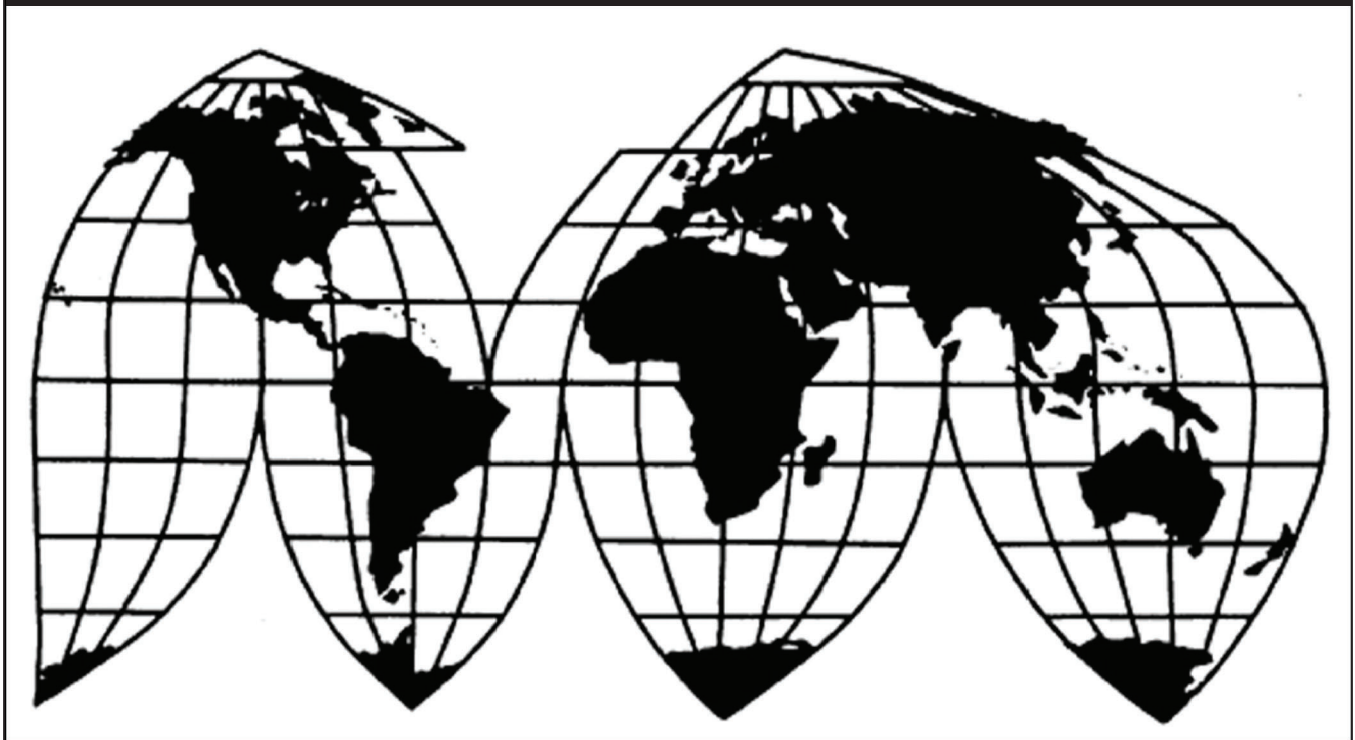# Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman

Investigation Nos. 701-TA-531-532 and 731-TA-1270-1273 (Review)

U.S. International Trade Commission

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Washington, DC 20436
www.usitc.gov

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Publication 5298   **March 2022**

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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets in confidential reports and is deleted and replaced with asterisks (***) in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-531-532 and 731-TA-1270-1273 (Review)

Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman

DETERMINATIONS

On the basis of the record[1] developed in the subject five-year reviews, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the countervailing duty orders on polyethylene terephthalate ("PET") resin from China and India and the antidumping duty orders on PET resin from Canada, China, India, and Oman would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted these reviews on April 1, 2021 (86 FR 17197) and determined on July 7, 2021 that it would conduct full reviews (86 FR 37343, July 15, 2021). Notice of the scheduling of the Commission's reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on October 20, 2021 (86 FR 58101). The Commission conducted its hearing on January 27, 2022. All persons who requested the opportunity were permitted to participate.

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[1] The record is defined in § 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of

the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the countervailing duty

orders on polyethylene terephthalate ("PET") resin from China and India and the antidumping

duty orders on PET resin from Canada, China, India, and Oman would be likely to lead to

continuation or recurrence of material injury to an industry in the United States within a

reasonably foreseeable time.

I. Background

Original Investigations. On March 10, 2015, DAK Americas LLC ("DAK Americas"), M&G

Chemicals ("M&G"), and Nan Ya Plastics Corporation, America ("Nan Ya"), domestic producers

of PET resin, filed antidumping duty petitions regarding imports of PET resin from Canada,

China, India, and Oman and countervailing duty petitions regarding imports of PET resin from

China, India, and Oman.[1] The Commission determined in April 2016 that a domestic industry

was materially injured by reason of less-than-fair-value ("LTFV") imports of PET resin from

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[1] *Certain Polyethylene Terephthalate Resin From Canada, China, India, and Oman; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*, 80 Fed. Reg. 13889 (Mar. 17, 2015) (title corrected). The only other domestic producer at that time (Indorama Ventures USA Inc. ("Indorama")) *** the petitions. *Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman*, Inv. Nos. 701-TA-531–532 and 731-TA-1270–1273 (Final), USITC Pub. 4604 (Apr. 2016) ("Original Determinations") at Table III-1; Memorandum INV-OO-022, EDIS Doc. 743831 (June 3, 2016) ("Original CR"), at Table III-1. *See* Confidential Report, Memorandum INV-UU-022 (Mar. 1, 2022) ("CR") at I-2; *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman*, Inv. Nos. 701-TA-531–532 and 731-TA-1270–1273 (Review), USITC Pub. 5298 (Mar. 2022) ("PR") at I-2.

Canada, China, India, and Oman and by subsidized imports of PET resin from China and India.[2]

On May 6, 2016, the U.S. Department of Commerce ("Commerce") published antidumping duty orders on imports of PET resin from Canada, China, India, and Oman and countervailing duty orders on PET resin from China and India.[3] [4]

Current Reviews. On April 1, 2021, the Commission instituted the first five-year reviews of the orders.[5] Domestic producers DAK Americas, Nan Ya, and Indorama Ventures USA Inc.

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[2] Original Determinations, USITC Pub. 4604 at 1. Commerce determined that countervailable subsidies were not being provided to producers and exporters of PET resin from Oman. *Certain Polyethylene Terephthalate Resin from the Sultanate of Oman: Final Negative Countervailing Duty Determination*, 81 Fed. Reg. 13321 (Mar. 14, 2016). The Commission subsequently terminated its countervailing duty investigation with respect to Oman. *Polyethylene Terephthalate Resin from Oman; Termination of Investigation*, 81 Fed. Reg. 19638 (Apr. 5, 2016).

[3] *Certain Polyethylene Terephthalate Resin From India and the People's Republic of China: Countervailing Duty Order (India) and Amended Final Affirmative Countervailing Duty Determination and Countervailing Duty Order (People's Republic of China)*, 81 Fed. Reg. 27977 (May 6, 2016); *Certain Polyethylene Terephthalate Resin From Canada, the People's Republic of China, India, and the Sultanate of Oman: Amended Final Affirmative Antidumping Determination (Sultanate of Oman) and Antidumping Duty Orders*, 81 Fed. Reg. 27979 (May 6, 2016).

[4] Based on petitions filed in September 2017, the Commission conducted antidumping duty investigations on PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan during the period of review ("POR"). *Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan*, Inv. Nos. 731-TA-1387–1391 (Final), USITC Pub. 4835 (Nov. 2018) ("2018 Determinations") at 1. In November 2018, the Commission determined that an industry in the United States was not materially injured or threatened with material injury by reason of imports of PET resin from these five countries. *Polyethylene Terephthalate Resin From Brazil, Indonesia, Korea, Pakistan, and Taiwan; Determinations*, 83 Fed. Reg. 56377 (Nov. 13, 2018). DAK Americas, Indorama, and Nan Ya appealed the Commission's negative injury determinations, and the U.S. Court of International Trade ("CIT") remanded the Commission's negative injury determinations in June 2020. *DAK Americas LLC v. United States*, 456 F. Supp. 3d 1340 (Ct. Int'l Trade 2020). In September 2020, the Commission again determined that an industry in the United States was not materially injured or threatened with material injury by reason of imports of PET resin from these five countries. *Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan*, Inv. Nos. 731-TA-1387–1391 (Final) (Remand), USITC Pub. 5125 (Sept. 2020) ("Remand Determinations"). In May 2021, the CIT sustained the Commission's remand determinations. *DAK Americas LLC v. United States*, 517 F. Supp. 3d 1349 (Ct. Int'l Trade 2021).

[5] *Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Institution of Five-Year Reviews*, 86 Fed. Reg. 17197 (Apr. 1, 2021).

("Indorama") submitted a joint response to the notice of institution ("NOI").[6] The Commission

also received a response to the NOI from a fourth domestic producer of PET resin, APG Polytech

LLC ("APG").[7] Respondent interested parties OCTAL SAOC-FZC and OCTAL Inc., an Omani

producer/exporter and a U.S. importer, respectively (collectively "OCTAL"),[8] and Niagara

Bottling, LLC ("Niagara"), a U.S. importer and purchaser,[9] each submitted responses to the

NOI.[10] On July 7, 2021, the Commission found that the domestic interested party group

response was adequate for all reviews and that the respondent interested party group

response with respect to Oman was adequate for the review of the order on subject imports

from Oman.[11] Therefore, it decided to conduct a full review with respect to the antidumping

duty order concerning PET resin from Oman.[12] The Commission further found that the

respondent interested party group responses with respect to Canada, China, and India were

inadequate.[13] The Commission determined to conduct full reviews concerning the antidumping

duty orders on PET resin from Canada, China, and India and the countervailing duty orders on

PET resin from China and India to promote administrative efficiency in light of its decision to

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[6] Domestic Industry's Substantive Response to Notice of Institution, May 3, 2021.

[7] APG's response to the notice of institution, May 3, 2021.

[8] OCTAL's Sunset Review Response, May 3, 2021.

[9] Response to Notice of Institution on Behalf of Niagara, May 3, 2021.

[10] The Commission also received responses to the NOI from CG Roxane LLC, a U.S. importer, and from the International Bottled Water Association ("IBWA"), a trade association representing the U.S. bottled water industry. Response to Notice of Institution on Behalf of CG Roxane LLC, May 3, 2021; IBWA's Response to the Notice of Institution, May 20, 2021. *See* 19 C.F.R. § 207.61(d) (submissions by persons other than interested parties).

[11] *Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Notice of Commission Determination To Conduct Full Five-Year Reviews*, 86 Fed. Reg. 37343 (July 15, 2021).

[12] 86 Fed. Reg. 37343.

[13] 86 Fed. Reg. 37343.

conduct a full review with respect to the antidumping duty order concerning PET resin from

Oman.[14]

All four domestic producers in these reviews (collectively, "domestic producers") jointly

submitted prehearing and posthearing briefs and final comments.[15] The Commission also

received prehearing and posthearing briefs and final comments from OCTAL[16] and from

Niagara.[17] Representatives of each of the parties above appeared at the Commission's hearing

accompanied by counsel.[18] Compagnie Selenis Canada ("Selenis"), a Canadian producer and

exporter, submitted a posthearing brief and final comments only.[19] [20]

In these reviews, U.S. industry data are based on questionnaire responses from four U.S.

producers that are believed to account for all U.S. production of PET resin during 2020 and on

certain data and information from the Commission's 2018 investigations on PET resin from

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[14] 86 Fed. Reg. 37343.

[15] Prehearing Brief of Domestic Industry, Jan. 19, 2022 ("Domestic Producers' Prehear. Br."); Posthearing Brief of Domestic Industry, Feb. 7, 2022 ("Domestic Producers' Posthear. Br."); Final Comments of the Domestic Industry, Mar. 8, 2022.

[16] Prehearing Brief of OCTAL, Jan. 19, 2022 ("OCTAL's Prehear. Br."); OCTAL's Posthearing Brief, Feb. 7, 2022 ("OCTAL's Posthear. Br."); Final Comments of OCTAL, Mar. 8, 2022.

[17] Prehearing Brief of Niagara, Jan. 19, 2022 ("Niagara's Prehear. Br."); Niagara's Posthearing Brief, Feb. 7, 2022 ("Niagara's Posthear. Br."); Final Comments of Niagara, Mar. 8, 2022. CG Roxane submitted a letter prior to the hearing "endorsing {the} prehearing brief" of Niagara. CG Roxane's Letter of Endorsement of Niagara's Prehearing Brief, Jan. 19, 2022.

[18] In light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted its hearing in these investigations by written witness testimony and videoconference held on January 27, 2022, as set forth in procedures provided to the parties. *See Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Scheduling of Full Five-Year Reviews*, 86 Fed. Reg. 58101 (Oct. 20, 2021).

[19] Selenis's Posthearing Brief, Feb. 7, 2022 ("Selenis's Posthear. Br."); Final Comments on Behalf of Compagnie Selenis Canada, Mar. 8, 2022. We note that the submission of arguments a party considers relevant to the subject matter of the Commission's determination should be presented early in a proceeding so that those arguments may be fully examined by the Commission and all participating parties. *See generally* 19 C.F.R. § 207.65.

[20] No submissions were received on behalf of any Chinese or Indian producer/exporter.

Brazil, Indonesia, Korea, Pakistan, and Taiwan.[21] Except as noted, U.S. import data and related

information are based on the questionnaire responses of 18 U.S. importers of PET resin and

certain data that M&G provided in the Commission's 2018 investigations on PET resin from

Brazil, Indonesia, Korea, Pakistan, and Taiwan, which account for the majority of imports of

subject and nonsubject PET resin during the January 2015–September 2021 period of review

("POR").[22] Data and related information on the PET resin industry in Canada are based on the

questionnaire response of Selenis, which is the only firm in Canada known to produce and

export PET resin and which accounted for virtually all U.S. imports of PET resin from Canada in

2020.[23] Data and related information on the PET resin industry in Oman are based on the

questionnaire response of OCTAL, which is the only firm in Oman known to produce and export

PET resin and which accounted for virtually all U.S. imports of PET resin from Oman in 2020.[24]

Data and related information on the PET resin industries in China and India, as well as

additional information on the industries in Canada and Oman, are based on industry research

and public export data.[25]

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[21] CR/PR at III-1. Certain data and information that M&G provided in the Commission's 2018 investigations were incorporated into the record in these reviews to cover the period prior to the March 2018 acquisition of M&G by Far Eastern New Century Corp., which then renamed the company APG. *Id.* The current known U.S. PET resin producers are APG, DAK Americas, Indorama, and Nan Ya. *Id.* at Table I-12.

[22] CR/PR at IV-1. Import data presented in the sections examining geographical markets and presence in the market are based on official Commerce statistics (U.S. Harmonized Tariff Schedule ("HTSUS") statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.61.0010, 3907.69.0000, and 3907.69.0010), which include out-of-scope products and subject PET resin. *Id.* at Tables IV-2, IV-3.

[23] CR/PR at IV-18.

[24] CR/PR at IV-34.

[25] CR/PR at IV-28, IV-31. In these reviews, the Commission received no questionnaire responses from 27 firms identified as possible producers/exporters of PET resin in China or from 13 firms identified as possible producers/exporters of PET resin in India. *Id.*

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[26] The Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle."[27] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[28]

In its final determinations, Commerce defined the imported merchandise within the scope of these investigations as PET resin

> having an intrinsic viscosity of at least 0.70, but not more than 0.88, deciliters per gram. The scope includes blends of virgin PET resin and recycled PET resin containing 50 percent or more virgin PET resin content by weight, provided such blends meet the intrinsic viscosity requirements above. The scope includes all

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[26] 19 U.S.C. § 1677(4)(A).

[27] 19 U.S.C. § 1677(10); *see, e.g., Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Dep't of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90–91 (1979).

[28] *See, e.g., Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8–9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

PET resin meeting the above specifications regardless of additives introduced in the manufacturing process.[29]

PET resin is currently imported under statistical reporting numbers 3907.61.0010 and 3907.69.0050 of the Harmonized Tariff Schedule of the United States ("HTSUS").[30]

PET resin is a large-volume, commodity-grade thermoplastic polyester polymer sold predominantly in bulk form to downstream end users.[31] The major end uses for PET resin include bottles for beverages (*e.g.*, juice, water, and carbonated soft drinks), containers for food (*e.g.*, salad dressings, jams and jellies, peanut butter, and edible oils), household cleaners, and cosmetics.[32] PET resin can also be used to produce other forms of packaging, such as food trays and drinking cups, as well as carpet fibers.[33] End-use products manufactured from PET resin are clear, transparent, sterile, lightweight, and thermally stable.[34] Other properties of

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[29] *Polyethylene Terephthalate Resin From the People's Republic of China and India: Final Results of the Expedited First Sunset Reviews of the Countervailing Duty Orders*, 86 Fed. Reg. 38982 (July 23, 2021); *Polyethylene Terephthalate Resin From Canada, China, India, and Oman: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*, 86 Fed. Reg. 41009 (July 30, 2021).
Intrinsic viscosity ("IV") is a measure of the molecular weight of PET resin and is a reflection of the resin's melting point, crystallinity, and tensile strength. CR/PR at I-16 n.21. The share of recycled PET resin in blends of virgin and recycled PET resin does not impact the IV of the product, but recycled PET resin is not a complete substitute for virgin PET resin due to impurities in the recycled PET resin that are nearly impossible to remove. *Id.* at I-16. Several domestic producers blend small amounts of recycled PET resin with virgin PET resin. *Id.*

[30] From 2015 to 2016, subject imports were imported under HTSUS statistical reporting number 3907.60.0030. CR/PR at I-15 n.18. From 2017 to 2018, subject imports were imported under subheadings 3907.61.00 and 3907.69.00, which had no statistical annotations. *Id.* Subject imports became classifiable under the current statistical reporting numbers in 2019. *Id.*

[31] CR/PR at I-15.

[32] CR/PR at I-15. Packaging and bottle-grade PET resin typically have an IV of at least 0.70 or more, but not more than 0.88 deciliters per gram. *Id.* at I-16. Bottle-grade resins may be blended with recycled PET resin and/or contain various additives, which can vary depending on the desired properties for an end use product, but these additives do not alter the fundamental properties of the subject product. *Id.*

[33] CR/PR at I-15.

[34] CR/PR at I-15.

note for articles made from PET resin are impact resistance, closure integrity, durability, and strength.[35]

In its final determinations, the Commission defined a single domestic like product, consisting of PET resin that is coextensive with Commerce's scope.[36] In these reviews, domestic producers argue that the Commission should again define a single domestic like product, as it did in the original investigations.[37] No party argues for a different definition, and no party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires.[38] The record does not indicate any material changes in pertinent facts from the original investigations that suggest revisiting the definition of the domestic like product in the original investigations.[39] Consequently, we define a single domestic like product, consisting of PET resin that is coextensive with Commerce's scope.

B.   Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of

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[35] CR/PR at I-15.
[36] Original Determinations, USITC Pub. 4604 at 6. The Commission found that PET resin produced in the United States had the same basic chemistry and end uses; was made from the same raw materials using the same manufacturing facilities, production processes, and employees; was sold through the same channels of distribution and at roughly comparable prices; and was largely interchangeable. *Id.*
[37] Domestic Producers' Prehear. Br. at 4–5.
[38] CR/PR at I-19. *See* OCTAL's Response to Commission's Notice of Institution Questions, May 3, 2021, p. 13.
[39] CR/PR at I-15 to I-18.

the product."[40] In defining the domestic industry, the Commission's general practice has been

to include in the industry producers of all domestic production of the like product, whether toll-

produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be

excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This

provision allows the Commission, if appropriate circumstances exist, to exclude from the

domestic industry producers that are related to an exporter or importer of subject merchandise

or which are themselves importers.[41] Exclusion of such a producer is within the Commission's

discretion based upon the facts presented in each investigation.[42]

Original Investigations. During the original investigations, four firms accounted for all

U.S. PET resin production: DAK Americas, Indorama, M&G, and Nan Ya.[43] In those proceedings,

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[40] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

[41] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331–32 (Ct. Int'l Trade 1989), *aff'd mem.,* 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[42] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. U.S. Int'l Trade Comm'n*, 100 F. Supp. 3d 1314, 1326–31 (Ct. Int'l Trade 2015); *see also Torrington Co.*, 790 F. Supp. at 1168.

[43] Original Determinations, USITC Pub. 4604 at 3, I-3.

based on its finding of a single domestic like product, the Commission found that the domestic industry consisted of all U.S. producers of PET resin.[44] It determined that *** were subject to possible exclusion under the related parties provision because they imported subject merchandise.[45] The Commission found that appropriate circumstances did not exist to exclude *** given the "very small" size of *** imports, which took place over a limited time period, relative to *** domestic production and because *** supported the petitions.[46]

Current Reviews. In these reviews, domestic producers argue that the Commission should define the domestic industry as all domestic producers of PET resin and that no domestic producer subject to the related parties provision be excluded from the domestic industry.[47] No respondent party presented arguments on the definition of the domestic industry or the issue of related parties. In these reviews, three domestic producers (APG, DAK Americas, and Indorama) are subject to the related parties provision.

APG. APG is a related party because of its affiliation through its corporate parent with a subject producer in China and a U.S. importer of subject merchandise from ***.[48] It began domestic production in 2018.[49] The subject producer in China and the U.S. importer of subject merchandise did not submit questionnaire responses in these reviews.[50] We note that total

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[44] Original Determinations, USITC Pub. 4604 at 7.

[45] Confidential Original Determinations, EDIS Doc. 743835 (June 3, 2021) ("Confidential Original Determinations"), at 9.

[46] Confidential Original Determinations at 9.

[47] Domestic Producers' Prehear. Br. at 5–6.

[48] CR/PR at Table I-13. APG is related to Far Eastern Industries (Shanghai) Ltd., a producer of subject merchandise in China, and to ***, a U.S. importer of PET resin from ***, through APG's corporate parent, Far Eastern New Century Corp. CR/PR at Table I-13.

[49] CR/PR at Table III-3.

[50] CR/PR at III-16 n.12, IV-28.

subject imports from China were small during APG's existence. They were ***.[51] APG

accounted for *** percent of domestic production during 2020.[52] In addition, APG supports

continuation of the orders.[53] The record also provides no indication that APG's relationship

with a subject producer in China and a U.S. importer of subject merchandise from ***

benefitted its domestic production operations. In light of these considerations, we find that

appropriate circumstances do not exist to exclude APG from the domestic industry under the

related parties provision.

DAK Americas. DAK Americas is a related party because of an affiliation through its

corporate parent, Alpek Polyester, S.A. de C.V. ("Alpek"), which also owns a controlling interest

in Selenis, a subject producer/exporter in Canada and U.S. importer of subject merchandise

from Canada.[54] [55] It accounted for *** percent of domestic production during 2020 and

supports continuation of the orders on subject imports from China, India, and Oman and takes

no position on the order on subject imports from Canada.[56] DAK Americas' production of PET

resin ***; it was *** pounds in interim 2020 and *** pounds in interim 2021.[57] The imports of

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[51] CR/PR at Table IV-1.

[52] CR/PR at Table I-12. Its production of PET resin was *** pounds in 2018, *** pounds in 2019, and *** pounds in 2020; it was *** pounds in January–September ("interim") 2020 and *** pounds in interim 2021. *Id.* at Table III-3.

[53] CR/PR at Table I-12.

[54] *See generally* 19 U.S.C. §§ 1677(4)(B)(ii)(II) and 1677(4)(B)(ii)(III). Alpek owns a controlling interest in Selenis through DAK Americas Exterior, S.L., a Spanish holding company, and owns *** percent of DAK Americas LLC. CR/PR at III-1, Tables I-13, III-1; Alpek Offering Memorandum, dated Nov. 19, 2019, EDIS Doc. 763174 (Feb. 14, 2022); *** (hereinafter ***).

[55] Alpek also has announced plans to acquire OCTAL, a subject producer/exporter in Oman. CR/PR at Table III-1. However, as discussed further below, Alpek's acquisition of OCTAL has not been finalized, and thus Alpek's and DAK Americas' potential future corporate relationship is not considered for purposes of the Commission's analysis under the related parties provision.

[56] CR/PR at Table I-12.

[57] CR/PR at Table III-3.

its related importer of subject merchandise from Canada declined from *** pounds in 2015 to *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021.[58] The ratio of its related importer's subject imports to its domestic production declined from *** percent in 2015 to *** percent in 2019 and was *** percent in 2020; it was *** percent in interim 2020 and *** percent in interim 2021.[59]

The ratio of the related importer's subject imports relative to DAK Americas' domestic production was consistently at low levels, and the record also provides no indication that DAK Americas' affiliation with Selenis benefitted its domestic production operations. In light of these considerations, we find that appropriate circumstances do not exist to exclude DAK Americas from the domestic industry under the related parties provision.

Indorama. Indorama is a related party because of its affiliation through its corporate parent with subject producers in China and India.[60] No producers in China or India submitted questionnaire responses in these reviews.[61] However, we note that total subject imports from China during the POR were *** and that total subject imports from India during the POR were ***.[62] Indorama's domestic production of PET resin ***; it was *** pounds in interim 2020 and *** pounds in interim 2021.[63] It accounted for *** percent of domestic production during

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[58] CR/PR at Table III-7.
[59] CR/PR at Table III-7.
[60] Indorama is related to Guangdong IVL PET Polymer Co., Ltd. in China and IVL Dhunseri Petrochem Industries Pvt. Ltd. in India through Indorama's corporate parent, Indorama Ventures. CR/PR at Table I-13.
[61] CR/PR at IV-28, IV-31.
[62] CR/PR at Table IV-1.
[63] CR/PR at Table III-3.

2020.[64] In addition, Indorama supports continuation of the orders.[65] The limited information in the record does not indicate that Indorama's domestic production operations benefitted from its affiliations with subject producers in China and India. In light of these considerations, we find that appropriate circumstances do not exist to exclude Indorama from the domestic industry under the related parties provision.

In view of these considerations and because no party has argued for the exclusion of any domestic producer, we find that appropriate circumstances do not exist to exclude any domestic producer from the domestic industry. Accordingly, we define the domestic industry to include all U.S. producers of PET resin.

III. Cumulation

A. Legal Standard and the Prior Proceedings

With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows:

> the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.[66]

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[64] CR/PR at Table I-12.
[65] CR/PR at Table I-12.
[66] 19 U.S.C. § 1675a(a)(7).

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.[67] The Commission may exercise its discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future. The statutory threshold for cumulation is satisfied in these reviews because all reviews were initiated on the same day: April 1, 2021.[68]

Original Investigations. In its final determinations, the Commission found a reasonable overlap of competition among the domestic like product and subject imports from Canada, China, India, and Oman and cumulated subject imports from the four sources for its material injury analysis.[69] The Commission found that there was substantial fungibility between and among PET resin from each of the subject sources and domestically produced PET resin.[70] It found sufficient geographic overlap because the domestic like product and imports from all

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[67] 19 U.S.C. § 1677(7)(G)(i); *see also, e.g.*, *Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337–38 (Ct. Int'l Trade 2008).
[68] 86 Fed. Reg. 17197.
[69] Original Determinations, USITC Pub. 4604 at 13–14.
[70] Original Determinations, USITC Pub. 4604 at 11–12.

subject countries were generally available and sold throughout the United States.[71] The

Commission also found an overlap of channels of distribution because the domestic like

product and imports from each subject country were sold mostly to end users.[72] The domestic

like product and imports from all subject countries were present in the U.S. market throughout

the period of investigation ("POI").[73]

B.   Parties' Arguments

Domestic Producers' Arguments. Domestic producers argue that the Commission should

cumulate subject imports from all four countries for purposes of its analysis in these reviews, as

it did in the original investigations, because the market conditions leading to that conclusion

have persisted since the original investigations.[74]

Domestic producers argue that imports from each of the subject countries are likely to

have a discernible adverse impact if the orders are revoked. Further, domestic producers argue

that the record in these reviews indicates a likely reasonable overlap in competition in the

event of revocation given the substantial fungibility between the domestic like product and

subject imports, the likely geographic overlap between the domestic like product and subject

imports, the overlap in channels of distribution, and the likely simultaneous presence of

imports from all subject countries.[75]

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[71] Original Determinations, USITC Pub. 4604 at 13.
[72] Original Determinations, USITC Pub. 4604 at 12–13.
[73] Original Determinations, USITC Pub. 4604 at 13. The Commission reduced the weight it accorded to January–September 2015 data in its analysis given the effect of the pendency of the investigations on importers' behavior. *Id.* at 21 n.122.
[74] Domestic Producers' Prehear. Br. at 8–9.
[75] Domestic Producers' Prehear. Br. at 9–12.

For Canada, domestic producers maintain that there would be no significant difference in the likely conditions of competition between imports from Canada and from China, India, and Oman if the orders were revoked.[76] They argue that although Selenis was acquired by DAK Americas' corporate parent, Alpek, during the POR, Selenis has provided no evidence of *** to warrant decumulation of subject imports from Canada.[77]

For China and India, domestic producers argue that the capacity of the subject industries has increased since the original investigations, with unused capacity in China *** and projected to increase in 2022 and 2023 and unused capacity in India increasing late in the POR.[78] They contend that these subject producers have become more export oriented and that the U.S. market is attractive given relatively higher prices and existing third-country barriers for subject merchandise from China and India.[79]

For Oman, domestic producers argue that OCTAL has *** and retained established distribution channels and ties to customers as it shipped large quantities of subject merchandise to the U.S. market during the POR.[80] They argue that OCTAL's ***.[81] They also argue that the recent acquisition announcement by the parent company of DAK Americas of OCTAL is not a finalized development warranting decumulation of subject imports from Oman.[82]

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[76] Domestic Producers' Posthear. Br. at Exh. 1 at p. 69.
[77] Domestic Producers' Final Comments at 1.
[78] Domestic Producers' Prehear. Br. at 21, 26.
[79] Domestic Producers' Prehear. Br. at 23–29.
[80] Domestic Producers' Prehear. Br. at 31–32, 35–37.
[81] Domestic Producers' Prehear. Br. at 38. They contend that, ***. *Id.* at 35–36.
[82] Domestic Producers' Posthear. Br. at 3–4. They highlight *** and the speculative nature of the company's new operational structure. *Id.* at 2, 4; Exh. 1 at pp. 47, 50–51.

Respondents' Arguments.[83] OCTAL argues that the Commission should exercise its discretion not to cumulate subject imports from Oman with imports from the other subject countries because subject imports from Oman will likely compete under different conditions in the U.S. market.[84] Notably, OCTAL asserts that it has plans to invest in a new PET resin production facility in Cooper River, South Carolina, with production expected to begin in 2024.[85] It maintains that the *** such that ***.[86] Following the announcement that the corporate parent of DAK Americas plans to acquire OCTAL, OCTAL additionally argues that the acquisition will *** that will "preserve the pricing environment in the U.S. market."[87]

OCTAL further contends that, unlike other subject producers, its imports have been present in the U.S. market *** while under the discipline of the antidumping order, and that it has received "extremely low dumping margins" in annual reviews at Commerce.[88] In addition, OCTAL contrasts its U.S. market presence with that of subject producers in China and India, which it maintains have not been similarly present in the U.S. market, are subject to U.S.

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[83] Niagara did not submit specific arguments on the issue of cumulation, but presented its arguments on other issues in terms of a cumulated analysis.

[84] OCTAL's Prehear. Br. at 5; OCTAL's Posthear. Br. at 2. OCTAL also briefly argues that the considerations discussed below indicate that subject imports from Oman would have no discernible adverse impact on the domestic industry if the order was revoked. OCTAL's Posthear. Br. Answers to Questions of Commissioners and Commission Staff at 59–60. Likewise, with respect to overlap in competition, OCTAL argues that its melt-to-resin technology results in a higher-quality product, which distinguishes subject imports from Oman from other sources. *Id.* at 60.

[85] OCTAL's Prehear. Br. at 12; OCTAL's Posthear. Br. at 4; Hearing transcript ("Hearing Tr.") at 152.

[86] OCTAL's Prehear. Br. at 13.

[87] OCTAL's Posthear. Br. at 2–3.

[88] OCTAL's Prehear. Br. at 14–15; OCTAL's Posthear. Br. at 4.

countervailing duty orders as well as antidumping duty orders, and face greater third-country

trade barriers to their exports.[89]

Selenis argues that DAK Americas' "controlling interest" in Selenis is a condition of

competition that warrants the Commission exercising its discretion not to cumulate subject

imports from Canada with imports from the other subject countries.[90] Similar to OCTAL, Selenis

contrasts its U.S. market presence with that of subject producers in China and India, and

maintains that exports from the other subject countries are subject to greater trade barriers in

third-country markets.[91]

C.   Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a

country are likely to have no discernible adverse impact on the domestic industry.[92] Neither

the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative

Action ("SAA") provides specific guidance on what factors the Commission is to consider in

determining that imports "are likely to have no discernible adverse impact" on the domestic

industry.[93] With respect to this provision, the Commission generally considers the likely volume

of subject imports and the likely impact of those imports on the domestic industry within a

reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject

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[89] OCTAL's Prehear. Br. at 14–17; OCTAL's Posthear. Br. at 4, Answers to Questions of Commissioners and Commission Staff at 22–23, 28–30.

[90] Selenis's Posthear. Br. at 3–5; Exh. 1, pp. 1–2. As explained above, DAK Americas does not have a controlling interest in Selenis. *See* CR/PR at Tables I-13, III-1.

[91] Selenis's Posthear. Br. at 7.

[92] 19 U.S.C. § 1675a(a)(7).

[93] SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994); *see Stainless Steel Wire Rod from Italy, Japan, Korea, Spain, and Taiwan*, Inv. Nos. 731-TA-770–773 and 775 (Third Review), USITC Pub. 4623 (July 2016).

countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

Based on the record in these reviews, we find that subject imports from Canada, China, India, or Oman, considered individually, would not likely have no discernible adverse impact on the domestic industry if the respective orders on subject imports from each country were revoked.

Canada. During the original investigations, U.S. imports of subject merchandise from Canada increased from 269 million pounds in 2012 to 319 million pounds in 2013, then declined to 308 million pounds in 2014.[94] In these reviews, subject imports from Canada decreased steadily from *** pounds in 2015 to *** pounds in 2019, then increased to *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021.[95] The U.S. market share for shipments of subject imports from Canada declined steadily from *** percent in 2015 to *** percent in 2019 and 2020; it was *** percent in interim 2020 and *** percent in interim 2021.[96]

In the final phase of the original investigations, the Commission did not receive a questionnaire response from the only producer/exporter of PET resin in Canada, Selenis.[97]

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[94] CR/PR at C-8.
[95] CR/PR at Table IV-1.
[96] CR/PR at Table I-16.
[97] CR/PR at IV-18. The Commission used data from the foreign producer/exporter questionnaire response of Selenis from the preliminary phase of the investigations. Original Determinations, USITC Pub. 4604 at VII-3.

However, in these reviews, Selenis, which again was the only producer/exporter of PET resin in Canada, submitted a questionnaire response.[98]

The capacity of the industry in Canada to produce PET resin decreased steadily from *** pounds in 2015 to *** pounds in 2019, then increased to *** pounds in 2020; it was *** pounds in interim 2020 and *** pounds in interim 2021.[99] Its capacity utilization rate was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and *** percent in 2020; it was *** percent in interim 2020 and *** percent in interim 2021.[100] Total shipments of PET resin by the industry in Canada were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017 and 2018, *** pounds in 2019, and *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021.[101] Exports of PET resin from Canada decreased steadily from *** pounds in 2015 to *** pounds in 2019, then increased to *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021.[102] On an annual basis, between *** and *** percent of the reporting producer's shipments were exported; between *** and *** percent of the reporting producer's shipments during any year were directed to the United States, which was its largest export market throughout the POR.[103]

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[98] CR/PR at IV-18.
[99] CR/PR at Table IV-8.
[100] CR/PR at Table IV-8.
[101] CR/PR at Table IV-8.
[102] CR/PR at Table IV-8.
[103] CR/PR at Table IV-8. The largest export markets for PET, a category that includes PET resin and out-of-scope products, from Canada in 2020 were the United States, Malaysia, and China. *Id.* at Table IV-10.

In the original investigations, subject imports from Canada undersold the domestic like product in 35 of 48 comparisons (73 percent) with underselling margins ranging from *** to *** percent.[104] In these reviews, subject imports from Canada undersold the domestic like product in *** of *** comparisons (25 percent) with underselling margins ranging from *** to *** percent.[105]

In light of the foregoing, including the increase in volume of subject imports from Canada during the original investigations and the apparent restraining effect of the order as indicated by the decline in subject imports since imposition of the order on PET resin from Canada; the subject industry's continued interest in the U.S. market, which accounted for the vast majority of its export shipments throughout the POR; and the underselling of the domestic like product by subject imports from Canada during the original investigations and continued underselling during the POR, we find that subject imports from Canada would not likely have no discernible adverse impact on the domestic industry if the order covering these imports were revoked.

China. During the original investigations, U.S. imports of subject merchandise from China decreased from 160 million pounds in 2012 to 145 million pounds in 2013, then increased to 249 million pounds in 2014.[106] In these reviews, subject imports from China were ***

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[104] CR/PR at V-24 n.15.
[105] CR/PR at V-24.
[106] CR/PR at C-8.

pounds in 2015 and ***.[107] During these reviews, the U.S. market share for shipments of

subject imports from China was *** percent in 2015 and ***.[108]

In the final phase of the original investigations, the Commission did not receive a

questionnaire response from any producers/exporters of PET resin in China.[109] Similarly, in

these reviews, no producer/exporter of PET resin in China submitted a questionnaire

response;[110] the Commission therefore relied on the information available concerning the

Chinese industry. That information reflects that the industry in China has added production

capacity during the POR.[111]

According to official Chinese statistics, exports of PET, a category that includes PET resin

and out-of-scope products, from China increased from 7.0 billion pounds in 2018 to 7.6 billion

pounds in 2019, then decreased to 6.0 billion pounds in 2020.[112] The largest export markets for

PET from China in 2020 were Nigeria, the Philippines, and Russia.[113]

In the original investigations, subject imports from China undersold the domestic like

product in 17 of 35 comparisons (49 percent) with underselling margins ranging from *** to

*** percent.[114] In these reviews, subject imports from China undersold the domestic like

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[107] CR/PR at Table IV-1.
[108] CR/PR at Table I-16.
[109] CR/PR at IV-28. The Commission used data from the foreign producer/exporter
questionnaire responses of seven firms in China from the preliminary phase of the investigations.
Original Determinations, USITC Pub. 4604 at VII-5.
[110] CR/PR at IV-28.
[111] CR/PR at Table IV-11.
[112] CR/PR at Table IV-12.
[113] CR/PR at Table IV-12.
[114] CR/PR at V-24 n.15.

product in *** of *** instances (58 percent) with underselling margins ranging from *** to ***

percent.[115]

In light of the foregoing, including the increase in volume of subject imports from China

during the original investigations and the subsequent apparent restraining effect of the order,

increased production capacity and substantial volume of exports by the industry in China, and

the underselling of the domestic like product by subject imports from China during the original

investigations and continued underselling during the POR, we find that subject imports from

China would not likely have no discernible adverse impact on the domestic industry if the

orders covering these imports were revoked.

India.   During the original investigations, U.S. imports of subject merchandise from India

increased steadily from 50.4 million pounds in 2012 to 80.9 million pounds in 2013 and to 85.8

million pounds in 2014.[116] In these reviews, subject imports from India were *** pounds in

2015, *** pounds in 2016, and ***.[117] During these reviews, the U.S. market share for

shipments of subject imports from India was *** percent in 2015 and 2016 and ***.[118]

In the final phase of the original investigations, the Commission received four

questionnaire responses from producers/exporters of PET resin in India.[119] In these reviews, no

producer/exporter of PET resin in India submitted a questionnaire response.[120]

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[115] CR/PR at V-24.
[116] CR/PR at C-8.
[117] CR/PR at Table IV-1.
[118] CR/PR at Table I-16.
[119] CR/PR at IV-31.
[120] CR/PR at IV-31.

According to official Indian statistics, exports of PET, a category that includes PET resin and out-of-scope products, from India decreased steadily from 2.4 billion pounds in 2018 to 2.2 billion pounds in 2019 and to 2.1 billion pounds in 2020.[121] The largest export markets for PET from India in 2020 were Italy, the United Arab Emirates ("UAE"), and Bangladesh.[122]

In the original investigations, subject imports from India undersold the domestic like product in 14 of 30 comparisons (47 percent) with underselling margins ranging from *** to *** percent.[123] In these reviews, subject imports from India undersold the domestic like product in *** of *** instances (33 percent) with underselling margins ranging from *** to *** percent.[124]

In light of the foregoing, including the increase in volume of subject imports from India during the original investigations and the subsequent apparent restraining effect of the order, the substantial volume of exports by the industry in India, and the underselling of the domestic like product by subject imports from India during the original investigations and continued underselling during the POR, we find that subject imports from India would not likely have no discernible adverse impact on the domestic industry if the orders covering these imports were revoked.

Oman. During the original investigations, U.S. imports of subject merchandise from Oman increased steadily from *** pounds in 2012 to *** pounds in 2013 and to *** pounds in

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[121] CR/PR at Table IV-14.
[122] CR/PR at Table IV-14.
[123] CR/PR at V-24 n.15.
[124] CR/PR at V-24.

2014.[125] In these reviews, subject imports from Oman were *** pounds in 2015, *** pounds in

2016, *** pounds in 2017, *** pounds in 2018, *** pounds in 2019, and *** pounds in 2020;

they were *** pounds in interim 2020 and *** pounds in interim 2021.[126] During these

reviews, the U.S. market share for shipments of subject imports from Oman was *** percent in

2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and

*** percent in 2020; it was *** percent in interim 2020 and *** percent in interim 2021.[127]

In the final phase of the original investigations, the Commission received a

questionnaire response from the only producer/exporter of PET resin in Oman, OCTAL.[128] In

these reviews, OCTAL, which again was the only producer/exporter of PET resin in Oman, also

submitted a questionnaire response.[129]

The capacity of the industry in Oman to produce PET resin was *** pounds *** and ***

pounds in ***; it was *** pounds in interim 2020 and *** pounds in interim 2021.[130] Its

capacity utilization rate was *** percent in 2015, *** percent in 2016, *** percent in 2017, ***

percent in 2018, *** percent in 2019, and *** percent in 2020; it was *** percent in interim

2020 and *** percent in interim 2021.[131] Total shipments of PET resin by the industry in Oman

were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, *** pounds in 2018, ***

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[125] CR/PR at C-8. After the order was imposed, Commerce conducted two successive administrative reviews and found imports from Oman were at fair market value in the first administrative review and assigned an antidumping duty margin of 0.75 percent in the second administrative review. *Id.* at Table I-5.
[126] CR/PR at Table IV-1.
[127] CR/PR at Table I-16.
[128] CR/PR at IV-34.
[129] CR/PR at IV-34.
[130] CR/PR at Table IV-17.
[131] CR/PR at Table IV-17.

pounds in 2019, and *** pounds in 2020; they were *** pounds in interim 2020 and ***

pounds in interim 2021.[132] Exports of PET resin from Oman increased irregularly from ***

pounds in 2015 to *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds

in interim 2021.[133] On an annual basis, between *** and *** percent of the reporting

producer's shipments were exported; between *** and *** percent of the reporting producer's

shipments during any year were directed to the United States.[134] The largest export markets

for PET, a category that includes PET resin and out-of-scope products, from Oman in 2020 were

the UAE, Turkey, and Saudi Arabia.[135]

In the original investigations, subject imports from Oman undersold the domestic like

product in 32 of 56 comparisons (57 percent) with underselling margins ranging from *** to

*** percent.[136] In these reviews, subject imports from Oman undersold the domestic like

product in *** of *** comparisons (54 percent) with underselling margins ranging from *** to

*** percent.[137]

In light of the foregoing, including the increase in volume of subject imports from Oman

during the original investigations, the export orientation of the industry in Oman and its

continued interest in the U.S. market, and the underselling of the domestic like product by

subject imports from Oman during the original investigations and continued underselling during

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[132] CR/PR at Table IV-17.
[133] CR/PR at Table IV-17.
[134] CR/PR at Table IV-17.
[135] CR/PR at Table IV-19.
[136] CR/PR at V-24 n.15.
[137] CR/PR at V-24.

the POR, we find that subject imports from Oman would not likely have no discernible adverse

impact on the domestic industry if the order covering these imports were revoked.[138]

D.   **Likelihood of a Reasonable Overlap of Competition**

The Commission generally has considered four factors intended to provide a framework

for determining whether subject imports compete with each other and with the domestic like

product.[139] Only a "reasonable overlap" of competition is required.[140] In five-year reviews, the

relevant inquiry is whether there likely would be competition even if none currently exists

because the subject imports are absent from the U.S. market.[141]

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[138] As explained in detail below, OCTAL's planned construction of a U.S. production facility is too
uncertain in several respects to warrant a finding regarding its effects on subject imports from Oman.
We also give limited weight to the pending acquisition of OCTAL by Alpek, given the lack of any
supporting or concrete evidence with respect to OCTAL's future behavior if and when the announced
acquisition receives *** and is finalized. *See* section III.E.

[139] The four factors generally considered by the Commission in assessing whether imports
compete with each other and with the domestic like product are as follows: (1) the degree of fungibility
between subject imports from different countries and between subject imports and the domestic like
product, including consideration of specific customer requirements and other quality-related questions;
(2) the presence of sales or offers to sell in the same geographical markets of imports from different
countries and the domestic like product; (3) the existence of common or similar channels of distribution
for subject imports from different countries and the domestic like product; and (4) whether subject
imports are simultaneously present in the market with one another and the domestic like product. *See,
e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[140] *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland
Werke,* 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel
Group v. United States,* 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996).
We note, however, that there have been investigations where the Commission has found an insufficient
overlap in competition and has declined to cumulate subject imports. *See, e.g.*, *Live Cattle from Canada
and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812–13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999),
aff'd sub nom., Ranchers-Cattlemen Action Legal Foundation v. United States, 74 F. Supp. 2d 1353 (Ct.
Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*,
Inv. Nos. 731-TA-761–62 (Final), USITC Pub. 3098 at 13–15 (Apr. 1998).

[141] *See generally Chefline Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade
2002).

In the original investigations, the Commission found a reasonable overlap of competition among subject imports from Canada, China, India, and Oman and between these imports and the domestic like product for purposes of its final determinations concerning subject imports from Canada, China, India, and Oman.[142]

Fungibility. In the original investigations, the Commission found that there was "substantial fungibility" between domestic and subject sources, with all domestic producers, importers, and purchasers reporting that PET resin from all sources was either "always" or "frequently" interchangeable.[143]

In these reviews, a majority of purchasers indicated that domestically produced PET resin and subject imports were comparable, except for delivery by rail and delivery time, for which a majority of purchasers indicated that domestically produced PET resin was superior to imports from at least some subject producers.[144] Domestic producers and a large majority of importers reported that the domestically produced product and PET resin from the subject countries are always interchangeable, and the majority of purchasers reported that the

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[142] Original Determinations, USITC Pub. 4604 at 11–13.
[143] Original Determinations, USITC Pub. 4604 at 11. In the original investigations, a majority of responding purchasers indicated that domestically produced PET resin and subject imports were comparable, except for the ability to ship by rail, delivery time, and technical support, for which a majority of responding purchasers indicated that domestically produced PET resin was generally superior to subject imports except those from Canada. *Id.* For those three factors, a majority of responding purchasers also indicated that PET resin from Canada was generally superior to imports from other subject sources. *Id.* The Commission found that purchaser questionnaire responses did not support respondents' contention that lack of access to rail is a significant barrier to subject imports from India or Oman (or the other two sources of subject imports) competing in the U.S. PET resin market. *Id.* at 12. When asked whether differences other than price were ever significant in choosing between PET resin from different sources, all domestic producers and a majority of importers and purchasers answered that nonprice differences were only "sometimes" or "never" important. *Id.* at 11–12.
[144] CR/PR at Table II-12.

domestically produced product and PET resin from the subject countries are always or

frequently interchangeable.[145] Domestic producers and most importers reported that factors

other than price were never or sometimes significant for PET resin from domestic and subject

sources.[146] Most purchasers reported that factors other than price were sometimes significant

for PET resin from domestic and subject sources.[147] The record also indicates that the

industries in the United States and the subject countries produce PET resin for the same

primary end use, bottle production.[148]

    Geographic Overlap. In the original investigations, domestic producers reported selling

PET resin to all U.S. regions, while importers from most subject countries reported selling to all

or most U.S. regions.[149] In these reviews, domestic producers reported selling PET resin to all

regions in the contiguous United States, as did importers of subject merchandise.[150]

    Channels of Distribution. In the original investigations, most domestically produced PET

resin and most subject imports were sold to end users, with a smaller but still substantial

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    [145] CR/PR at Tables II-13 to II-15.
    [146] CR/PR at Tables II-16, II-17.
    [147] CR/PR at Table II-18.
    [148] CR/PR at II-1 and Tables II-1a, II-1b.
    [149] Original Determinations, USITC Pub. 4604 at 13 & n.59. ***. *Id.*; Confidential Original
Determinations at 18 & n.59. Purchasers generally reported that PET resin from the United States,
subject countries, and other sources was available in their firms' geographic region. Original
Determinations, USITC Pub. 4604 at 13. The Commission found that the record in the original
investigations "consequently {did} not support OCTAL's argument that there is a lack of geographic
overlap between subject imports from Oman and those from other sources." *Id.*
    [150] CR/PR at II-5. Importers of PET resin from Canada reported more sales in the midwestern,
northeastern, and southeastern regions of the United States; importers of PET resin from China
reported more sales in the northeastern, Pacific coast, and southeastern regions of the United States;
and importers of PET resin from Oman reported more sales in the midwestern, northeastern, and
southeastern regions of the United States. *Id.* at Table II-2.

volume of shipments to distributors.[151] In these reviews, domestic producers and importers of

PET resin from Canada, China, India, and Oman sold primarily to end users.[152]

Simultaneous Presence in Market. In the original investigations, the domestic like

product and imports from Canada, China, India, and Oman were sold in the U.S. market

throughout the POI.[153] In these reviews, the domestic like product and subject imports from at

least one of the four countries were present in the U.S. market throughout the POR.[154]

Conclusion. The record in these reviews indicates that there has been no significant

change in the considerations that led the Commission to conclude in the original investigations

that there was a reasonable overlap of competition among subject imports from each source

and the domestic like product. In particular, the domestic like product and subject imports

from Canada, China, India, and Oman remain fungible, are primarily shipped through the same

channels of distribution, overlap geographically to a large degree, and were simultaneously

present in the U.S. market throughout most of the POR. The record also indicates that, upon

revocation, subject imports from Canada, China, India, and Oman and the domestic like product

likely would be sold for overlapping end uses, as they were during the original investigations. In

light of this and the lack of any contrary argument, we find that there would likely be a

reasonable overlap in competition among subject imports from Canada, China, India, and Oman

and the domestic like product should the orders be revoked.

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[151] Original Determinations, USITC Pub. 4604 at 12.
[152] CR/PR at Tables II-1a, II-1b.
[153] Original Determinations, USITC Pub. 4604 at 13.
[154] Of the 81 months in the POR, imports from Canada were present each month, imports from China were present in 42 months, imports from India were present in 56 months, and imports from Oman were present in 69 months. CR/PR at Table IV-3.

E.   Likely Conditions of Competition

In determining whether to exercise our discretion to cumulate the subject imports, we assess whether subject imports from Canada, China, India, and Oman would likely compete under similar or different conditions of competition. The record in these reviews indicates a lack of likely significant distinctions in conditions of competition among these subject countries insofar as they might impact competition in the U.S. market.

The market penetration of each of the subject countries increased during the POI.[155] Under the discipline of the orders, subsequent imports from each of these subject countries generally have been considerably below pre-order levels.[156] The industries producing PET resin in the subject countries exported substantial volumes of PET resin during the original POI and, except for Canada, continued to export a substantial portion of their production during the POR.[157] There are existing third-country barriers covering PET resin from all subject countries.[158] Moreover, there was predominant or mixed underselling of the domestic like product by subject imports from each of the subject countries in the original investigations.[159] In these reviews, in terms of quarterly comparisons, there continued to be some underselling

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[155] CR/PR at C-8.

[156] *Compare* CR/PR at C-8 with Table I-16. Total subject imports from Oman were considerably below pre-order levels in several years of the POR, but at comparable levels in others. *Compare id.* at Table IV-1 with Original CR at Table IV-2. Subject imports from Oman exceeded pre-order levels at *** pounds in interim 2021, demonstrating OCTAL's continued interest in the U.S. market and ability to export increasing volumes of subject imports by shifting product from third-country markets. *Id.* at Table IV-1; Hearing Tr. at 194. *See* CR/PR at Tables I-15, IV-17.

[157] CR/PR at Tables IV-8 (PET resin), IV-17 (PET resin), IV-22 (global PET exports). Total exports of subject merchandise from Canada declined over the POR in tandem with the Canadian industry's declining exports to the U.S. market, which were substantial prior to imposition of the order on PET resin from Canada. *Id.* at C-8, Table IV-8.

[158] CR/PR at Table IV-21; OCTAL's Final Comments at 10.

[159] CR/PR at V-24 n.15.

by imports from each subject country despite being under the discipline of the orders.[160]

Finally, the record evidence and facts available indicate that each of the subject industries

continues to have substantial production capacity.[161] As with domestic producers, subject

producers seek to maintain high operating rates to spread their costs and maximize efficiency

because PET resin production is capital intensive.[162]

We are unpersuaded by OCTAL's argument that subject imports from Oman are likely to

compete under distinct conditions of competition after revocation. OCTAL asserts that subject

imports from Oman are different insofar as they have maintained a consistent presence in the

U.S. market. As explained above, subject imports from Oman, like imports from the other

subject countries, declined following imposition of the order and remained below pre-order

levels until interim 2021, reflecting that for the bulk of the POR the order did appear to have a

restraining effect on subject imports from Oman.[163] Further, the record reflects that the

subject industry in Oman maintains both the ability and incentive to further increase shipments

to the U.S. market. Even in interim 2021, when the capacity utilization of the industry in Oman

was close to its highest level on record, it maintained available unused capacity.[164] The subject

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[160] CR/PR at Table V-11.
[161] *See* CR/PR at Tables IV-8, IV-17; Polyethylene Terephthalate (PET) Solid-State Resins, EDIS Doc. 759722 (Jan. 5, 2022), at 103, 114.
[162] OCTAL uses a melt-to-resin technology in its production process, which is less capital intensive than solid-state polymerization process. CR/PR at I-17 to I-19; Hearing Tr. at 151.
[163] CR/PR at Table IV-1, Original CR at Table IV-2.
[164] *Compare* CR/PR at Table IV-17 with Original CR at Table VII-17.

industry in Oman also exports a substantial portion of its production,[165] and its continuing

interest in the U.S. market indicates that notwithstanding its stated focus on exports to existing

third-country markets, it has the ability and incentive to increase exports to the U.S. market

upon revocation.[166] [167]

In addition, we are unpersuaded by OCTAL's argument that its exports to the U.S.

market, which it alleges were at *de minimis* dumping margins, demonstrate that it can make

sales at fair prices, and that it is therefore a "responsible market participant" now operating

under different competitive conditions.[168] First, Commerce found in its review of the order on

imports from Oman that revocation of the order would likely lead to the continuation or

recurrence of dumping at a margin of up to 7.62 percent, the same rate found in the original

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[165] CR/PR at Table IV-17. The record also does not support OCTAL's argument that its melt-to-resin technology results in a higher-quality product that distinguishes subject imports from Oman from other sources. OCTAL's Posthear. Br. Answers to Questions of Commissioners and Commission Staff at 60. All four U.S. producers reported that the domestic like product and PET resin from Oman are always interchangeable, and most importers (8 of 10) and purchasers (15 of 18) reported that they are always or frequently interchangeable. CR/PR at Table II-13. All 14 responding purchasers reported that the domestically produced product was comparable to subject imports from Oman in terms of quality meets industry standards and quality exceeds industry standards. *Id.* at Table II-12.

[166] During the POR, subject imports from Oman varied annually from a high of *** pounds in 2018 to a low of *** pounds in 2019, yet were *** pounds in interim 2021 compared to *** pounds in interim 2020. CR/PR at Table IV-1.

[167] OCTAL's submission shows that ***. OCTAL Posthear. Br. at Exh. 2, attachment A. The record reflects that the average unit value ("AUV") of OCTAL's exports to the U.S. market was higher than the AUVs of its exports to other markets and of its home market shipments throughout the POR. CR/PR at Table IV-17.

[168] OCTAL's Prehear. Br. at 19–20; Hearing Tr. at 201.

investigation.[169] Thus, Commerce has already found that revocation of the order would likely

lead to sales of subject imports from Oman at unfair prices. Second, the administrative reviews

that OCTAL highlights cover two periods from May 2017 to April 2019 that were early in the

POR and during a time of relatively low import volumes.[170] They do not cover the latter portion

of the POR, which includes the sharp increase of subject imports from Oman, in interim 2021.[171]

Indeed, it appears that these lower volumes were the result of the disciplining effect of the

orders, which respondents' counsel has acknowledged.[172] Further, we have found in these

reviews that, despite the order, subject imports from Oman undersold domestic producers

during the POR in 54 percent of comparisons, a similar level of underselling found for subject

imports from Oman in the original investigation.[173]

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[169] 86 Fed. Reg. 41009, 41010. *See* 81 Fed. Reg. 27979, 27982 (order). Section 752(a)(6) of the Act states that "the Commission may consider the magnitude of the margin of dumping" in making its determination in a five-year review investigation. 19 U.S.C. § 1675a(a)(6). The statute defines the "magnitude of the margin of dumping" to be used by the Commission in five-year review investigations as "the dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title." *Id.* § 1677(35)(C)(iv). The Commission has rejected the argument that low margins over most of the POR establishes that subject imports will not increase significantly or have significant price effects if the order is revoked, noting that the statute merely says the Commission "may" consider the margins, and that the statute "does not mandate that we consider the actual margins that existed over the period of review." *Stainless Steel Sheet and Strip from France, Germany, Italy, Japan, Korea, Mexico, Taiwan, and the United Kingdom*, Inv. Nos. 701-TA-381–382 and 731-TA-797–804 (Review), USITC Pub. 3788 (July 2005) at 14 n.85; SAA at 887. *See also Polychloroprene Rubber from Japan*, Inv. No. AA-1921-129 (Second Review), USITC Pub. 3786 (June 2005) at 9 (noting that the antidumping finding had a restraining effect on exports to the United States, notwithstanding a zero percent margin).

[170] 84 Fed. Reg. 64460; 86 Fed. Reg. 7361. Subject imports from Oman were *** pounds in 2017, *** pounds in 2018, and *** pounds in 2019. CR/PR at Table IV-1.

[171] Subject imports from Oman were *** pounds in interim 2021. CR/PR at Table IV-1.

[172] Hearing Tr. at 229 ("Yes, the existence of the antidumping {order} itself has discipline.").

[173] CR/PR at V-24 n.15. That subject imports from Oman are covered by an antidumping duty order and not also a countervailing duty order like subject imports from China and India does not constitute a different condition of competition to warrant decumulation. Imports from each subject country are subject to the disciplining effects of an order or orders.

OCTAL further asserts that its plans to build a PET resin production facility in South

Carolina and Alpek's recently announced pending acquisition of OCTAL support decumulating

subject imports from Oman.[174] Regarding its planned U.S. production facility, OCTAL states that

it has had *** and is in ***, but its submitted documentation show that its plans are at an early

stage, with no signed contracts, concrete design plans, financial investment, or actual

construction.[175] The record also contains no supporting information on the facility's production

level at startup or when a full production level will be reached.[176] [177] Therefore, it is unclear

whether and when OCTAL's plans to serve the U.S. market from a future U.S. production facility

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[174] OCTAL's Prehear. Br. at 12; OCTAL's Posthear. Br. at 4; Hearing Tr. at 150–152. Alpek is a multinational firm that owns U.S. producer DAK Americas. CR/PR at Table III-1. After the hearing in these reviews, Alpek announced it would be acquiring OCTAL ***. *Id.*

[175] OCTAL's Prehear. Br. at 13; OCTAL's Posthear. Br. at Exh. 1, attachments A–G (emails and PowerPoint presentations regarding Cooper River facility construction).

[176] OCTAL states that the facility is expected to have production capacity of *** pounds. CR/PR at IV-35.

[177] Niagara disputes OCTAL's assertion that its South Carolina facility will be completed in the reasonably foreseeable future and thus the domestic industry's capacity will have expanded by 2024. *See, e.g.,* Hearing Tr. at 176 ("I'm not sure if they're going to have additional capacity by 2024"); Niagara's Prehear. Br. at 13–14 (arguing with respect to OCTAL's proposed U.S. facility that "with ***"); Niagara's Final Comments at 5–6 (arguing that the proposed OCTAL facility ***).

will come to fruition, much less the extent to which such production would have an effect on restraining subject imports from Oman in the reasonably foreseeable future.[178]

Regarding Alpek's planned acquisition, OCTAL states that ***.[179] However, the acquisition remains subject to regulatory approvals across several countries and has not yet occurred,[180] and the record in these reviews contains ***. These uncertainties about possible operations in the future do not provide a basis for finding likely differences in conditions of competition in the reasonably foreseeable future.[181]

In addition, we do not find persuasive Selenis's argument that Alpek's acquisition of a controlling interest in Selenis in 2016 supports decumulating subject imports from Canada.[182] Selenis states that ***[183] and that a "key tenet" of the Alpek sales strategy is a fair price for the

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[178] OCTAL argues that, in prior determinations, the Commission has found that development of domestic production capacity by foreign producers creates a distinct condition of competition and therefore the Commission should not cumulate subject imports from Oman with other subject imports because of OCTAL's planned South Carolina PET resin plant. OCTAL's Prehear. Br. at 8–11 (citing *Certain Large Residential Washers from Korea and Mexico*, Inv. Nos. 701-TA-488 and 731-TA-1199–1200 (Review), USITC Pub. 4882 (April 2019) ("*Washers*"); *Stainless Steel Plate from Belgium, Italy, Korea, South Africa, and Taiwan*, Inv. Nos. 701-TA-379 and 731-TA-788, 790–793 (Second Review), USITC Pub. 4248 (August 2011) ("*Stainless Steel Plate*"); *Hot-Rolled Steel Products From Argentina, China, India, Indonesia, Kazakhstan, Romania, South Africa, Taiwan, Thailand, and Ukraine*, Inv. Nos. 701-TA-404–408 and 731-TA-898–902 and 904–908 (Review), USITC Pub. 3956 (October 2007) ("*Hot-Rolled Steel Products*")). As an initial matter, "{E}ach injury investigation by the Commission is *sui generis* and, "{f}or that reason, prior determinations by the Commission with regard to one industry typically provide little guidance for later determinations with regard to different industries.'" Remand Determinations at 2 (quoting *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *Mexichem Fluor Inc. v. United States*, 179 F. Supp. 3d 1238, 1255 (Ct. Int'l Trade 2016)). Nevertheless, the record in these reviews differs from those in the other reviews in that there is no existing U.S. production facility owned by OCTAL presently in operation, unlike the U.S. production facilities described in the prior determinations cited by OCTAL. *See Washers*, USITC Pub. 4882 at 19–23; *Stainless Steel Plate*, USITC Pub. 4248 at 16–18; *Hot-Rolled Steel Products*, USITC Pub. 3956 at 17–18.
[179] OCTAL's Posthear. Br. at 2–3.
[180] CR/PR at Table III-1.
[181] ***.
[182] CR/PR at III-16 n.13, Table III-1. *See* ***.
[183] ***.

domestic like product.[184] The record, however, primarily contains argument on these points

from Selenis and no supporting documents, such as internal company documents or

correspondence regarding any coordinated sales strategy between DAK Americas and

Selenis.[185] In fact, domestic producers, of which DAK Americas is one, argue that all subject

countries, including Canada, should be cumulated for the purposes of our analysis in these

reviews and that cumulated subject imports will undersell the domestic like product and have

price-depressing and -suppressing effects if the orders are revoked, causing harm to the

domestic industry, of which DAK Americas is a part.[186]

Based on these considerations, we find that the record in these reviews does not

indicate that there would likely be any significant difference in the conditions of competition

among subject imports upon revocation of the orders.

F.   Conclusion

Based on the record, we find that subject imports from Canada, China, India, and Oman,

considered individually, would not be likely to have no discernible adverse impact on the

domestic industry if the corresponding orders were revoked. We also find a likely reasonable

overlap of competition between and among subject imports from Canada, China, India, and

Oman and the domestic like product, and that imports from the subject countries are likely to

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[184] Selenis's Posthear. Br. at 5. *See id.* at Exh. 1, p. 5.

[185] *See generally* ***. Selenis did not file a prehearing brief and did not appear at the hearing.
See Hearing Tr. at 66 (noting that counsel for Selenis was "on the phone" monitoring the Commission's
video transmission of the hearing). As a result, domestic producers could address Selenis's arguments
only in their final comments, in which they state that ***. Final Comments of the Domestic Industry at
7. We note that domestic producers were precluded from submitting any new information addressing
these arguments.

[186] Domestic Producers' Prehear. Br. at 8–41, 75–80; Domestic Producers' Posthear. Br. at 11–
14; Final Comments of the Domestic Industry at 5–8, 10–15.

compete in the U.S. market under similar conditions of competition, if the orders were revoked.

We therefore exercise our discretion to cumulate subject imports from Canada, China, India,

and Oman for purposes of our analysis in these reviews.

IV. Revocation of the Antidumping and Countervailing Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will

revoke an antidumping or countervailing duty order unless: (1) it makes a determination that

dumping or subsidization is likely to continue or recur and (2) the Commission makes a

determination that revocation of the antidumping or countervailing duty order "would be likely

to lead to continuation or recurrence of material injury within a reasonably foreseeable

time."[187] The SAA states that "under the likelihood standard, the Commission will engage in a

counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of

an important change in the status quo – the revocation or termination of a proceeding and the

elimination of its restraining effects on volumes and prices of imports."[188] Thus, the likelihood

standard is prospective in nature.[189] The U.S. Court of International Trade has found that

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[187] 19 U.S.C. § 1675a(a).

[188] SAA at 883–84. The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[189] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

"likely," as used in the five-year review provisions of the Act, means "probable," and the

Commission applies that standard in five-year reviews.[190]

The statute states that "the Commission shall consider that the effects of revocation or

termination may not be imminent, but may manifest themselves only over a longer period of

time."[191] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case,

but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in

original investigations."[192]

Although the standard in a five-year review is not the same as the standard applied in an

original investigation, it contains some of the same fundamental elements. The statute

provides that the Commission is to "consider the likely volume, price effect, and impact of

imports of the subject merchandise on the industry if the orders are revoked or the suspended

investigation is terminated."[193] It directs the Commission to take into account its prior injury

determination, whether any improvement in the state of the industry is related to the order or

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[190] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").
[191] 19 U.S.C. § 1675a(a)(5).
[192] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.
[193] 19 U.S.C. § 1675a(a)(1).

the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[194] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[195]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[196] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.[197]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to

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[194] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings since the imposition of the orders. CR/PR at I-16.
[195] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.
[196] 19 U.S.C. § 1675a(a)(2).
[197] 19 U.S.C. § 1675a(a)(2)(A–D).

consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[198]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[199] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to

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[198] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

[199] 19 U.S.C. § 1675a(a)(4).

which any improvement in the state of the domestic industry is related to the orders under

review and whether the industry is vulnerable to material injury upon revocation.[200]

B.   Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an

order is revoked, the statute directs the Commission to consider all relevant economic factors

"within the context of the business cycle and conditions of competition that are distinctive to

the affected industry."[201] The following conditions of competition inform our determinations.

A number of the conditions of competition that were relevant in the original investigations

remain pertinent in these reviews.

1.   Findings in the Original Investigations

Demand. In its original determinations, the Commission found that U.S. demand for PET

resin depends on the demand for downstream products, such as bottles for soft drinks and

other beverages, which was its largest end use.[202] Most U.S. producers, importers, and

purchasers indicated that demand for PET resin had increased during the POI, and apparent

U.S. consumption data corroborated this view.[203]

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[200] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

[201] 19 U.S.C. § 1675a(a)(4).

[202] Original Determinations, USITC Pub. 4604 at 18. It observed that a trend toward lighter-weight water bottles initially decreased demand for PET resin, but may have led to increased consumption of water bottles. *Id.*

[203] Original Determinations, USITC Pub. 4604 at 18.

Supply. In the original investigations, the domestic industry was the largest supplier to the U.S. market, but its market share fell steadily during the POI.[204] Cumulated subject import market share increased over the POI, and subject imports accounted for the largest share of all imports in the last two years of the POI.[205] During the POI, the market share of nonsubject imports fluctuated, but Mexico was by far the largest source of nonsubject imports, with M&G's imports from its affiliated company in Mexico accounting for most of those imports.[206] All four domestic producers were affiliated with foreign producers of PET resin.[207]

The Commission found that the production of PET resin is capital intensive, and producers try to maintain high operating rates to spread their costs and maximize efficiency.[208] During the POI, the domestic industry ceased production at two facilities, but M&G was constructing a plant in Corpus Christi, Texas, with "plans to begin operations" in 2016.[209]

Substitutability and Other Conditions. In its original determinations, the Commission found a moderate to high degree of substitutability between the domestic like product and cumulated subject imports and that price was an important consideration for purchasers of PET resin.[210] During the POI, raw material costs accounted for approximately 90 percent of the cost of goods sold ("COGS"), with the prices for purified terephthalic acid ("PTA") and monoethylene glycol ("MEG"), the primary inputs in PET resin production, declining significantly and along

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[204] Original Determinations, USITC Pub. 4604 at 18.
[205] Original Determinations, USITC Pub. 4604 at 18.
[206] Original Determinations, USITC Pub. 4604 at 18–19.
[207] Original Determinations, USITC Pub. 4604 at 19.
[208] Original Determinations, USITC Pub. 4604 at 19.
[209] Original Determinations, USITC Pub. 4604 at 19.
[210] Original Determinations, USITC Pub. 4604 at 19.

with falling oil prices.[211] Two PTA supply disruptions occurred during the POI, but the domestic

producers indicated that these disruptions did not translate into shortages of PET resin in the

U.S. market.[212] The Commission found that domestic producers generally sold PET resin under

long-term or annual contracts indexed to raw material prices, while importers more often

entered into short-term or annual contracts.[213]

2.   Demand Conditions

In these reviews, U.S. demand for PET resin continues to depend on the demand for

downstream products, such as bottles for soft drinks and other beverages, which is its largest

end use; sheets used for making clam shell containers in which items such as fruits are

packaged; carpeting; and strapping, such as for lumber.[214] PET resin accounts for a large share

of the cost of the intermediate products in which it is used, but a smaller share of the ultimate

end-use products.[215] For example, PET resin is a smaller share of the cost of a bottled beverage

than it is a share of the cost of a bottle alone.[216]

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[211] Original Determinations, USITC Pub. 4604 at 19–20.
[212] Original Determinations, USITC Pub. 4604 at 20.
[213] Original Determinations, USITC Pub. 4604 at 20. The Commission observed that domestically produced PET resin and subject imports from Canada were delivered more often by rail than PET resin from other sources, which were delivered by truck, but that only four purchasers indicated a preference for rail and that not all customers could receive shipments by rail. *Id.* It also observed that large purchasers of PET resin switched to importing PET resin themselves during the POI and that a substantial portion of the subject imports from India were imported in this fashion during the POI. *Id.*
[214] CR/PR at I-15, II-1, II-12, Table II-1a.
[215] CR/PR at II-13.
[216] CR/PR at II-13.

Apparent U.S. consumption increased from 2015 to its highest level on record in 2020 and was higher in most years of the POR than during the POI.[217] It was higher in interim 2021 than in interim 2020.[218] All parties agree that PET resin consumption increased from 2015 to 2019, as well as in 2020 and when comparing the interim periods due to increased demand for downstream products relating to the COVID-19 pandemic.[219] They also agree that demand for PET resin will continue to increase through 2023, although they disagree on the rate of that increase.[220]

3. Supply Conditions

The U.S. market continues to be supplied by the domestic industry and imports from subject and nonsubject sources.[221] The domestic industry was the largest source of supply to the U.S. market during the POR. Its share of apparent U.S. consumption declined from 85.4 percent in 2015 to 79.2 percent in 2016, then increased steadily to 83.8 percent in 2020, for a total decrease of 1.7 percentage points; the industry's share was lower in interim 2021 (79.4 percent) than in interim 2020 (85.6 percent).[222] The domestic industry's capacity declined from 6.6 billion pounds in 2015 to 6.3 billion pounds in 2018, then increased to 6.7 billion pounds in

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[217] Apparent U.S. consumption was 6.3 billion pounds in 2015; 7.0 billion pounds in 2016, 2017, and 2018; 6.9 billion pounds in 2019, and 7.3 billion pounds in 2020. CR/PR at Table I-15. During the original investigations, apparent U.S. consumption was *** pounds in 2012, *** pounds in 2013, and *** pounds in 2014. *Id.* at C-8.

[218] Apparent U.S. consumption was 5.5 billion pounds in interim 2020 and 5.6 billion pounds in interim 2021. CR/PR at Table I-15.

[219] CR/PR at II-14, Tables II-4, II-5.

[220] CR/PR at Table II-6. Domestic producers argue that demand will slow to align with the growth in gross domestic product. Domestic Producers' Prehear. Br. at 41–43. Niagara argues that the substantial pandemic-related increase will continue. Niagara's Prehear. Br. at 24–26; Niagara's Posthear. Br. Responses to the Commissioners' Questions at Question A, p. 11.

[221] CR/PR at Table I-15.

[222] CR/PR at Tables I-16, C-1.

2019 and 2020; it was unchanged when comparing interim 2020 and interim 2021.[223] The

industry's reported capacity utilization fluctuated during 2015–2020, at 84.7 percent in 2015,

88.3 percent in 2016, 86.3 percent in 2017, 93.4 percent in 2018, 84.5 percent in 2019, and 91.3

percent in 2020, for a total increase of 6.6 percentage points.[224] Its capacity utilization was

lower in interim 2021 (at 90.2 percent) than in interim 2020 (at 92.2 percent).[225]

Since the original investigations, the domestic industry has undergone changes in

composition. In October 2017, M&G declared bankruptcy and closed its West Virginia

production facility.[226] Far Eastern New Century Corp., a PET resin producer in Taiwan,

purchased M&G's West Virginia production facility in March 2018, renamed it APG, and

restarted production in July 2018.[227] Beginning in 2016, the domestic industry's production

capacity has been less than apparent U.S. consumption.[228] Three of four domestic producers

are affiliated with foreign producers/exporters of PET resin subject to these reviews.[229]

Nineteen of 20 purchasers reported supply constraints during the POR. Ten reported

that force majeure or natural disasters caused supply disruptions.[230] Thirteen reported that

suppliers were unable to provide the requested PET resin by refusing to bid on business or

providing short shipments.[231] Two of four U.S. producers reported refusing or being unable to

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[223] CR/PR at Table III-3.
[224] CR/PR at Tables III-3, C-1.
[225] CR/PR at Table III-3.
[226] CR/PR at Table III-1.
[227] CR/PR at Table III-1.
[228] CR/PR at Tables I-15, III-3.
[229] CR/PR at Table I-13.
[230] CR/PR at II-12.
[231] CR/PR at II-12.

supply customers during the POR.[232] Reasons offered included hurricane-, drought-, and fire-

related delays in raw materials deliveries; equipment problems or decommissioning;

bankruptcy; and ***.[233] A joint venture of the parent companies of APG, DAK Americas, and

Indorama plans to begin production of PET resin at a facility in Corpus Christi, Texas. The plan

was first announced in 2011, and construction has begun, but the parties dispute the extent to

which the plant will be ready to begin production in 2024 as planned.[234] As reviewed above,

OCTAL has announced plans to begin production in Cooper River, South Carolina by 2024,

though such plans remain nascent.[235]

Cumulated subject imports declined irregularly as a share of apparent U.S. consumption,

from *** percent in 2015 to *** percent in 2020.[236] As discussed above, the Commission

received questionnaire responses from the sole known producer/exporter in Canada and the

sole known producer/exporter in Oman and no questionnaire responses from 27 firms

identified as possible producers/exporters of PET resin in China or from 13 firms identified as

possible producers/exporters of PET resin in India.[237] Cumulated subject imports entered the

U.S. market each year from 2015 to 2020 and during interim 2021.[238]

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[232] CR/PR at II-12.

[233] CR/PR at Tables III-1, III-2.

[234] CR/PR at Table III-1; Domestic Producers' Prehear. Br. at 54–57; Domestic Producers'
Posthear. Br. at 8–9; Niagara's Prehear. Br. at 8–14; Niagara's Posthear. Br. at 3–5.

[235] CR/PR at Table III-1.

[236] CR/PR at Table I-16. Subject import market share was *** percent in interim 2020 and ***
percent in interim 2021. *Id.*

[237] CR/PR at IV-28, IV-31. The Commission therefore relies on the information available
regarding the industries in China and India.

[238] CR/PR at Tables IV-1, IV-3.

Nonsubject imports were the second-largest source of supply to the U.S. market during

the POR. Nonsubject imports' market share increased from *** percent in 2015 to *** percent

in 2016, then declined irregularly to *** percent in 2020 and was higher in each year of the POR

than in any year of the POI.[239] The largest country source of nonsubject imports during the POR

was Mexico.[240]

4. Substitutability and Other Conditions

We find that there is a high degree of substitutability between domestically produced

PET resin and subject imports from Canada, China, India, and Oman and that price remains an

important factor in purchasing decisions.[241] [242] As previously stated, all domestic producers and

a large majority of importers reported that the domestically produced product and PET resin

from the subject countries are always interchangeable, and a majority of purchasers reported

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[239] CR/PR at C-8, Table I-16. It was *** percent in interim 2020 and *** percent in interim 2021.
Id. at Table I-16. As detailed above, based on petitions filed in September 2017, the Commission
conducted antidumping duty investigations on PET resin from Brazil, Indonesia, Korea, Pakistan, and
Taiwan during the POR. 2018 Determinations at 1. In November 2018, the Commission made negative
determinations in those investigations. 83 Fed. Reg. 56377.

[240] Import statistics, EDIS Doc. 764293 (March 2, 2022). These data may be overstated as HTSUS
subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews. The
largest importer of nonsubject imports during the POR *** was ***, accounting for *** percent of
nonsubject imports. CR/PR at IV-3.

[241] CR/PR at II-18 to II-20, II-29, Tables II-8, II-9, II-16.

[242] Commissioner Schmidtlein notes that this record in several respects contains data that
support a finding of "high" substitutability, compared to the "moderate to high" finding in the original
investigations. *See* Original Determinations at 19. Those data include: a fewer number of purchasers
now making purchasing decisions based on either the identity of the producer or the identity of the
country of origin; and a majority of purchasers now reporting that none of their purchases require U.S.-
produced product, rather than a minority of purchasers as in the original investigations. In addition,
during the POR there were several instances where imports were utilized to complement domestic
supplies without any issues arising: emergencies such as weather disasters and supply chain constraints;
increased demand during the COVID-19 pandemic; and producers utilizing foreign sourcing from related
suppliers to meet domestic demand. Finally, she would also note that the Commission found "high"
substitutability in the PET resin investigations instituted in 2015, which covered some of the same time
period (2015–2018) as the current POR. 2018 Determinations at 29.

they are always or frequently interchangeable.[243] Domestic producers and most importers

reported that factors other than price were never or sometimes significant for PET resin from

domestic and subject sources.[244] Most purchasers reported that factors other than price were

sometimes significant for PET resin from domestic and subject sources.[245] All 20 purchasers

rated availability and price as very important.[246] The majority of purchasers (14 of 20) reported

that they usually purchase the lowest-priced product.[247]

Eighteen of 20 purchasers reported that they had changed suppliers during the POR.[248]

They reported dropping or reducing purchases from domestic producers because of shortages

in domestic supply or the use of international supply chains by a domestic producer, who

sourced PET resin from such countries as Egypt and Mexico.[249]

The domestic industry and importers reported selling the majority of their U.S.

commercial shipments of PET resin through annual contracts, with half or more responding

firms reporting that their contracts are indexed to raw materials prices.[250] The PET resin

manufacturing process remains capital intensive.[251] As a result, producers must maintain

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[243] CR/PR at Tables II-13 to II-15.
[244] CR/PR at Tables II-16, II-17.
[245] CR/PR at Table II-18. The most often cited top three factors that purchasers considered in their purchasing decisions were availability (all 18 firms), price (15 firms), and quality (11 firms). *Id.* at Table II-8.
[246] CR/PR at Table II-9.
[247] CR/PR at II-20.
[248] CR/PR at II-22.
[249] CR/PR at II-22 to II-23 (reflecting *** questionnaire responses from *** stating that *** supplied imported PET resin instead of domestically produced PET resin). *See ***; ***.
[250] CR/PR at V-4, Table V-3. The domestic industry sold a portion of its U.S. commercial shipments of PET resin through long-term contracts. *Id.* at Table V-3.
[251] Hearing Tr. at 16.

relatively high production rates and achieve profit margins sufficient to cover the substantial

cost of maintaining plants and equipment.[252]

The primary raw materials used in PET resin production are the petrochemicals PTA and

MEG, which account for a high share of COGS.[253] The ratio of domestic producers' raw material

costs to COGS increased from *** percent in 2015 to *** percent in 2018, then declined to ***

percent in 2020.[254] From 2015 to 2019, prices for PTA increased *** percent and for MEG

decreased *** percent.[255]

On August 23, 2018, subject imports from China became subject to an additional 25

percent ad valorem duty under Section 301 of the Trade Act of 1974.[256]

C. Likely Volume of Subject Imports

1. The Original Investigations

In its final investigation determinations, the Commission found that the volume and

increase in volume of cumulated subject imports were significant, both in absolute terms and

relative to consumption.[257] It found that, between 2012 and 2014, the increase in the market

share of subject imports came entirely at the expense of the domestic industry.[258]

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[252] Hearing Tr. at 16.
[253] CR/PR at V-1. PTA and MEG represent an estimated *** percent and *** percent of input costs, respectively. *Id.*
[254] CR/PR at Table III-12. It was *** percent in interim 2020 and *** percent in interim 2021. *Id.*
[255] CR/PR at V-1.
[256] *Notice of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 Fed. Reg. 40823 (Aug. 16, 2018). *See* CR/PR at I-20.
[257] Original Determinations, USITC Pub. 4604 at 21.
[258] Original Determinations, USITC Pub. 4604 at 21.

2.   The Current Reviews

As discussed above, despite the disciplining effect of the orders, cumulated subject

imports maintained a continuous presence in the U.S. market during the POR. Cumulated

subject import volume fluctuated from 2015 to 2020, declining from *** pounds in 2015 to ***

pounds in 2016, then increasing to *** pounds in 2017 and to *** pounds in 2018, declining to

*** pounds in 2019 and increasing to *** pounds in 2020.[259] Cumulated subject imports were

*** pounds in interim 2020 and *** pounds in interim 2021.[260] As a share of apparent U.S.

consumption, cumulated subject imports decreased from *** percent in 2015 to *** percent in

2016 before increasing to *** percent in 2017 and to *** percent in 2018, declining to ***

percent in 2019 and increasing to *** percent in 2020; it was *** percent in interim 2020 and

*** percent in interim 2021.[261] Cumulated subject imports in interim 2021 were at a higher

absolute level and held a greater share of the U.S. market than in any full year of the POR since

2015.

On a cumulated basis, producers in the subject countries also maintain the ability to

significantly increase their exports to the United States. The record indicates that cumulated

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[259] CR/PR at Table I-15.
[260] CR/PR at Table I-15.
[261] CR/PR at Table I-16.

production capacity in the subject countries is substantial and increased during the POR.[262] The

information available on the record indicates that PET resin producers in China possessed

production capacity of *** pounds in 2020, an increase of approximately *** pounds since

2015, and operated at a utilization rate of *** percent in 2020.[263] This information also

indicates that PET resin producers in India possessed production capacity of *** pounds in

2020, an increase of approximately *** pounds since 2015, and operated at a utilization rate of

*** percent in 2020.[264] On a cumulated basis, subject foreign producers possessed unused

capacity in 2020 equivalent to *** apparent U.S. consumption in 2020.[265] Moreover, the

subject industries in China and India are each anticipated to increase their production capacities

in 2022 and 2023.[266]

We also find that, on a cumulated basis, producers in the subject countries would have

the incentive to significantly increase their exports to the United States if the orders were

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[262] In these reviews, the Commission received no questionnaire responses from 27 firms identified as possible producers/exporters of PET resin in China or from 13 firms identified as possible producers/exporters of PET resin in India. CR/PR at IV-28, IV-31. The information available on the subject industries in China and India in these reviews is from IHS Markit, which publishes authoritative data concerning the PET resin industry. *See* Polyethylene Terephthalate (PET) Solid-State Resins. When discussing the subject industries in China and India, we rely on these data while recognizing that they may contain out-of-scope PET resin and thus may be overstated. In addition, domestic producers and respondent OCTAL submitted information regarding the massive and growing capacity and idle capacity of the subject industries in China and India. Domestic Producers' Prehear. Br. at Exh. 1, Table V; OCTAL Prehear. Br. at 24–28.

[263] Polyethylene Terephthalate (PET) Solid-State Resins at 114.

[264] Polyethylene Terephthalate (PET) Solid-State Resins at 103. For reporting subject producers in Canada and Oman in 2020, their production capacity was lower and their capacity utilization was higher than that of the industries in China and India. CR/PR at Table IV-20.

[265] Apparent U.S. consumption in 2020 was 7.3 billion pounds, and excess capacity for the subject countries was *** pounds in 2020. Calculated from CR/PR at Tables I-15, IV-20; Polyethylene Terephthalate (PET) Solid-State Resins at 103, 114.

[266] Polyethylene Terephthalate (PET) Solid-State Resins at 103, 114.

revoked.[267] The subject industries in China and India were export oriented during the POR,

ranking respectively as the world's largest and third-largest exporters of PET in 2020.[268] In 2020

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[267] We are unpersuaded by OCTAL's argument that if the order on subject imports from Oman were revoked, the volume of imports from Oman would be limited. OCTAL's Prehear. Br. at 14–15; OCTAL's Posthear. Br. at 4. OCTAL's arguments are premised on an individual analysis of subject imports from Oman, but as explained above, we have exercised our discretion to cumulate subject imports for purposes of our analysis in these reviews and found that if the order were revoked, the cumulated volume of subject imports would be significant. *See* section III.F. In any event, as explained above, OCTAL's planned construction of a U.S. production facility is too uncertain in several respects to warrant a finding regarding its effects on subject imports from Oman. Likewise, the planned acquisition of OCTAL by Alpek is uncertain with *** pending, and there is no supporting or concrete evidence with respect to OCTAL's future behavior if and when the planned acquisition receives approval. *See* section III.E. We observe that subject imports from Oman were present in the U.S. market continuously during the POR, declining initially after the order was imposed but substantially higher in interim 2021. CR/PR at C-8, Table I-15. The record reflects that subject imports from Oman undersold the domestic like product in the majority of comparisons prior to and after imposition of the order. *Id.* at V-24 and n.15. As discussed above, we do not agree that the dumping margins received in administrative reviews before Commerce are indicative of OCTAL's pricing behavior absent the discipline of the order. *See* section III.E.

Further, we are unpersuaded by OCTAL's argument that it is unlikely to increase its exports to the U.S. market beyond the volume observed in interim 2021 because it is constrained by existing capacity and its interest in maintaining long-term relationships in other markets. *See* Hearing Tr. at 195, 227; OCTAL's Posthear. Br. at Exh. 2. The record reflects that OCTAL during the POR retained substantial unused capacity, including in interim 2021, and that even assuming OCTAL's claims with respect to other markets, OCTAL maintains the ability to shift substantial additional shipments to the U.S. market. CR/PR at Table IV-17; OCTAL's Posthear. Br. at Exh. 2 (indicating that approximately *** of third-country export volumes in 2021 were to markets OCTAL considers less attractive than the U.S. market). Moreover, we disagree with the underlying premise of OCTAL's argument that import volumes from Oman would need to exceed interim 2021 levels to be significant. Import volumes from Oman in interim 2021 were higher than the volume of subject imports from Oman during any full year on record, and the increase in subject imports from Oman in interim 2021 came at the expense of *** percentage points of market share from the domestic industry in interim 2021. CR/PR at C-8, Tables I-16, IV-17; Original CR at Tables IV-2, VII-17.

We are similarly unpersuaded by Selenis's argument that if the order on subject imports from Canada were revoked, the volume of imports from Canada would be limited. Selenis's Posthear. Br. at 3–5, 7; Exh. 1, pp. 1–2, 5. Selenis's arguments are premised on an individual analysis of subject imports from Canada, but as explained above, we have exercised our discretion to cumulate subject imports for purposes of our analysis in these reviews and found that if the orders were revoked, the cumulated volume of subject imports would be significant. *See* section III.F. As explained above, Selenis's arguments regarding ***. *See* section III.E.

the United States was one of the largest markets for PET resin globally.[269] In addition, the

record in these reviews indicates that the United States has been the highest-priced market, or

among the highest-priced markets, for PET resin exported from the subject countries from 2015

to 2020.[270] Moreover, the continuous presence of cumulated subject imports during the POR

reflects the subject producers' continued interest in serving the U.S. market.[271] It also reflects

their continued access to U.S. distribution networks that could be used to expand their

presence in the market.

The record also shows existing barriers to exports of PET resin from all subject countries,

including multiple trade actions against PET resin from China and India.[272] These trade actions

by the European Union and countries such as Argentina, Brazil, Turkey, and South Africa would

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[268] CR/PR at Table IV-22 (reflecting data that includes PET resin and out-of-scope products). According to IHS Markit, the subject industries in China and India exported a combined *** percent of their production of PET resin in 2020. Calculated from Polyethylene Terephthalate (PET) Solid-State Resins at 103, 114. The responding Canadian producer reported exporting *** percent of their total shipments in 2020. CR/PR at Table IV-8. The responding Omani producer reported exporting *** percent of their total shipments in 2020. *Id.* at Table IV-17. Responding producers in Canada and Oman reported that they are able to shift production between in-scope PET resin and other products. *Id.* at Tables IV-9, IV-18. The record contains no comparable information regarding the industries in China and India because of the absence of responding PET resin producers in those countries. *Id.* at IV-28, IV-31.

[269] CR/PR at Tables I-15, IV-12 (reflecting data that includes PET resin and out-of-scope products), IV-14 (reflecting data that includes PET resin and out-of-scope products), IV-20; Polyethylene Terephthalate (PET) Solid-State Resins at 103 (consumption in India), 114 (consumption in China).

[270] CR/PR at Tables IV-12, IV-14 (indicating that AUVs for exports of PET from China and India to the U.S. market from 2019 to 2020 were higher than most other major export markets for PET from those countries and higher than the average for all export markets for PET from those countries; reflecting data that includes PET resin and out-of-scope products), IV-20 (indicating that AUVs for exports of PET resin from the subject producers in Canada and Oman to the U.S. market from 2015 to 2020 were higher than any other major export market for PET resin from those countries and higher than the average for all export markets for PET resin from those countries).

[271] CR/PR at Tables I-15, IV-3.

[272] CR/PR at Table IV-21; OCTAL's Final Comments at 10.

make the U.S. market a relatively more attractive destination for exports of PET resin from the

subject countries in the event of revocation of the orders.[273]

On a cumulated basis, subject producers have the means and the incentive to export

subject merchandise to the U.S. market in significant volumes within a reasonably foreseeable

time if the orders were revoked. Given the cumulated subject producers' substantial and

increasing production capacity and excess capacity, its overall export orientation, and the size

and relative attractiveness of the U.S. market, we find that the cumulated volume of subject

imports, both in absolute terms and relative to U.S. consumption, would likely be significant if

the orders were revoked.[274]

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[273] CR/PR at Table IV-21; OCTAL's Final Comments at 10.
[274] We have also considered other statutory factors in our analysis of likely subject import volume. Reported end-of-period inventories of subject merchandise maintained in Canada were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, *** pounds in 2018, *** pounds in 2019, and *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021. CR/PR at Table IV-8. Reported end-of-period inventories of subject merchandise maintained in Oman were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, *** pounds in 2018, *** pounds in 2019, and *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021. *Id.* at Table IV-17. The record contains no comparable information regarding the industries in China and India because of the absence of responding PET resin producers in those countries. U.S. inventories of subject merchandise were present in the United States in appreciable amounts that increased during the POR. U.S. importers' inventories of cumulated subject imports were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, *** pounds in 2018 and 2019, and *** pounds in 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021. *Id.* at Table IV-4. We observe that domestic producers reported that 82.0 percent of their sales were from inventory. *Id.* at II-21.
     Section 301 tariffs currently impose a 25 percent *ad valorem* duty on subject imports from China, and several importers and purchasers reported that these tariffs have had an effect on either the supply of or demand for subject imports or that they anticipated such effects in the reasonably foreseeable future. *See id.* at Table D-1. We note that imports of PET resin from China also were subject to antidumping duties of up to 126.58 percent and countervailable subsidy margins of up to 47.56 percent during the POR. *Id.* at Tables I-6, I-9.

D.   **Likely Price Effects**

1.   **The Original Investigations**

In its final investigation determinations, the Commission found that cumulated subject imports were moderately to highly substitutable for the domestic like product and that price was an important factor in purchasing decisions.[275] It found significant underselling of the domestic like product by cumulated subject imports, with prices of those imports below those of the domestic like product in 82 of 133 quarterly comparisons (62 percent) from 2012 to 2014 and that, as a result of this significant underselling, subject imports gained market share at the expense of the domestic industry.[276] The Commission also examined price trends and stated that prices for all pricing products fell from 2012 to 2014.[277] It found that domestic producers were forced to reduce prices because their sales contracts were indexed to publicly available raw material price data, which reflected price declines during much of the POI, and therefore lower-priced subject imports did not account for the significant price declines.[278] The Commission also found that price increases would not have been likely given the domestic industry's steady or declining raw materials costs and unit COGS from 2012 to 2014.[279] Based on the significant underselling that resulted in a market share shift, the Commission concluded that subject imports had significant price effects.[280]

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[275] Original Determinations, USITC Pub. 4604 at 22.
[276] Original Determinations, USITC Pub. 4604 at 22, 24.
[277] Original Determinations, USITC Pub. 4604 at 23.
[278] Original Determinations, USITC Pub. 4604 at 23.
[279] Original Determinations, USITC Pub. 4604 at 24.
[280] Original Determinations, USITC Pub. 4604 at 23–24. Commissioner Schmidtlein found that subject imports significantly depressed prices for the domestic like product and that lower raw material costs did not fully explain the decline in prices. *Id.* at 23 n.137.

2.   The Current Reviews

As previously stated, we find that there is a high degree of substitutability between the domestic like product and subject imports and that price is an important factor in purchasing decisions for PET resin.

The Commission requested pricing data for four pricing products in these reviews.[281] Four U.S. producers and eight importers provided usable data for sales of the requested products, although not all firms reported data for all products for all quarters.[282] Data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of PET resin, *** percent of U.S. shipments of subject imports from Canada, *** percent of U.S. shipments of subject imports from China, and *** percent of U.S. shipments of subject imports

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[281] The Commission requested pricing data on the following products:

Product 1.-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications;
Product 2.-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in sheet and strapping;
Product 3.-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in carbonated soft drink applications; and
Product 4.-- PET resin, being mainly a co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

CR/PR at V-6.
[282] CR/PR at V-6.

from Oman in 2019.[283] No pricing data were reported for U.S. shipments of subject imports

from India.[284]

On a cumulated basis, subject imports undersold the domestic like product in 52 of 127

quarterly comparisons (41 percent), involving *** pounds of subject imports, and oversold the

domestic like product in the remaining 75 comparisons (59 percent), involving *** pounds of

subject imports.[285] Margins of underselling ranged from 0.0 to 44.4 percent and averaged 10.7

percent.[286] Over the POR, prices of U.S.-produced PET resin for three of the four pricing

products increased between *** percent and *** percent.[287] The ratio of COGS to net sales

declined overall from 2015 to 2020 and was lower in interim 2021 compared to interim 2020.[288]

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[283] CR/PR at V-6. No price data was reported for PET resin imported from China after the first quarter of 2016. *Id.* at n.10. The reported data accounted for approximately *** percent of U.S. shipments of subject imports from China in 2015–2016. *Id.*

[284] CR/PR at V-6. The Commission also collected purchase cost data for imports for internal consumption or retail sale. *Id.* at V-19. Three importers reported useable purchase cost data for Pricing Product 1 only. *Id.* These data accounted for *** percent of imports from Oman and *** percent of imports from Canada in 2020. *Id.* and n.12. One importer provided purchase cost data for its imports from China for one quarter, which were not used because they were substantially higher than the average cost and represented very insignificant quantities. *Id.* at n.11, V-26 n.16. The purchase cost data show that subject imports from Oman were priced below the sales price for U.S.-produced PET resin in *** quarterly comparisons (63 percent) involving *** pounds with price-cost differentials of *** percent. *Id.* at Table V-13. In the remaining *** comparisons (37 percent) involving *** pounds, subject imports from Oman were priced *** percent higher than sales prices for U.S.-produced PET resin. *Id.* The purchase cost data also show that subject imports from Canada were priced higher than the sales price for U.S.-produced PET resin in *** comparisons involving *** pounds with price-cost differentials of *** percent. *Id.* Although these purchase cost data by volume for Pricing Product 1 indicate that subject imports for internal consumption or retail sale were generally valued higher than the prices for U.S.-produced PET resin, we note the small volumes represented by the purchase cost data, as compared with the much greater volumes represented in the pricing product data, and give it limited weight in our analysis.

[285] CR/PR at Table V-10.

[286] CR/PR at Table V-11.

[287] CR/PR at Table V-9.

[288] The COGS to net sales ratio was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and *** percent in 2020; it was *** percent in interim 2020 and *** percent in interim 2021. CR/PR at Table III-14.

Given the significant underselling in the original investigations,[289] the continued

importance of price in purchasing decisions, and the high degree of substitutability between

subject imports and the domestic like product, as well as our findings that the likely cumulated

subject import volume would be significant upon revocation, we find that there would likely be

significant underselling by cumulated subject imports if the orders were revoked, as subject

producers would likely engage in underselling the domestic like product to rapidly increase

their penetration of the U.S. market. Because of the importance of price in purchasing

decisions, this underselling would likely cause the domestic industry to either reduce its prices,

forego price increases that would otherwise have occurred, or risk losing market share to

subject imports. Thus, if the orders were revoked, the significant volume of low-priced

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[289] In the original investigations, subject imports from Canada undersold the domestic like
product in 35 of 48 comparisons (73 percent), with underselling margins ranging from 1.6 to 16.7
percent; subject imports from China undersold the domestic like product in 17 of 35 comparisons (49
percent), with underselling margins ranging from 0.4 to 20.0 percent; subject imports from India
undersold the domestic like product in 14 of 30 comparisons (47 percent), with underselling margins
ranging from 0.0 to 17.2 percent; and subject imports from Oman undersold the domestic like product
in 32 of 56 comparisons (57 percent), with underselling margins ranging from 0.1 to 141.9 percent.
CR/PR at V-24 n.15.

cumulated subject imports would likely have significant price effects within a reasonably foreseeable time.[290]

E. Likely Impact

1. The Original Investigations

In its final determinations, the Commission found that cumulated subject imports had a significant impact on the domestic industry.[291] It based this conclusion on its findings of a significant volume of cumulated subject imports, evidence of significant underselling by subject imports that gained market share at the expense of the domestic industry, and an "almost universal{}" decline in the domestic industry's performance indicators from 2012 to 2014 "despite moderate growth in apparent U.S. consumption."[292]

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[290] We are unpersuaded by respondents' argument that elevated shipping costs that existed at the end of the POR, due at least in part to the COVID-19 pandemic and resulting supply chain issues, will continue such that they will constrain cumulated subject import levels into the reasonably foreseeable future if the orders are revoked. Hearing Tr. at 279; OCTAL's Posthear. Br. Answers to Questions of Commissioners and Commission Staff at 59 and n.148. As an initial matter, data on the record indicates that "freight rates are expected to face correction {i.e., to decline} in the coming years" as the impact of the pandemic recedes. Domestic Producers' Posthear. Br. at Exh. 11 (IHS Markit, "Shipping Market Outlook 2022; Container vs Dry Bulk," dated Nov. 30, 2021). Furthermore, to the extent that cumulated subject imports would no longer be subject to the disciplining effects of the orders were the orders revoked, the effect of price levels observed in interim 2021 are not a reflection of likely pricing behavior if the orders are revoked. In addition, despite the elevated shipping costs in 2021, subject import market penetration increased significantly and was *** percentage points higher in interim 2021 than in interim 2020. CR/PR at Table IV-16.

[291] Original Determinations, USITC Pub. 4604 at 29.

[292] Original Determinations, USITC Pub. 4604 at 25–28. The Commission also found that the market share of nonsubject imports remained relatively stable between 2012 and 2014 and that PET resin from Mexico, the largest nonsubject source, typically oversold subject imports and the domestic like product. *Id.* at 28–29. Commissioner Schmidtlein found that price depression caused by subject imports also contributed to the industry's declining financial performance. *Id.* at 28 n.158.

2. The Current Reviews

Measures of the domestic industry's performance were positive overall, with production-related indicators increasing and financial indicators showing improvement, especially at the end of the POR. The industry's capacity was stable in 2015 and 2016, then decreased in 2017 and 2018 before increasing in 2019 and 2020 to reach its highest level during the POR.[293] Production and capacity utilization increased from 2015 to 2020, with production in 2020 reaching its highest level during the POR.[294] The domestic industry's U.S. shipments mirrored the trend of its production.[295] The industry's share of apparent U.S. consumption decreased in 2016, then increased each of the next four years, but declined in interim 2021.[296]

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[293] The domestic industry's capacity was 6.6 billion pounds in 2015 and 2016, 6.5 billion pounds in 2017, 6.3 billion pounds in 2018, and 6.7 billion pounds in 2019 and 2020, an increase of 1.6 percent from 2015 to 2020. CR/PR at Tables III-3, C-1. It was 5.0 billion pounds in interim 2020 and interim 2021. *Id.* at Table III-3.

[294] The domestic industry's production was 5.6 billion pounds in 2015, 5.8 billion pounds in 2016, 5.6 billion pounds in 2017, 5.9 billion pounds in 2018, 5.7 billion pounds in 2019, and 6.1 billion pounds in 2020, an increase of 9.6 percent from 2015 to 2020; it was 4.6 billion pounds in interim 2020 and 4.5 billion pounds in interim 2021. CR/PR at Tables III-3, C-1. Capacity utilization was 84.7 percent in 2015, 88.3 percent in 2016, 86.3 percent in 2017, 93.4 percent in 2018, 84.5 percent in 2019, and 91.3 percent in 2020, an increase of 6.6 percentage points from 2015 to 2020; it was 92.2 percent in interim 2020 and 90.2 percent in interim 2021. *Id.*

[295] The domestic industry's U.S. shipments were 5.4 billion pounds in 2015, 5.6 billion pounds in 2016 and 2017, 5.7 billion pounds in 2018, 5.6 billion pounds in 2019, and 6.1 billion pounds in 2020, an increase of 13.7 percent from 2015 to 2020; they were 4.7 billion pounds in interim 2020 and 4.5 billion pounds in interim 2021. CR/PR at Tables III-3, C-1. Its inventory levels were *** pounds in 2015, *** pounds in 2016, *** pounds in 2017, *** pounds in 2018, *** pounds in 2019, and *** pounds in 2020, a decline of *** percent from 2015 to 2020; they were *** pounds in interim 2020 and *** pounds in interim 2021. *Id.* at Tables III-6, C-1.

[296] The domestic industry's share of apparent U.S. consumption declined from 85.4 percent in 2015 to 79.2 percent in 2016, then increased steadily to 83.8 percent in 2020, for a total decrease of 1.7 percentage points; the industry's share was lower in interim 2021 (79.4 percent) than in interim 2020 (85.6 percent). CR/PR at Tables I-16, C-1.

Employment indicators improved during the POR. The number of production and related workers ("PRWs"), number of hours worked, and wages paid increased overall from 2015 to 2020.[297] Productivity declined over the same period.[298]

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[297] CR/PR at Table III-11. The average number of PRWs was 889 in 2015, 886 in 2016, 931 in 2017, 960 in 2018, 1,002 in 2019, and 974 in 2020, an increase of 9.6 percent from 2015 to 2020; they were 974 in interim 2020 and 978 in interim 2021. *Id.* at Tables III-11, C-1. The number of hours worked was 1.87 million in 2015, 1.96 million in 2016, 2.05 million in 2017, 1.96 million in 2018, 2.19 million in 2019, and 2.17 million in 2020, an increase of 16.4 percent from 2015 to 2020; they were 1.64 million in interim 2020 and 1.63 million in interim 2021. *Id.* Wages paid were $70.8 million in 2015, $68.6 million in 2016, $66.2 million in 2017, $68.1 million in 2018, $79.7 million in 2019, and $80.0 million in 2020, an increase of 13.1 percent from 2015 to 2020; they were $58.2 million in interim 2020 and $64.8 million in interim 2021. *Id.*

[298] CR/PR at Table III-11. Productivity in pounds per hour was 3,000 in 2015, 2,978 in 2016, 2,731 in 2017, 3,006 in 2018, 2,592 in 2019, and 2,824 in 2020, a decline of 5.9 percent from 2015 to 2020; it was 2,837 in interim 2020 and 2,791 in interim 2021. *Id.* at Tables III-11, C-1.

The domestic industry's total net sales value declined overall from 2015 to 2020, but gross profit, operating income, net income, and ratio of operating income to sales improved.[299] All of those indicators were higher in interim 2021 when compared to interim 2020.[300]

In sum, the domestic industry's performance indicators generally improved during the POR, and based on the foregoing, we find the domestic industry not to be in a vulnerable condition. However, as discussed above, if the orders were revoked, the volume of cumulated subject imports would likely increase to a significant level, as subject producers revert to significant underselling to rapidly increase their penetration of the U.S. market. Given the high degree of substitutability between subject imports and the domestic like product and the

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[299] CR/PR at Table III-12. Net sales value was $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, a decline of *** percent from 2015 to 2020. *Id.* at Tables III-12, C-1. Total COGS was $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, a decrease of *** percent from 2015 to 2020. *Id.* The ratio of COGS to net sales was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and *** in 2020, a decrease of *** percentage points from 2015 to 2020. *Id.* Gross profits were $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, an increase of *** percent from 2015 to 2020. *Id.* Operating income was $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, an increase of *** percent from 2015 to 2020. *Id.* The domestic industry had a net ***. *Id.* The ratio of operating income to sales was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and *** in 2020, an increase of *** percentage points from 2015 to 2020. *Id.*

Capital expenditures and research and development ("R&D") expenses increased from 2015 to 2020. CR/PR at Tables III-18, III-20. Total capital expenditures were $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, an increase of *** percent from 2015 to 2020; they were $*** in interim 2020 and $*** in interim 2021. *Id.* at Tables III-18, C-1. R&D expenses were $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, $*** in 2019, and $*** in 2020, an increase of *** percent from 2015 to 2020; they were $*** in interim 2020 and $*** in interim 2021. *Id.* at Tables III-20, C-1.

[300] CR/PR at Table III-12. Net sales value was $*** in interim 2020 and $*** in interim 2021. *Id.* at Tables III-12, C-1. Total COGS was $*** in interim 2020 and $*** in interim 2021. *Id.* The ratio of COGS to net sales was *** percent in interim 2020 and *** percent in interim 2021. *Id.* Gross profits were $*** in interim 2020 and $*** in interim 2021. *Id.* Operating income was $*** in interim 2020 and $*** in interim 2021. *Id.* Net income was $*** in interim 2020 and $*** in interim 2021. *Id.* The ratio of operating income to sales was *** percent in interim 2020 and *** percent in interim 2021. *Id.*

importance of price to purchasers, the domestic industry would need to respond either by forgoing sales and ceding market share to subject imports, lowering their prices, or forgoing price increases that would otherwise have occurred. Under these circumstances, the likely significant volume and price effects of the cumulated subject imports would likely have a significant impact on the production, shipments, sales, market share, and revenue of the domestic industry. These declines would likely impact the domestic industry's profitability and employment, its ability to raise capital, and to make and maintain capital investments.

We have also considered the role of factors other than subject imports, specifically the presence of nonsubject imports, so as not to attribute injury from other factors to the subject imports. In these reviews, the domestic industry has experienced improvements in its condition despite an increasing presence of nonsubject imports in the U.S. market over the POR.[301] Consequently, any likely effects of nonsubject imports are distinguishable from those that we have attributed to the cumulated subject imports. We find the continued presence of nonsubject imports in the U.S. market would not preclude subject imports from taking market share from the domestic industry, the largest supplier of PET resin to the U.S. market, or forcing the domestic industry to lower its prices to compete if the orders were revoked.

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[301] In these reviews, nonsubject imports' market share was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, *** percent in 2019, and *** percent in 2020, an increase of *** percentage points from 2015 to 2020; it was *** percent in interim 2020 and *** percent in interim 2021. CR/PR at Tables I-16, C-1. During the original investigations, nonsubject imports' market share was *** percent in 2012, *** percent in 2013, and *** percent in 2014. *Id.* at C-8.

Accordingly, we conclude that, if the orders were to be revoked, cumulated subject imports would likely have a significant impact on domestic producers of PET resin within a reasonably foreseeable time.

V. Conclusion

For the foregoing reasons, we determine that revocation of the countervailing duty orders on PET resin from China and India and the antidumping duty orders on PET resin from Canada, China, India, and Oman would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

Part I: Introduction

Background

On April 1, 2021, the U.S. International Trade Commission ("Commission" or "USITC") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted reviews to determine whether revocation of the countervailing duty orders on polyethylene terephthalate resin ("PET resin") from China and India and the antidumping duty orders on PET resin from Canada, China, India, and Oman would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] [3] On July 7, 2021, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act. [4] The following tabulation presents information relating to the background and schedule of this proceeding:[5]

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[1] 19 U.S.C. 1675(c).

[2] 86 FR 17197, April 1, 2021. All interested parties were requested to respond to this notice by submitting the information requested by the Commission.

[3] In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 86 FR 16701, March 31, 2021.

[4] 86 FR 37343, July 15, 2021. The Commission found that the domestic interested party group response to its notice of institution and the respondent interested party group response from Oman were adequate and that the respondent interested party group responses from Canada, China, and India were inadequate. Ibid.

[5] The Commission's notice of institution, notice to conduct full reviews, scheduling notice, and statement on adequacy are referenced in appendix A and may also be found at the Commission's web site (internet address *www.usitc.gov*). Commissioners' votes on whether to conduct expedited or full reviews may also be found at the web site. Appendix B presents the witnesses who appeared at the Commission's hearing.

Table I-1
PET resin: Information relating to the background and schedule of this proceeding

Effective date	Action
May 6, 2016	Commerce's countervailing duty orders on PET resin from China and India (81 FR 27977, May 6, 2016) and antidumping duty orders on PET resin from Canada, China, India, and Oman (81 FR 27979, May 6, 2016)
April 1, 2021	Commerce's initiation of five-year reviews (86 FR 16701, March 31, 2021)
April 1, 2021	Commission's institution of five-year reviews (86 FR 17197, April 1, 2021)
July 7, 2021	Commission's determinations to conduct full five-year reviews (86 FR 37343)
July 23, 2021	Commerce's final results of expedited five-year reviews of the countervailing duty orders (86 FR 38982, July 23, 2021)
July 30, 2021	Commerce's final results of expedited five-year reviews of the antidumping duty orders (86 FR 41009, July 30, 2021)
October 14, 2021	Commission's scheduling of the reviews (86 FR 58101, October 20, 2021)
January 27, 2022	Commission's hearing
March 10, 2022	Commission's vote
March 30, 2022	Commission's determinations and views

The original investigations

The original investigations resulted from petitions filed on March 10, 2015, with Commerce and the Commission by DAK Americas LLC ("DAK"), Charlotte, North Carolina; M&G Chemicals ("M&G"), Houston, Texas; and Nan Ya Plastics Corporation, America ("Nan Ya"), Lake City, South Carolina, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized imports of PET resin from China, India, and Oman and less-than-fair-value ("LTFV") imports of PET resin from Canada, China, India, and Oman.[6] On March 14, 2016, Commerce determined that imports of PET resin from Canada, China, India, and Oman were being sold at LTFV[7] and subsidized by the governments of China and India.[8] Commerce also determined that countervailable subsidies are not being provided to producers and exporters of PET resin from Oman.[9] The Commission determined on April 28, 2016 that the domestic industry was materially injured by reason of LTFV imports of PET resin

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[6] Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman, Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Publication 4604, April 2016 ("Original publication"), p. I-1.

[7] 81 FR 13319, 81 FR 13331, 81 FR 13327, and 81 FR 13336, March 14, 2016. Commerce made final affirmative critical circumstances findings for imports of PET resin from India from all parties (Dhunseri Petrochem, Ltd, Ester Industries, Ltd, JBF Industries, Ltd, Reliance Industries, Ltd, and Indian companies in the "all others" category).

[8] 81 FR 13337 and 81 FR 13334, March 14, 2016.

[9] 81 FR 13321, March 14, 2016. The Commission subsequently terminated its countervailing duty investigation with respect to Oman, 81 FR 19638, April 5, 2016.

from Canada, China, India, and Oman and subsidized imports of PET resin from China and India.[10] On May 6, 2016, Commerce issued its antidumping and countervailing duty orders on PET resin from Canada, China, India, and Oman.[11]

Previous and related investigations

The Commission has conducted two previous import relief investigations on PET resin. Table I-2 presents data on previous title VII investigations.

Table I-2
PET resin: Previous Commission proceedings and status of orders

Date	Numbers	Countries	Determinations	Current Status of Orders
2004	701–TA–440 and 731–TA–1079	Thailand and Taiwan	Terminated	N/A
2004	701–TA–439 and 731–TA–1077, 1078, and 1080	India, Indonesia, and Thailand	Negative	N/A
2017	731-TA-1387-1391	Brazil, Indonesia, Korea, Pakistan, and Taiwan	Negative	N/A

Source: U.S. International Trade Commission publications and Federal Register notices.

Note: The scope of the 2017 proceeding excluded PET-glycol resin, also referred to as PETG.

Note: In Investigation Nos. 731-TA-1387-1391, the U.S. Court of International Trade remanded the Commission's unanimous negative injury determinations, by opinion and order dated June 4, 2020. *DAK Americas LLC v. United States*, 456 F. Supp. 3d 1340 (Ct. Int'l Trade June 4, 2020). In September 2020, the Commission again unanimously determined that an industry in the United States is not materially injured or threatened with material injury by reason of imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan, USITC Publication 5125, September 2020. In May 2021, the Court of International Trade sustained the Commission's remand determinations. *DAK Americas LLC v. United States*, 517 F. Supp. 3d 1349 (Ct. Int'l Trade May 3, 2021).

Note: "Date" refers to the year in which the investigation was instituted by the Commission.

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[10] 81 FR 26832, May 4, 2016.

[11] 81 FR 27979, May 6, 2016. As a result of a ministerial error, Commerce amended its final determination of sales at LTFV with regard to PET resin from Oman. OCTAL SAOC-FZC's (''OCTAL") weighted-average dumping margin decreased from 7.82 percent to 7.62 percent, and the "all-others" rate, which was based on OCTAL's dumping margin, was revised accordingly. Commerce also published a notice of correction to the antidumping duty order for PET resin from India, amending the cash deposit rate for Ester Industries, Ltd, which was incorrectly listed at 9.31 percent, to the correct cash deposit rate for Ester, 9.13 percent.

Summary data

Table I-3 presents a summary of data from the original investigations and the current full five-year reviews. Summary data from the original investigations and the current reviews are also presented in appendix C. Apparent U.S. consumption by quantity was *** percent higher in 2020 than in 2014, and was *** percent lower by value. U.S. producers' share of apparent consumption by quantity was *** percentage points higher in 2020 than in 2014, while subject imports' share of apparent consumption in 2020 was *** percentage points lower. U.S. producers' capacity and production were 1.7 percent and 14.4 percent higher respectively. The quantity of U.S. producers' U.S. shipments was 19.4 percent higher in 2020 than in 2014, while the quantity of U.S. importers' subject U.S. shipments were *** percent lower. The average unit values of U.S. producers' and U.S. importers' subject U.S. shipments were each lower in 2020 than in 2014, by 37.4 percent and *** percent respectively. U.S. producers' operating income was *** percent higher in 2020 than in 2014.

Table I-3
PET resin: Comparative data from the original investigations and subsequent reviews, by terminal years

Quantity in 1,000 pounds; value in 1,000 dollars; share in percent.

Item	Measure	2014	2020
Apparent consumption	Quantity	***	7,306,649
U.S. producers market share	Share of quantity	***	83.8
Canada market share	Share of quantity	***	***
China market share	Share of quantity	***	***
India market share	Share of quantity	***	***
Oman market share	Share of quantity	***	***
Subject market share	Share of quantity	***	***
Nonsubject market share	Share of quantity	***	***
Import market share	Share of quantity	***	16.2
Apparent consumption	Value	***	3,221,435
U.S. producers market share	Share of value	***	84.4
Canada market share	Share of value	***	***
China market share	Share of value	***	***
India market share	Share of value	***	***
Oman market share	Share of value	***	***
Subject market share	Share of value	***	***
Nonsubject market share	Share of value	***	***
Import market share	Share of value	***	15.6

Table continued.

Table I-3 Continued
PET resin: Comparative data from the original investigations and subsequent reviews, by terminal years

Quantity in 1,000 pounds; Value in 1,000 dollars; Unit value in dollars per pound

Item	Measure	2014	2020
Canada	Quantity	307,992	***
Canada	Value	240,432	***
Canada	Unit value	$0.78	***
China	Quantity	248,678	***
China	Value	106,660	***
China	Unit value	$0.43	***
India	Quantity	85,803	***
India	Value	56,927	***
India	Unit value	$0.66	***
Oman	Quantity	***	***
Oman	Value	***	***
Oman	Unit value	***	***
Subject sources	Quantity	***	***
Subject sources	Value	***	***
Subject sources	Unit value	***	***
Nonsubject sources	Quantity	566,476	***
Nonsubject sources	Value	408,701	***
Nonsubject sources	Unit value	$0.72	***
All import sources	Quantity	***	1,186,986
All import sources	Value	***	501,533
All import sources	Unit value	***	$0.42

Table continued.

Table I-3 Continued
PET resin: Comparative data from the original investigations and subsequent reviews, by terminal years

Quantity in 1,000 pounds; Value in 1,000 dollars; Unit value in dollars per pound; Ratio in percent

Item	Measure	2014	2020
Capacity	Quantity	6,604,313	6,715,988
Production	Quantity	5,357,911	6,130,398
Capacity utilization	Ratio	81.1	91.3
Producer U.S. shipments	Quantity	5,126,103	6,119,663
Producer U.S. shipments	Value	3,616,987	2,719,902
Producer U.S. shipments	Unit value	$0.71	$0.44
Producer inventories	Quantity	***	***
Producer inventory ratio to total shipments	Ratio	***	***
Production workers (number)	Noted in label	989	974
Hours worked (in 1,000 hours)	Noted in label	1,581	2,171
Wages paid (1,000 dollars)	Value	40,652	80,042
Hourly wages (dollars per hour)	Value	$25.71	$36.87
Productivity (pounds per hour)	Noted in label	3,389	2,824
Net sales	Quantity	***	6,238,551
Net sales	Value	***	2,769,332
Net sales	Unit value	***	$0.44
Cost of goods sold	Value	***	***
Gross profit or (loss)	Value	***	***
SG&A expense	Value	***	***
Operating income or (loss)	Value	***	***
Unit COGS	Unit value	***	***
Unit operating income	Unit value	***	***
COGS/ Sales	Ratio	***	***
Operating income or (loss)/ Sales	Ratio	***	***

Source: Investigation Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final): Certain Polyethylene Terephthalate Resin from Canada, China, India, and Oman, Confidential Report, INV-OO-22, March 18, 2016, as revised in INV-OO-25, March 23, 2016, INV-OO-27, March 24, 2016, and INV-OO-28, March 25, 2016 ("Original confidential report"); and data submitted in response to Commission questionnaires.

Note: Data for 2014 are from the last year of the original investigations and data for 2020 are from the last year of these first reviews.

Note: 2014 import data are based on questionnaire responses for PET resin from Oman and official Commerce statistics, HTS statistical reporting number 3907.60.0030, for PET resin from all other sources. 2020 import data are based on questionnaire responses.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Table I-4
PET resin: Historical U.S. shipments and imports, by source and period

Quantity in 1,000 pounds

Source	Measure	2012	2013	2014
U.S. producers	Quantity	5,278,504	5,217,493	5,126,103
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	532,753	422,531	566,476
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***

Source: Original confidential report.

Figure I-1
PET resin: Historical apparent consumption, by source and period

*   *   *   *   *   *   *

Statutory criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation "would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury."

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury--

> *(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--*
>
> > *(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,   (B) whether any improvement in the state of the industry is related to the order or the suspension agreement,*
> > *(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and*
> > *(D) in an antidumping proceeding . . ., (Commerce's findings) regarding duty absorption . . ..*
>
> *(2) VOLUME.--In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--*
> > *(A) any likely increase in production capacity or existing unused production capacity in the exporting country,*
> > *(B) existing inventories of the subject merchandise, or likely increases in inventories,*

(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and
(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.

(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and
(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.

(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to–

(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,
(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and
(C) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Organization of report

Information obtained during the course of the reviews that relates to the statutory criteria is presented throughout this report. As noted previously, summary of trade and financial data for PET resin as collected in the reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of four U.S. producers of PET resin that are believed to have accounted for all domestic production of PET resin in 2020.[12] U.S. import data and related information are based on the questionnaire responses of 18 U.S. importers of PET resin that are believed to have accounted for the majority of total subject U.S. imports during 2020.[13] Foreign industry data and related information are based on the questionnaire responses of two producers of PET resin, which accounted for all known production in Canada and Oman. Responses by U.S. producers, importers, purchasers, and foreign producers of PET resin to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D.

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[12] In March 2018, M&G was acquired by Taiwan PET resin producer Far Eastern New Century Corp. ("Far Eastern") and renamed APG Polytech LLC ("APG"). ***. To cover the period prior to the acquisition, staff incorporated certain information M&G provided in the Commission's 2018 final investigations on Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan ("2018 final investigations"). *See also* staff correspondence with ***, December 6, 2021.

[13] Staff also incorporated in the importer dataset certain information M&G provided in the 2018 final investigations.

Commerce's reviews[14]

Administrative reviews

Commerce has completed two administrative reviews of the antidumping duty orders on PET resin from Oman.[15] The results of the administrative reviews are shown in table I-5. No administrative reviews have been completed with respect to the orders on Canada, China, or India.

Table I-5
PET resin: Administrative reviews of the antidumping duty order for Oman

Date results published	Period of review	Producer/exporter	Margin (percent)
November 22, 2019 (84 FR 64460)	5/1/17-4/30/18	OCTAL SAOC-FZC	0.00
January 28, 2021 (86 FR 7361)	5/1/18-4/30/19	OCTAL SAOC-FZC	0.75

Source: Cited Federal Register notices.

Five-year reviews

Commerce has issued the final results of its expedited reviews with respect to all subject countries.[16] Tables I-6 to I-11 present the countervailable subsidy and dumping margins calculated by Commerce in its original investigations and first reviews.

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[14] Commerce has not conducted any changed circumstances reviews or scope rulings and has not issued any duty absorption findings, company revocations, or anti-circumvention findings since the imposition of the orders.

[15] For previously reviewed or investigated companies not included in an administrative review, the cash deposit rate continues to be the company-specific rate published for the most recent period.

[16] 86 FR 38982, July 23, 2021; and 86 FR 41009, July 30, 2021.

Table I-6
PET resin: Commerce's original and first five-year review countervailable subsidy margins for producers/exporters in China

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Jiangyin Xingyu New Material Co., Ltd., Jiangsu Xingye Plastic Co., Ltd., Jiangyin Xingjia Plastic Co., Ltd., Jiangyin Xingtai New Material Co., Ltd., Jiangsu Xingye Polarization Co., Ltd., Jiangsu Sanfangxiang Group Co., Ltd., Jiangyin Hailun Petrochemicals Co., Ltd., Jiangyin Xinlun Chemical Fiber Co., Ltd., Jiangyin Huasheng Polymer Co., Ltd., Jiangsu SanFangxiang International Trading Co., Ltd., Jiangyin HuaYi Polymerization Co., Ltd., Jiangyin Xingsheng Plastic Co., Ltd., Jiangyin Chemical Fiber Co., Ltd., Jiangyin Huaxing Synthetic Co., Ltd., Jiangyin Bolun Chemical Fiber Co., Ltd., (collectively, Xingyu)	7.53	7.53
Dragon Special Resin (Xiamen) Co., Ltd.; Xiang Lu Petrochemicals Co., Ltd.; Xianglu Petrochemicals (Zhangzhou) Co. Ltd.; Xiamen Xianglu Chemical Fiber Company Limited; and Dragon Aromatics (Zhangzhou) Co., Ltd. (collectively, Dragon Group)	47.56	47.56
All others	27.55	27.55

Source: 81 FR 27977, May 6, 2016; and 86 FR 38982, July 23, 2021.

Table I-7
PET resin: Commerce's original and first five-year review countervailable subsidy margins for producers/exporters in India

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Dhunseri Petrochem Ltd. (formerly Dhunseri Petrochem and Tea Ltd) (collectively, Dhunseri)	5.12	5.12
JBF Industries Limited	153.80	153.80
All others	5.12	5.12

Source: 81 FR 27977, May 6, 2016; and 86 FR 38982, July 23, 2021.

Table I-8
PET resin: Commerce's original and first five-year review dumping margins for producers/exporters in Canada

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Selenis Canada	13.60	--
All others	13.60	13.60

Source: 81 FR 27979, May 6, 2016; and 86 FR 41009, July 30, 2021.

Table I-9
PET resin: Commerce's original and first five-year review dumping margins for producers/exporters in China

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Far Eastern Industries (Shanghai) Ltd. or Oriental Industries (Suzhou) Limited	104.98	--
Jiangyin Xingyu New Material Co., Ltd. or Jiangsu Xingye Plastic Co., Ltd. or Jiangyin Xingjia Plastic Co., Ltd. or Jiangyin Xingtai New Material Co., Ltd. or Jiangsu Xingye Polytech Co., Ltd	118.32	--
Dragon Special Resin (XIAMEN) Co., Ltd	114.47	--
Hainan Yisheng Petrochemical Co., Ltd.	114.47	--
Shanghai Hengyi Polyester Fiber Co., Ltd	114.47	--
Zhejiang Wankai New Materials Co., Ltd	114.47	--
All others	126.58	126.58

Source: 81 FR 27979, May 6, 2016; and 86 FR 41009, July 30, 2021.

Table I-10
PET resin: Commerce's original and first five-year review dumping margins for producers/exporters in India

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Dhunseri Petrochem, Ltd	19.41	--
Ester Industries, Ltd	14.23	--
JBF Industries, Ltd	19.41	--
Reliance Industries, Ltd	8.03	--
All others	11.13	19.41

Source: 81 FR 27979, May 6, 2016; and 86 FR 41009, July 30, 2021.

Table I-11
PET resin: Commerce's original and first five-year review dumping margins for producers/exporters in Oman

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
OCTAL SAOC-FZC	7.62	--
All others	7.62	7.62

Source: 81 FR 27979, May 6, 2016; and 86 FR 41009, July 30, 2021.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[17]

The merchandise covered by these orders is PET resin having an intrinsic viscosity of at least 0.70, but not more than 0.88, deciliters per gram. The scope includes blends of virgin PET resin and recycled PET resin containing 50 percent or more virgin PET resin content by weight, provided such blends meet the intrinsic viscosity requirements above. The scope includes all PET resin meeting the above specifications regardless of additives introduced in the manufacturing process.

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[17] 86 FR 38982, July 23, 2021; and 86 FR 41009, July 30, 2021.

Tariff treatment

PET resin is currently imported under statistical reporting numbers 3907.61.0010 and 3907.69.0050 of the Harmonized Tariff Schedule of the United States ("HTS").[18] The general duty rate for subheadings 3907.61.00 and 3907.69.00 is 6.5 percent ad valorem; goods of Canada or of Oman are eligible for duty-free entry under free trade agreements with these countries; and products of India are eligible to receive duty-free entry under the Generalized System of Preferences, when that program is in effect.

Effective August 23, 2018, PET resin produced in China and imported under HTS subheadings 3907.61.00 and 3907.69.00 is subject to an additional 25 percent ad valorem duty under Section 301 of the Trade Act of 1974.[19] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

The product

Description and applications[20]

PET resin is a large-volume, commodity-grade thermoplastic polyester polymer. PET resin is predominantly sold in bulk form as chips or pellets to downstream end users/converters. Prior to being converted to downstream products, virgin PET resin pellets are noted for being slightly opaque and whitish in color. Converters use PET resin to produce bottles, containers, and packaging. The major end uses for PET resin include bottles for beverages (e.g., juice, water, and carbonated soft drinks), containers for food (e.g., salad dressings, jams and jellies, peanut butter, edible oils), household cleaners, and cosmetics. PET resin can also be used to produce other forms of packaging, such as food trays and drinking cups, as well as carpet fibers. End-use products manufactured from PET resin are clear, transparent, sterile, lightweight, and thermally stable. Other properties of note for articles made from PET resin are impact resistance, closure integrity, durability, and strength.

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[18] From 2015 to 2016, subject PET resin was imported under HTS statistical reporting number 3907.60.0030. From 2017 to 2018, subject PET resin was imported under subheadings 3907.61.00 and 3907.69.00, which had no statistical annotations. Effective 2019, subject PET resin is currently imported under statistical reporting numbers 3907.61.0010 and 3907.69.0010.

[19] 83 FR 40823, August 16, 2018.

[20] Unless otherwise noted, this information is based on the original publication, pp. I-9-I-11; and original confidential report, pp. I-11-I-14.

Packaging and bottle-grade PET resin typically have an intrinsic viscosity ("IV") of at least 0.70 or more, but not more than 0.88 deciliters per gram.[21] Bottle-grade resins may be blended with recycled PET resin and/or contain various additives, which can vary depending on the desired properties for an end-use product. However, these additives do not alter the fundamental properties of the subject product.[22]

Packaging-grade PET resin can be subdivided into two major end-use classifications: "cold-fill" and "hot-fill." Cold-fill refers to container applications where the substance being filled into the container does not require excessive temperatures in the filling process, i.e., can be filled at ambient room temperature. Hot-fill refers to container applications where the substance poured into the container requires high temperatures in the filling process, similar to a canning process. Generally, cold-fill PET resin has a lower IV range than hot-fill PET resin; however, both fall within the IV range 0.70 to 0.88 deciliters per gram.

Converters produce bottles and other specialty food containers predominately by an injection stretch blow-molding process. For this process, an intermediate "preform" product is produced by injection molding, followed by a stretch blow-molding process to form finished PET containers. Most bottle converters manufacture both the bottle preforms and the final blow-molded bottles. PET resin can also be extruded into sheets of various thicknesses or thermoformed into such items as clear cups, vegetable containers, or strawberry clamshells. No U.S. PET resin producer has any significant amount of preform or stretch blow-molding equipment intended for commercial use, nor does any domestic PET resin producer have ownership in downstream applications for its polymers.

The scope of these reviews includes blends of virgin and recycled PET resin. The share of recycled content does not impact the IV of the product. However, recycled PET resin is not a complete substitute for virgin PET resin due to impurities in the recycled PET resin that are nearly impossible to remove. Several domestic producers blend small amounts of recycled PET resin with virgin PET resin.[23]

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[21] IV is a measure of the molecular weight of PET resin and is a reflection of the resin's melting point, crystallinity, and tensile strength. Test procedure to determine IV is ASTM D4603. "Solution Intrinsic Viscosity" https://www.plastictechnologies.com/test/preform-and-bottle-testing/solution-intrinsic-viscosity.aspx, accessed December 13, 2021.

[22] PET resin excludes amorphous ("AMPET") resin, which has an IV below 0.70 deciliters per gram, and certain further processed resins having an IV greater than 0.88 deciliters per gram, such as some high tensile strength strapping and extrusion blow molds. An extrusion blow mold is a very large container with a clear handle, commonly seen as orange juice containers.

[23] The American Plastics Council has labeled bottles or containers made with PET resin with the "PETE 1" code for recycling purposes. This label is usually found on or near the bottom of the PET bottle or

(*continued*...)

PET resin must be protected from moisture and contamination during transport. PET resin is typically shipped in sealed one metric ton poly bags (super sacks) within large metal shipping containers. Subject imported product may be removed from the containers and temporarily stored in order to have some local inventory and save on demurrage. Both imported and domestic product may be shipped bulk inland in specially lined railcars or truck beds in lots of 200,000 pounds and 50,000 pounds, respectively. According to testimony, subject imported product can be the most competitive with domestically produced product in coastal regions, where such U.S. producers have the higher cost of inland freight, but importers have the lower cost of freight.[24] Transportation costs can vary a great deal depending on the logistics of shipping. [25]

Manufacturing process[26]

Producers manufacture the precursor AMPET resin from a controlled chemical reaction between the petro-based chemical terephthalic acid ("TPA")[27] and the natural gas-based chemical monoethylene glycol ("MEG")[28] in a melt-phased polymerization treatment. Firms manufacture packaging-grade PET resin by submitting AMPET resin to a solid-state polymerization ("SSP") treatment. In both the domestic industry and the subject country industries, PET resin producers have both the melt-phase polymerization capability to produce AMPET and the SSP capability to produce PET resin.

(…*continued*)
container. PET Resin Association, "Plastics Manufacturers Reconfirm PET Bottles Do NOT Contain BPA," http://www.petresin.org/pdf/newsrelease_NoBPAinPET.pdf, accessed February 10, 2022.

[24] Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan Investigation Nos. 701-TA-1387-1391 (Final), USITC Publication 4835, November 2018, pp. I-11.

[25] The COVID-19 pandemic contributed the unreliability and disruption of transportation, further impacting variability in transportation costs. Octal's posthearing brief, p. 59; Hearing transcript, p. 30 (Meyer), p. 57 (Rosenthal).

[26] Unless otherwise noted, this information is based on the original confidential report, pp. I-14-I-16 and original publication, pp. I-11-I-12.

[27] Older technologies use dimethyl terephthalate ("DMT") in lieu of TPA in manufacturing of AMPET resin, but TPA has largely displaced DMT as the main raw material component in the industry. Also, there are several grades of TPA. The highest-quality TPA is purified terephthalic acid ("PTA"), and this is the quality of TPA that is sold on the merchant market to PET resin producers in the United States. PET resin lines can use other qualities of TPA other than PTA; however, if non-purified forms of TPA are used in PET resin manufacturing, the PET resin lines must compensate for the lower-quality raw material input through further in-line chemical processing.

[28] Also referred to as "EG," or ethylene glycol.

Packaging-grade PET resin is produced by submitting AMPET resin to an SSP treatment, which increases the IV of the polyester pellet to a level within the range of IVs as defined within the scope of these investigations. The amorphous chip's raw material feedstocks, TPA and MEG, are based on xylene and ethylene, respectively, from the petrochemical industry; thus, TPA and MEG feedstock prices for the manufacture of AMPET resin are variably dependent upon prices in the larger petrochemical industry. TPA and MEG account for approximately 98 percent of AMPET resin by weight and an estimated 75 to 80 percent of PET resin by cost. AMPET resin producers can modify polymer properties by incorporating nominal amounts of copolymer chemical reactants such as isophthalic acid ("IPA") at levels of 2 to 3 percent by weight.[29]

An SSP treatment essentially bakes the AMPET resin chips in large cylindrical reaction towers. In these towers the AMPET chips flow through an oxygen-free, nitrogen gas atmosphere at temperatures above 200°C for a period of 18-24 hours. Once the baking is completed, the resin pellets exit the bottom of the reaction tower where air cooling takes place in a closed-circuit heat exchanger prior to storage for transport by rail or truck. Some PET resin producers are partially vertically integrated between feedstocks and PET resin production, while others are not.

Some producers utilize a Melt to Resin ("MTR") process in their manufacturing, which is different from the conventional SSP technology.[30] In MTR technology, no solid state crystallizer is used, which saves on the cost of that equipment.[31] [32] The MTR process has shorter residence time (time that a plastic or resin is subjected to heat), resulting in minimal generation of secondary products and cross linked polymers (16 hour residence times vs. the conventional 24 hours), more stable parameters lower crystallinity, lower temperature processing, spherical pellet output compared to cylinder shaped output which leads to lower dust generation and lower IV drop during downstream processing, a more narrow processing window due to narrow

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[29] Copolymer resin is usually demanded by consumers because of improved processing speed and physical properties. Homopolymers define unmodified forms of PET resin.

[30] Uhde Inventa-Fischer, "MTR Melt-To Resin Technology for cost-efficient, energy saving production of high-quality PET," http://www.thyssenkrupp-industrial-solutions-rus.com/assets/pdf/MTR_Melt-To-Resin_Technology_Brochure_Uhde_Inventa-Fischer.pdf, accessed February 10, 2022.

[31] Plastemart, "A new technology offers cost benefit to PET producers," http://www.plastemart.com/upload/Literature/New-technology-offers-cost-benefit-to-PET-producers.asp, accessed February 8, 2022.

[32] Uhde Inventa-Fischer, "MTR Melt-To Resin Technology for cost-efficient, energy saving production of high-quality PET," http://www.thyssenkrupp-industrial-solutions-rus.com/assets/pdf/MTR_Melt-To-Resin_Technology_Brochure_Uhde_Inventa-Fischer.pdf, accessed February 8, 2022.

molecular weight distribution and improved process ability, lower thermal heat stress, and energy cost savings.[33]

Domestic like product issues

In its original determinations, the Commission defined a single domestic like product, consisting of certain PET resin that is coextensive with Commerce's scope.[34]

In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate definitions of the domestic like product and domestic industry.[35] U.S. producers DAK, Indorama, and Nan Ya indicated that they agree with the Commission's definition of the domestic like product, but reserve the right to comment on the appropriate definitions during the course of the proceeding.[36] Foreign producer OCTAL SAOC-FZC and U.S. importer OCTAL Inc. (collectively "OCTAL") agree with the definition of the domestic like product but reserve the right to further analyze the issue.[37] No party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires.[38] No other interested party provided further comment on the domestic like product.

In its prehearing brief, counsel for domestic producers APG, DAK, Indorama, and Nan Ya agreed with the definition of the domestic like product set forth in the original investigations.[39] No other interested party provided further comment on the domestic like product.[40]

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[33] Ibid.

[34] Original publication, p. 6.

[35] 86 FR 17197, April 1, 2021.

[36] Domestic interested parties' response to the notice of institution, May 3, 2021, p. 20.

[37] Respondent OCTAL's response to the notice of institution, May 3, 2021, p. 13.

[38] *See generally* comments on draft questionnaires from (1) DAK, Indorama, and Nan Ya; and (2) the American Beverage Association ("ABA"), October 4, 2021. *See also* letter of endorsement of ABA's comments on draft questionnaires from Niagara Bottling, LLC, the International Bottled Water Association, and CG Roxane LLC, October 4, 2021.

[39] Domestic producers' prehearing brief, January 19, 2022, p. 4.

[40] *See generally* prehearing briefs of Niagara and OCTAL, January 19, 2022.

U.S. market participants

U.S. producers

During the final phase of the original investigations, the Commission received U.S. producer questionnaires from four firms, which accounted for all known U.S. production of PET resin in 2014.[41] In these current reviews, the Commission issued U.S. producers' questionnaires to four firms, all of which provided the Commission with information on their product operations.[42] These firms are believed to account for all U.S. production of PET resin in 2020. Table I-12 presents a list of current domestic producers of PET resin and each company's position on continuation of the orders, production locations(s), and share of reported production of PET resin in 2020. Table I-13 presents U.S. producers' related and/or affiliated firms.

Table I-12
PET resin: U.S. producers, their position on the continuation of the orders, location(s) of production, and share of reported production, 2020

Share in percent

Firm	Position on continuation of the orders	Production location(s)	Share of production
APG	Support	Apple Grove, WV	***
DAK	Support (China, India, Oman); Takes no position (Canada)	Charlotte, NC Fayetteville, NC Gaston, SC Moncks Corner, SC Bay St. Louis, MS	***
Indorama	Support	Asheboro, NC Decatur, AL Spartanburg, SC	***
Nan Ya	Support	Lake City, SC	***
All firms	Various	Various	100.0

Source: Compiled from data submitted in response to Commission questionnaires and the Commission's notice of institution.

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[41] Original publication, p. I-4. These firms were: DAK, Indorama, M&G, and Nan Ya. Ibid.

[42] As mentioned previously, in March 2018, M&G was acquired by Far Eastern and renamed APG. ***. To cover the period prior to the acquisition, staff incorporated certain information M&G provided in the Commission's 2018 final investigations. *See also* staff correspondence with ***, December 6, 2021.

Table I-13
PET resin: U.S. producers' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
APG	Ownership: Far Eastern New Century Corporation	100 percent
DAK	Ownership: Alpek Polyester, S.A. de C.V.	***
***	***	***
Indorama	Ownership: Indorama Ventures PCL, Thailand	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
APG	Related producer: Far Eastern New Century Corporation (Taiwan)	Parent Company
***	***	***
APG	Related producer: Far Eastern Industries (Shanghai) Ltd. (China)	Sister company under Far Eastern New Century Corporation
***	***	***
DAK	Related producer: Compagnie Selenis Canada (Canada)	Affiliate ***
***	***	***
***	***	***
***	***	***
***	***	***

Reporting firm	Relationship type and related firm	Details of relationship
***	***	***
***	***	***
Indorama	Related producer: Guangdong IVL PET Polymer Co., Ltd. (China); ***	Sister companies under the umbrella of Indorama Ventures
Indorama	Related producer: ***; IVL Dhunseri Petrochem Industries Private Limited (Haldia) (India); IVL Dhunseri Petrochem Industries Private Limited (Karnal) (India); ***	Sister companies under the umbrella of Indorama Ventures
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and to the Commission's notice of institution and staff research.

Note: U.S. producer DAK is affiliated with Canadian producer Selenis through common corporate ownership, ***. Staff correspondence with ***, February 22, 2022.

As indicated in table I-13, three U.S. producers are related to foreign producers of the subject merchandise and one U.S. producer is related to U.S. importers of the subject merchandise. In addition, as discussed in greater detail in Part III, no U.S. producer imports or purchases the subject merchandise.

U.S. importers

In the original investigations, 22 firms supplied the Commission with usable information on their operations involving the importation of PET resin, accounting for over 80 percent of U.S. imports of PET resin from Canada, China, India, and Oman between 2012 and September 2015 under HTS statistical reporting number 3907.60.0030.[43] Of the responding U.S. importers, two were domestic producers: Indorama and M&G.

In the current proceeding, the Commission issued U.S. importers' questionnaires to 50 firms believed to be importers of PET resin, as well as to all U.S. producers of PET resin. Usable questionnaire responses were received from 18 firms, representing the majority of U.S. imports from Canada, China, India, and Oman during 2020.[44] Of the responding U.S. importers, two were domestic producers: DAK and Indorama. In addition, prior to its acquisition, U.S. producer M&G also imported PET resin.

Table I-14 lists all responding U.S. importers of PET resin from Canada, China, India, Oman, and other sources, their locations, and their shares of U.S. imports in 2020.

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[43] Original publication, p. IV-1.

[44] As mentioned previously, in March 2018, M&G was acquired by Far Eastern and renamed APG. ***. To cover the period prior to the acquisition, staff incorporated certain information M&G provided in the Commission's 2018 final investigations. *See also* staff correspondence with ***, December 6, 2021.

Table I-14
PET resin: U.S. importers, their headquarters, and shares of imports, 2020

Share in percent

Firm	Headquarters	Subject sources	Nonsubject sources	All import sources
Barnet	Spartanburg, SC	***	***	***
CG Roxane	Olancha, CA	***	***	***
Custom Polymers	Charlotte, NC	***	***	***
DAK	Charlotte, NC	***	***	***
DL Trading	Katy, TX	***	***	***
Freudenberg	Durham, NC	***	***	***
G-Pac	Atlanta, GA	***	***	***
Ice River Springs	Shelburne, ON	***	***	***
Indorama	Charlotte, NC	***	***	***
iResin	Newark, NJ	***	***	***
KP Films	Gordonsville, VA	***	***	***
M&G	Houston, TX	***	***	***
Niagara	Diamond Bar, CA	***	***	***
OCTAL	Plano, TX	***	***	***
PolyQuest	Wilmington, NC	***	***	***
POSCO	Anaheim, CA	***	***	***
Ravago	Orlando, FL	***	***	***
Selenis	Montreal, Quebec	***	***	***
Vinmar	Houston, TX	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

U.S. purchasers

The Commission received 20 usable questionnaire responses from firms that bought PET resin since January 2015.[45] Seventeen of these responding purchasers indicated that they are end users, including 13 bottle makers, 2 sheet and packaging manufacturers, and 2 carpet manufacturers; 2 described themselves as other; and one described themselves as a distributor.[46] Responding U.S. purchasers were located nationwide. The largest responding purchasers of PET resin in order of size were ***. During 2020, responding purchasers purchased 78.5 percent of their PET resin from U.S. producers, purchased or imported 0.8 percent from subject countries (0.01 percent from Canada, none from China, 0.1 percent from India, and 0.7 percent from Oman), and 16.5 percent from nonsubject countries; 4.3 percent were from unknown sources.

Apparent U.S. consumption

Data concerning apparent U.S. consumption of PET resin are shown in table I-15. Apparent U.S. consumption by quantity fluctuated during 2015-20 and reached the highest level in 2020, increasing overall by 15.9 percent. Apparent U.S. consumption by value also fluctuated during 2015-20 but was at its lowest level in 2020, decreasing overall by 8.4 percent. Apparent U.S. consumption by quantity and value were higher in January-September 2021 than in January-September 2020, by 2.7 percent and 26.0 percent respectively.

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[45] Of the 20 responding purchasers, all 20 purchased domestic PET resin, 8 purchased imports of the subject merchandise from Canada, 1 from China, 2 from India, 11 from Oman, and 17 from nonsubject sources. However, purchasers did not always know the origin of the PET resin purchased. *** noted that it often purchased PET resin to be used in other formats ***. *** would make purchases ***.

[46] Purchasers were asked, if they were distributors, whether they competed for sales to customers with their suppliers. One purchaser (***) answered that they did compete for sales to customers with their suppliers, stating ***.

Table I-15
PET resin: Apparent U.S. consumption, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars

Source	Measure	2015	2016	2017
U.S. producers	Quantity	5,383,028	5,557,251	5,590,397
Canada	Quantity	***	***	***
China	Quantity	***	***	***
India	Quantity	***	***	***
Oman	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	918,655	1,463,688	1,377,155
All sources	Quantity	6,301,683	7,020,939	6,967,552
U.S. producers	Value	3,021,032	2,726,537	2,888,078
Canada	Value	***	***	***
China	Value	***	***	***
India	Value	***	***	***
Oman	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	494,381	718,879	743,339
All sources	Value	3,515,413	3,445,416	3,631,417

Table continued.

Table I-15 Continued
PET resin: Apparent U.S. consumption, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars

Source	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
U.S. producers	Quantity	5,662,983	5,633,736	6,119,663	***	4,484,904
Canada	Quantity	***	***	***	***	***
China	Quantity	***	***	***	***	***
India	Quantity	***	***	***	***	***
Oman	Quantity	***	***	***	***	***
Subject sources	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	1,376,127	1,288,634	1,186,986	794,920	1,164,348
All sources	Quantity	7,039,110	6,922,370	7,306,649	5,502,361	5,649,252
U.S. producers	Value	3,560,526	3,210,890	2,719,902	2,086,718	2,411,595
Canada	Value	***	***	***	***	***
China	Value	***	***	***	***	***
India	Value	***	***	***	***	***
Oman	Value	***	***	***	***	***
Subject sources	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	878,062	699,838	501,533	338,329	644,389
All sources	Value	4,438,588	3,910,728	3,221,435	2,425,047	3,055,984

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Note: Apparent U.S. consumption presented in this table is based on U.S. producers' U.S. shipments and U.S. importers' U.S. shipments.

Figure I-2
PET resin: Apparent U.S. consumption, by source and by period

        *   *   *   *   *   *   *

U.S. market shares

U.S. market share data are presented in table I-16. U.S. producers' market share by quantity decreased between 2015 and 2016, then increased in each year during 2017-20. U.S. producers' market share by quantity decreased overall by 1.7 percentage points during 2015-20, from 85.4 percent to 83.8 percent, and was 6.2 percentage points lower in January-September 2021 than in January-September 2020.

Subject import market share by quantity decreased by *** percentage points between 2015 and 2020, from *** percent to *** percent, and was *** percentage points higher in January-September 2021 than in January-September 2020. The higher market share in January-September 2021 when compared to January-September 2020 is primarily due to an increase in shipments of imports from Oman.

Nonsubject import market share increased by *** percentage points from 2015-20, from *** percent to *** percent, peaking in 2016 at *** percent. Nonsubject import market share was *** percentage points higher in January-September 2021 than in January-September 2020.

Table I-16
PET resin: Market shares, by source and by period

Share in percent

Source	Measure	2015	2016	2017
U.S. producers	Share of quantity	85.4	79.2	80.2
Canada	Share of quantity	***	***	***
China	Share of quantity	***	***	***
India	Share of quantity	***	***	***
Oman	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	14.6	20.8	19.8
All sources	Share of quantity	100.0	100.0	100.0
U.S. producers	Share of value	85.9	79.1	79.5
Canada	Share of value	***	***	***
China	Share of value	***	***	***
India	Share of value	***	***	***
Oman	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	14.1	20.9	20.5
All sources	Share of value	100.0	100.0	100.0

Table continued.

Table I-16 Continued
PET resin: Market shares, by source and by period

Share in percent

Source	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
U.S. producers	Share of quantity	80.5	81.4	83.8	85.6	79.4
Canada	Share of quantity	***	***	***	***	***
China	Share of quantity	***	***	***	***	***
India	Share of quantity	***	***	***	***	***
Oman	Share of quantity	***	***	***	***	***
Subject sources	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	19.5	18.6	16.2	14.4	20.6
All sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
U.S. producers	Share of value	80.2	82.1	84.4	86.0	78.9
Canada	Share of value	***	***	***	***	***
China	Share of value	***	***	***	***	***
India	Share of value	***	***	***	***	***
Oman	Share of value	***	***	***	***	***
Subject sources	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
All import sources	Share of value	19.8	17.9	15.6	14.0	21.1
All sources	Share of value	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

PET resin is used in four main downstream applications: bottles for soft drinks and other beverages, sheets for making clam shells for fruit and vegetable packaging, carpet fibers, and strapping used to ship bulk products, such as lumber. The largest single end use is the manufacture of beverage bottles. The U.S. market for PET resin is supplied by U.S. producers, as well as numerous import sources.

Demand for PET resin has been growing, and is forecasted to continue growing, in conjunction with the increasing trend of replacing traditional glass packaging with that of PET packaging. PET bottles are high in demand because they are easy to handle, shatterproof, and convenient for on-the-go consumption. Additionally, with the COVID-19 pandemic and "work from home" expanding, there has been an increase in the use of PET resin due to increased demand for personal protection equipment (PPE), food packaging, and packaged water and other beverages.[1]

Historically, carbonated soft drinks have had the highest demand as an end-use segment for bottles. However, consumer trends have largely shifted to bottled water due to health concerns tied into consumption of high sugar content carbonated drinks. The water bottles market is growing and could soon make up a larger share of the PET resin market by end-use segment. Recycled PET resin demand has created more opportunity for recyclers resulting in strong demand for recycled PET ("rPET"), which is driven largely by the U.S. fiber industry.[2]

Apparent U.S. consumption of PET resin increased during 2015-2020. Overall, apparent U.S. consumption in 2020 was 15.9 percent higher than in 2015 and was 2.7 percent higher in January-September 2021 than in January-September 2020.

Channels of distribution

U.S. producers and importers sold mainly to end users, as shown in table II-1a and table II-1b. Producers and subject importers usually listed soda and/or other bottlers as the single largest end-use channel, although shipments of imports from *** to distributors increased over the period, and imports from *** were sold mostly to distributors in *** of the years during the period.

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[1] IHS Markit. Chemical Economics Handbook: PET Polymer, 2021.
[2] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan.* Inv. Nos. 731-TA-1387-1387 (Final), USITC Publication 4835, November 2018, pp. II-1–II-2.

Table II-1a
PET resin: Share of U.S. producers' and importers' U.S. shipments by channel of distribution within source, by period, 2015-17

Shares in percent

Channel	Source	2015	2016	2017
Distributors	United States	***	***	***
Bottle producers	United States	***	***	***
Carpeting producers	United States	***	***	***
Packaging sheet	United States	***	***	***
Other end users	United States	***	***	***
End users, subtotal	United States	***	***	***
All channels	United States	***	***	***
Distributors	Canada	***	***	***
Bottle producers	Canada	***	***	***
Carpeting producers	Canada	***	***	***
Packaging sheet	Canada	***	***	***
Other end users	Canada	***	***	***
End users, subtotal	Canada	***	***	***
All channels	Canada	***	***	***
Distributors	China	***	***	***
Bottle producers	China	***	***	***
Carpeting producers	China	***	***	***
Packaging sheet	China	***	***	***
Other end users	China	***	***	***
End users, subtotal	China	***	***	***
All channels	China	***	***	***
Distributors	India	***	***	***
Bottle producers	India	***	***	***
Carpeting producers	India	***	***	***
Packaging sheet	India	***	***	***
Other end users	India	***	***	***
End users, subtotal	India	***	***	***
All channels	India	***	***	***
Distributors	United States	***	***	***
Bottle producers	United States	***	***	***
Carpeting producers	United States	***	***	***
Packaging sheet	United States	***	***	***
Other end users	United States	***	***	***
End users, subtotal	United States	***	***	***
All channels	United States	***	***	***

Table continued on next page.

Table II-1a Continued
PET resin: Share of U.S. producers' and importers' U.S. shipments by channel of distribution within source, by period, 2015-17

Shares in percent

Channel	Source	2015	2016	2017
Distributors	Subject	***	***	***
Bottle producers	Subject	***	***	***
Carpeting producers	Subject	***	***	***
Packaging sheet	Subject	***	***	***
Other end users	Subject	***	***	***
End users, subtotal	Subject	***	***	***
All channels	Subject	***	***	***
Distributors	Nonsubject	***	***	***
Bottle producers	Nonsubject	***	***	***
Carpeting producers	Nonsubject	***	***	***
Packaging sheet	Nonsubject	***	***	***
Other end users	Nonsubject	***	***	***
End users, subtotal	Nonsubject	***	***	***
All channels	Nonsubject	***	***	***
Distributors	All sources	***	***	***
Bottle producers	All sources	***	***	***
Carpeting producers	All sources	***	***	***
Packaging sheet	All sources	***	***	***
Other end users	All sources	***	***	***
End users, subtotal	All sources	***	***	***
All channels	All sources	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-1b
PET resin: Share of U.S. producers' and importers' U.S. shipments by channel of distribution within source, by period, 2018-20, January-September 2020, and January-September 2021 2021

Shares in percent

Channel	Source	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Distributors	United States	***	***	***	***	***
Bottle producers	United States	***	***	***	***	***
Carpeting producers	United States	***	***	***	***	***
Packaging sheet	United States	***	***	***	***	***
Other end users	United States	***	***	***	***	***
End users, subtotal	United States	***	***	***	***	***
All channels	United States	***	***	***	***	***
Distributors	Canada	***	***	***	***	***
Bottle producers	Canada	***	***	***	***	***
Carpeting producers	Canada	***	***	***	***	***
Packaging sheet	Canada	***	***	***	***	***
Other end users	Canada	***	***	***	***	***
End users, subtotal	Canada	***	***	***	***	***
All channels	Canada	***	***	***	***	***

Table continued on next page.

Table II-1b Continued
PET resin: Share of U.S. producers' and importers' U.S. shipments by channel of distribution within source, by period, January 2019-June 2021

Shares in percent

Channel	Source	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Distributors	China	***	***	***	***	***
Bottle producers	China	***	***	***	***	***
Carpeting producers	China	***	***	***	***	***
Packaging sheet	China	***	***	***	***	***
Other end users	China	***	***	***	***	***
End users, subtotal	China	***	***	***	***	***
All channels	China	***	***	***	***	***
Distributors	India	***	***	***	***	***
Bottle producers	India	***	***	***	***	***
Carpeting producers	India	***	***	***	***	***
Packaging sheet	India	***	***	***	***	***
Other end users	India	***	***	***	***	***
End users, subtotal	India	***	***	***	***	***
All channels	India	***	***	***	***	***
Distributors	Oman	***	***	***	***	***
Bottle producers	Oman	***	***	***	***	***
Carpeting producers	Oman	***	***	***	***	***
Packaging sheet	Oman	***	***	***	***	***
Other end users	Oman	***	***	***	***	***
End users, subtotal	Oman	***	***	***	***	***
All channels	Oman	***	***	***	***	***
Distributors	Subject	***	***	***	***	***
Bottle producers	Subject	***	***	***	***	***
Carpeting producers	Subject	***	***	***	***	***
Packaging sheet	Subject	***	***	***	***	***
Other end users	Subject	***	***	***	***	***
End users, subtotal	Subject	***	***	***	***	***
All channels	Subject	***	***	***	***	***
Distributors	Nonsubject	***	***	***	***	***
Bottle producers	Nonsubject	***	***	***	***	***
Carpeting producers	Nonsubject	***	***	***	***	***
Packaging sheet	Nonsubject	***	***	***	***	***
Other end users	Nonsubject	***	***	***	***	***
End users, subtotal	Nonsubject	***	***	***	***	***
All channels	Nonsubject	***	***	***	***	***
Distributors	All sources	***	***	***	***	***
Bottle producers	All sources	***	***	***	***	***
Carpeting producers	All sources	***	***	***	***	***
Packaging sheet	All sources	***	***	***	***	***
Other end users	All sources	***	***	***	***	***
End users, subtotal	All sources	***	***	***	***	***
All channels	All sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Geographic distribution

U.S. producers reported selling PET resin to all regions in the contiguous United States. Importers[3] of subject product did as well, but with some regional emphases (table II-2). Importers of Canadian PET resin report more sales in the Midwest, Northeast, and Southeastern United States; importers of Chinese PET resin reported more sales in the Northeastern, Pacific Coast, and Southeastern regions of the United States; and importers of Omani PET resin reported more sales in the Midwest, Northeast, and Southeast regions of the United States. For U.S. producers, 14.4 percent of sales were within 100 miles of their production facility, 69.6 percent were between 101 and 1,000 miles, and 16.0 percent were over 1,000 miles. Importers sold 1.0 percent within 100 miles of their U.S. point of shipment, 5.8 percent between 101 and 1,000 miles, and 93.2 percent over 1,000 miles.

Table II-2
PET resin: Count of U.S. producers' and U.S. importers' geographic markets

Count in number of firms reporting

Region	U.S. producers	Canada	China	India	Oman	Subject sources
Northeast	4	4	2	1	4	9
Midwest	4	3	0	0	4	6
Southeast	4	3	2	1	4	8
Central Southwest	4	0	1	0	3	4
Mountains	4	0	1	0	1	2
Pacific Coast	4	0	3	1	1	4
Other	2	0	0	0	1	1
All regions (except Other)	4	0	0	0	1	1
Reporting firms	4	4	3	3	4	9

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other U.S. markets include AK, HI, PR, and VI.

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[3] ***.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding PET resin from U.S. producers and from subject countries. Responding foreign producers in *** have decreased their capacity to produce PET resin. U.S. producers' overall capacity was much higher than that of individual reporting subject countries, and U.S. producers' capacity utilization levels were lower than that of *** but slightly higher than that of ***. Almost all U.S. producers' shipments went to the domestic market. Most *** producers' shipments were to their home market, while most other foreign producers' shipments were to export markets. Two of four U.S. producers and *** responding foreign producers reported being able to switch production from PET resin to alternative products. *** reported being able to switch to different varieties of PET resin that are ***, and *** reported being able to switch to ***. Of the responding foreign producers, *** reported being able to switch to producing ***, *** reported being able to produce ***. These products include ***.

Table II-3
PET resin: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in 1,000 pounds; Ratios in percent

Factor	Measure	United States	Canada	China	India	Oman	Subject suppliers
Capacity 2015	Quantity	***	***	***	***	***	***
Capacity 2020	Quantity	***	***	***	***	***	***
Capacity utilization 2015	Ratio	***	***	***	***	***	***
Capacity utilization 2020	Ratio	***	***	***	***	***	***
Ending inventories to total shipments 2015	Ratio	***	***	***	***	***	***
Ending inventories to total shipments 2020	Ratio	***	***	***	***	***	***
Home market to total shipments 2020	Ratio	***	***	***	***	***	***
Non-US export markets to total shipments 2020	Ratio	***	***	***	***	***	***
Ability to shift production	Count	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note: Responding U.S. producers accounted for all of U.S. production of PET resin in 2020. Responding foreign producer/exporter firms accounted for all or virtually all of U.S. imports of PET resin from Canada and Oman during 2020. No responses to the Commission questionnaire were received from a foreign producer/exporter from China and India. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

Domestic production

Based on available information, U.S. producers of PET resin have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of U.S.-produced PET resin to the U.S. market. The main contributing factor to this degree of responsiveness of supply is the limited availability of unused capacity and the very limited ability to shift shipments from alternate markets. However, there is some availability of inventories and some ability to shift production to or from alternate products.

Overall, responding U.S. producers' capacity increased slightly from 2015 to 2020. U.S. producers' production increased slightly from 2015 to 2016, decreased in 2017 (reflecting the shutdown of M&G's facility in late 2017), then showed an overall increase since then. Exports were a very small share of U.S. producers' shipments. U.S. producers reported exports to Canada, Mexico, and Romania. Other products that producers reportedly can produce on the same equipment as PET resin are specialty polymers, barrier, film, and tray resin. More information regarding domestic production is presented in Part III.

Domestic capacity utilization was relatively steady at approximately *** percent from 2015-2017, but then fluctuated in 2018 and 2019. From 2020 to 2021, average capacity utilization rose to a level somewhat above its level in 2019. This moderately high level of capacity utilization suggests that U.S. producers may have a moderate-to-low ability to increase production of PET resin in response to an increase in prices.

U.S. producers' exports decreased overall by *** percent from 2015 to 2020. There was an average decrease of *** percent from 2015 to 2019, before rising somewhat from 2019 to 2020 to *** percent and was lower at *** percent in January-September 2021 than in January-September 2020. These levels likely indicate that U.S. producers do not have a high volume of exports to potentially divert back to the U.S. market in the event of rising U.S. prices.

U.S. producers' inventories ratio to total shipments decreased by *** percentage point over 2015-2020. These inventory levels suggest that U.S. producers are limited in their ability to respond to changes in demand with changes in the quantity shipped from inventories.

Producers *** described U.S. producers' capacity limited by equipment and production constraints such as pump performance, equipment size, and reaction rate. *** reports that reactor capacity also limits capacity production. U.S. producer ***, and U.S. producer ***.

Subject imports from Canada[4]

Based on available information, responding producers of PET resin from Canada have the ability to respond to changes in demand with small-to-moderate changes in the quantity of

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[4] The Commission received one questionnaire response from Canadian producer *** in these first review investigations. In the original investigations, the Commission received ***. The information in this section is based on ***.

shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the limited availability of unused capacity, limited alternate markets other than the United States and Canada, low inventories, a limited ability to produce alternate products, and uncertainty over the levels of Canadian production.

According to data submitted in the Canadian producer's questionnaire, Canadian capacity of PET resin *** over 2015-20, and capacity utilization reached *** percent in 2020, indicating a limited ability to increase production of PET resin in response to an increase in prices. Additionally, Canadian inventories relative to total shipments decreased slightly from *** percent in 2015 to *** percent in 2020, indicating a somewhat limited ability to respond to changes in prices with increased shipments from inventory.

*** Canadian production went to ***, indicating that the Canadian producer has limited ability to shift export shipments ***. The Canadian producer indicated that it *** switch to producing ***.

Subject imports from China[5]

Based on available information from the original investigations, producers of PET resin from China have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to increase capacity, the existence of alternate markets, and uncertainty over production developments due to a lack of response in this first review phase. Developments since the original investigations are unknown due to a lack of response from Chinese producers in both the final investigations in 2016 and in this current review phase.

According to data submitted in the original investigations in 2015, Chinese capacity rose by *** percent over 2012-14, with capacity utilization rising from *** percent to ***

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[5] In these first review investigations, no Chinese producers submitted foreign producer questionnaires. In the original investigations, the Commission received *** questionnaire responses from Chinese producers. These firms' exports to the United States accounted for *** percent of U.S. imports of PET resin from China during 2012-14. *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman.* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), Confidential staff report ("Original confidential report"), April 2016, p. VII-8.

percent over the same period. While capacity utilization is relatively high, the ability to increase capacity each year suggests that Chinese producers have some ability to respond to changes in price with increased production. Chinese exports to the United States made up *** percent of total Chinese shipments in 2014. Over 2012-14, usually *** of Chinese producers' shipments went to their home market while *** went to third-country markets. The large share of shipments to third-country markets suggests that Chinese producers have some ability to shift sales to the U.S. market if U.S. prices increase. During the original investigation two of seven Chinese producers indicated that they could shift their PET resin production to another product, with both citing *** as the shifting product[6].

Subject imports from India[7]

Based on available information from the original investigations, producers of PET resin from India have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to increase capacity and the existence of alternate markets constrained by *** inventory levels and high capacity utilization.

Indian producers' capacity utilization was usually above *** percent. Between 2012 and 2013, capacity rose *** percent before falling back somewhat in 2014 and was projected to rise again in 2015 and 2016. These capacity increases indicate the potential to increase production in response to changes in price.

During 2012-14, Indian producers shipped *** of their shipments to their home market, with most of the remainder (*** percent in 2014) going to third-country markets. The trend from 2012 to 2015 shows a lower share of home market shipments and a higher share of shipments to third-country markets.

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[6] *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman.* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), Confidential staff report ("Original confidential report"), April 2016, pp. II-13–II-15.

[7] In these first review investigations, no Indian producers submitted foreign producer questionnaires. In the original investigations, the Commission received four questionnaire responses from Indian producers. The exports of these firms accounted for *** percent of imports of PET resin from India in 2014.

In the original investigations, *** Indian producers indicated that they could switch their production of PET resin to *** and one indicated that it could switch to making ***.[8]

Subject imports from Oman[9]

Based on available information, the sole responding Omani producer of PET resin has the ability to respond to changes in demand with small to moderate changes in the quantity of shipments of PET resin to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets and production from alternate products. Factors mitigating responsiveness include limited availability of unused capacity and inventories.

The Omani producer increased its capacity utilization from *** percent in 2015 to *** in 2020, although ***. Inventories also fell during this period from *** percent of total shipments to *** percent of total shipments. This increase in capacity utilization along with a decrease in inventory may indicate that the Omani producer has somewhat limited ability to respond to changes in price with changes in production.

Over 2015-20 and January-September 2021, the Omani producer shipped over *** percent of its PET resin to countries other than Oman and the United States, indicating that it would likely have the ability to respond to changes in U.S. prices with increased shipments to the United States.[10]

The Omani producer indicated that it *** with the equipment it uses to produce PET resin.[11] The limiting factor to switching capacity was due to ***.

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[8] *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman.* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), Confidential staff report ("Original confidential report"), April 2016, pp. II-15–II-16.

[9] The Commission received one questionnaire response from an Omani producer, ***, which is believed to account for *** Omani production of PET resin.

[10] In the original investigations, OCTAL described its interests as focused on growing demand in Europe, Africa, and the Middle East. OCTAL Postconference brief, p. 36.

[11] Petitioner stated that ***. Petitioner's Posthearing brief, p. 11.

Imports from nonsubject sources

Imports of PET resin from nonsubject sources accounted for *** percent of apparent U.S. consumption in 2020.

Supply constraints

Two of the 4 U.S. producers and 4 of 13 importers reported that their firm had refused or been unable to supply any customers since January 1, 2015. Importers reported supply disruptions because of weather, port congestion (and other port disruptions), problems obtaining the input PTA, and limited supply due to ***.

Most purchasers (19 of 20) reported supply constraints. Ten purchasers reported that force majeure or natural disasters caused supply disruptions. Thirteen purchasers reported that suppliers were unable to provide the requested PET resin by refusing to bid on business or providing short shipments. Other purchasers reported a number of issues caused by supply constraints including prior and current antidumping remedies; customers are on allocation from U.S. producers, and delayed deliveries.

New suppliers

Thirteen of 20 purchasers reported that new suppliers have entered the U.S. market since January 1, 2015. Purchasers cited five new suppliers from South Korea (HYOSUNG Corporation, Paarang Co LTD, Jinyoung Chemical, Kolon Industries, Posco Daewoo Corporation); four new suppliers from Vietnam (FENC, Billion, FORMOSA, Hoasheng Vina Co); two new suppliers from Malaysia (Recron, Malaysia Shoei Shokai Co., LTD); one new supplier from China (India China Resources Packaging Materials); one new supplier from Italy (Italy Garden Silk Mills LTD); one new supplier from Japan (Japan Plastipak); one new supplier from Mexico (Petstar); one new supplier from Pakistan (Novae Impex); one new supplier from South Africa (Hosaf); and one new supplier from Thailand (Thai Pet Resin).

U.S. demand

Based on available information, the overall demand for PET resin is likely to experience small-to-moderate changes in response to changes in price. The main contributing factors are the somewhat limited range of substitute products and the large cost share of PET resin in most of its end-use products. Demand for PET resin is derived from the demand for its end-use products, such as carbonated soda bottles and water bottles, as well as other containers and products (including strapping and sheet) that are made of PET resin.

End uses and cost share

U.S. demand for PET resin depends on the demand for U.S.-produced downstream products. Reported end uses include bottles of various types (e.g., water or carbonated beverages), sheets, carpets, strapping, and thermoformed plastic containers. PET resin in bottles can be either cold-fill (i.e., for bottles meant to be filled with cold liquids) or hot-fill (i.e., for bottles that can be filled with hot liquids).[12]

PET resin accounts for a large share of the cost of the intermediate products in which it is used, but a smaller share of the ultimate end-use products. For example, PET resin is a smaller share of the cost of a bottled beverage than the share of the cost of a bottle alone. Reported cost shares of PET resin for some end uses were as follows:

- Empty bottles and preforms: 29 to 85 percent (11 of 14 firms reported 60 percent or higher).
- Bottles/containers: 20 to 70 percent (8 of 15 firms reported 37 percent or lower).
- Filled containers: 10 to 75 percent (6 of 7 firms reported 40 percent or lower).
- Carpets: 28 to 96 percent (7 of 8 firms reported 60 percent or lower).
- Strapping and sheets: 57 to 96 percent (7 of the 13 firms reported 80 percent or higher).[13]

All four responding U.S. producers, 12 of 15 reporting importers, and 14 of 20 purchasers reported no changes in the end uses for PET resin since January 1, 2015. Seventeen firms noted an increase in product consumption in certain applications. Purchaser *** stated that demand is shifting to PET from other plastics due to PET being more environmentally friendly along with processes and possible opportunities for PET resin to be utilize in food grade products. *** stated that the increase was due to its shift to more sales into sheet extruders and carpet, and purchaser *** stated that there is an increase in post-consumer content. Purchasers *** and *** stated that there was an increase in usage of recycled PET (rPET) as a total percent of PET resin, with the trend expected to increase in the future.

Business cycles

Three of 4 U.S. producers, 10 of 15 importers, and 10 of 20 purchasers indicated that the U.S. PET resin market was subject to distinctive business cycles. Most of these firms reported higher PET resin demand during the summer or warmer seasons because of higher

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[12] *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman.* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Publication 4604, April 2016, p. II-11
[13] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan.* Inv. Nos. 731-TA-1387-1387 (Final), USITC Publication 4835, November 2018, pp. II-17-II-18.

demand for bottled beverages. Additionally, importer *** and purchaser *** stated that the PET resin market may be impacted by hurricanes, freezes, and rail and truck availability, as well as water shortages and maintenance shutdowns. Three importers and eight purchasers reported other distinctive conditions of competition, including an increase in demand, an artificially high price of upstream feedstock PTA in the U.S. market, restricted imports, supply constraints, capacity constraints, and transportation issues. No U.S. producers reported other distinctive conditions of competition.

Demand trends

Almost all responding firms reported an increase in U.S. demand for PET resin from 2015 to 2019 (table II-4) and since 2020 (table II-5). Responding firms attributed the demand increase to the increase in packaging materials in food and beverage along with the increased demand for PET resin used in cleaning supplies, hand sanitizers, and safety packaging. Additionally, firms cited increased demand for water bottles and packaging due to the COVID-19 pandemic and the work from home trend. Some firms also stated that demand for PET resin grows commensurately with GDP (approximately 2-3 percent each year). Nearly all responding firms anticipate that demand will increase (table II-6).

Table II-4
PET resin: Count of firms' responses regarding domestic and foreign demand from January 1, 2015 to December 31, 2019

Count in number of firms reporting

Market	Firm type	Increase	No change	Decrease	Fluctuate
Domestic demand: Overall	U.S. producers	4	0	0	0
Domestic demand: Overall	Importers	12	1	0	1
Domestic demand: Overall	Purchasers	18	1	0	0
Domestic demand: Overall	Foreign producers	2	0	0	0
Domestic demand: Bottle sector	U.S. producers	4	0	0	0
Domestic demand: Bottle sector	Importers	12	0	1	0
Domestic demand: Bottle sector	Purchasers	15	1	0	0
Domestic demand: Bottle sector	Foreign producers	2	0	0	0
Domestic demand: Other	U.S. producers	4	0	0	0
Domestic demand: Other	Importers	10	0	0	2
Domestic demand: Other	Purchasers	9	1	0	0
Domestic demand: Other	Foreign producers	2	0	0	0
Demand outside U.S.: Overall	U.S. producers	4	0	0	0
Demand outside U.S.: Overall	Importers	10	0	0	0
Demand outside U.S.: Overall	Purchasers	11	0	0	0
Demand outside U.S.: Overall	Foreign producers	2	0	0	0
Demand outside U.S.: Bottle sector	U.S. producers	4	0	0	0
Demand outside U.S.: Bottle sector	Importers	11	0	0	0
Demand outside U.S.: Bottle sector	Purchasers	10	0	0	0
Demand outside U.S.: Bottle sector	Foreign producers	2	0	0	0
Demand outside U.S.: Other	U.S. producers	4	0	0	0
Demand outside U.S.: Other	Importers	8	0	0	1
Demand outside U.S.: Other	Purchasers	8	0	0	0
Demand outside U.S.: Other	Foreign producers	2	0	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-5
PET resin: Count of firms' responses regarding domestic and foreign demand since January 1, 2020

Count in number of firms reporting

Market	Firm type	Increase	No change	Decrease	Fluctuate
Domestic demand: Overall	U.S. producers	4	0	0	0
Domestic demand: Overall	Importers	13	1	0	0
Domestic demand: Overall	Purchasers	17	0	0	0
Domestic demand: Overall	Foreign producers	2	0	0	0
Domestic demand: Bottle sector	U.S. producers	4	0	0	0
Domestic demand: Bottle sector	Importers	12	0	0	0
Domestic demand: Bottle sector	Purchasers	16	0	0	0
Domestic demand: Bottle sector	Foreign producers	2	0	0	0
Domestic demand: Other	U.S. producers	3	0	0	1
Domestic demand: Other	Importers	11	0	0	0
Domestic demand: Other	Purchasers	10	0	0	0
Domestic demand: Other	Foreign producers	2	0	0	0
Demand outside U.S.: Overall	U.S. producers	4	0	0	0
Demand outside U.S.: Overall	Importers	11	0	0	0
Demand outside U.S.: Overall	Purchasers	9	0	0	0
Demand outside U.S.: Overall	Foreign producers	2	0	0	0
Demand outside U.S.: Bottle sector	U.S. producers	4	0	0	0
Demand outside U.S.: Bottle sector	Importers	10	0	0	0
Demand outside U.S.: Bottle sector	Purchasers	9	0	0	0
Demand outside U.S.: Bottle sector	Foreign producers	2	0	0	0
Demand outside U.S.: Other	U.S. producers	4	0	0	0
Demand outside U.S.: Other	Importers	8	0	0	0
Demand outside U.S.: Other	Purchasers	7	0	0	0
Demand outside U.S.: Other	Foreign producers	2	0	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-6
PET resin: Count of firms' responses regarding anticipated future domestic and foreign demand

Count in number of firms reporting

Market	Firm type	Increase	No change	Decrease	Fluctuate
Anticipated domestic demand: Overall	U.S. producers	3	0	0	1
Anticipated domestic demand: Overall	Importers	13	1	0	0
Anticipated domestic demand: Overall	Purchasers	17	0	0	0
Anticipated domestic demand: Overall	Foreign producers	2	0	0	0
Anticipated domestic demand: Bottle sector	U.S. producers	3	0	0	1
Anticipated domestic demand: Bottle sector	Importers	12	0	0	0
Anticipated domestic demand: Bottle sector	Purchasers	15	0	0	0
Anticipated domestic demand: Bottle sector	Foreign producers	1	0	0	0
Anticipated domestic demand: Other	U.S. producers	3	0	0	1
Anticipated domestic demand: Other	Importers	11	0	0	0
Anticipated domestic demand: Other	Purchasers	8	0	0	0
Anticipated domestic demand: Other	Foreign producers	2	0	0	0
Anticipated demand outside U.S.: Overall	U.S. producers	3	0	0	1
Anticipated demand outside U.S.: Overall	Importers	10	0	0	0
Anticipated demand outside U.S.: Overall	Purchasers	9	0	0	0
Anticipated demand outside U.S.: Overall	Foreign producers	2	0	0	0
Anticipated demand outside U.S.: Bottle sector	U.S. producers	3	0	0	1
Anticipated demand outside U.S.: Bottle sector	Importers	10	0	0	0
Anticipated demand outside U.S.: Bottle sector	Purchasers	7	0	0	0
Anticipated demand outside U.S.: Bottle sector	Foreign producers	2	0	0	0
Anticipated demand outside U.S.: Other	U.S. producers	3	0	0	1
Anticipated demand outside U.S.: Other	Importers	8	0	0	0
Anticipated demand outside U.S.: Other	Purchasers	6	0	0	0
Anticipated demand outside U.S.: Other	Foreign producers	2	0	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products

Substitutes for PET resin are limited. All four U.S. producers, 13 of 15 importers, and 15 of 19 purchasers reported that there were no substitutes. Two importers and four purchasers listed substitutes including aluminum containers, paper bottles, polypropylene, polystyrene, molded fiber, and recycled PET resin a as substitutes for PET resin in certain applications.

Substitutability issues

This section assesses the degree to which U.S.-produced PET resin and imports of PET resin from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of PET resin from domestic and imported sources based on those factors. Based on available data, staff believes that there is a high degree of substitutability between domestically produced PET resin and PET resin imported from subject sources.[14] Factors contributing to this level of substitutability include similar quality, availability, lead times for PET resin from inventory, little preference for particular country of origin or producers, similarities between domestically produced PET resin and PET resin imported from subject countries across multiple purchase factors, interchangeability between domestic and subject sources, and limited significant factors other than price. Factors reducing substitutability include limited domestic availability, few domestic content requirements, purchaser preferences for PET resin from certain subject sources over other sources.

Factors affecting purchasing decisions[15]

Purchaser decisions based on source

As shown in table II-7, slightly more than half of purchasers (10 of 19) and their customers sometimes or never make purchasing decisions based on the producer or country of

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[14] The degree of substitution between domestic and imported PET resin depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced PET resin to the PET resin imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

[15] Twenty purchasers indicated they had country knowledge indicating their firm has experience or information in the PET resin market of domestic product, 11 of Canadian product, 8 of Chinese product, 5 of Indian product, 11 of Omani product, and 15 of product from nonsubject countries.

origin. Of the nine purchasers that reported that they always or usually make decisions based the manufacturer, six firms cited business relationships, quality, price, diversity of supply, and limited availability from U.S. producers. Other reasons cited include specialized intrinsic viscosity (IV) resin, technical support, and reputation. Purchasers reported that their customers' decisions were based on packaging and sustainability requirements and resin qualifications.

Table II-7
PET resin: Purchasing decisions based on producer and country of origin

Count in number of firms reporting

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	3	6	6	4
Customer	Producer	0	1	4	10
Purchaser	Country	4	5	6	4
Customer	Country	0	0	5	11

Source: Compiled from data submitted in response to Commission questionnaires.

Importance of purchasing domestic product

Fourteen of 19 purchasers reported that none of their purchases required U.S.-produced product.[16] Five purchasers reported it was required by their customers (for 10 to 20 percent of their purchases), and three reported other reasons for preferences for domestic product. Reasons cited for preferring domestic product included: customer preference to run "NAFTA produced" resin; logistics and supply chain dependability; and lower price. None reported that purchasing domestic product was required by law.

Most important purchase factors

Of the responding firms, the most often cited top three factors that firms consider in their purchasing decisions for PET resin were availability (all 18 firms), price (15 firms), and quality (11 firms), as shown in table II-8. Availability of supply was the most frequently cited first-most important factor (9 firms), followed by quality (5 firms); quality was the most frequently reported second-most important factor (6 firms); and price was the most frequently reported third-most important factor (8 firms).

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[16] The remaining five firms reported that 80 percent or more of their purchases had no domestic requirement.

Table II-8
PET resin: U.S. purchasers' count of importance of purchase factors, by factor

Count in number of firms reporting

Factor	First	Second	Third	Total
Availability/supply	9	6	7	18
Price	4	5	8	15
Quality	5	6	0	11
Logistics/on time	0	0	3	3
Other[1]	3	0	3	6

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other first factors included grade, compliance, and "direct vs. toll" (where the purchasers' customers negotiate the price of PET resin instead of the purchaser). Additionally, "other" important factors listed included post-consumer recycled content, sustainability programs, offerings, and reputation.

The majority of purchasers (14 of 20) reported that they usually purchase the lowest-priced product. Five purchasers reported sometimes purchasing the lowest-priced product, and one reported never purchasing the lowest-priced product.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 19 factors in their purchasing decisions (table II-9). All 20 purchasers rated availability and price as very important. Other factors rated as very important by more than half of responding purchasers were quality meets industry standards (19), reliability of supply (19), product consistency (17), delivery time (16), and delivery terms (12). More purchasers (6) reported that blend of post-consumer PET resin as not as important than purchasers that reported them as very important (4).

Table II-9
PET resin: Count of importance of purchase factors, as reported by U.S. purchasers, by factor

Count in number of firms reporting

Factor	Very important	Somewhat important	Not important
Availability	20	0	0
Price	20	0	0
Quality meets industry standards	19	1	0
Reliability of supply	19	1	0
Product consistency	17	2	0
Delivery time	16	4	0
U.S. transportation costs	15	3	2
Delivery terms	12	7	1
Technical support/service	8	8	3
Packaging	2	14	4
Product range	5	13	2
Blend of post-consumer PET resin	4	10	6
Payment terms	9	10	1
Discounts offered	8	10	2
Delivery by rail	7	9	4
Production process	6	9	5
Recycled PET	8	7	4
Quality exceeds industry standards	7	7	6
Minimum quantity requirements	7	6	7

Source: Compiled from data submitted in response to Commission questionnaires.

Lead times

PET resin is primarily sold from inventory. U.S. producers reported that 82.0 percent of their sales came from inventories, with lead times averaging 19 days, and the remainder were produced-to-order, with lead times averaging 21 days. Importers reported that 95.9 percent of their commercial shipments came from U.S. inventories with lead times averaging 24 days, 0.4 percent were produced-to-order with lead times averaging 90 days, and none from foreign inventories.

Supplier certification

Eighteen of 20 responding purchasers require that their suppliers become certified or qualified to sell PET resin to their firm. Purchasers reported that the time to qualify a new supplier ranged from 15 days to a year. Qualification requirements varied by firm but included: ability to run on equipment (trial run on equipment), quality (adherence to specifications, lab tests, food safety, performance of packaging produced, regulatory compliance, stability, shelf life, clarity, and taste), customer acceptance, producer's conditions (production system audit, system for ordering, and service), and mechanical and chemical testing.

Thirteen purchasers indicated that no suppliers had failed in its attempt to qualify PET resin. Seven purchasers reported that a domestic or foreign supplier had failed in its attempt to

qualify PET resin or had lost its approved status since 2015. Producers that failed to qualify or lost qualification included DAK, EkoPet (Russia), Nan Ya, Indorama, M&G, and OCTAL (Oman).

Minimum quality specifications

As can be seen from table II-10, 12 of 20 responding purchasers reported that domestically produced product always met minimum quality specifications. Five responding purchasers reported that the Canadian PET resin always met minimum quality specifications, and nine reported Omani PET resin always met minimum quality specifications. Three responding purchasers reported China as always meeting minimum quality specifications, and three also reported that India always met minimum quality specifications.

Table II-10
PET resin: Count of firms' responses regarding suppliers' ability to meet minimum quality specifications, by source

Count in number of firms reporting

Source of purchases	Always	Usually	Sometimes	Rarely or never	Don't Know
United States	12	8	0	0	0
Canada	5	5	0	0	10
China	3	4	0	0	13
India	3	3	1	0	13
Oman	9	3	0	1	7
All other sources	10	5	1	0	2

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Purchasers were asked how often domestically produced or imported PET resin meets minimum quality specifications for their own or their customers' uses.

Purchasers reported factors that determined quality such as intrinsic viscosity (IV), color, acetaldehyde level, injection, blow molding performance, modifiers in the resins to allow variable crystallinity, consistency, bottling line efficiencies, customer satisfaction and feedback, processing in production plants, meeting required food safety and regulatory compliance, pellet size and shape, benzene levels for recycled PET, catalyst used, reheat capabilities, clarity, RPET quality and contamination, and performance in carpet.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2015 (table II-11). Reasons reported for changes in sourcing included general market conditions, price, transition to recycled PET, supply shortages, and increased demand. Eighteen of 20 responding purchasers reported that they had changed suppliers since January 1, 2015. Specifically, firms stated that they dropped or reduced purchases from the United

States because of shortages in supply to meet demand or use of international supply chains from other countries such as Mexico or Egypt. Firms also stated dropping or reducing purchases from Canada due to availability issues and Oman for being uncompetitive in the market. Firms added or increased purchases from the United States because of increased demand. Firms also reported changes because of increased shortages, diversification of supply, or supply issues caused by natural disaster events such as hurricanes.

Table II-11
PET resin: Count of changes in purchase patterns from U.S., subject, and nonsubject countries

Count in number of firms reporting

Source of purchases	Decreased	Increased	Constant	Fluctuated	Did not purchase
United States	2	5	6	6	0
Canada	4	0	1	3	10
China	1	0	0	0	16
India	1	1	0	0	15
Oman	5	4	0	2	7
All other sources	0	12	1	4	2

Source: Compiled from data submitted in response to Commission questionnaires.

Purchase factor comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing PET resin produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 19 factors (table II-12) for which they were asked to rate the importance. For most comparisons of U.S. product with imported product, a majority of responding purchasers indicated that U.S. product and imported product were comparable. However, for delivery by rail and delivery time, a majority of responding purchasers indicated that U.S. product was superior to imports from at least some import sources.

Most purchasers reported that U.S. and nonsubject PET resin were comparable on 10 factors and that the U.S. product was superior in delivery time and U.S. transportation cost.

Table II-12
PET resin: Count of purchasers' responses comparing U.S.-produced and imported product

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Canada	7	7	0
Blend of post-consumer PET resin	U.S. vs Canada	6	5	0
Delivery terms	U.S. vs Canada	5	7	1
Delivery time	U.S. vs Canada	6	7	1
Delivery by rail	U.S. vs Canada	3	10	1
Discounts offered	U.S. vs Canada	1	11	0
Minimum quantity requirements	U.S. vs Canada	1	12	1
Packaging	U.S. vs Canada	1	13	0
Payment terms	U.S. vs Canada	2	11	0
Price	U.S. vs Canada	4	8	1
Product consistency	U.S. vs Canada	1	11	0
Product range	U.S. vs Canada	5	6	2
Production process	U.S. vs Canada	1	12	0
Quality meets industry standards	U.S. vs Canada	2	12	0
Quality exceeds industry standards	U.S. vs Canada	1	13	0
Recycled PET	U.S. vs Canada	5	6	0
Reliability of supply	U.S. vs Canada	4	8	1
Technical support/service	U.S. vs Canada	3	9	1
U.S. transportation costs	U.S. vs Canada	5	7	2

Table continued.

Table II-12 Continued
PET resin: Count of purchasers' responses comparing U.S.-produced and imported product

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs China	3	5	1
Blend of post-consumer PET resin	U.S. vs China	3	4	0
Delivery terms	U.S. vs China	4	3	1
Delivery time	U.S. vs China	8	0	1
Delivery by rail	U.S. vs China	8	0	1
Discounts offered	U.S. vs China	2	6	0
Minimum quantity requirements	U.S. vs China	2	6	1
Packaging	U.S. vs China	3	4	2
Payment terms	U.S. vs China	4	4	0
Price	U.S. vs China	3	3	2
Product consistency	U.S. vs China	3	5	0
Product range	U.S. vs China	2	7	0
Production process	U.S. vs China	1	7	0
Quality meets industry standards	U.S. vs China	1	9	0
Quality exceeds industry standards	U.S. vs China	1	8	0
Recycled PET	U.S. vs China	3	5	0
Reliability of supply	U.S. vs China	4	3	1
Technical support/service	U.S. vs China	6	1	0
U.S. transportation costs	U.S. vs China	6	3	0

Table continued.

Table II-12 Continued
PET resin: Count of purchasers' responses comparing U.S.-produced and imported product

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs India	4	4	0
Blend of post-consumer PET resin	U.S. vs India	3	3	0
Delivery terms	U.S. vs India	4	2	1
Delivery time	U.S. vs India	7	0	1
Delivery by rail	U.S. vs India	7	0	1
Discounts offered	U.S. vs India	2	4	1
Minimum quantity requirements	U.S. vs India	2	4	2
Packaging	U.S. vs India	3	2	3
Payment terms	U.S. vs India	3	3	0
Price	U.S. vs India	3	3	2
Product consistency	U.S. vs India	2	6	0
Product range	U.S. vs India	2	6	0
Production process	U.S. vs India	1	6	0
Quality meets industry standards	U.S. vs India	1	8	0
Quality exceeds industry standards	U.S. vs India	1	6	1
Recycled PET	U.S. vs India	3	3	0
Reliability of supply	U.S. vs India	3	3	0
Technical support/service	U.S. vs India	6	1	1
U.S. transportation costs	U.S. vs India	6	1	1

Table continued.

Table II-12 Continued
PET resin: Count of purchasers' responses comparing U.S.-produced and imported product

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Oman	7	4	1
Blend of post-consumer PET resin	U.S. vs Oman	7	3	1
Delivery terms	U.S. vs Oman	4	7	1
Delivery time	U.S. vs Oman	8	2	3
Delivery by rail	U.S. vs Oman	10	3	1
Discounts offered	U.S. vs Oman	4	8	0
Minimum quantity requirements	U.S. vs Oman	3	10	1
Packaging	U.S. vs Oman	3	9	2
Payment terms	U.S. vs Oman	4	8	0
Price	U.S. vs Oman	3	6	3
Product consistency	U.S. vs Oman	1	13	0
Product range	U.S. vs Oman	4	9	1
Production process	U.S. vs Oman	0	12	0
Quality meets industry standards	U.S. vs Oman	0	14	0
Quality exceeds industry standards	U.S. vs Oman	0	14	0
Recycled PET	U.S. vs Oman	7	2	1
Reliability of supply	U.S. vs Oman	5	8	0
Technical support/service	U.S. vs Oman	8	5	1
U.S. transportation costs	U.S. vs Oman	11	2	1

Table continued.

Table II-12 Continued
PET resin: Count of purchasers' responses comparing U.S.-produced and imported product

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Nonsubject	3	9	3
Blend of post-consumer PET resin	U.S. vs Nonsubject	2	5	5
Delivery terms	U.S. vs Nonsubject	4	8	2
Delivery time	U.S. vs Nonsubject	7	5	3
Delivery by rail	U.S. vs Nonsubject	7	7	2
Discounts offered	U.S. vs Nonsubject	1	12	1
Minimum quantity requirements	U.S. vs Nonsubject	1	13	2
Packaging	U.S. vs Nonsubject	2	12	2
Payment terms	U.S. vs Nonsubject	2	13	0
Price	U.S. vs Nonsubject	2	10	2
Product consistency	U.S. vs Nonsubject	0	16	0
Product range	U.S. vs Nonsubject	2	12	1
Production process	U.S. vs Nonsubject	0	14	0
Quality meets industry standards	U.S. vs Nonsubject	0	16	0
Quality exceeds industry standards	U.S. vs Nonsubject	0	16	0
Recycled PET	U.S. vs Nonsubject	1	6	6
Reliability of supply	U.S. vs Nonsubject	2	8	5
Technical support/service	U.S. vs Nonsubject	4	10	2
U.S. transportation costs	U.S. vs Nonsubject	9	5	2

Source: Compiled from data submitted in response to Commission questionnaires.

Note: A rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Comparison of U.S.-produced and imported PET resin

In order to determine whether U.S.-produced PET resin can generally be used in the same applications as imports from Canada, China, India, and Oman; U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in tables II-13 to II-15, all U.S. producers and a large majority of importers reported that domestic and imported PET resin are always interchangeable. The majority of purchasers reported that PET resin from different countries is always or frequently interchangeable.

Table II-13
PET resin: Count of U.S. producers reporting the interchangeability between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	4	0	0	0
United States vs. China	4	0	0	0
United States vs. India	4	0	0	0
United States vs. Oman	4	0	0	0
Canada vs. China	4	0	0	0
Canada vs. India	4	0	0	0
Canada vs. Oman	4	0	0	0
China vs. India	4	0	0	0
China vs. Oman	4	0	0	0
India vs. Oman	4	0	0	0
United States vs. Other	4	0	0	0
Canada vs. Other	4	0	0	0
China vs. Other	4	0	0	0
India vs. Other	4	0	0	0
Oman vs. Other	4	0	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-14
PET resin: Count of importers reporting the interchangeability between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	9	0	2	0
United States vs. China	6	1	2	0
United States vs. India	6	1	2	0
United States vs. Oman	7	1	2	0
Canada vs. China	5	1	3	0
Canada vs. India	5	1	3	0
Canada vs. Oman	5	1	3	0
China vs. India	6	1	2	0
China vs. Oman	6	1	2	0
India vs. Oman	5	2	2	0
United States vs. Other	8	1	2	0
Canada vs. Other	5	1	2	0
China vs. Other	6	1	2	0
India vs. Other	5	2	2	0
Oman vs. Other	5	2	2	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-15
PET resin: Count of purchasers reporting the interchangeability between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	8	7	1	0
United States vs. China	8	4	3	0
United States vs. India	7	4	3	0
United States vs. Oman	9	6	2	1
Canada vs. China	5	4	2	0
Canada vs. India	4	4	2	0
Canada vs. Oman	6	3	2	0
China vs. India	7	3	1	0
China vs. Oman	8	3	0	1
India vs. Oman	4	6	0	1
United States vs. Other	8	6	3	0
Canada vs. Other	5	1	5	0
China vs. Other	7	2	3	0
India vs. Other	4	4	3	0
Oman vs. Other	5	4	2	1

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of PET resin from the United States, subject, or nonsubject countries. As seen in tables II-16 to II-18, all U.S. producers reported that factors other than price were never or sometimes significant. Most importers reported that factors other than price were never or sometimes significant for all country pairs except for being frequently significant between the United States and Oman (two importers) and Canada and Oman (two importers). Three importers reported that factors other than price are always significant between the United States and nonsubject countries. Most purchasers reported that factors other than price were sometimes significant for all country pairs. Six purchasers reported that factors other than price are always significant between the United States and nonsubject countries.

Table II-16
PET resin: Count of U.S. producers reporting the significance of differences other than price between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	0	0	1	3
United States vs. China	0	0	1	3
United States vs. India	0	0	1	3
United States vs. Oman	0	0	1	3
Canada vs. China	0	0	1	3
Canada vs. India	0	0	1	3
Canada vs. Oman	0	0	1	3
China vs. India	0	0	1	3
China vs. Oman	0	0	1	3
India vs. Oman	0	0	1	3
United States vs. Other	0	0	1	3
Canada vs. Other	0	0	1	3
China vs. Other	0	0	1	3
India vs. Other	0	0	1	3
Oman vs. Other	0	0	1	3

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-17
PET resin: Count of importers reporting the significance of differences between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	1	0	5	4
United States vs. China	1	1	3	4
United States vs. India	1	1	3	4
United States vs. Oman	1	2	3	4
Canada vs. China	1	1	3	4
Canada vs. India	1	1	3	4
Canada vs. Oman	0	2	3	4
China vs. India	0	1	4	3
China vs. Oman	0	1	4	3
India vs. Oman	0	1	4	3
United States vs. Other	3	1	3	5
Canada vs. Other	1	1	3	4
China vs. Other	0	1	4	3
India vs. Other	0	1	4	3
Oman vs. Other	0	1	4	3

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-18
PET resin: Count of purchasers reporting the significance of differences between PET resin produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. Canada	2	0	9	3
United States vs. China	4	1	6	1
United States vs. India	4	1	4	1
United States vs. Oman	2	5	7	2
Canada vs. China	3	0	4	1
Canada vs. India	3	0	3	1
Canada vs. Oman	1	2	4	1
China vs. India	2	0	5	1
China vs. Oman	1	0	6	2
India vs. Oman	1	0	5	2
United States vs. Other	6	1	8	1
Canada vs. Other	3	0	4	1
China vs. Other	1	1	4	1
India vs. Other	1	1	4	1
Oman vs. Other	1	0	5	2

Source: Compiled from data submitted in response to Commission questionnaires.

Elasticity estimates

This section discusses elasticity estimates; parties were encouraged to comment on these estimates. None did so.

U.S. supply elasticity

The domestic supply elasticity for PET resin measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of PET resin. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced PET resin. Analysis of these factors earlier indicates that the U.S. industry has somewhat limited ability to increase or decrease shipments to the U.S. market; an estimate in the range of 1 to 3 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for PET resin measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of PET resin. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the PET resin in the production of any downstream products. Based on the available information, the aggregate demand for PET resin is likely to be inelastic; a range of -0.25 to -0.75 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[17] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available data and inputs provided by producer, importers, and purchaser questionnaires, staff believes that there is a high degree of substitutability between domestically produced PET resin and PET resin

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[17] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

imported from subject sources. Based on this analysis, the elasticity of substitution between U.S.-produced PET resin and imported PET resin is likely to be in the range of 4 to 7.

Part III: Condition of the U.S. industry

Overview

The information in this section of the report was compiled from responses to the Commission's questionnaires and certain information from the Commission's 2018 final investigations. Four firms, which accounted for all U.S. production of PET resin during 2020, supplied information on their operations in these reviews. Staff also incorporated certain information M&G provided in the Commission's 2018 final investigations to cover the period prior to APG's 2018 acquisition of M&G.

Table III-1 presents developments in the industry since the imposition of the orders. Since imposition of the orders, U.S. producers experienced several force majeures and raw material shortages due to weather events as well as acquisitions. In July 2016, Alpek, parent of U.S. producer DAK, acquired controlling interest in Canadian producer Selenis.[1] In March 2018, following M&G's declaration of bankruptcy and subsequent bankruptcy proceedings, Far Eastern acquired M&G's West Virginia facility, which was renamed APG.

M&G's unfinished Corpus Christi PET resin facility was also acquired during the bankruptcy proceedings, by a joint venture comprised of Alpek, Indorama Ventures (parent of U.S. producer Indorama), and Far Eastern.[2] In April 2021, it was announced that construction of the Corpus Christi facility may resume in 2022 with PET resin production projected to begin in early 2024.[3] On January 31, 2022, the legal entity that owns the Corpus Christi facility entered into memoranda of understanding (MOUs) with several contractors to resume construction activities within 90 days. The tri-venture participants also continue to invest in equipment maintenance.[4]

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[1] Selenis, "About Us," accessed January 4, 2022. As mentioned previously, ***. Staff correspondence with ***, February 22, 2022.

[2] Additionally, as part of the bankruptcy process, Indorama Ventures purchased M&G's PET resin facility in Brazil (M&G Polímeros Brasil).

[3] Tri-venture owners confirmed that ***. Domestic producers' posthearing brief, February 7, 2022, exh. 1 at p. 79.

[4] Domestic producers' posthearing brief, February 7, 2022, exh. 1 at pp. 77-79. Domestic producers attributed project delays since 2019 to ***. However, domestic producers reported "renewed optimism" in the project due to improving market conditions. Ibid., exh. 1 at p. 14.

The Corpus Christi facility, planning for which began in 2011 and construction of which began in December 2014, is expected to have a nominal annual production capacity of 1.1 million metric tons and the plant for integrated PTA feedstock is expected to have a nominal annual production capacity of 1.3 million metric tons.[5]

In addition, Alpek signed an agreement to acquire Omani producer OCTAL on February 1, 2022.[6] OCTAL testified that it is planning to open a PET resin facility in Cooper River, South Carolina in 2024, with PET resin production capacity of ***.[7] This new facility is also expected to produce out-of-scope PET sheet. Although Alpek's acquisition of OCTAL is not yet finalized and is subject to regulatory approval, OCTAL asserts that ***.[8]

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[5] Original publication, p. 28 n.156; and Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan, Investigation Nos. 701-TA-1387-1391 (Final), USITC Publication 4835, November 2018, pp. III-3-III-8. The joint venture plans to complete the construction of the Corpus Christi complex, with each of the three partners having independent access to one third of the capacities at the facility. Each of the partners plans to procure raw materials and sell and distribute their PTA and PET resin independently from the facility. Ibid.

[6] Alpek press release, "Alpek signs agreement to acquire OCTAL," February 1, 2022.

[7] Hearing transcript, pp. 150-153 (Barenberg); OCTAL's posthearing brief, p. 31 and attachment, "Sworn Declaration of William J. Barengerg, Jr.," exh. 1; and OCTAL's foreign producer questionnaire response, II-2c.

[8] OCTAL's posthearing brief, Attachment, "Sworn Declaration of William J. Barengerg, Jr.," exh. 1.

Table III-1
PET resin: Important industry events, since January 1, 2015

Item	Firm	Date	Event
Acquisition	DAK	July 2016	Alpek, the parent company of U.S. producer DAK, acquires Selenis Canada, Inc., which is renamed Compagnie Selenis Canada.
Force majeure	DAK	October 8, 2016	Hurricane Matthew hits East Coast of U.S. mainland. U.S. producer DAK declares force majeure at its Fayetteville facility due to the hurricane's impact on rail transportation of raw materials to that facility. Production down for less than one week. During this period DAK supplies PET resin from inventory and other facilities.
Raw materials shortage	M&G	August 25 and September 5, 2017	Hurricane Harvey hits Texas Gulf coast at the end of August. M&G shuts down its Altamira, Mexico PET resin facility due to the inability to purchase raw materials.
Raw materials shortage	Alpek	September 12, 2017	Alpek ceases PET feedstock supply to M&G PET resin plants in Mexico and Brazil.
Closure and layoffs	M&G	September 21, 2017	M&G gives WARN Act notice that it will be ceasing production activities at its West Virginia facility. It also announces that financial difficulties require it to reduce its plant construction activity at Corpus Christi, Construction contractor Fluor releases 274 workers from M&G Corpus Christi project.
Related Proceedings	All	September 26, 2017	Domestic PET resin producers file antidumping duty petitions on U.S. imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan.
Layoffs	M&G	Early October 2017	M&G announces plans to release 100 workers from its M&G Corpus Christi project.
Bankruptcy	M&G	October 24 and 30, 2017	M&G files for bankruptcy; its U.S. PET resin facility in West Virginia shuts down, and construction on Corpus Christi facility ceases; M&G seeks buyer for its unfinished Corpus Christi plant in bankruptcy documents.
Resumption of production	M&G	November 2017	M&G's Altamira, Mexico PET resin facility restarts.

Item	Firm	Date	Event
Financing	Alpek and M&G	January 2018	Alpek, S.A.B. de C.V. ("Alpek") (owner of U.S. PET resin producer DAK) signs agreement to provide secured financing to M&G Polímeros México, S.A. de C.V. ("M&G Mexico") to normalize the PET resin operations in Mexico until the completion of M&G's restructuring process.
Acquisition	Far Eastern	March 2018	Sale of M&G's West Virginia facility to Taiwan PET resin producer Far Eastern New Century Corp. ("FENC" or "Far Eastern") finalized through bankruptcy proceedings. FENC renames the West Virginia facility APG Polytech LLC.
Acquisition	Alpek, Indorama, and Far Eastern ("Corpus Christi Polymers")	March 28, 2018	U.S. bankruptcy court approves sale of M&G's Corpus Christi plant to newly formed joint venture comprised of Alpek (parent of U.S. producer DAK), Indorama Ventures (parent of U.S. producer, Indorama), and Far Eastern (Taiwan PET resin producer). Indorama states that PET production by Corpus Christi Polymers is not likely to begin before 2020 and feedstock PTA lines are expected to follow in 2021.
Resumption of production	Far Eastern/APG Polytech	July 2018	Far Eastern restarts former M&G Apple Grove, West Virginia facility; facility is now known as APG Polytech
Raw input shortage	Alpek	July 15, 2018	Fire at Alpek's PTA plant in Mexico disrupts supply of PTA to PET resin producer DAK.
Related proceedings	All	October 18, 2018	USITC determined that a U.S. industry is not materially injured or threatened with material injury by reason of U.S. imports of PET resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan.
Incorporation	Corpus Christi Polymers	December 24, 2018	Corpus Christi Polymers receives FTC approval, which allows for the resumption of construction at the Corpus Christi site.
Construction cessation	Corpus Christi Polymers	March 19, 2020	Construction at Corpus Christi site suspended

Item	Firm	Date	Event
Force majeure	Lotte, Indorama, and Sasol	August 27 and September 1, 2020	Hurricane Laura makes hits Gulf Coast of the United States at the end of August. Three MEG producers in southwestern Louisiana and southeastern Texas (Lotte, Indorama and Sasol) declared force majeure.
Force majeure	DAK	September 11, 2020	U.S. producer DAK issues a force majeure
Construction announcement	Corpus Christi Polymers	April 21, 2021	Announced that the construction on the Texas PET plant may resume in 2022, which means that production would start up in early 2024
Force majeure	Alpek and DAK	May 4, 2021	Alpek issues a force majeure at its PTA plant in Mexico due to drought conditions, disrupting supply of PTA to PET resin producer DAK.
Force majeure	DAK	August 30, 2021	DAK declares a force majeure at its Bay St. Louis, Mississippi PET resin plant due to Hurricane Ida.
Production expansion	OCTAL	January 27, 2022	OCTAL is in process of establishing a PET resin production facility in the U.S. Production is anticipated to start in 2024.
Acquisition	Alpek	February 1, 2022	Alpek signs an agreement to acquire OCTAL. This includes PET resin production in Salaha Free Zone, Oman (576,000 tons). The purchase is not yet final as it must still be approved by regulatory agencies ***. ***.

Source: Polyethylene Terephthalate Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan Investigation Nos. 701-TA-1387-1391 (Final), USITC Publication 4835, November 2018, pp. III-3-III-4; Selenis, "About Us," accessed January 4, 2022; West Virginia Development Office, "Causes to celebrate: Polymer plant saved by laid-off workers returns to production under new ownership," August 21, 2019; Indorama, "Corpus Christi Joint Venture Receives FTC approval," December 24, 2018; ICIS, "Alpek, partners may resume construction on Texas PET plant in '22," April 21, 2021; Floor Daily, "DAK Americas Issues Force Majeure on PET Resin," May 4, 2021; ICIS, "US DAK force majeure prompts unusual European PET exports, helps alleviate excess stocks," September 11, 2020; ICIS, "Power outages after hurricane lead to FMs on one third of US MEG capacity," September 1, 2020; Paben, "The details on three disruptive developments in virgin market," March 25, 2020; Hays, "Factbox: Post-Ida Damage Assessments Continue at Louisiana Petrochemical Facilities," September 2, 2021; Hearing transcript, pp. 151-153, 175 (Barenberg Jr.), p. 173 (Durling), and p. 173-174 (Maberry); Alpek press release, "Alpek signs agreement to acquire OCTAL," February 1, 2022; and Domestic producers' posthearing brief, February 7, 2022, pp. 79-80.

Changes experienced by the industry

Domestic producers were asked to indicate whether their firm had experienced any plant openings, relocations, expansions, acquisitions, consolidations, closures, or prolonged shutdowns because of strikes or equipment failure; curtailment of production because of shortages of materials or other reasons, including revision of labor agreements; or any other change in the character of their operations or organization relating to the production of PET resin since 2015. All five domestic producers indicated that they had experienced such changes; their responses are presented in table III-2.

Table III-2
PET resin: U.S. producers' reported changes in operations, since January 1, 2015

Item	Firm name and narrative on changes in operations
Plant openings	***
Plant closings	***
Expansions	***
Expansions	***
Acquisitions	***
Acquisitions	***
Acquisitions	***
Prolonged shutdowns or curtailments	***
Prolonged shutdowns or curtailments	***
Prolonged shutdowns or curtailments	***
Prolonged shutdowns or curtailments	***
Revised labor agreements	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

Anticipated changes in operations

The Commission asked domestic producers to report anticipated changes in the character of their operations relating to the production of PET resin. One U.S. producer reported such changes. *** reported that it plans to renovate some equipment to gain efficiencies in production.

U.S. production, capacity, and capacity utilization

Table III-3 presents U.S. producers' production, capacity, and capacity utilization. Domestic U.S. producers' PET resin capacity and production increased overall during 2015-20, by 1.6 percent and 9.6 percent respectively. Capacity was the same in 2015 and 2016, decreased in 2017 and 2018, then increased in 2019 and 2020. Production fluctuated in each year of the period, with year-to-year changes ranging from a decrease of 3.9 percent to an increase of 4.9 percent during 2015-19 and ending with an 8.0 percent increase during 2019-20 (for an overall increase of 9.6 percent between 2015 and 2020). Capacity was the same in January-September 2021 when compared to January-September 2020, while production was 2.2 percent lower during the same period.[9] U.S. producers' capacity utilization was over 80 percent in each period and increased irregularly from 84.7 percent in 2015 to 91.3 percent in 2020.[10]

The decrease in capacity in 2017 and 2018 is due to the shutdown of M&G's Apple Grove facility in October 2017 after declaring bankruptcy. As mentioned previously, in March 2018, M&G was acquired by Taiwan PET resin producer Far Eastern and renamed APG. APG restarted PET resin production in July 2018.[11] The increase in capacity in 2019 and 2020 is due to ***, which reported a capacity expansion due to efficiencies gained from "debottlenecking."

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[9] Domestic producers primarily attributed the overall decline in production in interim 2021 compared to interim 2020 to ***. Domestic producers' posthearing brief, February 7, 2022, exh. 1 at p. 77.

[10] Domestic producers attributed the 7.1 percentage point increase in capacity utilization between 2017 and 2018 to the increased production that resulted from M&G's closure and subsequent supply disruption in the market. Domestic producers also attributed the 6.7 percentage point increase in capacity utilization between 2019 and 2020 to increased demand from the COVID-19 pandemic. Domestic producers' posthearing brief, February 7, 2022, exh. 1 at pp. 2-3; and hearing transcript, p. 47 (Rosenthal).

[11] Domestic interested parties' response to the notice of institution, May 3, 2021, p. 16. Far Eastern New Century Corp., a PET resin producer from Taiwan, acquired the facility in March 2018 and the facility ultimately became APG Polytech, LLC. Ibid.

Table III-3
PET resin: U.S. producers' capacity, by firm and period

Quantity in 1,000 pounds

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	6,606,992	6,606,992	6,500,742

Table continued.

Table III-3 Continued
PET resin: U.S. producers' capacity, by firm and period

Quantity in 1,000 pounds

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	6,299,914	6,712,568	6,715,988	5,033,220	5,033,220

Table continued.

Table III-3 Continued
PET resin: U.S. producers' production, by firm and period

Quantity in 1,000 pounds

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	5,595,057	5,834,288	5,609,181

Table continued.

Table III-3 Continued
PET resin: U.S. producers' production, by firm and period

Quantity in 1,000 pounds

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	5,885,823	5,674,697	6,130,398	4,641,685	4,538,145

Table continued.

Table III-3 Continued
PET resin: U.S. producers' capacity utilization ratio, by firm and period

Ratio in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	84.7	88.3	86.3

Table continued.

Table III-3 Continued
PET resin: U.S. producers' capacity utilization ratio, by firm and period

Ratio in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	93.4	84.5	91.3	92.2	90.2

Note: Capacity utilization ratio represents the ratio of the U.S. producer's production to its production capacity
Table continued.

Table III-3 Continued
PET resin: U.S. producers' share of production, by firm and period

Share in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-3 Continued
PET resin: U.S. producers' share of production, by firm and period

Share in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

**Figure III-1
PET resin: U.S. producers' production, capacity, and capacity utilization, by period**
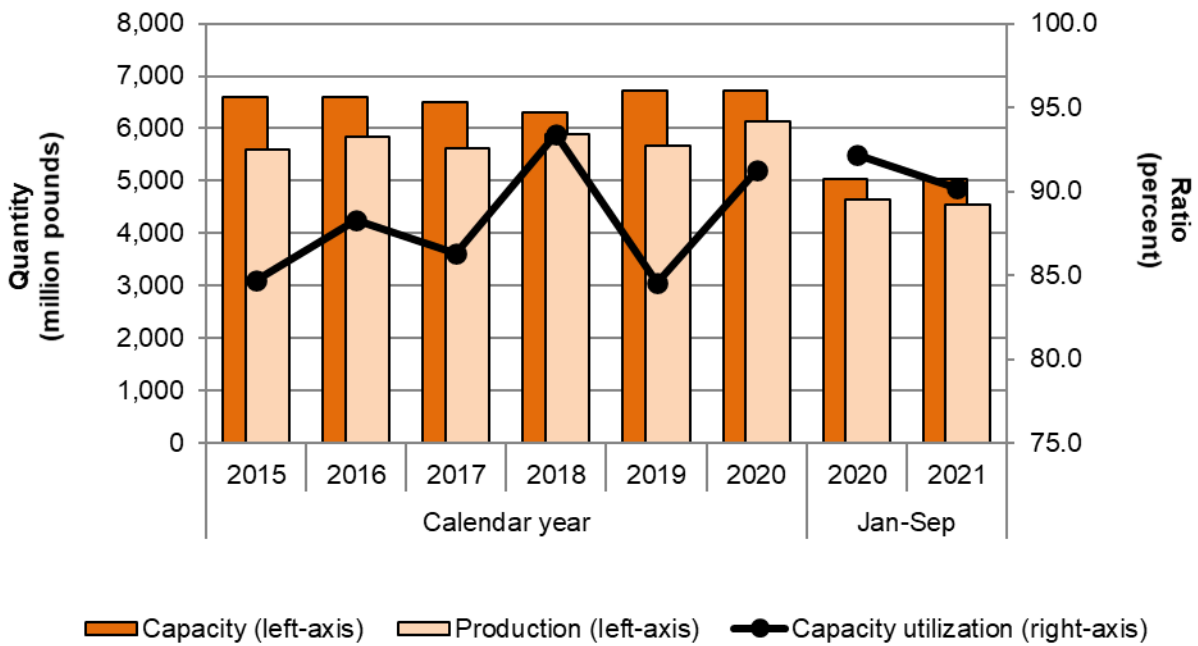
Capacity (left-axis) Production (left-axis) Capacity utilization (right-axis)

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

Alternative products

As shown in table III-4, the vast majority of the product produced by U.S. producers during 2015-20 was PET resin. Two firms *** reported producing alternative products, including film, tray resin, and specialty polymers. In addition, ***.

*** reported that their ability to switch production from PET resin to other products is limited. *** reported that switching production takes time and multiple transitions can result in lower productivity and operating efficiency. *** reported that along with the usual difficulties of transition, the alternative markets are small and already maximized at the current levels.

Table III-4
PET resin: U.S. producers' overall capacity and production on the same equipment as subject production, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2015	2016	2017
Overall capacity	Quantity	***	***	***
PET resin production	Quantity	5,595,057	5,834,288	5,609,181
Other production	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
PET resin production	Share	***	***	***
Other production	Share	***	***	***
Total production	Share	***	***	***

Table continued.

Table III-4 Continued
PET resin: U.S. producers' overall capacity and production on the same equipment as subject production, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Overall capacity	Quantity	***	***	***	***	***
PET resin production	Quantity	5,885,823	5,674,697	6,130,398	4,641,685	4,538,145
Other production	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
PET resin production	Share	***	***	***	***	***
Other production	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

Constraints on capacity

Responding firms reported equipment capacity as a constraint on production.

U.S. producers' U.S. shipments and exports

Table III-5 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. shipments by quantity increased by 13.7 percent between 2015 and 2020, while U.S. shipments by value decreased by 10.0 percent during the same period. U.S. shipments by quantity were 4.7 percent lower in January-September 2021 than in January-September 2020, while U.S. shipments by value were 15.6 percent higher during the same period. Unit values decreased by 20.8 percent from $0.56 per pound in 2015 to $0.44 per pound in 2020.

U.S. producers' U.S. shipments accounted for the vast majority of total shipments (*** percent in 2020). All five firms reported export shipments, with *** accounting for the majority in most periods. Export shipments by quantity and value decreased between 2015 and 2020, by *** percent and *** percent respectively, and were lower in January-September 2021 than in January-September 2020, by *** percent and *** percent respectively.

Table III-5
PET resin: U.S. producers' shipments, by type and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound; shares in percent

Item	Measure	2015	2016	2017
U.S. shipments	Quantity	5,383,028	5,557,251	5,590,397
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	3,021,032	2,726,537	2,888,078
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	0.56	0.49	0.52
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	***	***	***
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	***	***	***

Table continued.

Table III-5 Continued
PET resin: U.S. producers' shipments, by type and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound; shares in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
U.S. shipments	Quantity	5,662,983	5,633,736	6,119,663	4,707,441	4,484,904
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	3,560,526	3,210,890	2,719,902	2,086,718	2,411,595
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	0.63	0.57	0.44	0.44	0.54
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Export shipments	Share of quantity	***	***	***	***	***
Total shipments	Share of quantity	***	***	***	***	***
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

U.S. producers' inventories

Table III-6 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. U.S. producers' inventories of PET resin decreased by *** percent during 2015-20 and were *** percent higher in January-September 2021 than in January-September 2020. The ratio of inventories to production during 2015-20 ranged between *** percent in 2020 and *** percent in 2018, and was higher in January-September 2021 than in January-September 2020. The ratio of inventories to U.S. shipments followed a similar trend, ranging from *** percent in 2020 to *** percent in 2018, and was higher in January-September 2021 than in January-September 2020.

Table III-6
PET resin: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds; inventory ratio in percent

Item	2015	2016	2017
End-of-period inventory quantity	***	***	***
Inventory ratio to U.S. production	***	***	***
Inventory ratio to U.S. shipments	***	***	***
Inventory ratio to total shipments	***	***	***

Table continued.

Table III-6 Continued
PET resin: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds; inventory ratio in percent

Item	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
End-of-period inventory quantity	***	***	***	***	***
Inventory ratio to U.S. production	***	***	***	***	***
Inventory ratio to U.S. shipments	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

U.S. producers' imports and purchases

No U.S. producer imported PET resin from Canada, China, India, or Oman. One U.S. producer is related to a firm that imported PET resin from subject sources.[12] [13] In addition, three U.S. producers imported PET resin from nonsubject sources.[14] Tables III-7 to III-9 present data on individual U.S. producers' U.S. production and U.S imports of PET resin. Table III-10 presents each firm's reason for importing.

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[12] ***. Similarly, ***. *** did not respond to staff's multiple attempts to obtain an importer questionnaire response. In addition, ***. Also, ***. *** producer questionnaire responses, I-5. *See also* staff correspondence with ***, December 16, 2021; ***, December 22, 2021; ***, December 23, 2021; and ***, January 12, 2022.

[13] Alpek acquired a controlling interest in Selenis, the sole Canadian producer, in July 2016. Domestic interested parties' response to the notice of institution, May 3, 2021, p.7 n.4 and exh. 2; and Selenis, "About Us," accessed January 4, 2022. ***. *** producer questionnaire response, II-13.

[14] Regarding foreign affiliates' sales to the United States, domestic producers reported the following. For APG, ***. For DAK, ***. For Indorama, ***. Nan Ya ***. Domestic producers' posthearing brief, February 7, 2022, exh. 1 at p. 70.

In addition, two U.S. producers reported purchases of PET resin during the period of review. *** reported purchasing PET resin from ***, while *** reported purchasing PET resin from ***.[15]

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[15] ***. *** producer questionnaire responses, II-8.

Table III-7
PET resin: ***'s U.S. production, U.S. imports, and ratio of imports to production, by source and period

*   *   *   *   *   *   *

Table III-7 Continued
PET resin: ***'s U.S. production, U.S. imports, and ratio of imports to production, by source and period

*   *   *   *   *   *   *

Table III-8
PET resin: *'s U.S. production, U.S. imports, and ratio of imports to production, by source and period**

<div align="center">*   *   *   *   *   *   *</div>

Table III-8 Continued
PET resin: *'s U.S. production, U.S. imports, and ratio of imports to production, by source and period**

<div align="center">*   *   *   *   *   *   *</div>

Table III-9
PET resin: *'s U.S. production, U.S. imports, and ratio of imports to production, by source and period**

<div align="center">*   *   *   *   *   *   *</div>

Table III-9 Continued
PET resin: *'s U.S. production, U.S. imports, and ratio of imports to production, by source and period**

*   *   *   *   *   *   *

Table III-10
PET resin: U.S. producers' reasons for importing

Item	Narrative response on reason(s) for importation
***'s reason for importing	***
***'s reason for importing	***
***'s reason for importing	***

Source: Compiled from data submitted in response to Commission questionnaires and from information provided in the Commission's 2018 final investigations.

Note: ***. Staff correspondence with ***, December 28, 2021.

Note: ***. Staff correspondence with ***, December 28, 2021.

Note: ***.

U.S. employment, wages, and productivity

Table III-11 shows U.S. producers' employment-related data. The number of production and related workers ("PRWs") increased by 9.6 percent during 2015-20, and was 0.4 percent higher in January-September 2021 than in January-September 2020. Hours worked and wages paid also increased during 2015-20, by 16.4 percent and 13.1 percent respectively. Hours worked were 0.6 percent lower in January-September 2021 than in January-September 2020, while wages paid were 11.3 percent higher.

Hourly wages decreased by 2.9 percent overall between 2015 and 2020, from $37.95 per hour to $36.87 per hour, and were $39.86 in January-September 2021, 12.0 percent higher than in January-September 2020. Productivity also decreased between 2015 and 2020, by 5.9 percent, while unit labor costs increased by 3.2 percent during the same period. Productivity was 1.6 percent lower in January-September 2021 than in January-September 2020, while unit labor costs were 13.9 percent higher.

Table III-11
PET resin: U.S. producers' employment related information, by period

Item	2015	2016	2017
Production and related workers (PRWs) (number)	889	886	931
Total hours worked (1,000 hours)	1,865	1,959	2,054
Hours worked per PRW (hours)	2,098	2,211	2,206
Wages paid ($1,000)	70,785	68,629	66,190
Hourly wages (dollars per hour)	$37.95	$35.03	$32.22
Productivity (pounds per hour)	3,000	2,978	2,731
Unit labor costs (dollars per 1,000 pounds)	$12.65	$11.76	$11.80

Table continued.

Table III-11 Continued
PET resin: U.S. producers' employment related information, by period

Item	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Production and related workers (PRWs) (number)	960	1,002	974	974	978
Total hours worked (1,000 hours)	1,958	2,189	2,171	1,636	1,626
Hours worked per PRW (hours)	2,040	2,185	2,229	1,680	1,663
Wages paid ($1,000)	68,108	79,652	80,042	58,208	64,806
Hourly wages (dollars per hour)	$34.78	$36.39	$36.87	$35.58	$39.86
Productivity (pounds per hour)	3,006	2,592	2,824	2,837	2,791
Unit labor costs (dollars per 1,000 pounds)	$11.57	$14.04	$13.06	$12.54	$14.28

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 investigations (for M&G).

Financial experience of U.S. producers

Background[16]

Four U.S. producers provided usable financial results on their PET resin operations.[17] *** U.S. producers reported financial data for a calendar year basis. *** provided their financial data on the basis of generally accepted accounting principles and *** provided their financial data on the basis of international financial reporting standards.[18] The net sales of PET resin consisted of commercial sales (*** percent) and internal consumption (*** percent) during the reporting period.[19] Accordingly, the tables below present a combined revenue total.

Figure III-2 presents each responding firm's share of the total reported net sales quantity in 2020.

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[16] The following abbreviations may be used in the tables and/or text of this section: net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development expenses ("R&D expenses"), and return on assets ("ROA").

[17] ***. M&G filed for bankruptcy protection on October 17, 2017. *PET resin maker M&G Group files for bankruptcy protection in Italy*, https://www.plasticsnews.com/article/20171024/NEWS/171029955/pet-resin-maker-m-g-group-files-for-bankruptcy-protection-in-italy, retrieved December 14, 2021. ***. To cover the period prior to APG's acquisition of M&G, staff incorporated certain information M&G provided in the Commission's 2018 final investigations. ***. Thus, in total this section of the report includes data for five U.S. producers.

[18] ***.

[19] ***. Email from ***, December 16, 2021.

Figure III-2
PET resin: Share of net sales quantity in 2020, by firm

*   *   *   *   *   *   *

Source: Compiled from data submitted in response to Commission questionnaires.
Note: The data used to calculate the firms' shares of total net sales quantity are located in table III-14.

Operations on PET resin

Table III-12 presents aggregated data on U.S. producers' operations in relation to PET resin, while table III-13 presents corresponding changes in AUVs. Table III-14 presents selected company-specific financial data.

Table III-12
PET resin: Results of operations of U.S. producers, by item and period

Quantity in 1000 pounds; value in 1000 dollars; ratios in percent

Item	Measure	2015	2016	2017
Total net sales	Quantity	5,585,046	5,730,256	5,722,208
Total net sales	Value	3,138,112	2,816,541	2,962,466
MEG costs	Value	***	***	***
PTA costs	Value	***	***	***
Other material input costs	Value	***	***	***
All raw material costs	Value	***	***	***
Direct labor costs	Value	***	***	***
Other factory costs	Value	***	***	***
COGS	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
Other expense / (income), net	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation/amortization	Value	***	***	***
Cash flow	Value	***	***	***
MEG costs	Ratio to NS	***	***	***
PTA costs	Ratio to NS	***	***	***
Other material input costs	Ratio to NS	***	***	***
All raw material costs	Ratio to NS	***	***	***
Direct labor costs	Ratio to NS	***	***	***
Other factory costs	Ratio to NS	***	***	***
COGS	Ratio to NS	***	***	***
Gross profit	Ratio to NS	***	***	***
SG&A expense	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***

Table continued on next page.

Table III-12 Continued
PET resin: Results of operations of U.S. producers, by item and period

Quantity in 1000 pounds; value in 1000 dollars; ratios in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Total net sales	Quantity	5,740,186	5,708,365	6,238,551	4,802,781	4,535,509
Total net sales	Value	3,609,506	3,252,475	2,769,332	2,126,084	2,439,618
MEG costs	Value	***	***	***	***	***
PTA costs	Value	***	***	***	***	***
Other material input costs	Value	***	***	***	***	***
All raw material costs	Value	***	***	***	***	***
Direct labor costs	Value	***	***	***	***	***
Other factory costs	Value	***	***	***	***	***
COGS	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Other expense/(income), net	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
MEG costs	Ratio to NS	***	***	***	***	***
PTA costs	Ratio to NS	***	***	***	***	***
Other material input costs	Ratio to NS	***	***	***	***	***
All raw material costs	Ratio to NS	***	***	***	***	***
Direct labor costs	Ratio to NS	***	***	***	***	***
Other factory costs	Ratio to NS	***	***	***	***	***
COGS	Ratio to NS	***	***	***	***	***
Gross profit	Ratio to NS	***	***	***	***	***
SG&A expense	Ratio to NS	***	***	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***	***	***
Net income or (loss)	Ratio to NS	***	***	***	***	***

Table continued on next page.

Table III-12 Continued
PET resin: Results of operations of U.S. producers, by item and period

Shares in percent; unit values in in dollars per pound; count in number of firms reporting

Item	Measure	2015	2016	2017
MEG costs	Share	***	***	***
PTA costs	Share	***	***	***
Other material input costs	Share	***	***	***
All raw material costs	Share	***	***	***
Direct labor costs	Share	***	***	***
Other factory costs	Share	***	***	***
COGS	Share	***	***	***
Total net sales	Unit value	0.56	0.49	0.52
MEG costs	Unit value	***	***	***
PTA costs	Unit value	***	***	***
Other material input costs	Unit value	***	***	***
All raw material costs	Unit value	***	***	***
Direct labor costs	Unit value	***	***	***
Other factory costs	Unit value	***	***	***
COGS	Unit value	***	***	***
Gross profit or (loss)	Unit value	***	***	***
SG&A expenses	Unit value	***	***	***
Operating income or (loss)	Unit value	***	***	***
Net income or (loss)	Unit value	***	***	***
Operating losses	Count	***	***	***
Net losses	Count	***	***	***
Data	Count	***	***	***

Table continued on next page.

Table III-12 Continued
PET resin: Results of operations of U.S. producers, by item and period

Shares in percent; unit values in in dollars per pound; count in number of firms reporting

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
MEG costs	Share	***	***	***	***	***
PTA costs	Share	***	***	***	***	***
Other material input costs	Share	***	***	***	***	***
All raw material costs	Share	***	***	***	***	***
Direct labor costs	Share	***	***	***	***	***
Other factory costs	Share	***	***	***	***	***
COGS	Share	***	***	***	***	***
Total net sales	Unit value	0.63	0.57	0.44	0.44	0.54
MEG costs	Unit value	***	***	***	***	***
PTA costs	Unit value	***	***	***	***	***
Other material input costs	Unit value	***	***	***	***	***
All raw material costs	Unit value	***	***	***	***	***
Direct labor costs	Unit value	***	***	***	***	***
Other factory costs	Unit value	***	***	***	***	***
COGS	Unit value	***	***	***	***	***
Gross profit or (loss)	Unit value	***	***	***	***	***
SG&A expenses	Unit value	***	***	***	***	***
Operating income or (loss)	Unit value	***	***	***	***	***
Net income or (loss)	Unit value	***	***	***	***	***
Operating losses	Count	***	***	***	***	***
Net losses	Count	***	***	***	***	***
Data	Count	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).
Note: Shares represent the share of COGS. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Table III-13
PET resin: Changes in AUVs between comparison periods

Changes in percent

Item	2015-20	2015-16	2016-17	2017-18	2018-19	2019-20	Jan-Sep 2020-21
Total net sales	▼(21.0)	▼(12.5)	▲5.3	▲21.5	▼(9.4)	▼(22.1)	▲21.5
MEG costs	***	***	***	***	***	***	***
PTA costs	***	***	***	***	***	***	***
Other material input costs	***	***	***	***	***	***	***
All raw material costs	***	***	***	***	***	***	***
Direct labor costs	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***
COGS	***	***	***	***	***	***	***

Table continued.

Table III-13 Continued
PET resin: Changes in AUVs between comparison periods

Changes in in dollars per pound

Item	2015-20	2015-16	2016-17	2017-18	2018-19	2019-20	Jan-Sep 2020-21
Total net sales	▼(0.12)	▼(0.07)	▲0.03	▲0.11	▼(0.06)	▼(0.13)	▲0.10
MEG costs	***	***	***	***	***	***	***
PTA costs	***	***	***	***	***	***	***
Other material input costs	***	***	***	***	***	***	***
All raw material costs	***	***	***	***	***	***	***
Direct labor costs	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***
COGS	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***
SG&A expense	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).
Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Table III-14
PET resin: Firm-by-firm total net sales quantity, by period

Net sales quantity

Quantity in 1000 pounds

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	5,585,046	5,730,256	5,722,208

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm total net sales quantity, by period

Net sales quantity

Quantity in 1000 pounds

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	5,740,186	5,708,365	6,238,551	4,802,781	4,535,509

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm total net sales value, by period

Net sales value

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	3,138,112	2,816,541	2,962,466

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm total net sales value, by period

Net sales value

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	3,609,506	3,252,475	2,769,332	2,126,084	2,439,618

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm cost of goods sold ("COGS"), by period

COGS

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm cost of goods sold ("COGS"), by period

COGS

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm gross profit or (loss), by period

Gross profit or (loss)

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm gross profit or (loss), by period

Gross profit or (loss)

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm selling, general, and administrative ("SG&A") expenses, by period

SG&A expenses

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm selling, general, and administrative ("SG&A") expenses, by period

SG&A expenses

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm operating income or (loss), by period

Operating income or (loss)

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm operating income or (loss), by period

Operating income or (loss)

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm net income or (loss), by period

Net income or (loss)

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm net income or (loss), by period

Net income or (loss)

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of COGS to net sales value, by period

COGS to net sales ratio

Ratios in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of COGS to net sales value, by period

COGS to net sales ratio

Ratios in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of gross profit or (loss) to net sales value, by period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of gross profit or (loss) to net sales value, by period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of SG&A expenses to net sales value, by period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of SG&A expenses to net sales value, by period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of operating income or (loss) to net sales value, by period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of operating income or (loss) to net sales value, by period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of net income or (loss) to net sales value, by period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm ratio of net income or (loss) to net sales value, by period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit net sales value, by period

Unit net sales value

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	0.56	0.49	0.52

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit net sales value, by period

Unit net sales value

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	0.63	0.57	0.44	0.44	0.54

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit MEG costs, by period

Unit MEG

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit MEG costs, by period

Unit MEG

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit PTA costs, by period

Unit PTA

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit PTA costs, by period

Unit PTA

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit other raw material costs, by period

Unit other raw material

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit other raw material costs, by period

Unit other raw material

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit total raw material costs, by period

Unit total raw material

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit total raw material costs, by period

Unit total raw material

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit direct labor cost, by period

Unit direct labor

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit direct labor cost, by period

Unit direct labor

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit other factory costs, by period

Unit other factory costs

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit other factory costs, by period

Unit other factory costs

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit COGS, by period

Unit COGS

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit COGS, by period

Unit COGS

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit gross profit or (loss), by period

Unit gross profit or (loss)

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit gross profit or (loss), by period

Unit gross profit or (loss)

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit SG&A expenses, by period

Unit SG&A expenses

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit SG&A expenses, by period

Unit SG&A expenses

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit operating income or (loss), by period

Unit operating income or (loss)

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit operating income or (loss), by period

Unit operating income or (loss)

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit net income or (loss), by period

Unit net income or (loss)

Unit values in in dollars per pound

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-14 Continued
PET resin: Firm-by-firm unit net income or (loss), by period

Unit net income or (loss)

Unit values in in dollars per pound

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).
Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Net sales

As seen in table III-12, total net sales quantity increased irregularly by 11.7 percent from $5.6 billion in 2015 to $6.2 billion in 2020 and was lower by 5.6 percent in January-September 2021 ($4.5 billion) than in January-September 2020 ($4.8 billion). Total net sales value increased irregularly from $3.1 billion in 2015 to a period high of $3.6 billion in 2018 then decreased to $2.8 billion in 2020 (for an overall decrease of 11.8 percent between 2015 and 2020), and was higher by 14.7 percent in January-September 2021 ($2.4 billion) than in January-September 2020 ($2.1 billion). On a company-by-company basis, ***.[20] *** reported a higher net sales quantity while *** reported a lower net sales quantity in January-September 2021 than in January-September 2020. *** reported similar directional trends in net sales value (an overall increase from 2015 to 2018 and a decrease from 2018 to 2020). In net sales value, ***. *** reported a higher net sales value in January-September 2021 than in January-September 2020.

On a per-unit basis, the net sales value irregularly increased from 2015 to 2018 and declined from 2018 to 2020 (for an overall decrease of 21.0 percent between 2015 and 2020). The net sales value was higher by 21.5 percent in January-September 2021 than in January-September 2020. On a company-specific basis, *** reported an overall increase in their net sales AUVs from 2015 to 2018 and an overall decline in their net sales AUVs from 2018 to 2020. All firms except *** reported a higher net sales AUV in January-September 2021 than in January-September 2020.[21]

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[20] ***.

[21] ***. Email from ***, December 16, 2021. ***. Email from ***, December 20, 2021.

Cost of goods sold and gross profit or loss

Raw materials

Total raw material cost is the largest component of cost of goods sold ("COGS"), ranging from *** percent (January-September 2020) of total COGS to *** percent (2018) during the reporting period. Both in total value and on a per-unit basis, raw material costs irregularly increased from 2015 to 2018 and declined from 2018 to 2020 (for an overall decrease of *** percent and *** percent from 2015 to 2020, respectively). Raw material costs in both total value and on a per-unit basis were higher in January-September 2021 than in January-September 2020. However, as a ratio to net sales, raw materials declined irregularly from *** percent in 2015 to *** percent in 2020 and were lower in January-September 2021 than in January-September 2020. On a company-specific basis, *** reported an overall increase from 2015 and 2018 and a decline from 2018 to 2020 in per unit raw materials. *** reported higher per unit raw material costs in January-September 2021 than in January-September 2020. Raw material costs include MEG, PTA, and various other raw materials such as ***.[22] All firms except *** reported that some raw materials are purchased from related sources.[23]

Table III-15 presents shares of total raw materials costs by recycled and virgin content in 2020 and table III-16 present the firms' narrative explanations of the recycled and virgin content changes over the reporting period and the impact to PET resin production. As seen from the data, ***.

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[22] During the reporting period, MEG, PTA, and other raw materials accounted for ***, respectively, of total raw material costs. On a per-unit basis, MEG and PTA exhibited the same trend with total raw material cost during the reporting period. Per-unit other raw material costs remained the same throughout the reporting period.

[23] ***. U.S. producers' questionnaire response of ***, sections III-6, III-7, and III-10a.

Table III-15
PET resin: Recycled/virgin raw material costs in 2020

Value in 1000 dollars; Unit values in in dollars per pound; Share of value in percent

Item	Value	Unit value	Share of value
Recycled content	***	***	***
Virgin content	***	***	***
All raw materials	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-16
PET resin: Narrative on recycled/virgin content changes and impact

Firm	Narrative
APG	***
DAK	***
Indorama	***
M&G	***
Nan Ya	***

Source: Compiled from data submitted in response to Commission questionnaires.

Direct labor and other factory costs

Direct labor, the smallest component of COGS in each period, accounted for between *** percent (2018) and *** percent (2020 and January-September 2021) of total COGS. The total direct labor costs fluctuated, but increased overall from 2015 to 2020 and were higher in January-September 2021 than in January-September 2020. The direct labor cost per unit moved within a relatively narrow range during the reporting period.

Other factory costs were generally the second largest component of COGS and accounted for between *** percent (2018) and *** percent (January-September 2020) of total COGS during the period for which data were collected. The total other factory costs fluctuated, but increased overall from 2015 to 2020 and were lower in January-September 2021 than in January-September 2020. On a per unit basis, other factory costs moved in a relatively narrow range during the reporting period.[24]

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[24] ***. U.S. producers' questionnaire response of ***, section III-12. ***. U.S. producers' questionnaire response of ***, section III-12 and email from ***, December 22, 2021.

COGS and gross profit or loss

Total COGS increased irregularly from $*** in 2015 to $*** in 2018, and then decreased from 2018 to $*** in 2020 (for an overall decrease of *** percent between 2015 and 2020). The total COGS was higher in January-September 2021 than in January-September 2020. The average COGS to net sales ratio fluctuated but declined overall from *** percent in 2015 to *** percent in 2020. This ratio was lower in January-September 2021 than in January-September 2020.

Between 2015 and 2018, the increase in total net sales value was greater than the increase in COGS, and resulted in the industry experiencing an increase in gross profit from $*** in 2015 to a period high of $*** in 2018. Gross profit decreased to $*** in 2020 because the decline in net sales value from 2018 to 2020 exceeded the corresponding decline in COGS, thus the industry's gross profit declined from 2018 to 2020. The gross profit was higher in January-September 2021 than in January-September 2020. The industry's gross profit margin (gross profit as a ratio to net sales) increased irregularly from *** percent in 2015 to *** percent in 2020, and was higher in January-September 2021 (*** percent) than in January-September 2020 (*** percent).[25]

SG&A expenses and operating income or loss

The U.S. industry's total selling, general, and administrative ("SG&A") expenses increased irregularly from 2015 to 2018, and then decreased irregularly from 2018 to 2020 (for an overall decrease of *** percent between 2015 and 2020). The total SG&A expenses were lower in January-September 2021 than in January-September 2020. The SG&A expense ratio (total SG&A expenses divided by total sales value) moved within a relatively narrow range during the reporting period. U.S. producers reported mixed directional trends as shown in table III-14.[26]

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[25] ***. Domestic producers' posthearing brief, p. 14.
[26] ***. U.S. producers' questionnaire response of ***, section III-12 and email from ***, December 22, 2021.

Operating income increased irregularly from $*** in 2015 to $*** in 2018 and $*** in 2019 (the period high) then declined to $*** in 2020. It was higher in January-September 2021 ($***) than in January-September 2020 ($***). As seen from the data in table III-14, ***. The operating income margin (operating income as a ratio to net sales) increased irregularly from *** percent in 2015 to *** percent in 2020, and was higher in January-September 2021 (*** percent) than in January-September 2020 (*** percent). U.S. producers reported mixed directional trends in terms of operating income margin, as shown in table III-14. *** reported their highest operating income margin in interim 2021.[27]

All other expenses and net income or loss

Classified below the operating income level are interest expense, other expense, and other income, which are often allocated to the product line from high levels in the corporation. In table III-12, these items are aggregated and only the net amount is shown. The industry' net amount of all other expenses fluctuated throughout the period for which data were collected, but decreased overall from $*** in 2015 to $*** in 2020 and was lower in January-September 2021 (***) than in January-September 2020 (other expense of $***), with a noticeable period high of $*** in 2017, and a period low of a negative $*** in 2018.[28] The vast majority of the increase in 2017 and the decline in 2018 in the net amount of all other expenses was due to nonrecurring items reported by ***. ***

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[27] ***. U.S. producers' questionnaire response of ***, question III-17.
[28] A negative value in all other expenses has a positive effect on net income, similar to an income item.

***.[29] ***.[30]

Net income fluctuated throughout the period for which data were collected, but increased overall from a loss of $*** in 2015 to $*** in 2020 and was higher in January-September 2021 than in January-September 2020, with a period low net loss of $*** in 2017 and a period high of $*** in 2018. Due to the large spike in all other expenses in 2017, net income recorded its largest losses of the period in 2017.

Variance analysis

A variance analysis for the operations of U.S. producers of PET resin is presented in table III-17.[31] The information for this variance analysis is derived from table III-12. The analysis shows that the increase in operating income from 2015 to 2020 is primarily attributable to ***. Between the comparable interim periods, the higher operating income in January-September 2021 was primarily attributable to ***

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[29] ***. Email from ***, December 21, 2021.

[30] ***. U.S. producers' questionnaire response of ***, question III-12. At the request of staff, ***. U.S. producers' questionnaire response of ***, questions III-9a and III-12.

[31] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A expense variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

***.

Table III-17
PET resin: Variance analysis on the operations of U.S. producers between comparison periods

Value in 1000 dollars

Item	2015-20	2015-16	2016-17	2017-18	2018-19	2019-20	Jan-Sep 2020-21
Net sales price variance	(735,970)	(403,161)	149,881	637,733	(337,022)	(785,229)	431,849
Net sales volume variance	367,190	81,590	(3,956)	9,307	(20,009)	302,086	(118,315)
Net sales total variance	(368,780)	(321,571)	145,925	647,040	(357,031)	(483,143)	313,534
COGS cost variance	***	***	***	***	***	***	***
COGS volume variance	***	***	***	***	***	***	***
COGS total variance	***	***	***	***	***	***	***
Gross profit variance	***	***	***	***	***	***	***
SG&A cost variance	***	***	***	***	***	***	***
SG&A volume variance	***	***	***	***	***	***	***
SG&A total variance	***	***	***	***	***	***	***
Operating income price variance	***	***	***	***	***	***	***
Operating income cost variance	***	***	***	***	***	***	***
Operating income volume variance	***	***	***	***	***	***	***
Operating income total variance	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Capital expenditures and research and development expenses

Table III-18 presents capital expenditures, by firm, and table III-20 presents R&D expenses, by firm. Tables III-19 and III-21 present the firms' narrative explanations of the nature, focus, and significance of their capital expenditures and R&D expenses, respectively.

Table III-18
PET resin: U.S. producers' capital expenditures, by firm and period

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-18 Continued
PET resin: U.S. producers' capital expenditures, by firm and period

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).
.

Table III-19
PET resin: Narrative descriptions of U.S. producers' capital expenditures, by firm

Firm	Narrative on capital expenditures
APG	***
DAK	***
Indorama	***
M&G	***
Nan Ya	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Table III-20
PET resin: U.S. producers' R&D expenses, by firm and period

Value in 1000 dollars

Firm	2015	2016	2017
APG	***	***	***
DAK	***	***	***
Indorama	***	***	***
M&G	***	***	***
Nan Ya	***	***	***
All firms	***	***	***

Table continued.

Table III-20 Continued
PET resin: U.S. producers' R&D expenses, by firm and period

Value in 1000 dollars

Firm	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
APG	***	***	***	***	***
DAK	***	***	***	***	***
Indorama	***	***	***	***	***
M&G	***	***	***	***	***
Nan Ya	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Table III-21
PET resin: Narrative descriptions of U.S. producers R&D expenses, by firm

Firm	Narrative on R&D expenses
APG	***
DAK	***
Indorama	***
M&G	***
Nan Ya	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Assets and return on assets

Table III-22 presents data on the U.S. producers' total net assets, while table III-23 presents their operating ROA.[32] Table IIII-24 presents U.S. producers' narrative responses explaining their major asset categories and any significant changes in asset levels over time.

Table III-22
PET resin: U.S. producers' total net assets, by firm and period

Value in 1000 dollars

Firm	2015	2016	2017	2018	2019	2020
APG	***	***	***	***	***	***
DAK	***	***	***	***	***	***
Indorama	***	***	***	***	***	***
M&G	***	***	***	***	***	***
Nan Ya	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Table III-23
PET resin: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2015	2016	2017	2018	2019	2020
APG	***	***	***	***	***	***
DAK	***	***	***	***	***	***
Indorama	***	***	***	***	***	***
M&G	***	***	***	***	***	***
Nan Ya	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

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[32] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value for PET resin.

Table III-24
PET resin: Narrative descriptions of U.S. producers' total net assets, by firm

Firm	Narrative on assets
APG	***
DAK	***
Indorama	***
M&G	***
Nan Ya	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Part IV: U.S. imports and the foreign industries

U.S. imports

Overview

The Commission issued questionnaires to 50 potential importers of PET resin between 2015 and September 2021.[1] Eighteen firms provided data and information in response to the questionnaires, while 12 firms certified that they did not import PET resin from any source since January 1, 2015.[2] [3] Staff also incorporated certain information M&G provided in the Commission's 2018 final investigations. These firms are estimated to account for the majority of U.S. imports of PET resin from Canada, China, India, Oman, and all other sources during January 2015-September 2021.

Because HTS statistical reporting numbers 3907.60.0030, 3907.60.0070, 3907.61.0000, and 3907.69.0000 include items that are outside the scope of these reviews (e.g., PET resin with an IV of less than 0.70 deciliters per gram or more than 0.88 deciliters per gram and PET resin that contains more than 50 percent recycled product by weight), U.S. import data presented in this report are based on questionnaires responses and information provided in the 2018 final investigations, unless otherwise indicated.

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[1] The Commission issued questionnaires to those firms identified in responses to the notice of institution, along with firms that, based on a review of data from third-party sources, may have imported more than one percent of total imports under HTS statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.69.0000, 3907.61.0010, and 3907.69.0010 in any year since 2015.

[2] In addition, ***, a U.S. importer of PET resin from ***, did not submit a questionnaire response in these reviews. Staff has made multiple attempts to obtain *** questionnaire response. Based on information it provided in the Commission's 2018 final investigations, *** accounted for *** percent of total reported U.S imports of PET resin in 2017.

[3] Firms that certified they did not import PET resin from any source since January 1, 2015 include: ***.

Imports from subject and nonsubject countries

Table IV-1 and figure IV-1 present information on U.S. imports of PET resin from Canada, China, India, Oman, and all other sources over the period examined. The quantity of imports of PET resin from subject sources fluctuated during 2015-20, and declined overall by *** percent. However, subject imports were nearly *** higher in January-September 2021, the highest volume reported in any period, than in January-September 2020. Subject import trends are driven primarily by imports from Oman.[4] There were no imports from China and India in most periods, while imports from Canada continued to enter in each period. During January 2015-September 2021, the largest importers of PET resin from subject sources were ***.

Subject imports as a share of total imports decreased by *** percentage points between 2015 and 2020, from *** percent to *** percent, and were *** percentage points higher in interim 2021 than in interim 2020 (*** percent compared to *** percent). Subject average unit values ("AUVs") in dollars per pound fluctuated and decreased overall by *** percent between 2015 and 2020, from *** to ***, but were *** percent higher in January-September 2021 than in January-September 2020 (*** compared to ***).

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[4] ***. Staff correspondence with ***, January 3, 2022.

Nonsubject imports more than doubled from 2015-16, then decreased in each year from 2017-20, increasing overall by *** percent, and were *** percent higher in January-September 2021 than in January-September 2020. Nonsubject AUVs in dollars per pound, similar to subject AUVs, decreased by *** percent between 2015 and 2020, from *** to ***, but were *** percent higher in January-September 2021 than in January-September 2020 (*** compared to ***).[5] During January 2015-September 2021, the largest importers of PET resin from nonsubject sources were ***, accounting for *** percent and *** percent of nonsubject imports respectively, followed by ***, accounting for *** percent, *** percent, and *** percent respectively. Responding firms reported importing PET resin from many nonsubject countries, including Argentina, Belgium, Brazil, Egypt, Germany, Indonesia, Lithuania, Malaysia, Mexico, Netherlands, Pakistan, Portugal, Russia, South Africa, South Korea, Spain, Taiwan, Thailand, Turkey, the United Arab Emirates, United Kingdom, and Vietnam.

Eleven of 18 importers reported being impacted by the COVID-19 pandemic. Since January 1, 2020, transportation challenges, such as increased lead times, increased shipping costs, and limited container availability, have disrupted importers' supply chain arrangements and affected PET resin and raw material availability.

The ratio of subject imports to U.S. production decreased by *** percentage points from *** percent in 2015 to *** percent in 2020, and was *** percentage points higher in interim 2021 than in interim 2020 (*** percent compared to *** percent).

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[5] Regarding AUV trends, U.S. importer *** states that the volatility in PET resin pricing, which it attributes to the volatility in raw material pricing, is a normal feature of the PET resin market. Staff correspondence with ***, January 3, 2022. *** and *** attributed the higher AUVs, particularly between 2015 and 2018, to higher raw material prices as well as the effects of the other trade case on PET resin from other countries. *** also attributed the lower AUVs during the latter part of the period to increased PET resin imports from countries subject to the other trade case following the Commission's negative determinations and subsequent removal of preliminary antidumping duties in late 2018. Staff correspondence with *** and ***, December 28, 2021.

Table IV-1
PET resin: U.S. imports, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound

Source	Measure	2015	2016	2017
Canada	Quantity	***	***	***
China	Quantity	***	***	***
India	Quantity	***	***	***
Oman	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	948,108	1,482,728	1,418,842
Canada	Value	***	***	***
China	Value	***	***	***
India	Value	***	***	***
Oman	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	499,566	707,986	746,626
Canada	Unit value	***	***	***
China	Unit value	***	***	***
India	Unit value	***	***	***
Oman	Unit value	***	***	***
Subject sources	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	0.53	0.48	0.53

Table continued.

Table IV-1 Continued
PET resin: U.S. imports, by source and period

Quantity in 1,000 pounds; value in 1,000 dollars; unit value in dollars per pound

Source	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Canada	Quantity	***	***	***	***	***
China	Quantity	***	***	***	***	***
India	Quantity	***	***	***	***	***
Oman	Quantity	***	***	***	***	***
Subject sources	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	1,423,620	1,234,608	1,179,859	779,076	1,181,385
Canada	Value	***	***	***	***	***
China	Value	***	***	***	***	***
India	Value	***	***	***	***	***
Oman	Value	***	***	***	***	***
Subject sources	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	888,779	653,573	460,007	304,185	646,234
Canada	Unit value	***	***	***	***	***
China	Unit value	***	***	***	***	***
India	Unit value	***	***	***	***	***
Oman	Unit value	***	***	***	***	***
Subject sources	Unit value	***	***	***	***	***
Nonsubject sources	Unit value	***	***	***	***	***
All import sources	Unit value	0.62	0.53	0.39	0.39	0.55

Table continued.

Table IV-1 Continued
PET resin: U.S. imports, by source and period

Share and ratio in percent

Source	Measure	2015	2016	2017
Canada	Share of quantity	***	***	***
China	Share of quantity	***	***	***
India	Share of quantity	***	***	***
Oman	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	***	***	***
Canada	Share of value	***	***	***
China	Share of value	***	***	***
India	Share of value	***	***	***
Oman	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	***	***	***
Canada	Ratio	***	***	***
China	Ratio	***	***	***
India	Ratio	***	***	***
Oman	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	16.9	25.4	25.3

Table continued on next page.

Table IV-1 Continued
PET resin: U.S. imports, by source and period

Share and ratio in percent

Source	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Canada	Share of quantity	***	***	***	***	***
China	Share of quantity	***	***	***	***	***
India	Share of quantity	***	***	***	***	***
Oman	Share of quantity	***	***	***	***	***
Subject sources	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	***	***	***	***	***
Canada	Share of value	***	***	***	***	***
China	Share of value	***	***	***	***	***
India	Share of value	***	***	***	***	***
Oman	Share of value	***	***	***	***	***
Subject sources	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
All import sources	Share of value	***	***	***	***	***
Canada	Ratio	***	***	***	***	***
China	Ratio	***	***	***	***	***
India	Ratio	***	***	***	***	***
Oman	Ratio	***	***	***	***	***
Subject sources	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	24.2	21.8	19.2	16.8	26.0

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Note: Ratios represent the ratio to U.S. production

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Figure IV-1
PET resin: U.S. import quantities and average unit values, by source and period

<p style="text-align:center">*   *   *   *   *   *   *</p>

Cumulation considerations

In assessing whether U.S. imports from the subject countries are likely to compete with each other and with the domestic like product, the Commission has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Geographical markets

PET resin produced in the United States is shipped nationwide (see Part II for more information on geographic markets). Table IV-2 presents U.S. imports of PET resin, by source and border of entry in 2020, based on official Commerce statistics. U.S. imports of PET resin from Canada, China, India, and Oman entered multiple U.S. ports of entry across the nation. U.S. imports from Canada entered all but the southern border of entry. Imports from China and India only entered through the eastern border of entry, while imports from Oman entered through all borders of entry. The majority of, if not all, imports of PET resin from each subject country entered through the eastern border of entry.

Table IV-2
PET resin: U.S. imports by source and border of entry, 2020

Quantity in 1,000 pounds

Source	East	North	South	West	All borders
Canada	69,801	20,585	---	1,023	91,408
China	2	---	---	---	2
India	216	---	---	---	216
Oman	46,860	2,051	4,514	2,741	56,166
Subject sources	116,879	22,636	4,514	3,763	147,792
Nonsubject sources	334,039	40,994	737,718	471,953	1,584,704
All import sources	450,918	63,630	742,232	475,716	1,732,496

Table continued.

Table IV-2 Continued
PET resin: U.S. imports by source and border of entry, 2020

Share across in percent

Source	East	North	South	West	All borders
Canada	76.4	22.5	---	1.1	100.0
China	100.0	---	---	---	100.0
India	100.0	---	---	---	100.0
Oman	83.4	3.7	8.0	4.9	100.0
Subject sources	79.1	15.3	3.1	2.5	100.0
Nonsubject sources	21.1	2.6	46.6	29.8	100.0
All import sources	26.0	3.7	42.8	27.5	100.0

Table continued.

Table IV-2 Continued
PET resin: U.S. imports by source and border of entry, 2020

Share down in percent

Source	East	North	South	West	All borders
Canada	15.5	32.4	---	0.2	5.3
China	0.0	---	---	---	0.0
India	0.0	---	---	---	0.0
Oman	10.4	3.2	0.6	0.6	3.2
Subject sources	25.9	35.6	0.6	0.8	8.5
Nonsubject sources	74.1	64.4	99.4	99.2	91.5
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.69.0000, 3907.61.0010, and 3907.69.0010, accessed November 29, 2021. Imports are based on the imports for consumption data series.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Presence in the market

PET resin produced in the United States was present in the market throughout the period for which data were collected. Table IV-3 and figures IV-2 and IV-3 present monthly data for U.S. imports of PET resin from subject and nonsubject sources between January 2015 and September 2021, based on official Commerce statistics. Cumulated subject imports were present in each month during this period. Specifically, imports from Canada were present in each month during this period; imports from China were present in 42 of 81 months, imports from India were present in 56 of 81 months, and imports from Oman were present in 69 of 81 months.

Table IV-3
PET resin: U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	Canada	China	India	Oman	Subject sources	Nonsubject sources	All import sources
2015	January	27,858	15,170	5,692	25,946	74,666	59,363	134,028
2015	February	28,632	6,585	5,323	7,607	48,147	53,001	101,148
2015	March	29,936	19,423	4,948	5,409	59,716	53,632	113,348
2015	April	27,584	12,937	11,991	9,459	61,971	62,834	124,805
2015	May	23,607	3,929	9,062	13,106	49,704	57,742	107,446
2015	June	25,067	3,675	7,336	6,553	42,631	72,049	114,679
2015	July	23,275	5,959	49	6,554	35,836	64,740	100,576
2015	August	24,531	5,441	265	7,581	37,818	59,048	96,866
2015	September	21,984	1,444	220	16,092	39,741	59,683	99,424
2015	October	20,995	0	---	12,229	33,224	81,207	114,432
2015	November	19,389	79	1,049	342	20,860	84,343	105,203
2015	December	17,805	---	---	337	18,143	74,832	92,975
2016	January	18,645	---	---	169	18,813	91,899	110,712
2016	February	19,181	---	3	665	19,849	94,641	114,490
2016	March	18,164	---	---	337	18,502	116,714	135,216
2016	April	18,399	---	1	84	18,485	103,767	122,252
2016	May	11,026	---	---	---	11,026	133,791	144,817
2016	June	15,910	24	---	84	16,019	110,549	126,568
2016	July	14,147	0	---	42	14,190	113,921	128,111
2016	August	13,542	46	---	337	13,926	108,413	122,339
2016	September	9,911	---	882	126	10,919	89,550	100,470
2016	October	13,240	---	---	290	13,530	105,894	119,425
2016	November	16,809	7	---	2,274	19,091	124,898	143,989
2016	December	12,209	2	---	3,058	15,269	120,109	135,378

Table continued.

Table IV-3 Continued
PET resin: U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	Canada	China	India	Oman	Subject sources	Nonsubject sources	All import sources
2017	January	21,541	122	1,163	2,499	25,325	151,708	177,034
2017	February	17,083	76	460	320	17,939	163,263	181,202
2017	March	17,871	359	1,095	---	19,325	186,051	205,376
2017	April	18,711	96	253	42	19,103	163,694	182,796
2017	May	17,360	164	649	253	18,426	177,754	196,180
2017	June	30,853	2	1,288	169	32,312	138,227	170,539
2017	July	24,378	183	759	885	26,206	162,888	189,093
2017	August	19,101	12	384	717	20,214	143,857	164,072
2017	September	18,042	2	810	759	19,613	127,048	146,662
2017	October	19,319	12	1,249	3,170	23,750	112,938	136,688
2017	November	15,246	271	1,263	295	17,076	166,308	183,384
2017	December	15,155	2,324	3,900	8,864	30,243	165,295	195,538
2018	January	22,163	3,848	417	20,747	47,174	125,420	172,594
2018	February	20,288	1,972	3,251	9,791	35,302	106,938	142,240
2018	March	18,309	3,197	4,563	15,864	41,933	184,644	226,577
2018	April	19,672	6,037	2,857	16,369	44,936	209,443	254,379
2018	May	16,982	12,562	5,833	17,808	53,185	190,741	243,925
2018	June	33,476	7,361	2,905	9,871	53,613	177,948	231,560
2018	July	29,519	7,911	6,851	11,989	56,270	188,614	244,884
2018	August	29,188	822	3,020	18,420	51,450	126,596	178,046
2018	September	31,817	86	4,041	7,490	43,435	146,878	190,313
2018	October	25,722	45	4,058	6,052	35,877	162,631	198,509
2018	November	24,035	332	3,977	4,663	33,006	153,955	186,961
2018	December	24,602	94	4,016	3,175	31,886	171,045	202,931

Table continued.

Table IV-3 Continued
PET resin: U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	Canada	China	India	Oman	Subject sources	Nonsubject sources	All import sources
2019	January	3,409	---	577	---	3,985	133,529	137,514
2019	February	3,739	---	670	496	4,906	115,320	120,226
2019	March	1,759	---	571	1,141	3,471	128,899	132,370
2019	April	1,274	---	559	2,927	4,760	133,268	138,028
2019	May	4,111	---	4	347	4,463	166,769	171,232
2019	June	3,839	---	110	89	4,039	152,953	156,992
2019	July	3,673	---	220	---	3,893	149,281	153,174
2019	August	5,262	---	640	50	5,951	145,974	151,925
2019	September	5,547	---	75	---	5,622	124,319	129,941
2019	October	6,314	---	---	---	6,314	120,016	126,329
2019	November	4,376	---	---	---	4,376	112,436	116,812
2019	December	4,683	---	254	---	4,937	96,012	100,949
2020	January	5,348	---	---	---	5,348	101,427	106,776
2020	February	6,158	---	---	637	6,795	95,780	102,575
2020	March	7,527	---	132	---	7,659	111,938	119,597
2020	April	8,523	---	---	---	8,523	139,687	148,210
2020	May	7,630	---	---	801	8,431	115,358	123,789
2020	June	5,593	---	---	---	5,593	129,550	135,143
2020	July	8,008	---	---	3,015	11,022	120,546	131,568
2020	August	9,211	---	---	397	9,608	131,800	141,408
2020	September	8,719	---	---	1,758	10,477	133,459	143,936
2020	October	8,122	2	84	19,794	28,002	155,183	183,184
2020	November	8,559	---	---	15,755	24,314	161,742	186,056
2020	December	8,011	---	---	14,009	22,020	188,235	210,255
2021	January	9,020	---	239	19,188	28,447	172,150	200,597
2021	February	7,769	---	---	10,167	17,936	106,707	124,643
2021	March	8,119	---	43	25,619	33,780	111,561	145,341
2021	April	7,721	---	43	20,262	28,026	143,890	171,915
2021	May	6,099	---	40	44,297	50,437	107,803	158,240
2021	June	9,742	---	7	29,461	39,210	135,918	175,128
2021	July	8,864	18	79	32,178	41,138	151,050	192,189
2021	August	8,095	---	42	38,809	46,946	166,067	213,013
2021	September	8,273	---	---	34,718	42,991	138,297	181,288

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.69.0000, 3907.61.0010, and 3907.69.0010, accessed November 29, 2021. Imports are based on the imports for consumption data series.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---**.**"

Figure IV-2
PET resin: U.S. imports from individual subject sources, by month
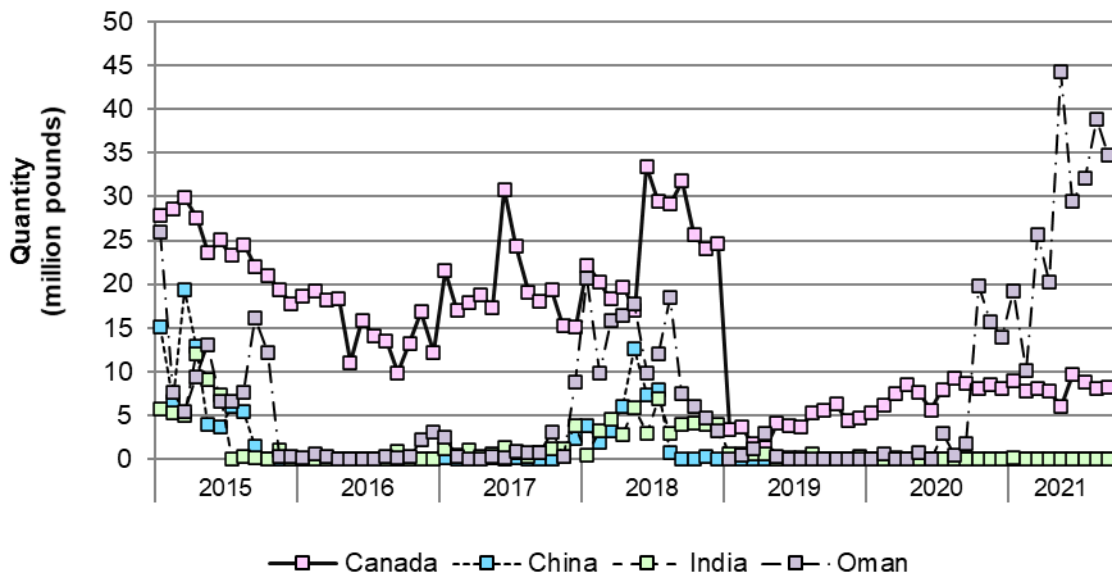
Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.69.0000, 3907.61.0010, and 3907.69.0010, accessed November 29, 2021. Imports are based on the imports for consumption data series.

Figure IV-3
PET resin: U.S. imports from aggregated subject and nonsubject sources, by month
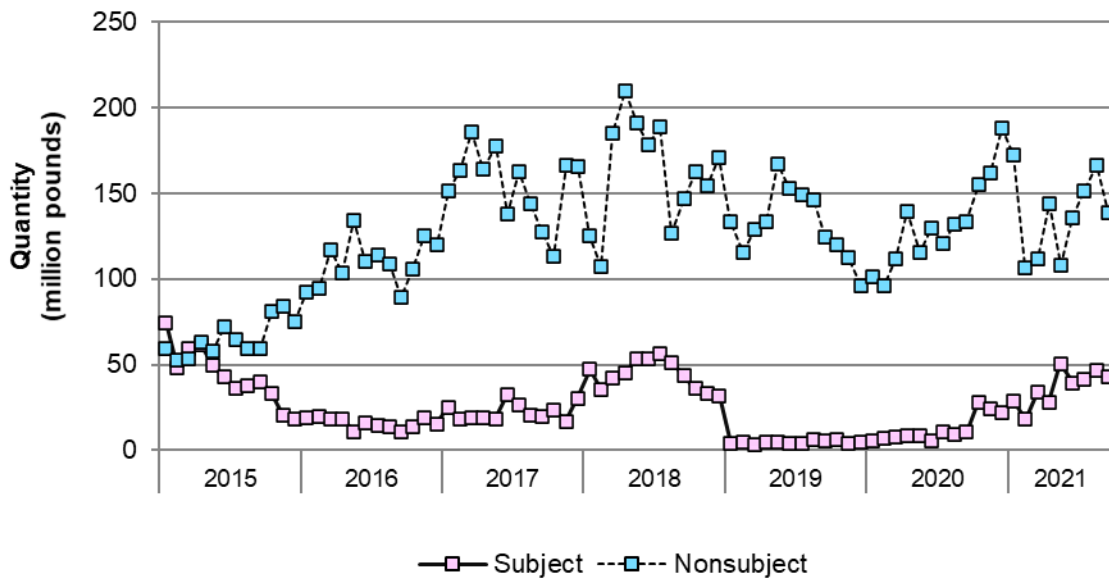
Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 3907.60.0030, 3907.61.0000, 3907.69.0000, 3907.61.0010, and 3907.69.0010, accessed November 29, 2021. Imports are based on the imports for consumption data series.

U.S. inventories of imported merchandise

Table IV-4 presents data on U.S. importers' reported inventories of PET resin. Three of 18 responding firms reported subject inventories, with *** accounting for all or the vast majority in most periods. Inventories of subject imports decreased by *** percent between 2015 and 2020 and were nearly *** times higher in interim 2021 than in interim 2020. The ratio of cumulated subject importers' inventories to U.S. shipments of imports were *** percent in each year during 2015-20, and was *** percentage points lower in interim 2021 (*** percent) than in interim 2020 (*** percent).

Table IV-4
PET resin: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds; ratio in percent

Measure	Source	2015	2016	2017
Inventories quantity	Canada	***	***	***
Ratio to imports	Canada	***	***	***
Ratio to U.S. shipments of imports	Canada	***	***	***
Ratio to total shipments of imports	Canada	***	***	***
Inventories quantity	China	***	***	***
Ratio to imports	China	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***
Ratio to total shipments of imports	China	***	***	***
Inventories quantity	India	***	***	***
Ratio to imports	India	***	***	***
Ratio to U.S. shipments of imports	India	***	***	***
Ratio to total shipments of imports	India	***	***	***
Inventories quantity	Oman	***	***	***
Ratio to imports	Oman	***	***	***
Ratio to U.S. shipments of imports	Oman	***	***	***
Ratio to total shipments of imports	Oman	***	***	***
Inventories quantity	Subject	***	***	***
Ratio to imports	Subject	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***
Ratio to total shipments of imports	Subject	***	***	***
Inventories quantity	Nonsubject	***	***	***
Ratio to imports	Nonsubject	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***
Inventories quantity	All	79,077	96,182	129,116
Ratio to imports	All	8.3	6.5	9.1
Ratio to U.S. shipments of imports	All	8.6	6.6	9.4
Ratio to total shipments of imports	All	***	***	***

Table continued.

Table IV-4 Continued
PET resin: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds; ratio in percent

Measure	Source	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Inventories quantity	Canada	***	***	***	***	***
Ratio to imports	Canada	***	***	***	***	***
Ratio to U.S. shipments of imports	Canada	***	***	***	***	***
Ratio to total shipments of imports	Canada	***	***	***	***	***
Inventories quantity	China	***	***	***	***	***
Ratio to imports	China	***	***	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***	***	***
Ratio to total shipments of imports	China	***	***	***	***	***
Inventories quantity	India	***	***	***	***	***
Ratio to imports	India	***	***	***	***	***
Ratio to U.S. shipments of imports	India	***	***	***	***	***
Ratio to total shipments of imports	India	***	***	***	***	***
Inventories quantity	Oman	***	***	***	***	***
Ratio to imports	Oman	***	***	***	***	***
Ratio to U.S. shipments of imports	Oman	***	***	***	***	***
Ratio to total shipments of imports	Oman	***	***	***	***	***
Inventories quantity	Subject	***	***	***	***	***
Ratio to imports	Subject	***	***	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***	***	***
Ratio to total shipments of imports	Subject	***	***	***	***	***
Inventories quantity	Nonsubject	***	***	***	***	***
Ratio to imports	Nonsubject	***	***	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***	***	***
Inventories quantity	All	171,969	115,643	108,025	99,310	124,672
Ratio to imports	All	12.1	9.4	9.2	9.6	7.9
Ratio to U.S. shipments of imports	All	12.5	9.0	9.1	9.4	8.0
Ratio to total shipments of imports	All	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and information provided in the Commission's 2018 final investigations (for M&G).

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

U.S. importers' imports subsequent to September 30, 2021

The Commission requested importers to indicate whether they had imported or arranged for the importation of PET resin after September 30, 2021. Eleven of 18 responding firms indicated such imports. Only one importer, ***, reported arranged imports from subject sources and ten firms reported arranged imports from nonsubject sources, with *** accounting for the majority.[6]

Table IV-5
PET resin: U.S. importers' arranged imports, by source and period

Quantity in 1,000 pounds

Source	Oct-Dec 2021	Jan-Mar 2022	Apr-Jun 2022	Jul-Sep 2022	Total
Canada	***	***	***	***	***
China	***	***	***	***	***
India	***	***	***	***	***
Oman	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

The industry in Canada

Overview

During the final phase of the original investigations, the Commission did not receive a foreign producer/exporter questionnaire from Selenis, the only firm in Canada known to produce and/or export PET resin.[7]

In these first full five-year reviews, the Commission issued and received a response to the foreign producer/exporter questionnaire from Selenis, which continued to be the only firm in Canada known to produce and/or export PET resin. Selenis' exports to the United States accounted for virtually all U.S. imports of PET resin from Canada in 2020. Selenis estimates that it accounted for approximately *** percent of PET resin production in Canada in 2020.

Table IV-6 presents information on the PET resin operations of the responding producer and exporter in Canada.

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[6] *** accounted for *** percent, *** accounted for *** percent, and *** accounted for *** percent of total arranged imports from nonsubject sources.

[7] Original publication, p. VII-3.

Table IV-6
PET resin: Summary data for producer in Canada, 2020

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Selenis	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

Table IV-7 presents the Canadian producer's reported several operational and organizational changes since January 1, 2015.[8]

Table IV-7
PET resin: Reported changes in operations in Canada, since January 1, 2015

Item	Firm name and narrative on changes in operations
Acquisitions	***
Prolonged shutdowns or curtailments	***

Source: Compiled from data submitted in response to Commission questionnaire.

Note: U.S. producer DAK is affiliated with Selenis through common corporate ownership, ***. Staff correspondence with ***, February 22, 2022.

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[8] In addition, Selenis reported that ***. Selenis' foreign producer questionnaire response, II-2b.

Operations on PET resin

Table IV-8 presents data on the PET resin operations of the responding producer in Canada. Capacity allocated to the production of PET resin decreased by *** percent during 2015-20 and was *** percent lower in interim 2021 than in interim 2020.[9] Production also decreased during 2015-20, by *** percent, and was *** percent higher in interim 2021 than in interim 2020. Capacity utilization was over *** percent in each period except for 2016, 2017, and 2019.

Home market shipments by quantity increased by *** percent during 2015-20 and were *** percent lower in interim 2021 than in interim 2020. Exports to the United States, which accounted for the majority of total exports in most periods, decreased by *** percent from 2015-20, and were higher in interim 2021 than in interim 2020. The other principal export markets for Selenis were ***.

Home market shipments as a share of total shipments increased during 2015-19, from *** percent to *** percent, then decreased to *** percent during 2019-20, ending *** percentage points higher in 2020 than in 2015. Export shipments to the United States as a share of total shipments decreased in each year from 2015-19, from *** percent to *** percent, and then increased to *** percent during 2019-20, ending *** percentage points lower in 2020 than in 2015.

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[9] Selenis allocated PET resin capacity by ***. *See also* staff correspondence with ***, December 17, 2021.

Table IV-8
PET resin: Data on industry in Canada, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2015	2016	2017
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Exports to the United States	Quantity	***	***	***
Exports to the European Union	Quantity	***	***	***
Exports to Asia	Quantity	***	***	***
Exports to all other markets	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Exports to the United States	Value	***	***	***
Exports to the European Union	Value	***	***	***
Exports to Asia	Value	***	***	***
Exports to all other markets	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-8 Continued
PET resin: Data on industry in Canada, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Capacity	Quantity	***	***	***	***	***
Production	Quantity	***	***	***	***	***
End-of-period inventories	Quantity	***	***	***	***	***
Internal consumption and transfers	Quantity	***	***	***	***	***
Commercial home market shipments	Quantity	***	***	***	***	***
Home market shipments	Quantity	***	***	***	***	***
Exports to the United States	Quantity	***	***	***	***	***
Exports to the European Union	Quantity	***	***	***	***	***
Exports to Asia	Quantity	***	***	***	***	***
Exports to all other markets	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
Internal consumption and transfers	Value	***	***	***	***	***
Commercial home market shipments	Value	***	***	***	***	***
Home market shipments	Value	***	***	***	***	***
Exports to the United States	Value	***	***	***	***	***
Exports to the European Union	Value	***	***	***	***	***
Exports to Asia	Value	***	***	***	***	***
Exports to all other markets	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***

Table continued.

Table IV-8 Continued
PET resin: Data on industry in Canada, by period

Unit value in dollars per pound; ratio and share in percent

Item	Measure	2015	2016	2017
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Exports to the United States	Unit value	***	***	***
Exports to the European Union	Unit value	***	***	***
Exports to Asia	Unit value	***	***	***
Exports to all other markets	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Exports to the United States	Share	***	***	***
Exports to the European Union	Share	***	***	***
Exports to Asia	Share	***	***	***
Exports to all other markets	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-8 Continued
PET resin: Data on industry in Canada, by period

Unit value in dollars per pound; ratio and share in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Internal consumption and transfers	Unit value	***	***	***	***	***
Commercial home market shipments	Unit value	***	***	***	***	***
Home market shipments	Unit value	***	***	***	***	***
Exports to the United States	Unit value	***	***	***	***	***
Exports to the European Union	Unit value	***	***	***	***	***
Exports to Asia	Unit value	***	***	***	***	***
Exports to all other markets	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
Capacity utilization ratio	Ratio	***	***	***	***	***
Inventory ratio to production	Ratio	***	***	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***	***	***
Internal consumption and transfers	Share	***	***	***	***	***
Commercial home market shipments	Share	***	***	***	***	***
Home market shipments	Share	***	***	***	***	***
Exports to the United States	Share	***	***	***	***	***
Exports to the European Union	Share	***	***	***	***	***
Exports to Asia	Share	***	***	***	***	***
Exports to all other markets	Share	***	***	***	***	***
Export shipments	Share	***	***	***	***	***
Total shipments	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Alternative products

Table IV-9 presents the responding producer's production of other products on the same equipment and machinery used to produce PET resin. Selenis reported production of out-of-scope ***. The majority of Selenis' overall capacity is dedicated to the production of ***. Selenis reported as a production constraint ***. Selenis also reported that factors impacting the ability to switch from production of PET resin to alternative products include ***.

Table IV-9
PET resin: Overall capacity and production on the same equipment as in-scope production in Canada, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2015	2016	2017
Overall capacity	Quantity	***	***	***
PET resin production	Quantity	***	***	***
Other production	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
PET resin production	Share	***	***	***
Other production	Share	***	***	***
Total production	Share	***	***	***

Table continued.

Table IV-9 Continued
PET resin: Overall capacity and production on the same equipment as in-scope production in Canada, by period

Quantity in 1,000 pounds; ratio and share in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Overall capacity	Quantity	***	***	***	***	***
PET resin production	Quantity	***	***	***	***	***
Other production	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
PET resin production	Share	***	***	***	***	***
Other production	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Exports

Table IV-10 presents the leading export markets for polyethylene terephthalate, a category that includes PET resin and out-of-scope products, from Canada. During 2020, the United States was the top export market for polyethylene terephthalate from Canada, accounting for 94.4 percent, followed by Malaysia and China, accounting for 4.1 percent and 1.0 percent respectively.

Table IV-10
Polyethylene terephthalate: Exports from Canada, by destination market and period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2018	2019	2020
United States	Quantity	297,069	253,771	245,247
Malaysia	Quantity	6,091	5,373	10,775
China	Quantity	2,205	2,141	2,562
Mexico	Quantity	1,185	443	341
Portugal	Quantity	55	677	337
Vietnam	Quantity	215	298	84
India	Quantity	51	128	78
Thailand	Quantity	25	60	63
South Korea	Quantity	104	---	52
All other destination markets	Quantity	162	180	129
All destination markets	Quantity	307,161	263,072	259,669
United States	Value	163,985	151,418	129,121
Malaysia	Value	6,374	5,474	10,905
China	Value	2,325	2,241	2,723
Mexico	Value	1,152	544	433
Portugal	Value	77	408	183
Vietnam	Value	158	405	206
India	Value	119	102	181
Thailand	Value	26	70	49
South Korea	Value	105	---	12
All other destination markets	Value	213	182	136
All destination markets	Value	174,534	160,845	143,950

Table continued.

Table IV-10 Continued
Polyethylene terephthalate: Exports from Canada, by destination market and period

Unit value in dollars per pound; share in percent

Destination market	Measure	2018	2019	2020
United States	Unit value	0.55	0.60	0.53
Malaysia	Unit value	1.05	1.02	1.01
China	Unit value	1.05	1.05	1.06
Mexico	Unit value	0.97	1.23	1.27
Portugal	Unit value	1.41	0.60	0.54
Vietnam	Unit value	0.73	1.36	2.44
India	Unit value	2.36	0.80	2.32
Thailand	Unit value	1.04	1.16	0.78
South Korea	Unit value	1.01	---	0.23
All other destination markets	Unit value	1.32	1.01	1.05
All destination markets	Unit value	0.57	0.61	0.55
United States	Share of quantity	96.7	96.5	94.4
Malaysia	Share of quantity	2.0	2.0	4.1
China	Share of quantity	0.7	0.8	1.0
Mexico	Share of quantity	0.4	0.2	0.1
Portugal	Share of quantity	0.0	0.3	0.1
Vietnam	Share of quantity	0.1	0.1	0.0
India	Share of quantity	0.0	0.0	0.0
Thailand	Share of quantity	0.0	0.0	0.0
South Korea	Share of quantity	0.0	---	0.0
All other destination markets	Share of quantity	0.1	0.1	0.0
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheadings 3907.60, 3907.61, and 3907.69, as reported by Statistics Canada in the Global Trade Atlas database, accessed November 30, 2021. These data may be overstated as HTS subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

The industry in China

Overview

During the final phase of the original investigations, the Commission did not receive any questionnaire responses from Chinese producers/exporters. During the preliminary phase of the original investigations the Commission received foreign producer/exporter questionnaires from seven firms in China, which accounted for approximately *** percent of production of PET resin in China and approximately *** percent of U.S. imports of PET resin from China during 2012-14.[10]

In these first full five-year reviews, the Commission issued foreign producers/exporters' questionnaires to 27 firms believed to produce and/or export PET resin in China. The Commission did not receive any questionnaire responses from Chinese producers/exporters.

Table IV-11 presents events in the Chinese industry since the original investigations.

Table IV-11
PET resin: Recent developments in the Chinese industry

Item	Firm	Event
Expansion	Yisheng	PET bottle chip production capacity expansions at Yisheng's plants in Hainan and Dalian brought online by end of Q4 2020, bringing combined PET bottle chip production to 1.1 million tons per year.
Input production (PTA) expansion	Xinfengming	Site No. 1 started PTA production line at Pinghu in east China's Zhejiang province (late 2019) Site No. 2 projected to produce 2.2 million tons per year of PTA feedstock (November 2020)
Input production (PTA) expansion	Fujian Billion	PTA project for 2.4 million tons per year at Quanzhou site in southeast China's Fujian province brought online in Q4 2020.
Plant opening	Chongqing Wankai (subsidiary of Zhejiang Zhengkai)	Chongqing plant in southwest China has two PET bottle chip production lines, each with a capacity of 600,000 tons per year. First production line started March 2020.

Source: Domestic interested parties' response to the notice of institution, May 3, 2021, p. 7; Argus, "Viewpoint:China's PTA expansion to cap margins in 2021," December 24, 2020; Argus, "China continues to expand PET bottle chip capacity," July 23, 2019; Argus, "Zhejiang Zhengkai starts up Chongqing PET plant," March 25, 2020.

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[10] Original confidential report, p. VII-8.

Exports

Table IV-12 presents the leading export markets for polyethylene terephthalate, a category that includes PET resin and out-of-scope products, from China. During 2020, Nigeria, Philippines, and Russia were the leading export markets for polyethylene terephthalate from China, accounting for 5.6 percent, 5.1 percent, and 5.0 percent respectively. The United States accounted for less than 0.05 percent of exports of polyethylene terephthalate from China in 2020.

Table IV-12
Polyethylene terephthalate: Exports from China, by destination market and period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2018	2019	2020
United States	Quantity	41,910	1,943	188
Nigeria	Quantity	388,611	416,594	340,122
Philippines	Quantity	292,990	352,714	305,670
Russia	Quantity	294,735	327,871	304,032
Vietnam	Quantity	193,256	285,790	274,748
South Korea	Quantity	214,633	239,348	248,441
India	Quantity	395,518	659,650	243,580
Indonesia	Quantity	413,183	347,614	236,263
Algeria	Quantity	304,542	279,078	229,080
All other destination markets	Quantity	4,463,090	4,680,832	3,846,927
All destination markets	Quantity	7,002,467	7,591,434	6,029,051
United States	Value	23,228	1,094	380
Nigeria	Value	210,720	190,647	109,753
Philippines	Value	162,445	164,106	113,033
Russia	Value	160,799	147,679	97,135
Vietnam	Value	107,211	132,980	97,583
South Korea	Value	119,020	109,201	80,191
India	Value	213,202	301,181	86,632
Indonesia	Value	225,187	158,040	80,509
Algeria	Value	166,434	127,681	74,272
All other destination markets	Value	2,441,127	2,169,152	1,309,785
All destination markets	Value	3,829,373	3,501,762	2,049,273

Table continued.

Table IV-12 Continued
Polyethylene terephthalate: Exports from China, by destination market and period

Unit value in dollars per pound; share in percent

Destination market	Measure	2018	2019	2020
United States	Unit value	0.55	0.56	2.03
Nigeria	Unit value	0.54	0.46	0.32
Philippines	Unit value	0.55	0.47	0.37
Russia	Unit value	0.55	0.45	0.32
Vietnam	Unit value	0.55	0.47	0.36
South Korea	Unit value	0.55	0.46	0.32
India	Unit value	0.54	0.46	0.36
Indonesia	Unit value	0.55	0.45	0.34
Algeria	Unit value	0.55	0.46	0.32
All other destination markets	Unit value	0.55	0.46	0.34
All destination markets	Unit value	0.55	0.46	0.34
United States	Share of quantity	0.6	0.0	0.0
Nigeria	Share of quantity	5.5	5.5	5.6
Philippines	Share of quantity	4.2	4.6	5.1
Russia	Share of quantity	4.2	4.3	5.0
Vietnam	Share of quantity	2.8	3.8	4.6
South Korea	Share of quantity	3.1	3.2	4.1
India	Share of quantity	5.6	8.7	4.0
Indonesia	Share of quantity	5.9	4.6	3.9
Algeria	Share of quantity	4.3	3.7	3.8
All other destination markets	Share of quantity	63.7	61.7	63.8
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheadings 3907.60, 3907.61, and 3907.69, as reported by China Customs in the Global Trade Atlas database, accessed January 4, 2022. These data may be overstated as HTS subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

The industry in India

Overview

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from four firms in India, which accounted for approximately *** percent of production of PET resin in India and approximately *** percent of U.S. imports of PET resin from India during January 2012-September 2015.[11]

In these first full five-year reviews, the Commission issued foreign producers/exporters' questionnaires to 13 firms believed to produce and/or export PET resin in India.[12] The Commission did not receive any questionnaire responses from Indian producers/exporters.

Table IV-13 presents events in the Indian industry since the original investigations.

Table IV-13
PET resin: Recent developments in the Indian industry

Item	Firm	Event
Curtailment	Reliance	Increased salinity in water and decreased availability of dam water prompted Reliance to reduce production and temporarily shut down its PET and PTA units (May 31, 2016)
Acquisition	***	***
Joint Venture	Dhunseri and Indorama	Dhunseri Petrochem's PET resin business (480,000 tonnes per year) in Haldia was transferred to the newly-formed company Dhunseri Petglobal Ltd .

Source: Domestic interested parties' response to the notice of institution, May 3, 2021, p. 9; Domain-b, "Reliance ramps up PTA and PET resin capacity at Dahej," April 10, 2015; Prasad, "Reliance Industries temporarily shuts PET, PTA units at Dahej on water shortage," May 31, 2016; The Economic Times "Dhunseri, Indorama completes formation of equal joint venture," September 13, 2016.

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[11] Original confidential report, p. VII-13.

[12] The domestic interested parties reported that four firms are believed to have produced the vast majority of PET resin in India during the period examined. These firms are Dhunseri Petrochem Industries Private Limited; Ester Industries Limited; JBF Industries Limited; and Reliance Industries Limited. Domestic interested parties' response to the notice of institution, May 3, 2021, p. 9, exhibit 4.

Exports

Table IV-14 presents the leading export markets for polyethylene terephthalate, a category that includes PET resin and out-of-scope products, from India. During 2020, Italy and the United Arab Emirates were the leading export markets for polyethylene terephthalate from India, each accounting for 8.0 percent. The United States accounted for 0.5 percent of exports of polyethylene terephthalate from India in 2020.

Table IV-14
Polyethylene terephthalate: Exports from India, by destination market and period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2018	2019	2020
United States	Quantity	45,127	6,400	9,606
Italy	Quantity	255,964	221,831	165,040
United Arab Emirates	Quantity	254,246	221,667	164,698
Bangladesh	Quantity	156,111	104,501	116,294
Bahrain	Quantity	79,893	80,294	109,021
Japan	Quantity	144,956	129,918	97,882
Nigeria	Quantity	30,668	33,125	89,038
Israel	Quantity	92,929	107,548	74,137
Turkey	Quantity	73,411	43,258	69,298
All other destination markets	Quantity	1,259,203	1,215,993	1,171,136
All destination markets	Quantity	2,392,509	2,164,536	2,066,149
United States	Value	27,494	3,833	4,068
Italy	Value	141,042	103,417	54,057
United Arab Emirates	Value	139,571	99,785	52,454
Bangladesh	Value	86,881	47,886	39,779
Bahrain	Value	42,904	37,189	38,858
Japan	Value	80,331	59,328	32,023
Nigeria	Value	17,279	14,305	27,597
Israel	Value	51,008	46,487	24,224
Turkey	Value	40,543	19,589	22,137
All other destination markets	Value	695,753	554,345	383,617
All destination markets	Value	1,322,808	986,162	678,814

Table continued.

Table IV-14 Continued
Polyethylene terephthalate: Exports from India, by destination market and period

Unit value in dollars per pound; share in percent

Destination market	Measure	2018	2019	2020
United States	Unit value	0.61	0.60	0.42
Italy	Unit value	0.55	0.47	0.33
United Arab Emirates	Unit value	0.55	0.45	0.32
Bangladesh	Unit value	0.56	0.46	0.34
Bahrain	Unit value	0.54	0.46	0.36
Japan	Unit value	0.55	0.46	0.33
Nigeria	Unit value	0.56	0.43	0.31
Israel	Unit value	0.55	0.43	0.33
Turkey	Unit value	0.55	0.45	0.32
All other destination markets	Unit value	0.55	0.46	0.33
All destination markets	Unit value	0.55	0.46	0.33
United States	Share of quantity	1.9	0.3	0.5
Italy	Share of quantity	10.7	10.2	8.0
United Arab Emirates	Share of quantity	10.6	10.2	8.0
Bangladesh	Share of quantity	6.5	4.8	5.6
Bahrain	Share of quantity	3.3	3.7	5.3
Japan	Share of quantity	6.1	6.0	4.7
Nigeria	Share of quantity	1.3	1.5	4.3
Israel	Share of quantity	3.9	5.0	3.6
Turkey	Share of quantity	3.1	2.0	3.4
All other destination markets	Share of quantity	52.6	56.2	56.7
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheadings 3907.60, 3907.61, and 3907.69, as reported by Indian Ministry of Commerce in the Global Trade Atlas database, accessed January 4, 2022. These data may be overstated as HTS subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

The industry in Oman

Overview

During the final phase of the original investigations, the Commission received a foreign producer/exporter questionnaire response from OCTAL, which accounted for all PET resin production in Oman and all PET resin exports from Oman to the United States during January 2012-September 2015.[13]

In these first full five-year reviews, the Commission issued and received a response to the foreign producer/exporter questionnaire from OCTAL, which continued to be the only firm in Oman known to produce and/or export PET resin. OCTAL's exports to the United States accounted for virtually all U.S. imports of PET resin from Oman in 2020.[14] OCTAL estimates that it accounted for approximately *** percent of PET resin production in Oman in 2020.

Table IV-15 presents information on the PET resin operations of the responding producer and exporter in Oman.

Table IV-15
PET resin: Summary data for producer in Oman, 2020

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
OCTAL	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

As presented in table IV-16, the producer in Oman reported several operational and organizational changes since January 1, 2015.[15]

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[13] Original publication, p. VII-11.
[14] OCTAL's exports to the United States *** reported U.S. imports from Oman in 2020. This may be due to timing differences in shipping/Customs clearance and recordkeeping.
[15] In addition, OCTAL reported that ***. OCTAL's foreign producer questionnaire response, II-2b.

OCTAL also reported that it plans to construct a new PET plant in Cooper River, South Carolina ***. This new facility will be similar to OCTAL's plant in Salalah, Oman with the ability to produce OCTAL's proprietary DPET. OCTAL states that the facility is expected to open in 2024 with PET resin production capacity of *** pounds, which OCTAL anticipates will handle most of its existing PET resin customer requirements in the U.S. market. OCTAL also reported that ***.[16] OCTAL states that the project has draft project schedules and proposed budgets for equipment and construction. Specifically, *** that will provide the technology ("melt-to-resin" (MTR)) and equipment for the plant.[17]

In addition, Alpek, parent company of U.S. producer DAK, signed an agreement to acquire OCTAL on February 1, 2022. Although the deal is not yet finalized and is subject to regulatory approval, OCTAL asserts that ***.[18]

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[16] Hearing transcript, pp. 150-153 (Barenberg); and OCTAL's posthearing brief, p. 31 and attachment, "Sworn Declaration of William J. Barengerg, Jr.," exh. 1.

[17] Hearing transcript, p. 153; and OCTAL's foreign producer questionnaire response, II-2c.

[18] Alpek press release, "Alpek signs agreement to acquire OCTAL," February 1, 2022. OCTAL's posthearing brief, Attachment, "Sworn Declaration of William J. Barengerg, Jr.," exh. 1.

Table IV-16
PET resin: Reported changes in operations in Oman, since January 1, 2015

Item	Firm name and narrative on changes in operations
Prolonged shutdowns or curtailments	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on PET resin

Table IV-17 presents data on the PET resin operations of the responding producer in Oman. Capacity allocated to the production of PET resin was stable during 2015-19, then decreased by *** percent during 2019-20. Capacity was *** percent lower in interim 2021 than in interim 2020.[19] As presented in table IV-16, OCTAL attributes this decrease in capacity to ***. Production increased in each year during 2015-20, and was *** percent higher in 2020 than in 2015. Production was *** percent lower in interim 2021 than in interim 2020. Capacity utilization increased in each year from *** percent in 2015 to *** percent in 2019 to *** percent in 2020. Capacity utilization was *** percentage points lower in interim 2021 (*** percent) than in interim 2020 (*** percent).

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[19] OCTAL allocated PET resin capacity based on total melt capacity (as presented in table IV-18) minus production of out-of-scope PET sheet (i.e., excess PET melt capacity was allocated to production of PET resin. Total melt capacity of *** pounds was calculated based on ***. Production of out-of-scope PET sheet was calculated based on *** and was *** pounds during 2015-19, *** pounds in 2020, *** pounds in interim 2020, and *** pounds in interim 2021. During 2015-19, actual PET sheet production ranged between *** pounds and *** pounds, ***. During 2020, ***; actual PET sheet production was *** percent lower than ***. Hearing transcript, pp. 221 (Freiji) and 224 (Porter); OCTAL's foreign producer questionnaire response, II-3c; and staff correspondence with ***, December 13, 2021 and February 17, 2022.

Allocated PET resin capacity, which was *** pounds in 2015-19 and *** pounds in 2020, *** percent of its total melt capacity to the production of PET resin. During the same period, OCTAL's PET resin production as a share of overall production (including out-of-scope PET sheet), as presented in table IV-18, ranged between *** percent. During 2020, OCTAL allocated *** percent of its total capacity to the production of PET resin, while PET resin production as a share of overall production was *** percent; the decrease in PET resin capacity while PET resin production reached its highest level of the period was due to OCTAL ***. In interim 2021, allocated PET resin capacity was *** percent of total melt capacity, while PET resin production as a share of overall production was *** percent. See OCTAL's foreign producer questionnaire response, II-3c; and staff correspondence with ***, December 13, 2021 and February 17, 2022.

Home market shipments by quantity increased by *** percent during 2015-20 and were *** percent lower in interim 2021 than in interim 2020. Export shipments also increased from 2015-20, by *** percent, and were *** percent lower in interim 2021 than in interim 2020.

Home market shipments as a share of total shipments was *** percent in 2020, and ranged between *** and *** percent during 2015-20. Export shipments as a share of total shipments was *** percent in 2020, and ranged between *** and *** percent during 2015-20. OCTAL's principal export markets were ***, accounting for *** percent and *** percent of total shipments in 2020, respectively.[20] Exports to the United States accounted for *** percent of total shipments in 2020, and ranged between *** and *** percent during 2015-20. Exports to the United States as a share of total shipments was *** percent in interim 2021 compared to *** percent in interim 2020.

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[20] OCTAL exported *** pounds to 75 countries in 2021. OCTAL's posthearing brief, February 7, 2022, p. 8.

Table IV-17
PET resin: Data on industry in Oman, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2015	2016	2017
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Exports to the United States	Quantity	***	***	***
Exports to the European Union	Quantity	***	***	***
Exports to Asia	Quantity	***	***	***
Exports to all other markets	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Exports to the United States	Value	***	***	***
Exports to the European Union	Value	***	***	***
Exports to Asia	Value	***	***	***
Exports to all other markets	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-17 Continued
PET resin: Data on industry in Oman, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Capacity	Quantity	***	***	***	***	***
Production	Quantity	***	***	***	***	***
End-of-period inventories	Quantity	***	***	***	***	***
Internal consumption and transfers	Quantity	***	***	***	***	***
Commercial home market shipments	Quantity	***	***	***	***	***
Home market shipments	Quantity	***	***	***	***	***
Exports to the United States	Quantity	***	***	***	***	***
Exports to the European Union	Quantity	***	***	***	***	***
Exports to Asia	Quantity	***	***	***	***	***
Exports to all other markets	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
Internal consumption and transfers	Value	***	***	***	***	***
Commercial home market shipments	Value	***	***	***	***	***
Home market shipments	Value	***	***	***	***	***
Exports to the United States	Value	***	***	***	***	***
Exports to the European Union	Value	***	***	***	***	***
Exports to Asia	Value	***	***	***	***	***
Exports to all other markets	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***

Table continued.

Table IV-17 Continued
PET resin: Data on industry in Oman, by period

Unit value in dollars per pound; share in percent

Item	Measure	2015	2016	2017
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Exports to the United States	Unit value	***	***	***
Exports to the European Union	Unit value	***	***	***
Exports to Asia	Unit value	***	***	***
Exports to all other markets	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Exports to the United States	Share	***	***	***
Exports to the European Union	Share	***	***	***
Exports to Asia	Share	***	***	***
Exports to all other markets	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-17 Continued
PET resin: Data on industry in Oman, by period

Unit value in dollars per pound; share in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Internal consumption and transfers	Unit value	***	***	***	***	***
Commercial home market shipments	Unit value	***	***	***	***	***
Home market shipments	Unit value	***	***	***	***	***
Exports to the United States	Unit value	***	***	***	***	***
Exports to the European Union	Unit value	***	***	***	***	***
Exports to Asia	Unit value	***	***	***	***	***
Exports to all other markets	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
Capacity utilization ratio	Ratio	***	***	***	***	***
Inventory ratio to production	Ratio	***	***	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***	***	***
Internal consumption and transfers	Share	***	***	***	***	***
Commercial home market shipments	Share	***	***	***	***	***
Home market shipments	Share	***	***	***	***	***
Exports to the United States	Share	***	***	***	***	***
Exports to the European Union	Share	***	***	***	***	***
Exports to Asia	Share	***	***	***	***	***
Exports to all other markets	Share	***	***	***	***	***
Export shipments	Share	***	***	***	***	***
Total shipments	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Alternative products

Table IV-18 presents the responding producer's production of other products on the same equipment and machinery used to produce PET resin.[21] OCTAL reported production of out-of-scope PET sheet.[22] The majority of OCTAL's overall capacity is dedicated to the production of ***. OCTAL reported several production constraints, including ***. OCTAL also reported that factors impacting the ability to switch from production of PET resin to alternative products are ***.

Table IV-18
PET resin: Overall capacity and production on the same equipment as in-scope production in Oman, by period

Quantity in 1,000 pounds; share and ratio in percent

Item	Measure	2015	2016	2017
Overall capacity	Quantity	***	***	***
PET resin production	Quantity	***	***	***
Other production	Quantity	***	***	***
Total production	Quantity	***	***	***
Overall capacity utilization	Ratio	***	***	***
PET resin production	Share	***	***	***
Other production	Share	***	***	***
Total production	Share	***	***	***

Table continued.

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[21] OCTAL reported ***. According to OCTAL, ***. Staff correspondence with ***, December 24, 2021.

[22] OCTAL's posthearing brief, February 7, 2022, p. 10. OCTAL asserts that PET sheet is the firm's "commercial priority" because profitability is higher when compared to PET resin. Ibid.

Table IV-18 Continued
PET resin: Overall capacity and production on the same equipment as in-scope production in Oman, by period

Quantity in 1,000 pounds; share and ratio in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Overall capacity	Quantity	***	***	***	***	***
PET resin production	Quantity	***	***	***	***	***
Other production	Quantity	***	***	***	***	***
Total production	Quantity	***	***	***	***	***
Overall capacity utilization	Ratio	***	***	***	***	***
PET resin production	Share	***	***	***	***	***
Other production	Share	***	***	***	***	***
Total production	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Exports

Table IV-19 presents the leading export markets for polyethylene terephthalate, a category that includes PET resin and out-of-scope products, from Oman. During 2020, the United Arab Emirates was the top export market for polyethylene terephthalate from Oman, accounting for 20.0 percent, followed by Turkey, Saudi Arabia, and the United States, accounting for 11.4 percent, 10.1 percent, and 8.9 percent respectively.

Table IV-19
Polyethylene terephthalate: Exports from Oman, by destination market and period

Quantity in 1,000 pounds; value in 1,000 dollars

Destination market	Measure	2018	2019	2020
United States	Quantity	142,239	5,050	56,244
United Arab Emirates	Quantity	69,685	125,333	126,734
Turkey	Quantity	10,422	44,634	72,580
Saudi Arabia	Quantity	25,978	44,248	64,222
Morocco	Quantity	55,705	55,804	44,693
Ukraine	Quantity	4,464	1,339	41,320
Brazil	Quantity	3,671	13,988	37,897
Jordan	Quantity	1,141	25,558	30,039
Paraguay	Quantity	37,997	29,614	21,263
All other destination markets	Quantity	155,533	168,717	139,789
All destination markets	Quantity	506,834	514,285	634,781
United States	Value	84,007	2,628	22,643
United Arab Emirates	Value	41,069	59,751	47,062
Turkey	Value	6,069	21,646	24,989
Saudi Arabia	Value	15,595	20,909	27,125
Morocco	Value	33,238	30,780	18,947
Ukraine	Value	2,730	689	15,675
Brazil	Value	2,104	7,433	13,737
Jordan	Value	656	12,398	12,512
Paraguay	Value	20,763	15,589	8,023
All other destination markets	Value	90,116	81,542	52,987
All destination markets	Value	296,347	253,365	243,702

Table continued.

Table IV-19 Continued
Polyethylene terephthalate: Exports from Oman, by destination market and period

Unit value in dollars per pound; share in percent

Destination market	Measure	2018	2019	2020
United States	Unit value	0.59	0.52	0.40
United Arab Emirates	Unit value	0.59	0.48	0.37
Turkey	Unit value	0.58	0.48	0.34
Saudi Arabia	Unit value	0.60	0.47	0.42
Morocco	Unit value	0.60	0.55	0.42
Ukraine	Unit value	0.61	0.51	0.38
Brazil	Unit value	0.57	0.53	0.36
Jordan	Unit value	0.58	0.49	0.42
Paraguay	Unit value	0.55	0.53	0.38
All other destination markets	Unit value	0.58	0.48	0.38
All destination markets	Unit value	0.58	0.49	0.38
United States	Share of quantity	28.1	1.0	8.9
United Arab Emirates	Share of quantity	13.7	24.4	20.0
Turkey	Share of quantity	2.1	8.7	11.4
Saudi Arabia	Share of quantity	5.1	8.6	10.1
Morocco	Share of quantity	11.0	10.9	7.0
Ukraine	Share of quantity	0.9	0.3	6.5
Brazil	Share of quantity	0.7	2.7	6.0
Jordan	Share of quantity	0.2	5.0	4.7
Paraguay	Share of quantity	7.5	5.8	3.3
All other destination markets	Share of quantity	30.7	32.8	22.0
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official imports statistics of imports from Oman (constructed export statistics for Oman) under HS subheadings 3907.60, 3907.61, and 3907.69, as reported by various countries in the Global Trade Atlas database, accessed November 30, 2021. These data may be overstated as HTS subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---."

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2020 data.

Subject countries combined

Table IV-20 presents summary data on PET resin operations of the reporting subject producers in Canada and Oman.

Table IV-20
PET resin: Data on the industry in subject countries, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2015	2016	2017
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Exports to the United States	Quantity	***	***	***
Exports to the European Union	Quantity	***	***	***
Exports to Asia	Quantity	***	***	***
Exports to all other markets	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Exports to the United States	Value	***	***	***
Exports to the European Union	Value	***	***	***
Exports to Asia	Value	***	***	***
Exports to all other markets	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-20 Continued
PET resin: Data on the industry in subject countries, by period

Quantity in 1,000 pounds; value in 1,000 dollars

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Capacity	Quantity	***	***	***	***	***
Production	Quantity	***	***	***	***	***
End-of-period inventories	Quantity	***	***	***	***	***
Internal consumption and transfers	Quantity	***	***	***	***	***
Commercial home market shipments	Quantity	***	***	***	***	***
Home market shipments	Quantity	***	***	***	***	***
Exports to the United States	Quantity	***	***	***	***	***
Exports to the European Union	Quantity	***	***	***	***	***
Exports to Asia	Quantity	***	***	***	***	***
Exports to all other markets	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
Internal consumption and transfers	Value	***	***	***	***	***
Commercial home market shipments	Value	***	***	***	***	***
Home market shipments	Value	***	***	***	***	***
Exports to the United States	Value	***	***	***	***	***
Exports to the European Union	Value	***	***	***	***	***
Exports to Asia	Value	***	***	***	***	***
Exports to all other markets	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***

Table continued.

Table IV-20 Continued
PET resin: Data on the industry in subject countries, by period

Unit value in dollars per pound; ratio and share in percent

Item	Measure	2015	2016	2017
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Exports to the United States	Unit value	***	***	***
Exports to the European Union	Unit value	***	***	***
Exports to Asia	Unit value	***	***	***
Exports to all other markets	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Exports to the United States	Share	***	***	***
Exports to the European Union	Share	***	***	***
Exports to Asia	Share	***	***	***
Exports to all other markets	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-20 Continued
PET resin: Data on the industry in subject countries, by period

Unit value in dollars per pound; ratio and share in percent

Item	Measure	2018	2019	2020	Jan-Sep 2020	Jan-Sep 2021
Internal consumption and transfers	Unit value	***	***	***	***	***
Commercial home market shipments	Unit value	***	***	***	***	***
Home market shipments	Unit value	***	***	***	***	***
Exports to the United States	Unit value	***	***	***	***	***
Exports to the European Union	Unit value	***	***	***	***	***
Exports to Asia	Unit value	***	***	***	***	***
Exports to all other markets	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
Capacity utilization ratio	Ratio	***	***	***	***	***
Inventory ratio to production	Ratio	***	***	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***	***	***
Internal consumption and transfers	Share	***	***	***	***	***
Commercial home market shipments	Share	***	***	***	***	***
Home market shipments	Share	***	***	***	***	***
Exports to the United States	Share	***	***	***	***	***
Exports to the European Union	Share	***	***	***	***	***
Exports to Asia	Share	***	***	***	***	***
Exports to all other markets	Share	***	***	***	***	***
Export shipments	Share	***	***	***	***	***
Total shipments	Share	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Third-country trade actions

The subject countries are affected by import injury measures in several third-country markets. These measures are summarized in table IV-21.

Table IV-21
PET resin: Antidumping or countervailing duty orders in third-country markets

Issuing Country	Subject Country	Imposition date	Updates (if applicable)	Duty ranges
Argentina	China India	October 24, 2013	Order extended: October 22, 2019	16 percent (China) 12 percent (India)
Brazil	China India	November 28, 2016	Antidumping duties vary according to country of origin and producer in a given country.	$87.23 to $682.38 (China) $193.78 to $468.97 (India)
EU	India	November 30, 2000	Order extended: February 27, 2007; September 9, 2011; May 23, 2013; July 31, 2019	€90.4/MT
EU	China	2004	Terminated 2017	
India	China	March 27, 2021	-	$60.92 to $200.66 per MT
Malaysia	China	December 24, 2020	-	"Nil" to 29.18 percent (provisional)
Turkey	Canada China India	December 13, 2020	Order is only for imports of PET resin with IV less 0.78 mL/g from subject countries.	$60/MT for the first year, $58 /MT for the second year, $56 /MT for the third year
South Africa	China	May 19, 2020	-	26.4 to 28.89 percent
South Africa	India	May 30, 2006	Extended: March 4, 2011 July 8, 2016	54.1 percent

Source: Original publication, pp. I-9-I-11; ICIS, "India Imposes Antidumping Duty on Bottle Grade PET from China," March 29, 2021; Coifman,"Brazil imposes antidumping duties on Asian PET," November 29,2016; Profi Consulting, "Turkey imposed safeguard measure on polyethylene terephthalate chips imports," November 12, 2020; South African Revenue Service, published in the Government Gazette No. 4336 of 19 May 2020, Notice R. 543; Domestic interested parties' response to the notice of institution, May 3, 2021, Exhibit 8; Global Trade Alert, "Argentina: Extension of definitive antidumping duty on imports of polyethylene terephthalate in granules from China, India and the Republic of Korea (termination of definitive duty imposed on imports from Chinese Taipei and Thailand)," accessed May 27, 2021.

Global market

Average global capacity for PET resin was estimated to be *** metric tons in 2019. World capacity of PET resin by region is shown in figure IV-4. In 2019, Northeast Asia accounted for *** percent of global PET resin capacity.[23] Within Northeast Asia, China accounts for *** of regional capacity.[24] The global PET resin industry is fragmented, with the top 10 largest PET solid-state resin producers accounting for about *** of the market in 2019 (figure IV-5). Generally, capacity has expanded at a higher average rate per year *** percent than production *** percent, resulting in the annual operating rates for virgin PET resin production declining to the *** percent range.[25]

The vast majority (*** percent) of the world's PET resin is produced as part of the continuous polymerization process. Figure IV-6 shows consumption of PET resin by end use.[26] PET resin is used by a variety of downstream industries. Despite a shift toward the use of recycled material in developed economies, recycled PET resin accounted for only about *** percent of the global PET resin supply in 2019.[27] Some granular changes in the PET resin industries occurred in non-subject countries include acquisitions and resumption of production.[28]

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[23] IHS Markit, Chemical Economics Handbook: Polyethylene Terephthalate (PET) Solid-State Resins, September 15, 2020, p. 35.

[24] Ibid.

[25] Ibid, p. 39.

[26] Ibid.

[27] Ibid.

[28] Examples of acquisition include: Alpek's (parent of U.S. producer DAK) acquisition of Petroquimica Suape Citepe's integrated PTA-PET resin facility in Brazil (April 2018), and Lottes Chemical's PET bottle chip plant in the UK (October 2019). Resumption of production includes the joint venture between Indorama and Dhunseri to restart PET production at EIPET (Egyptian Indian Polyester Company S.A.E.) PET (1) facility. Indorama, "Indorama Ventures to Support Manufacturing Revival in Egypt," Jun 15, 2018; Argus, "Alpek buys Lotte Chemical's UK PET plant," October 30, 2019; Alpek, "Corporate Presentation," 3Q 2018.

Figure IV-4
World capacity of PET solid-state resins by region

*   *   *   *   *   *   *

Figure IV-5
World producers of PET solid-state resins by shareholder, 2019

*   *   *   *   *   *   *

Figure IV-6
World consumption of PET solid-state resins by shareholder, 2019

*　　　*　　　*　　　*　　　*　　　*　　　*

Table IV-22 presents global exports for polyethylene terephthalate, a category that includes PET resin and out-of-scope products. The leading exporters and their shares of 2020 global exports are: China, 23.4 percent; Taiwan, 9.0 percent; India, 8.0 percent; South Korea, 7.2 percent; and Netherlands, 5.2 percent.

Table IV-22
Polyethylene terephthalate: Global exports, by reporting country and period

Quantity in 1,000 pounds; value in 1,000 dollars

Exporting country	Measure	2018	2019	2020
United States	Quantity	504,300	485,105	532,831
Canada	Quantity	307,161	263,072	259,669
China	Quantity	7,002,467	7,591,434	6,029,051
India	Quantity	2,392,509	2,164,536	2,066,149
Oman	Quantity	506,834	514,285	634,781
Subject sources	Quantity	10,208,972	10,533,326	8,989,651
Taiwan	Quantity	2,549,691	2,288,564	2,328,233
South Korea	Quantity	2,066,657	1,987,202	1,862,592
Netherlands	Quantity	1,363,626	1,201,541	1,332,053
Lithuania	Quantity	1,116,986	1,212,321	1,195,198
Thailand	Quantity	977,921	873,843	917,086
Belgium	Quantity	979,810	820,547	861,471
Vietnam	Quantity	278,303	757,358	842,603
All other exporters	Quantity	7,394,774	6,952,520	6,910,369
All reporting exporters	Quantity	27,441,041	27,112,326	25,772,087
United States	Value	356,055	321,550	319,863
Canada	Value	174,534	160,845	143,950
China	Value	3,829,373	3,501,762	2,049,273
India	Value	1,322,808	986,162	678,814
Oman	Value	296,347	253,365	243,702
Subject sources	Value	5,623,063	4,902,135	3,115,740
Taiwan	Value	1,426,095	1,106,698	853,103
South Korea	Value	1,268,994	1,067,846	826,555
Netherlands	Value	762,484	627,300	578,552
Lithuania	Value	668,288	622,290	467,123
Thailand	Value	549,765	415,002	324,838
Belgium	Value	567,494	428,696	338,996
Vietnam	Value	167,938	401,454	347,623
All other exporters	Value	4,150,187	3,366,501	2,778,597
All reporting exporters	Value	15,540,364	13,259,472	9,950,989

Table continued.

Table IV-22 Continued
Polyethylene terephthalate: Global exports, by reporting country and period

Unit value in dollars per pound; share in percent

Exporting country	Measure	2018	2019	2020
United States	Unit value	0.71	0.66	0.60
Canada	Unit value	0.57	0.61	0.55
China	Unit value	0.55	0.46	0.34
India	Unit value	0.55	0.46	0.33
Oman	Unit value	0.58	0.49	0.38
Subject sources	Unit value	0.55	0.47	0.35
Taiwan	Unit value	0.56	0.48	0.37
South Korea	Unit value	0.61	0.54	0.44
Netherlands	Unit value	0.56	0.52	0.43
Lithuania	Unit value	0.60	0.51	0.39
Thailand	Unit value	0.56	0.47	0.35
Belgium	Unit value	0.58	0.52	0.39
Vietnam	Unit value	0.60	0.53	0.41
All other exporters	Unit value	0.56	0.48	0.40
All reporting exporters	Unit value	0.57	0.49	0.39
United States	Share of quantity	1.8	1.8	2.1
Canada	Share of quantity	1.1	1.0	1.0
China	Share of quantity	25.5	28.0	23.4
India	Share of quantity	8.7	8.0	8.0
Oman	Share of quantity	1.8	1.9	2.5
Subject sources	Share of quantity	37.2	38.9	34.9
Taiwan	Share of quantity	9.3	8.4	9.0
South Korea	Share of quantity	7.5	7.3	7.2
Netherlands	Share of quantity	5.0	4.4	5.2
Lithuania	Share of quantity	4.1	4.5	4.6
Thailand	Share of quantity	3.6	3.2	3.6
Belgium	Share of quantity	3.6	3.0	3.3
Vietnam	Share of quantity	1.0	2.8	3.3
All other exporters	Share of quantity	26.9	25.6	26.8
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics and official global imports statistics from Oman under HS subheadings 3907.60, 3907.61, and 3907.69, as reported by various national statistical authorities in the Global Trade Atlas database, accessed November 30, 2021. These data may be overstated as HTS subheadings 3907.60, 3907.61, and 3907.69 contain products outside the scope of these reviews.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top followed by the countries under investigation, all remaining top exporting countries in descending order of 2020 data.

Part V: Pricing data

Factors affecting prices

Raw material costs

Two crude oil-based raw materials, monoethylene glycol ("MEG") and purified terephthalic acid ("PTA"), historically account for over 75 percent of the cost of producing PET resin.[1] It is estimated that PTA and MEG represent *** and *** percent of input costs, respectively.[2] In general, production of 1 kilogram of PET resin requires 850 grams of PTA and 350 grams of MEG.[3] In these investigations, raw materials as a share of the cost of goods sold were relatively stable and ranged from *** percent in 2015 to *** percent in 2020.

As shown in figure V-1, prices of PTA and MEG have fluctuated since January 2015. Prices of MEG and PTA declined from 2015 to early 2016, increased somewhat volatilely in 2016 and more smoothly from 2017 to 2018, before decreasing from 2018 to 2019. Overall, prices of MEG decreased *** percent and PTA increased *** percent from 2015 to 2019.

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[1] *Polyethylene Terephthalate (PET) Resin from Brazil, Indonesia, Korea, Pakistan, and Taiwan, Inv. Nos. 731-TA-1387-1391 (Final)*, USITC Publication 4835, November 2018, p. V-1.
[2] Ibid. p. V-1.
[3] Ibid. p. V-1.

Figure V-1
PET resin: U.S. indexed prices of monoethylene glycol (MEG) and purified terephthalic acid (PTA) by year, 2015-2019[4]
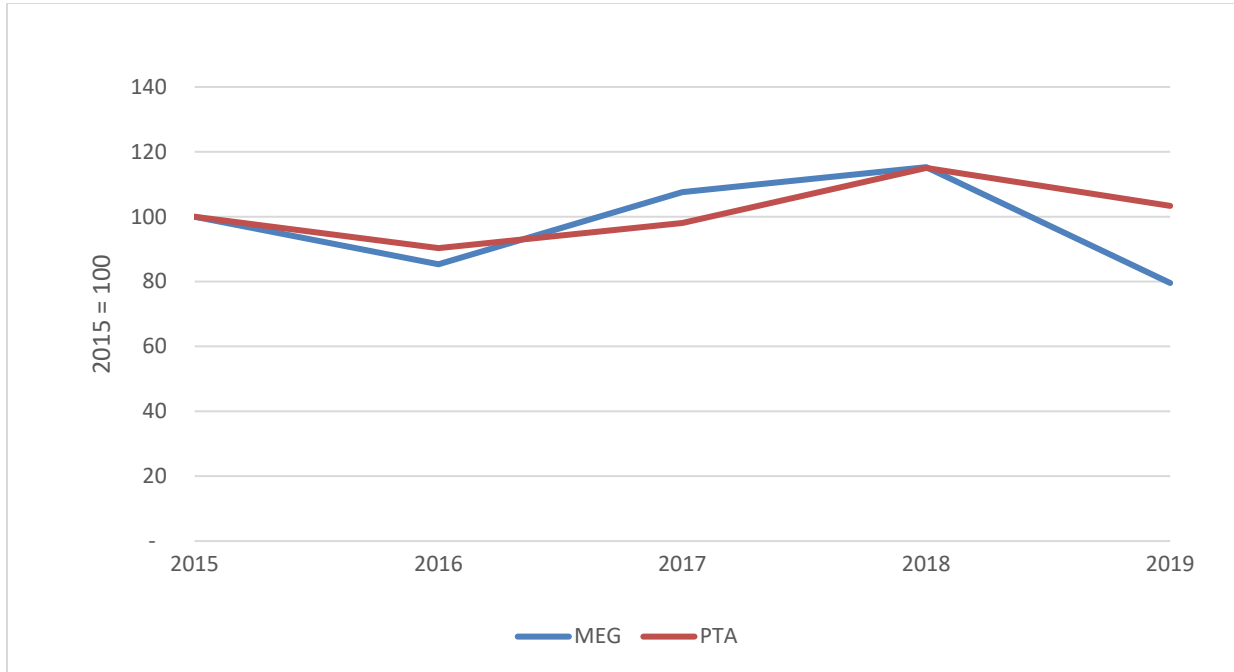
Source: IHS Markit 2020 and staff calculation.

Table V-1
PET resin: U.S. indexed prices of monoethylene glycol (MEG) and purified therephthalic acid (PTA) by year, 2015-2019

Percentage

Year	MEG	PTA
2015	100.0	100.0
2016	85.3	90.4
2017	107.6	98.1
2018	115.3	115.0
2019	79.6	103.3

Source: IHS Markit 2020

Transportation costs to the U.S. market

Transportation costs for PET resin shipped from subject countries to the United States averaged 2.0 percent for Canada, 36.5 percent for China, 2.6 percent for India, and 14.5 percent

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[4] Information for MEG from IHS Markit available up to 2019.

for Oman during 2020. These estimates were derived from official import data and represent the transportation costs and other charges on imports.[5]

U.S. inland transportation costs

All four responding U.S. producers and 10 of 10 importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from 3.5 to 10.0 percent of total cost while most responding importers reported costs of 3.0 to 15.0 percent.

Pricing practices

Pricing methods

U.S. producers and importers reported setting prices using both transaction-by-transaction and contracts (table V-2).

Table V-2
PET resin: U.S. producers' and importers' reported price setting methods

Count in number of firms reporting

Method	U.S. producers	Importers
Transaction-by-transaction	4	11
Contract	4	9
Set price list	0	0
Other	1	0
Responding firms	4	12

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

U.S. producers reported selling most of their PET resin under annual contracts and long-term contracts. Importers sold the majority of their PET resin using annual contracts (tables V-3).

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[5] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2020 and then dividing by the customs value based on the HTS subheadings 39.07.60.0030, 3907.61.0000, 3907.69.000, 3907.61.0010, and 3907.69.0010.

Table V-3
PET resin: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2020

Share in percent

Type of sale	U.S. producers	Importers
Long-term contracts	***	***
Annual contract	***	***
Short-term contracts	***	***
Spot sales	***	***
Total	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Because of rounding, figures may not add to the totals shown.

U.S. producers reported that their long-term contracts last 2 to 3 years. Half of responding U.S. producers' (2 of 4) long-term contracts allowed price renegotiations, and 3 of 4 producers reported that their contracts were indexed to raw materials. None of four U.S. producers' annual contracts allow price renegotiations during the contract, and half of reporting producers (2 of 4) indexed to raw materials. U.S. producers reported that short-term contracts lasted from 1 to 6 months, and one responding U.S. producers reported that these contracts allow price renegotiations during the contract.

Importers reported that long-term contracts lasted 2 years. Most importers reported that long-term contracts do not allow for price renegotiations during the contract. Importers reported short-term contracts lasting from 2 to 3 months; none allow price renegotiations during the contract; contracts fix both price and quantity; and all are indexed to raw materials. Importers' annual contracts do not allow price renegotiations during the contract. Most importers (4 of 6) reported that their annual contracts are indexed to raw materials, and three importers reported that these contracts fix quantities.

Nine purchasers reported that they purchase product daily, four purchase weekly, six purchase monthly, two purchase quarterly, and one purchase annually. Eight of 15 responding purchasers reported that their purchasing pattern had changed since 2015: seven purchasers report discontinuing purchases and one reducing purchases from subject countries due to the order. Two reported that they had not changed. Almost all (19 of 20) purchasers contact 1 to 14 suppliers before making a purchase.

Sales terms and discounts

All U.S. producers and almost all importers typically quote prices on a delivered basis.[6] All U.S. producers reported offering total volume discounts for their product, and half (2 of 4 responding) offered quantity discounts along with other discounts such as early payment discounts and cash payments. Most responding importers (9 of 13 responding) reported no discount policy. One importer offered quantity discounts, three offered total volume discounts, and one offered a duty drawback discount.

Price leadership

Twelve purchasers indicated that DAK was a price leader in the U.S. PET resin market, 3 reported Indorama, 2 reported M&G, and 1 reported APG were price leaders. Purchasers also listed firms related to DAK ((Alpa (1 purchaser) and Alpek (1 purchaser)) and a firm related to Indorama (Auriga (1 purchaser)). Purchasers reported that these price leaders led by being the first in the industry to put out announcement letters, driving price direction, leading impact on domestic and global PET resin pricing, and size. Two purchasers indicated that there were no price leaders in the U.S. PET resin market.

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[6] Importer *** stated that it quotes prices based on F.O.B. at the U.S. port dockside.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following PET resin products shipped to unrelated U.S. customers during January 2015–September 2021.

> **Product 1.**-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

> **Product 2.**-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in sheet and strapping.

> **Product 3.**-- PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in carbonated soft drink applications.

> **Product 4.**-- PET resin, being mainly a co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

Four U.S. producers and eight importers provided usable pricing data for sales of the requested products,[7] although not all firms reported pricing for all products for all quarters.[8] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of PET resin, *** percent of U.S. shipments of subject imports from Canada, *** percent from Oman, and *** percent from China in 2020.[9] [10] No pricing data was received for imports from India. Price data for products 1-4 are presented in tables V-4 to V-7 and figures V-2 to V-5.

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[7] In addition, staff incorporated pricing data M&G provided in the Commission's 2018 final investigations to cover the period prior to APG's acquisition of M&G.

[8] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[9] Pricing coverage is based on coverage of U.S. shipments reported in questionnaires.

[10] No price data was reported for PET resin imported from China after the first quarter of 2016. The reported data accounted for approximately *** percent of U.S. shipments of subject imports from China in 2015-16.

Table V-4
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	US price	US quantity	Canada price	Canada quantity	Canada margin	China price	China quantity	China margin
2015 Q1	***	***	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***

Table continued.

Table V-4 Continued
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	India price	India quantity	India margin	Oman price	Oman quantity	Oman margin
2015 Q1	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

Table V-5
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	US price	US quantity	Canada price	Canada quantity	Canada margin	China price	China quantity	China margin
2015 Q1	***	***	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***

Table continued.

Table V-5 Continued
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	India price	India quantity	India margin	Oman price	Oman quantity	Oman margin
2015 Q1	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in sheet and strapping.

Table V-6
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	US price	US quantity	Canada price	Canada quantity	Canada margin	China price	China quantity	China margin
2015 Q1	***	***	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***

Table continued.

Table V-6 Continued
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	India price	India quantity	India margin	Oman price	Oman quantity	Oman margin
2015 Q1	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in carbonated soft drink applications.

Table V-7
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	US price	US quantity	Canada price	Canada quantity	Canada margin	China price	China quantity	China margin
2015 Q1	***	***	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***

Table continued.

Table V-7 Continued
PET resin: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and in dollars per pound; Margins in percent

Period	India price	India quantity	India margin	Oman price	Oman quantity	Oman margin
2015 Q1	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: PET resin, being mainly a co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

Figure V-2
PET resin: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2015–September 2021

Price of product 1

*   *   *   *   *   *   *

Volume of product 1

*   *   *   *   *   *   *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

Figure V-3
PET resin: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2015–September 2021

Price of product 2

*   *   *   *   *   *   *

Volume of product 2

*   *   *   *   *   *   *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in sheet and strapping.

Figure V-4
PET resin: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2015–September 2021

Price of product 3

*   *   *   *   *   *   *

Volume of product 3

*   *   *   *   *   *   *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.78 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in carbonated soft drink applications.

Figure V-5
PET resin: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2015–September 2021

Price of product 4

*   *   *   *   *   *   *

Volume of product 4

*   *   *   *   *   *   *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: PET resin, being mainly a co-polymer, and having an intrinsic viscosity of 0.75 IV to 0.86 IV, in the solid state form. This PET resin product is typically used in heat set or hot fill applications; food, household, and other products.

Import purchase cost data

Three importers reported useable import purchase cost data for product 1.[11] Purchase cost data reported by these firms accounted for *** percent of imports from Oman and *** percent of imports from Canada in 2020.[12] Landed duty paid purchase cost data for imports from Oman and Canada are presented in tables V-8, along with U.S. producers' sales prices.[13]

Importers reporting import purchase cost data were asked to provide additional information regarding the costs and benefits of importing PET resin for their own use or retail sale.

One (***) of six reporting importers reported that they incurred additional costs beyond landed duty-paid costs by importing PET resin for their own use or retail sale rather than purchasing from a U.S. producer or U.S. importer. The total additional cost incurred is reported between *** percent compared to the landed duty-paid value. Firms were also asked to identify specific additional costs they incurred as a result of importing PET resin for their own use or retail sale. Reported costs include logistical and supply chain management cost, inventory carrying cost, bulk delivery, and personnel cost.

Firms were also asked to describe how these additional costs incurred by importing PET resin for their own use or retail sale compares with additional costs incurred when purchasing from a U.S. producer or U.S. importer. Firms stated that they imported rather than purchasing from a U.S. producer or importer due to supply shortages from U.S. domestic producers, a desire to diversify supply to mitigate supply interruptions, hedging options due to domestic PET resin producers' alleged inability or unwillingness to package PET resin in large bags, an alleged lack of regional capacity coverage creating gaps in several regions in the United States (e.g. the that many producers Pacific Northwest, West, and Southwest) where the nearest domestic PET resin producer is up to 2,500 miles away, transportation savings, the allegation outside of the United States have larger scale and more technologically advanced production lines with lower

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[11] *** provided purchase cost data for ***. However, the cost data were significantly higher than the average cost and quantity values were very insignificant; thus, the data were not utilized.

[12] Data reported for *** was ***. *** import percentage was calculated as *** due to values greater than zero, but less than "0.05" percent.

[13] LDP import value does not include any potential additional costs that a purchaser may incur by importing rather than purchasing from another importer or U.S. producer. Price-cost differentials are based on LDP import values whereas margins of underselling/overselling are based on importer sales prices.

conversion costs than U.S. producers, relationship with foreign supplier, internal consumption of excess stock, and duty drawback on exports of material.

Importers were asked if they compare costs of importing to the cost of purchasing from a U.S. producer in determining whether to import PET resin. Five importers compare costs to purchasing from a U.S. importer, and one importer does not compare costs of purchasing from either U.S. producers or importers. Seven importers reported benefits from importing PET resin for their own use or retail sale instead of purchasing from U.S. producers or importers. The benefits stated were to address supply issues (4 of 7 reporting); diversification of supplier (3 of 7 reporting); shipping and transportation advantages (3 of 7 reporting); and operating as a subsidiary or trading company (2 of 7 reporting).

Firms were also asked whether the import cost (both excluding and including additional costs) of PET resin they imported are lower than the price of purchasing PET resin from a U.S. producer or importer. One importer (***) reported that the import costs excluding additional costs were lower than purchasing from a U.S. producer or importer and estimated that they saved *** percent of the purchase price by importing PET resin rather than purchasing from a U.S. producer or importer.[14]

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[14] One firm reported that it based its estimates on previous company transactions, one reported basing its estimates on market research, and one reported other basis for its estimates such as transfer of excess stock from Canadian plant to U.S. plant.

Table V-8
PET resin: Import landed duty-paid purchase costs and domestic prices, and quantities of product 1, and price-cost differentials, by quarter, January 2015–September 2021

Quantity in 1,000 pounds; Prices and unit LDP values in dollars per pound; Differentials in percent

Period	US price	US quantity	Canada price	Canada quantity	Canada margin	Oman price	Oman quantity	Oman margin
2015 Q1	***	***	***	***	***	***	***	***
2015 Q2	***	***	***	***	***	***	***	***
2015 Q3	***	***	***	***	***	***	***	***
2015 Q4	***	***	***	***	***	***	***	***
2016 Q1	***	***	***	***	***	***	***	***
2016 Q2	***	***	***	***	***	***	***	***
2016 Q3	***	***	***	***	***	***	***	***
2016 Q4	***	***	***	***	***	***	***	***
2017 Q1	***	***	***	***	***	***	***	***
2017 Q2	***	***	***	***	***	***	***	***
2017 Q3	***	***	***	***	***	***	***	***
2017 Q4	***	***	***	***	***	***	***	***
2018 Q1	***	***	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

Note: Quantity and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note: U.S. producer price data is the same as that presented in table V-4.

Figure V-6
PET resin: U.S. producer prices and import purchase costs, and quantities, of product 1, by quarter, January 2015–September 2021

Price of product 1

*　　　*　　　*　　　*　　　*　　　*　　　*

Volume of product 1

*　　　*　　　*　　　*　　　*　　　*　　　*

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: PET resin, being either a clear homo- or co-polymer, and having an intrinsic viscosity of 0.72 IV to 0.84 IV, in the solid state form. This PET resin product is typically used in water bottle applications.

Price and purchase cost trends

In general, prices increased during January 2015–September 2021. Table V-9 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** to *** percent during January 2015–September 2020 while import price increases ranged from *** to *** percent. The price of domestic product 3 declined between the first quarter of 2015 and the third quarter of 2021 by *** percent. of the price of product 1 imported from Oman decreased by *** percent during the same period. Reported import purchase cost data from Canada and Oman did not span the entire period of investigation and trends were not calculated.

Table V-9
PET resin: Summary of weighted-average f.o.b. prices and importer purchase costs, for products 1-4, by country, January 2015–September 2021

Quantity in 1,000 pounds; Prices in dollars per pound; Changes in percent

Product	Source	Number of quarters	Volume of shipments	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	***	***	***	***	***	***	***
Product 1	Canada	***	***	***	***	***	***	***
Product 1	China	***	***	***	***	***	***	***
Product 1	India	***	***	***	***	***	***	***
Product 1	Oman	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***
Product 2	Canada	***	***	***	***	***	***	***
Product 2	China	***	***	***	***	***	***	***
Product 2	India	***	***	***	***	***	***	***
Product 2	Oman	***	***	***	***	***	***	***
Product 3	United States	***	***	***	***	***	***	***
Product 3	Canada	***	***	***	***	***	***	***
Product 3	China	***	***	***	***	***	***	***
Product 3	India	***	***	***	***	***	***	***
Product 3	Oman	***	***	***	***	***	***	***
Product 4	United States	***	***	***	***	***	***	***
Product 4	Canada	***	***	***	***	***	***	***
Product 4	China	***	***	***	***	***	***	***
Product 4	India	***	***	***	***	***	***	***
Product 4	Oman	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Percentage change from the first quarter in which data were available to the last quarter in which price data were available in 2021.

Price and purchase cost comparisons[15]

Price comparisons

As shown in tables V-10 and V-11, prices for products imported from subject countries were below those for U.S.-produced product in 52 of 127 instances (317.6 million pounds); margins of underselling ranged from 0.0 to 44.4 percent. In the remaining 75 instances (541.1 million pounds), prices for product from subject countries were between 0.2 and 193.3 percent above prices for the domestic product.

Prices for PET resin imported from Canada were below those of U.S. produced product in *** of *** instances; margins of underselling ranged from *** to *** percent. In the remaining *** instances, price for PET resin from Canada were between *** to *** percent above prices for the domestic product.

For PET resin imported from China, prices were below those of U.S. produced product in *** of *** instances; margins of underselling ranged from *** to *** percent. In the remaining *** instances, price for PET resin from China were between *** to *** percent higher than above prices for domestic product.

Prices for PET resin imported from India were below those of U.S. produced product in *** of *** instances; margins of underselling ranged from *** to *** percent. In the remaining *** instances, price for PET resin from India were between *** to *** percent above prices for the domestic product.

PET resin imports from Oman were priced below U.S.-produced product in *** of *** instances with margins of underselling ranging from *** to *** percent. In the remaining *** instances, prices for PET resin from Oman were between *** to *** percent above prices for the domestic product.

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[15] In the original investigations, subject imports from Canada were priced lower than domestic product in 35 of 48 comparisons, with underselling margins ranging from *** to *** percent; subject imports from China were priced lower than domestic product in 17 of 35 comparisons, with underselling margins ranging from *** to *** percent; subject imports from India were priced lower than domestic product in 14 of 30 comparisons, with underselling margins ranging from *** to *** percent; subject imports from Oman were priced lower than domestic product in 32 of 56 comparisons, with underselling margins ranging from *** to *** percent. Original publication, pp. V-34–V-35.

Table V-10
PET resin: Instances of underselling/overselling and the range and average of margins, by product

Quantity in 1,000 pounds; Margins in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	***	***	***	***	***
Product 2	Underselling	***	***	***	***	***
Product 3	Underselling	***	***	***	***	***
Product 4	Underselling	***	***	***	***	***
All products	Underselling	52	***	10.7	0.0	44.4
Product 1	Overselling	***	***	***	***	***
Product 2	Overselling	***	***	***	***	***
Product 3	Overselling	***	***	***	***	***
Product 4	Overselling	***	***	***	***	***
All products	Overselling	75	***	(18.8)	(0.2)	(193.3)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table V-11
PET resin: Instances of underselling and overselling and the range and average of margins, by country

Quantity in 1,000 pounds; Margins in percent

Source	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Canada	Underselling	***	***	***	***	***
China	Underselling	***	***	***	***	***
India	Underselling	***	***	***	***	***
Oman	Underselling	***	***	***	***	***
All subject sources	Underselling	52	***	10.7	0.0	44.4
Canada	Overselling	***	***	***	***	***
China	Overselling	***	***	***	***	***
India	Overselling	***	***	***	***	***
Oman	Overselling	***	***	***	***	***
All subject sources	Overselling	75	***	(18.8)	(0.2)	(193.3)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Price-cost comparisons

As shown in table V-12 and V-13, usable purchase cost data for product 1 was only reported for Oman and Canada.[16] Landed duty-paid costs for PET resin imported from Oman were below the sales price for U.S.-produced product in *** of *** instances ***; price-cost differentials ranged from *** to *** percent. In the remaining *** instances ***, landed duty-paid costs for PET resin from Oman were between *** to *** percent above sales prices for the domestic product. Landed duty-paid costs for PET resin imported from Canada were below the sales price for U.S.-produced product in *** of *** instances. In the remaining *** instances ***, landed duty-paid costs for PET resin from Oman were between *** to *** percent above sales prices for the domestic product.

Table V-12
PET resin: Instances of lower/(higher) average unit purchase costs compared to U.S. prices and the range and average of price/cost differentials, by product, January 2015 through September 2021

Quantity in 1,000 pounds; Margins in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Lower	***	***	***	***	***
Product 2	Lower	***	***	***	***	***
Product 3	Lower	***	***	***	***	***
Product 4	Lower	***	***	***	***	***
All products	Lower	5	***	7.4	3.3	11.5
Product 1	Higher	***	***	***	***	***
Product 2	Higher	***	***	***	***	***
Product 3	Higher	***	***	***	***	***
Product 4	Higher	***	***	***	***	***
All products	Higher	7	***	(27.8)	(17.2)	(44.5)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

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[16]Purchase cost data for PET resin from China was reported for one quarter and was too small an amount to register for calculations.

Table V-13
PET resin: Instances of lower/(higher) average unit purchase costs compared to U.S. prices and the range and average of price/cost differentials, by country, January 2015 through September 2021

Quantity in 1,000 pounds; Margins in percent

Source	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Canada	Lower	***	***	***	***	***
China	Lower	***	***	***	***	***
India	Lower	***	***	***	***	***
Oman	Lower	***	***	***	***	***
All subject sources	Lower	5	***	7.4	3.3	11.5
Canada	Higher	***	***	***	***	***
China	Higher	***	***	***	***	***
India	Higher	***	***	***	***	***
Oman	Higher	***	***	***	***	***
All subject sources	Higher	7	***	(27.8)	(17.2)	(44.5)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Note: Quantity and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent or under 100 pounds.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
86 FR 16701 March 31, 2021	*Initiation of Five-Year (Sunset) Reviews*	https://www.govinfo.gov/content/pkg/FR-2021-03-31/pdf/2021-06645.pdf
86 FR 17197 April 1, 2021	*Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Institution of Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2021-04-01/pdf/2021-06358.pdf
86 FR 37343, July 7, 2021	*Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Notice of Commission Determination To Conduct Full Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2021-07-15/pdf/2021-15088.pdf
86 FR 38982, July 23, 2021	*Polyethylene Terephthalate Resin From the People's Republic of China and India: Final Results of the Expedited First Sunset Reviews of the Countervailing Duty Orders*	https://www.govinfo.gov/content/pkg/FR-2021-07-23/pdf/2021-15662.pdf
86 FR 41009, July 30, 2021	*Polyethylene Terephthalate Resin From Canada, China, India, and Oman: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*	https://www.govinfo.gov/content/pkg/FR-2021-07-30/pdf/2021-16253.pdf
86 FR 58101, October 20, 2021	*Polyethylene Terephthalate (PET) Resin From Canada, China, India, and Oman; Scheduling of Full Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2021-10-20/pdf/2021-22802.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in the United States International Trade Commission's hearing via videoconference:

Subject:	Polyethylene Terephthalate ("PET") Resin from Canada, China, India, and Oman
Inv. Nos.:	701-TA-531-532 and 731-TA-1270-1273 (Review)
Date and Time:	January 27, 2022 - 9:30 a.m.

OPENING REMARKS:

In Support of Continuation (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
In Opposition to Continuation (**J. Scott Maberry**, Sheppard, Mullin, Richter & Hampton LLP
 and **Daniel L. Porter**, Curtis, Mallet-Prevost, Colt & Mosle LLP)

**In Support of the Continuation of
 Antidumping and Countervailing Duty Orders:**

Kelley Drye & Warren LLP
Washington, DC
on behalf of

DAK Americas LLC
Indorama Ventures USA, Inc.
Nan Ya Plastics Corporation, America
APG Polytech, LLC

> **John Cullen**, Director, PET Commercial Sales, DAK Americas LLC
>
> **John Freeman**, Assistant Director of Sales,
> Nan Ya Plastics Corporation, America
>
> **Sathish Seshadri**, Regional Sales Manager, PET – US & Canada,
> Indorama Ventures USA, Inc.
>
> **Andre Meyer**, Vice President Supply Chain & Marketing,
> APG Polytech, LLC
>
> **Gina Beck**, Economist, Georgetown Economic Services LLC

In Support of the Continuation of
     <u>**Antidumping and Countervailing Duty Orders (continued):**</u>

        Brad Hudgens, Economist, Georgetown Economic Services LLC

            Paul C. Rosenthal   )
            Kathleen W. Cannon   )
) – OF COUNSEL
            Brooke M. Ringel   )
            Elizabeth C. Johnson   )

In Opposition to the Continuation of
     <u>**Antidumping and Countervailing Duty Orders:**</u>

Curtis, Mallet-Prevost, Colt & Mosle LLP
Washington, DC
<u>on behalf of</u>

OCTAL SAOC-FZC
OCTAL Inc.
     (collectively "OCTAL")

        William J. (Joe) Barenberg, Jr., Chief Operating Officer, OCTAL Inc.

        George Freiji, Vice President, General Manager Resin
            and Global Procurement, OCTAL SAOZ FZC

        Prashant Boloor, Senior Sales Director PET Resin,
            OCTAL SAOZ FZC

        Arnaud Figard, Vice President/General Manager Sheet Business
            OCTAL SAOZ FZC

            Daniel L. Porter   )
            James P. Durling   )
            James Beaty   ) – OF COUNSEL
            Ana Amador   )
            Katherine Afzal   )

In Opposition to the Continuation of
      <u>**Antidumping and Countervailing Duty Orders (continued):**</u>

Sheppard, Mullin, Richter & Hampton LLP
Washington, DC
<u>on behalf of</u>

Niagara Bottling, LLC ("Niagara")

      Shawn Safieddin, Vice President of Supply Chain, Niagara

      Cara Groden, Senior Economic Consultant, ION Economics, LLC

            J. Scott Maberry   )
) – OF COUNSEL
            Mario A. Torrico   )

<u>REBUTTAL/CLOSING REMARKS:</u>

In Support of Continuation
(**Kathleen W. Cannon** and **Paul C. Rosenthal**, Kelley Drye & Warren LLP)

In Opposition to Continuation
(**James P. Durling**, Curtis, Mallet-Prevost, Colt & Mosle LLP and
      J. Scott Maberry, Sheppard, Mullin, Richter & Hampton LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
PET resin: Summary data concerning the U.S. market, 2015-20, January to September 2020, and January to September 2021
     Quantity=1,000 pounds; Value=1,000 dollars; Unit values and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data							
	Calendar year						Jan-Sep	
	2015	2016	2017	2018	2019	2020	2020	2021
U.S. consumption quantity:								
Amount...	6,301,683	7,020,939	6,967,552	7,039,110	6,922,370	7,306,649	5,502,361	5,649,252
Producers' share (fn1).............................	85.4	79.2	80.2	80.5	81.4	83.8	85.6	79.4
Importers' share (fn1):								
Canada..	***	***	***	***	***	***	***	***
China..	***	***	***	***	***	***	***	***
India...	***	***	***	***	***	***	***	***
Oman..	***	***	***	***	***	***	***	***
Subject sources.................................	***	***	***	***	***	***	***	***
Nonsubject sources...........................	***	***	***	***	***	***	***	***
All import sources...........................	14.6	20.8	19.8	19.5	18.6	16.2	14.4	20.6
U.S. consumption value:								
Amount...	3,515,413	3,445,416	3,631,417	4,438,588	3,910,728	3,221,435	2,425,047	3,055,984
Producers' share (fn1).............................	85.9	79.1	79.5	80.2	82.1	84.4	86.0	78.9
Importers' share (fn1):								
Canada..	***	***	***	***	***	***	***	***
China..	***	***	***	***	***	***	***	***
India...	***	***	***	***	***	***	***	***
Oman..	***	***	***	***	***	***	***	***
Subject sources.................................	***	***	***	***	***	***	***	***
Nonsubject sources...........................	***	***	***	***	***	***	***	***
All import sources...........................	14.1	20.9	20.5	19.8	17.9	15.6	14.0	21.1
U.S. importers' U.S. shipments of imports from:								
Canada:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***
China:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***
India:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***
Oman:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***
Subject sources:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***
Nonsubject sources:								
Quantity...	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value..	***	***	***	***	***	***	***	***
Ending inventory quantity......................	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1 continued
PET resin: Summary data concerning the U.S. market, 2015-20, January to September 2020, and January to September 2021
Quantity=1,000 pounds; Value=1,000 dollars; Unit values and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Period changes						
			Comparison years				Jan-Sep
	2015-20	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
U.S. consumption quantity:							
Amount	▲15.9	▲11.4	▼(0.8)	▲1.0	▼(1.7)	▲5.6	▲2.7
Producers' share (fn1)	▼(1.7)	▼(6.3)	▲1.1	▲0.2	▲0.9	▲2.4	▼(6.2)
Importers' share (fn1):							
Canada	▼***	▼***	▼***	▼***	▼***	▲***	▲***
China	▼***	▼***	▼***	***	***	▲***	***
India	▼***	▼***	▼***	***	***	***	***
Oman	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Subject sources	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Nonsubject sources	▲***	▲***	▼***	▼***	▲***	▼***	▲***
All import sources	▲1.7	▲6.3	▼(1.1)	▼(0.2)	▼(0.9)	▼(2.4)	▲6.2
U.S. consumption value:							
Amount	▼(8.4)	▼(2.0)	▲5.4	▲22.2	▼(11.9)	▼(17.6)	▲26.0
Producers' share (fn1)	▼(1.5)	▼(6.8)	▲0.4	▲0.7	▲1.9	▲2.3	▼(7.1)
Importers' share (fn1):							
Canada	▼***	▼***	▼***	▼***	▼***	▲***	▲***
China	▼***	▼***	▼***	***	***	▲***	***
India	▼***	▼***	▼***	***	***	***	***
Oman	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Subject sources	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Nonsubject sources	▲***	▲***	▼***	▼***	▲***	▼***	▲***
All import sources	▲1.5	▲6.8	▼(0.4)	▼(0.7)	▼(1.9)	▼(2.3)	▲7.1
U.S. importers' U.S. shipments of imports from:							
Canada:							
Quantity	▼***	▼***	▼***	▼***	▼***	▲***	▲***
Value	▼***	▼***	▼***	▼***	▼***	▲***	▲***
Unit value	▼***	▼***	▲***	▲***	▲***	▼***	▼***
Ending inventory quantity	▼***	▼***	***	▼***	***	***	▼***
China:							
Quantity	▼***	▼***	▼***	***	***	***	***
Value	▼***	▼***	▼***	***	***	***	***
Unit value	▲***	▼***	▼***	***	***	***	***
Ending inventory quantity	▼***	▼***	***	***	***	***	***
India:							
Quantity	▼***	▼***	▼***	***	***	***	***
Value	▼***	▼***	▼***	***	***	***	***
Unit value	▼***	▼***	▼***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***
Oman:							
Quantity	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Value	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Unit value	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Ending inventory quantity	▼***	▼***	▼***	▼***	***	▲***	▲***
Subject sources:							
Quantity	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Value	▼***	▼***	▲***	▲***	▼***	▲***	▲***
Unit value	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Ending inventory quantity	▼***	▼***	▼***	▼***	***	▲***	▲***
Nonsubject sources:							
Quantity	▲***	▲***	▼***	▼***	▲***	▼***	▲***
Value	▲***	▲***	▲***	▲***	▼***	▼***	▲***
Unit value	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Ending inventory quantity	▲***	▲***	▲***	▲***	▼***	▼***	▲***

Table C-1 continued
PET resin: Summary data concerning the U.S. market, 2015-20, January to September 2020, and January to September 2021
    Quantity=1,000 pounds; Value=1,000 dollars; Unit values and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Reported data							
	Calendar year						Jan-Sep	
	2015	2016	2017	2018	2019	2020	2020	2021
U.S. importers' U.S. shipments of imports from:								
All import sources:								
Quantity..	918,655	1,463,688	1,377,155	1,376,127	1,288,634	1,186,986	794,920	1,164,348
Value..	494,381	718,879	743,339	878,062	699,838	501,533	338,329	644,389
Unit value...	$0.54	$0.49	$0.54	$0.64	$0.54	$0.42	$0.43	$0.55
Ending inventory quantity......................	79,077	96,182	129,116	171,969	115,643	108,025	99,310	124,672
U.S. producers':								
Average capacity quantity........................	6,606,992	6,606,992	6,500,742	6,299,914	6,712,568	6,715,988	5,033,220	5,033,220
Production quantity...................................	5,595,057	5,834,288	5,609,181	5,885,823	5,674,697	6,130,398	4,641,685	4,538,145
Capacity utilization (fn1)...........................	84.7	88.3	86.3	93.4	84.5	91.3	92.2	90.2
U.S. shipments:								
Quantity..	5,383,028	5,557,251	5,590,397	5,662,983	5,633,736	6,119,663	4,707,441	4,484,904
Value..	3,021,032	2,726,537	2,888,078	3,560,526	3,210,890	2,719,902	2,086,718	2,411,595
Unit value...	$0.56	$0.49	$0.52	$0.63	$0.57	$0.44	$0.44	$0.54
Export shipments:								
Quantity..	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***
Unit value...	***	***	***	***	***	***	***	***
Ending inventory quantity.........................	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)..............	***	***	***	***	***	***	***	***
Production workers...................................	889	886	931	960	1,002	974	974	978
Hours worked (1,000s).............................	1,865	1,959	2,054	1,958	2,189	2,171	1,636	1,626
Wages paid ($1,000)................................	70,785	68,629	66,190	68,108	79,652	80,042	58,208	64,806
Hourly wages (dollars per hour)...............	$37.95	$35.03	$32.22	$34.78	$36.39	$36.87	$35.58	$39.86
Productivity (pounds per hour).................	3,000	2,978	2,731	3,006	2,592	2,824	2,837	2,791
Unit labor costs ($ per 1,000 pounds)......	$12.65	$11.76	$11.80	$11.57	$14.04	$13.06	$12.54	$14.28
Net sales:								
Quantity..	5,585,046	5,730,256	5,722,208	5,740,186	5,708,365	6,238,551	4,802,781	4,535,509
Value..	3,138,112	2,816,541	2,962,466	3,609,506	3,252,475	2,769,332	2,126,084	2,439,618
Unit value...	$0.56	$0.49	$0.52	$0.63	$0.57	$0.44	$0.44	$0.54
Cost of goods sold (COGS)......................	***	***	***	***	***	***	***	***
Gross profit or (loss) (fn2)........................	***	***	***	***	***	***	***	***
SG&A expenses.......................................	***	***	***	***	***	***	***	***
Operating income or (loss) (fn2)...............	***	***	***	***	***	***	***	***
Net income or (loss) (fn2).........................	***	***	***	***	***	***	***	***
Unit COGS...	***	***	***	***	***	***	***	***
Unit SG&A expenses................................	***	***	***	***	***	***	***	***
Unit operating income or (loss) (fn2)........	***	***	***	***	***	***	***	***
Unit net income or (loss) (fn2).................	***	***	***	***	***	***	***	***
COGS/sales (fn1).....................................	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)...............	***	***	***	***	***	***	***	***
Capital expenditures................................	***	***	***	***	***	***	***	***
Research and development expenses.....	***	***	***	***	***	***	***	***
Net assets...	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1 continued
PET resin: Summary data concerning the U.S. market, 2015-20, January to September 2020, and January to September 2021
Quantity=1,000 pounds; Value=1,000 dollars; Unit values and unit expenses=dollars per pound; Period changes=percent--exceptions noted

	Period changes						
			Comparison years				Jan-Sep
	2015-20	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
U.S. importers' U.S. shipments of imports from:							
All import sources:							
Quantity..............................	▲29.2	▲59.3	▼(5.9)	▼(0.1)	▼(6.4)	▼(7.9)	▲46.5
Value..................................	▲1.4	▲45.4	▲3.4	▲18.1	▼(20.3)	▼(28.3)	▲90.5
Unit value...........................	▼(21.5)	▼(8.7)	▲9.9	▲18.2	▼(14.9)	▼(22.2)	▲30.0
Ending inventory quantity.....................	▲36.6	▲21.6	▲34.2	▲33.2	▼(32.8)	▼(6.6)	▲25.5
U.S. producers':							
Average capacity quantity......................	▲1.6	---	▼(1.6)	▼(3.1)	▲6.6	▲0.1	---
Production quantity................................	▲9.6	▲4.3	▼(3.9)	▲4.9	▼(3.6)	▲8.0	▼(2.2)
Capacity utilization (fn1).........................	▲6.6	▲3.6	▼(2.0)	▲7.1	▼(8.9)	▲6.7	▼(2.1)
U.S. shipments:							
Quantity..............................	▲13.7	▲3.2	▲0.6	▲1.3	▼(0.5)	▲8.6	▼(4.7)
Value..................................	▼(10.0)	▼(9.7)	▲5.9	▲23.3	▼(9.8)	▼(15.3)	▲15.6
Unit value...........................	▼(20.8)	▼(12.6)	▲5.3	▲21.7	▼(9.4)	▼(22.0)	▲21.3
Export shipments:							
Quantity..............................	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Value..................................	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Unit value...........................	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Ending inventory quantity.....................	▼***	▲***	▼***	▲***	▲***	▼***	▲***
Inventories/total shipments (fn1)..............	▼***	▲***	▼***	▲***	▼***	▼***	▲***
Production workers................................	▲9.6	▼(0.3)	▲5.1	▲3.1	▲4.4	▼(2.8)	▲0.4
Hours worked (1,000s)............................	▲16.4	▲5.0	▲4.8	▼(4.7)	▲11.8	▼(0.8)	▼(0.6)
Wages paid ($1,000).............................	▲13.1	▼(3.0)	▼(3.6)	▲2.9	▲16.9	▲0.5	▲11.3
Hourly wages (dollars per hour)..............	▼(2.9)	▼(7.7)	▼(8.0)	▲7.9	▲4.6	▲1.3	▲12.0
Productivity (pounds per hour)................	▼(5.9)	▼(0.7)	▼(8.3)	▲10.1	▼(13.8)	▲8.9	▼(1.6)
Unit labor costs ($ per 1,000 pounds)......	▲3.2	▼(7.0)	▲0.3	▼(1.9)	▲21.3	▼(7.0)	▲13.9
Net sales:							
Quantity..............................	▲11.7	▲2.6	▼(0.1)	▲0.3	▼(0.6)	▲9.3	▼(5.6)
Value..................................	▼(11.8)	▼(10.2)	▲5.2	▲21.8	▼(9.9)	▼(14.9)	▲14.7
Unit value...........................	▼(21.0)	▼(12.5)	▲5.3	▲21.5	▼(9.4)	▼(22.1)	▲21.5
Cost of goods sold (COGS).....................	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Gross profit or (loss) (fn2).......................	▲***	▲***	▼***	▲***	▼***	▼***	▲***
SG&A expenses.....................................	▼***	▼***	▲***	▲***	▲***	▲***	▼***
Operating income or (loss) (fn2)...............	▲***	▲***	▼***	▲***	▲***	▼***	▲***
Net income or (loss) (fn2)........................	▲***	▲***	▼***	▲***	▼***	▼***	▲***
Unit COGS..	▼***	▼***	▲***	▲***	▼***	▼***	▲***
Unit SG&A expenses...............................	▼***	▼***	▲***	▲***	▼***	▼***	▼***
Unit operating income or (loss) (fn2)........	▲***	▲***	▼***	▲***	▲***	▼***	▲***
Unit net income or (loss) (fn2).................	▲***	▲***	▼***	▲***	▲***	▼***	▲***
COGS/sales (fn1)..................................	▼***	▼***	▲***	▼***	▼***	▼***	▼***
Operating income or (loss)/sales (fn1).....	▲***	▲***	▼***	▲***	▲***	▼***	▲***
Net income or (loss)/sales (fn1)..............	▲***	▲***	▼***	▲***	▼***	▲***	▲***
Capital expenditures...............................	▲***	▲***	▼***	▲***	▲***	▼***	▲***
Research and development expenses.....	▲***	▼***	▲***	▲***	▲***	▲***	▼***
Net assets..	▲***	▲***	▼***	▲***	▼***	▲***	***

Note.--Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent (if positive) and greater than "(0.05)" percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

Source: Compiled from data submitted in response to Commission questionnaires.

Summary data from original investigations (excerpted)

Table C-1
PET resin: Summary data concerning the U.S. market, 2012-14, January to September 2014, and January to September 2015
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Report data					Period changes			
	Calendar year			January to September			Calendar year		Jan-Sep
	2012	2013	2014	2014	2015	2012-14	2012-13	2013-14	2014-15
U.S. consumption quantity:									
Amount..	***	***	***	***	***	***	***	***	***
Producers' share (fn1)..................	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
Canada.....................................	***	***	***	***	***	***	***	***	***
China..	***	***	***	***	***	***	***	***	***
India...	***	***	***	***	***	***	***	***	***
Oman...	***	***	***	***	***	***	***	***	***
Subject sources......................	***	***	***	***	***	***	***	***	***
Of which subject to non de minimis AD margins...........	***	***	***	***	***	***	***	***	***
Of which subject to non de minimis CVD margins.........	***	***	***	***	***	***	***	***	***
Korea..	***	***	***	***	***	***	***	***	***
Mexico......................................	***	***	***	***	***	***	***	***	***
Taiwan......................................	***	***	***	***	***	***	***	***	***
All other sources........................	***	***	***	***	***	***	***	***	***
Nonsubject sources.................	***	***	***	***	***	***	***	***	***
Total imports........................	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount..	***	***	***	***	***	***	***	***	***
Producers' share (fn1)..................	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
Canada.....................................	***	***	***	***	***	***	***	***	***
China..	***	***	***	***	***	***	***	***	***
India...	***	***	***	***	***	***	***	***	***
Oman...	***	***	***	***	***	***	***	***	***
Subject sources......................	***	***	***	***	***	***	***	***	***
Of which subject to non de minimis AD margins...........	***	***	***	***	***	***	***	***	***
Of which subject to non de minimis CVD margins.........	***	***	***	***	***	***	***	***	***
Korea..	***	***	***	***	***	***	***	***	***
Mexico......................................	***	***	***	***	***	***	***	***	***
Taiwan......................................	***	***	***	***	***	***	***	***	***
All other sources........................	***	***	***	***	***	***	***	***	***
Nonsubject sources.................	***	***	***	***	***	***	***	***	***
Total imports........................	***	***	***	***	***	***	***	***	***
U.S. imports from:									
Canada:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
China:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
India:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Oman:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Subject sources:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Subtotal, subject to AD (fn3):									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Share of subject imports............	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Subtotal, subject to CVD (fn4):									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Share of subject imports............	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Korea:									
Quantity....................................	6,813	11,077	3,334	2,903	6,058	(51.1)	62.6	(69.9)	108.7
Value..	5,041	8,044	2,183	1,898	3,141	(56.7)	59.6	(72.9)	65.5
Unit value.................................	$0.74	$0.73	$0.65	$0.65	$0.52	(11.5)	(1.8)	(9.8)	(20.7)
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Mexico:									
Quantity....................................	307,005	212,080	384,706	284,329	312,693	25.3	(30.9)	81.4	10.0
Value..	232,554	148,768	278,741	208,249	180,995	19.9	(36.0)	87.4	(13.1)
Unit value.................................	$0.76	$0.70	$0.72	$0.73	$0.58	(4.3)	(7.4)	3.3	(21.0)
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Taiwan:									
Quantity....................................	74,594	78,949	65,992	54,664	81,072	(11.5)	5.8	(16.4)	48.3
Value..	56,646	63,747	49,006	40,729	48,415	(13.5)	12.5	(23.1)	18.9
Unit value.................................	$0.76	$0.81	$0.74	$0.75	$0.60	(2.2)	6.3	(8.0)	(19.8)
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
All other sources:									
Quantity....................................	144,340	120,425	112,443	77,777	142,263	(22.1)	(16.6)	(6.6)	82.9
Value..	107,243	88,779	78,771	56,365	76,707	(26.5)	(17.2)	(11.3)	36.1
Unit value.................................	$0.74	$0.74	$0.70	$0.72	$0.54	(5.7)	(0.8)	(5.0)	(25.6)
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity....................................	532,753	422,531	566,476	419,672	542,086	6.3	(20.7)	34.1	29.2
Value..	401,483	309,338	408,701	307,241	309,257	1.8	(23.0)	32.1	0.7
Unit value.................................	$0.75	$0.73	$0.72	$0.73	$0.57	(4.3)	(2.9)	(1.5)	(22.1)
Ending inventory quantity............	***	***	***	***	***	***	***	***	***
Total imports:									
Quantity....................................	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value.................................	***	***	***	***	***	***	***	***	***
Ending inventory quantity............	***	***	***	***	***	***	***	***	***

Table continued.--

Table C-1--Continued
PET resin: Summary data concerning the U.S. market, 2012-14, January to September 2014, and January to September 2015
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Report data					Period changes			
	Calendar year			January to September		Calendar year			Jan-Sep
	2012	2013	2014	2014	2015	2012-14	2012-13	2013-14	2014-15
U.S. producers':									
Average capacity quantity............................	6,857,842	6,744,856	6,604,313	4,953,235	4,953,235	(3.7)	(1.6)	(2.1)	0.0
Production quantity...................................	5,706,121	5,627,090	5,357,911	4,092,589	4,335,267	(6.1)	(1.4)	(4.8)	5.9
Capacity utilization (fn1)...........................	83.2	83.4	81.1	82.6	87.5	(2.1)	0.2	(2.3)	4.9
U.S. shipments:									
Quantity...	5,278,504	5,217,493	5,126,103	3,984,793	4,128,863	(2.9)	(1.2)	(1.8)	3.6
Value..	4,139,466	4,078,200	3,616,987	2,868,939	2,465,704	(12.6)	(1.5)	(11.3)	(14.1)
Unit value...	$0.78	$0.78	$0.71	$0.72	$0.60	(10.0)	(0.3)	(9.7)	(17.1)
Export shipments:									
Quantity...	492,050	345,436	250,241	202,813	227,142	(49.1)	(29.8)	(27.6)	12.0
Value..	358,590	250,490	168,672	140,309	127,300	(53.0)	(30.1)	(32.7)	(9.3)
Unit value...	$0.73	$0.73	$0.67	$0.69	$0.56	(7.5)	(0.5)	(7.0)	(19.0)
Ending inventory quantity............................	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)...................	***	***	***	***	***	***	***	***	***
Production workers...................................	1,060	1,057	989	989	982	(6.7)	(0.3)	(6.4)	(0.7)
Hours worked (1,000s)................................	1,683	1,681	1,581	1,236	1,219	(6.1)	(0.1)	(5.9)	(1.4)
Wages paid ($1,000)................................	41,036	41,064	40,652	33,384	33,026	(0.9)	0.1	(1.0)	(1.1)
Hourly wages (dollars)...............................	$24.38	$24.43	$25.71	$27.01	$27.09	5.5	0.2	5.3	0.3
Productivity (pounds per hour).......................	3,390.4	3,347.5	3,388.9	3,311.2	3,556.4	(0.0)	(1.3)	1.2	7.4
Unit labor costs.....................................	$7.19	$7.30	$7.59	$8.16	$7.62	5.5	1.5	4.0	(6.6)
Net Sales:									
Quantity...	***	***	***	***	***	***	***	***	***
Value..	***	***	***	***	***	***	***	***	***
Unit value...	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)............................	***	***	***	***	***	***	***	***	***
Gross profit or (loss)...............................	***	***	***	***	***	***	***	***	***
SG&A expenses..	***	***	***	***	***	***	***	***	***
Operating income or (loss)..........................	***	***	***	***	***	***	***	***	***
Net income or (loss).................................	***	***	***	***	***	***	***	***	***
Capital expenditures.................................	***	***	***	***	***	***	***	***	***
Unit COGS..	***	***	***	***	***	***	***	***	***
Unit SG&A expenses...................................	***	***	***	***	***	***	***	***	***
Unit operating income or (loss).....................	***	***	***	***	***	***	***	***	***
Unit net income or (loss)...........................	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)....................................	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)..............	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)....................	***	***	***	***	***	***	***	***	***

fn1.--Report data are in percent and period changes are in percentage points.
fn2.--Undefined.

APPENDIX D

LIKELY EFFECT OF REVOCATION

Table D-1

PET resin: Firms' narratives on the impact of the order(s) and the likely impact of revocation

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	U.S. producers	***
Effect of order	U.S. producers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	U.S. producers	***
Effect of order	U.S. producers	***
Likely impact of revocation	U.S. producers	***
Likely impact of revocation	U.S. producers	***
Likely impact of revocation	U.S. producers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	U.S. producers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	Foreign producers	***
Effect of order	Foreign producers	***
Likely impact of revocation	Foreign producers	***
Likely impact of revocation	Foreign producers	***

Source: Compiled from data submitted in response to Commission questionnaires.