Unwrought Palladium from Russia

Investigation Nos. 701-TA-776 and 731-TA-1761 (Preliminary)

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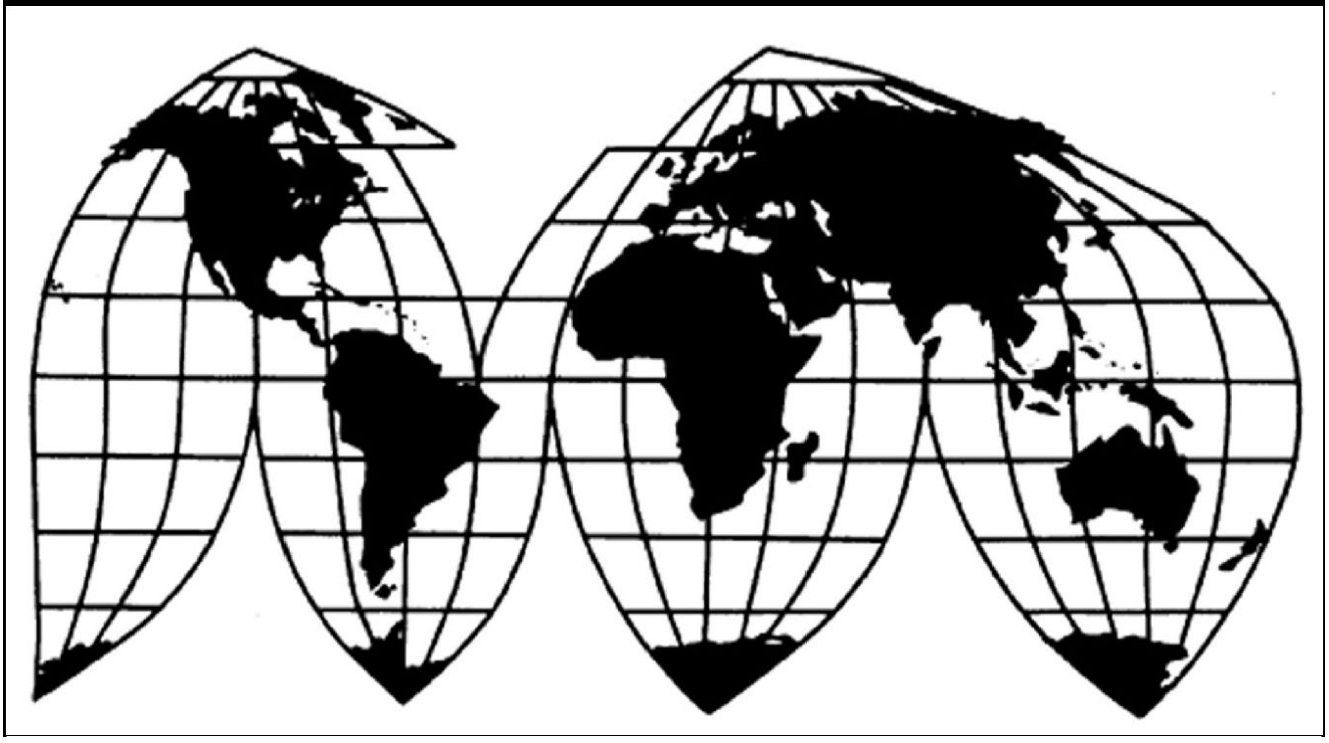
U.S. International Trade Commission



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U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual firms may not be published. Such information is identified by brackets ([ ]) in confidential reports and is deleted and replaced with asterisks (***) in public reports. Zeroes, null values, and undefined calculations are suppressed and shown as em dashes (—) in tables. If using a screen reader, we recommend increasing the verbosity setting.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-776 and 731-TA-1761 (Preliminary)

Unwrought Pallidum from Russia

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of unwrought palladium from Russia, provided for in subheading 7110.21.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV") and subsidized by the government of Russia.[2]

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in § 207.21 of the Commission's rules, upon notice from the U.S. Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under §§ 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under §§ 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Any other party may file an entry of appearance for the final phase of the investigations after publication of the final phase notice of scheduling. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations. As provided in section 207.20 of the Commission's rules,

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

[2] 90 FR 41032, August 22, 2025 and 90 FR 41039, August 22, 2025.

the Director of the Office of Investigations will circulate draft questionnaires for the final phase of the investigations to parties to the investigations, placing copies on the Commission's Electronic Document Information System (EDIS, https://edis.usitc.gov), for comment.

BACKGROUND

On July 30, 2025, Stillwater Mining Company and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Industrial and Services Workers International Union, AFL-CIO, CLC filed petitions with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized imports of unwrought palladium from Russia and LTFV imports of unwrought palladium from Russia. Accordingly, effective July 30, 2025, the Commission instituted countervailing duty investigation No. 701-TA-776 and antidumping duty investigation No. 731-TA-1761 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference 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* of August 4, 2025 (90 FR 36451). The Commission conducted its conference on August 20, 2025. All persons who requested the opportunity were permitted to participate.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of unwrought palladium from Russia that are allegedly sold in the United States at less than fair value and subsidized by the government of Russia.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

The petitions in these investigations were filed on July 30, 2025, by Stillwater Mining Company d/b/a Sibanye-Stillwater ("Sibanye-Stillwater"), a U.S. producer of unwrought palladium, and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO, CLC ("USW") (collectively, "Petitioners"), which states it is a recognized union that is representative of the domestic

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[2] *American Lamb Co.*, 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

industry engaged in the manufacture of unwrought palladium in the United States.[3] Petitioners appeared at the staff conference with counsel and submitted a postconference brief.[4]

Two respondent entities – BASF Metals LLC ("BASF"), a U.S. importer of palladium,[5] and Metal Trade Overseas AG ("Metal Trade"), a producer/exporter of palladium from Russia – entered an appearance in these investigations.[6] Counsel for Metal Trade appeared at the staff conference; both respondents filed postconference briefs.[7]

U.S. industry data are based on the questionnaire responses of three firms, accounting for all U.S. production of mined ("primary") unwrought palladium and a portion of recycled ("secondary") unwrought palladium during 2024.[8] U.S. import data are based on official Commerce statistics and questionnaire responses from four firms that accounted for nearly all subject imports from Russia and approximately one-half of nonsubject imports in 2024.[9] The

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[3] Petitions, EDIS Doc. 858072 (July 30, 2025). Unless otherwise specified all citations to the Petition refer to Volume I.

[4] Submission of Participant Testimony, EDIS Doc. 859818 (Aug. 18, 2025) ("Pet. Written Testimony"); Petitioners' Postconference Brief, EDIS Doc. 860354 (Aug. 25, 2025) ("Petitioners' Postconference Br.").

[5] BASF Metals LLC Entry of Appearance, EDIS Doc. 859104 (Aug. 8, 2025).

[6] Metal Trade Overseas AG Entry of Appearance, EDIS Doc. 859792 (Aug. 18, 2025).

[7] BASF Metals LLC's Postconference Brief, EDIS Doc. 860368 (Aug. 25, 2025) ("BASF Postconference Br."); Metal Trade Overseas AG's Postconference Brief, EDIS Doc. 860501 (Aug. 26, 2025) ("Metal Trade Postconference Br.").

[8] Confidential Staff Report ("CR"), INV-XX-119 (Sept. 8, 2025) at 1.4, 3.1, Table 3.1; Palladium from Russia, Inv. Nos. 701-TA-776 and 731-TA-1761 (Preliminary), USITC Pub. 5671 (Sept. 2025) ("PR") at 1.4, 3.1, Table 3.1; Petition at 2 ("Petition"). The Commission sent questionnaires to 22 firms identified in the petition as potential U.S. producers (which included platinum-group metal ("PGM") refiners). CR/PR at 3.1. As noted above only three firms responded to the Commission's questionnaire, one that has both mining and recycling operations, and two that have recycling operations. The record indicates that Sibanye-Stillwater is the only domestic firm with mining operations. Petitioners state there are a number of additional recycling firms that did not respond. Additionally, Johnson Matthey was the only PGM refiner that responded to the toll processing portion of the U.S. producer questionnaire. Through these investigations, however, Commission Staff determined that there are several additional PGM refining companies for which it did not receive questionnaire responses. We consider that the available questionnaire data provide the best information available with respect to production of the domestic like product. However, given missing questionnaire responses, the data in the current record may understate the volume and value of U.S. producers' production and shipments. We intend to seek information from the aforementioned additional firms in any final phase of these investigations.

[9] CR at 1.4, 4.1. ***. CR/PR at 4.2, n.2. Because nonsubject imports as reported in the questionnaire responses are incomplete, the Commission has used official import statistics under HTSUS statistical reporting number 7110.21.0000 for U.S. import data for these preliminary phase investigations. CR/PR at Table 4.2.

The Commission has also used the official import statistics, adjusted as noted below, as a proxy for U.S. importers' U.S. shipment data for purposes of the preliminary phase of these investigations, on account of *** and because ***. CR/PR at 4.14 n.7. Therefore, to calculate apparent U.S. consumption,

Commission received usable responses to its questionnaires from one foreign producer/exporter of subject merchandise, accounting for *** percent of production of subject merchandise in Russia and *** percent of U.S. imports from Russia in 2024 based on official import statistics.[10]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[11] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "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 the product."[12] In turn, 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."[13]

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by the U.S. Department of Commerce ("Commerce").[14] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[15] The Commission

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the Commission adjusted the official import statistics to remove official foreign-origin export (re-exports) statistics as reported in schedule B with respect to statistical reporting number 7110.21.0000, allocated to individual original import source based on official import statistics, and changes in importer inventory levels as reported by the responding U.S. importer to Commission questionnaires. CR/PR at Tables 4.10, C.1. The Commission intends to investigate these market dynamics and how to best refine its subject import U.S. shipments, apparent consumption, and market share data in any final phase investigations.

[10] CR/PR at 7.3, Table 7.1.

[11] 19 U.S.C. § 1677(4)(A).

[12] 19 U.S.C. § 1677(4)(A).

[13] 19 U.S.C. § 1677(10).

[14] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[15] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v.*

then defines the domestic like product in light of the imported articles Commerce has identified.[16] The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[17] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[18] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[19] The Commission may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[20]

In its notices of initiation, Commerce defined the imported merchandise within the scope of these investigations as:

United States, Case No. 19-1289, slip op. at 8-9 (Fed. Circ. Feb. 7, 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[16] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–52 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

[17] *See, e.g., Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. See *Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[18] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[19] *See*, *e.g.*, *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49*; see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[20] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 at 8 n.34 (Nov. 2001); *Torrington,* 747 F. Supp. at 748-49 (holding that the Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

> Unwrought palladium covered by this proceeding includes palladium, whether or not refined, in the form of ingots, blocks, lumps, billets, cakes, slabs, pigs, cathodes, anodes, briquettes, cubes, sticks, grains, sponge, pellets, shot, powder, and similar forms. The scope does not cover rolled, forged, drawn or extruded products, tubular products or cast or sintered forms which have been machined or processed otherwise than by simple trimming, scalping, or descaling.
>
> Unwrought palladium is covered by the scope regardless of production method. The scope includes unwrought palladium produced through ore extraction, unwrought palladium produced by recycling palladium containing scrap, unwrought palladium produced by any other method, and blends of unwrought palladium produced by different methods.
>
> The scope includes unwrought palladium that is commingled with unwrought palladium from sources not subject to these investigations or commingled with other metals. Only the subject unwrought palladium component of such commingled products is covered by the scope of these investigations.
>
> Subject merchandise includes merchandise matching the above description that has been finished, packaged, or otherwise processed in a third country, including by refining, grinding, commingling, adding or removing additives, or performing any other finishing, packaging, or processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the subject country.[21]

Palladium is one of six platinum-group metals ("PGMs") that possess similar, yet notably different, physical and chemical characteristics.[22] Palladium is designated as a "critical mineral" by the U.S. government because of its relative scarcity and unique physical properties that are essential for the manufacture and performance of important end-use products.[23] Unwrought palladium, whether or not refined, is available in various forms.[24] Nearly all refined

[21] *Unwrought Palladium From the Russian Federation: Initiation of Less-Than-Fair-Value Investigation*, 90 Fed. Reg. 41032 (Dep't Commerce Aug. 22, 2025); *Unwrought Palladium From the Russian Federation: Initiation of Countervailing Duty Investigation*, 90 Fed. Reg. 41039 (Dep't Commerce Aug. 22, 2025).

[22] CR/PR at 1.8.

[23] CR/PR at 1.8.

[24] CR/PR at 1.8. These forms include, but are not limited to, ingots, blocks, lumps, billets, cakes, sponges, slabs, pigs, cathodes, anodes, briquettes, cubes, sticks, grains, pellets, shot, and powder. *Id.*

unwrought palladium consumed in the United States is in the form of high-purity, industrial-grade "sponge" or powder.[25] Palladium sponge consists of coarse-grained, porous, granular particles with purity of 99.95 percent or more, while palladium powder is more compact, consisting of finer and more uniform grains, also with purity of 99.95 percent or more.[26] Refined unwrought palladium cast in the form of ingots (referred to as "Good Delivery" bars or plates) are the basis of trading on organized commodity exchanges and physical-investment holdings.[27]

Palladium is valued by end users for its chemical stability, high melting point, durability, electrical conductivity, corrosion and oxidation resistance, hydrogen absorbance, and especially its unique catalytic capabilities.[28] The large majority of palladium is used in catalytic converters to control emissions from internal combustion engines. Additional catalytic applications for palladium include chemical synthesis, petroleum refining, hydrogen fuel cells, and hydrogen generation and purification. Noncatalytic applications for palladium include electronic components and connections, advanced materials, dental fillings, precious jewelry, and investment items.[29]

A. Arguments of the Parties

Petitioners and Respondent Metal Trade both argue that the Commission should define a single domestic like product that includes both unrefined and refined primary and secondary palladium.[30]

Petitioners and Respondent Metal Trade agree that the Commission's semifinished product analysis supports including unrefined and refined palladium in a single domestic like product because unrefined palladium imparts essential characteristics to the refined palladium and is dedicated to use as industrial grade palladium.[31] These parties also agree that mined and recycled palladium should constitute a single domestic like product because, regardless of

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[25] CR/PR at 1.8.

[26] CR/PR at 1.8.

[27] CR/PR at 1.8. Palladium considered as Good Delivery meets the product quality and refinery accreditation requirements of the London Bullion Market Association ("LBMA") and the London Platinum & Palladium Market ("LPPM"). Palladium refiners so certified appear on the LPPM's Palladium Good Delivery List. CR/PR at 1.8-1.9, n.19.

[28] CR/PR at 1.10.

[29] CR/PR at 1.10-1.11.

[30] Petitioners' Postconference Br. at 3; Metal Trade Postconference Br. at 7-11. BASF did not make any arguments regarding domestic like product.

[31] Petitioners' Postconference Br., Questions and Answers, at 4-6; Metal Trade Postconference Br. at 10-11.

whether the inputs were ore or recycled material, or both, unwrought palladium is interchangeable and indistinguishable.[32] Petitioners note that in Sibanye-Stillwater's production process, mined and recycled materials are co-mingled before smelting for subsequent base-metal refining into filter cake.[33] Metal Trade argues that under the traditional six-factor test, there are no clear dividing lines between mined and recycled palladium.[34]

B. Analysis

Based on the record in these preliminary investigations, we define a single domestic like product consisting of all unwrought palladium coextensive with the scope.

1. Background

The subject merchandise consists of both primary palladium extracted from palladium-bearing ores and secondary palladium recovered from recycled palladium-bearing waste, scrap, and post-consumer items, whether refined or unrefined.[35] Sibanye-Stillwater blends primary and secondary palladium together in its smelting and refining processes, and those inputs are indistinguishable in the final product.[36]

Sibanye-Stillwater's production involves three successive processing stages: (1) mining and concentrating, (2) smelting and base-metal refining, and (3) precious-metal refining.[37] For primary palladium production, ore is ground into a slurry and undergoes a flotation process to increase the PGM content. The flotation concentrate is then filtered to reduce moisture prior to being sent by truck to the smelter and base-metal refinery.[38] For secondary palladium, the first stage consists of "decanning" to extract the ceramic core from within the steel converter shell, followed by crushing and grinding, and bagging the fine-grained material for shipment to smelters.[39] The crushed material is assayed for its precious-metals content by both processors and smelters.

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[32] Petitioners' Postconference Br., Questions and Answers, at 6-8; Metal Trade Postconference Br. at 8-9.

[33] Petitioners' Postconference Br., Questions and Answers, at 6.

[34] Metal Trade Postconference Br. at 8-9.

[35] CR/PR at 1.9.

[36] CR/PR at 1.9. By contrast, subject foreign producer MMC Norilsk Nickel ("Nornickel") produces palladium solely from its own mined ores, and does not incorporate any secondary palladium. *Id*. Nornickel is the parent company of Metal Trade. *Id.* at 1.4 n.6.

[37] CR/PR at 1.14.

[38] CR/PR at 1.14-1.15.

[39] CR/PR at 1.16.

During the smelting stage, the crushed material is heated with flux materials to separate out the metal-rich ores from the slag materials.[40] Smelting removes the bulk of the gangue materials.[41] The molten matte is then further processed through a granulation circuit before being sent for base-metal refining. At the base-metal refinery, a three-step acid leach process first extracts the nickel and remaining iron, followed by extraction of copper, and finally a polish leach to extract any remaining nickel, iron, and copper, resulting in a final "filter cake".[42] This filter cake is then sent to toll processors for precious-metals refining to extract the individual precious metals.[43] The precious metals refining process separates and purifies the precious metals by chemical leaching processes, resulting in palladium sponge that is at least 99.95 percent pure,[44] which is considered "industrial grade."

2. Whether refined and unrefined unwrought palladium should be two separate domestic like products.

We consider below whether two in-scope products at two different stages of processing, unrefined (any form up until and including filter cake,) and refined (sponge, with 99.95 percent purity) palladium, should be included in the same domestic like product or treated as two separate domestic like products. Because this question concerns whether articles at different stages of processing should be included in the same domestic like product, we analyze the issue using a semifinished product analysis.[45] Based on that analysis, we find that refined and unrefined palladium form a single domestic like product for purposes of these preliminary investigations.

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[40] CR/PR at 1.16.

[41] CR/PR at 1.18.

[42] CR/PR at 1.19. At Sibanye-Stillwater, the filter cake contains 60 to 65 percent PGMs. CR/PR at 1.19, n. 54.

[43] CR/PR at 1.16-1.19.

[44] CR/PR at 1.20.

[45] In a semifinished products analysis, the Commission examines the following: (1) the significance and extent of the processes used to transform the upstream into the downstream articles; (2) whether the upstream article is dedicated to the production of the downstream article or has independent uses; (3) differences in the physical characteristics and functions of the upstream and downstream articles; (4) whether there are perceived to be separate markets for the upstream and downstream articles; and (5) differences in the costs or value of the vertically differentiated articles. *See, e.g.*, *Glycine from India, Japan, and Korea*, Inv. Nos. 731-TA-1111-1113 (Preliminary), USITC Pub. 3921 (May 2007) at 7; *Artists' Canvas from China*, Inv. No. 731-TA-1091 (Final), USITC Pub. 3853 (May 2006) at 6; *Live Swine from Canada*, Inv. No. 731-TA-1076 (Final), USITC Pub. 3766 (Apr. 2005) at 8 n.40; *Certain Frozen Fish Fillets from Vietnam*, Inv. No. 731-TA-1012 (Preliminary), USITC Pub. 3533 (Aug. 2002) at 7.

Dedication for Use. The record indicates that unrefined palladium ore is ultimately dedicated to the production of the downstream article, refined palladium.[46] The same holds true for unrefined recycled materials.[47] Although unrefined ore and recycled material both include additional metals, including other precious metals, processing increases the palladium content but does not change the actual palladium element contained in the inputs.[48]

Separate Markets. The record indicates that there is no separate market for unrefined palladium, as it is all ultimately refined to 99.95 percent purity (or industrial grade) for use in downstream products.[49]

Differences in Physical Characteristics and Functions. The record indicates that the only physical differences between unrefined palladium and refined palladium is the purity of the palladium content.[50] The former product contains other materials, including other PGMs, before the refining process removes them. Metal Trade states that there is no known separate function for the upstream unrefined palladium.[51]

Differences in Costs or Value. The value of both unrefined and refined palladium is generally based on palladium content, so the purity level may affect their value.[52] Refined palladium generally has a higher value than the equivalent quantity of unrefined palladium, given its purity and the fact that it is ready to be used in downstream articles.[53] Record evidence suggests that the fee paid to refine palladium filter cake into palladium sponge is a small percentage (***) of the value of the final product.[54]

Significance and Extent of Processes Used to Transform Upstream Articles into Downstream Articles. The record indicates that the overall process to transform initial extracted ore or recycled palladium into 99.95 percent pure sponge requires multiple phases and is complex and extensive.[55] However, Petitioners assert that once the palladium is in filter cake form, the final refining by a toll processor to remove the other PGMs so as to produce

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[46] Petitioners' Postconference Br., Questions and Answers, at 4; Metal Trade Postconference Br. at 10.

[47] Petitioners' Postconference Br., Questions and Answers, at 4; Metal Trade Postconference Br. at 10.

[48] CR/PR at 1.9.

[49] Petitioners' Postconference Br., Questions and Answers, at 5; Metal Trade Postconference Br. at 10.

[50] Petitioners' Postconference Br., Questions and Answers, at 5; Metal Trade Postconference Br. at 10.

[51] Metal Trade Postconference Br. at 10.

[52] Petitioners' Postconference Br., Questions and Answers, at 5.

[53] Metal Trade Postconference Br. at 11.

[54] Petitioners' Postconference Br., Questions and Answers, at 5.

[55] CR/PR at 1.10-1.20; Petitioners' Postconference Br., Questions and Answers, at 6.

palladium sponge is much less intensive than making the initial filter cake.[56] While the record contains limited evidence regarding the complexity of refining the filter cake into sponge form relative to the preceding processing needed to make the filter cake, as discussed above, the refining fee is a small percentage of the value of the final product.

Conclusion. The available information in these preliminary phase investigations supports finding that unrefined palladium and refined palladium belong in a single domestic like product. The parties agree that unrefined palladium is dedicated for production of refined palladium and that there is no separate market for unrefined palladium. The record also indicates that the two products share essentially the same physical characteristics and have the same end uses, and that the difference in value is based on the palladium content and any additional refining necessary. In light of these considerations, and in the absence of any argument to the contrary, we find that unrefined palladium belongs in the same domestic like product as refined palladium.[57]

3. Whether primary and secondary unwrought palladium should be two separate domestic like products.

We consider below whether primary and secondary palladium should be included in the same domestic like product or be treated as two separate domestic like products. As discussed above, Sibanye-Stillwater co-mingles its unrefined mined palladium with unrefined recycled palladium before the smelting process, which results in palladium filter cake that includes both primary and secondary palladium. The record indicates that Sibanye-Stillwater, the only U.S. mining operation, does not produce palladium filter cake made exclusively of primary palladium.[58]

The record also indicates that primary and secondary palladium share the same basic physical characteristics and general end uses, are sold through the same channels of distribution, and are produced using the same processes from the smelting stage forward.[59] Although primary and secondary palladium are sold using different pricing mechanisms,[60] the

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[56] Petitioners' Postconference Br., Questions and Answers, at 7.

[57] While we define a single domestic like product to include both palladium cake and sponge, we note that record evidence indicates that the large majority of sales of palladium occur in sponge form. CR/PR at 1.8, n.16.

[58] CR/PR at 1.17.

[59] Petitioners' Postconference Br., Questions and Answers, at 5-6; Metal Trade Postconference Br. at 8.

[60] CR/PR at 1.9. As noted, Sibanye-Stillwater blends primary and secondary palladium together in its smelting and refining processes, and those inputs are indistinguishable in the final product.

parties agree that the end-products are interchangeable, and customers do not view them as different products.[61]

In light of these considerations, and in the absence of argument to the contrary, we include both primary and secondary palladium in a single domestic like product for purposes of these preliminary investigations.

4. Conclusion

For the purposes of these preliminary phase investigations, and in the absence of any contrary argument, we define a single domestic like product consisting of unrefined and refined, and primary and secondary palladium, coextensive with the scope in these investigations.[62]

IV. Domestic Industry

The domestic industry is defined 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 the product."[63] 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.

These investigations raise the issue of whether the activities of toll processor Johnson Matthey, which conducts the final processing to refine the palladium cake into palladium sponge, engages in sufficient production-related activities to qualify as a domestic producer.

A. Sufficient Production-Related Activities

In deciding whether a firm qualifies as a domestic producer of the domestic like product, the Commission generally analyzes the overall nature of a firm's U.S. production-related

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However, Sibanye-Stillwater reported that it closely tracks the amounts of primary and secondary palladium that go into its production process. These allocations are used when the product is sold by the toll processor, as there are different pricing mechanisms for sales of Sibanye-Stillwater's primary and secondary palladium. *See* Conf. Tr. at 19 (Mr. Shuck); CR/PR at 1.20, n.57.

[61] Petitioners' Postconference Br., Questions and Answers, at 6; Metal Trade Postconference Br. at 8.

[62] Parties wishing to raise domestic like product arguments should address any data collection issues in their comments on draft questionnaires in any final phase investigations. 19 C.F.R. § 207.20(b).

[63] 19 U.S.C. § 1677(4)(A).

activities, as production-related activity at minimum levels could be insufficient to constitute domestic production.[64]

1. Arguments of the Parties

Petitioner's Arguments. Petitioners contend that the U.S. producers, both miners and recyclers, should be included in the U.S. industry.[65] Petitioners state that they lack sufficient information to take a position on whether Johnson Matthey, a toll processor that engages in the final refining steps, engages in sufficient production-related activities to be considered a domestic producer.[66]

Respondents' Arguments. Respondent Metal Trade argues that recyclers and toll processor refiners (including Johnson Matthey) should be considered domestic producers. It argues that the further processing of filter cake into industrial grade palladium requires technical expertise and significant capital investment in machinery, and that the activities add significant value to the end product.[67] It contends that because the scope includes industrial grade palladium, its producers should be included in the domestic industry.

2. Analysis

Based on available information, with the exception of the starting materials, the complex and extensive processing undertaken by Sibanye-Stillwater, which has mining and recycling operations, and Metallix Refining and Techemet, which have recycling operations, is almost identical.[68] As noted above, Sibanye-Stillwater co-mingles its mined palladium ore and recycled palladium prior to its smelting phase, and the two remain combined throughout the rest of the

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[64] The Commission generally considers six factors: (1) source and extent of the firm's capital investment; (2) technical expertise involved in U.S. production activities; (3) value added to the product in the United States; (4) employment levels; (5) quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. No single factor is determinative, and the Commission may consider any other factors it deems relevant in light of the specific facts of any investigation. *Crystalline Silica Photovoltaic Cells and Modules from China*, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. 4360 at 12-13 (Nov. 2012).

[65] Petitioners' Postconference Br., Questions and Answers, at 9.

[66] Petitioners' Postconference Br., Questions and Answers, at 9.

[67] Metal Trade Postconference Br. at 12-13.

[68] *See* CR/PR at 1.9-1.18 (explaining the extensive production processes). While Techemet engages in its recycling operations pursuant to toll production agreements with its customers, it engages in the same recycling processes as Sibanye-Stillwater and Metallix Refining. *See* CR/PR at 6.1, n.2. Moreover, Techemet's reported sales data include both the firm's and its customers' portions of toll produced unwrought palladium, similar to Sibanye-Stillwater's reporting. *See* CR at 6.11, n.8.

process.[69] Metallix Refining and Techemet do not incorporate any primary product in their production processes. All three firms produce palladium filter cake, and then send it to a toll processor, such as Johnson Matthey, for refining to 99.95 percent pure industrial grade palladium. Their filter cake production processes require significant capital investment and technical expertise, and involve numerous processing steps that incur extensive costs regardless of whether the initial product was primary or secondary material. In light of these considerations, and in the absence of any arguments to the contrary, we conclude that Sibanye-Stillwater, Metallix Refining, and Techemet engage in sufficient production-related activities to be considered producers of the domestic like product and part of the domestic industry.

Based on the record in these preliminary phase investigations, the record at this stage does not contain sufficient evidence to support a conclusion that toll processor Johnson Matthey conducts sufficient production-related activities for inclusion in the domestic industry.[70] Johnson Matthey provided very little information regarding its operations and we intend to further investigate whether it engages in sufficient production related activities in any final phase of this investigation. We nevertheless address the Commission's six factors below based on the information available in this preliminary phase of this investigation.

Source and Extent of Firms' Capital Investment. Respondent Metal Trade argues that the final refining step requires significant capital investment in machinery, but provides no further argumentation or evidence in support of this view.[71]

Johnson Matthey reported that it has specific ***.[72] Johnson Matthey reported greenfield capital investment of $*** from 2022 to 2024.[73] By comparison, U.S. producer Sibanye-Stillwater reported greenfield capital investment of $*** over the same period; U.S. producer Techmet reported greenfield capital investment of $***.[74] The processor reported annual research and development ("R&D") expenses of $*** to $***.[75]

Reported assets were $*** for Metallix Refining, $*** for Sibanye-Stillwater, $*** for Techmet, and $*** for the toll processor. Johnson Mattheys reported $*** in capital

[69] CR/PR at 1.9.

[70] Johnson Matthey is one of possibly several U.S. toll processors. The Commission will seek further information regarding other toll processors in any final phase of these investigations.

[71] Metal Trade Postconference Br. at 12.

[72] U.S. Producer Questionnaire Response of Johnson Matthey at V-3.

[73] CR/PR at Table D.7. Note that the processor did not provide detailed annual breakdown of its expenditures, only noting overall expenditure for the POI, therefore, comparisons with U.S. producers are based on full period. *Id.*

[74] CR/PR at Table D.7.

[75] CR/PR at Table D.7. U.S. producers did not provide information on R&D expenses for comparison.

expenditures; Metallix Refining reported capital expenditures of $***, Sibanye-Stillwater reported capital expenditures of $***, and Techmet reported capital expenditures of $***.[76]

Technical Expertise. Johnson Matthey reported that it ***.[77] Respondent Metal Trade argues that Johnson Matthey's process for refining filter cake to sponge is intensive and that this final processing requires technical expertise in machinery but provides no further argumentation or evidence in support of this view.[78] In comparison, Petitioners contend that the production of the filter cake requires significant technical expertise.[79] As reviewed in section III.B.1 above, the production of filter cake involves putting mined or recycled material a smelting process the output of which then goes through a process of base-metal refining to produce filter cake which is then sent to toll processors for precious-metals refining.[80] Petitioner does not elaborate the technical expertise required for these processes.

Value Added. Johnson Matthey's final processing refines unrefined palladium filter cake into industrial grade palladium with a 99.95 percent purity,[81] which customers can use to manufacture downstream products such as catalytic converters. Respondent Metal Trade argues that this final processing adds significant value to the palladium as it extracts the palladium metal content from the filter cake.[82] Sibanye-Stillwater reported that the toll processing fee paid to Johnson Matthey for the final refinement process accounts for *** of the final product's value.[83] It contends that this final step is minimal compared to the multi-step process described above to produce a filter cake from primary or secondary palladium.[84]

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[76] CR/PR at Table D.7.

[77] U.S. Producer Questionnaire Response of Johnson Matthey at V-3.

[78] Metal Trade Postconference Br. at 12.

[79] Petitioners' Postconference Br., Questions & Answers, at 8-9.

[80] With the exception of source materials, the production process for producing unwrought palladium undertaken by producers Sibanye-Stillwater, which has mining and recycling operations, and Metallix Refining and Techement, which have recycling operations, is almost identical. CR/PR at 1.9.

[81] CR/PR at 1.16. In the case of Sibanye-Stillwater's product, the product would be refined from 60-65 percent purity to 99.95 percent purity. CR/PR at 1.19, n.54.

[82] Metal Trade Postconference Br. at 12. While all reporting U.S. producers and the single toll refiner have provided estimates for value added, the spread in the estimates appears to be too wide to provide a reliable comparison. The Commission will seek further information on this issue in any final phase of these investigations.

[83] Petitioners' Postconference Br., Questions & Answers, at 5. Although the substantiality of production-related activities does not depend on a comparison with confirmed domestic producers, we note that the filter cake producers' direct labor and other factory costs per unit accounted for $*** in 2022, $*** in 2023, and $*** in 2024, representing, respectively, ***, ***, and *** percent of COGS in those years. *Derived from* CR/PR at Table 6.1. However, it is not clear that these figures are comparable to the value-added estimates referenced by the parties.

[84] Petitioners' Postconference Br., Questions & Answers, at 5. However, at the Staff Conference a witness for Sibanye-Stillwater testified that the PGM refining process is complicated and requires specific

Employment Levels. Johnson Matthey reports that ***.[85] Sibanye-Stillwater reported employing *** production-related workers ("PRWs") during the POI, while Metallix and Techemet reported *** PRWs and *** PRWs, respectively.[86]

Quantity and Type of Parts Sourced in United States. Johnson Matthey reported using a mix of domestically sourced primary palladium (*** percent) and domestically sourced secondary palladium (*** percent), as well as imported palladium from nonsubject sources (*** percent).[87] In comparison, Sibanye-Stillwater reported using *** percent domestic inputs; Techmet reported using *** percent domestic inputs.[88]

Other Costs and Activities. There is limited information on the record regarding the costs and activities related to operations performed by Johnson Matthey to refine palladium filter cake into palladium sponge. Johnson & Matthey reports that ***.[89]

Conclusion. We find for purposes of these preliminary phase investigations that the evidence on the record is insufficient to conclude that Johnson Matthey performs sufficient production-related activities for inclusion in the domestic industry. The record in these preliminary investigations suggests that the relevant production-related activities of Johnson Matthey do not require the multiplicity of steps taken by producers of filter cake. The values of assets held by U.S. producers in the aggregate and by *** U.S. producers individually *** that held by Johnson Matthey, and the estimated capital greenfield investments for Johnson Matthey is a fraction of that reported by U.S. producers in the aggregate and by U.S. producer *** but comparable to that reported by U.S producer ***.[90] Moreover, Johnson Matthey employs far fewer production-related workers than U.S. producers in total and *** individual U.S. producers.[91]

In light of data currently available in this preliminary phase investigation and these uncertainties, we find for purposes of these preliminary phase investigations that the evidence on the record is insufficient to conclude that Johnson Matthey performs sufficient production-related activities for inclusion in the domestic industry. We therefore define the domestic industry to include the mining and recycling operations of the U.S. producers Sibanye-

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technical expertise and equipment. Conf. Tr. at 68 (Mr. Shuck) ("{The process} is complicated, and it is labor-intensive. It takes a special expertise to do it, and the key is, if you don't do it right, you don't get a good product. So you've got to have that -- all the pieces in the right place.").

[85] U.S. Producer Questionnaire Response of Johnson Matthey at V-3.

[86] CR/PR at Table D.7.

[87] CR/PR at Table D.7 (at page D.7).

[88] CR/PR at Table D.7.

[89] U.S. Producer Questionnaire Response of Johnson Matthey at V-3.

[90] CR/PR at Table D.7.

[91] CR/PR at Table D.7.

Stillwater, Metallix Refining, and Techemet.[92] The Commission will seek further information on this issue, including information regarding other toll processors, in any final phase of these investigations.

V. Negligible Imports

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible.[93]

Based on the Commission's questionnaire data, during the 12-month period preceding the filing of the petitions (July 2024 through June 2025), imports of unwrought palladium from Russia accounted for 44.4 percent of total imports.[94] As subject imports are clearly above negligible levels, we find that imports of unwrought palladium from Russia are not negligible.

VI. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[95] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[96] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[97] In assessing whether there is a reasonable indication that the

[92] Based on the available evidence in this preliminary phase investigation, we understand that there are likely other companies that are similarly situated to Johnson Matthey as processors in the U.S. market, and the record contains no information regarding those companies.

[93] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

[94] CR/PR at Table 4.9.

[95] 19 U.S.C. §§ 1671b(a), 1673b(a).

[96] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[97] 19 U.S.C. § 1677(7)(A).

domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[98] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[99]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[100] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[101] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[102]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material

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[98] 19 U.S.C. § 1677(7)(C)(iii).

[99] 19 U.S.C. § 1677(7)(C)(iii).

[100] 19 U.S.C. §§ 1671b(a), 1673b(a).

[101] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[102] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

injury threshold.[103] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[104] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[105] It is clear that the existence of injury caused by other factors does not compel a negative determination.[106]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject

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[103] The Uruguay Round Agreements Act Statement of Administrative Action, H. Doc. 103-316 (1994) ("SAA") states at 851-52 ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[104] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[105] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[106] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

imports."[107] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other sources to the subject imports." [108] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[109]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[110] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[111]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

1. Demand Conditions

Domestic demand for unwrought palladium is driven by demand for U.S.-produced downstream products, including catalytic converters that are used in internal combustion engine automobiles.[112] Based on available information, there is currently some limited ability to use substitute products for unwrought palladium in catalytic converters. Palladium accounts

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[107] *Mittal Steel*, 542 F.3d at 876 &78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination . . . {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[108] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[109] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[110] We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[111] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[112] BASF Postconference Br. at 4; Metal Trade Postconference Br. at 15-16; CR/PR 2.5-2.6.

for a small to moderate share of the cost of most of its end-use products.[113] Therefore, the overall demand for unwrought palladium is likely to experience only moderate changes in response to changes in price. Demand decreased over the POI due to increased use of electric vehicles and catalysts other than palladium, such as platinum, in catalytic converters.[114]

U.S. apparent consumption declined from *** troy ounce contained palladium ("TOCPs") in 2022 to *** TOCPs in 2023 and *** TOCPs in 2024, an overall decrease of *** percent.[115] U.S. apparent consumption increased from *** TOCPs in interim (January-March) 2024 to *** TOCPs in interim 2025, or by *** percent.[116]

2. Supply Conditions

The domestic industry was the largest source of supply in the U.S. market during the POI. The domestic industry's share of apparent U.S. consumption decreased from *** percent in 2022 to *** percent in 2023, and then increased to *** percent in 2024, a level *** percentage points lower than in 2022.[117] Its share of apparent U.S. consumption was much lower in interim 2025, at *** percent, than in interim 2024, at *** percent.[118]

There were several notable domestic industry events during the POI, including production curtailments, acquisitions, and layoffs. In September 2024, Sibanye-Stillwater cut its mining production output by 40 percent (200,000 troy ounces of mined ore) annually.[119] Sibanye-Stillwater reports that this restructuring was due to severe financial operating losses, totaling $350 million, and forced them to place the West side of the mine on care and maintenance and lay off over 600 employees.[120] Additionally, shortly after Metallix Refining launched new furnace technology in June 2025, Sibanye-Stillwater announced an $82 million purchase agreement to acquire Metallix Refining in July 2025.[121]

The domestic industry's practical palladium production capacity decreased by *** percent between 2022 and 2024; its capacity in interim 2025 was *** percentage points less

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[113] CR/PR at 2.6, 2.8.
[114] CR/PR at 2.7-2.8.
[115] CR/PR at Table C.1.
[116] CR/PR at Table C.1. Respondent *** asserts that any increase in the volume of imports toward the end of the POI is due to its decision to relocate all of its inventories to the United States, and that the relocated inventories have no effect on the U.S. market, as they are slated for export. *** Postconference Br. at 8.
[117] CR/PR at Table C.1.
[118] CR/PR at Table C.1.
[119] CR/PR at Table 3.3.
[120] CR/PR at Table 3.3.
[121] CR/PR at Table 3.3.

than in interim 2024. [122] The domestic industry's practical capacity utilization rate fluctuated over the POI but ended at a high level, first decreasing from *** percent in 2022 to *** percent 2023, then increasing to *** percent in 2024, for an overall increase of *** percentage points.[123] Its practical capacity utilization rate of *** percent in interim 2025 was *** less than its *** percent utilization rate in interim 2024.[124]

Subject imports were the third largest source of supply to the U.S. market throughout the POI (except for interim 2024). Their share of apparent U.S. consumption increased from *** percent in 2022 to *** percent in 2023, then decreased to *** percent in 2024, for an overall increase of *** percentage points.[125] Notably, subject imports' share of apparent U.S. consumption increased sharply from *** percent in interim 2024 to *** percent in interim 2025, resulting in a level higher than in any of the full years of the POI.[126]

Nonsubject imports were the second largest source of supply to the U.S. market throughout the POI. Their share of apparent U.S. consumption increased from *** percent in 2022 to *** percent in 2023, before falling to *** percent in 2024, for an overall decrease of *** percentage points between 2022 and 2024.[127] Their market share decreased from *** percent in interim 2024 to *** percent in interim 2024, for an decrease of *** percentage points between the interim periods.[128] South Africa was the primary source of nonsubject imports, accounting for *** percent of total U.S. apparent consumption in 2024.[129]

Responding U.S. producers and importers reported that they did not experience supply constraints during the POI.[130]

3. Substitutability and Other Conditions

A substantial portion of unwrought palladium is distributed through global "trading hubs" that provide vault storage, clearing, and verification services not only for refineries but

[122] CR/PR at Table 3.5; Table C.1. The domestic industry's practical palladium production capacity decreased from *** TOCP in 2022 to *** TOCP in 2023 and *** TOCP in 2024; it decreased from *** TOCP in interim 2024 to *** troy ounces in interim 2025. *Id.* The decline in the industry's capacity was mostly due to Sibanye-Stillwater, whose practical capacity declined from *** TOCP in 2023 to *** TOCP in 2024 and from *** TOCP in interim 2024 to *** TOCP in interim 2025. CR/PR at Table 3.7.

[123] CR/PR at Table C.1.

[124] CR/PR at Table 3.5, Table C.1.

[125] CR/PR at Table 4.10, Table C.1.

[126] CR/PR at Table 4.10, Table C.1. It is unclear why subject imports' share was so low in interim 2024 given the full year market share data. *Id.*

[127] CR/PR at Table C.1.

[128] CR/PR at Table C.1.

[129] CR/PR at Table C.1.

[130] CR/PR at 2.5.

also their customers.[131] Market participants maintain supplies of high-purity palladium, in the form of either Good Delivery ingot or accredited sponge,[132] through these trading hub vaults, which allow for transfer of ownership of defined amounts of palladium without the need for physical product transfers. [133] Trading hubs also facilitate location-based physical or electronic swaps of these two unwrought forms for refineries.[134] Johnson Matthey is the major U.S. trading hub for storing, clearing, and trading palladium sponge.[135] BASF also acts as a trading hub and began in 2023 to centralize its palladium from all sources into a single vault in the United States to better manage its global PGM inventory to reduce working capital. Palladium is stored in BASF Metals' vault until it is either sold to customers or transferred to affiliated companies.[136]

We find that there is a high degree of substitutability between subject imports and the domestic like product. Petitioners and Metal Trade agree that palladium of all forms and from all sources is highly fungible and interchangeable as all end-use palladium is sold in 99.95 percent purity form.[137] The respective "Good Delivery" and "accredited" requirements for palladium ingots and sponge by the trading hubs and commodity exchanges adds to this high degree of substitutability. A high degree of substitutability is also supported by the record evidence regarding similar product quality, availability, and lead times; little purchaser preference for particular country of origin or producers; and the relatively small number of non-price factors that purchasers list as affecting purchasing decisions.

We also find that price is one of several important factors in palladium purchasing decisions. Petitioners contend that due to the high degree of interchangeability, price is a very important purchasing factor for palladium.[138] However, the single purchaser responding to the Commission's lost sales/lost revenue survey (***) ranked availability/supply as the most important factor, followed by commercial terms and product quality.[139] We intend to investigate the role of price in purchasing decisions in any final phase investigations.

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[131] CR/PR at 1.11-1.12.

[132] Trading hubs maintain lists of PGM refiners that produce "Good Delivery" palladium and "accredited sponge" after meeting specific criteria. Producers/refiners can be suspended from the accreditation lists for a number of reasons. *See* CR/PR at 1.12, n.36, 7.5.

[133] CR/PR at 1.11-1.12.

[134] CR/PR at 1.11-1.12.

[135] CR/PR at 1.12, n.34.

[136] CR/PR at 1.12, n.34.

[137] Petitioners' Postconference Br. at 5; Conf. Tr. at 138 (Ms. Chen, Metal Trade).

[138] Petitioners' Postconference Br. at 5.

[139] CR/PR at 2.9.

The record indicates that the starting point for palladium price negotiations in the U.S. market, whether a sale is on a contract or spot basis, is one of the indexes set forth by global commodity exchanges, particularly the London Palladium and Platinum Market ("LPPM") and New York Mercantile Exchange ("NYMEX").[140] Parties to a transaction, particularly in the spot market, may also negotiate discounts or premiums depending on their circumstances and overall market supply-demand balance.[141] As a result, producers and end users consider themselves to be price takers and must generally accept the prevailing price set by market forces.[142] The record indicates that some firms that buy on a contract basis may bid for additional volumes or spot purchase on a premium over the daily market price as additional quantities are required to sell to other fabricators or traders.[143] According to Petitioners, unwrought palladium allocated as mined product is sold according to a ***, while product allocated as recycled product is sold on a spot-market basis.[144]

Metal Trade contends that Russian law requires the minimum export price for all palladium exported from Russia to be equal to or more than 95 percent of the price published by the LPPM or LBMA.[145]

Raw material costs, including PGM-bearing ore and/or recovered or recycled spent catalytic converters and other scrap, accounted for the largest component of the cost of goods sold ("COGS") for the domestic industry.[146] Primary palladium costs (***) increased irregularly in terms of unit value (dollars per troy ounces containing palladium) from 2022 to 2024, but were lower in interim 2025 compared with interim 2024.[147] Secondary palladium costs (***) decreased each year in per unit terms from 2022 to 2024, but were higher in interim 2025 compared with interim 2024.[148] U.S. producers' total unit raw material costs decreased sharply from 2022 to 2023, and decreased further in 2024, for an overall decrease of *** percent

[140] CR at 1.12-13, 5.3; Petitioners' Postconference Br. at 5; Metal Trade Postconference Br. at 17-18; BASF Postconference Br. at 3.

[141] CR at 1.13, 5.3. We note that palladium is also bought and sold through the exchanges. Conf. Tr. at 27 (Mr. Binando).

[142] Conf. Tr. at 118 (Ms. Chen); Petitioners' Postconference Br. at 5.

[143] CR/PR at 2.1.

[144] CR/PR at 2.1.

[145] Metal Trade Postconference Br. at 18-19.

[146] Raw materials costs accounted for between *** percent of total COGS between 2022 and 2024, and for *** percent of total COGS in interim 2024 and *** percent in interim 2025. CR/PR at Table 6.1.

[147] CR/PR at 6.12.

[148] CR/PR at 6.12.

between 2022 and 2024.[149] U.S. producers' unit raw material costs were *** percent higher in interim 2025 than in interim 2024.[150]

Unwrought palladium is primarily sold from inventory.[151] U.S. producers and importers reported that *** percent of their commercial shipments were from inventories, with lead times averaging 30 days.[152] According to questionnaire data, spot sales accounted for *** percent and *** percent, respectively, of U.S. shipments of the domestic like product and subject imports, while long-term contract sales accounted for the remainder.[153]

Unwrought palladium is imported under HTSUS statistical reporting number 7110.21.0000, which has a general rate of duty of "Free."[154] Effective April 9, 2022, imports of all products of Russia are subject to duty rates set forth in column 2 of the HTS, which is also "Free" for HTS subheading 7110.21.00.12.[155]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[156]

The volume of U.S. imports of palladium from Russia increased each year of the POI, ending 35.1 percent higher in 2024 than in 2022, and was 50.0 percent higher in interim 2025 compared to interim 2024.[157] Specifically, subject imports increased from *** TOCPs in 2022 to *** TOCPs in 2023 and *** TOCPs in 2024. Subject imports of *** TOCPs in interim 2025 were higher than the *** TOCPs in interim 2024.[158]

Subject imports' share of apparent U.S. consumption increased from *** percent in 2022 to *** percent in 2023, and then decreased to *** percent in 2024, for an overall increase

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[149] CR/PR at Table 6.1. U.S. producers' raw materials costs unit value was $*** in 2022, $*** in 2023, and $*** in 2024. *Id.*

[150] CR/PR at Table 6.1. U.S. producers' raw materials costs unit value was $*** in interim 2024 and $*** in interim 2025. *Id.*

[151] CR/PR at 2.10.

[152] CR/PR at 2.10.

[153] CR/PR at Table 5.3.

[154] CR/PR at 1.7.

[155] CR/PR at 1.7.

[156] 19 U.S.C. § 1677(7)(C)(i).

[157] CR/PR at 4.2. We note that the record indicates that all imports from Russia, and subsequent U.S. shipments of imported palladium, came in the form of palladium sponge. CR/PR at 4.11. As noted above, BASF's consolidation of company-wide palladium supplies in its U.S. vaults may have had an effect on these data.

[158] CR/PR at Table 4.2.

of *** percentage points from 2022 to 2024; it was higher in interim 2025, at *** percent, compared to interim 2024, at *** percent.[159]

Respondent BASF contends that *** its imports from the United States, and that import statistics accordingly overstate both the volume of subject merchandise in the U.S. market and any increase in volume.[160] As discussed in Section I, we have addressed this concern by adjusting the data to account for reexports when examining apparent U.S. consumption and subject imports' share of consumption.[161]

Based on the record of these preliminary phase investigations, we conclude that the volume and increase in volume of the subject imports are significant, both in absolute terms and relative to apparent U.S. consumption during the 2022 to 2024 period. We also conclude that the volume and increase in volume of subject imports is significant, both in absolute terms and relative to consumption in the United States between the 2024 and 2025 interim periods; in particular, subject imports' share of apparent U.S. consumption reached its highest level of the POI in interim 2025.

D. Price Effects of Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of subject imports, the Commission shall consider whether –

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[162]

As addressed in Section VI.B.3. above, we have found that there is a high degree of substitutability between the domestic like product and subject imports and that price is one of several important factors in purchasing decisions of unwrought palladium.

The Commission collected quarterly pricing data for the total quantity and f.o.b. value of unwrought palladium product in sponge form shipped to unrelated U.S. customers from January 2022 to March 2025. *** of three U.S. producers and *** importers provided usable pricing

[159] CR/PR at Table C.1.
[160] BASF Postconference Br. at 8.
[161] *See supra* n.9.
[162] 19 U.S.C. § 1677(7)(C)(ii).

data for sales of the requested products, although not all firms reported pricing for all products for all quarters. Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments of unwrought palladium, and *** percent of U.S. shipments of subject imports from Russia.[163]

In general, prices of the domestic like product and subject merchandise *** over the course of the POI. Prices for product imported from Russia were below those for U.S.-produced product in two of thirteen instances; margins of underselling ranged from *** percent and averaged *** percent. In the remaining 11 instances, prices for product from Russia were between *** percent above prices for the domestic product and an average of *** percent above domestic producer prices.[164] There were *** TOCP of subject imports in the comparisons with lower subject import prices (*** percent of the volume of subject imports in the pricing data) and *** TOCP of subject imports in the comparisons with higher subject import prices (*** percent of the volume of subject imports in the pricing data).[165]

Respondent Metal Trade argues that because subject imports oversold domestic producers in *** quarters and the underselling margin was minimal, the Commission cannot find that subject imports undersold domestic like product to a significant degree.[166] In response, Petitioners contend that any underselling, even at small margins, can affect pricing in this type of market for a commodity good with high price transparency based on public indexes.

Commission Staff contacted five purchasers and received a response from one (***), which reported that it did not buy subject imports instead of the domestic like product.[167] Petitioners contend that Sibanye-Stillwater was unable to submit lost sales and lost revenue allegations due to a lack of detailed information from its customers.[168] However, they assert

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[163] CR/PR at 5.4. We recognize that the pricing data on the record in these preliminary phase investigations likely omit a portion of the domestic industry, particularly U.S. producers with recycling operations.

[164] CR/PR at Table 5.4. Petitioners also argue that ***, and that ***. Petitioners' Postconference Br. at 10. ***. *See* U.S. Importer Questionnaire Response of Johnson Matthey at III-26; Email from Tim Murray, Johnson Matthey to Stephanie Myers Irizarry, U.S. International Trade Commission (Aug. 18, 2025).

[165] CR/PR at 5.9, Table 5.6.

[166] Metal Trade Postconference Br. at 22-23.

[167] CR/PR at 5.10. *** stated that it does not rely on one source of palladium over another and instead aims to "***" and purchasing on the spot market. *Id*. at 5.10-5.11. *** also reported *** purchases of subject merchandise as "***." *Id*. at 5.10.

[168] Petitioners' Postconference Br. at 13. Petitioners report that purchasers sometimes mention access to lower-priced supply but do not tell Sibanye-Stillwater the source of the lower-priced supply. Petitioners' Postconference Br. at 13, Exh. 1.

that ***.[169] They contend that during this same time, ***,[170] and that *** accounted for ***.[171] We intend to investigate further the relationship between subject import pricing and these shifts in purchase volumes in any final phase investigations.

As discussed above, the record indicates that pricing in the U.S. market is based on public indexes, including LPPM and the NYMEX. However, the record in these preliminary phase investigations does not contain information with respect to many of the details regarding calculation of the indexes and their effect on pricing. We intend to investigate such issues further in any final investigation.[172]

We have also examined whether subject imports depressed prices or prevented price increases for domestically produced palladium that otherwise would have occurred to a significant degree. Petitioners assert that subject imports depressed domestic industry prices and prevented price increases which otherwise would have occurred to a significant degree.[173] Respondent BASF argues that palladium is a globally traded commodity with prices based on multiple global commodity exchanges, and, therefore, any changes in pricing trends are based on global supply and demand.[174] Respondents argue that pricing trends of subject imports and U.S. producers tracked the index prices closely.[175] ***[176] BASF contends that prices of imports from Russia and South Africa were also comparable between 2022 and 2024.[177] Respondent Metal Trade asserts that in early 2022, palladium prices spiked based on anticipated supply constraints due to the Russian-Ukraine war, but then decreased after sanctions were not imposed on palladium.[178]

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[169] Petitioners' Postconference Br. at 13-14.

[170] Petitioners' Postconference Br. at 14.

[171] Petitioners' Postconference Br. at 14.

[172] Based on the record of these preliminary phase investigations, Commissioner Johanson does not find that subject imports significantly undersold the domestic like product. He observes that based on this record, subject imports were mostly sold at higher prices than the domestic like product. CR/PR at Tables 5.4, 5.6. As noted above, *** and there is no indication that the pricing data are inaccurate. However, he observes that subject imports' and U.S. producers' prices tracked each other closely throughout the POI, with small margins of underselling and overselling. *Id*. Commissioner Johanson intends to further investigate the significance of subject import underselling in any final phase of these investigations.

[173] Petitioners' Postconference Br. at 15.

[174] BASF Postconference Br. at 10.

[175] Metal Trade Postconference Br. at 22; BASF Postconference Br. at 13.

[176] Compare CR/PR at Figure 5.1 with CR/PR at Figure 5.2.

[177] BASF Postconference Br. at 13. The Commission intends to seek South African import pricing in any final phase investigations.

[178] Metal Trade Postconference Br. at 21.

Prices for both the domestic like product and subject imports decreased from the first quarter of 2022 through the first quarter of 2025, with any increases both transitory and minor. Prices for both the domestic like product and subject imports decreased by *** percent over the POI, and differences between them were ***.[179]

During the POI, the domestic industry's net sales average unit value ("AUV") declined by a greater amount than its unit COGS, resulting in an increase in the industry's COGS-to-net-sales ratio. The industry's net sales AUV decreased overall by $*** per TOCP, or *** percent between 2022 and 2024.[180] It was $*** per TOCP (*** percent) lower in interim 2025 than in interim 2024.[181] The domestic industry's per-unit COGS decreased each year during the POI, with an overall decrease of $*** per TOCP (*** percent) between 2022 and 2024.[182] It was also $*** per TOCP (*** percent) lower in interim 2025 than in interim 2024.[183] As a result, the domestic industry's COGS-to-net-sales ratio increased from *** percent in 2022 to *** percent in 2024, an increase of *** percentage points; it was *** percent in interim 2025, up *** percentage points from *** percent in interim 2024.[184]

While the record in these preliminary phase investigations shows that the volume and market share of subject imports, which are highly substitutable with the domestic like product and priced similarly, significantly increased during the POI as U.S. prices decreased, this occurred as U.S. demand and global palladium prices generally declined.[185] The record is unclear as to how prices are set in this market and how the above-mentioned factors impact U.S. prices for palladium. Based on this record we cannot determine that subject imports did not depress domestic prices to a significant degree.

Thus, for purposes of these preliminary investigations we cannot conclude, based on the limited record, that subject imports did not depress or suppress domestic prices to a significant degree. As noted, there are a number of issues to further investigate in any final phase of these

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[179] CR/PR at 5.5, Table 5.4.

[180] CR/PR at Tables 6.1, 6.2. The domestic industry's net sales average unit value ("AUV") decreased from $*** per troy ounce in 2022 to $*** per troy ounce in 2023 and to $*** per troy ounce in 2024. *Id.*

[181] CR/PR at Tables 6.1, 6.2. The domestic industry's net sales AUV was $*** in interim 2024 and $*** in interim 2025. *Id.*

[182] CR/PR at Tables 6.1, 6.2, C.1. The domestic industry's COGS was $*** per unit in 2022, $*** in 2023, and $*** in 2024. *Id.*

[183] CR/PR at Tables 6.1, 6.2. The domestic industry's per unit COGS in interim 2024 was $*** and $*** in interim 2025. *Id.*

[184] CR/PR at Table 6.1.

[185] We note that the parties agree that supply and demand conditions affect palladium sales prices, in addition to published price indexes. Petitioners' Postconference Br. at 15; BASF's Postconference Br. at 14; Metal Trade's Postconference Br. at 18.

investigations. We will further examine price effects, including how prices are set and negotiated, particularly in the spot market, in any final phase investigations. We will also examine whether the volume of subject imports and the increase in that volume affected prices in the U.S. market.

E. Impact of Subject Imports

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development ("R&D"), and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[186]

The domestic industry became increasingly unprofitable throughout the POI, while apparent consumption was declining, and its performance continued to decline even as apparent consumption increased in interim 2025.

The industry's trade performance generally declined throughout the POI. The industry's practical capacity,[187] production,[188] U.S. shipments,[189] and market share[190] all declined overall from 2022 to 2024, and experienced further declines in interim 2025. Sibanye-Stillwater

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[186] 19 U.S.C. § 1677(7)(C)(iii).

[187] CR/PR at Tables 3.7 and C.1. The industry's practical unwrought palladium capacity declined by *** percent from 2022 to 2024, falling from *** TOCPs in 2022 to *** TOCPs in 2023 and *** TOCPs in 2024; it was *** percent lower in interim 2025, at *** TOCPs, compared to *** TOCPs in interim 2024. *Id.*

[188] CR/PR at Tables 3.7 and C.1. Production decreased by *** percent from 2022 to 2024, falling from *** TOCPs in 2022 to *** TOCPs in 2023 and 2024; it was *** percent lower in interim 2025, at *** TOCPs, than in interim 2024, at *** TOCPs. *Id.*

[189] CR/PR at Tables 3.9 and C.1. The domestic industry's U.S. shipments declined irregularly by *** percent from 2022 to 2024, falling from *** TOCPs in 2022 to *** TOCPs in 2023, and then rising to *** TOCPs in 2024; they were *** percent lower in interim 2025, at *** TOCPs, than in interim 2024, at *** TOCPs. *Id.*

[190] CR/PR at Table C.1. The domestic industry's market share declined irregularly by *** percentage points from 2022 to 2024, falling from *** percent in 2022 to *** percent in 2023, then rising to *** percent in 2024; it was *** percentage points lower in interim 2025, at *** percent, than in interim 2024, at *** percent. *Id.*

reported reducing its mined palladium production ***.[191] As the industry's production fell, its practical capacity utilization increased irregularly from 2022 to 2024 to *** and was similar in interim 2025 and interim 2024.[192]

The industry's end-of-period inventories decreased by *** percent from 2022 to 2024 and were *** percent higher in interim 2025 than in interim 2024. [193] In relation to total shipments, the domestic industry's end-of-period inventories declined by *** percentage points from 2022 to 2024, but were *** percentage points higher in interim 2025, at *** percent, than in interim 2024 at *** percent.[194]

Similarly, most of the domestic industry's employment-related indicators declined overall from 2022 to 2024, and experienced large declines in interim 2025. Specifically, the number of PRWs,[195] total hours worked,[196] and wages paid[197] all declined overall from 2022 to 2024 and in interim 2025. Sibanye-Stillwater reported laying off more than 600 employees, or about 40 percent of its workforce, in 2024.[198] Productivity declined irregularly by *** percent from 2022 to 2024; it was *** percent higher in interim 2025 than in interim 2024.[199]

The industry's financial indicators fell sharply from 2022 to 2023 and were poor

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[191] U.S. Producer Questionnaire Response of Sibanye-Stillwater at II-2.

[192] CR/PR at Tables 3.7 and C.1. The industry's practical unwrought palladium capacity utilization increased irregularly by *** percentage points from 2022 to 2024, falling from *** percent in 2022 to *** percent in 2023, then rising to *** percent in 2024; it was *** percentage points lower in interim 2025, at *** percent, compared to interim 2024, at *** percent. *Id.*

[193] CR/PR at Tables 3.12 and C.1. The industry's end-of-period inventories fell from *** TOCPs in 2022 to *** TOCPs in 2023 and *** TOCPs in 2024; they were higher in interim 2025, at *** TOCPs, compared to interim 2024, at *** TOCPs. *Id.*

[194] CR/PR at Tables 3.12 and C.1. The industry's ratio of inventories to total shipments declined irregularly from 2022 to 2024, rising from *** percent in 2022 to *** percent in 2023, then falling to *** percent in 2024; it was *** percentage points higher in interim 2025, at *** percentage points, compared to *** percent in interim 2024. *Id.*

[195] CR/PR at Table 3.13 and C.1. The industry's number of PRWs declined by *** percent from 2022 to 2024, falling from *** in 2022 to *** in 2023 and *** in 2024; the number of PRWs was *** lower in interim 2025, at ***, than in interim 2024, at ***. *Id.*

[196] CR/PR at Table 3.13 and C.1. The number of total hours worked declined by *** percent from 2022 to 2024, falling from *** in 2022 to *** hours in 2023 and *** hours in 2024; they were *** percent lower in interim 2024, at *** hours, than in 2024, at *** hours. *Id.*

[197] CR/PR at Table 3.13 and C.1. The industry's wages paid declined irregularly by *** percent from 2022 to 2024, rising from $*** in 2022 to $*** in 2023, then falling to $*** in 2024; they were *** percent lower in interim 2025, at $***, than in interim 2024 at $***. *Id.*

[198] Petitioners' Postconference Br. at 18.

[199] CR/PR at Tables 3.13 and C.1. Productivity in TOCPs per 1,000 hours declined irregularly from 2022 to 2024, falling from *** TOCPs per 1,000 hours in 2022 to *** TOCPs per 1,000 hours in 2023, then rising to *** TOCPs per 1,000 hours in 2024; it was higher in interim 2025, at *** TOCPs per 1,000 thousand hours, than in interim 2024 at *** TOCPs per 1,000 hours. *Id.*

throughout the rest of the POI.[200] The industry's gross profits fell and *** in 2023 and remained at *** for the remainder of the POI.[201] Similarly, the industry reported *** in 2023 and 2024 and continued to report losses in interim 2025.[202] The ratio of the industry's operating income to net sales ratios declined from *** ratio in 2022 to a *** ratio in 2023 that worsened in 2024; it continued to decline in interim 2025, compared to interim 2024.[203] Specifically, the industry's ratio of operating income to net sales decreased and became a loss from 2022 to 2024, falling from *** percent in 2022 to *** percent in 2023 and *** percent in 2024; it worsened in interim 2025, to *** percent, compared to *** percent in interim 2024. *Id.* The industry's ratio of net income to net sales also declined and became a loss from 2022 to 2024, falling from *** percent in 2022 to *** percent in 2023 and *** percent in 2024; it worsened in interim 2025, to *** percent, compared to interim 2024, at ***.[204]

The domestic industry's capital expenditures declined irregularly by *** percent between 2022 and 2024; they were *** percent lower in interim 2025 than in interim 2024.[205] The domestic industry's return on assets fell throughout the POI, declining from *** percent in 2022 to *** percent in 2023 and *** percent in 2024.[206]

As discussed above, Sibanye-Stillwater reported severe financial operating losses totaling $*** between 2023 and 2024, which forced it to restructure and layoff many employees.[207] However, Sibanye-Stillwater announced an $82 million purchase agreement to acquire Metallix Refining in July 2025.[208]

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[200] CR/PR at Tables 6.1 and C.1.

[201] CR/PR at Tables 6.1 and C.1. The industry's gross profits fell from $*** in 2022 to $*** in 2023 and $*** in 2024; they were $*** in interim 2025 compared to $*** in interim 2024. *Id.* The industry's net income fell from $*** in 2022 to $*** in 2023 and $*** in 2024; they were lower in interim 2025, at $***, compared to interim 2024, at $***. *Id.*

[202] CR/PR at Tables 6.1 and C.1. The industry's operating income declined from 2022 to 2024, falling from $*** in 2022 to $*** in 2023 and $*** in 2024; it was $*** in interim 2025, compared to $*** in interim 2024. The industry's net income declined from 2022 to 2024, falling from $*** in 2022 to $*** in 2023 and to $*** in 2024; it worsened in interim 2025, to $***, compared to $*** in net income in interim 2024. *Id.*

[203] CR/PR at Tables 6.1 and C.1.

[204] CR/PR at Tables 6.1 and C.1.

[205] CR/PR at Table 6.5. The industry's capital expenditures increased from $*** in 2022 to $*** in 2023 and then decreased to $*** in 2024; they were lower in interim 2025, at $***, than in 2024, at $***. *Id.*

[206] CR/PR at Table 6.8. None of the U.S. producers had research and development expenses. *Id.* at 6.16 n.22.

[207] CR/PR at Tables 3.3, 3.9.

[208] CR/PR at Table 3.3.

As discussed above, the volume and increase in volume of subject imports was significant, both in absolute terms and relative to consumption in the United States during the POI.[209] We cannot find that subject imports did not gain sales and market share at the expense of the domestic industry by underselling the domestic like product.[210] We also cannot conclude, given the decline in domestic producer prices as subject imports increased in volume and market share but during a time of declining demand and global palladium prices, that the significant increase in subject import volume and market share did not depress U.S. prices to a significant degree.[211] We also cannot conclude that the significant and increasing volume of subject imports, which gained sales and market share at the expense of the domestic industry, did not have a significant adverse impact on the domestic industry.[212] [213] Consequently, we are unable to determine that subject imports did not have a significant adverse impact on the domestic industry during the POI.

We have also considered whether there are other factors that may have had an impact on the domestic industry, to ensure we are not attributing injury from other factors to subject imports. Nonsubject imports were the second largest source of supply to the U.S. market throughout the POI. As discussed above, their share of apparent U.S. consumption increased by *** percentage points between 2022 and 2023, before falling by *** percentage points between 2023 and 2024, for an overall decrease of *** percentage points between 2022 and 2024.[214] Their market share decreased by *** percentage points between interim 2024 and

[209] As noted above, the domestic industry's practical capacity declined in each year of the POI and in the interim period. Neither party addresses how the domestic industry's declining capacity may have affected subject import volume or vice versa.

[210] Chair Karpel does not join this sentence given that the Commission is not making a finding on underselling in this preliminary phase in these investigations.

[211] There was a *** percentage point decline in domestic producers' market share from 2022-24 and *** percentage point decline from interim 2024 to interim 2025. CR/PR at Table C.1. As noted in Section II, the Commission intends to further investigate how to best refine its subject import U.S. shipments, apparent consumption, and market share data in any final phase investigations, as well as the implications of *** on any market share shifts.

[212] As noted above, subject imports gained *** percentage points of market share at the expense of the domestic industry from 2022 to 2024 and an additional *** percentage points from interim 2024 to interim 2025.

[213] Commissioner Johanson does not join this sentence. In his view the record in these preliminary phase investigations does not establish that the domestic industry lost sales and market share to subject imports as a result of subject import pricing.

[214] CR/PR at Table C.1. Nonsubject imports' share of apparent U.S. consumption increased from *** percent in 2022 to *** percent in 2023, before falling to *** percent in 2024. *Id.*

interim 2025.[215] While nonsubject imports from South Africa gained *** percentage points of market share from 2022 to 2024 before losing *** percentage points of market share between interim periods, nonsubject imports from countries other than South Africia declined *** percentage points from 2022 to 2024 before gaining *** percentage points between interim periods.[216] We intend to further investigate this issue in any final phase of these investigations.

Respondents argue that palladium prices were artificially high in the beginning of 2022 due to fear of sanctions on Russia, but fell and then ultimately stabilized at the end of 2023 when sanctions were not imposed.[217] Parties also noted that the availability of alternative catalysts and greater purchases of electric automobiles led to a decrease in global demand for palladium.[218] While apparent U.S. consumption declined by *** percent from 2022 to 2024 as prices generally declined, these factors do not explain the increase in subject import volume and market share during the POI. Moreover, while apparent U.S. consumption was higher in interim 2025 than in interim 2024, prices continued to decline. We intend to further investigate the impact of supply and demand, published palladium price indexes, and other factors on U.S. prices in any final phase of these investigations.

In light of these considerations, particularly given the industry's financial performance over the POI and the increase in subject import volume and market share, we cannot conclude that subject imports did not have a significant impact on the domestic industry.

VII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of unwrought palladium from Russia that are allegedly sold in the United States at less than fair value and are allegedly subsidized by the government of Russia.

[215] CR/PR at Table C.1. Nonsubject imports' share of apparent U.S. consumption decreased from *** percent in interim 2024 to *** percent in interim 2024. *Id.*

[216] CR/PR at Table 4.10.

[217] BASF Postconference Br. at 15.

[218] BASF Postconference Br. at 16-17. Prices for platinum, which is a limited substitute for palladium in some catalytic converter applications, were below palladium prices during 2022-2023 and comparable in 2024 and interim 2025. CR/PR at 2.6, 5.8.

Part 1: Introduction

Background

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Stillwater Mining Company ("Sibanye-Stillwater") and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Industrial and Services Workers International Union, AFL-CIO, CLC ("USW"), on July 30, 2025, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of unwrought palladium ("palladium")[1] from Russia. Table 1.1 presents information relating to the background of these investigations.[2] [3]

Table 1.1 Palladium: Information relating to the background and schedule of this proceeding

Effective date	Action
July 30, 2025	Petitions filed with Commerce and the Commission; institution of the Commission investigations (90 FR 36451, August 4, 2025)
August 20, 2025	Commission's conference
August 19, 2025	Commerce's notice of initiation AD (90 FR 41032, August 22, 2025), CVD (90 FR 41039, August 22, 2025)
September 12, 2025	Scheduled date for the Commission's vote
September 15, 2025	Scheduled date for the Commission's determinations
September 22, 2025	Scheduled date for the Commission's views

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission—

> shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such

[1] See the section entitled "The subject merchandise" in Part 1 of this report for a complete description of the merchandise subject in this proceeding.

[2] Pertinent Federal Register notices are referenced in appendix A and may be found at the Commission's website (www.usitc.gov).

[3] A list of witnesses appearing at the conference is presented in appendix B of this report.

merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that—[4]

In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in

[4] Amended by PL 114—27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.
[5] Amended by PL 114—27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part 1 of this report presents information on the subject merchandise, alleged subsidy rates/dumping margins, and domestic like product. Part 2 of this report presents information on conditions of competition and other relevant economic factors. Part 3 presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. Parts 4 and 5 present the volume of subject imports and pricing of domestic and imported products, respectively. Part 6 presents information on the financial experience of U.S. producers. Part 7 presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

Market summary

Palladium is a critical mineral that is primarily used in catalytic converters for automobiles, but it is also used to produce chemical and petroleum catalysts, electronics, dental implements, and jewelry. The leading U.S. producers of palladium are Sibanye-Stillwater, ***, while leading producers of palladium outside the United States include Nornickel of Russia.[6] The leading U.S. importer of palladium from Russia is ***. Leading importers of product from nonsubject countries include ***. U.S. purchasers of palladium are generally refiners that sell refined product for downstream.

Apparent U.S. consumption of palladium totaled approximately *** troy ounces, *** in 2024. Currently, three firms are known to produce unwrought palladium in the United States. U.S. producers' U.S. shipments of unwrought palladium totaled *** troy ounces (***) in 2024, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from subject sources totaled 877,338 troy ounces, ($877.7 million) in 2025 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled 1.2 million troy ounces, ($1.2 billion) in 2025 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, table C.1. The Commission's questionnaires collected data for the years 2022 to 2024 and interim periods January through March of 2024 ("interim 2024") and January through March of 2025 ("interim 2025"). Except as noted, U.S. industry data are based on questionnaire responses of three firms that account for all of primary palladium and not a insubstantial portion of secondary palladium U.S. production of unwrought palladium during 2024. U.S. imports are based on adjusted official import statistics and questionnaire responses of four firms that accounted for nearly all U.S. imports from Russia and approximately half of imports from nonsubject countries.

[6] Metal Trade Overseas provided foreign producer/exporter questionnaire that included applicable palladium operations of its parent, Norilsk Nickel ("Nornickel"). See part 7 for additional information.

Previous and related investigations

Palladium have not been the subject of prior countervailing and antidumping duty investigations in the United States.

Nature and extent of alleged subsidies and sales at LTFV

Alleged subsidies

On August 22, 2025, Commerce published a notice in the Federal Register of the initiation of its countervailing duty investigation on palladium from Russia.[7]

Alleged sales at LTFV

On August 22, 2025, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigation on palladium from Russia.[8] Commerce has initiated an antidumping duty investigation based on estimated dumping margin of 828.09 percent for palladium from Russia.

[7] For further information on the alleged subsidy programs see Commerce's notice of initiation and related CVD Initiation Checklist. 90 FR 41039, August 22, 2025.

[8] 90 FR 41032, August 22, 2025.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[9]

> Unwrought palladium covered by this proceeding includes palladium, whether or not refined, in the form of ingots, blocks, lumps, billets, cakes, slabs, pigs, cathodes, anodes, briquettes, cubes, sticks, grains, sponge, pellets, shot, powder, and similar forms. The scope does not cover rolled, forged, drawn or extruded products, tubular products or cast or sintered forms which have been machined or processed otherwise than by simple trimming, scalping, or descaling.
>
> Unwrought palladium is covered by the scope regardless of production method. The scope includes unwrought palladium produced through ore extraction, unwrought palladium produced by recycling palladium-containing scrap, unwrought palladium produced by any other method, and blends of unwrought palladium produced by different methods.
>
> The scope includes unwrought palladium that is commingled with unwrought palladium from sources not subject to these investigations or commingled with other metals. Only the subject unwrought palladium component of such commingled products is covered by the scope of these investigations.
>
> Subject merchandise includes merchandise matching the above description that has been finished, packaged, or otherwise processed in a third country, including by refining, grinding, commingling, adding or removing additives, or performing any other finishing, packaging, or processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the subject country.

[9] 90 FR 41039, August 22, 2025.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to this/these investigation(s) are imported under the following provision of the Harmonized Tariff Schedule of the United States ("HTS"): statistical reporting number 7110.21.0000. The general rate of duty is "Free" for HTS subheading 7110.21.00.[10] Effective April 9, 2022, imports of all products of Russia are subject to duty rates set forth in column 2 of the HTS.[11] The column 2 rate of duty is "Free" for HTS subheading 7110.21.00.[12] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection ("CBP").

[10] Palladium otherwise meeting the scope description may also enter under HTSUS statistical reporting number 7110.29.0000. USITC, HTS (2025) Revision 18, Publication 5654, August 2025, p. 71.9.

[11] 19 U.S.C. § 2434, Statutory Notes and Related Subsidiaries.

[12] USITC, HTS (2025) Revision 21, Publication 5666, September 2025, p. 71.9.

For unwrought palladium originating in Russia was not included in Presidential Proclamation 10420 'Increasing Duties on Certain Articles from the Russian Federation," and so the column 2 duty rate was not raised to 35.0 percent ad valorem effective July 27, 2022, nor raised again to 70.0 percent ad valorem effective April 1, 2023 as a result of Presidential Proclamation 10523.

87 FR 38875, June 30, 2022. See also HTS heading 9903.90.08 and U.S. note 30(b) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 21, Publication 5666, September 2025, pp. 99.3.294 to 99.3.295, 99.3.297, 99.3.408.

88 FR 13277, March 2, 2023. See also HTS headings 9903.90.08 and 9903.90.09 and U.S. note 30(d) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 21, Publication 5666, September 2025, pp. 99.3.300 to 99.3.301, 99.3.408.

The product

Description and applications

Palladium is one of the six platinum-group metals ("PGMs") that possess similar yet notable physical and chemical characteristics.[13] Palladium is also designated as a "critical mineral" by the U.S. government for their relative scarcity and unique physical properties that are essential for the manufacture and performance of important end-use products.[14] Unwrought palladium, whether or not refined, is available as ingots, blocks, lumps, billets, cakes, slabs, pigs, cathodes, anodes, briquettes, cubes, sticks, grains, pellets, shot, and powder, among other forms.[15] Nearly all refined unwrought palladium consumed in the United States is in the form of high-purity, industrial-grade "sponge" or powder.[16] Palladium sponge consists of coarse-grained, porous, granular particles with purity of 99.95 percent or more. By contrast, palladium powder is more compact, consisting of finer and more uniform grains.[17] Refined unwrought palladium cast in the form of ingots (referred to as "Good Delivery" bars or plates) underlie trading on organized commodity exchanges and physical-investment holdings (figure 1.1).[18] [19]

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[13] The six PGMs are platinum, palladium, rhodium, iridium, ruthenium, and osmium. For further information about their individual chemical and physical properties, see: International Platinum-Group Metals Association ("IPA"), "About PGMs, the Six Metals," No date, https://ipa-news.com/index/about-pgms/the-six-metals.html, retrieved August 26, 2025.

[14] Conference transcript, p. 5 to 6 (Drake), 16 (McDowell).

[15] Conference transcript, p. 57 (Drake). For further information, see: Additional U.S. Note 1(a) to HTS Chapter 71. USITC, HTS (2025) Revision 18, Publication 5654, August 2025, p. 71.2.

[16] Conference transcript, p. 6 (Drake); BASF Metals' postconference brief, p. 4.

Likewise, imports of unwrought palladium originating in Russia are in the form of sponge rather than other unwrought forms. Metal Trade Overseas' postconference brief, exh. 1: Answers to Staff Questions, p. 5.

[17] American Elements, "Palladium Sponge," ©1997–2025, https://www.americanelements.com/palladium-sponge-7440-05-3, retrieved August 27, 2025; American Elements, "Palladium Powder," ©1997–2025, https://www.americanelements.com/palladium-powder-7440-05-3, retrieved August 27, 2025.

[18] BASF Metals' postconference brief, exh. 4: Trevor Raymond, David Wilson, and Brendan Clifford, "Platinum Essentials, Palladium: An Introduction for Platinum and Palladium investors," World Platinum Investment Council ("WPIC"), March 2020, p. 3, https://platinuminvestment.com/files/essentials/WPIC_Platinum_Essentials_March_2020.pdf.

[19] Palladium considered as Good Delivery meets the product quality and refinery accreditation requirements of the London Bullion Market Association ("LBMA") and the London Platinum & Palladium

(continued...)

Figure 1.1 Refined unwrought palladium in the forms of sponge and ingot (bar)

Source: Heraeus
Uses: industrial including autocatalysts

Refined unwrought palladium sponge

Source: Valcambi
Uses: storage and investment

Refined unwrought palladium ingot (bar)

Source: BASF Metals LLC, postconference brief, exh. 4: Trevor Raymond, David Wilson, and Brendan Clifford, "Platinum Essentials, Palladium: An Introduction for Platinum and Palladium investors," World Platinum Investment Council ("WPIC"), March 2020, p. 3, https://platinuminvestment.com/files/essentials/WPIC_Platinum_Essentials_March_2020.pdf.

The subject product consists of either primary palladium extracted from palladium-bearing ores, secondary palladium recovered from recycled palladium-bearing waste and scrap and post-consumer items, or both comingled. High unit values and ease of recovery promote a high degree of recycling, with estimated recovery rates reaching 95 percent of the contained PGMs both from within manufacturing operations (closed-loop recycling) and recycled catalytic converters and other PGM-containing materials (open-loop recycling).[20] Moreover, the petitioners emphasize,[21] and respondent Metal Trade Overseas concurs,[22] that unwrought palladium contains the same metal that is both identical and interchangeable regardless of its source. Sibanye-Stillwater blends both primary and secondary palladium together in its smelting and refining processes, which are otherwise indistinguishable in the final product.[23] At the smelting stage, the PGM-bearing materials are recorded by sources, as the toll refining contract provides different sales pricing terms for the refined palladium derived from primary

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Market ("LPPM"). Palladium refiners so certified appear on the LPPM's Palladium Good Delivery List. LBMA, "6. Good Delivery – Platinum and Palladium," ©2025, https://www.lbma.org.uk/publications/the-otc-guide/good-delivery-platinum-and-palladium; LPPM, "Good Delivery," No date, https://www.lppm.com/good-delivery, retrieved September 5, 2025; LPPM, "The London/Zurich Good Delivery List," No date, https://www.lppm.com/good-delivery/the-london-zurich-good-delivery-list, retrieved September 5, 2025.

[20] IPA, "Mining & Recyling," No date, https://ipa-news.com/index/about-pgms/mining-und-recycling, retrieved August 26, 2025.

[21] Petition, pp. 1.4 and 1.5; conference transcript, pp. 6 to 7 (Drake), 13 to 14 (McDowell), 25 (Binando).

[22] Metal Trade Overseas' postconference brief, p. 8.

[23] Petition, p. 1.4; conference transcript, pp. 13 (McDowell), 19 to 20 (Shuck), 25 (Binando); petitioners' postconference brief, p. 1.

versus secondary materials.[24] By contrast, subject producer MMC Norilsk Nickel ("Nornickel") does not produce any palladium from secondary sources but rather solely from its own mined ores.[25] Nevertheless, petitioners' counsel testified that "…the palladium itself is exactly the same once it reaches the market as the palladium from Russia. All of it is taken out of the earth at different concentrations, but then ultimately concentrated into the sponge of 99.95 percent purity, and it's identical once it goes through those smelting and refining processes."[26]

Palladium is valued by end users for its chemical stability, high melting point, durability, electrical conductivity, corrosion and oxidation resistance, hydrogen absorbance, and especially its unique catalytic capabilities.[27] The motor-vehicle sector accounted for approximately four-fifths (82.4 percent) of global palladium consumption in 2024[28] as catalytic converters containing palladium along with platinum and rhodium, to control emissions from internal combustion engines.[29] As the exhaust emissions pass through the catalytic converter, the PGMs coating on the inner surfaces of the honeycombed ceramic core facilitates oxidation of hydrocarbons and carbon monoxide into carbon dioxide and water vapor and reduction of nitrous oxides into elemental nitrogen and oxygen (figure 1.2).[30] Palladium-containing catalytic converters also control emissions from stationary sources (i.e., industrial and power-generating facilities) that consume fossil fuels.[31] Additional catalytic applications for palladium include chemical synthesis, petroleum refining, hydrogen fuel cells, and hydrogen generation and purification. Non-catalytic applications for palladium include electronic components and

[24] Conference transcript, pp. 25 to 26 (Shuck).

[25] Metal Trade Overseas' postconference brief, exh. 1: Answers to Staff Questions, pp. 2, 4.

[26] Conference transcript, p. 39 (Drake).

[27] IPA, "About PGMs, the Six Metals," No date, https://ipa-news.com/index/about-pgms/the-six-metals.html, retrieved August 26, 2025.

[28] Metal Trade Overseas' postconference brief, exh. 8: Johson Matthey ("JM"), PGM Market Report, May 2025, p. 26, https://matthey.com/documents/161599/509428/PGM_Market_Report_25.pdf/5f4e4078-8e9a-3c96-d334-9d14da9de094?t=174766393943.

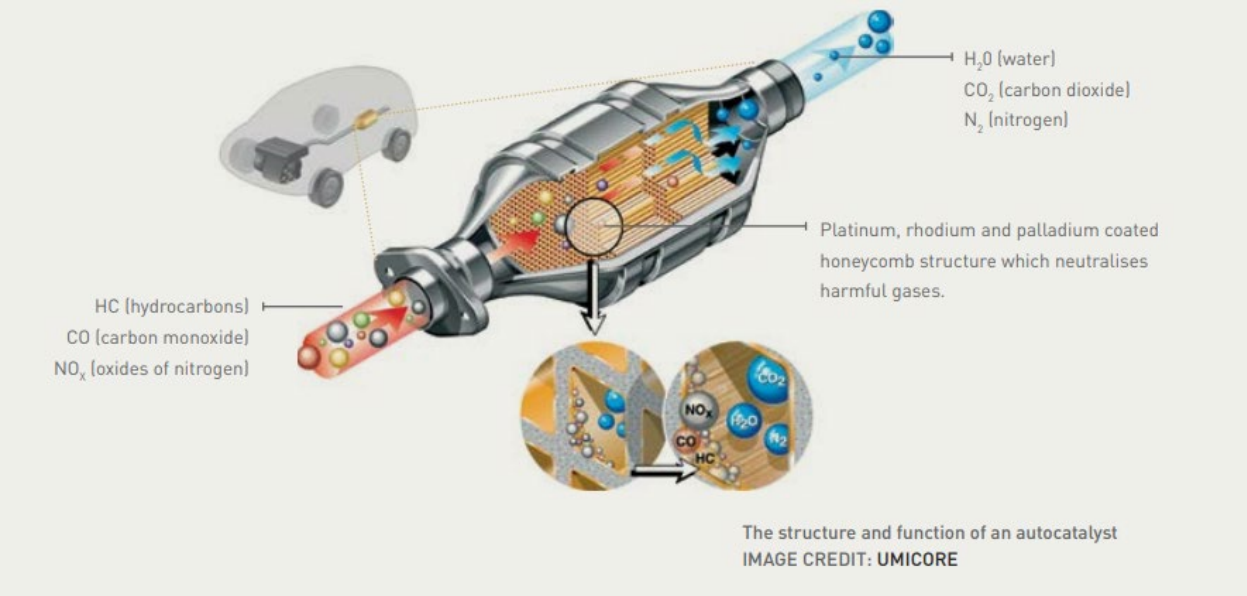
[29] BASF Metals' Catalyst Division launched a new Tri-metal Catalyst in March 2020, which enabled partial substitution of higher priced palladium with lower priced platinum. BASF Corp., "BASF Launches a New Tri-Metal Catalyst, Developed in Collaboration with and Sponsored by Sibanye-Stillwater and Impala Platinum," Joint News Release, March 10, 2020, https://www.basf.com/global/en/media/news-releases/2020/03/p-20-134.

[30] Avneet Kahlon and Anthony Tang, "7.1: Catalytic Converters," Chemistry LibreTexts, August 19, 2023, https://chem.libretexts.org.

[31] Custom Markets Insight ("CMI"), "Global Stationary Emission Control Catalyst Market 2024–2033," https://www.custommarketinsights.com/report/stationary-emission-control-catalyst-market, retrieved August 27, 2025.

connections, advanced materials, dental fillings, precious jewelry, and investment items.[32] Substitution between palladium, platinum, and other PGMs is possible to limited extents in both catalytic and certain non-catalytic applications but with some operational efficiency losses.[33]

Figure 1.2 Automotive catalytic converter cut-away diagram showing its structure and function



Source: International Platinum Group Metals Association ("IPA"), "Autocatalysts and Platinum Group Metals (PGMs)," Fact Sheet, No date, https://ipa-news.com/assets/pdfs/autocatalyst-fact-sheet-lr.pdf, retrieved August 26, 2025.

A substantial portion of unwrought palladium is distributed through global "trading hubs" that provide vault storage, clearing, and verification services not only for refineries but

[32] For further information, see: IPA, "PGM Uses," No date, https://ipa-news.com/index/about-pgms/pgm-uses; "Automotive," No date, https://ipa-news.com/index/about-pgms/pgm-uses/automotive; "Chemical," No date, https://ipa-news.com/index/about-pgms/pgm-uses/chemical; "Dental & Biomedical," No date, https://ipa-news.com/index/about-pgms/pgm-uses/dental-und-biomedica; "Electronics & Electrochemical," No date, https://ipa-news.com/index/about-pgms/pgm-uses/electronics-und-electrochemical; "Industrial," No date, https://ipa-news.com/index/about-pgms/pgm-uses/industral; "Investment," No date, https://ipa-news.com/index/about-pgms/pgm-uses/investment; "Jewelry & Every Day Products," No date, https://ipa-news.com/index/about-pgms/pgm-uses/jewellry-und-everyday-products; "Pollution Control," No date, https://ipa-news.com/index/about-pgms/pgm-uses/pollution-control, retrieved August 28, 2025.

[33] Petition, exh. 1.2: U.S. Geological Survey ("USGS"), "Platinum-Group Metals," Mineral Commodity Summaries 2025, January 2025, p. 137, https://www.usgs.gov/centers/national-minerals-information-center/mineral-commodity-summaries.

also their customers.[34] [35] High-purity palladium, in the form of either Good Delivery ingot or Accredited sponge,[36] is considered fully fungible for recording transfers among "pool accounts"[37] which reduces the need for actual physical transfers.[38] Trading hubs also facilitate location-based physical or electronic swaps of these two unwrought forms for refineries.[39]

[34] JM is the major U.S. trading hub for storing, clearing, and trading palladium sponge., JM, "Platinum Group Metal Supply Chains: Mature and Global," p. 6, https://matthey.com/documents/161599/0/JM_PGM_Supply_Chains_Whitepaper.pdf, retrieved August 27, 2025.

Major PGM refiner and fabricator BASF Metals began, in 2023, to centralize its palladium from the United States and other global sources into a single vault in the United States to better manage its global PGM inventory to reduce working capital. Palladium is stored in BASF Metals' vault until it is either sold to customers or transferred to affiliated companies. BASF metals' postconference brief, p. 8.

[35] Trading hubs also facilitate PGM recycling. Global PGM refiners have different capabilities and typically handle specific types of scrap. PGM refiners rely on the trading hubs to facilitate their refined-metal sales or transfers back to their customers to pay off leases in other parts of the world. JM, "Platinum Group Metal Supply Chains: Mature and Global," p. 6, https://matthey.com/documents/161599/0/JM_PGM_Supply_Chains_Whitepaper.pdf, retrieved August 27, 2025.

[36] The LPPM also has a Palladium Sponge Accredited PGM List for palladium sponge produced by Good Delivery PGM refiners. LPPM, "PGM Sponge Accreditation," No date, https://www.lppm.com/sponge-accreditation, retrieved September 5, 2025.

On April 8, 2022, Russian parastatal PGM refiners Gulidov Krasnoyarsk Non-Ferrous Metals Plant ("Krastsvetmet") and Prioksky Plant of Non-Ferrous Metals ("PZCM") were suspended from the LPPM's Platinum and Palladium Good Delivery and Sponge Accreditation Lists. Hence, until further notice, platinum and palladium ingots and sponge will no longer be accepted for Good Delivery on the London and Zurich exchanges. Management Committee LPPM, "LPPM Good Delivery Platinum and Palladium Update," April 8, 2022, https://www.lppm.com/news/lppm-good-delivery-platinum-and-palladium-update_830.html.

[37] A pool account, much like a bank account, is a customer's ownership claim to a specific lot (pool) of "allocated" palladium. Otheriwse, "unallocated" palladium is any specific lot not otherwise assigned to a specific customer. JM, "Platinum Group Metal Supply Chains: Mature and Global," p. 7, https://matthey.com/documents/161599/0/JM_PGM_Supply_Chains_Whitepaper.pdf, retrieved August 27, 2025; conference transcript, pp. 81 to 82 (Binando).

[38] JM, Platinum Group Metal Supply Chains: Mature and Global, pp. 5 to 6, https://matthey.com/documents/161599/0/JM_PGM_Supply_Chains_Whitepaper.pdf, retrieved August 27, 2025.

[39] Refineries can optimize the allocation of their production capabilities by swapping one unwrought form for another, based on the conversion cost between the two. BASF Metals' postconference brief, exh. 4: Raymond, Wilson, and Clifford, "Platinum Essentials, Palladium: An Introduction for Platinum and Palladium investors," WPIC, March 2020, pp. 5 to 6, https://platinuminvestment.com/files/essentials/WPIC_Platinum_Essentials_March_2020.pdf.

The terminal markets for palladium are the major commodity exchanges that provide trading, pricing, and hedging mechanisms.[40] Transactions for palladium, whether on a contractual or spot basis, are priced relative to indices set on the major commodity exchanges, particularly the London Platinum and Palladium Market ("LPPM") and the New York Mercantile Exchange ("NYMEX") subsidiary of the Chicago Mercantile Exchange ("CME") Group.[41] Hence, respondent Metal Trade Overseas characterized all market participants, including producers, importers, exporters, and purchasers, as "price takers."[42] A petitioners' witnesses testified that spot prices do not match price indices, due to premiums and discounts reflecting the transacting parties' respective circumstances and overall market supply-demand balance.[43]

Manufacturing processes

According to the petitioners and respondent Metal Trade Overseas, both Sibanye-Stillwater and foreign producers rely on the same processes and technologies to produce unwrought palladium.[44] A witness for the petitioners testified further that Sibanye-Stillwater adheres to stricter pollution controls than anywhere else in the global PGM industry.[45] A significant difference is that the subject producer Nornickel does not include any secondary palladium-bearing material in its smelter feedstock while Sibanye-Stillwater does (figure 1.3).[46]

[40] JM, Platinum Group Metal Supply Chains: Mature and Global, p. 6, https://matthey.com/documents/161599/0/JM_PGM_Supply_Chains_Whitepaper.pdf, retrieved August 27, 2025.

[41] BASF Metals' postconference brief, pp. 3 to 4; Metal Trade Overseas' postconference brief, pp. 17 to 18; conference transcript, pp. 114, 127 (Chen).

[42] Conference transcript, pp. 10, 114, 138 (Chen); Metal Trade Overseas' postconference brief, pp. 17 to 18.

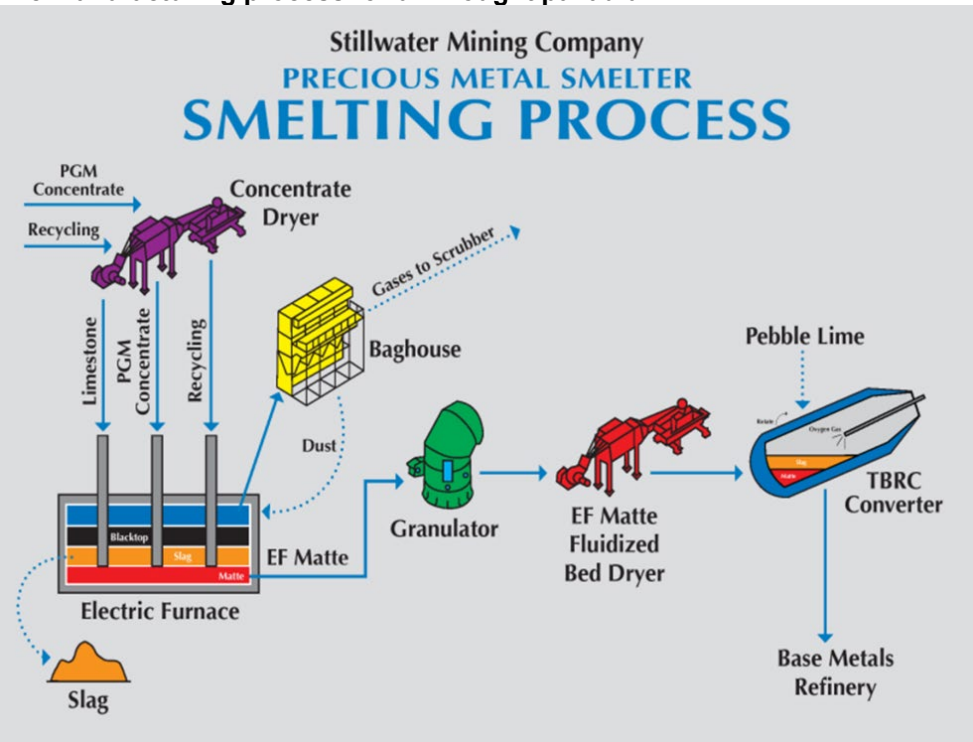
[43] Conference transcript, p. 27 (Binando), 84, 57 to 58 (Drake).

[44] Conference transcript, pp. 47, 103 (Shuck); Metal Trade Overseas' postconference brief, exh. 1: Answers to Staff Questions, p. 2.

[45] Sibanye-Stillwater extracts over 99 percent of the sulfur dioxide from its smelter emissions for conversion into gypsum. Conference transcript, p. 73 (Shuck).

[46] Metal Trade Overseas' postconference brief, exh. 1: Answers to Staff Questions, pp. 2, 4.

Figure 1.3 The manufacturing process for unwrought palladium



Source: Gregory Roset, "Recycling PGM's at Stillwater Mining Company Mine Design, Operations & Closure Conference," Sibanye-Stillwater, May 2015, https://www.mtech.edu/mwtp/presentations/docs/greg-roset.pd.

The manufacturing process for unwrought palladium consists of three successive processing stages: (1) mining and concentrating, (2) smelting and base-metal refining, and (3) precious-metal refining.

Mining and concentrating

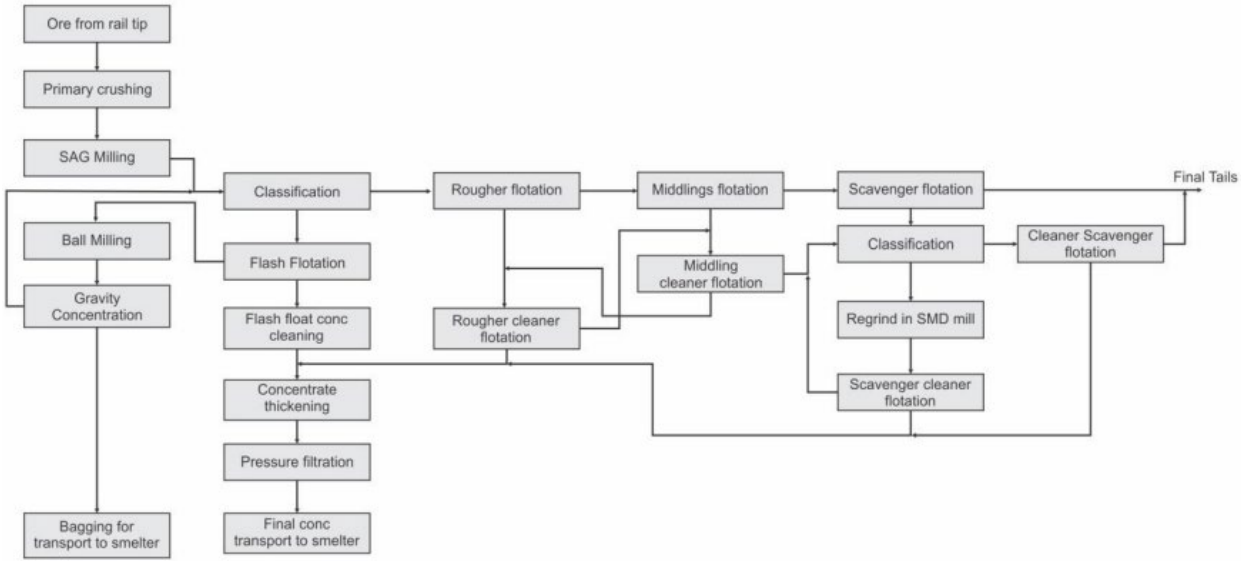
Petitioner Sibanye-Stillwater excavates PGM-bearing ores at two underground mining operations from opposite ends of the J-M Reef, in southern Montana, the only significant PGM deposit in the United States and the highest-grade PGM deposit worldwide.[47]

[47] Sibanye-Stillwater, "US PGM Operations," https://www.sibanyestillwater.com/business/americas/pgm-operations-americas, retrieved August 28, 2025.

The PGM content of the mined ore contains about 78 percent palladium and 22 percent platinum, with a small amount of rhodium. The ore also contains gold, nickel, copper, and silver, but these are considered byproducts as palladium accounts for most of the firm's sales. Conference transcript, p. 13 (McDowell), p. 19 (Shuck).

Ores extracted from either of Sibanye-Stillwater's two mines is delivered to a concentrator at each site.[48] The ore is ground into a slurry and undergoes a flotation process to increase the PGM content (figure 1.4). The flotation concentrate is then filtered to reduce moisture prior to being sent by truck to the smelter and base-metal refinery.[49]

Figure 1.4 Flow diagram of the concentrator operations



Source: Petition, pp. 1.4, 1.8; exh. I-8: Sibanye-Stillwater, Figure 57: A Simplified Block Flow Diagram of the East Boulder Concentrator," Technical Report, Summary of the Sibanye-Stillwater US PGM Operations Situated in the Montana, United States, December 13, 2023, p. 148, https://thevault.exchange/?get_group_doc=245/1703227553-SSW-US-PGM-Operations-13dec2023.pdf.

Scrap recovery

The full process for recovering PGMs from recycled catalytic converters ("converters") consists of multiple stages (table 1.2). Al the local level, sellers include automotive repair shops that replace old converters with new ones, automotive dismantlers that recover the converts from end-of-life vehicles, and scrap yards that purchase individual converters. Smaller ones sell by the piece to buyers, while higher volume one more likely have established buying relationships with collectors to sell in bulk. Next, collector firms buy converters from the sellers, compile them into inventory, and depending on their equipment and infrastructure either process in-house or resell to processors. The processors perform "decanning" to extract the

[48] Sibanye-Stillwater, "Stillwater & East Boulder, https://www.sibanyestillwater.com/business/americas/pgm-operations-americas/stillwater-east-boulder, retrieved August 28, 2025.

[49] At Sibanye-Stillwater, the ore contains approximately 0.45 ounces of PGMs per ton and the concentrate contains approximately 15 ounces of PGMs per ton. Conference transcript, pp. 19 to 20 (Shuck).

ceramic core from within the steel converter shell, followed by crushing and grinding, and bagging the fine-grained material for shipment to smelters. The crushed material is assayed for its precious-metals contents by both processors and smelters. Smelters heat the crushed material with based metals and flux materials to separate out the metal-rich from the slag materials. Finally, the resulting metallic material is sent to a precious-metals refinery to extract the individual precious metals.[50] Figure 1.5 provides an overview of the processing, smelting, and refining stages.

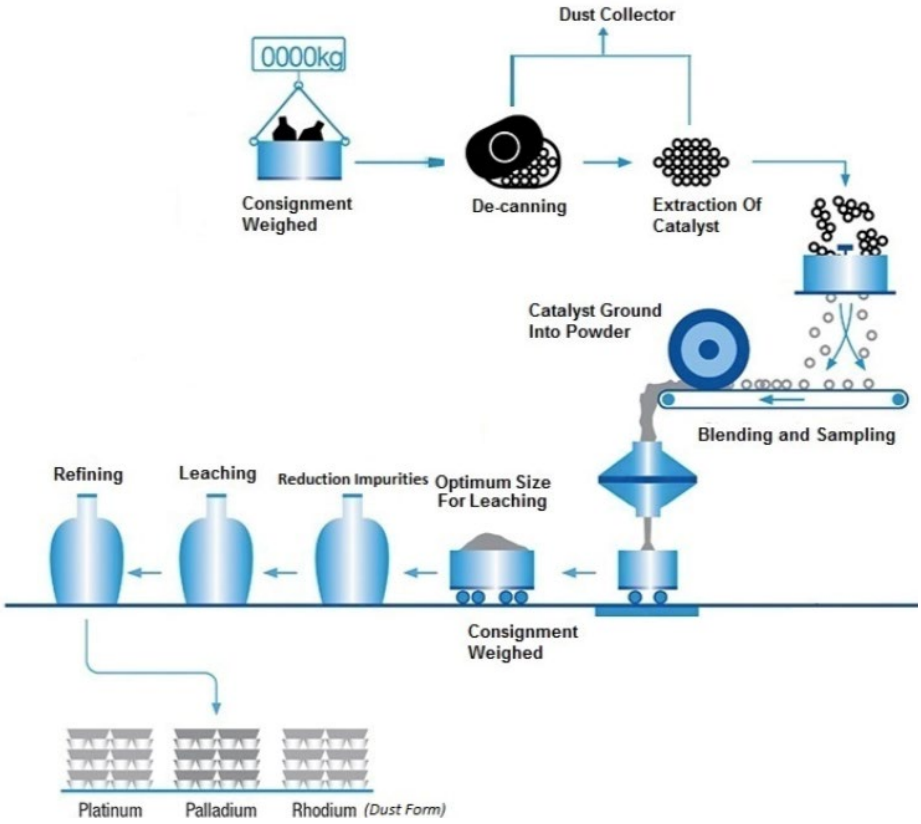
Table 1.2 U.S. catalytic converter supply chain segments, roles, and number of firms

Segment	Roles	Number of firms (estimated)
Sellers	Generate scrap converters	~125,000
Collectors	Aggregate and ship	~2,500
Processors	Decan and pulverize	~50
Smelters	Melt into metallic forms	~6
Refiners	Extract pure PGMs	~6 (worldwide)

Source: Noble6, "Catalytic Converter Recycling Explained: 5 Segments of the Supply Chain," April 29, 2025, https://noble6.com/catalytic-converter-recycling-explained-5-segments-of-the-supply-chain.

[50] EcoTrade Group, "Refining Scrap Catalysts," https://www.ecotradegroup.com/en/refining-scrap-catalysts, retrieved September 5, 2025; Noble6, "Catalytic Converter Recycling Explained: 5 Segments of the Supply Chain," April 29, 2025, https://noble6.com/catalytic-converter-recycling-explained-5-segments-of-the-supply-chain; PMR Inc., "An Overview of the Catalytic Converter Recycling Industry," ©2025, https://pmrcc.com/en/news-blog/processing-knowledge/An-Overview-of-the-Catalytic-Converter-Recycling-Industry, retrieved September 5, 2025.

Figure 1.5 Processing, smelting, and refining PGMs from recovered catalytic converters



Source: EcoTrade Group, "Refining Scrap Catalysts," https://www.ecotradegroup.com/en/refining-scrap-catalysts, retrieved September 5, 2025.

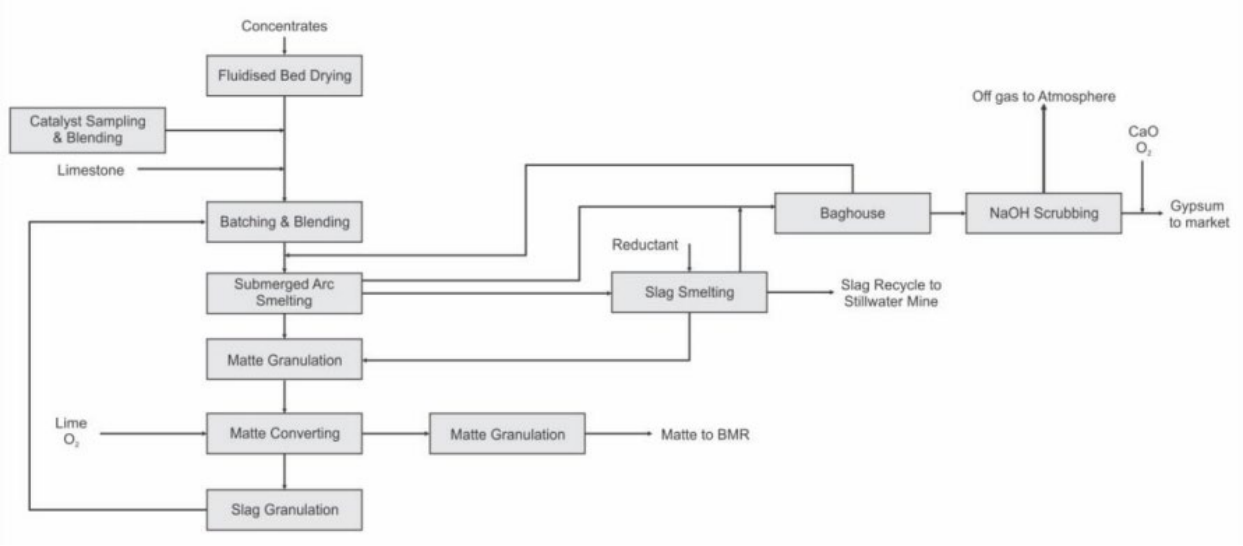
Smelting and base-metal refining

Prior to commencement of the smelting process (figure 1.6), the concentrate must be dried to less than one percent moisture prior to entering the smelting furnaces. Likewise, any milled recycled material is comingled with the dried concentrate prior to the smelting process.[51]

[51] Sibanye-Stillwater claims that its metallurgical complex is one of the world's largest recyclers of PGMs derived from catalytic converters and other industrial materials. There are two furnaces that together can smelt up to 250 short tons of PGM-bearing material per day. This mix is optimized to ensure the most efficient production process.

Two types of recycled PGM-bearing materials are commingled with the dried concentrate prior to commencing the smelting process: 1) spent automotive catalytic converters that have been decanned but not milled (ground) and 2) material that is milled but still needs to be ground and sampled before it can go to the smelter. The recycled materials are assayed to determine the precise palladium, platinum, and other metal contents as the basis for paying the recycled-material suppliers. Conference transcript, (continued...)

Figure 1.6 Flow diagram of the smelter operations



Source: Petition, pp. 1.4, 1.8; exh. I-8: Sibanye-Stillwater, Figure 60: A Simplified Block Flow Diagram of the Smelter," Technical Report, Summary of the Sibanye-Stillwater US PGM Operations Situated in the Montana, United States, December 13, 2023, p. 154, https://thevault.exchange/?get_group_doc=245/1703227553-SSW-US-PGM-Operations-13dec2023.pdf.

The PGM-bearing materials are heated to approximately 1,500 degrees Centigrade, which forms three distinct layers within the furnace. The top layer is un-smelted material, the middle layer is slag containing the bulk of the gangue (non-metallic) minerals and minor amounts of PGMs, and the matte in the bottom layer contains the copper, nickel, and iron sulfides along with the primary concentration of PGMs. The copper and nickel sulfides act as collector metals for the PGMs. The slag removed from the furnace on a regular basis is returned to the concentrators to recover the PGMs, while the remainder from the slag is deposited in the mines as backfill material or in the lined tailings facility.[52]

Smelting removes the bulk of the gangue materials to reduce the weight by about 90 percent. The molten matte is then processed through a granulation circuit that quenches the matte prior to undergoing another pyrometallurgical process that oxidizes the bulk of the iron.

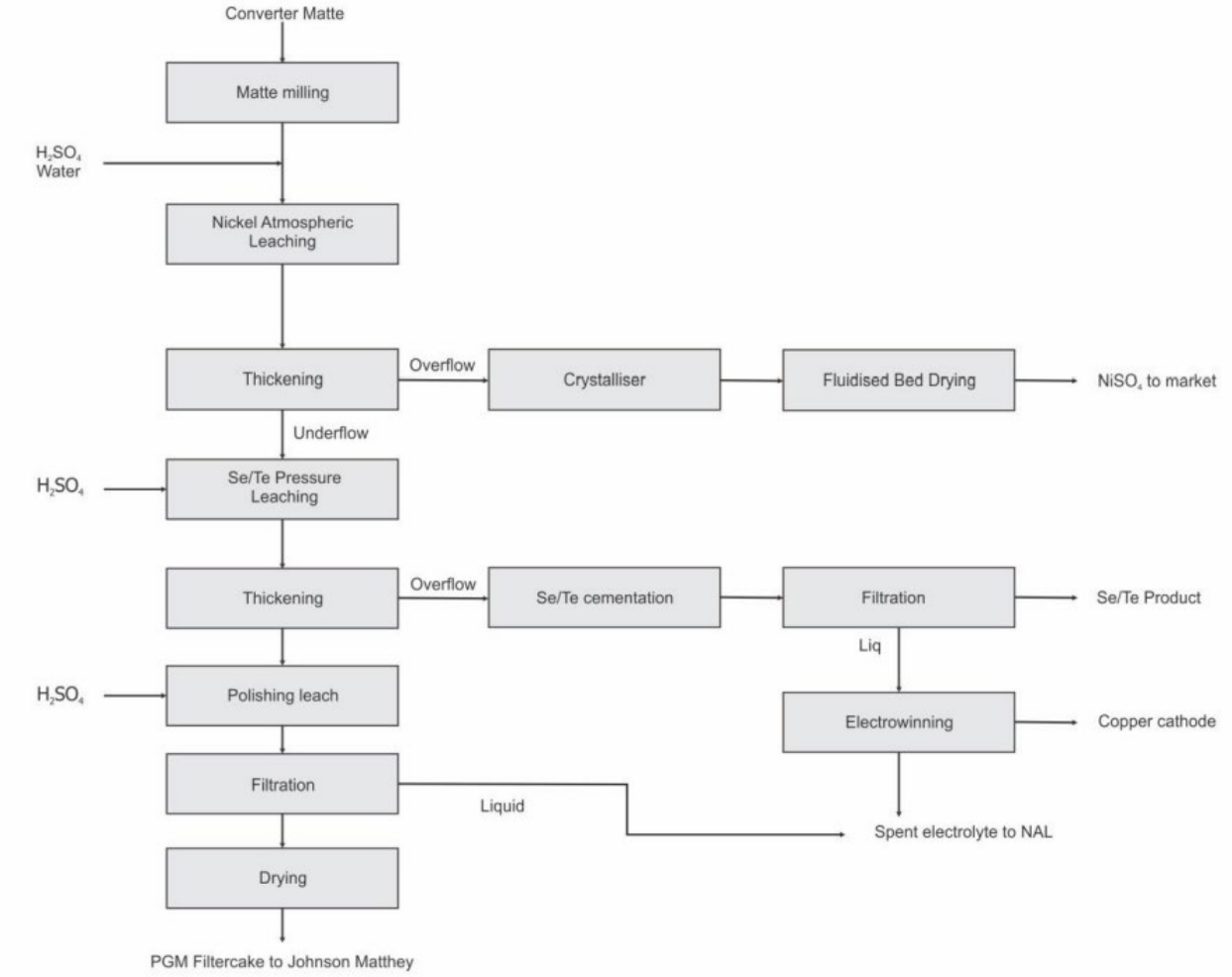
pp. 20 to 21 (Shuck); Sibanye-Stillwater, "Columbus Metallurgical Complex," https://www.sibanyestillwater.com/business/americas/pgm-operations-americas/columbus-metallurgical-complex; "US PGM Recycling," https://www.sibanyestillwater.com/business/americas/recycling/us-pgm-recycling, retrieved August 28, 2025.

[52] At Sibanye-Stillwater, the PGM contents of matte removed from the furnace is upgraded to approximately 200 ounces per ton. Conference transcript, p. 21 (Shuck).

After the final matte has been quenched, it is delivered to the base-metal refinery for further processing.[53]

At the base-metal refinery, a three-step acid leach process (figure 1.7) first extracts the nickel and remaining iron, followed by extraction of copper, and finally polish leach to extract any remaining nickel, iron, and copper from the final "filter cake."[54]

Figure 1.7 Flow diagram of the base-metal refinery operations



Source: Petition, pp. 1.4, 1.8; exh. I-8: Sibanye-Stillwater, "Figure 63: A Simplified Block Flow Diagram of the Base Metal Refinery," Technical Report, Summary of the Sibanye-Stillwater US PGM Operations Situated in the Montana, United States, December 13, 2023, p. 158, https://thevault.exchange/?get_group_doc=245/1703227553-SSW-US-PGM-Operations-13dec2023.pdf.

[53] At Sibanye-Stillwater, the final matte is upgraded to contains approximately 500 ounces of PGMs per ton, 30 percent copper, and 40 percent nickel. Conference transcript, pp. 21 to 22 (Shuck).

[54] At Sibanye-Stillwater, the filter cake contains 60 to 65 percent PGMs. Conference transcript, p. 22 (Shuck).

Precious-metals refining

The filter cake is sent for toll refining to precious-metals refiner Johnson Matthey ("JM")[55] that separates and purifies the precious metals by chemical leaching processes (figure 1.8). The resulting palladium sponge is at least 99.95 percent pure, which is the final product sold.[56] [57]

[55] JM is the toll refiner for Sibanye-Stillwater's filter cake. Sibanye-Stillwater, "Columbus Metallurgical Complex," https://www.sibanyestillwater.com/business/americas/pgm-operations-americas/columbus-metallurgical-complex, retrieved August 28, 2025.

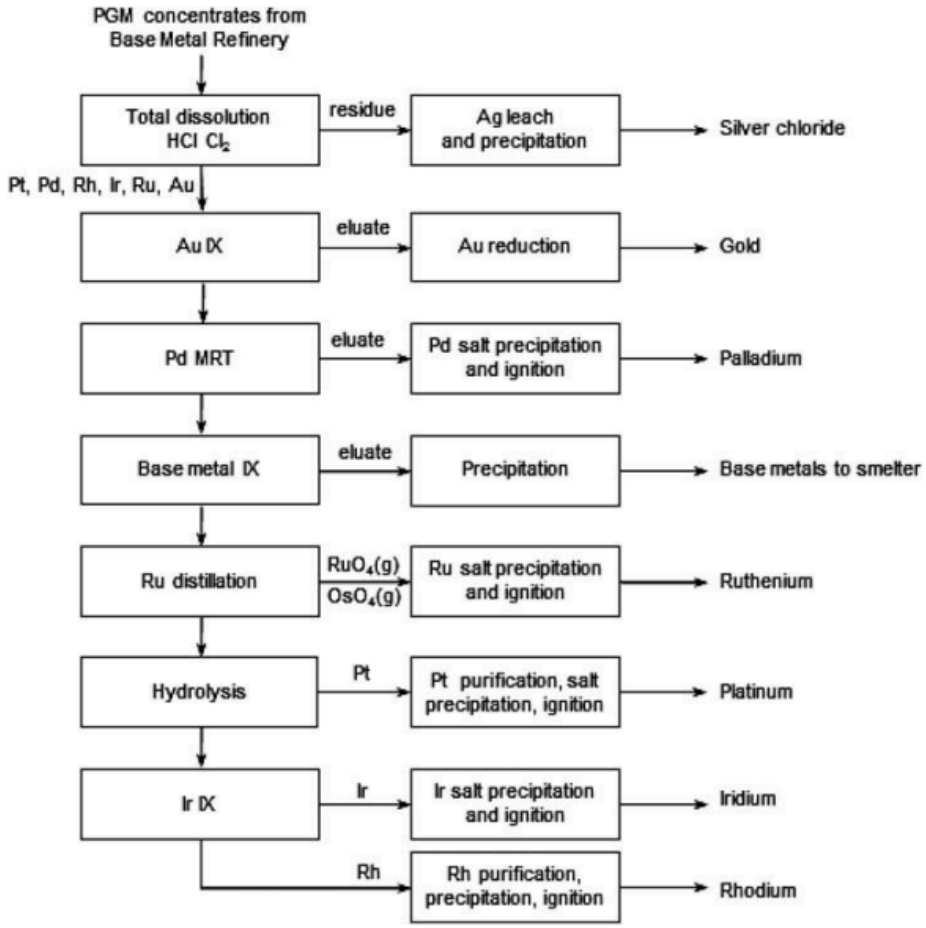
[56] Conference transcript, pp. 22, 47 (Shuck).

[57] Throughout Sibanye-Stillwater's manufacturing process, the palladium contents are recorded to provide allocations between primary versus secondary sources when sending the filter cake to the toll refiner. Sibanye-Stillwater's mined palladium supply agreement with the toll refiner (Johnson Matthey), which is also the biggest customer, provides a different pricing mechanism than for sales of recycled palladium. Conference transcript, pp. 25 to 26 (Binando).

More specifically, for the ounces allocated to mined production, once the refined unwrought palladium is released from Sibanye-Stillwater's pool account into the toll refiner's account, title passes to the latter and they pay the former according to an agreed-upon formula based on two price indices for palladium. The toll refiner sells some of the toll-refined palladium to outside customers and consumes some internally to produce downstream palladium products. Conference transcript, pp. 26 to 27 (Binando).

Conversely, for the ounces allocated to recycled production, pricing is on a spot and short-term forward basis. The toll refiner can bid for the recycled product, but in competition with four or five different trading houses that are either producers or traders, and the pricing formula is not set as for the mined product. Though customers will refer to indices in bidding, prices they are willing to offer are influenced by supplier's needs and any imbalances between supply and demand and forward rates. Hence, different customers will offer different prices, which will change and vary daily or even within a single day. Conference transcript, pp. 27, 80 (Binando).

Figure 1.8 Simplified flow diagram of the precious metals refining process



Source: Kathryn C. Sole, Michael B. Mooiman, and Edmund Hardwick, “Ion Exchange in Hydrometallurgical Processing: An Overview and Selected Applications, Separation & Purification Reviews, July 17, 2017, p. 8, https://www.tandfonline.com/doi/full/10.1080/15422119.2017.1354304.

Domestic like product issues

The petitioners propose that the Commission find that there is a single domestic like product coextensive with the scope of these petitions.[58] Respondents, for the purposes of the Commission's preliminary determinations, concur with the petitioners that there is one domestic like product, unwrought palladium.[59]

[58] Petitioners argue that based on the semifinished like product analysis factors, the Commission should define the domestic like product to include refined unwrought palladium that is coextensive with the scope of the investigations, as well as unrefined palladium. Moreover, the petitioners assert that miners and recyclers of palladium engage in sufficient production-related activities and should therefore be included in the domestic industry. Petitioners' postconference brief, p. 3 and answers to Staff questions, pp. 3 to 9.

[59] Respondent Metal Trade Overseas argues that based on the Commission's six factor domestic like product analysis, mined (or ore) palladium and recycled palladium should constitute a single like product. It noted that other than the initial production method he two products share similarities in each of the six domestic like product factors. In addition, Metal Trade Overseas assert that the Commission should consider both refiners and recyclers as members of the domestic industry. Metal Trade Overseas' postconference brief, pp. 7 to 13.

Part 2: Conditions of competition in the U.S. market

U.S. market characteristics

Palladium is a critical mineral, one of the platinum-group metals (PGMs), which also include ruthenium, rhodium, palladium, osmium, iridium, and platinum.[1] While palladium is primarily used to produce automobile catalytic converters, it is also used to produce chemical catalysts, electronics, dental implements, and jewelry. It can be obtained by mining (although there are few ore bodies around the world) or processing or recycling of scrap materials.[2]

Unwrought palladium comes in a variety of forms (including ingots, lumps, cake, and sponge), is highly fungible, and sold in a variety of terms. Some firms will buy volumes on a contract basis, while other firms may bid for additional volumes or spot purchase on a premium over the daily market price as additional quantities are required to sell to other fabricators or traders.[3] According to the petitioner, U.S. mined product is sold according to a *** while recycled product is sold on the spot market.[4]

*** U.S. producers and two out of four importers indicated that the market was not subject to distinctive conditions of competition. The remaining importers, ***, reported that palladium's substitutability for platinum in the production of catalytic converters, increasing sales of electric vehicles (which do not require catalytic converters, as catalytic converts are used to neutralize emissions from internal combustion engines), and impacts of the Russia-Ukraine conflict as distinctive conditions of competition.

Apparent U.S. consumption, by quantity and value of unwrought palladium, steadily decreased from 2022 to 2024, and was higher in interim 2025 than in interim 2024.

Impact of new or modified tariffs and other trade actions

U.S. producers and importers were asked to report the impact of tariffs and other trade actions (for example, sanctions) on overall demand, supply, prices, or raw material costs (table 2.1). Producer *** reported that "***." Importer *** reported that the "threat and uncertainty of tariffs" have resulted in "price dislocation(s)" for ***."

[1] Platinum-Group Metal Statistics and Information, https://www.usgs.gov/centers/national-minerals-information-center/platinum-group-metals-statistics-and-information, accessed September 2, 2025.

[2] Petitioner's postconference brief, p. 1.

[3] Petitioner's postconference brief, p. 10.

[4] Ibid.

Table 2.1 Unwrought palladium: Count of firms' responses regarding the impact of tariffs or other trade actions, by firm type

Firm type	No	Yes	Don't know
U.S. producers	1	1	0
Importers	1	2	1

Source: Compiled from data submitted in response to Commission questionnaires.

Channels of distribution

As shown in table 2.2, over the period of investigation, U.S. producers sold slightly greater volumes to refiners/distributors than to fabricators/end users except in interim 2024. Volumes imported from Russia, nonsubject South Africa, and all other sources were primarily sold to fabricators/end users.

Table 2.2 Unwrought palladium: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent; interim is January through March

Source	Channel	2022	2023	2024	Interim 2024	Interim 2025
United States	Refiners/distributors	***	***	***	***	***
United States	Fabricators/end users	***	***	***	***	***
Russia	Refiners/distributors	***	***	***	***	***
Russia	Fabricators/end users	***	***	***	***	***
South Africa	Refiners/distributors	***	***	***	***	***
South Africa	Fabricators/end users	***	***	***	***	***
All other import sources	Refiners/distributors	***	***	***	***	***
All other import sources	Fabricators/end users	***	***	***	***	***
Nonsubject import sources	Refiners/distributors	***	***	***	***	***
Nonsubject import sources	Fabricators/end users	***	***	***	***	***
All imports	Refiners/distributors	***	***	***	***	***
All imports	Fabricators/end users	***	***	***	***	***

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 "—".

Geographic distribution

U.S. producers and importers reported selling unwrought palladium to the Northeast and Southeast U.S. (table 2.3). For U.S. producers, ***. Responding importers sold ***. Imported unwrought palladium is shipped *** to the United States, reducing lead times.

Table 2.3 Unwrought palladium: Count of U.S. producers' and U.S. importers' geographic markets

Region	U.S. producers	Importers
Northeast	***	***
Midwest	***	***
Southeast	***	***
Central Southwest	***	***
Mountain	***	***
Pacific Coast	***	***
Other	***	***
All regions (except Other)	***	***
Reporting firms	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table 2.4 provides a summary of the supply factors regarding unwrought palladium from U.S. producers and from Russia. Producers in Russia have *** capacity, but *** capacity utilization. Reported U.S. capacity has *** between 2022 and 2024, with capacity utilization *** over the same period. In 2024, the *** of U.S. producer shipments in were ***, while *** of shipments from Russia were to ***. Producers in Russia reported a *** proportion of inventories to total shipments, and U.S. producer inventories to total shipments *** between 2022 and 2024. *** U.S. producers and *** reported the ability to shift production between different products.

Table 2.4 Unwrought palladium: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in troy ounces contained palladium; ratio and share in percent; count in number of firms reporting

Factor	Measure	United States	Russia
Capacity 2022	Quantity	***	***
Capacity 2024	Quantity	***	***
Capacity utilization 2022	Ratio	***	***
Capacity utilization 2024	Ratio	***	***
Inventories to total shipments 2022	Ratio	***	***
Inventories to total shipments 2024	Ratio	***	***
Home market shipments 2024	Share	***	***
Non-US export market shipments 2024	Share	***	***
Ability to shift production (firms reporting "yes")	Count	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: U.S. industry production data are based on questionnaire responses of three firms that account for production of all primary palladium and not an insubstantial portion of secondary palladium U.S. production of unwrought palladium during 2024. Responding foreign producer/exporter firms accounted for a vast majority of U.S. imports of unwrought palladium from Russia during 2025. 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 Parts 3 and 7.

Some firms importing unwrought palladium also reported storing all (regardless of source) palladium inventories in centralized vaults.[5] These volumes are stored in vaults until they are sold to customers or transferred to related companies' accounts, in and out of the United States.

Domestic production

Based on available information, U.S. producers of unwrought palladium have limited ability to respond to changes in demand by changes in the quantity of shipments of U.S.-produced unwrought palladium to the domestic market. The main contributing factors to this mitigated degree of responsiveness of supply are the very limited availability of unused capacity, existing *** share of shipments to the domestic market, and limited inventories. Other products that *** producers reportedly can produce on the same equipment as unwrought palladium are ***.[6]

[5] Respondent *** postconference brief, p. 8 and ***'s U.S. importer questionnaire response, section 2.9.

[6] ***.

Subject imports from Russia

Based on available information, producers of unwrought palladium from Russia have the ability to respond to changes in demand with moderate changes in the quantity of shipments of unwrought palladium to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of inventories, ability to shift shipments from alternate markets or inventories, and ability to shift production to or from alternate products. Factors mitigating responsiveness of supply include the limited availability of unused capacity.

Other products that the foreign producer *** can produce on the same equipment as unwrought palladium are palladium "***." Factors affecting foreign producers' ability to shift production in response to changes in demand for unwrought palladium include inability to selectively mine for a single, specific metal and potential bottlenecks in different production stages. Foreign producer *** reported industry-specific factors that limit its ability to respond to changes in demand with shipments of palladium. The firm reported that it operates a vertically integrated production system that spans from mining and mineral extraction to metallurgy. As such, its production operations face bottlenecks in each phase that have implication on downstream production. Further complicating the definition of capacity, *** is required by Russian law to extract all valuable components or metals from the subsoil and therefore cannot limit its production to palladium as there are a full range of other metal ores present in the geological formation that contain palladium.[7] These factors complicate defining *** production capacity and capacity utilization but clearly limit its ability to respond to changes in demand with shipments of palladium.

Imports from nonsubject sources

South Africa is the primary source of nonsubject imports. Unwrought palladium imported from South Africa accounted for *** percent of total U.S. imports in 2024, according to data submitted in response to Commission questionnaires.[8]

Supply constraints

Responding U.S. producers and importers reported not experiencing supply constraints since January 1, 2022.

[7] Foreign producer *** postconference brief, p. 18.

[8] For additional information regarding nonsubject imports, see Part 4.

U.S. demand

Based on available information, the overall demand for unwrought palladium is likely to experience moderate changes in response to changes in price. The main contributing factors are the somewhat limited substitute products and the small to moderate cost share of unwrought palladium in most of its end-use products. Reported substitute products include unwrought platinum, which can also be used to produce automotive catalytic converters.

End uses and cost share

U.S. demand for unwrought palladium depends on the demand for U.S.-produced downstream products and the price of other platinum group metals.[9] The primary end use reported is producing automobile catalytic converters. Below, table 2.5 and figure 2.1 illustrates domestic U.S. automobile production, as a demand driver for unwrought palladium. Other downstream products include chemical compounds, chemical catalysts, and high-performance alloys.

Table 2.5 Demand driver: Domestic auto production, by month

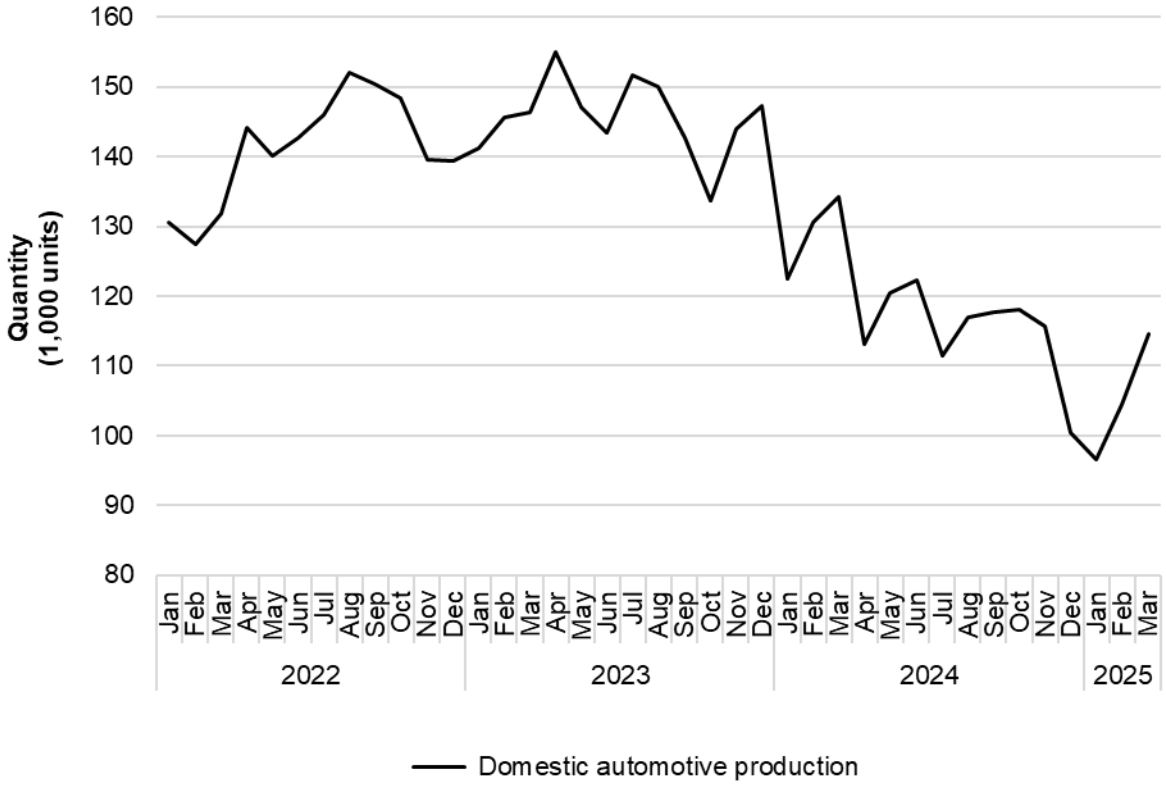
Quantity in 1,000 units

Month	2022	2023	2024	2025
January	131	141	122	97
February	128	146	131	105
March	132	146	134	115
April	144	155	113	NA
May	140	147	121	NA
June	143	143	122	NA
July	146	152	111	NA
August	152	150	117	NA
September	150	143	118	NA

Source: U.S. Bureau of Economic Analysis, Domestic Auto Production ***, retrieved from FRED, Federal Reserve Bank of St. Louis, at https://fred.stlouisfed.org/series/DAUPSA, accessed August 28, 2025.

[9] Preliminary conference transcript p. 55 to56.

Figure 2.1 Demand driver: Domestic auto production, by month.



Source: U.S. Bureau of Economic Analysis, Domestic Auto Production ***, retrieved from FRED, Federal Reserve Bank of St. Louis, at https://fred.stlouisfed.org/series/DAUPSA, accessed August 28, 2025.

Unwrought palladium accounts for a small to high share of the cost of the end-use products in which it is used. Reported cost shares for some end uses were *** for catalytic converters, *** percent for chemical catalysts, and *** percent for high-performance alloys.

Business cycles

*** U.S. producers and three importers indicated that the market was subject to business cycles. Importer *** reported that unwrought palladium spot prices "***" until mid-2022 over the period but have "steadily declined" since the last quarter of 2023. Importer *** reported that "***" affected automotive sellers' margins, resulting in their modifying their palladium supply chains as "***," where firms opted to spend down precious metal stockpiles, decreasing purchasers and "***."

Demand trends

Most firms reported that U.S. demand for unwrought palladium as fluctuating down since January 1, 2022 (table 2.5). All responding importers reported that the overall demand decreases reflect the automobile industry's shift toward electric vehicles, with importers *** specifying that demand has "***" and "***." In addition, importers reported that U.S. automakers are significant adopters of platinum-bearing catalysts (or tri-metal catalysts), further decreasing U.S. demand for unwrought palladium.[10]

Table 2.5 Unwrought palladium: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Market	Firm type	Steadily Increase	Fluctuate up	No change	Fluctuate down	Steadily decrease
Domestic demand	U.S. producers	0	0	0	1	0
Domestic demand	Importers	0	0	0	3	1
Foreign demand	U.S. producers	0	0	0	1	0
Foreign demand	Importers	0	0	0	3	1

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products and form interchangeability

Half of responding U.S. producers and most responding importers reported that there are limited substitutes for unwrought palladium, depending on end use. The primary substitute reported was platinum (for producing catalytic converters).

Unwrought palladium is produced in ingots, lumps, cake, and sponge. The majority of U.S. producers reported these forms as always or frequently interchangeable, but a majority of importers reported the forms as sometimes or never interchangeable. *** indicated that two forms, ingot and sponge, are "***," and that while the form purity is comparable, sponge is typically used in industrial applications and the ingots function as an investment.

[10] *** postconference brief, p. 5.

Substitutability issues

This section assesses the degree to which U.S.-produced unwrought palladium and imports of unwrought palladium from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of unwrought palladium from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate-to-high degree of substitutability between domestically produced unwrought palladium and unwrought palladium imported from subject sources.[11] Factors contributing to this level of substitutability include similar product quality, availability, lead times for unwrought palladium from inventory, little preference for particular country of origin or producers, similarities between domestically produced unwrought palladium and unwrought palladium 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 high capacity utilization, purity requirements, and differences between domestic and subject sources regarding multiple purchase factors.

Factors affecting purchasing decisions

Most important purchase factors

Purchasers responding to lost sales lost revenue allegations[12] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for unwrought palladium. The responding purchaser reported availability/supply, as the most important factor, followed by commercial terms, and product quality.

[11] The degree of substitution between domestic and imported unwrought palladium depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced unwrought palladium to the unwrought palladium imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as 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.).

[12] This information is compiled from responses by purchasers identified by Petitioners in a *** provided via email. See Part 5 for additional information.

Lead times

Unwrought palladium is primarily sold from inventories. U.S. producers and importers reported that *** percent of their commercial shipments were from inventories, with lead times averaging 30 days.

Comparison of U.S.-produced and imported unwrought palladium

In order to determine whether U.S.-produced unwrought palladium can generally be used in the same applications as imports from Russia, U.S. producers and importers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table 2.6, a majority of responding firms report that U.S.-produced and imported unwrought palladium is always interchangeable. Importers *** reported that if the product meets industry and/or grade purity specifications, imported or domestic unwrought palladium are interchangeable.

Table 2.6 Unwrought palladium: Count of U.S. producers and importers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Firm type	Always	Frequently	Sometimes	Never
U.S. vs. Russia	Producer	1	0	0	0
U.S. vs. Other	Producer	1	0	0	0
Russia vs. Other	Producer	1	0	0	0
U.S. vs. Russia	Importer	2	1	0	0
U.S. vs. Other	Importer	2	1	0	0
Russia vs. Other	Importer	2	1	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

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In addition, U.S. producers and importers were asked to assess how often differences other than price were significant in sales of unwrought palladium from the United States, subject, or nonsubject countries (table 2.7). Importers reported that product availability and the product meeting industry standards are significant factors aside from price. *** reported a preference for *** due to U.S. producers' long lead times when refining unwrought palladium.

Table 2.7 Unwrought palladium: Count of U.S. producers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Country pair	Firm type	Always	Frequently	Sometimes	Never
U.S. vs. Russia	Producer	0	0	0	1
U.S. vs. Other	Producer	0	0	0	1
Russia vs. Other	Producer	0	0	0	1
U.S. vs. Russia	Importer	1	1	0	1
U.S. vs. Other	Importer	0	0	1	3
Russia vs. Other	Importer	1	0	0	2

Source: Compiled from data submitted in response to Commission questionnaires.

Part 3: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in Part 1 of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part 4 and Part 5. Information on the other factors specified is presented in this section and/or Part 6 and (except as noted) is based on the questionnaire responses of three firms of U.S. production of unwrought palladium during 2024.[1] [2]

U.S. producers

The Commission issued a U.S. producer questionnaire to 22 firms based on information contained in the petition. Three firms provided usable data on their operations, for both primary (e.g. mined ore) and secondary (e.g. recycled catalytic converters, scrap) palladium.[3] Table 3.1 lists U.S. producers of unwrought palladium, their production locations, positions on the petition, and shares of total production.

[1] In addition, *** provided a response but did not produce any unwrought palladium during the period in which data were collected.

[2] In addition, Johnson Matthey provided a response. ***. Appendix D presents information including U.S. toll processor (refiner) ***.

[3] Sibanye-Stillwater mines and recycles, Metallix recycles and refines and Techemet recycles and refines ***.

Table 3.1 Unwrought palladium: U.S. producers, their positions on the petition, production locations, and shares of reported production, 2024

Share in percent

Firm	Position on petition	Production location(s)	Share of production
Metallix Refining	***	Greenville, NC	***
Sibanye-Stillwater	Petitioner	Columbus, MT Big Timber, MT Nye, MT	***
Techemet	***	Pasadena Texas	***
All firms	Various	Various	100.0

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 “—“.

Table 3.2 presents information on U.S. producers' ownership, related and/or affiliated firms.

Table 3.2 Unwrought palladium: U.S. producers' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
***	***	***
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

As indicated in table 3.2, no U.S. producers are related to foreign producers of the subject merchandise and no U.S. producers are related to U.S. importers of the subject merchandise. In addition, as discussed in greater detail below, no U.S. producers directly import unwrought palladium from subject sources and none purchase unwrought palladium from subject sources through U.S. importers. U.S. producer Sibanye-Stillwater is related to a producer of unwrought palladium in South Africa, a nonsubject country.[4]

Table 3.3 presents events in the U.S. industry since January 1, 2022.

Table 3.3 Unwrought palladium: Important industry events since 2022

Item	Firm	Event
Disrupted mining operations	Sibanye-Stillwater	June 2022— Mining was suspended at the U.S. PGM operations from mid-June to late-July after heavy flooding from rising rivers due to heavy rainfall and rapid snowmelt damaged an access road and bridges to the Stillwater Mine, which provides 60 percent of the operations' total mined output.
Acquisition announcement	Sibanye-Stillwater	November 2023— Sibanye-Stillwater announced a $155.4-million purchase agreement to acquire Abington Reldan Metals LLC ("Reidan"), a processor of precious metals operating in Fairless Hills, Pennsylvania, as well as in Mexico and India. Reidan recovers precious metals from numerous types of industrial and electronic waste and scrap streams. Reportedly this acquisition both complements the existing PGM recovery operations in Montana and starting point for expanding the firm's precious-metals recycling capabilities.
Layoffs	Sibanye-Stillwater	November 2023— Slumping palladium prices were cited for the decision for cutting over 100 mining jobs from the U.S. PGM operations. United Steel Workers ("USW") union representatives confirmed 88 mine workers were laid off, but the number of affected workers was anticipated to rise with cutbacks of contract workers as well.
Acquisition completed	Sibanye-Stillwater	March 2024—Completion of the acquisition of Reldan. The $155.9-million purchase price was financed from the proceeds of a $500 million issue of senior unsecured convertible

[4] Sibanye-Stillwater Group 2024 annual report, p. 6 and https://www.sibanyestillwater.com/business/, retrieved September 5, 2025.

Item	Firm	Event
		corporate bonds coming due in 2028 with a yield rate of 4.25 percent.
Potential closure	Sibanye-Stillwater	June 2024— Sibanye-Stillwater considering placing the loss-making U.S. PGM operations in “care and maintenance” status unless palladium prices do not recover from the current slump. Earlier this year, Sibanye-Stillwater took a $2.1 billion write-down of its U.S. PGM operations assets due to slumping palladium prices, increased operating costs, and difficulties implementing expansion plans.
Layoffs	Sibanye-Stillwater	September 2024— Severe financial operating losses, totaling $350 million since the beginning of 2023, from slumping palladium prices significantly below the cost of production were cited for the decision to lay-off over 40 percent of the workforce at the U.S. PGM operations. Over 600 mine workers losing their jobs was the largest layoff ever in Montana’s history. However, collaboration with the USW union representatives sought to minimize the number of jobs lost and to extend the recall period from 2 years to 3 years for laid-off workers. At the metallurgical complex, one of two furnaces was idle and capital investment plans were placed on hold.
Production cutbacks	Sibanye-Stillwater	September 2024— As part of the corporate restructuring of the U.S. PGM operations, output was cutback by 40 percent or 200,000 troy ounces of mined PGMs (42,000 troy ounces of platinum and 158,000 troy ounces of palladium). The West side of the Stillwater Mine was placed under care and maintenance status. Mining operations were also being shifted from the East Boulder Mine to the East side of the Stillwater Mine with richer PGM ore grades.
Demonstration project	Travertine, Sabine	October 2024— Travertine Technologies Inc. (“Travertine”) will partner with precious-metals refiner Sabine Metal Corp. (“Sabine”) to construct a sulfuric acid-generating plant in Rochester, New York. This demonstration project will utilize Travertine’s three-step process to convert Sabine’s accumulated gypsum and carbon dioxide into hydrogen gas and sulfuric acid. The “carbon-negative” sulfuric acid will be sold to Sabine for use in its precious-metals refining processes.
Federal grant	Sibanye-Stillwater	December 2024— The Montana Department of Labor received from the U.S. Department of Labor $3.5 million of the $11.4 million National Dislocated Worker Grant requested in November to assist mine workers laid off from the U.S. PGM operations in September.
New facility	PMR	May 2025— PMR USA Inc. (“PMR”) is investing $6 million to construct a new 25,000-square-foot facility in Gastonia, North Carolina, that enhances its long-term corporate growth strategy and commitment to promoting innovations in the scrapped catalytic converter processing industry. The new facility, scheduled to commence operations in early-2026, will feature custom-engineered, AI-integrated machinery for one-touch processing to reduce material handling, increase security, triple the output of traditional systems, and enable real-time mass balancing operations.

Item	Firm	Event
New production equipment	Metallix Refining	June 2025— Metallix Refining announced the launch of its latest innovation, APR4-Advanced Pyrolytic Reduction furnace technology. The reduction process relies on two oxygen-starved, continuously fed furnaces that thermally decompose materials in a controlled environment by indirect heating to minimize the environmental impact of organic materials contained in precious-metal-bearing waste and scrap.
Acquisition announcement	Silbanye-Stillwater, Metallix Refining	July 2025— Corporate staff announced a $82-million purchase agreement to acquire Metallix Refining", a processor of precious metals operating in Greenville, North Carolina, as well as in South Korea and the United Kingdom. Metallix Refining recovers precious metals from industrial scrap materials, including catalytic converters. This acquisition both complements the firm's existing PGM recovery operations in Montana and Pennsylvania, and provides access to proprietary furnace technology, additional processing capacity, further technical expertise, and an expanded worldwide customer base.

Source: Petition, pp. 1.17 to 1.20, exh. 1.3; Conference transcript, pp. 16 to 17, 42, 87, 102 (McDowell), 23 to 24 (Shuck), 28 (Binando), 30 (Drummond), 33 to 35 (Kesler); Petitioners' preconference brief, pp. 17 to 19; Sibanye-Stillwater, "Flood Event in Montana Affects the Stillwater Mine, US PGM Operations," Market Release, June 14, 2022, https://thevault.exchange/?get_group_doc=245/1655186855-LogoFloodeventinMontanaaffectstheStillwatermineUSPGMoperations14Jun2022.pdf; Sibanye-Stillwater, "Update on the Impact of Regional Flooding on the US PGM Operations," Market Release, June 24, 2022, https://thevault.exchange/?get_group_doc=245/1656075925-LogoUpdateontheimpactofregionalfloodingontheUSPGMoperations24Jun2022.pdf; Sibanye-Stillwater, "Sibanye-Stillwater to Acquire Reldan, a US-based Metals Recycler, Enhancing Its Exposure to the Circular Economy," Market Release, November 9, 2023, https://thevault.exchange/?get_group_doc=245/1699525241-LogoSibanye-StillwatertoacquireReldanaUS-basedmetalsrecycler9Nov23.pdf; Sibanye-Stillwater, "Sibanye-Stillwater Reldan," https://www.sibanyestillwater.com/business/americas/recycling/reldan, retrieved September 1, 2025; Mining Technology, "Sibanye-Stillwater to Purchase US Metals Recycler Reldan," November 10, 2023, https://www.mining-technology.com/news/sibanye-stillwater-purchase-reldan; Darrell Ehrlick, "Sibayne-Stillwater Lays Off 100 Miners in the Wake of Slumping Metal Prices," Daily Montanan, November 30, 2023, https://dailymontanan.com/2023/11/30/sibayne-stillwater-lays-off-100-miners-in-the-wake-of-slumping-metal-prices; Darrell Ehrlick, "Platinum Mine Lays Off 100 Miners in the Wake of Slumping Prices, The Bend Bulletin, November 30, 2023, https://bendbulletin.com/2023/11/30/platinum-mine-lays-off-100-miners-in-the-wake-of-slumping-prices; Mining Technology, "Sibanye-Stillwater Closes Purchase of Metals Recycler Reldan," March 19, 2024, https://www.mining-technology.com/news/sibanye-closes-reldan; Sibanye-Stillwater, "Sibanye-Stillwater Completes the Acquisition of Reldan," Market Release, March 18, 2024, https://thevault.exchange/?get_group_doc=245/1710754023-Sibanye-Stillwater-completes-acquisition-Reldan-18Mar2024.pdf; Mining Technology, "Sibanye's US Palladium Mine Could Face Closure Amid Price Slump," June 27, 2024, https://www.mining-technology.com/news/sibanyes-palladium-closure-slump/?cf-view&cf-closed; Sibanye-Stillwater, "Trading Statement and Production Update for the Six Months Ended 30 June 2024," Market Release, September 2, 2024, https://thevault.exchange/?get_group_doc=245/1725254752-LogoTradingstatementandproductionupdateforthesixmonthsended30June20242Sep2024.pdf; Blair Miller, "Sibanye-Stillwater Plans to Lay Off 700 Montana Mining Workers," Daily Montanan, September 12, 2024, https://dailymontanan.com/2024/09/12/sibanye-stillwater-plans-to-lay-off-700-montana-mining-workers; Mining.com, "Sibanye to Slash Output to Turn Around US Palladium Mines," September 12, 2024, https://www.mining.com/web/sibanye-stillwater-posts-394-million-loss-on-weak-prices-us-impairment; Nelson Banya, "Sibanye to Halve US Mine Output as Losses Persist, Shares Jump," Reuters, September 12, 2024, https://www.reuters.com/markets/commodities/sibanye-close-

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Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of unwrought palladium since 2022. Two of three producers indicated in their questionnaires that they had experienced such changes. Table 3.4 presents the changes identified by these producers.

Table 3.4 U: U.S. producers' reported changes in operations, since January 1, 2022

Item	Firm name and narrative response on changes in operations
Production curtailments	***
Production curtailments	***
Acquisitions	***
Weather-related or force majeure events	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. production, capacity, and capacity utilization

Table 3.5 presents U.S. producers' installed and practical capacity and production on the same equipment. Installed overall capacity fluctuated year to year, increasing from 2022 to 2023 then decreasing from 2023 to 2024, ending *** percent lower than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. Installed overall production decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. Installed overall capacity utilization decreased year to year, ending *** percentage points lower in 2024 than in 2022, and was *** percentage points lower in interim 2025 compared to interim 2024. Practical overall capacity decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024.[5] Practical overall production decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. Practical overall capacity utilization fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percentage points higher, but was *** percent lower in interim 2025 compared to interim 2024.

[5] All three firms had lower practical overall capacity, with *** practical overall capacity in interim 2025 than interim 2024. *** reported that *** impacted their production. ***'s practical capacity is based on ***.

Table 3.5 Unwrought palladium: U.S. producers' installed and practical capacity and production on the same equipment as in-scope production, by period

Capacity and production in troy ounces; utilization in percent; interim is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical unwrought palladium	Capacity	***	***	***	***	***
Practical unwrought palladium	Production	***	***	***	***	***
Practical unwrought palladium	Utilization	***	***	***	***	***

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 "—". Metrics for installed overall and practical overall are based on the total weight while the metric for unwrought palladium is based on contained palladium weight.

Table 3.6 presents U.S. producers' reported narratives regarding practical capacity constraints.

Table 3.6 Unwrought palladium: U.S. producers' reported capacity constraints since January 1, 2022

Item	Firm name and narrative response on constraints to practical overall capacity
Production bottlenecks	***
Production bottlenecks	***
Existing labor force	***
Supply of material inputs	***
Other constraints	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table 3.7 and figure 3.1 present U.S. producers' production, capacity, and capacity utilization. U.S. producers' practical capacity decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. U.S. producers' production decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. U.S. producers' capacity utilization fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percentage points higher, but was *** percent lower in interim 2025 compared to interim 2024.

Table 3.7 Unwrought palladium: U.S. producers' output, by firm and period

Practical capacity

Capacity in troy ounces contained palladium ("TOCP"); interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 3.7 (Continued) Unwrought palladium: U.S. producers' output, by firm and period

Production

Production in troy ounces contained palladium; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 3.7 (Continued) Unwrought palladium: U.S. producers' output, by firm and period

Capacity utilization

Capacity utilization in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Note: Capacity utilization ratio represents the ratio of the U.S. producer's production to its production capacity.

Table continued.

Table 3.7 (Continued) Unwrought palladium: U.S. producers' output, by firm and period

Share of production

Share in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	100.0	100.0	100.0	100.0	100.0

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 "—".

Figure 3.1 Unwrought pallidum: U.S. producers' capacity, and capacity utilization, by period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table 3.8, less than *** percent of the product produced during 2022 to 2024 and the interim periods by U.S. producers was unwrought palladium. *** reported producing gold, silver, platinum, rhodium, and iridium.

Table 3.8 Unwrought palladium: U.S. producers' overall production on the same equipment as in-scope production, by period

Quantity in troy ounces; ratio and share in percent; interim is January through March

Product type	Measure	2022	2023	2024	Interim 2024	Interim 2025
Unwrought palladium contained weight	Quantity	***	***	***	***	***
Unwrought palladium weight other elements	Quantity	***	***	***	***	***
Unwrought palladium total weight	Quantity	***	***	***	***	***
Other products	Quantity	***	***	***	***	***
Total same machinery	Quantity	***	***	***	***	***
Unwrought palladium contained weight	Share	***	***	***	***	***
Unwrought palladium weight other elements	Share	***	***	***	***	***
Unwrought palladium total weight	Share	***	***	***	***	***
Other products	Share	***	***	***	***	***
Total same machinery	Share	100.0	100.0	100.0	100.0	100.0

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 "—". Other products include ***.

U.S. producers' U.S. shipments and exports

Table 3.9 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. shipments accounted for the majority of U.S. producers' total shipments from 2022 to 2024 and both interim periods.[6] The quantity of U.S. shipments fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent lower than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. The value of their U.S. shipments decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024.

The average unit value of U.S. producers' U.S. shipments decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024.

[6] No firms reported internal consumption or transfers to related firms.

Table 3.9 Unwrought palladium: U.S. producers' shipments, by destination and period

Quantity in troy ounces contained palladium; value in 1,000 dollars; unit value in dollars per troy ounce contained palladium; shares in percent; interim is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. shipments	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Export shipments	Share of quantity	***	***	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	100.0	100.0	100.0	100.0	100.0

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 "—".

By quantity, export shipments accounted for a minority share of U.S. producers' total shipments in each year from 2022 to 2024 and both interim periods.[7] The quantity of export shipments decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024. The value of U.S. producers' export shipments decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024.

The average unit value of exports shipments decreased year to year, ending *** percent lower in 2024 than in 2022, and was *** percent lower in interim 2025 compared to interim 2024.

Table 3.10 presents U.S. producers' U.S. shipments by source of palladium and source.

[7] ***.

Primary unwrought palladium accounted for at least *** percent, and secondary unwrought palladium accounted for at least *** percent of U.S producers' U.S. shipments during the period for which data was collected.

Table 3.10 Unwrought palladium: U.S. producer' U.S. shipments by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 "—".

Tables 3.11 presents U.S. producers' U.S. shipments by product form. In 2024, sponge accounted for *** percent and ingots, blocks, billets accounted *** percent of U.S. producers' U.S. shipments.

Table 3.11 Unwrought palladium: U.S. importers' U.S. shipment by product form and source, 2024

Quantity in troy ounces contained palladium

Product form	Quantity	Share
Ingots, blocks, billets	***	***
Lumps, briquettes, cubes	***	***
Cake	***	***
Sponge	***	***
Other product forms	***	***
All product forms	***	100.0

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. producers' inventories

Table 3.12 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' end-of-inventories decreased year to year, ending *** percent lower in 2024 than in 2022, but was *** percent higher in interim 2025 compared to interim 2024.[8]

Table 3.12 Unwrought palladium: U.S. producers' inventories and their ratio to select items, by period

Quantity in troy ounces contained palladium; ratio in percent; interim is January through March

Item	2022	2023	2024	Interim 2024	Interim 2025
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.

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 "—".

[8] ***.

U.S. employment, wages, and productivity

Table 3.13 shows U.S. producers' employment-related data. The number of production-related workers ("PRWs") decreased by *** percent from 2022 to 2024 and were *** percent lower in interim 2025 than in interim 2024.[9] Productivity decreased by *** percent from 2022 to 2024 but was *** percent higher in interim 2025 than in interim 2024. Unit labor costs increased by *** percent from 2022 to 2024 but was *** percent lower in interim 2025 than in interim 2024. Total hours worked decreased by *** from 2022 to 2024 and were *** percent lower in interim 2025 than in interim 2024. Hours worked per PRW decreased *** percent, and wages paid increased by *** during 2022 to 2024, while wages paid wages decreased *** percent, from 2022 to 2024.

Table 3.13 Unwrought palladium: U.S. producers' employment related information, by period

Interim is January through March

Item	2022	2023	2024	Interim 2024	Interim 2025
Production and related workers (PRWs) (number)	***	***	***	***	***
Total hours worked (1,000 hours)	***	***	***	***	***
Hours worked per PRW (hours)	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***
Productivity (TOCP per 1,000 hours)	***	***	***	***	***
Unit labor costs (dollars per TOCP)	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[9] ***.

Part 4: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to nine firms believed to be importers of subject unwrought palladium, as well as to all U.S. producers of unwrought palladium.[1] Usable questionnaire responses were received from four companies, nearly all of U.S. imports from Russia and *** percent of imports from nonsubject countries in 2024 under HTS subheading 7110.21.00. Table 4.1 lists all responding U.S. importers of unwrought palladium from Russia and other sources, their locations, and their shares of U.S. imports, in 2024.

Table 4.1 Unwrought palladium: U.S. importers, their headquarters, and share of imports within each source, 2024

Share in percent

Firm	Headquarters	Russia	South Africa	All other sources	Nonsubject sources	All import sources
BASF Metals	Iselin, NJ	***	***	***	***	***
General Motors	Detroit, MI	***	***	***	***	***
Johnson Matthey	West Chester, PA	***	***	***	***	***
Mitsubishi International	New York, NY	***	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0	100.0

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 "—".

[1] The Commission issued questionnaires to those firms identified in the petitions; staff research; and proprietary, Census-edited Customs' import records.

U.S. imports

Table 4.2 presents data for U.S. imports of unwrought palladium from Russia and all other sources.[2]

U.S. imports from Russia by quantity increased year to year, ending 35.1 percent higher in 2024 than in 2022, and was 50.0 percent higher in interim 2025 compared to interim 2024. U.S. imports from Russia by value decreased year to year, ending 35.2 percent lower in 2024 than in 2022, but was 44.8 percent higher in interim 2025 compared to interim 2024. The unit value of imports from Russia decreased in year to year, ending 52.0 lower in 2024 than in 2022, and was 3.4 percent lower in interim 2025 compared to interim 2024.

U.S. imports from South Africa by quantity increased year to year, ending 31.4 percent higher in 2024 than in 2022, and was 15.2 percent higher in interim 2025 compared to interim 2024. U.S. imports from South Africa by value decreased year to year, ending 38.1 percent lower in 2024 than in 2022, but was 12.6 percent higher in interim 2025 compared to interim 2024. The unit value of imports from South Africa decreased in year to year, ending 52.9 lower in 2024 than in 2022, and was 2.2 percent lower in interim 2025 compared to interim 2024.

[2] ***.

Table 4.2 Unwrought palladium: U.S. imports by source and period

Quantity in troy ounces contained palladium; value in 1,000 dollars; unit value in dollars per troy ounces contained palladium; interim is January through March

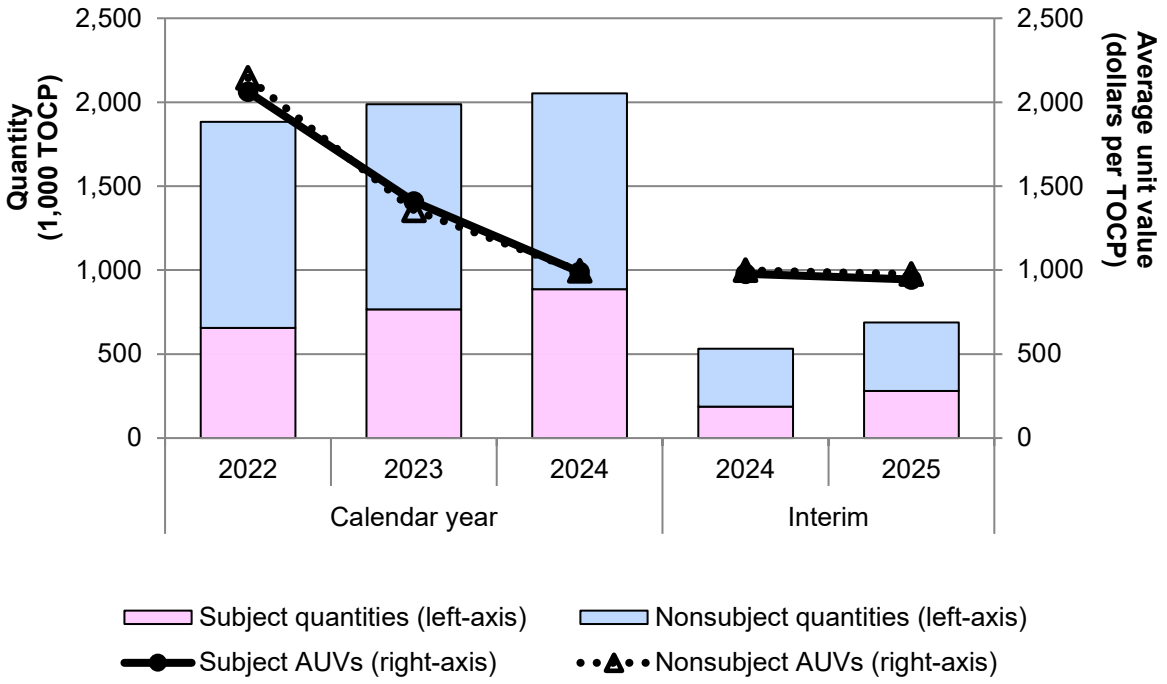
Source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Russia	Quantity	656,631	766,109	887,338	186,474	279,711
South Africa	Quantity	667,180	782,084	876,594	235,033	270,776
Other sources	Quantity	559,073	440,664	288,696	111,090	137,022
Nonsubject sources	Quantity	1,226,253	1,222,748	1,165,290	346,124	407,797
All import sources	Quantity	1,882,884	1,988,857	2,052,628	532,598	687,509
Russia	Value	1,354,059	1,079,782	877,763	182,380	264,154
South Africa	Value	1,406,700	1,052,447	870,421	233,736	263,257
Other sources	Value	1,224,196	606,503	289,680	112,193	135,110
Nonsubject sources	Value	2,630,896	1,658,950	1,160,101	345,930	398,367
All import sources	Value	3,984,955	2,738,732	2,037,864	528,309	662,521
Russia	Unit value	2,062	1,409	989	978	944
South Africa	Unit value	2,108	1,346	993	994	972
Other sources	Unit value	2,190	1,376	1,003	1,010	986
Nonsubject sources	Unit value	2,145	1,357	996	999	977
All import sources	Unit value	2,116	1,377	993	992	964
Russia	Share of quantity	34.9	38.5	43.2	35.0	40.7
South Africa	Share of quantity	35.4	39.3	42.7	44.1	39.4
Other sources	Share of quantity	29.7	22.2	14.1	20.9	19.9
Nonsubject sources	Share of quantity	65.1	61.5	56.8	65.0	59.3
All import sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Russia	Share of value	34.0	39.4	43.1	34.5	39.9
South Africa	Share of value	35.3	38.4	42.7	44.2	39.7
Other sources	Share of value	30.7	22.1	14.2	21.2	20.4
Nonsubject sources	Share of value	66.0	60.6	56.9	65.5	60.1
All import sources	Share of value	100.0	100.0	100.0	100.0	100.0
Russia	Ratio	***	***	***	***	***
South Africa	Ratio	***	***	***	***	***
Other sources	Ratio	***	***	***	***	***
Nonsubject sources	Ratio	***	***	***	***	***
All import sources	Ratio	***	***	***	***	***

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.

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: Share of quantity is the share of U.S. imports by quantity; share of value is the share of U.S. imports by value; ratio are U.S. imports to production.

Figure 4.1 Unwrought palladium: U.S. import quantities and average unit values, by source and period



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.

Tables 4.3 through 4.7 and figure 4.2 present U.S. importers' U.S. shipments by input source and source of palladium. Primary unwrought palladium (from mined ore) accounted for *** percent of U.S. shipments from Russia during the period for which data was collected. Primary unwrought palladium account for at least *** percent of U.S. shipments from South Africa during the period for which data was collected. Secondary unwrought palladium (from recycling) accounted for at least *** percent of U.S. shipments from all other sources during the period for which data was collected. Nonsubject primary unwrought palladium account for at least *** percent, while secondary unwrought palladium account for *** percent during the period for which data was collected.

In 2024, the unit value for primary unwrought palladium for Russia was $*** per troy ounce contained palladium, while primary unwrought palladium from South Africa was $***, and primary unwrought palladium from all other sources was $***.

Table 4.3 Unwrought palladium: U.S. importers' U.S. shipments from Russia, by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 "—".

Table 4.4 Unwrought palladium: U.S. importers' U.S. shipments from South Africa, by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 "—".

Table 4.5 Unwrought palladium: U.S. importers' U.S. shipments from all other sources, by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 "—".

Table 4.6 Unwrought palladium: U.S. importers' U.S. shipments from nonsubject sources, by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 "—".

Table 4.7 Unwrought palladium: U.S. importers' U.S. shipments from all sources, by source or palladium and period

Quantity in troy ounces contained palladium; value in 1,000 of dollars; units value in dollars per troy ounces contained palladium; shares in percent; interim period is January through March

Input source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary	Quantity	***	***	***	***	***
Secondary	Quantity	***	***	***	***	***
All input sources	Quantity	***	***	***	***	***
Primary	Value	***	***	***	***	***
Secondary	Value	***	***	***	***	***
All input sources	Value	***	***	***	***	***
Primary	Unit value	***	***	***	***	***
Secondary	Unit value	***	***	***	***	***
All input sources	Unit value	***	***	***	***	***
Primary	Share of quantity	***	***	***	***	***
Secondary	Share of quantity	***	***	***	***	***
All input sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
Primary	Share of value	***	***	***	***	***
Secondary	Share of value	***	***	***	***	***
All input 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: 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 4.2 Unwrought palladium: U.S. producers' and U.S. importers' U.S. shipments from all sources, by source or palladium, 2024

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The boxes represent the relative sizes using quantity of the source/ input type in the market in 2024 based on questionnaire data, and the parenthetical represents the average unit value for that source /input type in 2024. The boxes for South Africa and all other import sources are smaller than they would be based on official statistics as USITC questionnaire coverage for those sources are less fulsome than for Russia and the United States. Items with little data are represented without labels, for example, South Africa secondary and all other sources primary. Data are shown in previous tables.

Tables 4.8 and figure 4.3 present U.S. importers' U.S. shipments by product form and source. In 2024, sponge accounted for at least the vast majority of U.S. shipments from each source, accounting for *** percent of U.S. shipments of imports from Russia, *** percent from South Africa, and *** percent from nonsubject sources. Other product forms accounted *** percent of U.S. shipments of imports from South Africa and *** percent from nonsubject sources.[3]

[3] Other forms include palladium powder.

Table 4.8 Unwrought palladium: U.S. importers' U.S. shipment by product form and source, 2024

Quantity in troy ounces contained palladium

Product form	Russia	South Africa	All other sources	Nonsubject sources	All import sources
Ingots, blocks, billets	***	***	***	***	***
Lumps, briquettes, cubes	***	***	***	***	***
Cake	***	***	***	***	***
Sponge	***	***	***	***	***
Other product forms	***	***	***	***	***
All product forms	***	***	***	***	***

Table continued.

Table 4.8 (Continued) Unwrought palladium: U.S. importers' U.S. shipment by product form and source, 2024

Share in percent

Product form	Russia	South Africa	All other sources	Nonsubject sources	All import sources
Ingots, blocks, billets	***	***	***	***	***
Lumps, briquettes, cubes	***	***	***	***	***
Cake	***	***	***	***	***
Sponge	***	***	***	***	***
Other product forms	***	***	***	***	***
All product forms	100.0	100.0	100.0	100.0	100.0

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 "—".

Figure 4.3 Unwrought palladium: U.S. producers' and U.S. importers' U.S. shipment by product form and source, 2024

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[4] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[5] Imports from Russia accounted for 44.4 percent of total imports of unwrought palladium by quantity from July 2024 through July 2025.

Table 4.9 Unwrought palladium: U.S. imports in the twelve-month period preceding the filing of the petition, July 2024 through June 2025

Quantity in troy ounces contained palladium; share in percent

Source	Quantity	Share of quantity
Russia	1,028,801	44.4
South Africa	913,560	39.4
All other sources	374,983	16.2
All import sources	2,317,343	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. 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 "—".

[4] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[5] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Apparent U.S. consumption and market shares[6]

Quantity

Table 4.10 and figure 4.4 present data on apparent U.S. consumption and U.S. market shares by quantity for unwrought palladium.[7] Apparent consumption decreased year to year from 2022 to 2024, ending *** percent lower, but was *** percent higher in interim 2025 compared to interim 2024.

During 2022 to 2024, the U.S. producers' and nonsubject sources other than South Africa market share decreased by *** and *** percentage points, respectively. While the market share of U.S. imports from Russia and South Africa increased by *** and *** percentage points, respectively.

U.S. producers' market share and that of U.S. imports from South Africa were *** and *** percentage points lower, respectively, in interim 2025 compared to interim 2024. While the market share of U.S. imports from Russia and nonsubject sources other than South Africa were *** and *** percentage points higher, respectively.

[6] Appendix E presents alternate apparent U.S. consumption using unadjusted U.S. import statistics of the U.S. Department of Commerce Census Bureau.

[7] ***. U.S. imports used in apparent U.S. consumption have been adjusted to remove foreign-origin export (re-exports).

Table 4.10 Unwrought palladium: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in troy ounces contained palladium; shares in percent; interim is January through March

Source	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. producers	Quantity	***	***	***	***	***
Russia	Quantity	347,169	437,950	340,290	3,314	130,811
South Africa	Quantity	437,301	332,390	393,928	131,137	142,505
All other sources	Quantity	269,741	302,133	100,476	76,873	109,303
Nonsubject sources	Quantity	707,041	634,523	494,404	208,010	251,807
All import sources	Quantity	1,054,210	1,072,473	834,694	211,324	382,619
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
South Africa	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires and adjusted official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Official U.S. import statistics were adjusted to remove official foreign-origin export (re-exports) statistics of the Census Bureau using schedule B number 7110.21.0000 allocated to individual original import source based on official import statistics, and changes in importer inventory levels as reported by the responding U.S. importer to Commission questionnaires. This methodology provides a holistic view of the portion of imports consumed in the U.S. market without the deficiencies in U.S. importers' questionnaire data coverage for nonsubject sources and certain misreporting of importer shipments by responding U.S. importers (***) in responses to the Commission's questionnaire. Imports are based on the imports for consumption data series. Exports used in the adjustment are based on the df_indicator = 2, which represents foreign-origin exports (re-exports) for palladium not produced in the United States.

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 4.4 Unwrought pallidum: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and adjusted official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Official U.S. import statistics were adjusted to remove official foreign-origin export (re-exports) statistics of the Census Bureau using schedule B number 7110.21.0000 allocated to individual original import source based on official import statistics, and changes in importer inventory levels as reported by the responding U.S. importer to Commission questionnaires. This methodology provides a holistic view of the portion of imports consumed in the U.S. market without the deficiencies in U.S. importers' questionnaire data coverage for nonsubject sources and certain misreporting of importer shipments by responding U.S. importers (***) in responses to the Commission's questionnaire. Imports are based on the imports for consumption data series. Exports used in the adjustment are based on the df_indicator = 2, which represents foreign-origin exports (re-exports) for palladium not produced in the United States.

Value

Table 4.11 and figure 4.5 present data on apparent U.S. consumption and U.S. market shares by value for unwrought palladium. Apparent consumption decreased year to year from 2022 to 2024, ending *** percent lower, but was *** percent higher in interim 2025 compared to interim 2024.

During 2022 to 2024, U.S. producers' market share decreased *** percentage points, and was *** percentage points lower in interim 2025 compared to interim 2024. During 2022 to 2024, the market share of imports from Russia increased by *** percentage points, and was *** percentage points higher in interim 2025 compared to interim 2024. During 2022 to 2024, the market share of imports from South Africa increased by *** percentage points, but was *** percentage points lower in interim 2025 compared to interim 2024. Additionally, the market share of U.S. imports from nonsubject sources other than South Africa decreased by *** percentage points from 2022 to 2024, but was *** percentage points higher in interim 2025 compared to interim 2024.

Table 4.11 Unwrought palladium: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent; interim is January through March

Source	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. producers	Value	***	***	***	***	***
Russia	Value	739,246	593,712	338,669	3,282	127,245
South Africa	Value	910,014	451,825	391,142	131,514	138,017
All other sources	Value	562,334	414,142	100,873	76,529	106,255
Nonsubject sources	Value	1,473,416	867,191	493,276	207,777	244,170
All import sources	Value	2,210,009	1,461,209	831,874	210,776	371,399
All sources	Value	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
South Africa	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires and adjusted official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Official U.S. import statistics were adjusted to remove official foreign-origin export (re-exports) statistics of the Census Bureau using schedule B number 7110.21.0000 allocated to individual original import source based on official import statistics, and changes in importer inventory levels as reported by the responding U.S. importer to Commission questionnaires. This methodology provides a holistic view of the portion of imports consumed in the U.S. market without the deficiencies in U.S. importers' questionnaire data coverage for nonsubject sources and certain misreporting of importer shipments by responding U.S. importers (***) in responses to the Commission's questionnaire. Imports are based on the imports for consumption data series. Exports used in the adjustment are based on the df_indicator = 2, which represents foreign-origin exports (re-exports) for palladium not produced in the United States.

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 4.5 Unwrought palladium: Apparent U.S. consumption based on value, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and adjusted official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025. Official U.S. import statistics were adjusted to remove official foreign-origin export (re-exports) statistics of the Census Bureau using schedule B number 7110.21.0000 allocated to individual original import source based on official import statistics, and changes in importer inventory levels as reported by the responding U.S. importer to Commission questionnaires. This methodology provides a holistic view of the portion of imports consumed in the U.S. market without the deficiencies in U.S. importers' questionnaire data coverage for nonsubject sources and certain misreporting of importer shipments by responding U.S. importers (***) in responses to the Commission's questionnaire. Imports are based on the imports for consumption data series. Exports used in the adjustment are based on the df_indicator = 2, which represents foreign-origin exports (re-exports) for palladium not produced in the United States.

Part 5: Pricing data

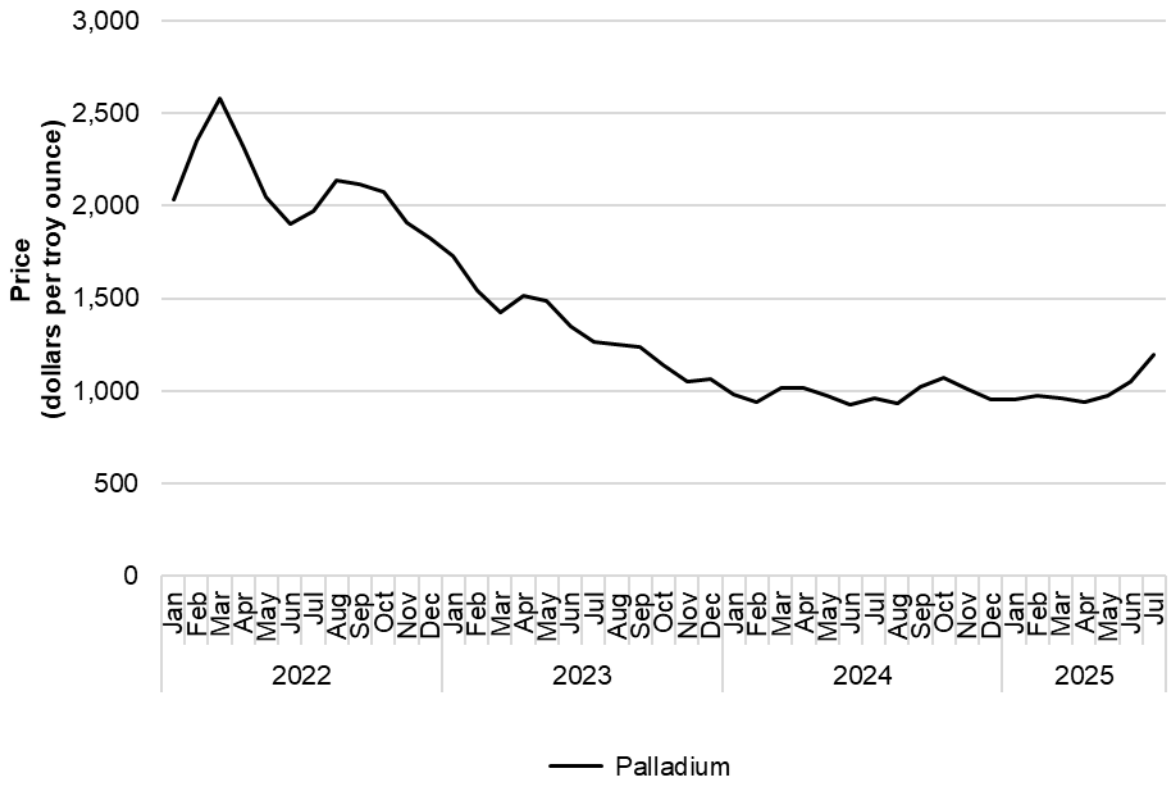
Factors affecting prices

Raw material costs

There are two main sources of raw materials used to produce unwrought palladium; PGM-bearing ore and recovered or recycled spent catalytic converters and other scrap.

Unwrought palladium prices follow international price indexes, usually the London Platinum and Palladium Market (LPPM), the London Bullion Market Association (LBMA), and the CME Group (NYMEX). According to London Bullion Market Association, the monthly average price of palladium has overall decreased between January 2022 and July 2025 (figure 5.1 and table 5.1). Firms reported that the palladium prices respond to anticipated supply constraints, trade actions, and forecasted demand.

Figure 5.1 Palladium: Monthly average prices, London afternoon fix, January 2022 to July 2025,



Source: London Bullion Market Association ("LBMA"), "LBMA Platinum and Palladium Price Data," https://www.lppm.com/data#c=pd&y=2025&t=daily, retrieved August 26, 2025; LBMA, "LBMA Palladium," https://www.lme.com/en/Metals/Precious/LBMA-Palladium#Monthly+averages, retrieved August 26, 2025.

Table 5.1 Palladium: Monthly average prices, London afternoon fix, January 2022 to July 2025

Price in dollars per troy ounce

Month	2022	2023	2024	2025
January	2,034	1,732	983	953
February	2,350	1,544	938	972
March	2,583	1,426	1,012	958
April	2,325	1,515	1,015	943
May	2,048	1,485	975	975
June	1,903	1,348	925	1,053
July	1,973	1,265	962	1,197
August	2,135	1,248	932	NA
September	2,115	1,239	1,020	NA
October	2,079	1,142	1,069	NA
November	1,912	1,050	1,009	NA
December	1,830	1,062	953	NA

Source: LBMA "LBMA Platinum and Palladium Price Data," https://www.lppm.com/data#c=pd&y=2025&t=daily, retrieved August 26, 2025; LBMA, "LBMA Palladium," https://www.lme.com/en/Metals/Precious/LBMA-Palladium#Monthly+averages, retrieved August 26, 2025.

Transportation costs to the U.S. market

Transportation costs for unwrought palladium shipped from Russia to the United States averaged under one percent. These estimates were derived from official import data and represent the transportation and other charges on imports.[1]

U.S. inland transportation costs

Two U.S. producers and two out of three responding importers reported that they typically arrange transportation to their customers. Firms did not provide usable data regarding their inland transportation costs.

Pricing practices

Pricing methods

As noted above, unwrought palladium prices follow international price indexes, usually the London Platinum and Palladium Market (LPPM), the (LBMA), and the CME Group (NYMEX). According to importer *** and the responding foreign producer, the global price is generally established through public price indexes.

[1] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2024 and then dividing by the customs value based on the HTS statistical reporting number 7110.21.0000.

U.S. producers and importers reported setting prices using transaction-by-transaction and contract negotiations (table 5.2). Importers described unwrought palladium prices, similarly to other PGMs as closely matching published indexes.

Table 5.2 Unwrought palladium: Count of U.S. producers' and importers' reported price setting methods

Count in number of firms reporting

Method	U.S. producers	Importers
Transaction-by-transaction	2	3
Set price lists	1	3
Other	0	0
Responding firms	0	0

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 and importers reported selling most of their unwrought palladium in the spot market, and approximately one-third of sales is via long-term contracts (table 5.3). One U.S. producer indicated using the public indexes of ***, while one responding importer reporting using the proprietary price index of ***.

Table 5.3 Unwrought palladium: U.S. producers' and importers' shares of commercial U.S. shipments by type of sale, 2024

Share in percent

Type of sale	U.S. producers	Subject importers
Long-term contracts	***	***
Annual contracts	***	***
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.

Sales terms and discounts

Each responding U.S. producer reported quoting prices in either an f.o.b. or delivered basis. Importers reported quoting prices on a delivered basis. Responding U.S. producers and importers reported no discount policies.

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 unwrought palladium product shipped to unrelated U.S. customers during January 2022 to March 2025.

Product 1.—Unwrought palladium in sponge form.

*** out of three U.S. producers and *** importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[2] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments of unwrought palladium, and *** percent of U.S. shipments of subject imports from Russia.[3] Price data for product 1 is presented in table 5.4 and figure 5.2.

[2] 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.

[3] Pricing coverage is based on U.S. shipments reported in questionnaires.

Table 5.4 Unwrought palladium: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per troy ounces contained palladium, quantity in troy ounces contained palladium, margin in percent.

Period	U.S. price	U.S. quantity	Russia price	Russia quantity	Russia margin
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***
2024 Q3	***	***	***	***	***
2024 Q4	***	***	***	***	***
2025 Q1	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Unwrought palladium in sponge form.

Figure 5.2 Unwrought palladium: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Unwrought palladium in sponge form.

Price trends

In general, between January 2022 to March 2025, prices fluctuated but remained similar between U.S. produced and imported product. Table 5.5 summarizes the price trends, by country.

Table 5.5 Unwrought palladium: Summary of price data, by product and source, January 2022 to March 2025

Quantity in troy ounces contained palladium, price in dollars per troy ounces contained palladium

Product	Source	Number of quarters	Quantity of shipments	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	13	***	***	***	***	***	***
Product 1	Russia	13	***	***	***	***	***	***

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. Percent change is the change from the first quarter to the last quarter of the data collection period.

As discussed in Part 2 of this report, some firms reported that U.S. automakers are adopters of tri-metal catalytic converters, which allows for platinum, rather than palladium, to be used to produce catalytic converters. Below, table 5.6 and figure 5.3 shows the average monthly prices of palladium and platinum over the period of investigation.

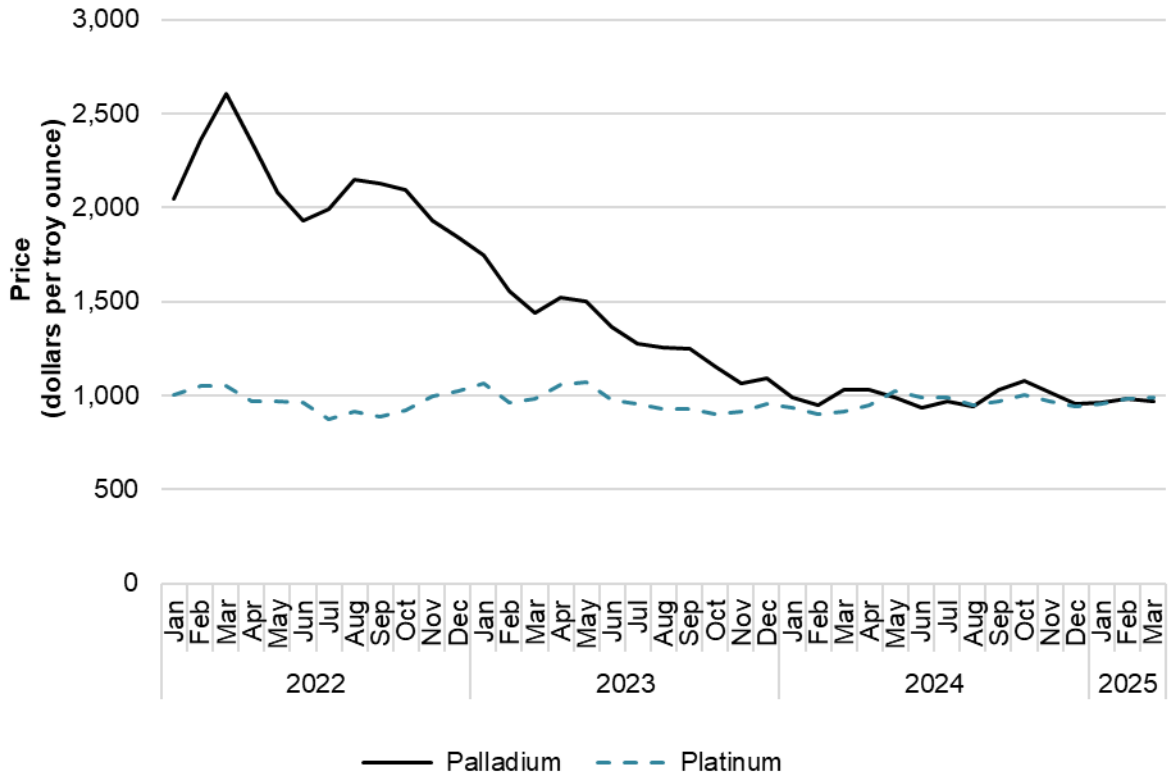
Table 5.6 Palladium: Johnson Matthey's monthly PGM prices, January 2022 to March 2025

Price in dollars per troy ounce

Month	2022	2023	2024	2025
January	2,048	1,746	992	962
February	2,360	1,554	948	981
March	2,606	1,441	1,028	968
April	2,343	1,521	1,027	NA
May	2,078	1,498	986	NA
June	1,928	1,361	934	NA
July	1,989	1,276	969	NA
August	2,148	1,256	941	NA
September	2,131	1,247	1,028	NA
October	2,095	1,151	1,079	NA
November	1,933	1,061	1,015	NA
December	1,839	1,094	956	NA

Source: JM PGM prices, https://matthey.com/products-and-markets/pgms-and-circularity/pgm-management, accessed August 28, 2025.

Figure 5.3 Palladium: Monthly average prices, London afternoon fix, January 2022 to July 2025.



Source: JM PGM prices, https://matthey.com/products-and-markets/pgms-and-circularity/pgm-management, accessed August 28, 2025.

Price comparisons

As shown in table 5.6, prices for product imported from Russia were below those for U.S.-produced product in two of thirteen instances (*** troy ounces contained palladium); margins of underselling ranged from *** percent. In the remaining 11 instances (*** troy ounces contained palladium), prices for product from Russia were between *** percent above prices for the domestic product.

Table 5.6 Unwrought palladium: Instances of underselling and overselling and the range and average of margins, by period

Quantity in troy ounces contained palladium; margin in percent

Period	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
2022	Underselling	—	***	***	***	***
2023	Underselling	—	***	***	***	***
2024	Underselling	2	***	***	***	***
January through March 2025	Underselling	—	***	***	***	***
All periods	Underselling	2	***	***	***	***
2022	Overselling	4	***	***	***	***
2023	Overselling	4	***	***	***	***
2024	Overselling	2	***	***	***	***
January through March 2025	Overselling	1	***	***	***	***
All periods	Overselling	11	***	***	***	***

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: Margins shown as “0.0” percent represent non-zero values less than “0.05” percent Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

While the Commission did not ask for pricing data for nonsubject imports in the preliminary investigation, firms reported that nonsubject prices were *** during the period under the review.[4]

Lost sales and lost revenue

The Commission requested that U.S. producers of unwrought palladium report purchasers with which they experienced instances of lost sales or revenue due to competition

[4] *** post conference brief pg. 13

from imports of unwrought palladium from Russia during 2022 through March 2025. Of the three responding U.S. producers, one reported that they had to reduce prices, none reported that they had to roll back announced price increases, and one firm *** reported that they had lost sales. However, no U.S. producers submitted lost sales and lost revenue allegations.[5]

Staff contacted five purchasers to complete a lost sales and lost revenue survey and received responses from one purchaser. The responding purchaser reported purchasing *** troy ounces contained palladium of unwrought palladium during January 2022 to March 2025 (table 5.8).

During 2024, the responding purchaser purchased *** percent from U.S. producers, *** percent from Russia, *** percent from nonsubject countries, and *** percent from "unknown source" countries. The purchaser was asked about changes in their purchasing patterns from different sources since 2022. The responding purchaser, *** reported *** purchases from domestic producers. Explanations for *** purchases of domestic product included ***."

The purchaser explained *** purchases of subject merchandise as "***." Regarding purchases of palladium from nonsubject sources, the purchaser reported *** purchases due to "***."

Table 5.7 Unwrought palladium: Purchasers' reported purchases and imports, by firm and source

Quantity in troy ounces contained palladium, share in percent

Purchaser	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject country share
***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: All other includes all other sources and unknown sources. Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

In responding to the lost sales lost revenue survey, *** provided additional information on purchases and market dynamics. The firm reported that it does not rely on one source of palladium over another and instead aims to "***" and purchasing on the spot market.

[5] U.S. producer *** reported experiencing lost sales and revenue "***," but did not provide further information regarding specific firms with which they lost sales or revenue.

Part 6: Financial experience of U.S. producers

Background[1]

Three U.S. producers (miner/recycler Sibanye-Stillwater and two recyclers Metallix Refining and Techemet) provided usable financial results on their unwrought palladium operations.[2] Sibanye-Stillwater produces unwrought palladium using primary mined ore from its mines and recycled palladium from its recycling operations, while Metallix Refining and Techemet ***.[3] [4] All U.S. producers reported financial data on a calendar year basis, and two out of three reported their financial data on the basis of GAAP.[5]

Figure 6.1 presents each responding firm's share of the total reported net sales quantity in 2024.[6] [7]

[1] The following abbreviations are used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), international financial reporting standards ("IFRS") fiscal year ("FY"), net sales ("NS"), troy ounces contained palladium ("TOCP"), 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").

[2] ***. Email from ***, August 19, 2025.

[3] Conference transcript, p. 13 (McDowell) and email from ***, August 8, 2025.

[4] ***. *** U.S. producer questionnaire response, section 2.6, and email from ***, August 7, 2025.

[5] *** reported its financial results on the basis IFRS. *** U.S. producers questionnaire response, section 3.2b.

[6] *** provided data related to its unwrought palladium toll-processing activity. Data are shown in appendix G.

[7] One firm (***) provided a response but did not produce any unwrought palladium during the period in which data were collected.

Figure 6.1 unwrought palladium: U.S. producers' share of net sales quantity in 2024, by firm

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on unwrought palladium

Table 6.1 presents aggregated data on U.S. producers' combined operations (non-toll production further refined under a tolling arrangement, and toll production that is also further refined under a tolling arrangement) in relation to unwrought palladium, while table 6.2 presents corresponding changes in AUVs. Table 6.3 presents selected company-specific financial data.

Appendix F presents the data of U.S. producers' results of operations excluding *** and U.S. producer *** result of operations. Appendix G presents U.S. toll processor's results of operations data.

Table 6.1 Unwrought palladium: U.S. producers' results of combined operations, by item and period

Quantity in troy ounces contained palladium; value in 1,000 dollars; ratios in percent; interim is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Commercial sales further refined under tolling	Quantity	***	***	***	***	***
Commercial sales toll produced	Quantity	***	***	***	***	***
Total net sales	Quantity	***	***	***	***	***
Commercial sales further refined under tolling	Value	***	***	***	***	***
Commercial sales toll produced	Value	***	***	***	***	***
Total net sales	Value	***	***	***	***	***
COGS: Primary palladium costs	Value	***	***	***	***	***
COGS: Secondary palladium costs	Value	***	***	***	***	***
COGS: Total raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Other expense or (income)	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COGS: Primary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Secondary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Total raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	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.

Table 6.1 (Continued) Unwrought palladium: U.S. producers' results of combined operations, by item and period

Shares in percent; unit values in dollars per TOCP; count in number of firms reporting; interim is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
COGS: Primary palladium costs	Share	***	***	***	***	***
COGS: Secondary palladium costs	Share	***	***	***	***	***
COGS: Total raw materials	Share	***	***	***	***	***
COGS: Direct labor	Share	***	***	***	***	***
COGS: Other factory	Share	***	***	***	***	***
COGS: Total	Share	100.0	100.0	100.0	100.0	100.0
Commercial sales further refined under tolling	Unit value	***	***	***	***	***
Commercial sales toll produced	Unit value	***	***	***	***	***
Total net sales	Unit value	***	***	***	***	***
COGS: Primary palladium costs	Unit value	***	***	***	***	***
COGS: Secondary palladium costs	Unit value	***	***	***	***	***
COGS: Total raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	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	3	3	3	3	3

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares represent the share of COGS.

Table 6.2 Unwrought palladium: Changes in AUVs between comparison periods for combined operations

Changes in percent; interim is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Commercial sales further refined under tolling	▼***	▼***	▼***	▼***
Commercial sales toll produced	▼***	▼***	▼***	▼***
Total net sales	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	▲***	▲***	▼***	▼***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▲***	▲***	▼***	▼***
COGS: Other factory	▲***	▲***	▲***	▼***
COGS: Total	▼***	▼***	▼***	▼***

Table Continued.

Table 6.2 (Continued) Unwrought palladium: Changes in AUVs between comparison periods for combined operations

Changes in dollars per TOCP; interim is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Commercial sales further refined under tolling	▼***	▼***	▼***	▼***
Commercial sales toll produced	▼***	▼***	▼***	▼***
Total net sales	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	▲***	▲***	▼***	▼***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▲***	▲***	▼***	▼***
COGS: Other factory	▲***	▲***	▲***	▼***
COGS: Total	▼***	▼***	▼***	▼***
Gross profit or (loss)	▼***	▼***	▼***	▼***
SG&A expense	▲***	▲***	▲***	▼***
Operating income or (loss)	▼***	▼***	▼***	▼***
Net income or (loss)	▼***	▼***	▼***	▼***

Source: Compiled data submitted in response to Commission questionnaires.

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table 6.3 Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales quantity

Quantity in troy ounces contained palladium; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales value

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss)

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss)

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss)

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS to net sales ratio

Ratios in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss) to net sales ratio

Ratios in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses to net sales ratio

Ratios in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss) to net sales ratio

Ratios in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss) to net sales ratio

Ratios in percent; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net sales value

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit raw material costs

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit direct labor costs

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit other factory costs

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit COGS

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit gross profit or (loss)

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit SG&A expenses

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit operating income or (loss)

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Table Continued.

Table 6.3 (Continued) Unwrought palladium: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net income or (loss)

Unit values in dollars per TOCP; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Net sales

The industry's total net sales include commercial sales of unwrought palladium that was further refined under a tolling arrangement, and commercial sales of unwrought palladium that was toll produced and further refined under a tolling arrangement, accounting for 61.5 and 38.5 percent of total sales quantity, respectively, in 2024.[8] As shown in table 6.1, total sales quantity decreased irregularly while total sales value decreased each year from 2022 to 2024, and both sales quantity and value were lower in interim 2025 compared with interim 2024. On a firm-by- firm basis, U.S. producers were uniform in directional trends with *** firms reporting an overall decrease in sales quantity and value from 2022 to 2024, and *** showing lower sales quantity and value in interim 2025 compared with interim 2024 (see table 6.3).

While sales quantity and value had the same directional trends, the decrease in value was more than double that of sales quantity from 2022 to 2024; with the majority of the

[8] ***. Emails from ***, August 19, and August 26, 2025.

decrease occurring between 2022 and 2023.[9] [10] [11] On a per-unit value (dollars per TOCP), sales value was within a comparable range between commercial sales refined under a tolling arrangement and toll produced commercial sales. Total sales per-unit value decreased each year from 2022 to 2024, and was lower in interim 2025 compared with interim 2024. As shown in table 6.3, *** firms reported a decrease in their per-unit sales value that was comparable in magnitudes from 2022 to 2024, and reported a lower unit value in interim 2025 compared with interim 2024.[12]

Cost of goods sold and gross profit or loss

As shown in table 6.1, raw materials cost is the largest component of COGS throughout the period in which data were collected, ranging between *** percent (interim 2024) and *** percent (2022). Total raw material cost includes the cost of primary palladium (e.g., ore, mined) and secondary palladium (e.g., recycled catalytic converters, scrap).[13] Primary palladium cost (***) increased consistently in absolute value and irregularly on a per-unit value (dollars per TOCP) from 2022 to 2024, but was lower in interim 2025 compared with interim 2024 in absolute and per-unit value. Secondary palladium cost (***) decreased each year in absolute and per-unit value from 2022 to 2024, but was higher in interim 2025 compared with interim 2024. Total raw materials cost, primarily impacted by the cost of secondary palladium decreased each year in absolute and per-unit value from 2022 to 2025, and was lower in absolute value but higher on a per unit

[9] ***. Email from ***, August 19, 2025.

[10] ***. Email from ***, August 19, 2025.

[11] ***. Email from ***, August 18, 2025.

[12] ***.

[13] Sibanye-Stillwater stated that "while the production process for mined and recycled palladium differs in the initial extraction stage, the two are then commingled in the smelting and refining stages, and sold as one product." Conference transcript, p. 6 (Drake).

value in interim 2025 compared with interim 2024.[14] On a firm-by-firm basis, U.S. producers were generally uniform in directional trends with *** U.S. producers reporting a decrease in their per-unit raw materials cost from 2022 to 2024, and a higher per-unit value in interim 2025 compared with interim 2024 (see table 6.3). As a ratio to net sales, raw materials cost increased irregularly from 2022 to 2024 and was higher in interim 2025 compared with interim 2024.

As shown in table 6.4, secondary palladium accounted for the majority of raw material cost ranging between *** percent, while primary palladium ranged between *** percent throughout the period in which data were collected.[15]

Table 6.4 Unwrought palladium: U.S. producers' raw material costs in 2024

Value in 1,000 dollars; share of value in percent.

Product	Measure	2022	2023	2024	Interim 2024	Interim 2025
Primary palladium costs	Value	***	***	***	***	***
Secondary palladium costs	Value	***	***	***	***	***
Total raw materials	Value	***	***	***	***	***
Primary palladium costs	Share	***	***	***	***	***
Secondary palladium costs	Share	***	***	***	***	***
Total raw materials	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Direct labor cost and other factory costs are two smaller components of COGS. Direct labor cost ranged between *** percent of total COGS, while other factory costs ranged between *** percent of total COGS.

Direct labor cost increased consistently in absolute value and irregularly on a per-unit value from 2022 to 2024, while other factory costs increased each year in absolute and per-unit value. Direct labor cost and other factory costs were lower in absolute value and on a per-unit basis in interim 2025 compared with interim 2024. As shown in table 6.3, company-specific unit values of direct labor and other factory cost between U.S. producers were not uniform,

[14] ***. Email from ***, August 19, 2025.

[15] For Sibanye-Stillwater and other recyclers, the biggest raw material is the spent catalytic converter. Sibanye Stillwater further explained that for primary palladium there are some other materials that are needed for mining, smelting, and refining but overall, the main input is spent catalytic converter. Conference transcript, p. 95 (Drake).

reflecting at least in part differences in their production methods and the nature of their operations.[16] [17]

As shown in table 6.1, total COGS decreased each year in absolute and per-unit value from 2022 to 2024 and was lower in interim 2025 compared with interim 2024. On a firm-by-firm basis, U.S. producers were uniform in directional trends, with *** U.S. producers reporting an overall decrease in total unit COGS from 2022 to 2024, and *** reporting a higher unit total COGS in interim 2025 compared with interim 2024. As a ratio to net sales, total COGS increased each year from 2022 to 2024 and was somewhat higher in interim 2025 compared with interim 2024.

As shown in table 6.1, gross profit was *** in 2022 then declined *** that worsened from 2023 to 2024, but improved in interim 2025 compared with interim 2024. On a firm-by-firm basis, U.S. producers were generally uniform in directional trends, with *** firms reporting a decrease in gross profit from 2022 to 2024 and *** reporting a lower gross profit in interim 2025 compared with interim 2024. *** (see table 6.3).[18]

[16] ***. Email from ***, August 29, 2025.

[17] As previously mentioned in footnote 8, ***.

[18] ***. Email from ***, August 29, 2025.

SG&A expenses and operating income or loss

As shown in table 6.1, SG&A expenses increased each year from 2022 to 2025 but were lower in interim 2025 compared with interim 2024. The SG&A expense ratio (total SG&A expenses divided by total net sales value) increased from 2022 to 2024 but was lower in interim 2025 compared with interim 2024. On a firm-by-firm basis, *** U.S. producers reported an increase in SG&A expenses from 2022 to 2024, and lower SG&A expenses in interim 2025 compared with interim 2024 (see table 6.3).[19]

Operating income followed trends that were similar to gross profit trends, decreasing from *** operating income in 2022 to *** operating income in 2023 and 2024, and remaining *** in the comparable periods, with interim 2025 showing a lower *** compared with interim 2024. On a firm-by-firm basis, *** U.S. producers reported an overall decrease in operating income and *** reported a lower operating income in interim 2025 compared with interim 2024. *** (see table 6.3).

All other expenses and net income or loss

Classified below the operating income level are interest expense, other expense, and other income items. In table 6.1, these items are aggregated and only the net amount is shown as "other expense/(income), net." Total other expense/income (***) decreased from 2022 to 2024. *** reported in interim 2024 resulting in *** amount compared with interim 2025.[20] [21]

As shown in table 6.1, net income generally followed the same trends as gross profit and operating income with differences reflecting the effect of interest expense and other expenses,

[19] ***. Email from ***, August 27, 2025.

[20] ***. Email from ***, August 19, 2025.

[21] A combined variance analysis is not shown because of the variation in cost structures between the responding U.S. producers.

varying in terms of their relative importance during the period in which data were collected and to the extent to which they were partially offset by other income.

Capital expenditures and R&D expenses[22]

Table 6.5 presents capital expenditures, by firm, and table 6.6 present the firms' narrative explanations of the nature, focus, and significance of their capital expenditures. Capital expenditures (***) data decreased irregularly from 2022 to 2024, and were lower in interim 2025 compared with interim 2024.

Table 6.5 Unwrought palladium: U.S. producers' capital expenditures, by firm and period

Value in 1,000 dollars; interim is January through March

Firm	2022	2023	2024	Interim 2024	Interim 2025
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table 6.6 Unwrought palladium: U.S. producers' narrative descriptions of their capital expenditures, by firm

Firm	Narrative on capital expenditures
Metallix Refining	***
Sibanye-Stillwater	***
Techemet	***

Source: Compiled from data submitted in response to Commission questionnaires.

[22] ***. *** U.S. producers questionnaire response, section 6.13b.

Assets and return on assets

Table 6.7 presents data on the U.S. producers' total assets while table 6.8 presents their operating ROA.[23] Table 6.9 presents U.S. producers' narrative responses explaining their major asset categories and any significant changes in asset levels over time.

Table 6.7 Unwrought palladium: U.S. producers' total net assets, by firm and period

Value in 1,000 dollars

Firm	2022	2023	2024
Metallix Refining	***	***	***
Sibanye-Stillwater	***	***	***
Techemet	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table 6.8 Unwrought palladium: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2022	2023	2024
Metallix Refining	***	***	***
Sibanye-Stillwater	***	***	***
Techemet	***	***	***
All firms	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table 6.9 Unwrought palladium: U.S. producers' narrative descriptions of their total net assets, by firm

Firm	Narrative on assets
Metallix Refining	***
Sibanye-Stillwater	***
Techemet	***

Source: Compiled from data submitted in response to Commission questionnaires.

[23] 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 on a product-specific basis.

Capital and investment

The Commission requested U.S. producers of unwrought palladium to describe any actual or potential negative effects of imports of unwrought palladium from Russia on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table 6.10 presents the number of firms reporting an impact in each category and table 6.11 provides the U.S. producers' narrative responses.

Table 6.10 Unwrought palladium: Count of firms indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2022, by effect

Number of firms reporting

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	***
Denial or rejection of investment proposal	Investment	***
Reduction in the size of capital investments	Investment	***
Return on specific investments negatively impacted	Investment	***
Other investment effects	Investment	***
Any negative effects on investment	Investment	***
Rejection of bank loans	Growth	***
Lowering of credit rating	Growth	***
Problem related to the issue of stocks or bonds	Growth	***
Ability to service debt	Growth	***
Other growth and development effects	Growth	***
Any negative effects on growth and development	Growth	***
Anticipated negative effects of imports	Future	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: ***.

Table 6.11 Unwrought palladium: U.S. producers' narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, #bopyear, by firm and effect

Item	Firm name and narrative on impact of imports
***	***
***	***
***	***
***	***
***	***
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part 7: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors[1]--
>
> (I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,
>
> (II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,
>
> (III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,
>
> (IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,
>
> (V) inventories of the subject merchandise,

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) 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,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the alleged subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in Parts 4 and 5; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part 6. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in Russia

The Commission issued foreign producers' or exporters' questionnaires to three firms believed to produce and/or export unwrought palladium from Russia.[3] Usable responses to the Commission's questionnaire were received from one firm.[4]

Table 7.1 presents the number of producers/exporters in Russia that responded to the Commission's questionnaire, their exports to the United States as a share of U.S. imports by Russia in 2024 and their estimated share of total production of unwrought palladium in Russia during 2024.

[3] These firms were identified through a review of information submitted in the petition and presented in third-party sources.

[4] Metal Trade Overseas AG provided a foreign producer/exporter questionnaire that included appropriate palladium operations of its parent group, Norilsk Nickel ("Nornickel"), a producer of palladium in Russia, and itself, the exporter for refined palladium produced by Nornickel. The production flow for palladium at Nornickel is:

1. Mining of palladium-bearing ore is carried out at the Norilsk site and Kola site of the Polar Division of Nornickel (Taimyrsky, Oktyabrsky, Komsomolsky, Skalisty, Zapolyarny, Mayak, Severny).
2. Further, the extracted ores are processed {through crushing, milling, flotation, gravity concentration and thickening) at the Norilsk, Talnakh and Zapolyarny Concentrator to produce metal-bearing concentrates.
3. The produced concentrates are then fed into smelting facilities at Nadezhda Metallurgical Plant, Copper Plant. The PGM containing intermediates are then processed at Copper Plant's metallurginal shop and at Kola refinery.
4. The PGM-concentrates from Copper Plant's metallurgical shop and Kola refinery are refined under tolling agreements by third-party companies (PGM refineries).
5. The export of refined palladium to the U.S. is currently carried out by Metal Trade Overseas AG, a Nornickel group company.

Metal Trade Overseas foreign producer questionnaire response, section 1.2, Nornickel 2024 Annual report, pp. 78 to 79, and https://nornickel.com/business/assets/norilsk-division/, retrieved September 2, 2025.

Table 7.1 Unwrought palladium: Number of responding producers/exporters, approximate share of production, and exports to the United States as a share of U.S. imports from Russia, 2024

Subject foreign industry	Number of responding firms	Approximate share of production (percent)	Exports as a share of U.S. imports from subject country (percent)
Russia	1	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: "Approximate share of production" reflects the responding firms' estimates of their production as a share of total Russia production of unwrought palladium in 2024. Since not all firms have perfect knowledge of the industry in their home market, different firms might use different denominators in estimating their firm's share of the total requested. Approximate shares are rounded to the nearest whole number.

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 "---".

Table 7.2 presents information on the unwrought palladium operations of the responding producers and exporters in Russia.

Table 7.2 Unwrought palladium: Summary data for producers in Russia in 2024

Producer	Production (troy ounces contained palladium)	Share of reported production (percent)	Exports to the United States (troy ounces contained palladium)	Share of reported exports to the United States (percent)	Total shipments (troy ounces contained palladium)	Share of firm's total shipments exported to the United States (percent)
Metal Trade Overseas	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table 7.3 presents events in the industry in Russia since January 1, 2022.

Table 7.3 unwrought palladium: Important industry events in Russia since 2022

Item	Event
Economic, financial, and trade sanctions	February 2022— Russia: Australia, Canada, the European Union, Japan, Switzerland, the United Kingdom, and the United States imposed various economic, financial, and trade sanctions on Russia after its invasion of Ukraine. However, these actions do not specifically target Russian PGM producers or palladium originating in Russia.
PNTR suspension	April 2022— Russia: After the United States suspended Permanent Normal Trade Relations ("PNTR"), imports of palladium originating in Russia are to be subject to the HTS column 2 duty rate of "Free."
Refinery Good Delivery suspensions	April 2022— Krastsvetmet and PZCM: The Management Committee of the London Platinum and Palladium Market ("LPPM") suspended parastatal PGM refiners Gulidov Krasnoyarsk Non-Ferrous Metals Plant ("Krastsvetmet") and Prioksky Plant of Non-Ferrous Metals ("PZCM") from the LPPM's Platinum and Palladium Good Delivery and Sponge Accreditation Lists. Until further notice, platinum and palladium ingots and sponge will no longer be accepted for Good Delivery on the London and Zurich exchanges after April 8, 2022.
New sulfur emission reduction program	April 2022— Nornickel started installing equipment at its Nadezhda Smelter for its two-stage Sulfur Program to reduce sulfur dioxide emissions by 20 percent in 2024 (first stage) and by 45 percent in 2025 (second stage). This capital investment for the main technological complex is anticipated to exceed 180 billion rubles ($1.9 billion).
Sale of U.S. distributor	July 2023— Nornickel sold its former longtime regional distributor Norilsk Nickel USA was sold to Pittsburgh-based TMP Metals Group Ltd. ("TMP Metals"), a refiner, distributor, and trader of PGMs and nickel throughout North and South America. Metal Trade Overseas AG exports Nornickel's palladium directly to European customers but relies on regional distributors for customers located China, Hong Kong, and the United States.
Sulfur emissions reduction program initiated	October 2023— Nornickel initiated the first stage of the Sulfur Programme to reduce sulfur dioxide emissions at its Nadezhda Smelter.
Sulfur emissions reduction results	April 2024— Nornickel reported first-stage reduction sulfur dioxide emissions by its Nadezhda Smelter were reduced by 400,000 metric tons (440,924 short tons) since the Sulfur Program was initiated in October 2023. The second-stage reductions are anticipated to reach 730,000 metric tons (804,687 short tons) in 2025.
No shareholder dividends	May 2024— Nornickel's board of directors recommended not paying dividends to shareholders for the remainder of 2023, citing "…sanctions restrictions and geopolitical challenges put significant pressure on Nornickel's financial results." Previously, Nornickel paid no dividends on its 2022 results for the first time in 14 years, citing "negative geopolitics," but resumed shareholder payouts for the first nine months of 2023 and paid $1.5 billion to shareholders in January 2024.
New refinery plans	May 2024— Nornickel reportedly plans to construct a new PGM refinery in Bahrain. However, further information about the timeframe and production capacity was not disclosed.
Upgraded furnace restart	August 2024— Nornickel announced the restart of one of two smelters at its Nadezhda Smelter. The repairs, costing 30 billion rubles ($340 million), included replacement of the smelting unit with sophisticated

Item	Event
	equipment available mostly from Western suppliers. Despite the ongoing sanctions against Russia, Nornickel successfully sought (but did not disclose the) alternative sources.
Output sales plan	December 2024— Nornickel announced corporate plans to sell all its metallic production, including palladium, despite ongoing marketing challenges. Western sanctions against Russia discouraged some Western firms from purchasing metal originating in Russia and impeding payment flows. Hence, Nornickel responded by redirecting sales to Asian markets.
Increased smelting capacity and output	January 2025— Nornickel reported producing 2.762 million troy ounces of palladium in 2024, a 3-percent increase over the prior year's quantity. Improved operating efficiency was attributed to resumption of operations at the rebuilt furnace at its Nadezhda Smelter which provided a 25-percent increase to its smelting capacity.
Legislation to ban U.S. imports of critical minerals from Russia	February 2025— U.S. Senate: Responding to Russia's invasion of Ukraine and unrelated domestic mining job losses, a bipartisan Senate bill was re-introduced into the 199th Congress to ban U.S. imports of PGMs and certain base metals originating in Russia. Senate bill S.808: Stop Russian Market Manipulation Act was referred to the Senate Finance Committee on February 27, 2025. On that same date, an identical House bill H.R. 1677 was referred to the House Committee on Ways and Means.
Palladium technologies development strategy	April 2025— Nornickel announced its strategy to develop palladium-based technologies at the PGMs Industry Day conference in South Africa. Nornickel's Palladium Centre actively seeks to establish a global partnership network to co-develop and commercialize palladium-based technologies for solar and hydrogen energy, biofuels, electronics, and other "next-generation" applications.
No shareholder dividends	May 2025— Nornickel's board of directors recommended not paying dividends to shareholders for 2024 "…in order to maintain financial stability."
Revised output forecast	July 2025— Nornickel lowered its anticipated palladium output to 2.677 to 2.729 million troy ounces from the previously anticipated 2.704 to 2.756 million troy ounces with a series of major repairs being scheduled for the second half of the year to improve the reliability of the main production equipment.
Extension of project development license	August 2025— Eurasia Mining PLC announced that it received an extension of its development license through August 20, 2027, to restart production at the NKT Project, located in the Russian Arctic region, that previously produced nickel, copper, PGMs, and gold.

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Changes in operations

The producers in Russia were asked to report any change in the character of their operations or organization relating to the production of unwrought palladium since 2022. The one producer indicated in its questionnaire that it had not experienced such changes.

Installed and practical overall capacity

Table 7.4 presents data on producers' installed capacity, practical overall capacity, and practical unwrought palladium capacity and production on the same equipment in Russia. Installed overall capacity and practical overall capacity fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent higher, and was *** percent lower in interim 2025 compared to interim 2024.[5] Installed overall production and practical overall production fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent higher, and was *** percent lower in interim 2025 compared to interim 2024.

Table 7.4 Unwrought palladium: Producers' installed and practical capacity and production on the same equipment as in-scope production in Russia, by period

Capacity and production in troy ounces; utilization in percent; interim period is January to March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical unwrought palladium	Capacity	***	***	***	***	***
Practical unwrought palladium	Production	***	***	***	***	***
Practical unwrought palladium	Utilization	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[5] Metal Trade Overseas reported that "***." Metal Trade Overseas' foreign producer questionnaire response, section 2.3c.

Constraints on capacity

Table 7.5 presents producers' reported capacity constraints in Russia since January 1, 2022.

Table 7.5 Unwrought palladium: Producers' reported constraints to practical overall capacity in Russia since January 1, 2022, by constraint and firm

Type of constraint	Firm name and narrative response on constraints to practical overall capacity
Production bottlenecks	***
Existing labor force	***
Supply of material inputs	***
Fuel or energy	***
Logistics/transportation	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on Unwrought palladium

Table 7.6 presents information on the unwrought palladium operations of the responding producers and exporters in Russia. Russian producers' installed capacity fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent higher, and was *** percent lower in interim 2025 compared to interim 2024. Russian producers' production fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent higher, and was *** percent lower in interim 2025 compared to interim 2024. Russian producers' capacity utilization was *** percent from 2022 to 2024 and in interim 2024 and 2025. Relative to 2024 levels, Russian producers' capacity and production are projected to be lower in 2025 and 2026.

Russian producers' exports to the United States increased year to year, ending *** percent higher in 2024 than in 2022, and was *** percent higher in interim 2025 compared to interim 2024. Russian producers reported no internal consumption during 2022 to 2024 and in interim 2024 and 2025. Commercial home market shipments increased year to year, ending *** percent higher in 2024 than in 2022, but were *** percent lower in interim 2025 compared to interim 2024. Exports to all other markets increased year to year, ending *** percent higher in 2024 than in 2022, and was *** percent higher in interim 2025 compared to interim 2024. Relative to 2024 levels, commercial home market and exports are projected to be higher in 2025 and 2026, while exports to the United States are projected to be lower in 205 and 2026.

Commercial home market shipments as share of subject producers' total shipments increased from *** percent in 2022 to *** percent in 2023 and 2024. Exports to the United States as share of Russian producers' total shipments increased from *** percent in 2022 to *** percent in 2023 and *** percent in 2024. Exports to all other markets as a share of total shipments decreased from *** percent in 2022 to *** percent in 2023 and *** percent in 2024.

Table 7.6 Unwrought palladium: Data on industry in Russia, by period

Quantity in troy ounces contained palladium; interim period is January through March

Item	2022	2023	2024	Interim 2024	Interim 2025	Projection 2025	Projection 2026
Capacity	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***
Internal consumption	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Home market shipments	***	***	***	***	***	***	***
Exports to the United States	***	***	***	***	***	***	***
Exports to all other markets	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***

Table continued.

Table 7.6 (Contained) Unwrought palladium: Data on industry in Russia, by period

Shares and ratios; interim period is January through March

Item	2022	2023	2024	Interim 2024	Interim 2025	Projection 2025	Projection 2026
Capacity utilization ratio	***	***	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***	***	***
Internal consumption share	***	***	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***	***	***
Home market shipments share	***	***	***	***	***	***	***
Exports to the United States share	***	***	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***	***	***
Export shipments share	***	***	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

As shown in table 7.7, responding firms in Russia produced other products on the same equipment and machinery used to produce unwrought palladium. ***.

Table 7.7 Unwrought Palladium: Producers' overall production on the same equipment as in-scope production in Russia, by period

Quantity in troy ounces; ratios and share in percent; interim period is January through March

Product type	Measure	2022	2023	2024	Interim 2024	Interim 2025
Unwrought palladium contained weight	Quantity	***	***	***	***	***
Unwrought palladium weight other elements	Quantity	***	***	***	***	***
Unwrought palladium total weight	Quantity	***	***	***	***	***
Other products	Quantity	***	***	***	***	***
All products	Quantity	***	***	***	***	***
Unwrought palladium contained weight	Share	***	***	***	***	***
Unwrought palladium weight other elements	Share	***	***	***	***	***
Unwrought palladium total weight	Share	***	***	***	***	***
Other products	Share	***	***	***	***	***
All products	Share	100.0	100.0	100.0	100.0	100.0

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 "---".

Exports

According to GTA, the leading export markets for unwrought palladium from Russia are China, Hong Kong, and Japan (table 7.8). During 2024, the United States was the top export market for unwrought palladium from Russia, accounting for 30.7 percent, followed by China, accounting for 30.7 percent, followed by the Hong Kong (14.4 percent), and Japan (13.5 percent).

Table 7.8 Unwrought palladium: Exports from Russia, by period

Quantity in troy ounces; value in 1,000 dollars

Destination market	Measure	2022	2023	2024
United States	Quantity	656,615	766,120	887,328
China	Quantity	245,374	496,215	541,804
Hong Kong	Quantity	502,388	1,145,981	416,931
Japan	Quantity	466,829	319,000	388,863
Armenia	Quantity	—	81,084	275,628
Italy	Quantity	216,600	237,273	206,279
Germany	Quantity	302,956	190,879	169,756
Switzerland	Quantity	20,898	900	193
Singapore	Quantity	—	—	—
All other destination markets	Quantity	99,796	6,912	32
Non-U.S. destination markets	Quantity	1,854,841	2,478,244	1,999,487
All destination markets	Quantity	2,511,456	3,244,364	2,886,816
United States	Value	1,353,938	1,079,758	877,728
China	Value	498,813	753,483	625,670
Hong Kong	Value	994,027	1,441,736	405,436
Japan	Value	988,217	434,289	379,398
Armenia	Value	—	106,098	252,934
Italy	Value	481,564	356,718	207,911
Germany	Value	713,003	288,327	185,114
Switzerland	Value	43,995	1,084	198
Singapore	Value	—	—	1
All other destination markets	Value	203,203	10,308	0
Non-U.S. destination markets	Value	3,922,822	3,392,042	2,056,661
All destination markets	Value	5,276,760	4,471,800	2,934,389

Table continued.

Table 7.8 (Continued) Unwrought palladium: Exports from Russia, by period

Unit value in troy ounces; share in percent

Destination market	Measure	2022	2023	2024
United States	Unit value	2,062	1,409	989
China	Unit value	2,033	1,518	1,155
Hong Kong	Unit value	1,979	1,258	972
Japan	Unit value	2,117	1,361	976
Armenia	Unit value	—	1,308	918
Italy	Unit value	2,223	1,503	1,008
Germany	Unit value	2,353	1,511	1,090
Switzerland	Unit value	2,105	1,204	1,025
Singapore	Unit value	—	—	—
All other destination markets	Unit value	2,036	1,491	0
Non-U.S. destination markets	Unit value	2,115	1,369	1,029
All destination markets	Unit value	2,101	1,378	1,016
United States	Share of quantity	26.1	23.6	30.7
China	Share of quantity	9.8	15.3	18.8
Hong Kong	Share of quantity	20.0	35.3	14.4
Japan	Share of quantity	18.6	9.8	13.5
Armenia	Share of quantity	—	2.5	9.5
Italy	Share of quantity	8.6	7.3	7.1
Germany	Share of quantity	12.1	5.9	5.9
Switzerland	Share of quantity	0.8	0.0	0.0
Singapore	Share of quantity	—	—	—
All other destination markets	Share of quantity	4.0	0.2	0.0
Non-U.S. destination markets	Share of quantity	73.9	76.4	69.3
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official import statistics (constructed exports) under HS subheading 7110.21 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed August 15, 2025. These numbers may understate the exports from Russia due to incomplete reporting.

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 "—". United States is shown at the top followed by the top destination markets in descending order of 2024 data.

U.S. inventories of imported merchandise

Table 7.9 presents data on U.S. importers' reported inventories of unwrought palladium. U.S. importers' inventories of imports from Russia fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent lower, and was *** percent lower in interim 2025 compared to interim 2024.

U.S. importers' inventories of imports from South Africa fluctuated year to year, increasing from 2022 to 2023 then decreasing from 2023 to 2024, ending *** percent higher, and was *** percent lower in interim 2025 compared to interim 2024.

U.S. importers' inventories of imports from all other sources fluctuated year to year, decreasing from 2022 to 2023 then increasing from 2023 to 2024, ending *** percent higher, and was *** percent higher in interim 2025 compared to interim 2024. [6]

[6] ***. ***.

Table 7.9 Unwrought palladium: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in troy ounces contained palladium; ratios in percent; interim period is January through March

Measure	Source	2022	2023	2024	Interim 2024	Interim 2025
Inventories quantity	Russia	***	***	***	***	***
Ratio to imports	Russia	***	***	***	***	***
Ratio to U.S. shipments of imports	Russia	***	***	***	***	***
Ratio to total shipments of imports	Russia	***	***	***	***	***
Inventories quantity	South Africa	***	***	***	***	***
Ratio to imports	South Africa	***	***	***	***	***
Ratio to U.S. shipments of imports	South Africa	***	***	***	***	***
Ratio to total shipments of imports	South Africa	***	***	***	***	***
Inventories quantity	All other sources	***	***	***	***	***
Ratio to imports	All other sources	***	***	***	***	***
Ratio to U.S. shipments of imports	All other sources	***	***	***	***	***
Ratio to total shipments of imports	All other sources	***	***	***	***	***
Inventories quantity	Nonsubject sources	***	***	***	***	***
Ratio to imports	Nonsubject sources	***	***	***	***	***
Ratio to U.S. shipments of imports	Nonsubject sources	***	***	***	***	***
Ratio to total shipments of imports	Nonsubject sources	***	***	***	***	***
Inventories quantity	All import sources	***	***	***	***	***
Ratio to imports	All import sources	***	***	***	***	***
Ratio to U.S. shipments of imports	All import sources	***	***	***	***	***
Ratio to total shipments of imports	All import 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. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of unwrought palladium from Russia after March 31, 2025. The four responding importers' reported data are presented in table 7.10. Russia accounted for *** percent, South Africa accounted for ***, and all other sources accounted for *** percent of total U.S. importers' arranged imports of unwrought palladium.

Table 7.10 Unwrought palladium: U.S. importers' arranged imports, by source and period

Quantity in troy ounces contained palladium

Source	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Total
Russia	***	***	***	***	***
South Africa	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Third-country trade actions

Neither the petitioners nor respondents mention any known trade remedy actions on unwrought palladium in third-country markets. Moreover, review of the World Trade Organization's ("WTO") antidumping measures[7] and countervailable subsidy measures[8] on or after January 1, 2020, found no additional import-injury orders on the subject product in third-country markets.

[7] WTO, "Database of Anti-dumping Measures," Trade Remedies Data Portal, ©2025, https://trade-remedies.wto.org/en/antidumping/measures, retrieved August 29, 2025.

[8] WTO, "Database of Countervailing Measures," Trade Remedies Data Portal, ©2025, https://trade-remedies.wto.org/en/countervailing/measures, retrieved August 29, 2025.

Information on nonsubject countries

Table 7.11 presents global export data for unwrought palladium (by exporting country in descending order of value for 2024). During 2024, Russia was the top exporter, accounting for almost one-fourth (23.9 percent) of the total global export quantity, followed by the United States (19.4 percent), South Africa (16.1 percent), and the United Kingdom (12.2 percent), which together accounted for nearly three-fourths (71.6 percent) of the total.

Table 7.11 Unwrought palladium: Global exports by exporter and period

Value in 1,000 dollars; share in percent

Exporting country	Measure	2022	2023	2024
United States	Value	3,708,333	2,798,089	2,390,142
Russia	Value	5,276,760	4,471,800	2,934,389
South Africa	Value	3,411,809	2,248,233	1,975,355
United Kingdom	Value	3,399,289	2,317,211	1,500,997
Italy	Value	2,371,298	1,393,782	961,824
Germany	Value	1,325,471	861,718	572,998
Belgium	Value	1,609,642	1,108,032	523,005
Hong Kong	Value	658,896	470,702	291,817
Armenia	Value	—	112,252	264,069
Switzerland	Value	863,410	198,543	204,578
Norway	Value	428,268	282,818	180,572
Japan	Value	659,431	424,506	167,971
All other exporters	Value	810,299	549,681	323,841
All reporting exporters	Value	24,522,908	17,237,369	12,291,558
United States	Share of value	15.1	16.2	19.4
Russia	Share of value	21.5	25.9	23.9
South Africa	Share of value	13.9	13.0	16.1
United Kingdom	Share of value	13.9	13.4	12.2
Italy	Share of value	9.7	8.1	7.8
Germany	Share of value	5.4	5.0	4.7
Belgium	Share of value	6.6	6.4	4.3
Hong Kong	Share of value	2.7	2.7	2.4
Armenia	Share of value	—	0.7	2.1
Switzerland	Share of value	3.5	1.2	1.7
Norway	Share of value	1.7	1.6	1.5
Japan	Share of value	2.7	2.5	1.4
All other exporters	Share of value	3.3	3.2	2.6
All reporting exporters	Share of value	100.0	100.0	100.0

Source: Official export statistics under HS subheading 7110.21, as reported by by various national statistical authorities in the Global Trade Atlas database, accessed August 15, 2025. These numbers may understate the exports from Russia due to incomplete reporting.

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 "—." The United States is shown at the top followed by the top destination markets in descending order of 2024 data.

Table 7.12 presents global mine output data for palladium (by producing country in descending order of quantity for 2024). During 2024, South Africa was the largest nonsubject producer, accounting for 37.9 percent of the total global reported production quantity, followed by Canada (7.9 percent) and Zimbabwe (7.9 percent).

Table 7.12 Palladium: Global mine output by producer and period

Quantity in 1,000 troy ounces; share in percent

Reporting producer	Measure	2022	2023	2024
United States	Quantity	325	331	257
Russia	Quantity	2,797	2,797	2,411
South Africa	Quantity	2,350	2,408	2,315
Canada	Quantity	518	518	482
Zimbabwe	Quantity	460	511	482
Others	Quantity	87	135	135
All other reporting producers	Quantity	6,527	6,687	6,109
United States	Share of quantity	5.0	5.0	4.2
Russia	Share of quantity	42.9	41.8	39.5
South Africa	Share of quantity	36.0	36.0	37.9
Canada	Share of quantity	7.9	7.7	7.9
Zimbabwe	Share of quantity	7.0	7.6	7.9
All other reporting producers	Share of quantity	1.3	2.0	2.2
All reporting producers	Share of quantity	100.0	100.0	100.0

Source: U.S. Geological Survey ("USGS"), "Platinum-Group Metals," Mineral Commodity Summaries 2025, January 2025, p. 137, https://pubs.usgs.gov/periodicals/mcs2025/mcs2025.pdf; "Platinum-Group Metals," Mineral Commodity Summaries 2025, January 2025, p. 137, https://pubs.usgs.gov/publication/mcs2024.

Note: The United States is shown at the top followed by the top reporting countries in descending order of 2024 data.

South Africa produces palladium and other PGMs from the platinum-rich ores of the Bushveld Igneous Complex ("BIC"), that contains the world's largest recorded PGM reserves and resources,[9] located in the northeastern part of the country.[10] In 2024, Anglo American Platinum Ltd. ("AAP") was the largest South African palladium producer, followed by Impala Platinum Holdings Ltd., Sibanye-Stillwater Ltd. (the petitioner's corporate parent), and Northam

[9] USGS, "Platinum-Group Metals," Mineral Commodity Summaries 2025, January 2025, p. 137, https://pubs.usgs.gov/periodicals/mcs2025/mcs2025.pdf.

[10] SFA Oxford, "The Bushveld Complex, South Africa," https://www.sfa-oxford.com/knowledge-and-insights/platinum-group-metals/pgm-mining/south-africa/the-bushveld-complex, retrieved September 7, 2025.

Platinum Ltd.[11] PGM concentrates from the mine sites are transported by truck and rail to smelters. After the nickel and copper are recovered at base-metal refineries, precious-metals refineries separate the palladium, other PGMs, gold, and silver. Only the larger South African producers also smelt and refine PGMs.[12] However, the South African PGM industry is also confronted by high production costs from deep-level mining that is not highly mechanized, costly and unreliable electric power supplies, labor disputes, water-access constraints, and rail transportation disruptions.[13]

[11] Madhumitha Jaganmohan, "Distribution of Palladium Production Worldwide in 2024, By Company," Statista, July 14, 2025, https://www.statista.com/statistics/692857/distribution-of-global-palldium-production-by-producer. See also: Emergen Research, "Top 10 Companies in Platinum Group Metals Market in 2024," Marketysers Global Consulting LLP, Report ID: ER_00809, September 2, 2024, https://www.emergenresearch.com/blog/top-10-companies-in-platinum-group-metals-market; SE Asia Consulting Pte. Ltd. ("SEAC"), "Complete List of Platinum Group Metals – PGM's," April 28, 2024, https://seasia-consulting.com/platinum-group-metals.

[12] SFA Oxford, "Metallurgical Processing, PGM Flows in South Africa," https://www.sfa-oxford.com/knowledge-and-insights/platinum-group-metals/pgm-mining/south-africa/metallurgical-processing, retrieved September 7, 2025; SE Asia Consulting Pte. Ltd. ("SEAC"), "Complete List of Platinum Group Metals – PGM's," April 28, 2024, https://seasia-consulting.com/platinum-group-metals.

[13] USGS, "Platinum-Group Metals," Mineral Commodity Summaries 2025, January 2025, p. 137, https://pubs.usgs.gov/periodicals/mcs2025/mcs2025.pdf; USGS, "Platinum-Group Metals," Mineral Commodity Summaries 2024, January 2024, p. 137, https://pubs.usgs.gov/publication/mcs2024; Felix Njini and Nelson Banya, "South Africa's Platinum Mining Industry in Terminal Decline," CNBC Africa, August 30, 2024, https://www.ipmi.org/news/south-africas-platinum-mining-industry-terminal-decline-northam-ceo-says; Minerals Council South Africa ("MCSA"), Facts and Figures Pocketbook 2024, February 3, 2025, pp. 4, 11, 20, https://www.mineralscouncil.org.za/component/jdownloads/?task=download.send&id=2390&catid=17&m=0&Itemid=119.

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
90 FR 36451, August 4, 2025	Unwrought Palladium From Russia; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations	https://www.govinfo.gov/content/pkg/FR-2025-08-04/pdf/2025-14708.pdf
90 FR 41032, August 22, 2025	Unwrought Palladium From the Russian Federation: Initiation of Less-Than-Fair-Value Investigation	https://www.govinfo.gov/content/pkg/FR-2025-08-22/pdf/2025-16156.pdf
90 FR 41039, August 22, 2025	Unwrought Palladium From the Russian Federation: Initiation of Countervailing Duty Investigation	https://www.govinfo.gov/content/pkg/FR-2025-08-22/pdf/2025-16157.pdf

APPENDIX B

LIST OF STAFF CONFERENCE WITNESSES

As of August 18, 2025 at 11:25 a.m. (subject to change)

TENTATIVE CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below are scheduled to appear as witnesses at the United States International Trade Commission's preliminary conference:

Subject: Unwrought Palladium from Russia

Inv. Nos.: 701-TA-776 and 731-TA-1761 (Preliminary)

Date and Time: August 20, 2025 – 9:30 a.m.

Sessions will be held in connection with these preliminary phase investigations all virtually via Webex.

OPENING REMARKS:	**TIME ALLOCATION:**
In Support of Imposition (**Elizabeth J. Drake,** Schagrin Associates)	5 minutes
In Opposition of Imposition (**TBD**)	5 minutes

In Support of the Imposition of the Antidumping and Countervailing Duty Orders:	**TIME ALLOCATION:**
Schagrin Associates Washington, DC on behalf of	60 minutes total

Stillwater Mining Company d/b/a Sibanye-Stillwater ("Sibanye-Stillwater")
United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Industrial and Service Workers International Union, AFL-CIO, CLC ("USW")

Heather McDowell, Senior Vice President and General Counsel, Legal and External Affairs, Americas, Sibanye-Stillwater

Dave Shuck, Vice President and General Manager, Metallurgical Complex, Sibanye-Stillwater

James Binando, Manager of Metal Sales and Trading, Sibanye-Stillwater

Cathy Drummond, Director, District 11, United Steelworkers

In Support of the Imposition of the
Antidumping and Countervailing Duty Orders (continued):

John Kesler, Staff Representative, United Steelworkers

Elizabeth J. Drake)
) – OF COUNSEL
Justin M. Neuman)

In Opposition of the Imposition of the **TIME**
Antidumping and Countervailing Duty Orders: **ALLOCATION:**

VCL Law LLP 60 minutes total
Vienna, VA
on behalf of

Metal Trade Overseas AG

Irene H. Chen)
) – OF COUNSEL
Mark Lehnardt)

Morgan, Lewis & Bockius LLP
Houston, TX
on behalf of

Metal Trade Overseas AG

Carl Valenstein)
Casey Weaver) – OF COUNSEL
Katelyn M. Hilferty)

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Elizabeth J. Drake**, Schagrin Associates) 10 minutes
In Opposition of Imposition (**TBD**) 10 minutes

APPENDIX C

SUMMARY DATA

U.S. producers

Table C.1

Unwrought palladium: Summary data concerning the U.S. market, defining the U.S. industry as U.S. producers, by item and period

Quantity=troy ounces contained palladium; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per TOCP; Period changes=percent--exceptions noted; Interim period is January through March

Item	Reported data: Calendar year 2022	Calendar year 2023	Calendar year 2024	Interim 2024	Interim 2025	Period change comparisons: Calendar year 2022–24	Calendar year 2022–23	Calendar year 2023–24	Interim 2024–25
U.S. consumption quantity:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▲***
Producers' share (fn1)	***	***	***	***	***	▼***	▼***	▲***	▼***
Importers' share (fn1):									
Russia	***	***	***	***	***	▲***	▲***	▼***	▲***
South Africa	***	***	***	***	***	▲***	▼***	▲***	▼***
All other sources	***	***	***	***	***	▼***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▲***	▼***	▼***
All import sources	***	***	***	***	***	▲***	▲***	▼***	▲***
U.S. consumption value:									
Amount	***	***	***	***	***	▼***	▼***	▼***	▲***
Producers' share (fn1)	***	***	***	***	***	▼***	▼***	▲***	▼***
Importers' share (fn1):									
Russia	***	***	***	***	***	▲***	▲***	▼***	▲***
South Africa	***	***	***	***	***	▲***	▼***	▲***	▼***
All other sources	***	***	***	***	***	▼***	▲***	▼***	▲***
Nonsubject sources	***	***	***	***	***	▼***	▲***	▼***	▼***
All import sources	***	***	***	***	***	▲***	▲***	▼***	▲***
Adjusted U.S. imports from:									
Russia:									
Quantity	347,169	437,950	340,290	3,314	130,811	▼(2.0)	▲26.1	▼(22.3)	▲3,847.0
Value	739,246	593,712	338,669	3,282	127,245	▼(54.2)	▼(19.7)	▼(43.0)	▲3,776.5
Unit value	$2,129	$1,356	$995	$990	$973	▼(53.3)	▼(36.3)	▼(26.6)	▼(1.8)
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▲***	▼***
South Africa:									
Quantity	437,301	332,390	393,928	131,137	142,505	▼(9.9)	▼(24.0)	▲18.5	▲8.7
Value	910,014	451,825	391,142	131,514	138,017	▼(57.0)	▼(50.3)	▼(13.4)	▲4.9
Unit value	$2,081	$1,359	$993	$1,003	$969	▼(52.3)	▼(34.7)	▼(27.0)	▼(3.4)
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▼***	▼***
All other sources:									
Quantity	269,741	302,133	100,476	76,873	109,303	▼(62.8)	▲12.0	▼(66.7)	▲42.2
Value	562,334	414,142	100,873	76,529	106,255	▼(82.1)	▼(26.4)	▼(75.6)	▲38.8
Unit value	$2,085	$1,371	$1,004	$996	$972	▼(51.8)	▼(34.2)	▼(26.8)	▼(2.4)
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▲***	▲***
Nonsubject sources:									
Quantity	707,041	634,523	494,404	208,010	251,807	▼(30.1)	▼(10.3)	▼(22.1)	▲21.1
Value	1,472,348	865,967	492,015	208,043	244,272	▼(66.6)	▼(41.2)	▼(43.2)	▲17.4
Unit value	$2,082	$1,365	$995	$1,000	$970	▼(52.2)	▼(34.5)	▼(27.1)	▼(3.0)
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
All import sources:									
Quantity	1,054,210	1,072,473	834,694	211,324	382,619	▼(20.8)	▲1.7	▼(22.2)	▲81.1
Value	2,211,594	1,459,678	830,684	211,326	371,517	▼(62.4)	▼(34.0)	▼(43.1)	▲75.8
Unit value	$2,098	$1,361	$995	$1,000	$971	▼(52.6)	▼(35.1)	▼(26.9)	▼(2.9)
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▲***	▼***

Table continued.

Table C.1 Continued

Unwrought palladium: Summary data concerning the U.S. market, defining the U.S. industry as U.S. producers, by item and period

Quantity=troy ounces contained palladium; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per TOCP; Period changes=percent--exceptions noted; Interim period is January through March

Item	Reported data					Period change comparisons			
	Calendar year			Interim		Calendar year			Interim
	2022	2023	2024	2024	2025	2022–24	2022–23	2023–24	2024–25
U.S. producers':									
Practical capacity quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Production quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Capacity utilization (fn1)	***	***	***	***	***	▲***	▼***	▲***	▼***
U.S. shipments:									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
Export shipments:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Inventories/total shipments (fn1)	***	***	***	***	***	▼***	▲***	▼***	▲***
Production workers	***	***	***	***	***	▼***	▼***	▼***	▼***
Hours worked (1,000s)	***	***	***	***	***	▼***	▼***	▼***	▼***
Wages paid ($1,000)	***	***	***	***	***	▼***	▲***	▼***	▼***
Hourly wages (dollars per hour)	***	***	***	***	***	▲***	▲***	▲***	▼***
Productivity (TOCP per 1,000 hours)	***	***	***	***	***	▼***	▼***	▲***	▲***
Unit labor costs	***	***	***	***	***	▲***	▲***	▼***	▼***
Net sales:									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
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	***	***	***	***	***	***	***	***	***
Total assets	***	***	***	***	***	▼***	▼***	▼***	***

Source: Compiled from data submitted in response to Commission questionnaires and adjusted official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting number 7110.21.0000, accessed on August 15, 2025. Official U.S. import statistics were adjusted to remove official foreign-origin export (re-exports) statistics of the Census Bureau using schedule B number 7110.21.0000, allocated to individual original import sources based on official import statistics, and changes in importer inventory levels as reported in Commission questionnaires by the responding U.S. importers. This methodology provides a holistic view of the portion of imports consumed in the U.S. market without the deficiencies in U.S. importers' questionnaire data coverage for nonsubject sources and certain misreporting of importer shipments by responding U.S. importers (***) in USITC questionnaire submissions. Imports are based on the imports for consumption data series. Exports used in the adjustment are based on the df_indicator = 2, which represents foreign-origin exports (re-exports) for palladium not produced in the United States. 508-compliant tables for these data are contained in parts 3, 4, 6, and 7 of this report.

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.

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.

U.S. producers and processors

Table C.2

Unwrought palladium: Summary data concerning the U.S industry as U.S. producers and processors, by item and period

Quantity=troy ounces contained palladium; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per TOCP; Period changes=percent--exceptions noted; Interim period is January through March

Item	Reported data					Period change comparisons			
	Calendar year			Interim		Calendar year			Interim
	2022	2023	2024	2024	2025	2022–24	2022–23	2023–24	2024–25
U.S. producers' (fn1):									
Practical capacity quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Production quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Capacity utilization (fn2)	***	***	***	***	***	▲***	▼***	▲***	▼***
U.S. shipments (fn1):									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▼***
Total value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
Export shipments:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▲***
Inventories/total shipments (fn2)	***	***	***	***	***	▼***	▲***	▼***	▲***
Production workers	***	***	***	***	***	▼***	▼***	▼***	▼***
Hours worked (1,000s)	***	***	***	***	***	▼***	▼***	▼***	▼***
Wages paid ($1,000)	***	***	***	***	***	▼***	▲***	▼***	▼***
Hourly wages (dollars per hour)	***	***	***	***	***	▲***	▲***	▲***	▼***
Productivity (TOCP per 1,000 hours)	***	***	***	***	***	▼***	▼***	▲***	▲***
Unit labor costs	***	***	***	***	***	▲***	▲***	▼***	▼***
U.S. toll processor's:									
Practical capacity quantity	***	***	***	***	***	▼***	▲***	▼***	***
Production quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Capacity utilization (fn2)	***	***	***	***	***	▲***	▼***	▲***	▼***
U.S. shipments (fn1):									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Total value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▲***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	▲***	▲***	▲***	▲***
Inventories/total shipments (fn2)	***	***	***	***	***	▲***	▲***	▲***	▲***
Production workers	***	***	***	***	***	▼***	▼***	▼***	▼***
Hours worked (1,000s)	***	***	***	***	***	▼***	▼***	▼***	▲***
Wages paid ($1,000)	***	***	***	***	***	▼***	▲***	▼***	▼***
Hourly wages (dollars per hour)	***	***	***	***	***	▲***	▲***	▲***	▼***
Productivity (TOCP per 1,000 hours)	***	***	***	***	***	▼***	▼***	▲***	▼***
Unit labor costs	***	***	***	***	***	▲***	▲***	▼***	▲***
U.S. producers':									
Net sales:									
Quantity	***	***	***	***	***	▼***	▼***	▲***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▼***
Cost of goods sold (COGS)	***	***	***	***	***	▼***	▼***	▼***	▼***
Gross profit or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▲***
SG&A expenses	***	***	***	***	***	▲***	▲***	▲***	▼***
Operating income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▲***
Net income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit COGS	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit SG&A expenses	***	***	***	***	***	▲***	▲***	▲***	▼***
Unit operating income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit net income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
COGS/sales (fn2)	***	***	***	***	***	▲***	▲***	▲***	▲***
Operating income or (loss)/sales (fn2)	***	***	***	***	***	▼***	▼***	▼***	▼***
Net income or (loss)/sales (fn2)	***	***	***	***	***	▼***	▼***	▼***	▼***
Capital expenditures	***	***	***	***	***	▼***	▲***	▼***	▼***
Research and development expenses	***	***	***	***	***	***	***	***	***
Total assets	***	***	***	***	***	▼***	▼***	▼***	***

Table continued.

Table C.2 Continued

Unwrought palladium: Summary data concerning the U.S industry as U.S. producers and processors, by item and period

Quantity=troy ounces contained palladium; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per TOCP; Period changes=percent--exceptions noted; Interim period is January through March

Item	Reported data					Period change comparisons			
	Calendar year			Interim		Calendar year			Interim
	2022	2023	2024	2024	2025	2022–24	2022–23	2023–24	2024–25
U.S. toll processor's:									
Net toll operations:									
Quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Value	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit value	***	***	***	***	***	▼***	▼***	▼***	▲***
Cost of tolling services (COTS)	***	***	***	***	***	▼***	▼***	▼***	▲***
Gross profit or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
SG&A expenses	***	***	***	***	***	▼***	▼***	▼***	▼***
Operating income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
Net income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit COTS	***	***	***	***	***	▲***	▲***	▼***	▲***
Unit SG&A expenses	***	***	***	***	***	▼***	▲***	▼***	▲***
Unit operating income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
Unit net income or (loss) (fn3)	***	***	***	***	***	▼***	▼***	▼***	▼***
COTS/sales (fn2)	***	***	***	***	***	▲***	▲***	▲***	▲***
Operating income or (loss)/sales (fn2)	***	***	***	***	***	▼***	▼***	▼***	▼***
Net income or (loss)/sales (fn2)	***	***	***	***	***	▼***	▼***	▼***	▼***
Capital expenditures	***	***	***	***	***	▲***	▲***	▲***	▲***
Research and development expenses	***	***	***	***	***	▲***	▲***	▼***	▼***
Total assets	***	***	***	***	***	▲***	▼***	▲***	***

Source: Compiled data submitted in response to Commission questionnaires. 508-compliant tables for these data are contained in parts 3, 4, 6, 7 and appendix D and G of this report.

fn1.--Apparent consumption and market shares are not presented again when defining the U.S. industry as U.S. producers and processors because the value added by toll processors is already incorporated in the market by U.S. producers, as presented in table C.1. For this reason, data in this table do not combine the U.S. shipments of producers and toll processors and just present their data side by side for comparison. Table C.2 market, shares and imports are the same as already presented in table C.1.
fn2.--Reported data are in percent and period changes are in percentage points.
fn3.--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.

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.

APPENDIX D

INFORMATION ON U.S. PRODUCERS AND U.S. TOLL PROCESSOR (REFINER) OPERATIONS

Table D.1 Unwrought palladium: U.S. toll processors, their position on the petition, location of processing, and share of reported processing

Shares in percent

Firm	Position on petition	Processing location(s)	Share of processing
Johnson Matthey	***	West Deptford, NJ	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.2 Unwrought palladium: U.S. toll processors' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
Johnson Matthey	***	***
Johnson Matthey	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.3 Unwrought palladium: U.S. producers and toll processor's explanation domestic activities

Firm name	Narrative response on domestic activities
Johnson Matthey	***
Metallix Refining	***
Sibanye-Stillwater	***
Techemet	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.4 Unwrought palladium: U.S. producers and toll processors' complexity and importance of domestic activities, by firm

Count in number of firms reporting

Firm	1	2	3	4	5
Johnson Matthey	***	***	***	***	***
Metallix Refining	***	***	***	***	***
Sibanye-Stillwater	***	***	***	***	***
Techemet	***	***	***	***	***
All firms	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.5 Unwrought palladium: U.S. producers and toll processors' reported complexity and importance of operations

Ratings of 1 are minimally complex, intense, or important, rating of 5 are extremely complex, intense, or important

Firm	Rating	Narrative response on complexity and importance rating
Johnson Matthey	***	***
Metallix Refining	***	***
Sibanye-Stillwater	***	***
Techemet	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.6 Unwrought palladium: U.S. producers and toll processors' narratives relating to domestic activities by firm and factor

Item	Firm name and narrative on domestic activities
Capital investments	***
Capital investments	***
Technical expertise	***
Technical expertise	***
Value added	***
Value added	***
Employment	***
Employment	***
Quantity, type, and source of parts	***
Quantity, type, and source of parts	***
Costs and activities	***
Costs and activities	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.7 Unwrought palladium: U.S. producers and toll processors' reported domestic operations, by factor, 2022 through 2024

Value as noted in the table; value added in percent; employment in average number of PRWs

Item	Producer: Metallix Refining	Producer: Sibanye-Stillwater	Producer: Techemet	All U.S. producers	Processor: Johnson Matthey
Capital investments: Greenfield	*** million	*** million	*** million	*** million	*** million
Capital investments: Assets	*** million	*** million	*** million	*** million	*** million
Capital investments: Capital expenditures	*** thousand	*** thousand	*** thousand	*** thousand	*** thousand
Technical expertise: R & D expenses	***	***	***	***	*** thousand
Value added	*** percent	*** percent	*** percent	*** percent	*** percent
Employment	*** PRWs	*** PRWs	*** PRWs	*** PRWs	*** PRWs
Quantity, type, and source of palladium	Domestic: *** %; Imported *** %	Domestic: *** %; Imported *** %	Domestic: *** %; Imported *** %	Domestic: *** %; Imported *** %	Domestic primary: *** %; Domestic secondary: *** %; Imported Russia origin: *** %; Imported other foreign origin: *** %

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "—". Value added is calculated as the share of conversion costs (direct labor and other factory costs) out of cost of goods sold (COGS) or in the case of the processor, cost of tolling services (COTS). Ranges cover full calendar years.

Table D.8 Unwrought palladium: U.S. toll processor's installed and practical capacity, production, and utilization on the scope capacity, by period

Capacity and production in troy ounces; utilization in percent; interim period is January through March

Measure	2022	2023	2024	Interim 2024	Interim 2025
Capacity	***	***	***	***	***
Production	***	***	***	***	***
Utilization	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Metrics for installed overall and practical overall are based on the total weight while the metric for unwrought palladium is based on contained palladium weight.

Figure D.1 Unwrought palladium: U.S. toll processor's capacity, production, and capacity utilization, by period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.9 Unwrought palladium: U.S. toll processor's source of palladium, by origin and period

Quantity in troy ounces; shares in percent; interim period January through March

Palladium source	Measure	2022	2023	2024	Interim 2024	Interim 2025
Domestic primary sources	Quantity	***	***	***	***	***
Domestic secondary sources	Quantity	***	***	***	***	***
Russia origin	Quantity	***	***	***	***	***
Other foreign origin	Quantity	***	***	***	***	***
All palladium sources	Quantity	***	***	***	***	***
Domestic primary sources	Share	***	***	***	***	***
Domestic secondary sources	Share	***	***	***	***	***
Russia origin	Share	***	***	***	***	***
Other foreign origin	Share	***	***	***	***	***
All palladium sources	Share	100.0	100.0	100.0	100.0	100.0

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 "—".

Table D.10 Unwrought palladium: U.S. toll processor's total shipment, by destination and period

Quantity in troy ounces contained palladium; value in 1,000 dollars shares in percent; unit values in dollar per TOCP; shares in percent; interim period January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. shipments	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
Export shipments	Value	***	***	***	***	***
Total shipments	Value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Export shipments	Unit value	***	***	***	***	***
Total shipments	Unit value	***	***	***	***	***
U.S. shipments	Share of quantity	***	***	***	***	***
Export shipments	Share of quantity	***	***	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***	***	***
Export shipments	Share of value	***	***	***	***	***
Total shipments	Share of value	100.0	100.0	100.0	100.0	100.0

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 "—".

Table D.11 Unwrought palladium: U.S. toll processors' U.S. shipment, by type and period

Quantity in troy ounces contained palladium; value in 1,000 dollars shares in percent; unit values in dollar per TOCP; shares in percent; interim period January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Commercial U.S. shipments	Quantity	***	***	***	***	***
Fee-based toll U.S. shipments to tollee	Quantity	***	***	***	***	***
U.S. shipments	Quantity	***	***	***	***	***
Commercial U.S. shipments	Value	***	***	***	***	***
Fee-based toll U.S. shipments to tollee	Value	***	***	***	***	***
U.S. shipments	Value	***	***	***	***	***
Commercial U.S. shipments	Unit value	***	***	***	***	***
Fee-based toll U.S. shipments to tollee	Unit value	***	***	***	***	***
U.S. shipments	Unit value	***	***	***	***	***
Commercial U.S. shipments	Share of quantity	***	***	***	***	***
Fee-based toll U.S. shipments to tollee	Share of quantity	***	***	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***	***	***
Fee-based toll U.S. shipments to tollee	Share of value	***	***	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0	100.0	100.0

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 "—".

Table D.12 Unwrought palladium: U.S. toll processors' inventories and their ratio to select items, by period

Quantity in troy ounces contained palladium; ratio in percent; interim period January through March

Item	2022	2023	2024	Interim 2024	Interim 2025
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.

Table D.13 Unwrought palladium: *'s U.S. processing, U.S. imports from source, and ratio of imports to processing, by period**

Quantity in troy ounces contained palladium; ratio in percent; interim period January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. production	Quantity	***	***	***	***	***
Imports from Russia	Quantity	***	***	***	***	***
Imports from Russia to U.S. processing	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table D.14 Unwrought palladium: U.S. processors' employment related information, by item and period

Item	2022	2023	2024	Interim 2024	Interim 2025
Production and related workers (PRWs) (number)	***	***	***	***	***
Total hours worked (1,000 hours)	***	***	***	***	***
Hours worked per PRW (hours)	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***
Productivity (TOCP per 1,000 hours)	***	***	***	***	***
Unit labor costs (dollars per TOCP)	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX E

ALTERNATE APPARENT U.S. CONSUMPTION

Table E.1 Unwrought palladium: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in troy ounces contained palladium; shares in percent; interim is January through March

Source	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. producers	Quantity	***	***	***	***	***
Russia	Quantity	656,631	766,109	887,338	186,474	279,711
South Africa	Quantity	667,180	782,084	876,594	235,033	270,776
All other sources	Quantity	559,073	440,664	288,696	111,090	137,022
Nonsubject sources	Quantity	1,226,253	1,222,748	1,165,290	346,124	407,797
All import sources	Quantity	1,882,884	1,988,857	2,052,628	532,598	687,509
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
South Africa	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025, and from data submitted in response to Commission questionnaires. 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 E.1 Unwrought pallidum: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025, and from data submitted in response to Commission questionnaires. Imports are based on the imports for consumption data series.

Table E.2 Unwrought palladium: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent; interim is January through March

Source	Measure	2022	2023	2024	Interim 2024	Interim 2025
U.S. producers	Value	***	***	***	***	***
Russia	Value	1,354,059	1,079,782	877,763	182,380	264,154
South Africa	Value	1,406,700	1,052,447	870,421	233,736	263,257
All other sources	Value	1,224,196	606,503	289,680	112,193	135,110
Nonsubject sources	Value	2,630,896	1,658,950	1,160,101	345,930	398,367
All import sources	Value	3,984,955	2,738,732	2,037,864	528,309	662,521
All sources	Value	***	***	***	***	***
U.S. producers	Share	***	***	***	***	***
Russia	Share	***	***	***	***	***
South Africa	Share	***	***	***	***	***
All other sources	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025, and from data submitted in response to Commission questionnaires. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.

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 E.2 Unwrought palladium: Apparent U.S. consumption based on value, by source and period

* * * * * * *

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting numbers 7110.21.0000, accessed on August 15, 2025, and from data submitted in response to Commission questionnaires. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.

APPENDIX F

U.S. PRODUCERS' RESULTS OF OPERATIONS EXCLUDING *** AND U.S. PRODUCER *** RESULTS OF OPERATIONS

Table F.1 Unwrought palladium: U.S. producers' results of operations excluding *, by item and period**

Quantity in troy ounces contained palladium; value in 1,000 dollars; ratio in percent; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Net sales (further refined under tolling)	Quantity	***	***	***	***	***
Net sales (further refined under tolling)	Value	***	***	***	***	***
COGS: Primary palladium costs	Value	***	***	***	***	***
COGS: Secondary palladium costs	Value	***	***	***	***	***
COGS: Total raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Other expense or (income)	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COGS: Primary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Secondary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Total raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	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.

Table F.1 (Continued) Unwrought palladium: U.S. producers' results of operations excluding *, by item and period**

Shares in percent; dollars per TOCP; count in number of firms reporting; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
COGS: Primary palladium costs	Share	***	***	***	***	***
COGS: Secondary palladium costs	Share	***	***	***	***	***
COGS: Total raw materials	Share	***	***	***	***	***
COGS: Direct labor	Share	***	***	***	***	***
COGS: Other factory	Share	***	***	***	***	***
COGS: Total	Share	100.0	100.0	100.0	100.0	100.0
Net sales (further refined under tolling)	Unit value	***	***	***	***	***
COGS: Primary palladium costs	Unit value	***	***	***	***	***
COGS: Secondary palladium costs	Unit value	***	***	***	***	***
COGS: Total raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	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.

Note: Shares represent the share of COGS.

Table F.2 unwrought palladium: Changes in AUVs between comparison periods for U.S. producers' operations excluding *

Changes in percent; interim period is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Net sales (further refined under tolling)	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	▲***	▲***	▼***	▼***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▲***	▲***	▼***	▼***
COGS: Other factory	▲***	▲***	▲***	▲***
COGS: Total	▼***	▼***	▼***	▲***

Table continued.

Table F.2 (Continued) Unwrought palladium: Changes in AUVs between comparison periods for U.S. producers' operations excluding *

Changes in dollars per ton; interim period is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Net sales (further refined under tolling)	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	▲***	▲***	▼***	▼***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▲***	▲***	▼***	▼***
COGS: Other factory	▲***	▲***	▲***	▲***
COGS: Total	▼***	▼***	▼***	▲***
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.

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table F.3 Unwrought palladium: U.S. producer * results of operations, by item and period**

Quantity in troy ounces contained palladium; value in 1,000 dollars; ratio in percent; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Total net sales (toll produced)	Quantity	***	***	***	***	***
Total net sales (toll produced)	Value	***	***	***	***	***
COGS: Primary palladium costs	Value	***	***	***	***	***
COGS: Secondary palladium costs	Value	***	***	***	***	***
COGS: Total raw materials	Value	***	***	***	***	***
COGS: Direct labor	Value	***	***	***	***	***
COGS: Other factory	Value	***	***	***	***	***
COGS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Other expense or (income)	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COGS: Primary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Secondary palladium costs	Ratio to NS	***	***	***	***	***
COGS: Total raw materials	Ratio to NS	***	***	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***	***	***
COGS: Other factory	Ratio to NS	***	***	***	***	***
COGS: Total	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.

Table F.3 (Continued) Unwrought palladium: U.S. producer * results of operations, by item and period**

Shares in percent; dollars per TOCP; count in number of firms reporting; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
COGS: Primary palladium costs	Share	***	***	***	***	***
COGS: Secondary palladium costs	Share	***	***	***	***	***
COGS: Total raw materials	Share	***	***	***	***	***
COGS: Direct labor	Share	***	***	***	***	***
COGS: Other factory	Share	***	***	***	***	***
COGS: Total	Share	100.0	100.0	100.0	100.0	100.0
Total net sales (toll produced)	Unit value	***	***	***	***	***
COGS: Primary palladium costs	Unit value	***	***	***	***	***
COGS: Secondary palladium costs	Unit value	***	***	***	***	***
COGS: Total raw materials	Unit value	***	***	***	***	***
COGS: Direct labor	Unit value	***	***	***	***	***
COGS: Other factory	Unit value	***	***	***	***	***
COGS: Total	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.

Note: Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table F.4 Unwrought palladium: Changes in AUVs between comparison periods for U.S. producer * results of operations**

Changes in percent; interim period is January through March

Item	2022–24	2022–23	2023–24	Interim 2024–25
Total net sales (toll produced)	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	***	***	***	***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▼***	▼***	▼***	▼***
COGS: Other factory	▼***	▲***	▼***	▼***
COGS: Total	▼***	▼***	▼***	▲***

Table continued.

Table F.4 (Continued) Unwrought palladium: Changes in AUVs between comparison periods for U.S. producer * result of operations**

Changes in dollars per pound; interim period is January through March

Item	2022–24	2022–23	2023–24	Interim 2024–25
Total net sales (toll produced)	▼***	▼***	▼***	▼***
COGS: Primary palladium costs	***	***	***	***
COGS: Secondary palladium costs	▼***	▼***	▼***	▲***
COGS: Total raw materials	▼***	▼***	▼***	▲***
COGS: Direct labor	▼***	▼***	▼***	▼***
COGS: Other factory	▼***	▲***	▼***	▼***
COGS: Total	▼***	▼***	▼***	▲***
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.

Note: 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.

APPENDIX G

FINANCIAL DATA OF U.S. TOLL PROCESSOR (REFINER) OPERATIONS

Table G.1 Unwrought palladium: U.S. toll processor's results of toll operations, by item and period

Quantity in troy ounces contained palladium; value in 1,000 dollars; ratio in percent; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Total net tolling	Quantity	***	***	***	***	***
Total fee revenues	Value	***	***	***	***	***
COTS: Raw materials not provided by tollee	Value	***	***	***	***	***
COTS: Direct labor	Value	***	***	***	***	***
COTS: Other factory	Value	***	***	***	***	***
COTS: Total	Value	***	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***	***
SG&A expenses	Value	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***
Other expense or (income), net	Value	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***
Depreciation/amortization	Value	***	***	***	***	***
Cash flow	Value	***	***	***	***	***
COTS: Raw materials not provided by tollee	Ratio to NS	***	***	***	***	***
COTS: Direct labor	Ratio to NS	***	***	***	***	***
COTS: Other factory	Ratio to NS	***	***	***	***	***
COTS: Total	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.

Table G.1 (Continued) Unwrought palladium: U.S. toll processor's results of toll operations, by item and period

Shares in percent; dollars per TOCP; count in number of firms reporting; interim period is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
COTS: Raw materials not provided by tollee	Share	***	***	***	***	***
COTS: Direct labor	Share	***	***	***	***	***
COTS: Other factory	Share	***	***	***	***	***
COTS: Total	Share	100.0	100.0	100.0	100.0	100.0
Total net fee revenue	Unit value	***	***	***	***	***
COTS: Raw materials not provided by tollee	Unit value	***	***	***	***	***
COTS: Direct labor	Unit value	***	***	***	***	***
COTS: Other factory	Unit value	***	***	***	***	***
COTS: Total	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	1	1	1	1	1

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: ***.

Table G.2 Unwrought palladium: Changes in AUVs between comparison periods for U.S. toll processor's results of toll operations

Changes in percent; interim period is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Total fee revenues	▼***	▼***	▼***	▲***
COTS: Raw materials not provided by tollee	▼***	▼***	▲***	▲***
COTS: Direct labor	▲***	▲***	▼***	▲***
COTS: Other factory	▲***	▲***	▼***	▲***
COTS: Total	▲***	▲***	▼***	▲***

Table continued.

Table G.2 (Continued) Unwrought palladium: Changes in AUVs between comparison periods for U.S. toll processor's results of toll operations

Changes in dollars per ton; interim period is January through March

Item	2022 to 2024	2022 to 2023	2023 to 2024	Interim 2024 to interim 2025
Total fee revenues	▼***	▼***	▼***	▲***
COTS: Raw materials not provided by tollee	▼***	▼***	▲***	▲***
COTS: Direct labor	▲***	▲***	▼***	▲***
COTS: Other factory	▲***	▲***	▼***	▲***
COTS: Total	▲***	▲***	▼***	▲***
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.

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table G.3 Unwrought palladium: U.S. toll processor's capital expenditures, R&D expenses, total assets and return on assets, by item and period

Value in 1,000 dollars; ratio in percent; interim is January through March

Item	Measure	2022	2023	2024	Interim 2024	Interim 2025
Capital expenditures	Value	***	***	***	***	***
R&D expenditures	Value	***	***	***	***	***
Total assets	Value	***	***	***	***	***
Return on assets	Ratio	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table G.4 Unwrought palladium: U.S. toll processor's narrative descriptions of its capital expenditures, R&D expenses, and total net assets

Item	Narrative on item
Capital expenditures	***
R&D expenditures	***
Total net assets	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table G.5 Unwrought palladium: U.S. toll processor's actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2022, by effect

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	***
Denial or rejection of investment proposal	Investment	***
Reduction in the size of capital investments	Investment	***
Return on specific investments negatively impacted	Investment	***
Other investment effects	Investment	***
Any negative effects on investment	Investment	***
Rejection of bank loans	Growth	***
Lowering of credit rating	Growth	***
Problem related to the issue of stocks or bonds	Growth	***
Ability to service debt	Growth	***
Other growth and development effects	Growth	***
Any negative effects on growth and development	Growth	***
Anticipated negative effects of imports	Future	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table G.6 Unwrought palladium: U.S. toll processor's narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2022, by firm and effect

Item	Firm's narrative responses on impact of imports
***	***

Source: Compiled from data submitted in response to Commission questionnaires.