Mobil Altona Refinery, however it provides a much lower yield when converting to ethylene (ethane can provide a 80% yield) and therefore it is not used as the primary feedstock.

Ethylene is a colourless gas, a hydrocarbon molecule consisting of carbon and hydrogen atoms and represented by the chemical formula  $C_2H_4$ . The Olefins plant processes the ethane into ethylene using steam cracking technology in which steam is injected into the ethane in the furnace. Cracking is the process by which heavier hydrocarbon molecules are broken up into lighter molecules by means of heat. Olefins has two cracking units called SCAL1 and SCAL2, and both can produce ethylene.

The Plastics & Resins site obtains the ethylene from the Olefins plant and converts the ethylene into HDPE. The Resins plant uses the Hoechst slurry phase technology and the Qenos Plastics site uses the Unipol gas phase process. Both are low pressure polymerisation processes to make HDPE resin. The ethylene (monomer) is mixed and reacted with hydrogen gas, catalyst and comonomer (butane, pentene or hexene) at controlled pressures and temperatures. A catalyst is used to initiate the reaction and alters the speed of a chemical reaction. The HDPE powder is

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<sup>1</sup> ExxonMobil Australia Pty Ltd is the parent entity of Esso Australia Resources Pty Ltd.

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then extruded through a compounder and cut into small pellets. Additives such as carbon black, can also be mixed in with the powder to form the final product.

The pellet quality is important as it can affect the material flow and efficiency when feeding the polyethylene into an extruder. Qenos measures the pellet quality by using a pellet shape and size distribution analyser.

The Qenos Botany site also uses a similar production process. Other products Qenos manufactures and sells include low density polyethylene and linear low density polyethylene. The Altona site also produces by-products including propylene and pygas. These products are not the subject of this investigation.

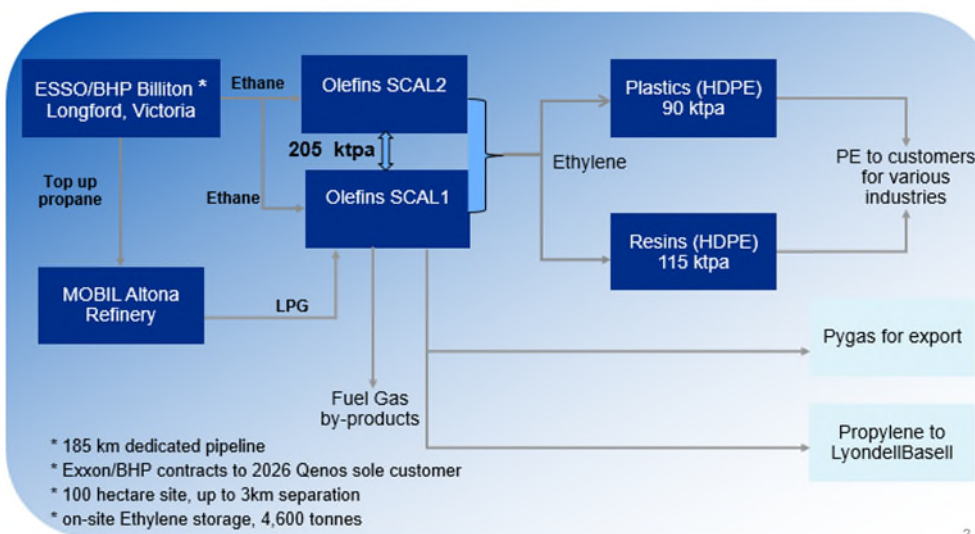


Figure 1 – Qenos Altona plant operations

Qenos also has a technical centre at the Altona site which tests the products for quality and consistency as well as developing new products and processes.

## 2.2 Model Control Codes (MCCs)

Qenos provided sales data in accordance with the MCC structure detailed in Anti-Dumping Notice (ADN) No. 2019/83. Qenos was unable to provide their cost data in accordance with the MCC structure and instead this was provided on a grade-by-grade level.

Qenos sold goods with the following MCCs during the investigation period:

- A-B-N
- A-B-O
- A-F-N
- A-I-N
- A-P-C
- A-T-N
- B-B-C
- B-B-N
- B-P-C
- B-I-N

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Below is a table that displays the relationship between the product code and the MCC categories for goods sold by Qenos during the investigation period.

Grade	MCC		
	Specification	Application	Other additives
BMSS-BL	B	B	C
BMSS	B	B	N
GE4760	A	B	N
GE4760	B	B	N
GF7660	A	B	N
GF7660	B	B	N
GF7740	A	T	N
GM4755	A	F	N
GM7655	A	P	N
HCR193B	A	P	C
HD0390	A	I	N
HD0490	A	I	N
HD0490	B	I	N
HD0790	A	I	N
HD0840	A	B	N
HD1090	A	I	N
HD1090	B	I	N
HD1155	A	B	N
HD1155	B	B	N
HD2090	A	I	N
HD3690	A	I	N
HD5148	A	B	N
HD5148	B	B	N
HD6095	B	B	N
HD6400	A	B	N
HD700B	B	P	C
HDF145B	A	P	C
HDF145B	B	P	C
HDF188	A	B	O
HDF193B	A	P	C
HDF193B	B	P	C
HDF193N	A	P	N
HDF693	A	B	N
HDF695	A	B	N
HDF895	A	F	N
HDF995	A	F	N
MDF169	A	P	N
MDF169	B	P	N

**Table 1 – relationship between grade and MCC**

The verification team relied on the following evidence to evaluate the accuracy of the above MCC structure for goods sold by Qenos:

Category	Characteristics of category
Specification	Prime or non-prime. Determined with reference to description on invoice. Non-prime goods referred to as off-grade on invoice.

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Category	Characteristics of category
Application	Product brochure categorises the grades by application type. Specific customers purchase grades within specific application categories depending on industry they are in.
Other additives	Certain grades require additives such as the addition of black for certain pipe grades for ultra-violet (UV) stabilisation. Other additive is listed on the invoice as part of grade of product sold.

**Table 2 – evidence of MCCs and grades**

### 2.3 Like goods

Like goods are defined under section 269T(1) of the *Customs Act 1901* (the Act)<sup>2</sup> as:

goods that are identical in all respects to the goods under consideration or that, although not alike in all respects to the goods under consideration, have characteristics closely resembling those of the goods under consideration.

The verification team considers that the HDPE, also referred to as the goods, manufactured by Qenos is identical to, or have characteristics closely resembling, the goods exported to Australia.

HDPE is a variety of polyethylene (PE) and is considered a commodity product.

- **Physical likeness:** The goods exported to Australia from the subject countries are physically similar to the HDPE produced by the Australian industry. Both the goods and like goods have identical or similar mechanical properties, thermal properties and chemical properties. Qenos provided product brochures and technical sheets which described the HDPE grades produced by Qenos and the density and melt index specifications applicable to those grades. The like goods have a cloudy white appearance and the resin is produced in pellet form with a minimum density of .94 gram per cubic centimetre. The verification team compared Qenos product specifications with the imported goods and consider the goods produced by Qenos to have physical characteristics that closely resemble the imported goods.
- **Production likeness:** The domestically manufactured goods and the imported goods are manufactured via similar manufacturing processes, using the same or similar raw materials in the production process. The Commission considers that the production of HDPE requires specific chemical reactions to make the goods. Whilst these processes may vary in terms of technology or methodology, they all rely on essentially the same raw material inputs to produce HDPE. The equipment and processes required to produce HDPE is therefore alike in most significant practical aspects.
- **Commercial likeness:** Qenos sell the goods to common users and directly compete in the same market as the goods imported from the subject countries. The verification team is satisfied that Qenos produces like goods that are sold to the same customers and therefore compete directly with the imported goods.
- **Functional likeness:** HDPE is produced in various grades and designed for application in various market sectors. The locally produced and imported good can be considered functionally alike, as they have similar end uses. The imported goods and the goods manufactured by the Australian industry are functionally alike as they can be used interchangeably in the production of downstream products through intermediate

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<sup>2</sup> References to any section in this report relate to provisions of the Act, unless specifically stated otherwise.

manufacturing processes (e.g. blow moulding, injection moulding, film and pipe extrusions).

## **2.4 Preliminary like goods assessment**

The verification team is satisfied that:

- HDPE manufactured by Qenos are like to the goods;<sup>3</sup>
- at least one substantial process of manufacture of HDPE is carried out in Australia;<sup>4</sup>
- the like goods were, therefore, wholly or partly manufactured in Australia by Qenos;<sup>5</sup> and
- there is an Australian industry, consisting solely of Qenos, which produce like goods in Australia.<sup>6</sup>

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<sup>3</sup> Section 269T(1).

<sup>4</sup> Section 269T(3).

<sup>5</sup> Section 269T(2).

<sup>6</sup> Section 269T(4).



## 3 AUSTRALIAN MARKET

### 3.1 Background

Qenos is the only manufacturer of HDPE in Australia. In addition to its own production, the Australian market is supplied by imports, particularly those from the Republic of Korea (Korea), the Republic of Singapore (Singapore), the Kingdom of Thailand (Thailand) and the United States of America (USA), also referred to as the subject countries, as well as Malaysia, Saudi Arabia and the United Arab Emirates. Qenos acknowledges that it lacks the capacity to supply the entire Australian market for HDPE, and describes the import supply chain in Australia as well established.

According to Qenos, there are no commercially significant substitutes for HDPE.

### 3.2 Market structure

#### 3.2.1 Market segmentation and end use

In Australia, HDPE is primarily supplied into four key applications: pipe, film, blow moulding and injection moulding.<sup>7</sup> The relevant end uses and demand drivers for these applications are outlined in the table below.

Application	End uses	Demand drivers
Pipe	<ul style="list-style-type: none"> <li>• Mining</li> <li>• Coal seam gas</li> <li>• Irrigation</li> <li>• Distribution (e.g. water, gas)</li> </ul>	<ul style="list-style-type: none"> <li>• Activities in the mining sector (either new mine or 'sustenance' capital)</li> <li>• Drilling activity for coal seam gas operators (number of wells drilled)</li> <li>• Farm sector output<sup>8</sup></li> <li>• Dwelling commencements and construction output<sup>9</sup></li> </ul> <p>Given demand for 'pressure pipe' (PE100) is often project driven, Qenos described demand in this segment as 'very lumpy'.</p>
Film	<ul style="list-style-type: none"> <li>• Carton liners for meat and produce</li> <li>• Cereal box liners</li> </ul>	<ul style="list-style-type: none"> <li>• Domestic final demand (key economic indicator)</li> <li>• Substitution effect of other packaging materials and imported finished goods (e.g. film on roll, or unfilled packages)</li> </ul>
Blow moulding	<ul style="list-style-type: none"> <li>• Bottles (less than four litres) used for milk, cream, yoghurt, water and juice</li> <li>• Household industrial chemicals, i.e. bottles (up to ten litres) primarily used for non-food packaging such as detergent/household cleaners and personal care products</li> </ul>	<ul style="list-style-type: none"> <li>• Domestic drinking milk sales (based on customer demand and population)</li> <li>• Long term contracts for private label milk supply</li> <li>• Consumer preference for packaging<sup>10</sup></li> <li>• Domestic final demand (key economic indicator)</li> <li>• Real retail sales (key economic indicator)</li> <li>• Imported finished goods substitution<sup>11</sup></li> </ul>

<sup>7</sup> 'Tape and monofilament' is also considered a relevant HDPE application; however, this appears to be less significant within the context of the overall Australian market, as outlined in Figure 2 below.

<sup>8</sup> The impact of farm sector output on HDPE volume is difficult to predict as (for example) periods of drought may reduce farm sector output, but increase the incentive to invest in irrigation systems.

<sup>9</sup> Construction output is increasingly becoming a lead indicator, as a large part of this segment is represented by the rehabilitation of existing pipelines (e.g. replacing metal or concrete pipes with HDPE).

<sup>10</sup> HDPE is used almost exclusively for two and three litre fresh milk bottles; however, substitute products include cartons, and to a lesser extent glass bottles.

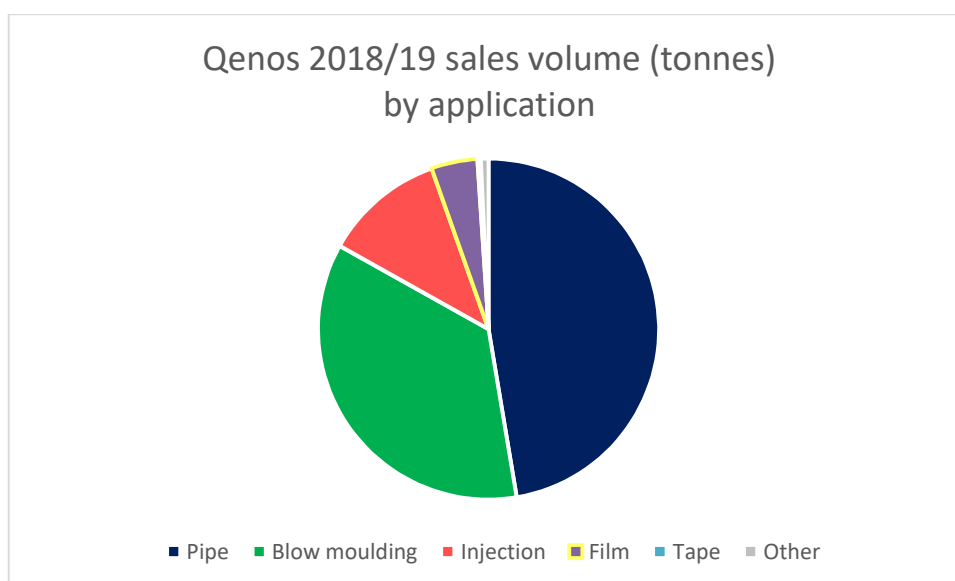
<sup>11</sup> For example, shampoo.

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	<ul style="list-style-type: none"> <li>High molecular weight, i.e. large containers greater than 10 litres used for packaging both dangerous good chemicals and food, such as drums, jerry cans and industrial bulk containers</li> </ul>	<ul style="list-style-type: none"> <li>Demographic changes, e.g. professional cleaners, eating out<sup>12</sup></li> <li>Demand for 'greener' packaging through increased use of polyethylene terephthalate (PET), biopolymers and light weighting bottles, plus polypropylene</li> <li>Manufacturing sector output (key economic indicator)</li> <li>Agricultural and environmental (e.g. weather) conditions</li> <li>Imported finished goods substitution<sup>13</sup></li> </ul>
Injection moulding	<ul style="list-style-type: none"> <li>General purpose (e.g. caps and closures, pails, DIY sealant/adhesive cartridges)</li> <li>Mobile garbage bins<sup>14</sup></li> <li>Large Storage, e.g. crates for fruit and produce storage and milk</li> </ul>	<ul style="list-style-type: none"> <li>Consumer demand</li> <li>Local government policies with respect to household and industrial waste management</li> <li>Domestic building construction rates</li> <li>The inclusion of 'recyclate' in products</li> <li>Thin walling of bins, and reduction in average bin capacity</li> <li>Increasing popularity of using collation shrink wrap as an alternative to cartons and crates (beer, bottled water, milk).</li> <li>Seasonality factors</li> </ul>

**Table 3 – demand drivers for each application and end use**

As outlined in the chart below,<sup>15</sup> it appears that grades for pipe and blow moulding applications comprised Qenos' largest contribution to the Australian HDPE market during the investigation period.<sup>16</sup> In particular, sales for pipe applications, including pipe grades that were both manufactured and imported by Qenos, comprised almost half of total sales.



**Figure 2 – Qenos sales volume in 2018/19 by application**

<sup>12</sup> This effect can be offset during times of stagnating wages and increased costs of living.

<sup>13</sup> Dangerous good containers tend to be made locally (for example, weed spray is imported in bulk).

<sup>14</sup> This is Qenos' largest end use for injection moulding.

<sup>15</sup> Using sales data provided in Appendix A4.

<sup>16</sup> The 'other' category includes sale of scrap.

### **3.2.2 Sales and distribution**

Geographically, Qenos distributes HDPE to all states in Australia. In its view, Melbourne is the largest consumer of HDPE, followed by Sydney, then Brisbane. Some product is sold to Adelaide and Perth. Any HDPE sold to Perth is usually sent by rail or ship (almost never by road).

HDPE is sold to both distributors and end-users in the Australian market. However, Qenos only sells direct to end-users, and does not have any agency or distribution agreements in place. The product is delivered free-into-store, which equates to 'delivered into silo'. Some customers may be charged a premium for distant deliveries.

Qenos considers that it can offer a different 'value proposition' (compared to importers), this includes:

- the provision of a full range of PE resins;
- the provision of local technical support;
- the ability of customers to buy as much as is needed; and
- the ability of customers to buy quickly.

Qenos places a premium on this value proposition.

During the visit, Qenos estimated that 80 per cent of its customers order before midday for next day delivery. Alternatively, customers may order an overall amount for the month, with dates of delivery shifted around as necessary. To assist with production, Qenos prefers to obtain a three month rolling forecast of demand, although it acknowledged that customers can tend to 'over forecast'.

Qenos has contractual arrangements with certain key customers. These arrangements are typically in place for two years. In most cases, contractual agreements do not stipulate a purchase volume, and are considered a 'best endeavours' agreement to supply. Instead, volume based rebate incentives are built into each contract to encourage customers to purchase a certain volume. The verification team notes that the majority of rebates issued during the investigation period were for contract customers.

### **3.2.3 Pricing**

Qenos describes itself as a 'price taker'. For key customers subject to contractual arrangements, pricing is predicated on a negotiated formula, comprising:

- an agreed published pricing marker for the relevant application, such as the ICIS South-East Asian pricing marker or S&P Global Platts (Platts), expressed in United States dollars (USD);
- a notional amount in USD to bring the 'cost insurance and freight' pricing marker 'to Australia';
- an agreed exchange rate (e.g. Reserve Bank of Australia) to convert the USD value to AUD;
- a notional amount to account for 'local logistics';
- any relevant grade premiums; and
- any relevant rebates.

Qenos advised that formula-based prices are usually calculated for each month, two months in advance; for example, August pricing is calculated based on the relevant weekly ICIS markers in June.

The verification team found that during the investigation period approximately 70 per cent of Qenos' sales of HDPE (based on volume) were priced using contract formulas. For the remaining customers, a market price is set at a 'negotiated competitive level' and is then adjusted up or down on a monthly basis. Market prices are determined two months ahead taking into account movements in the ICIS marker,<sup>17</sup> and any environmental factors at play. This is communicated to customers in a pricing letter. According to Qenos, negotiation typically occurs whenever a gap opens up between the Qenos price and import price offers.

Taking into account the relevant pricing mechanisms described above, which show that HDPE pricing in the Australian market is determined by South East Asian regional price, or movement in the South East Asian regional price, it does not appear that Australia HDPE pricing is cost driven. Further, it is understood that HDPE for pipe applications is usually priced approximately \$USD110 higher than HDPE for blow and injection moulding grades, due to the cost of the carbon black additive. Similarly, HDPE for film applications is usually priced approximately USD50 higher than HDPE for blow and injection moulding grades.

As outlined in Section 2.3, Qenos describes HDPE as a commodity product, meaning end users are unlikely to discern significant physical or functional differences. Given there is little product differentiation, the verification team considers it likely that price will be at least one of the key considerations in any purchasing decision.

During the visit, Qenos claimed that some customers 'will leave over small amounts' (for example AUD10 or AUD20 per tonne), suggesting that it considers the Australian market for HDPE to be price sensitive. However, factors other than price that could influence purchasing decisions include service, supply, quality, technical support and product range. It is expected the Commission will consider these factors further during the course of the investigation, and is likely to approach end users in the market to seek their views.

Qenos also claims that the Australian market for HDPE is transparent, as participants in the market have access to import data from the Australian Bureau of Statistics. Further, information obtained during the visit suggests that it is not uncommon for customers that are subject to market pricing to obtain price offers from more than one source. As a result, purchasers of HDPE have the ability to compare prices of domestically produced product to imported product, and there is evidence to suggest that imported HDPE prices may be used as leverage in price negotiations with Qenos.

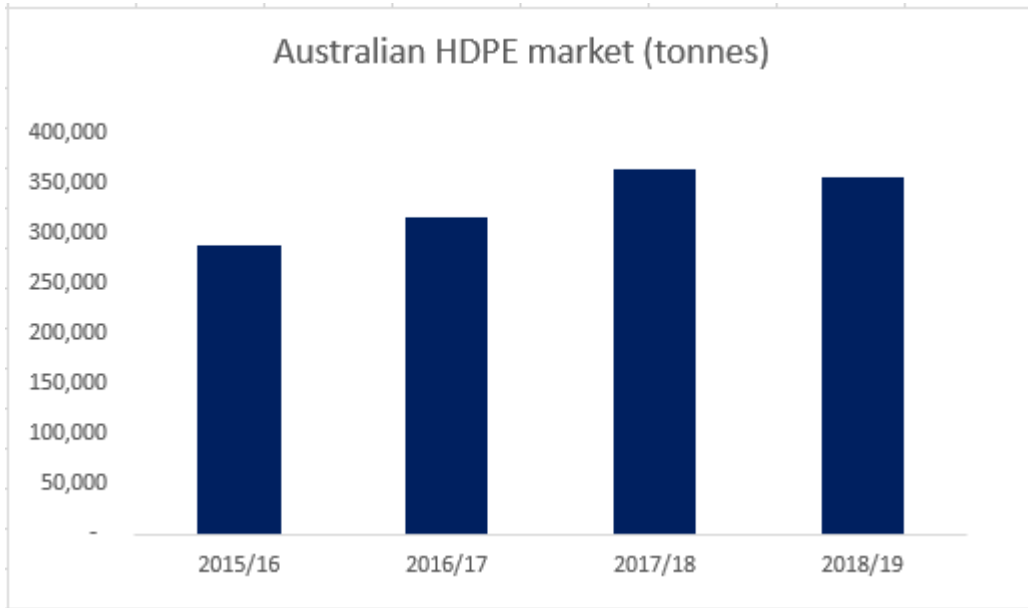
### **3.3 Market size**

As shown in Consideration Report No. 515 (CON 515), the following graph depicts the Commission's estimate of the Australian market size for HDPE at the time of initiation using data from the Australian Border Force import database and Qenos' sales data for the period 1 April 2015 to 31 March 2019. The verification team has assessed the sales data submitted by Qenos and considers it reasonable and reliable for this purpose (Chapters 4 and 5 refer).

In particular, the Commission estimates that the size of the Australian market for HDPE appeared to be above 355,000 tonnes during the investigation period.

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<sup>17</sup> For example, two months prior will be considered when pricing for August.



**Figure 3 – Australian HDPE market size<sup>18</sup>**

The graph above shows that the total Australian market size for HDPE has increased by 24 per cent overall since 2015/16; however, the market contracted slightly in 2018/19.

Data supporting the assessment of the Australian market size for HDPE is provided at **Confidential Appendix 1**.

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<sup>18</sup> Based on years ending 31 March.

## 4 UPWARDS VERIFICATION OF SALES

### 4.1 Verification of sales completeness and relevance

Verification of relevance and completeness is conducted by reconciling selected data submitted "upwards" through management accounts and up to audited financial accounts. The verification team verified the completeness and relevance of the Australian sales listing provided in the application by reconciling this to audited financial statements in accordance with ADN No. 2016/30.

The verification team reconciled Qenos' total sales value for all products sold during the investigation period from Qenos' 2018 audited financial statements to its accounting system. From Qenos' accounting system, Qenos was able to show the verification team the value and volume of:

- Domestic HDPE sales only (which reconciled to the Australian sales listing)
- Domestic sales pertaining to products other than HDPE
- Domestic sales of imported HDPE
- Export sales of HDPE

The verification team did not identify any issues during the upwards sales verification process. Details of this process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

### 4.2 Sales completeness and relevance finding

The verification team is satisfied that the sales data provided in the application by Qenos is complete and relevant.

## 5 DOWNWARDS VERIFICATION OF SALES

### 5.1 Verification of sales accuracy

The accuracy of data is verified by reconciling selected data submitted "downwards" to source documents. This part of verification involves the process of agreeing the volume, value and other key information fields within the sales data down to source documents. This verifies the accuracy of the data (e.g. for sales data, the volume and value of the records for selected transactions are accurate and reflect sales that did occur). The verification team verified the accuracy of the Australian sales listing submitted in the application by reconciling these to audited financial statements in accordance with ADN No. 2016/30.

The verification team identified the issues outlined below during this process. Details of this verification process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

#### 5.1.1 Exceptions during Verification of Sales Accuracy

No.	Exception	Resolution
1	For one of the 12 domestic sales samples, the verification team found that there was a sale to an overseas customer. Considering all invoice selections were from the Australian sales listing, this was seen as an inconsistency.	This was a sample sale to an overseas customer and the quantity sold was minimal. Based on the information provided by Qenos, the verification team identified all sales to overseas customers incorrectly listed in the Australian sales listing. The verification team removed all sales that had an overseas customer from the Australian sales listing, for the purposes of the Australian sales analysis.
2	For the selected invoices with a rebate as part of the sales listing, the net revenue amount in the Australian sales listing did not match the source documents.	Qenos confirmed that the rebate amounts from the sales listing were not reflected in the source documents for the respective sales. The verification team requested that rebates be included in the sales spreadsheet in order to bring the price to a "net invoice value". Qenos revised the Australian sales spreadsheet to include rebates for the appropriate transactions.

The verification team established the following information as outlined in the table below:

Item	Methodology Applied
Product	Based on invoice
Product code	Based on invoice
Currency	Based on invoice
Customer number	Based on invoice

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Customer name	Based on invoice
Reference document number (invoice number)	Based on invoice
Date of sale	Taken as invoice date, as stated on invoice
Sales order number	Based on invoice
Revenue (gross revenue)	Based on invoice
Rebate	Based on revised rebate listing
Net revenue	Based on invoice and revised rebate listing
Sales quantity	Based on invoice
Packaging	Based on packaging supporting documents
Payment of the invoice amount	Based on payment listings and bank deposit statements
Credit terms	Based on invoice
Region	Based on invoice

### 5.2 Related party customers

Qenos did not sell HDPE to any related parties during the investigation period. The verification team found no evidence to believe otherwise.

### 5.3 Sales accuracy finding

The verification team is satisfied that the sales data provided in the application by Qenos, including any required amendments as outlined in the exception tables above, is accurate. Details of this verification process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

Accordingly, the verification team considers Qenos' sales data suitable for analysing the economic performance of its HDPE operations from 1 April 2018 to 31 March 2019.



## 6 VERIFICATION OF COST TO MAKE AND SELL

### 6.1 Verification of completeness and relevance of CTMS data

The verification team verified the completeness and relevance of the cost to make and sell (CTMS) information provided in the application by reconciling it to audited financial statements in accordance with ADN No. 2016/30.

The verification team did not identify any issues during this process. Details of this verification process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

### 6.2 Verification of CTMS allocation methodology

The verification team verified the reasonableness of the methodology used to allocate the CTMS information provided in the application to the relevant MCCs, in accordance with ADN No. 2016/30.

Cost Area	Methodology Applied
Raw Materials	<p>Qenos is fully integrated and therefore manufactures its own main raw material being ethylene.</p> <p>The verification team verified the costs associated with the Olefins plant which is responsible for producing ethylene which is then transferred to other Qenos plants responsible for the manufacture of HDPE.</p> <p>Qenos use standard costing however the verification relied on trial balances and management accounts to obtain an actual cost of ethylene which then formed the transfer price from the Olefins plant to the Plastics, Resins and Botany plants which manufacture HDPE.</p> <p>As ethylene is not used in its entirety when producing HDPE, the remaining ethylene is on-sold as various by-products domestically and on the export market.</p> <p>The unit cost allocated is based on a weighted average for the quarter.</p> <p>Evidence relied on:</p> <ul style="list-style-type: none"> <li>Trial balance and management accounts</li> <li>Cost and allocation presentations produced from SAP system</li> <li>CTMS cost allocation methodology spreadsheet</li> <li>Invoices for gas purchases</li> </ul>
Additives	Standard costs, using bill of materials and production cost worksheets
Manufacturing Overheads	Actual costs allocated on a per tonne manufactured basis
Labour	Actual costs allocated on a per tonne manufactured basis
Depreciation	Actual costs allocated on a per tonne manufactured basis

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Variance	Production quantity as per the production warehouse
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The verification team identified the issue outlined below during this process. Details of this verification process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

### 6.2.1 Exceptions during verification of CTMS allocation methodology

No.	Exception	Resolution
1	Fixed costs reported at Appendix 6 were annualised on a calendar year with a quarterly weighted average applied to the investigation period which is not a calendar year.	Fixed costs in Appendix 6 have been revised for each quarter of the injury analysis period as a weighted average based on the annual figure from 1 April to 31 March each year rather than the calendar year.

### 6.3 Verification of accuracy of CTMS data

The verification team verified the accuracy of the CTMS information provided in the application by reconciling it to source documents in accordance with ADN No. 2016/30.

The verification team did not identify any issues during this process. Details of this verification process are contained in the verification work program and its relevant attachments, at **Confidential Attachment 1**.

### 6.4 Cost to make and sell verification finding

The verification team is satisfied that the CTMS data provided in the application by applicant, including any required amendments as outlined in the exception table above, is complete, relevant and accurate.

Accordingly, the verification team considers Qenos' CTMS data is suitable for analysing the economic performance of its HDPE operations from 1 April 2018 to 31 March 2019.

## 7 ECONOMIC CONDITION

### 7.1 Applicant's injury claims

In its application, Qenos claimed that the Australian industry has experienced injury in the form of:

- loss of sales volume;
- reduced market share;
- price depression (throughout 2018/19);
- price suppression;
- loss of profits;
- reduced profitability;
- reduced employment;
- reduced capacity utilisation;
- reduced return on investment; and
- reduced investment.

Qenos claimed that material injury commenced in 2017/18 when exports of HDPE to Australia from the subject countries undercut its selling prices. It also claims that it is experiencing a threat of material injury from goods exported to Australia from the United States of America (USA).

### 7.2 Approach to injury analysis

The analysis detailed in this chapter is based on verified financial information and data provided by Qenos in support of its application, including verified production, cost, sales and other financial data.

The verification team has examined the economic condition of the Australian industry from 1 April 2015 for the purposes of its injury analysis. As such, the figures presented show the data for years ending 31 March.

The verification team's preliminary assessment of the economic condition of the Australian industry (including other injury factors) is provided at **Confidential Appendix 2**.

### 7.3 Volume effects

#### 7.3.1 Sales volume

The following graph shows Qenos' total sales volume for HDPE<sup>19</sup> in the Australian market since 1 April 2015.

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<sup>19</sup> This includes sales of both own production and imports.

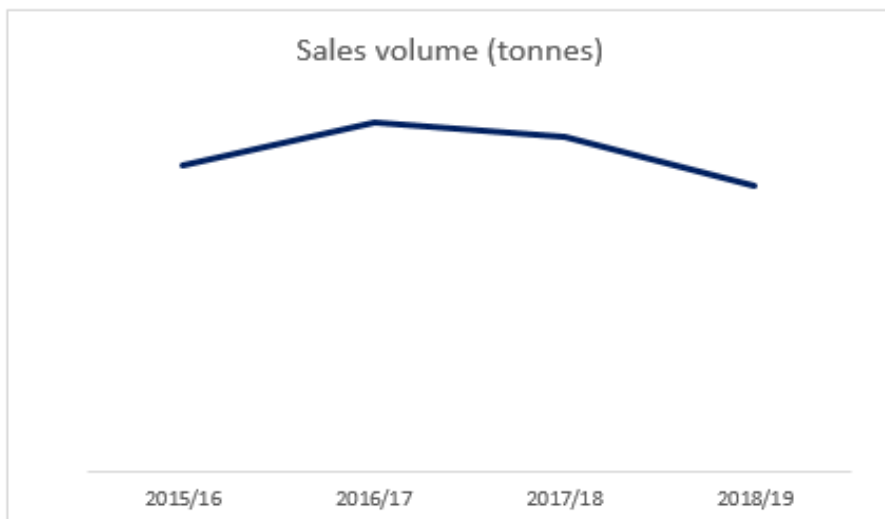


Figure 4 – Qenos’ domestic sales volume of HDPE

This graph shows that Qenos’ domestic sales volume of HDPE increased in 2016/17, before decreasing in both 2017/18 and 2018/19. As outlined in Section 3.3, this occurred at a time when the overall size of the Australian market for HDPE had grown.

### 7.3.2 Market share

The following graph shows changes in the domestic market share between Qenos and importing countries for the period 2015/16 to 2018/19.

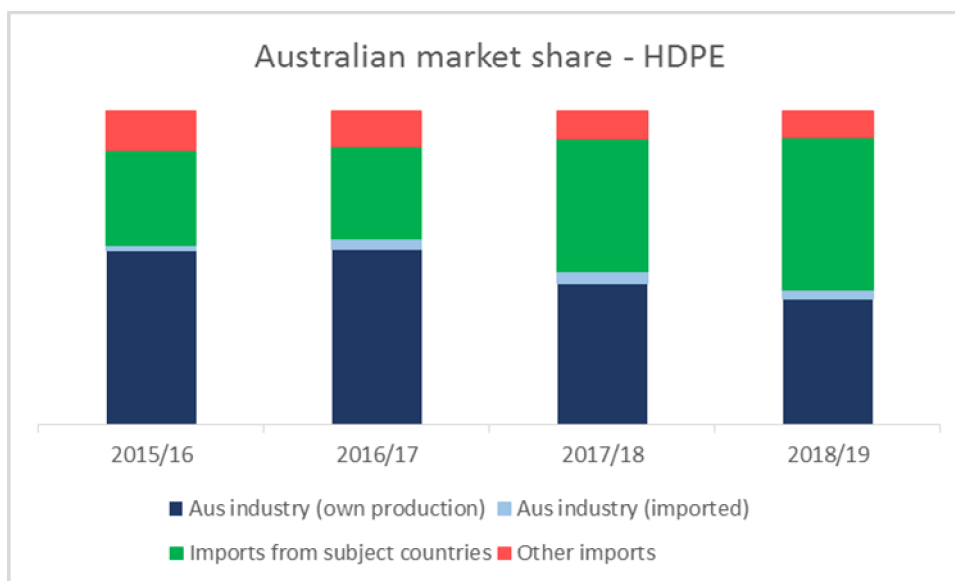


Figure 5 – Australian market share

The above graph shows that Qenos’ share in the Australian HDPE market has decreased progressively from 2016/17. The graph also shows that the share of imports from the subject countries have increased over the same period.

### 7.3.3 Conclusion – volume effects

Based on this analysis, there appear to be reasonable grounds to support the claim that the Australian industry has experienced injury in the form of loss of sales volume and market share.

## 7.4 Price effects

In its application Qenos claimed the Australian industry has experienced material injury in the form of price depression (throughout 2018/19) and price suppression. Qenos alleges that, as a result of price undercutting by dumped imports, it has been required to lower its prices in order to maintain volume.

Price depression occurs when a company, for some reason, lowers its prices. Price suppression occurs when price increases, which otherwise would have occurred, have been prevented. An indicator of price suppression may be the margin between prices and costs.

The following graph shows the trends in Qenos' unit price and unit CTMS for HDPE from 2015/16 to 2018/19.

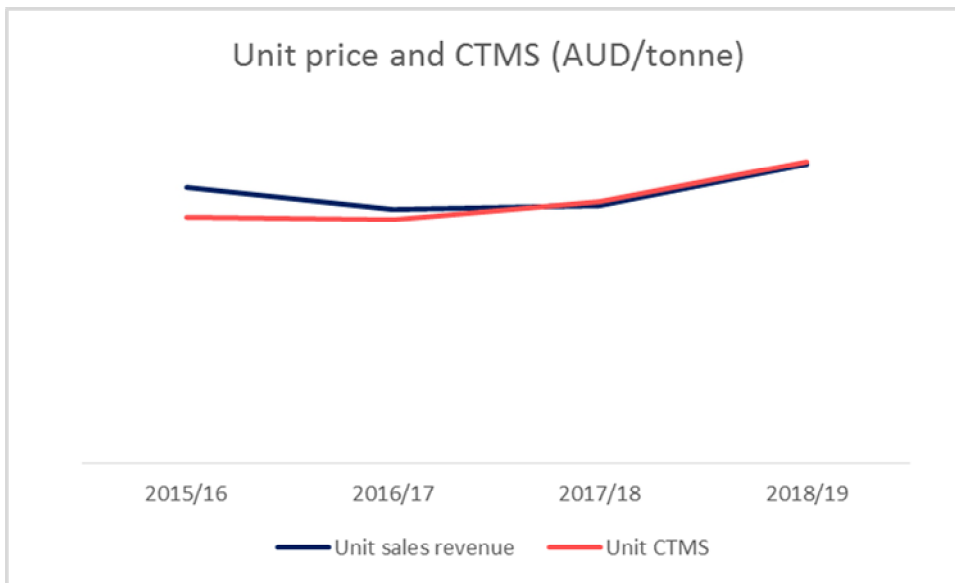


Figure 6 – Qenos' HDPE unit price and cost

The graph above shows that unit price has decreased in 2016/17, remained relatively steady in 2017/18 and increased in 2018/19 (to be higher than the unit price in 2015/16). This does not appear to indicate price depression, as prices overall have risen during the period.

However, the graph also shows that between 2016/17 and 2018/19 Qenos' unit cost increased steadily. Although it remained relatively in line with unit pricing during this period, the Commission notes that unit cost was slightly higher than pricing in both 2017/18 and 2018/19 (compared to 2015/16 when there was a clear margin between unit price and cost), indicating price suppression.

### 7.4.1 Conclusion – price effects

Based on this analysis, there appear to be reasonable grounds to support the claim that the Australian industry has experienced injury in the form of price suppression, but no price depression.

## 7.5 Profit and profitability

Qenos claims that the Australian industry has experienced injury in the form of loss of profits and reduced profitability, as a result of the suppression of its margin between selling prices and costs.

The following graph shows the trend in Qenos' domestic profit and profitability during the period 2015/16 to 2018/19.

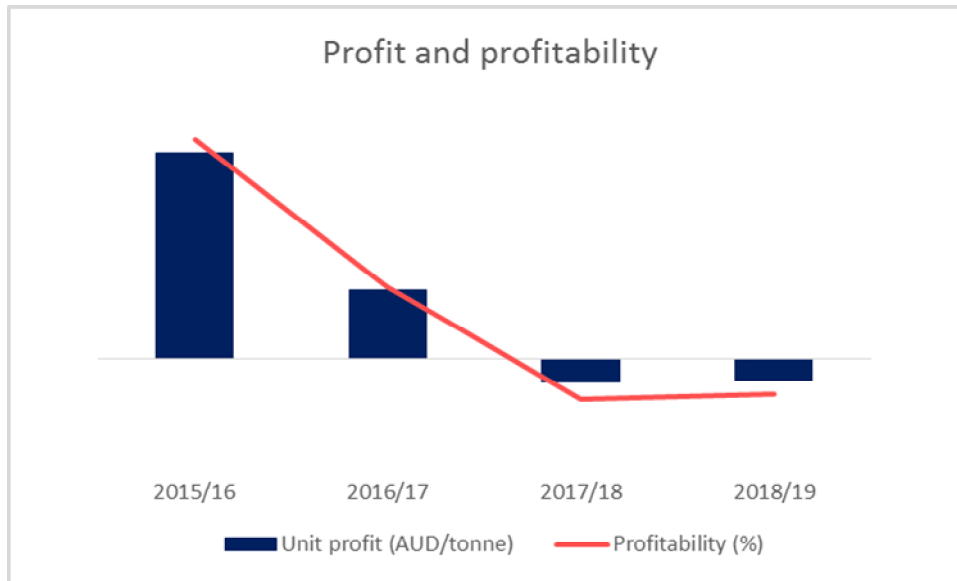


Figure 7 – Qenos' profit and profitability for HDPE

The graph above shows a continuing decrease in Qenos' profit and profitability between 2015/16 and 2018/19. Notwithstanding the slight improvement to profit and profitability in 2018/19, compared to the previous year, this is still a loss compared to the profitable position at the beginning of the injury period.

### 7.5.1 Conclusion – profit and profitability

Based on this analysis, there appear to be reasonable grounds to support the claim that the Australian industry has experienced injury in the form of loss of profits and reduced profitability.

## 7.6 Other economic factors

Qenos provided a completed Appendix A7 (other injury factors) with its application for the period 1 April 2015 to 31 March 2019. Based on this, Qenos claims that the Australian industry has experienced injury in respect of other economic factors, including reduced capital expenditure, reduced return on investment, lower capacity utilisation and reduced levels of employment. Qenos also claims that the eroding of its profit and profitability has impacted negatively on its shareholders' willingness to reinvest in the business.

In CON 515, the Commission noted that information pertaining to capital expenditure and employment was reported in aggregate only (i.e. was provided for more than just like goods). The verification team also noted that data pertaining to assets, return on investment and wages was limited to aggregate information, and that some factors were reported against like goods only, preventing a comparison to other production (e.g. R&D expenditure and capacity utilisation). No information was provided for employment (hours worked), productivity or cash flow measures. As a result, Qenos submitted a revised Appendix A7 with updated data.

The verification team identified three issues during the verification of Appendix A7, as outlined below. Details of this verification process are contained in the verification work program, and its relevant attachments, at **Confidential Attachment 1**.

### **7.6.1 Research and development**

Qenos calculated total research and development (R&D) expenditure using *R&D tax incentive* workings for the previous calendar year (noting the Appendix A7 template requests R&D expenditure in calendar years). As such, the information provided for year ending March 2019 is based on information for calendar year 2018.

Using the workings provided by Qenos, the verification team identified two additional projects in 2015 and one additional project in 2016 that did not appear relevant to like goods. These projects have been removed from R&D expenditure reported against like goods in Appendix A7.

### **7.6.2 Capacity utilisation**

Qenos has indicated that it does not maintain a record of its PE capacity. Rather, the company prefers to track its actual production against planned production for the relevant period.

The verification team considers that planned production is not a reliable proxy to estimate capacity, as it will not provide a true indication of what Qenos is capable of producing. As a result, the team does not consider it appropriate to make a finding on this economic indicator.

### **7.6.3 Productivity**

Qenos did not report productivity in its revised version of Appendix A7. As a result, the verification team has calculated productivity using tonnes produced per employee, noting this information was already available in Appendix A7.

### **7.6.4 Other factors**

In regards to Qenos' specific other injury claims in the application, the verification team notes the following trends in the revised Appendix A7 during the period 1 April 2015 to 31 March 2019:

- capital expenditure increased both in 2018/19, and across the injury period;
- return on investment decreased from 2017/18;<sup>20</sup>
- employment (measured by number of persons) decreased from 2017/18.<sup>21</sup>

When comparing these trends to those for 'other production', the verification team notes that capital expenditure decreased from 2016/17, and employment (measured by number of persons) decreased from 2017/18.<sup>22</sup>

Qenos has not provided any specific evidence to support its claim of reduced ability to raise capital for reinvestment.

The verification team has also reviewed a range of other economic factors relevant to Qenos that were not claimed by the applicant, as follows:

- the value of assets used in the production of like goods decreased progressively from 2015/16;

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<sup>20</sup> The verification team notes that data provided to support return on investment was provided in aggregate only, as Qenos advised that it does not calculate a 'return on capital employed' for individual segments of its business.

<sup>21</sup> As outlined above, the verification team does not consider that it is appropriate to make a finding on capacity utilisation at this time.

<sup>22</sup> As data provided to support return on investment does not distinguish like goods separately, a similar comparison cannot be made for this economic factor.

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- R&D expenditure decreased progressively from 2017/18;
- revenue increased both in 2018/19, and (slightly) across the injury period;
- productivity (measured as tonnes produced per employee) has decreased both in 2018/19, and across the injury period;
- receivables turnover increased in 2018/19, although there was a slight decrease across the injury period;
- inventory turnover increased both in 2018/19, and across the injury period;
- total wages paid to employees involved in the production of like goods decreased progressively from 2017/18; and
- the average wage per employee decreased in 2018/19, but increased over the injury period.

### 7.6.5 Conclusion – other economic factors

The verification team has considered the other injury indicators outlined above, and based on an assessment of Qenos' verified information provided in Appendix A7, the team considers that Qenos has experienced injury in the form of reduced value of assets, reduced R&D expenditure, reduced return on investment, reduced employment (number of persons), reduced productivity and lower wages paid during the investigation period.

The verification team does not consider that Qenos has experienced injury in the form of a reduction in capital expenditure, as claimed in the application.<sup>23</sup>

## 7.7 Conclusion

Based on an analysis of the information contained in the application and verified during the visit, the verification team considers that Qenos has experienced injury during the investigation period in the form of:

- loss of sales volume;
- reduced market share;
- price suppression;
- loss of profits;
- reduced profitability;
- reduced value of assets;
- reduced R&D expenditure;
- reduced return on investment;
- reduced employment;
- reduced productivity; and
- lower wages paid.

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<sup>23</sup> The verification team notes that the previous finding regarding capital expenditure shown in CON 515 was based on aggregate information only.



## 8 CAUSAL LINK

The verification team requested that Qenos provide additional evidence to support its claim that allegedly dumped imports from Korea, Singapore, Thailand and USA are causing material injury to the Australian industry, and in the case of USA are also threatening material injury to the Australian industry. This evidence will be considered further during the course of the investigation.

### 8.1 Volume effects

Qenos' application claims that it has experienced reduced sales and production volumes due to price undercutting, in the context of a growing market. Qenos also makes a very specific claim regarding the loss of business to a particular customer, which it claims switched to imports in 2018.

Qenos has provided a small number of high level notes extracted from its customer relationship management (CRM) system outlining discussions with customers regarding offers available in the market.<sup>24</sup> These file notes will be reviewed further as the case progresses; however, the verification team does not consider that these notes are sufficiently detailed to show the outcome of any negotiations with those customers, and whether volumes were lost (or reduced) as a result. Rather, the internal notes indicate more generally that Qenos is aware of other offers in the market, and anecdotally show that Qenos has received feedback on at least one occasion stating that its price 'wouldn't get orders'.

To support its specific loss of business claim, Qenos submitted a series of internal file notes (or information reports) from its CRM system outlining the content of ongoing discussions with the relevant customer during contract negotiations. These documents refer to discussions that occurred between 12 January and 15 November 2018. It appears these discussions (partly) occurred within the broader context of a 'request for quote' process that the customer had initiated at the beginning of 2018, and which Qenos participated in.

In addition to the internal file notes, Qenos submitted a copy of the 2019 agreement that was ultimately negotiated with the customer, as well as a comparison table outlining the differences between the 2016 and 2019 agreements. The verification team also obtained data that outlined the monthly volumes sold to that customer over the entire injury period; these volumes confirmed there was a reduction in both 2017/18 and 2018/19, suggesting that volumes had begun to change prior to expiration of the previous contractual agreement.

Notwithstanding this specific loss of business example, Qenos noted in its application that during the investigation period at least two customers had indicated a preparedness not to take allegedly dumped material (specifically, from the USA) in preference to Qenos.

### 8.2 Price effects

Qenos' application claims that, in response to lower price offers from the subject countries, it has reduced pricing in order to maintain business, and that this reduction has resulted in reduced revenue. Qenos also claims that, as a result of allegedly dumped imports, it has experienced an inability to increase selling prices to sufficiently counter rising costs.

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<sup>24</sup> Almost all these examples were for customers subject to market pricing.

Based on the 2019 contract described in Section 8.1, the verification team did not identify any reduction in pricing for that customer as a result of the updated agreement. As such, the contract does not support Qenos' general claim that it has had to reduce pricing in order to maintain business. In regards to any potential suppression of Qenos' pricing during that negotiation, at this time the evidence does not indicate that Qenos considered and/or responded to lower priced imports (in particular, imports from Korea, Singapore, Thailand and USA) during negotiations in order to remain price competitive. However, it is expected the Commission will continue to consider this as the case progresses.

The verification team is not aware of any other contractual arrangements that were negotiated during the investigation period. At this time there is no evidence to show that customers subject to contractual arrangements seek to negotiate whenever a gap opens up between the Qenos formula price and import price offers.

As outlined previously, Qenos has provided a small number of high level notes extracted from its CRM system that show information around other price offers in the market. Similar to volume, these notes are not considered to be sufficiently detailed to show the outcome of any price negotiations with those customers (or whether such negotiations occurred), or any specific impact on Qenos' price. However, the notes do indicate that in some months of the investigation period Qenos' initial prices were higher than the competition, including feedback on particular occasions that Qenos' pricing was 'too high', 'uncompetitive' or 'not attractive by a fair amount'. The notes also describe an example where one particular customer requested that Qenos not only meet the market on pricing, but better it.

In its application, Qenos claims that global prices for HDPE increased in 2018/19 (reflecting increased oil and gas prices); however, exporters from the subject countries did not pass on the full effects of that raw material price. Based on a copy of weekly ICIS and Platts pricing for the injury period provided by Qenos, the verification team notes that while published pricing appears to have increased around mid-2017, within the investigation period itself that pricing has reduced by between AUD200 to AUD350 per tonne across the different applications. It is expected that this will be considered further during the course of the investigation.

The verification team notes that a detailed price undercutting analysis will be completed once the verification of data provided in the responses to the importer and exporter questionnaires is complete.

### **8.3 Threat of material injury**

Further to the injury that it claims has been realised, Qenos also alleges there is a threat of material injury to the Australian industry from goods exported to Australia from USA.

Noting the (non-exhaustive) factors outlined in the Commission's policy manual (including capacity, and the availability of other export markets to absorb additional exports), Qenos stated that firms in the industry (e.g. Chevron Phillips Chemicals LP) are global entities that find it easy to redirect material where necessary. For example, in light of the USA-China trade war, product from USA that might have previously been supplied to China could easily be sourced from Europe as an alternative.

In regards any change in circumstances that would make the threat to the Australian industry imminent or foreseeable, Qenos referred to the change in global capacity (particularly as a result of increased USA capacity, which Qenos estimated to be over one million tonnes) and the USA-China trade war. To support this, Qenos submitted information sourced from IHS Markit regarding historical and projected HDPE capacity (by region) out to 2028.

## 8.4 Injury caused by factors other than dumping

In its application, Qenos acknowledged that it has experienced an increase in both energy and feedstock costs over the prior two year period. It also acknowledged that it has experienced some limited production outages that impacted output to a minor degree, although it considered that any reduced output was the result of raw material cost increases associated with LPG.

### 8.4.1 Energy prices in Australia

Qenos has acknowledged that its competitors operate within different energy markets. During the visit, Qenos submitted a document comparing energy costs in Australia to USA. Qenos explained that ethane costs are bigger than energy costs on their own, but there has been a combined effect on its profitability.<sup>25</sup> According to Qenos, this has compressed its margin and made it more susceptible to injury from allegedly dumped imports.

Qenos also stated that it undertook a number of initiatives to reduce its costs as much as possible, e.g. reducing the workforce size, initiating pay freezes, re-negotiating its transport costs. However, despite these initiatives, it has been unable to offset the injury from the alleged dumping entirely.

### 8.4.2 Production outages

During the visit, the verification team requested that Qenos provide more information on the production outages referenced in the application. Qenos acknowledged there was a quality issue in 2017 whereby 'gels' were present in the plastic coming from a particular reactor; this in turn curtailed production of prime polyethylene. According to Qenos, this issue was limited to a particular product (HD1155; blow moulding grade).

Qenos also acknowledged that, within a particular month of 2017, there were three cracker 'trips' (i.e. mechanical failures) when converting ethane to ethylene. These trips take three to four days to restore. If a cracker 'trips' then it cannot accept ethane, and if more ethane is supplied than the second cracker can consume, Qenos will have to 'flare' or burn the excess ethane, which is a waste of raw material.

Qenos claimed that it has three ways to address these production outages, namely:

- the company targets a 55,000 tonne inventory level;
- the company has an 'export overhang buffer' whereby it prioritises its commitment to local supply, and participates in the export market on a 'spot' basis; and
- the company communicates with customers to allocate volume amounts (meaning the customer cannot purchase more than that amount). Alternatively, Qenos might delay delivery by one or two days.

### 8.4.3 Ability to supply

As outlined in Section 3.1, Qenos acknowledges that its production capacity (in all market segments) is less than that required to meet the needs of the Australian market, and that as a result a certain level of imports is required.

In particular, given demand for pipe resin is often project driven, demand from Qenos' customers can occasionally exceed its ability to supply from domestically manufactured production. Because

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<sup>25</sup> Based on the cost data provided, ethylene accounts for approximately 70 per cent of the total cost to make HDPE.

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of this, Qenos maintains a relationship with a particular exporter for the supply of PE100 resin, and aims to import a quantity of PE100 from this exporter each month. Qenos claims that it can call on this supply relationship at relatively short notice to increase imports and help meet customer demand in periods of increased project activity.

Despite this strategy, Qenos acknowledged that in times of extremely high pipe market project demand, it will work with customers on an agreed forward supply plan that outlines ‘... what Qenos is capable of supplying ... so that customers can determine what they will need to import themselves to meet any short term shortfall in supply’.

### **8.4.4 Failure to price match in a timely manner**

Given the sales team require approval to reduce pricing below a certain level, Qenos has acknowledged that it sometimes lost business if it was asked to match a price within a short period of time.

**9 APPENDICES AND ATTACHMENTS**

<b>Confidential Attachment 1</b>	Verification work program
<b>Confidential Appendix 1</b>	Assessment of the Australian market size for HDPE
<b>Confidential Appendix 2</b>	Preliminary assessment of the economic condition of the Australian industry