

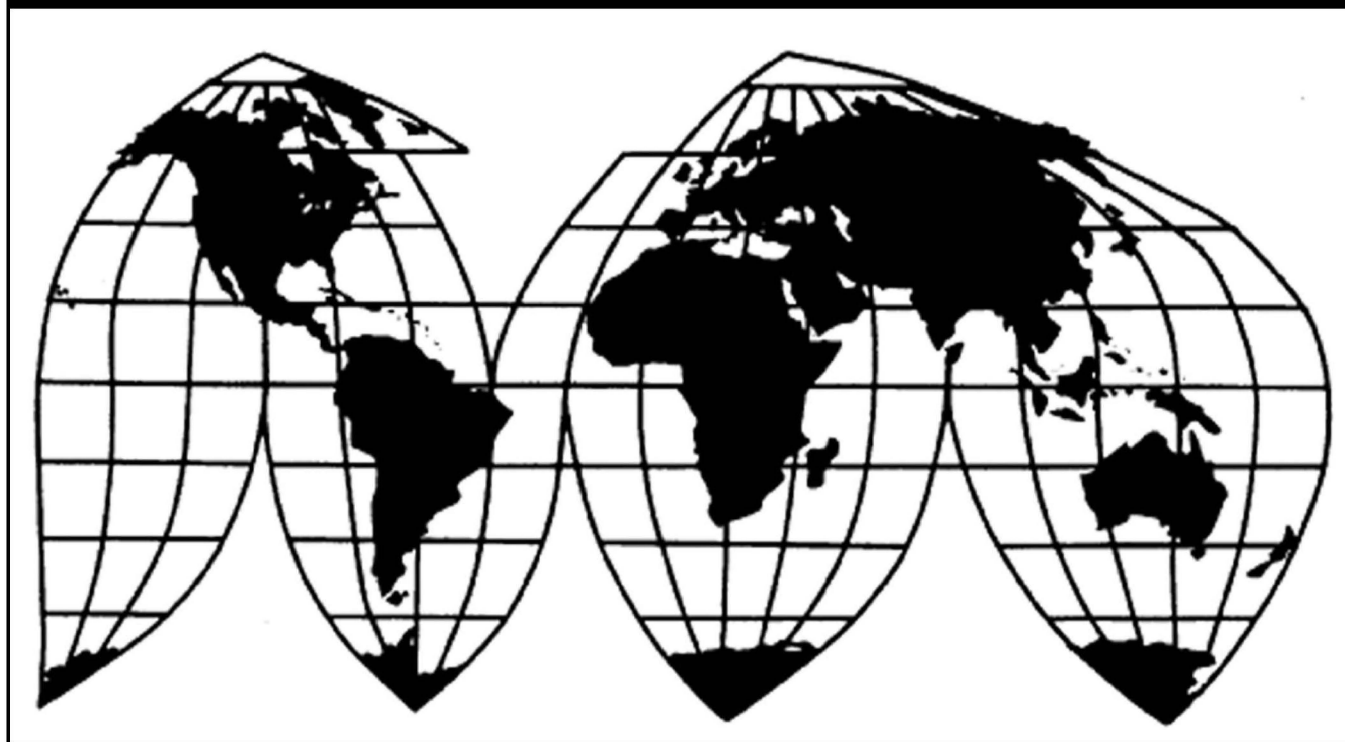
# Hydrofluorocarbon Blends from China

Investigation No. 731-TA-1279 (Review)

Publication 5278

February 2022

**U.S. International Trade Commission**



Washington, DC 20436

# U.S. International Trade Commission

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Note: Information that would reveal confidential operations of individual concerns may not be published.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

# UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1279 (Review)

Hydrofluorocarbon Blends from China

## **DETERMINATION**

On the basis of the record<sup>1</sup> developed in the subject five-year review, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that revocation of the antidumping duty order on hydrofluorocarbon blends from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

## **BACKGROUND**

The Commission instituted this review on July 1, 2021 (86 FR 35131) and determined on October 4, 2021 that it would conduct an expedited review (87 FR 117, January 3, 2022).

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<sup>1</sup> The record is defined in § 207.2(f) of the Commission’s Rules of Practice and Procedure (19 CFR 207.2(f)).





## Views of the Commission

Based on the record in this five-year review, we determine under section 751(c) of the Tariff Act of 1930, as amended (“the Tariff Act”), that revocation of the antidumping duty order on hydrofluorocarbon blends (“HFC blends”) from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

### I. Background

*Original Investigation.* The American HFC Coalition and its members (“Petitioners”) filed an antidumping duty petition on HFC blends and components from China on June 25, 2015.<sup>1</sup> As part of its determination, the Commission applied its five-factor finished/semi-finished product analysis and found two domestic like products - one domestic like product comprised of HFC blends and one comprised of HFC components. In August 2016, the Commission determined that the domestic industry was materially injured by reason of less than fair value imports of HFC blends from China. The Commission further determined that a U.S. industry was not materially injured or threatened with material injury by reason of imports of HFC components from China.<sup>2</sup> On August 19, 2016, Commerce issued an antidumping duty order on HFC blends.<sup>3</sup>

In October 2016, Petitioners appealed to the U.S. Court of International Trade (“CIT”) the Commission’s finding that there were two domestic like products.<sup>4</sup> In July 2019, the Court ultimately affirmed the Commission’s definition of two domestic like products - one comprised of HFC blends and one comprised of HFC blends.<sup>5</sup> There were no further appeals.<sup>6</sup>

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<sup>1</sup> The American HFC Coalition was comprised of domestic HFC blend and component producers Arkema Inc. (“Arkema”), The Chemours Company FC LLC (“Chemours”), Honeywell International, Inc. (“Honeywell”), and Mexichem Fluor, Inc. (“Mexichem”). Confidential Report (“CR”), INV-TT-105, EDIS Doc. 752414 at I-2 n.5; Public Report (“PR”) at I-2 n.5.

<sup>2</sup> *Hydrofluorocarbon Blends and Components from China*, Inv. No. 731-TA-1279 (Final), USITC Pub. 4629 (Aug. 2016) (“Original Investigation”) at 25-28, 38-41, and 44.

<sup>3</sup> *Hydrofluorocarbon Blends from the People’s Republic of China: Antidumping Duty Order*, 81 Fed. Reg. 55436 (Aug. 19, 2016) (“Order”).

<sup>4</sup> *See Arkema Inc., et al., v. USITC*, Court No. 16-00179, Slip Op. 19-81 (July 3, 2019).

<sup>5</sup> *Arkema Inc., et al., v. USITC*, Court No. 16-00179.

<sup>6</sup> Petitioners initially appealed the CIT’s decision affirming the Commission’s determination to the U.S. Court of Appeals for the Federal Circuit. In October 2019, Petitioners voluntarily withdrew the appeal with prejudice. *See Arkema Inc., et. al. v. United States*, Court No. 2019-2361, Order of Dismissal (Fed. Cir. 2019).

*Current Review.* The Commission instituted this review on June 25, 2021.<sup>7</sup> The parties that filed responses to the notice of institution in this review are: the American HFC Coalition and its individual members,<sup>8</sup> domestic producers of HFC blends (collectively referred to herein as “Domestic Parties”); and iGas USA, Inc., a domestic producer of HFC blends, and its affiliated companies, including its wholly-owned U.S. importer, \*\*\* (collectively, “iGas” or “respondent interested parties”).<sup>9</sup> On October 4, 2021, the Commission determined that the individual responses for Domestic Parties were adequate and each respondent interested party’s individual response to be adequate. Because the Commission received a response from interested parties accounting for a substantial share of U.S. production of HFC blends in 2020, the Commission determined that the domestic interested party group response was adequate. However, it determined that the respondent interested party group response was inadequate because the response did not account for a substantial share of imports or exports of subject merchandise in 2020.<sup>10</sup> Finding no circumstances that would otherwise warrant a full review, the Commission determined to conduct an expedited review of the order.<sup>11</sup> Both Domestic Parties and iGas subsequently filed final comments pursuant to Commission Rule 207.62(d)(1).<sup>12</sup>

U.S. industry data for this review are based on the information Domestic Parties and iGas provided in their responses to the notice of institution and information from the original investigation.<sup>13</sup> Domestic Parties accounted for an estimated \*\*\* percent of HFC blends production and iGas accounted for an estimated \*\*\* percent during 2020.<sup>14</sup> U.S. import data

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<sup>7</sup> See *Hydrofluorocarbon Blends From China; Institution of a Five-Year Review*, 86 Fed. Reg. 35131 (July 1, 2021).

<sup>8</sup> Arkema, Chemours, Honeywell, and Mexichem. Mexichem manufactures one of the components used to process HFC blends, R-134a, in the United States, but did not blend HFC components in the United States in 2020. Therefore, Mexichem is not a producer of the domestic like product subject to this review. CR/PR at I-2 n.5; Domestic Parties Response (Aug. 2, 2021), EDIS Doc 748470 at 1-3.

<sup>9</sup> iGas USA, Inc. listed the following affiliate companies: \*\*\*. CR/PR at I-2 n.6 & 7; iGas Supplemental Response (Aug. 31, 2021), EDIS Doc. 750634 at 1-2.

<sup>10</sup> *Explanation of Commission Determination on Adequacy*, EDIS Doc. 754051 (Oct. 4, 2021).

<sup>11</sup> *Scheduling of Expedited Five-Year Review; Hydrofluorocarbon Blends from China*, 87 Fed. Reg. 118 (Jan. 3, 2022).

<sup>12</sup> Domestic Parties Final Comments (Confidential) (Jan. 11, 2022), EDIS Doc. 760260; iGas Final Comments (Confidential) (Jan. 11, 2022), EDIS Doc. 760272.

<sup>13</sup> CR/PR at I-11.

<sup>14</sup> CR/PR at I-27 and Table I-1. Domestic Parties reported producing \*\*\* short tons of HFC blends in 2020 and estimated that this production collectively accounted for approximately \*\*\* of total 2020 production. Domestic Parties Response at 1 and Exhibit 5. iGas reported that it had produced \*\*\* short tons of HFC blends in 2020 and also \*\*\*, for an additional \*\*\* short tons of HFC blends during 2020. iGas indicated it had no basis to provide an estimate of its production’s share of total U.S. production. iGas Response at 9. Based on the domestic interested parties’ estimates, iGas’s reported (Continued...)

and related information are based on official import statistics.<sup>15</sup> No foreign producer or exporter of HFC blends from China participated in this review. Foreign industry data and related information for the period of review are based on data provided by the Domestic Parties, iGas, and publicly available data.<sup>16</sup> Five U.S. purchasers responded to the Commission’s adequacy phase questionnaire.<sup>17</sup>

## II. Domestic Like Product and Industry

### A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the “domestic like product” and the “industry.”<sup>18</sup> The Tariff Act defines “domestic like product” as “a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle.”<sup>19</sup> The Commission’s practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.<sup>20</sup>

Commerce has defined the imported merchandise within the scope of the order under review as follows:

The products subject to the *Order* are HFC blends. HFC blends covered by the scope are R-404A, a zeotropic mixture consisting of 52 percent 1,1,1-Trifluoroethane, 44 percent Pentafluoroethane, and 4 percent 1,1,1,2-Tetrafluoroethane; R-407A, a zeotropic mixture of 20 percent

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(...Continued)

HFC blends production in 2020 (including its reported toll-produced production) accounted for approximately \*\*\* percent of the total U.S. production of HFC blends; however, this estimate when combined with Domestic Parties Response for their production yield a total production estimate for 2020 that \*\*\*. See CR/PR at Table I-1 note.

<sup>15</sup> CR/PR at Table I-4.

<sup>16</sup> CR/PR at I-18 to I-19.

<sup>17</sup> CR/PR at Appendix D.

<sup>18</sup> 19 U.S.C. § 1677(4)(A).

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

<sup>20</sup> See, e.g., *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

Difluoromethane, 40 percent Pentafluoroethane, and 40 percent 1,1,1,2-Tetrafluoroethane; R-407C, a zeotropic mixture of 23 percent Difluoromethane, 25 percent Pentafluoroethane, and 52 percent 1,1,1,2-Tetrafluoroethane; R-410A, a zeotropic mixture of 50 percent Difluoromethane and 50 percent Pentafluoroethane; and R-507A, an azeotropic mixture of 50 percent Pentafluoroethane and 50 percent 1,1,1-Trifluoroethane also known as R-507. The foregoing percentages are nominal percentages by weight. Actual percentages of single component refrigerants by weight may vary by plus or minus two percent points from the nominal percentage identified above.<sup>21</sup>

Any blend that includes an HFC component other than R-32, R-125, R-143a, or R-134a is excluded from the scope of the *Order*.

Excluded from the *Order* are blends of refrigerant chemicals that include products other than HFCs, such as blends including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrocarbons (HCs), or hydrofluoroolefins (HFOs).

Also excluded from the *Order* are patented HFC blends, including, but not limited to, ISCEON© blends, including MO99TM (R-438A), MO79 (R-422A), MO59 (R-417A), MO49PlusTM (R-437A) and MO29TM (R-422D), Genetron© PerformaxTM LT (R-407F), Choice© R-421A, and Choice© R-421B.

HFC blends covered by the scope of the *Order* are currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) at subheadings 3824.78.0020 and 3824.78.0050.

Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope is dispositive.<sup>22 23</sup>

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<sup>21</sup> R-404A is sold under various trade names, including Forane© 404A, Genetron© 404A, Solkane© 404A, Klea© 404A, and Suva©404A. R-407A is sold under various trade names, including Forane© 407A, Solkane© 407A, Klea©407A, and Suva©407A. R-407C is sold under various trade names, including Forane© 407C, Genetron© 407C, Solkane© 407C, Klea© 407C and Suva© 407C. R-410A is sold under various trade names, including EcoFluor R410, Forane© 410A, Genetron R410A and AZ-20, Solkane© 410A, Klea© 410A, Suva 410A, and Puron©. R-507A is sold under various trade names, including Forane 507, Solkane© 507, Klea©507, Genetron© AZ-50, and Suva© 507. R-32 is sold under various trade names, including Solkane© 32, Forane© 32, and Klea32. R-125 is sold under various trade names, including Solkane© 125, Klea© 125, Genetron© 125, and Forane© 125. R-143a is sold under various trade names, including Solkane© 143a, Genetron© 143a, and Forane© 125.

<sup>22</sup> Certain merchandise has been the subject of affirmative anti-circumvention determinations by Commerce, pursuant to section 781 of the Tariff Act of 1930, as amended (the Act). As a result, this merchandise is included in the scope of the antidumping duty order on HFC blends from China. See *Hydrofluorocarbon Blends from the People's Republic of China: Final Negative Scope Ruling on Gujarat Fluorochemicals Ltd.'s R-410A Blend; Affirmative Final* (Continued...)

Hydrofluorocarbons (“HFCs”) are synthetic chemical compounds containing only hydrogen, fluorine, and carbon. Unlike other refrigerants and refrigerant components, HFCs have no ozone depleting potential because they do not contain chlorine. HFC blends, produced from HFC components, are colorless, odorless gases that are generally used for refrigeration and air conditioning applications, such as residential air conditioning and heat pumps, commercial air conditioning, commercial refrigeration (*e.g.*, walk-in coolers and supermarket display cases), transportation refrigeration, and process refrigeration (*e.g.*, food processing and chemical manufacturing). HFC blends were developed to replace R-22, a single refrigerant, in low- and medium-temperature applications.<sup>24</sup>

*Original Investigation.* In the original investigation, Petitioners requested that the Commission define a single like product comprised of HFC blends and HFC components, coextensive with Commerce’s scope. The Commission, however, found a clear dividing line between HFC blends and HFC components based on its five factor semi-finished product analysis. Consequently, the Commission found two domestic like products – one domestic like product consisting of HFC blends and one consisting of HFC components.<sup>25</sup> The Commission subsequently determined that an industry in the United States was not materially injured or threatened with material injury by reason of imports of HFC components from China.<sup>26</sup> It also determined that an industry in the United States was materially injured by reason of imports of HFC blends from China.<sup>27</sup>

*Current Review.* In this review, Domestic Parties agree with the definition of the domestic like product (HFC blends) the Commission adopted in the original determination and is coextensive with Commerce’s scope in this review.<sup>28</sup> iGas did not state a position on the

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(...Continued)

*Determination of Circumvention of the Antidumping Duty Order by Indian Blends Containing Chinese Components*, 85 Fed. Reg. 61930 (Oct. 1, 2020); *Hydrofluorocarbon Blends from the People’s Republic of China: Final Scope Ruling on Unpatented R–421A; Affirmative Final Determination of Circumvention of the Antidumping Duty Order for Unpatented R–421A*, 85 Fed. Reg. 34416 (June 4, 2020); and *Hydrofluorocarbon Blends from the People’s Republic of China: Affirmative Final Determination of Circumvention of the Antidumping Duty Order; Unfinished R–32/R–125 Blends*, 85 Fed. Reg. 15428 (Mar. 18, 2020).

<sup>23</sup> *Hydrofluorocarbon Blends from the People’s Republic of China; Final Results of Expedited First Sunset Review of the Antidumping Duty Order*, 86 Fed. Reg. 61120, 61121 (Nov. 5, 2021) (“Commerce Expedited First Sunset Review”).

<sup>24</sup> CR/PR at I-10 to I-11.

<sup>25</sup> Original Investigation at 10-13.

<sup>26</sup> Original Investigation at 38-41, and 44.

<sup>27</sup> Original Investigation at 25-28.

<sup>28</sup> See Domestic Parties Response at 31.

definition of the domestic like product.<sup>29</sup> The record contains no new information suggesting that the characteristics and uses of domestically produced HFC blends have changed since the original investigation that would warrant revisiting the definition.<sup>30</sup> We therefore again define a single domestic like product consisting of HFC blends, coextensive with Commerce’s scope in this review.<sup>31</sup>

## **B. Domestic Industry**

Section 771(4)(A) of the Tariff Act defines the relevant industry as the domestic “producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product.”<sup>32</sup> In defining the domestic industry, the Commission’s general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise

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<sup>29</sup> See, e.g., iGas Response (Aug. 2, 2022), EDIS Doc. 748436 at 12.

<sup>30</sup> See CR/PR at I-9 to I-11.

<sup>31</sup> Chair Kearns notes that the Commission’s original determination, which divided the scope into two separate domestic like products (HFC blends and HFC components), resulted in disconnected agency investigations. After the order on HFC blends was imposed, but not an order on HFC components, Commerce initiated anti-circumvention inquiries, including whether imports of HFC components (*i.e.*, R-32, R-125, and R-143a) from China were circumventing the HFC blends order. CR/PR at I-5. Commerce preliminarily determined that HFC components from China were circumventing the HFC blends order, but ultimately made a final negative injury determination following notification from the Commission that an affirmative circumvention determination on HFC components would raise a significant injury issue. CR/PR at I-6. Subsequently, separate petitions were filed covering R-32 and R-125 components from China. CR/PR at I-7-8. While Chair Kearns questions whether he would have reached the same conclusion as the Commission in the original determination (*i.e.*, that the scope contained two separate like products, HFC blends and HFC components), the scope of the order currently under review covers only HFC blends, and Chair Kearns does not see any reason to expand the domestic like product beyond the scope.

<sup>32</sup> 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. See 19 U.S.C. § 1677.

or which are themselves importers.<sup>33</sup> Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.<sup>34</sup>

In the original investigation, the Commission found that appropriate circumstances did not exist to exclude the sole related domestic producer from the domestic industry under 19 U.S.C. § 1677(4)(B).<sup>35</sup>

In this review, domestic producer iGas USA is a related party because its affiliates intermittently imported subject merchandise early in the period of review ("POR")<sup>36</sup> and its wholly owned U.S. importer \*\*\* imported subject merchandise in 2020.<sup>37</sup> iGas did not state a position on the Commission's definition of the domestic industry.<sup>38</sup>

iGas reported that its affiliates and wholly owned U.S. importer imported subject merchandise at various points during the POR, though it only reported volume and value data for these imports for 2020.<sup>39</sup> Notably, iGas reported a single entry by its wholly owned U.S.

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<sup>33</sup> See *Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.*, 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

<sup>34</sup> The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

- (1) the percentage of domestic production attributable to the importing producer;
- (2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);
- (3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;
- (4) the ratio of import shipments to U.S. production for the imported product; and
- (5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); *see also Torrington Co.*, 790 F. Supp. at 1168.

<sup>35</sup> ICOR International, Inc. ("ICOR") was a related party with respect to the industry producing HFC blends because it imported subject HFC blends during the period of investigation ("POI"). The Commission found that ICOR produced HFC blends in each year of the POI and imported subject blends from China in only one year; its imports were very limited and were less than its total domestic production during the POI. Thus, the Commission found that appropriate circumstances did not exist to exclude ICOR from the domestic HFC blends industry. Original Investigation at 14 and n.66. Subsequently, ICOR was acquired by domestic HFC blend producer Chemours in 2018. CR/PR at I-12 and Table I-2.

<sup>36</sup> In addition to \*\*\*, iGas reported that \*\*\*. CR/PR at I-14 to I-15; iGas Response at 1-2.

<sup>37</sup> iGas' importer, \*\*\*, imported \*\*\* short tons of subject merchandise in 2020, with a value of \$\*\*\*, that reportedly is unsold and remains in inventory. CR/PR at I-11 and n.64; iGas Response at 9.

<sup>38</sup> See iGas Response at 12.

<sup>39</sup> See CR/PR at I-14 to I-15 and n.64; iGas Response at 9.

importer in 2020 that was limited in volume and value.<sup>40</sup> iGas indicated that imports by its other affiliates ceased after 2016 and 2017.<sup>41</sup> Moreover, iGas, the only non-integrated domestic producer that participated in this review, accounted for an estimated \*\*\* percent of domestic production of HFC blends in 2020.<sup>42</sup> Exclusion of iGas from the domestic industry would skew the data for the rest of the industry. Therefore, in light of the above, we find that appropriate circumstances do not exist to exclude iGas from the domestic industry as a related party. We consequently define the domestic industry to include all domestic producers of HFC blends.

### **III. Revocation of the Antidumping Duty Order Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time**

#### **A. Legal Standards**

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur, and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order “would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.”<sup>43</sup> The SAA states that “under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports.”<sup>44</sup> Thus, the likelihood standard is prospective in nature.<sup>45</sup> The CIT has found that “likely,” as used in the five-year

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<sup>40</sup> CR/PR at I-14 to I-15 and n.64; iGas Response at 9.

<sup>41</sup> CR/PR at I-14 to I-15.

<sup>42</sup> See note 12 *supra*.

<sup>43</sup> 19 U.S.C. § 1675a(a).

<sup>44</sup> SAA at 883-84. The SAA states that “{t}he likelihood of injury standard applies regardless of the nature of the Commission’s original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed.” *Id.* at 883.

<sup>45</sup> While the SAA states that “a separate determination regarding current material injury is not necessary,” it indicates that “the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked.” SAA at 884.



review provisions of the Act, means “probable,” and the Commission applies that standard in five-year reviews.<sup>46</sup>

The statute states that “the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time.”<sup>47</sup> According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but normally will exceed the ‘imminent’ timeframe applicable in a threat of injury analysis in original investigations.”<sup>48</sup>

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to “consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated.”<sup>49</sup> It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).<sup>50</sup> The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission’s determination.<sup>51</sup>

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<sup>46</sup> See *NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int’l Trade 2003) (“‘likely’ means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)”), *aff’d mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) (“more likely than not” standard is “consistent with the court’s opinion;” “the court has not interpreted ‘likely’ to imply any particular degree of ‘certainty’”); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) (“standard is based on a likelihood of continuation or recurrence of injury, not a certainty”); *Usinor v. United States*, 26 CIT 767, 794 (2002) (“‘likely’ is tantamount to ‘probable,’ not merely ‘possible’”).

<sup>47</sup> 19 U.S.C. § 1675a(a)(5).

<sup>48</sup> SAA at 887. Among the factors that the Commission should consider in this regard are “the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities.” *Id.*

<sup>49</sup> 19 U.S.C. § 1675a(a)(1).

<sup>50</sup> 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings with respect to the antidumping duty order on HFC Blends from China.

<sup>51</sup> 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.<sup>52</sup> In doing so, the Commission must consider “all relevant economic factors,” including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.<sup>53</sup>

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.<sup>54</sup>

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.<sup>55</sup> All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to

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<sup>52</sup> 19 U.S.C. § 1675a(a)(2).

<sup>53</sup> 19 U.S.C. § 1675a(a)(2)(A-D).

<sup>54</sup> See 19 U.S.C. § 1675a(a)(3). The SAA states that “{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices.” SAA at 886.

<sup>55</sup> 19 U.S.C. § 1675a(a)(4).

which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.<sup>56</sup>

No respondent producer or exporter participated in this expedited review. The record, therefore, contains limited new information with respect to the HFC blends industry in China. There also is limited new information on the HFC blends market in the United States during the POR. Accordingly, for our determination, we rely as appropriate on the facts available from the original investigation and the limited new information on the record in this review.

## **B. Conditions of Competition and the Business Cycle**

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”<sup>57</sup> The following conditions of competition inform our determination.

### **1. Demand Conditions**

*Original Investigation.* In the original investigation, the Commission found that demand for HFC blends in the United States depends on the demand for their use in downstream products. Residential air conditioning was reported to be the largest end use, followed by commercial refrigeration; other end uses include commercial air conditioning, transport refrigeration, and process refrigeration. It found that demand for HFC blends was tied to the need to replace HCFCs both in new equipment and in existing equipment retrofitted to accept HFC blends in air conditioning and refrigeration applications.<sup>58</sup>

In the original investigation, the majority of U.S. producers and importers reported that the U.S. market was subject to business cycles; all companies reported that HFC blend demand was seasonal with higher demand occurring directly before the summer months. Demand for certain blends used in refrigeration products reportedly were sold steadily throughout the year although some blends were used more in the first eight months of the year when demand

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<sup>56</sup> The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission “considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.” SAA at 885.

<sup>57</sup> 19 U.S.C. § 1675a(a)(4).

<sup>58</sup> Original Investigation at 20.

increased for air conditioning units. The Commission found that apparent U.S. consumption of HFC blends rose steadily over the period of investigation (“POI”).<sup>59</sup>

*Current Review.* In the current review, Domestic Parties assert that HFC blends are sold throughout the year, with seasonal demand peaking in the months preceding the summer, consistent with the largest uses of HFC blends in residential air conditioning and commercial refrigeration.<sup>60</sup> They also claim that future U.S. demand for HFC blends will likely be affected by the development of next-generation refrigerants, such as hydrofluoroolefins (“HFO”) blends, while demand for HFC blends will continue for existing equipment.<sup>61</sup>

The American Innovation and Manufacturing (“AIM”) Act, enacted on December 27, 2020, as part of the Consolidated Appropriations Act, 2021, provides the U.S. Environmental Protection Agency (“EPA”) with new authority to promulgate regulations designed to phase down the production and consumption of HFCs in the United States, including the HFC blends subject to the antidumping duty order under review.<sup>62</sup> The AIM Act is intended to accomplish this reduction by lowering the allowable annual sums of the global warming potentials (“GWPs”) for all HFCs consumed, produced, and imported each year. Specifically, the allowable annual sums of the GWPs for all regulated HFCs in the AIM Act will decrease in phases from a baseline. The baseline is determined primarily as the average of the annual sums of GWPs for all HFCs produced and imported in 2011, 2012, and 2013.<sup>63</sup> HFCs will be phased down to 15 percent of their baseline levels in a stepwise manner by 2036, and EPA will issue allowances which will be needed to produce or import HFCs during the phasedown period.<sup>64</sup> iGas points out that the EPA is to publish rules and GWP allowances, by company, to meet these goals.<sup>65</sup>

Apparent U.S. consumption, as measured by quantity, increased from 2015 to 2020. It was \*\*\* short tons in 2015 and \*\*\* short tons in 2020.<sup>66</sup>

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<sup>59</sup> Original Investigation at 20-21.

<sup>60</sup> Domestic Parties Response at 11.

<sup>61</sup> Domestic Parties Response at 12.

<sup>62</sup> CR/PR at I-12; *see, e.g.*, iGas Response at 4 and Exhibits 1 & 2.

<sup>63</sup> In addition, the baselines include 15 percent of the HCFC levels in 1989 and 0.42 percent of the CFC levels in 1989. *See, e.g.*, EPA Fact Sheet: Proposed Rule – Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program under the American Innovation and Manufacturing (AIM) Act (Apr. 30, 2021). iGas Response, Exhibit 1; *see also* CR/PR at I-12 and note 48.

<sup>64</sup> CR/PR at I-12. As the Act stipulates that the allowable sums of GWPs for all HFCs on the regulated list will in total be decreased by 85 percent by 2036, the individual HFC components themselves may have different percentages of decrease. *See* S. 2754, 116th Congress, §6(b)(3).

<sup>65</sup> iGas Response at 4-5 and Exhibits 1 & 2.

<sup>66</sup> CR/PR at Table I-5. Apparent U.S. consumption, as measured by value, also increased, from \$\*\*\* in 2020, higher than the \$\*\*\* in 2015. *Id.* Of the five responding U.S. purchasers, one reported that \*\*\*. CR/PR at App. D-3.

## 2. Supply Conditions

*Original Investigation.* In the original investigation, the Commission found that the U.S. market for HFC blends was satisfied almost entirely by the domestic industry and subject imports during the POI, with nonsubject imports accounting for a very small portion of the market. It found the domestic industry's share of the U.S. market for HFC blends decreased throughout the POI, decreasing from \*\*\* percent in 2013 to \*\*\* percent in 2014 and \*\*\* percent in 2015.<sup>67</sup> There were five domestic producers of HFC blends during the original investigation period; three of these firms (Arkema, Chemours, and Honeywell) were integrated producers that produced both components and blends, while another firm (National) was an independent blender, and the fifth firm (ICOR) was a blender/reclaimer that produced only a small amount of HFC blends during the POI. The domestic industry's capacity to produce HFC blends rose moderately over the POI, and the industry exported a significant but decreasing portion of its HFC blend production.<sup>68</sup>

During the POI, subject imports' share of the U.S. HFC blends market increased from \*\*\* percent in 2013 to \*\*\* percent in 2014 and \*\*\* percent in 2015.<sup>69</sup>

Nonsubject imports' share of apparent U.S. consumption of HFC blends decreased from \*\*\* percent in 2013 to \*\*\* percent in 2014, and there were no nonsubject imports in 2015.<sup>70</sup>

*Current Review.* The domestic industry was the largest source of supply to the U.S. market in 2020. Its shipments were \*\*\* short tons, accounting for \*\*\* percent of apparent U.S. consumption.<sup>71</sup> Domestic Parties estimate that they accounted for \*\*\* percent of domestic production in 2020; iGas is estimated to account for approximately \*\*\* percent of domestic production during 2020.<sup>72</sup>

Subject imports were the smallest source of supply to the U.S. market in 2020. Shipments of subject imports totaled 428 short tons in 2020 and accounted for \*\*\* percent of apparent U.S. consumption.<sup>73</sup> Nonsubject imports increased their presence in the U.S. market since the original investigation and their market share fluctuated during the POR; shipments of nonsubject imports were 1,900 short tons in 2020 and accounted for \*\*\* percent of apparent

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<sup>67</sup> Original Investigation at 21 and CR/PR at Table I-5.

<sup>68</sup> Original Investigation at 21.

<sup>69</sup> Original Investigation at 21.

<sup>70</sup> Original Investigation at 21.

<sup>71</sup> CR/PR at Table I-5.

<sup>72</sup> CR/PR at Table I-1 note; Domestic Parties Response at 1 and Exhibit 5; iGas Response at 9.

<sup>73</sup> CR/PR at Table I-5. Effective September 24, 2018, HFC blends produced in China are subject to an additional duty under Section 301 of the Trade Act of 1974. The additional duty provided for in subheading 9903.88.03 was 10 percent ad valorem from September 24, 2018, through December 31, 2018. On January 1, 2019, the additional duty increased to 25 percent ad valorem. CR/PR at I-10.

U.S. consumption.<sup>74</sup> The largest sources of nonsubject imports were Taiwan and the United Kingdom.<sup>75</sup>

### **3. Substitutability and Other Conditions**

*Original Investigation.* In the original investigation, the Commission found that there was a high degree of substitutability between the domestic like product and subject imports. The record showed that all responding U.S. producers and the majority of importers reported that domestically produced HFC blends, subject imports, and nonsubject imports of HFC blends are “always” or “frequently” interchangeable. When asked about the significance of differences other than price between domestically produced HFC blends and subject imports, most responding U.S. producers and importers indicated that such differences were only “sometimes” or “never” significant. The Commission noted that purchasers most frequently cited price as the most important of their top-three purchasing factors, and a majority of purchasers also reported that price is very important in purchasing decisions. In light of these circumstances, the Commission found that price was an important factor in purchasing decisions, although quality and the availability of supply could also be important factors.<sup>76</sup>

The Commission found that the primary raw materials used to produce the subject HFC blends were four HFC components, R-32, R-125, R-143a, and R-134a, with R-125 being the only HFC component used in all five in-scope blends.<sup>77</sup> The record showed that HFC components accounted for the bulk of the cost of producing the in-scope HFC blends over the POI.<sup>78</sup>

*Current Review.* The record in these reviews contains no new information to indicate that the high degree of substitutability between the domestic like product and subject imports or the importance of price in purchasing decisions has changed since the original investigation.<sup>79</sup> Accordingly, we again find that there is a high degree of substitutability between domestically produced HFC blends and subject imports and that price continues to be an important factor in purchasing decisions.

#### **C. Likely Volume of Subject Imports**

*Original Investigation.* The Commission found the volume and market share of subject imports of HFC blends increased steadily over the POI. It also found that the increase of subject

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<sup>74</sup> CR/PR at Tables I-4 and I-5.

<sup>75</sup> CR/PR at Table I-4.

<sup>76</sup> Original Investigation at 22.

<sup>77</sup> Original Investigation at 22.

<sup>78</sup> Original Investigation at 22.

<sup>79</sup> See Original Investigation at 22.

imports' market share came almost entirely at the expense of the domestic industry. The Commission determined that the subject import volume and the increase in that volume was significant in absolute terms and relative to apparent U.S. consumption.<sup>80</sup>

*Current Review.* The available data show that the volume of subject imports declined substantially from a period high of 10,885 short tons 2016 to a period low of 409 short tons in 2019 and remained low at 428 short tons in 2020.<sup>81</sup> The volume of subject imports throughout most of the POR was considerably below the peak level of \*\*\* short tons reached in 2015 during the original investigation.<sup>82</sup> In light of these data, we find that the order has had a disciplining effect on subject import volume.

The record indicates that subject producers in China have both the means and the incentive to increase shipments of subject merchandise to the U.S. market to significant levels within a reasonably foreseeable time if the antidumping duty order was revoked.<sup>83</sup> As previously stated, no producer or exporter of subject merchandise participated in this expedited review. In the original investigation, there were nine producers of HFC blends in China who responded to the Commission's questionnaire.<sup>84</sup> Questionnaire data from these producers indicated that the subject industry in China had substantial production capacity and excess capacity. Its production capacity was \*\*\* short tons in 2015 and its capacity utilization

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<sup>80</sup> Original Investigation at 22-23.

<sup>81</sup> See CR/PR at Table I-4.

<sup>82</sup> Compare CR/PR at Tables I-4 and I-5. Subject imports were 10,885 short tons in 2016, 2,490 short tons in 2017, 2,334 short tons in 2018, 409 short tons in 2019, and 428 short tons in 2020. CR/PR at Table I-4.

<sup>83</sup> iGas has alleged that the EPA's proposed regulations, promulgated pursuant to the AIM Act, would limit imports of HFCs, including HFC blends subject to the antidumping duty order under review here, because the regulations are designed to phase down the production and consumption of HFCs in the United States in the future. See iGas Response at 4-5 and Exhibits 1 & 2. We have limited information on the record of this review regarding the phase down and its likely impact. While iGas attached EPA's proposed regulations to its response to the Commission's notice of institution and the record also contains a "pre-publication" version of the final regulations, the final regulations were not published when the record in this review closed (October 4, 2021). In any event, it is unclear to what degree any final EPA action will reduce U.S. consumption of HFC blends in the reasonably foreseeable future. As noted above, however, the baseline years of 2011 to 2013 for determining the average of the annual sums of GWPs for all HFCs produced and imported, will include for subject imports the first year of the original investigation (2013) when subject imports were substantially higher than in 2020. Consequently, on this record, we cannot conclude that the EPA regulations likely would prevent a significant volume of subject imports in the reasonably foreseeable future if the order was revoked.

<sup>84</sup> CR/PR at I-18. During this review, Domestic Parties and iGas jointly identified approximately 40 producer/exporters of subject HFC blends in China. See Domestic Parties Response, Exhibit 7; iGas Response at 7.

rate was \*\*\* percent.<sup>85</sup> There is no indication in the record of this review that the capacity or excess capacity of the subject industry has declined. To the contrary, Domestic Parties estimate that there are currently at least 40 subject producers and that the Chinese industry's capacity was greater in 2016 than during the original investigation.<sup>86</sup>

The record in this review also indicates that the subject industry is export oriented and that it views the United States as an attractive export market. As indicated, although the order has had a disciplining effect on subject import volume, subject imports nevertheless maintained a presence in the U.S. market throughout the POR.<sup>87</sup> Moreover, Global Trade Atlas ("GTA") data indicate that China was the world's largest exporter of "mixtures containing perfluorocarbons or hydrofluorocarbons, but not CFCs or HCFCs," throughout the POR.<sup>88</sup> China's global exports of such merchandise increased from 120,881 short tons in 2015 to 139,685 short tons in 2020.<sup>89</sup> These data indicate that global export quantities of HFC blends from China since 2016 have been greater than those during the original investigation, suggesting that subject capacity has not declined significantly since the original investigation.<sup>90</sup>

Given the subject industry's substantial capacity and export orientation, the disciplining effect of the order on subject import volume, and the subject industry's continued interest in the U.S. market, we find that the likely volume of subject imports, both in absolute terms and relative to consumption in the United States, would be significant if the order was revoked.<sup>91</sup>

#### **D. Likely Price Effects**

*Original Investigation.* The Commission found a high degree of substitutability between subject imports of HFC components and the domestic like product and that price was an important consideration, although other factors were also important. With respect to underselling, the Commission found that subject imports pervasively undersold the domestic like product throughout the POI, often by significant margins. Given the predominant

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<sup>85</sup> Original CR at Table VII-3.

<sup>86</sup> See Domestic Parties Response, Ex. 7 and Final Comments at 10-11; see also CR/PR at I-19.

<sup>87</sup> CR/PR at Table I-4.

<sup>88</sup> CR/PR at Table I-7. GTA data encompasses merchandise classified under HTS subheading 3824.78, a category containing both subject HFC blends and products outside the scope of the order under review. CR/PR at I-22 and Table I-7.

<sup>89</sup> CR/PR at Table I-7.

<sup>90</sup> CR/PR at I-19; Domestic Parties Response, Table 3 at 18.

<sup>91</sup> We observe that the record in these expedited reviews contains no information concerning inventories of the subject merchandise or the potential for product shifting. With respect to trade measures in other countries, we note that India initiated an antidumping duty investigation against HFC blends (R-407 and R-410) from China in September 2020. CR/PR at I-20 and n.72.



underselling and the fact that price was an important consideration in purchasing decisions, the Commission found the underselling by subject imports of HFC blends to be significant.<sup>92</sup>

With respect to price trends, the Commission found that prices for each of the four domestically produced HFC blend pricing products declined over the POI while prices for three of the four imported HFC blends also declined during this period. It noted that the price declines occurred despite increasing apparent U.S. consumption over the POI and could not be explained by changes in raw materials costs. Moreover, purchasers reported that U.S. producers had reduced prices to compete with lower priced imports from China. The Commission therefore concluded that subject imports depressed prices for the domestic like product to a significant degree.<sup>93</sup>

The Commission concluded that the pervasive underselling by subject HFC blends enabled those imports to capture market share from the domestic industry, and the increasing volume of low-priced subject imports significantly depressed the domestic industry's prices. It consequently concluded that the subject imports had significant price effects.<sup>94</sup>

*Current Review.* As previously discussed in Section III.B.3., there is a high degree of substitutability between the domestic like product and subject imports and price continues to be an important factor in purchasing decisions. Due to the expedited nature of this review, the record does not contain new product-specific pricing information. In the original investigation, the Commission found underselling in the majority of quarterly comparisons, price competition between domestically produced HFC blends, and that subject imports had depressed prices for the domestic like product to a significant degree.<sup>95</sup> The Commission further found that the domestic industry lost sales to lower-priced subject imports.<sup>96</sup>

In light of these considerations, we find that if the antidumping duty order was revoked, likely significant volumes of subject imports would likely result in a recurrence of intense price competition between the domestic like product and subject imports, leading subject imports to gain sales and market share at the expense of the domestic industry and/or to have price-depressing or suppressing effects on the domestic like product, as they did during the original investigation. Accordingly, we find that subject imports would likely have significant price effects if the order was revoked.

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<sup>92</sup> Original Investigation at 23.

<sup>93</sup> Original Investigation at 23-24.

<sup>94</sup> Original Investigation at 25.

<sup>95</sup> See Original Investigation at 24-25.

<sup>96</sup> See Original Investigation at 24 and n.126.

## E. Likely Impact

*Original Investigation.* The Commission found that the domestic industry's performance was impaired during the POI as it lost market share to subject imports and any growth the industry experienced in output-related indicators was far less than the growth in apparent U.S. consumption. Similarly, it found the industry's financial condition was poor as the industry could not fully benefit from improvements in apparent U.S. consumption and its cost structure.<sup>97</sup>

Further, the Commission found that the domestic industry's capacity and capacity utilization increased over the period but at a far more modest rate than apparent U.S. consumption, and the industry's production declined later in the POI. It found that the domestic industry's U.S. commercial shipments showed a similar trend to production and its share of apparent U.S. consumption steadily declined over the POI, while the industry experienced a substantial increase in end-of-period inventories.<sup>98</sup>

Moreover, the Commission found that the domestic industry's employment indicators were somewhat mixed during the POI. The average number of production-related workers and the industry's productivity decreased over the POI, while its unit labor costs increased. The domestic industry's hours worked, wages paid, and hourly wages also increased irregularly.<sup>99</sup>

The Commission found that the domestic industry's financial performance fluctuated over the POI but was generally poor. Despite the increases in apparent U.S. consumption, the industry's net sales revenues were lower reflecting, in part, the significant price depression caused by the subject imports. Despite the fact that domestic producers' cost of goods sold ("COGS") declined over the POI, the industry's gross profits also declined. Operating income and net income, by contrast, showed some improvement over the POI, but the industry never achieved more than \*\*\* profitability. Finally, the Commission found that the industry's capital expenditures increased over the POI, while its research and development ("R&D") expenses steadily declined.<sup>100</sup>

Some of the improvement in the domestic industry's financial condition in 2015 was attributable to decreases in costs and post-petition increases in domestic prices. Nevertheless, because of the significant and increased volume of subject imports, the Commission found that the domestic industry lost market share and was unable to benefit fully from increased demand. Lower priced subject imports took market share from domestic producers and drove down domestic prices, which resulted in the domestic industry forgoing revenues that it

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<sup>97</sup> Original Investigation at 25-26.

<sup>98</sup> Original Investigation at 26.

<sup>99</sup> Original Investigation at 26-27.

<sup>100</sup> Original Investigation at 27.

otherwise would have received. Consequently, the domestic industry's financial condition was worse than it would have been otherwise. The Commission therefore found that the subject imports had a significant impact on the domestic industry.<sup>101</sup>

The Commission considered whether there were other factors that had an impact on the domestic industry so as not to attribute any injury caused by these factors to the subject imports. It found that nonsubject imports were a small and declining factor in the U.S. market with a decreasing share of apparent U.S. consumption over the POI. The Commission therefore concluded that nonsubject imports could not explain the domestic industry's loss of market share and revenues.<sup>102</sup>

*Current Review.* Due to the expedited nature of this review, the record contains limited information on the domestic industry's performance since the original investigation. The available information concerning the domestic industry's condition consists primarily of the data provided by the Domestic Parties and iGas in their responses to the notice of institution.

The available data indicate that in 2020 the domestic industry's production capacity was \*\*\* short tons, its production was \*\*\* short tons, and its capacity utilization rate was \*\*\* percent.<sup>103</sup> U.S. shipments were \*\*\* short tons in 2020, with a value of \$\*\*\* and an average unit value ("AUV") of \$\*\*\* per short ton. The industry's reported total net sales were \$\*\*\* in 2020, its operating income was \$\*\*\* in 2020, and its operating income margin was \*\*\* percent in 2020.<sup>104</sup> Because of the expedited nature of this review, the limited information in this record is insufficient for us to make a finding whether the domestic industry is vulnerable to the continuation or recurrence of material injury if the order was revoked.

Based on the information available in this review, we find that revocation of the orders would likely lead to a significant volume of subject imports that would likely engage in intense price competition with the domestic like product, leading subject imports to gain market share at the expense of the domestic industry and/or have price-depressing effects on the domestic like product. Subject imports' significant volume and price effects would consequently likely have a significant adverse effect on the domestic industry's production, capacity utilization, shipments, employment, and profitability.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports, so as not to attribute injury from other factors to subject imports. As discussed previously, the facts available show that nonsubject imports increased

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<sup>101</sup> Original Investigation at 27.

<sup>102</sup> Original Investigation at 27-28.

<sup>103</sup> CR/PR at Table I-3. Reported capacity and production were higher, but capacity utilization was lower in 2020 than in 2015. *Id.*

<sup>104</sup> CR/PR at Table I-3. Each of these financial measures was higher in 2020 than 2015. *Id.*

their presence in the U.S. market since the original investigation.<sup>105</sup> Nonetheless, the increasing presence of nonsubject imports did not preclude the domestic industry from obtaining higher AUVs for its products and improving its financial condition since the original investigation.<sup>106</sup> Given the substitutability between the domestic like product and subject imports, and in light of likely price competition between subject imports and the domestic like product, we find it likely that any increase in subject imports would come at least in part at the expense of the domestic industry and have significant price effects. Consequently, subject imports would likely have adverse effects distinct from any that may be caused by nonsubject imports.

Accordingly, we conclude that if the antidumping duty order was revoked, subject imports from China would likely have a significant impact on the domestic industry within a reasonably foreseeable time.

#### **IV. Conclusion**

For the reasons discussed above, we determine that revocation of the antidumping duty order on hydrofluorocarbon blends from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

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<sup>105</sup> See CR/PR at Table I-5.

<sup>106</sup> CR/PR at Table I-3. In 2015, domestic producers reported AUVs of U.S. shipments of \$\*\*\*, while in 2020 domestic producers reported a value of \$\*\*\*. Due to higher net sales in 2020 relative to 2015, the domestic industry's operating income and operating income as a ratio to net sales were also higher between these years. *Id.*

# Information obtained in this review

## Background

On July 1, 2021, the U.S. International Trade Commission (“Commission”) gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended (“the Act”),<sup>1</sup> that it had instituted a review to determine whether revocation of the antidumping duty order on hydrofluorocarbon blends (“HFC blends”) from China would likely lead to the continuation or recurrence of material injury to a domestic industry.<sup>2</sup> All interested parties were requested to respond to this notice by submitting certain information requested by the Commission.<sup>3 4</sup> The following tabulation presents information relating to the background and schedule of this proceeding:

Effective date	Action
July 1, 2021	Notice of initiation by Commerce (86 FR 35070, July 1, 2021)
July 1, 2021	Notice of institution by Commission (86 FR 35131, July 1, 2021)
October 4, 2021	Commission’s vote on adequacy
November 5, 2021	Commerce’s results of its expedited review (86 FR 61120, November 5, 2021)
February 7, 2022	Commission’s determinations and views

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<sup>1</sup> 19 U.S.C. 1675(c).

<sup>2</sup> 86 FR 35131, July 1, 2021. In accordance with section 751(c) of the Act, the U.S. Department of Commerce (“Commerce”) published a notice of initiation of a five-year review of the subject antidumping duty order. 86 FR 35070, July 1, 2021. Pertinent Federal Register notices are referenced in app. A, and may be found at the Commission’s website ([www.usitc.gov](http://www.usitc.gov)).

<sup>3</sup> As part of their response to the notice of institution, interested parties were requested to provide company-specific information. That information is presented in app. B. Summary data compiled in the original investigation are presented in app. C.

<sup>4</sup> Interested parties were also requested to provide a list of three to five leading purchasers in the U.S. market for the subject merchandise. Presented in app. D are the responses received from purchaser surveys transmitted to the purchasers identified in this proceeding.

# Responses to the Commission’s notice of institution

## Individual responses

The Commission received two submissions in response to its notice of institution in the subject review. They were filed on behalf of the following entities:

1. American HFC Coalition and its individual members,<sup>5</sup> domestic producers of HFC blends (collectively referred to herein as “domestic interested parties”)
2. iGas USA, Inc., respondent domestic producer of HFC blends, and its affiliated companies,<sup>6</sup> including its affiliated importer, Scales N Stuff <sup>7</sup> (collectively “iGas”)

A complete response to the Commission’s notice of institution requires that the responding interested party submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy and explain any deficiencies in their responses. A summary of the number of responses and estimates of coverage for each is shown in table I-1.

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<sup>5</sup> The American HFC Coalition is an association comprised of Arkema Inc. (“Arkema”), King of Prussia, Pennsylvania; The Chemours Company FC LLC (“Chemours”), Wilmington, Delaware; Honeywell International Inc. (“Honeywell”), Baton Rouge, Louisiana; and Mexichem Fluor Inc. (“Mexichem”), St. Gabriel, Louisiana. American HFC Coalition and its members were the petitioners in the original investigation. In its original determinations, the Commission defined two domestic like products: HFC components and HFC blends. The Commission determined that an industry in the United States was materially injured by reason of imports of HFC blends from China. The Commission further determined that a U.S. industry was not materially injured or threatened with material injury by reason of imports of HFC components from China. Arkema, Chemours, and Honeywell each manufacture HFC components in the United States and blend those components in the United States. As such, they are producers of the domestic like product subject to this review. Mexichem manufactures one of the components used to process HFC blends, R-134a, in the United States, but did not blend HFC components in the United States in 2020. As such, Mexichem is not a producer of the domestic like product subject to this review. Domestic interested parties’ response to notice of institution, August 2, 2021, pp. 1-3.

<sup>6</sup> \*\*\*

<sup>7</sup> \*\*\*

**Table I-1**

**HFC blends: Summary of completed responses to the Commission’s notice of institution**

<b>Interested party</b>	<b>Type</b>	<b>Number of firms</b>	<b>Coverage</b>
U.S. producer	Domestic	4	***%
U.S. trade association	Domestic	1	***%
U.S. importer	Domestic	1	***

Note: \*\*\*

Note: \*\*\*

**Party comments on adequacy**

The Commission received party comments on the adequacy of responses to the notice of institution and whether the Commission should conduct expedited or full reviews from the domestic interested parties and iGas. The domestic interested parties contend that the Commission conduct an expedited review of the antidumping duty order on HFC blends.<sup>8</sup> iGas requests that the Commission conduct a full review of the antidumping duty order on HFC blends. iGas contends that a full review will allow the Commission to examine the changes in the relevant conditions of competition that have developed since the imposition of the order.<sup>9</sup>

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<sup>8</sup> Domestic interested parties’ adequacy comments, September 10, 2021, p. 1.

<sup>9</sup> Comments on Adequacy of Responses to Notice of Institution on behalf of iGas USA, Inc., September 10, 2021, p. 1.

## The original investigation

The original investigation resulted from a petition filed on June 25, 2015, with Commerce and the Commission by the American HFC Coalition and its members.<sup>10 11</sup> On June 29, 2016, Commerce determined that imports of HFC blends and components from China were being sold at less than fair value (“LTFV”).<sup>12</sup> As part of its determination, the Commission applied its five-factor finished/semi-finished product analysis and found that there were two domestic like products, one comprised of HFC components and one comprised of HFC blends. The Commission determined on August 5, 2016 that the domestic industry was materially injured by reason of LTFV imports of HFC blends from China. The Commission further determined that a U.S. industry was not materially injured or threatened with material injury by reason of imports of HFC components from China.<sup>13</sup> On August 19, 2016, Commerce issued its antidumping duty order on HFC blends with the final weighted-average dumping margins ranging from 101.82 to 216.37 percent.<sup>14</sup>

### Remand orders

On September 9, 2016, the petitioners appealed to the U.S. Court of International Trade (“CIT”) challenging the Commission’s finding of two domestic like products. By decision and order dated February 16, 2018, the Court remanded two issues to the Commission and affirmed all other aspects of the Commission's domestic like product findings.<sup>15</sup> The Commission filed its remand with the Court on May 5, 2018. Upon consideration of the Court’s instructions and the parties’ comments and based on the record from the original investigation, the Commission

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<sup>10</sup> The members of the American HFC Coalition at the time of the filing of the original investigation petition were as follows: Amtrol, Inc., West Warwick, Rhode Island; Arkema, Inc., King of Prussia, Pennsylvania; The Chemours Company FC, LLC, Wilmington, Delaware; Honeywell International Inc., Morristown, New Jersey; Hudson Technologies, Pearl River, New York; Mexichem Fluor Inc., St. Gabriel, Louisiana; Worthington Industries, Inc., Columbus, Ohio; and District Lodge 154 of the International Association of Machinists and Aerospace Workers. The Commission did not grant Amtrol or Worthington interested party status because neither qualified as an interested party.

<sup>11</sup> Hydrofluorocarbon Blends and Components from China, Investigation Nos. 731-TA-1279 (Final), USITC Publication 4629, August 2016 (“Original publication”), p. I-1.

<sup>12</sup> 81 FR 42314, June 29, 2016. In addition, Commerce determined that critical circumstances existed with respect to imports of the subject merchandise.

<sup>13</sup> 81 FR 53157, August 11, 2016. The Commission also found that imports subject to Commerce's affirmative critical circumstances determination with respect to HFC blends were not likely to undermine seriously the remedial effect of the antidumping duty order on HFC blends from China.

<sup>14</sup> 81 FR 55436, August 19, 2016.

<sup>15</sup> *Arkema, Inc. v. United States*, Ct. No. 16-00179, Slip Op. 18-12 (Court of International Trade February 16, 2018).



again defined two domestic like products, one consisting of HFC blends and one consisting of HFC components. Only the domestic like product analysis was at issue in the litigation, and the Commission's ultimate domestic like product findings on remand were the same as those in the original determinations.<sup>16</sup>

On November 5, 2018, the CIT issued a second opinion and held that the Commission's domestic like product determination remained deficient regarding the same two issues and again remanded these issues to the Commission for reconsideration and further explanation.<sup>17</sup> Based on the entirety of the record, including the data collected in the second remand proceeding, the Commission again found that there were two domestic like products, one consisting of HFC blends and one consisting of HFC components. Accordingly, the Commission again determined that an industry in the United States producing HFC blends was materially injured by reason of imports of HFC blends from China and that an industry in the United States producing HFC components was not materially injured or threatened with material injury by reason of imports of LTFV HFC components from China.<sup>18</sup> The CIT subsequently affirmed on second remand the Commission's determination that there were two domestic like products, one consisting of HFC blends and one of HFC components, and the Commission's negative present material injury and threat of material injury determinations with respect to HFC components.<sup>19</sup>

#### **Anti-circumvention inquiry and scope rulings**

On June 18, 2019, Commerce initiated four anti-circumvention inquiries of the antidumping duty order on HFC blends from China to address: (1) whether imports of unfinished blends of HFC components R-32 and R-125 from China that are further processed into finished HFC blends in the United States were circumventing the order; (2) whether imports of non-patented R-421A (a blend of HFC components R-125 and R-134a) from China that are further processed into finished HFC blends in the United States were circumventing the order; (3) whether imports of HFC components R-32, R-125, and R-143a from China that are further processed into HFC blends in the United States were circumventing the order; and (4) whether certain HFC blends containing HFC components from India and China were

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<sup>16</sup> Views of the Commission on Remand, Hydrofluorocarbon Blends and Components from China, Inv. No. 731-TA-1279 (Remand), May 2, 2018, p. 3.

<sup>17</sup> *Arkema, Inc. v. United States*, Court No. 16-00179, Slip. Op. 18-153 (U.S. Court of International Trade, November 5, 2018).

<sup>18</sup> Views of the Commission on Remand, Hydrofluorocarbon Blends and Components from China, Inv. No. 731-TA-1279 (Second Remand), March 18, 2019, p. 3.

<sup>19</sup> See *Arkema, Inc. v. United States*, 81 CIT \_\_\_\_\_, 393 F.Supp.3d 1177 (Ct. Int'l Trade 2019).

circumventing the order.<sup>20</sup> On March 18, 2020, Commerce determined that imports of unfinished blends of HFC components R-32 and R-125 from China were circumventing the order.<sup>21</sup> On June 4, 2020, Commerce determined that imports of unpatented R-421A from China were circumventing the order.<sup>22</sup> On August 19, 2020, Commerce determined not to include R-32, R-125, and R-143a imported from China within the scope of the order.<sup>23</sup> On October 1, 2020, Commerce determined that imports of certain HFC blends containing HFC components from India and China that were blended in India prior to importation into the United States were circumventing the order.<sup>24</sup> Additionally, Commerce issued three other scope rulings in 2020 related to the antidumping duty order.<sup>25</sup>

## Previous and related investigations

HFC blends have not been subject to prior unfair trade investigations in the United States. However, out-of-scope components R-134a (also known as “1,1,1,2-tetrafluoroethane” and HFC-134a), R-32, and R-125 have been the subject of unfair trade investigations. Details on investigations concerning out-of-scope components are provided below.

### **R-134a from China antidumping and countervailing duty investigations**

On October 22, 2013, Mexichem filed antidumping and countervailing duty petitions with the Commission and Commerce concerning R-134a from China. In October 2014, Commerce found that such imports were being sold at LTFV and that countervailable subsidies were being provided to producers and exporters of R-134a from China.<sup>26</sup> In December 2014, the Commission determined that an industry in the United States was not materially injured or threatened with material injury, and the establishment of an industry in the United States was not materially retarded, by reason of imports of R-134a from China that had been found by Commerce to be sold in the United States at LTFV and subsidized by the government of China.<sup>27</sup> Mexichem subsequently filed a complaint on February 4, 2015, appealing the Commission’s

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<sup>20</sup> 84 FR 28276, 84 FR 28281, 84 FR 28273, and 84 FR 28269, June 18, 2019.

<sup>21</sup> 85 FR 15428, March 18, 2020.

<sup>22</sup> 85 FR 34416, June 4, 2020.

<sup>23</sup> 85 FR 51018, August 19, 2020.

<sup>24</sup> 85 FR 61930, October 1, 2020.

<sup>25</sup> 85 FR 12511, March 3, 2020; 85 FR 34416, June 4, 2020; and 85 FR 61930, October 1, 2020.

<sup>26</sup> 79 FR 62597 and 62594, October 20, 2014.

<sup>27</sup> 79 FR 73102, December 9, 2014.

negative determinations to the CIT. In June 2016, the court sustained the Commission's negative determinations.<sup>28</sup>

#### **R-134a from China antidumping investigation**

On March 3, 2016, the American HFC Coalition and its individual members<sup>29</sup> and District Lodge 154 of the International Association of Machinists and Aerospace Workers filed an antidumping duty petition concerning imports of R-134a from China. Effective March 1, 2017, Commerce found that R-134a from China was, or was likely to be, sold in the United States at LTFV.<sup>30</sup> In April 2017, the Commission determined that an industry in the United States was materially injured by reason of imports of R-134a from China.<sup>31</sup> Effective April 19, 2017, Commerce issued the antidumping duty order on R-134a from China.<sup>32</sup>

#### **R-32 from China antidumping investigation**

On January 23, 2020, Arkema filed an antidumping duty petition concerning imports of difluoromethane ("R-32") from China, an HFC component commonly blended with R-125 to produce refrigerant blends. Effective January 19, 2021, Commerce determined that R-32 from China was being, or was likely to be, sold in the United States at LTFV.<sup>33</sup> On March 2, 2021, the Commission determined that an industry in the United States was materially injured by reason of dumped imports of R-32 from China.<sup>34</sup> Effective March 11, 2021, Commerce issued the antidumping duty order on R-32 from China.<sup>35</sup>

#### **R-125 from China antidumping and countervailing duty investigations**

On January 12, 2021, Honeywell International, Inc., Charlotte, North Carolina, filed antidumping and countervailing duty petitions alleging that an industry in the United States was materially injured and threatened with material injury by reason of subsidized and LTFV imports of pentafluoroethane ("R-125") from China. On February 26, 2021, the Commission determined

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<sup>28</sup> *Mexichem Fluor, Inc. v. United States*, No. 15-00004 (U.S. Court of International Trade, June 6, 2016).

<sup>29</sup> American HFC Coalition's members at the time were Amtrol, Inc., West Warwick, Rhode Island; Arkema, Inc., King of Prussia, Pennsylvania; The Chemours Company FC LLC, Wilmington, Delaware; Honeywell International Inc., Morristown, New Jersey; Hudson Technologies, Pearl River, New York; Mexichem Fluor Inc., St. Gabriel, Louisiana; and Worthington Industries, Inc., Columbus, Ohio.

<sup>30</sup> 82 FR 12192, March 1, 2017.

<sup>31</sup> 82 FR 17280, April 10, 2017.

<sup>32</sup> 82 FR 18422, April 19, 2017.

<sup>33</sup> 86 FR 5136, January 19, 2021.

<sup>34</sup> 86 FR 13400, March 8, 2021.

<sup>35</sup> 86 FR 13886, March 11, 2021.

that there was a reasonable indication that an industry in the United States was materially injured by reason of imports of R-125 that were alleged to be sold in the United States at LTFV and to be subsidized by the government of China.<sup>36</sup> On June 25, 2021, Commerce preliminarily determined that countervailable subsidies are being provided to producers and exporters of R-125 from China.<sup>37</sup> On August 17, 2021, Commerce preliminarily determined that R-125 from China was being, or was likely to be, sold in the United States at LTFV.<sup>38</sup> Final determinations from Commerce and the Commission are forthcoming.

## **Commerce’s five-year review**

Commerce announced that it would conduct an expedited review with respect to the order on imports of HFC blends from China with the intent of issuing the final results of this review based on the facts available not later than October 29, 2021.<sup>39</sup> Commerce’s Issues and Decision Memorandum, published concurrently with Commerce’s final results, will contain complete and up-to-date information regarding the background and history of the order, including scope rulings, duty absorption, changed circumstances reviews, and anti-circumvention. Upon publication, a complete version of the Issues and Decision Memorandum can be accessed at <http://enforcement.trade.gov/frn/>. The Issues and Decision Memorandum will also include any decisions that may have been pending at the issuance of this report. Any foreign producers/ exporters that are not currently subject to the antidumping duty order on imports of HFC blends from China are noted in the sections titled “The original investigation” and “U.S. imports,” if applicable.

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<sup>36</sup> 86 FR 12712, March 4, 2021.

<sup>37</sup> 86 FR 33648, June 5, 2021. Commerce also preliminarily determined that critical circumstances exist, in part, with respect to imports of R-125 from certain producers and exporters from China in the CVD investigation. 86 FR 36526, July 12, 2021.

<sup>38</sup> 86 FR 45959, August 17, 2021. Commerce also preliminarily determined that critical circumstances existed, in part, with respect to imports of R-125 from China in the AD investigation.

<sup>39</sup> Letter from Melissa G. Skinner, Senior Director, Office VII, Office of AD/CVD Operations, U.S. Department of Commerce to Nannette Christ, Director of Investigations, August 20, 2021.

## The product

### Commerce's scope

Commerce has defined the scope as follows:

*HFC blends covered by the scope are R-404A, a zeotropic mixture consisting of 52 percent 1,1,1-Trifluoroethane, 44 percent Pentafluoroethane, and 4 percent 1,1,1,2-Tetrafluoroethane; R-407A, a zeotropic mixture of 20 percent Difluoromethane, 40 percent Pentafluoroethane, and 40 percent 1,1,1,2-Tetrafluoroethane; R-407C, a zeotropic mixture of 23 percent Difluoromethane, 25 percent Pentafluoroethane, and 52 percent 1,1,1,2-Tetrafluoroethane; R-410A, a zeotropic mixture of 50 percent Difluoromethane and 50 percent Pentafluoroethane; and R-507A, an azeotropic mixture of 50 percent Pentafluoroethane and 50 percent 1,1,1-Trifluoroethane also known as R-507. The foregoing percentages are nominal percentages by weight. Actual percentages of single component refrigerants by weight may vary by plus or minus two percent points from the nominal percentage identified above.*

*Any blend that includes an HFC component other than R-32, R-125, R-143a, or R-134a is excluded from the scope of this order.*

*Excluded from this order are blends of refrigerant chemicals that include products other than HFCs, such as blends including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrocarbons (HCs), or hydrofluoroolefins (HFOs).*

*Also excluded from this order are patented HFC blends, including, but not limited to, ISCEON® blends, including MO99TM (R-438A), MO79 (R-422A), MO59 (R-417A), MO49PlusTM (R-437A) and MO29TM (R-422D), Genetron® PerformaxTM LT (R-407F), Choice® R-421A, and Choice® R-421B.<sup>40</sup>*

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<sup>40</sup> 81 FR 55436, August 19, 2016.

## U.S. tariff treatment

HFC blends are currently imported under HTS statistical reporting number 3824.78.0020.<sup>41</sup> <sup>42</sup> This statistical reporting number contains numerous HFC blends that are beyond the scope of this review. However, the HFC blends that are the subject of this review are the most common ones used in current air conditioning and refrigeration units and account for the bulk of the trade recorded under this HTS statistical reporting number. HFC blends from China enter the U.S. market at a column 1-general duty rate of 3.7 percent ad valorem. Effective September 24, 2018, HFC blends produced in China are subject to an additional duty under Section 301 of the Trade Act of 1974. The additional duty provided for in subheading 9903.88.03 was 10 percent ad valorem from September 24, 2018, through December 31, 2018. On January 1, 2019, the additional duty increased to 25 percent ad valorem.<sup>43</sup> Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

## Description and uses<sup>44</sup>

Hydrofluorocarbons (“HFCs”) are synthetic chemical compounds containing only hydrogen, fluorine, and carbon. They do not occur naturally. Unlike CFCs and HCFCs, HFCs have no ozone depleting potential because they do not contain chlorine. HFC blends are colorless, odorless gases that are generally used for refrigeration and air conditioning applications.

The HFC blends subject to this review are used almost exclusively for refrigeration and air conditioning. These two major end uses are further categorized into residential air conditioning and heat pumps, commercial air conditioning, commercial refrigeration (e.g., walk-in coolers and supermarket display cases), transportation refrigeration, and process refrigeration (e.g., food processing and chemical manufacturing). As they were developed to

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<sup>41</sup> Statistical note 3 to chapter 38 states, “For the purposes of statistical reporting number 3824.78.0020, the term “hydrofluorocarbon refrigerant blends” consists of hydrofluorocarbon mixtures containing at least pentafluoroethane (R125) or difluoromethane (R32) or 1,1,1-trifluoroethane (R143a), mixed, with or without other ingredients.”

<sup>42</sup> Commerce’s antidumping duty order also referenced HTS statistical reporting number 3824.78.0050. 81 FR 55436, August 19, 2016. Products under statistical reporting number 3824.78.0050, however, are outside the scope of this review.

<sup>43</sup> 83 FR 47974, September 21, 2018. R-421A and R-421B are excluded from the additional section 301 duties.

<sup>44</sup> Unless otherwise noted, this information is based on Hydrofluorocarbon Blends and Components from China, Investigation No. 731-TA-1279 (Final), USITC Publication 4629, August 2016 (“Original publication”), p. I-10.

replace R-22, a single refrigerant, in these low- and medium-temperature conditions, the subject blends have considerable overlap in their applications.

## **Manufacturing process<sup>45</sup>**

The commercial manufacture of HFC blends involves large-scale mixing of component HFCs in precise quantities under controlled pressure for a specific period of time. It does not involve a chemical reaction or generate by-products. To blend R-410A, for example, R-32 and R-125 are piped from separate tanks into a blending tank. The HFC with the lowest vapor pressure (e.g., R-32) is typically introduced into the blending tank first. Other component HFCs are then added, progressing from the lowest to the highest vapor pressure. In the case of R-410A, the blending tank produces a uniform blend of the R-32 and R-125 in prescribed proportions, i.e., 50/50. The blend is continuously recirculated in the blending tank for a period of time. A liquid sample is drawn and analyzed in a laboratory. If the analysis is within the specification, the blend is ready for packaging. If not, additional HFC components are added as necessary.

## **The industry in the United States**

### **U.S. producers**

During the final phase of the original investigation, the Commission received U.S. producer questionnaires from six firms, which accounted for the vast majority of in-scope blend production in 2015.<sup>46</sup>

In response to the Commission's notice of institution in this current review, domestic interested parties provided a list of 11 U.S. producers believed to have produced the domestic like product during the five-year review period. The four firms that provided U.S. industry data in response to the Commission's notice of institution accounted for at least \*\*\* percent of production of HFC blends in the United States during 2020.<sup>47</sup>

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<sup>45</sup> Unless otherwise noted, this information is based on the original publication, pp. I-11-12.

<sup>46</sup> Original publication, p. I-4.

<sup>47</sup> \*\*\*

## Recent developments

Since the Commission's original investigation, the following developments have occurred in the HFC blends industry.

The American Innovation and Manufacturing (AIM) Act, enacted on December 27, 2020, directs the United States Environmental Protection Agency ("EPA") to address the environmental impact of HFCs by phasing down U.S. production and consumption (including the blends subject to this review), maximizing reclamation and minimizing releases from equipment, and facilitating the transition to next-generation technologies through sector-based restrictions.<sup>48</sup> HFCs will be phased down to 15 percent of their baseline levels in a stepwise manner by 2036 and EPA will issue allowances which will be needed to produce or import HFCs during the phasedown period.<sup>49</sup>

The reported U.S. capacity in 2020 is \*\*\* than in the original investigations. However, given the lack of publicly available information, it is unclear whether this is due to \*\*\* plant capacity or the inclusion of producers not contained in the original investigation. While \*\*\* is not included in the review capacity figures, \*\*\* and \*\*\* were not included in the original investigation. Based on information contained in its response to the notice of institution, \*\*\*. Since the imposition of the antidumping duty order on HFC blends from China, imports of the HFC components from China have increased, potentially supporting increased U.S. production of HFC blends.<sup>50</sup> However, as noted above in the section on previous and related investigations, recent investigations have resulted in antidumping duties being imposed on HFC components from China as well. In the spring of 2018 Chemours acquired ICOR International.<sup>51</sup> Additionally, \*\*\*, a small blender and seller of refrigerants, stopped blending refrigerants in 2018.<sup>52</sup> Table I-2 presents identified events in the U.S. industry since the original investigation.

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<sup>48</sup> Protecting Our Climate by Reducing Use of HFCs, <https://www.epa.gov/climate-hfcs-reduction>, accessed September 2, 2021.

<sup>49</sup> 86 FR 27150, May 19, 2021.

<sup>50</sup> Domestic interested parties' response to the notice of institution, August 2, 2021, p. 20.

<sup>51</sup> Domestic interested parties' response to the notice of institution, August 2, 2021, p. 29, fn. 90.

<sup>52</sup> iGas's response to the notice of institution, August 2, 2021, p. 1.



**Table I-2**  
**HFC blends: Recent developments in the U.S. industry**

Item	Firm	Event
Closure	BMP USA, Inc.	Stopped blending operations in 2018.
Acquisition	ICOR International, Inc.	Acquired by Chemours in the spring of 2018.

Source: Domestic interested parties' response to the notice of institution, August 2, 2021, p. 29, fn. 90. iGas's response to the notice of institution, August 2, 2021, p. 1.

## U.S. producers' trade and financial data

The Commission asked domestic interested parties to provide trade and financial data in their response to the notice of institution in the current five-year review.<sup>53</sup> Table I-3 presents a compilation of the trade and financial data submitted from all responding U.S. producers in the original investigation.

**Table I-3**  
**HFC blends: Trade and financial data submitted by U.S. producers, by period**

Quantity in short tons; value in 1,000 dollars; unit value in dollars per short ton; ratio is in percent

Item	Measure	2013	2014	2015	2020
Capacity	Quantity	***	***	***	***
Production	Quantity	***	***	***	***
Capacity utilization	Ratio	***	***	***	***
U.S. shipments	Quantity	***	***	***	***
U.S. shipments	Value	***	***	***	***
U.S. shipments	Unit value	***	***	***	***
Net sales	Value	***	***	***	***
COGS	Value	***	***	***	***
COGS to net sales	Ratio	***	***	***	***
Gross profit or (loss)	Value	***	***	***	***
SG&A expenses	Value	***	***	***	***
Operating income or (loss)	Value	***	***	***	***
Operating income or (loss) to net sales value	Ratio	***	***	***	***

Source: For the years 2013-15, data are compiled using data submitted in the Commission's original investigation. Data include U.S. producer responses submitted in the original investigation by Arkema, Chemours, Honeywell, National Refrigerants, Inc., and ICOR International, Inc. For the year 2020, data are compiled using data submitted by domestic interested parties (Arkema, Chemours, and Honeywell) and iGas. Domestic interested parties' response to the notice of institution, August 2, 2021, exh. 5 and iGas's response to the notice of institution, August 2, 2021, pp. 9-10. U.S. shipments include commercial U.S. shipments and internal consumption and company transfers.

Note: For a discussion of data coverage, please see "U.S. producers" section.

<sup>53</sup> Individual company trade and financial data are presented in app. B.

## Definitions of the domestic like product and domestic industry

The domestic like product is defined as the domestically produced product or products which are like, or in the absence of like, most similar in characteristics and uses with, the subject merchandise. In its original determination, the Commission defined two domestic like products: one consisting of in-scope HFC blends and one consisting of in-scope HFC components. The Domestic Like Product for this review consists of in-scope HFC blends.<sup>54</sup>

The domestic industry is defined as the U.S. producers as a whole of the domestic like product, or those producers whose collective output of the domestic like product constitutes a major proportion of the total domestic production of the product. Under the related parties provision, the Commission may exclude a U.S. producer from the domestic industry for purposes of its injury determination if “appropriate circumstances” exist.<sup>55</sup>

With respect to the domestic industry, the domestic interested parties noted in their response to the notice of institution, “\*\*\*”<sup>56</sup> The domestic interested parties also noted in their supplemental response, “\*\*\*”<sup>57</sup>

In its response to the notice of institution iGas noted, “\*\*\*”

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<sup>54</sup> 86 FR 35131, July 1, 2021.

<sup>55</sup> Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

<sup>56</sup> Domestic interested parties’ response to notice of institution, August 2, 2021, pp. 31-32.

<sup>57</sup> Domestic interested parties’ supplemental response, August 31, 2021, p. 3.

\*\*\*.”<sup>58</sup> With respect to \*\*\*, iGas further noted, “\*\*\*”<sup>59</sup> iGas also noted in its response, “\*\*\*.”<sup>60</sup> In its supplemental response, iGas added, “\*\*\*.”<sup>61</sup> Lastly, iGas also noted in its response, “\*\*\*.”<sup>62</sup>

## U.S. imports

### U.S. importers

During the final phase of the original investigation, the Commission received U.S. importer questionnaires from 16 firms, which accounted for over one-third of the in-scope products imported from China in 2015 under HTS statistical reporting numbers 2903.39.2030 (for in-scope components) and 3824.78.0000 (for in-scope blends).<sup>63</sup> Import data presented in the original investigation are based on questionnaire responses.

The Commission received one response from a respondent importer in this current review.<sup>64</sup> Additionally, in its response to the Commission’s notice of institution, the domestic interested parties and iGas collectively provided a list of 34 potential U.S. importers of HFC blends.<sup>65</sup>

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<sup>58</sup> iGas response to notice of institution, August 2, 2021, pp. 1-2.

<sup>59</sup> iGas response to notice of institution, August 2, 2021, p. 11.

<sup>60</sup> iGas response to notice of institution, August 2, 2021, p. 12.

<sup>61</sup> iGas supplemental response to notice of institution, August 31, 2021, p. 4.

<sup>62</sup> iGas response to notice of institution, August 2, 2021, p. 7.

<sup>63</sup> Original publication, p. IV-1.

<sup>64</sup> \*\*\*

<sup>65</sup> \*\*\*

## U.S. imports

Table I-4 presents the quantity, value, and unit value of U.S. imports from China as well as the other top sources of U.S. imports (shown in descending order of 2020 imports by quantity).

**Table I-4**  
**Hydrofluorocarbon refrigerant blends: U.S. imports, by source and period**

Quantity in short tons; value in 1,000 dollars; unit value in dollars per short tons

Source	Measure	2016	2017	2018	2019	2020
China	Quantity	10,885	2,490	2,334	409	428
Taiwan	Quantity	198	369	-	-	874
United Kingdom	Quantity	7	161	277	227	828
All other sources	Quantity	667	2,232	2,205	211	198
Nonsubject sources	Quantity	871	2,763	2,482	438	1,900
All imports	Quantity	11,756	5,252	4,816	847	2,328
China	Value	31,108	12,344	14,991	2,800	1,778
Taiwan	Value	699	1,356	-	-	2,670
United Kingdom	Value	174	827	1,342	1,060	2,852
All other sources	Value	2,784	12,580	13,929	1,291	1,082
Nonsubject sources	Value	3,658	14,764	15,271	2,351	6,604
All imports	Value	34,766	27,108	30,262	5,151	8,382
China	Unit value	2,858	4,958	6,422	6,842	4,154
Taiwan	Unit value	3,534	3,672	-	-	3,054
United Kingdom	Unit value	26,228	5,135	4,844	4,661	3,447
All other sources	Unit value	4,177	5,636	6,317	6,124	5,454
Nonsubject sources	Unit value	4,199	5,344	6,153	5,365	3,476
All imports	Unit value	2,957	5,161	6,283	6,078	3,600

Source: Compiled from official Commerce statistics for HTS statistical reporting number 3824.78.0020, accessed September 2, 2021.

Note: These data may be overstated as HTS statistical reporting number 3824.78.0020 may contain products outside the scope of this review. Commerce's antidumping duty order also references HTS statistical reporting number 3824.78.0050. 81 FR 55436, August 19, 2016. Products under statistical reporting number 3824.78.0050, however, are outside the scope of this review.

Note: Because of rounding, figure may not add to total shown.

## Apparent U.S. consumption and market shares

Table I-5 presents data on U.S. producers' U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

**Table I-5**  
**HFC blends: Apparent U.S. consumption and market shares, by source and period**

Quantity in short tons; value in 1,000 dollars; share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent

Source	Measure	2013	2014	2015	2020
U.S. producers	Quantity	***	***	***	***
China	Quantity	***	***	***	428
Nonsubject sources	Quantity	***	***	***	1,900
Total imports	Quantity	***	***	***	2,328
Apparent U.S. consumption	Quantity	***	***	***	***
U.S. producers	Value	***	***	***	***
China	Value	***	***	***	1,778
Nonsubject sources	Value	***	***	***	6,604
All import sources	Value	***	***	***	8,382
Apparent U.S. consumption	Value	***	***	***	***
U.S. producers	Share of quantity	***	***	***	***
China	Share of quantity	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***
All import sources	Share of quantity	***	***	***	***
U.S. producers	Share of value	***	***	***	***
China	Share of value	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***
All import sources	Share of value	***	***	***	***

Source: For the years 2013-15, data are compiled using data submitted in the Commission's original investigations. For the year 2020, U.S. producers' U.S. shipments are compiled using the responses to the Commission's notice of institution from the domestic interested parties (Arkema, Chemours, and Honeywell) and iGas and U.S. imports are compiled using official Commerce statistics under HTS statistical reporting number 3824.78.0020, accessed September 2, 2021.

Note: Official Commerce import data may be overstated as HTS statistical reporting number 3824.78.0020 may contain products outside the scope of this review. Commerce's antidumping duty order also references HTS statistical reporting number 3824.78.0050. 81 FR 55436, August 19, 2016. Products under statistical reporting number 3824.78.0050, however, are outside the scope of this review.

Note: For years 2013-15, apparent U.S. consumption is derived from U.S. shipments of imports, rather than U.S. imports and is based on questionnaire data.

Note: Because of rounding, figure may not add to total shown.

Note: For a discussion of data coverage, please see "U.S. producers" and "U.S. importers" sections.

## The industry in China

During the final phase of the original investigation, the Commission received foreign producer/exporter questionnaires from 16 firms, nine of which produced in-scope blends.<sup>66</sup> Estimates for the coverage of HFC blends in terms of total Chinese production or total Chinese exports was not provided in the original staff report.

Although the Commission did not receive responses from any foreign producer/exporter respondent interested parties in this five-year review, the domestic interested parties and iGas provided lists that collectively named 40 possible producers of HFC blends in China.<sup>67</sup>

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<sup>66</sup> Original confidential publication, p. VII-3.

<sup>67</sup> The domestic interested parties listed 39 companies as foreign producers and/or exporters of subject merchandise from China. Domestic interested parties' response to notice of institution, August 2, 2021, exh. 7. iGas listed eight companies as exporters of the subject merchandise in China. iGas response to notice of institution, August 2, 2021, p. 7. Only one of the companies listed by iGas appeared to not have also appeared in the domestic interested parties' list, thus 40 distinct companies in total were named.

<sup>68</sup> In its response to the notice of institution, iGas noted, "iGas is not a foreign producer or exporter of the subject merchandise but \*\*\* iGas will request that the company cooperate with the Commission's review." iGas response to notice of institution, August 2, 2021, p. 12. In its supplemental response, iGas added, "\*\*\*." iGas supplemental response to notice of institution, August 31, 2021, p. 4.

<sup>69</sup> In its response to the notice of institution, the domestic interested parties noted, "\*\*\*." Domestic interested parties' response to notice of institution, August 2, 2021, p. 32.

Table I-6 presents export quantity data for HS subheading 3824.78, mixtures containing perfluorocarbons or hydrofluorocarbons, but not CFCs or HCFCs, from China (by export destination in descending order of quantity for 2020).

**Table I-6**  
**Mixtures containing perfluorocarbons or hydrofluorocarbons, but not CFCs or HCFCs: Quantity of exports from China, by destination and period**

Quantity in short tons,

Destination market	2016	2017	2018	2019	2020
Korea	8,572	10,545	14,010	12,255	14,802
Mexico	4,798	9,336	10,344	10,022	11,215
India	5,851	7,002	7,398	10,050	10,916
Russia	6,595	6,885	8,355	8,061	8,822
Thailand	12,494	12,581	10,368	9,419	8,226
Japan	7,059	6,696	8,484	7,689	7,379
Brazil	5,120	6,616	6,124	7,784	7,011
Turkey	4,279	5,346	5,437	8,558	3,952
Taiwan	4,400	4,642	5,030	3,163	3,739
Singapore	2,438	2,805	3,422	3,064	3,134
All other markets	59,276	58,291	62,612	56,364	60,488
All markets	120,881	130,747	141,584	136,429	139,685

Note: Because of rounding, figures may not add to totals shown.

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 3824.78, accessed September 2, 2021. These data may be overstated as HS subheading 3824.78 may contain products outside the scope of this review.

The Chinese industry is still the largest in the world, with substantial unused capacity. Publicly available information on the industry in China is not readily available.<sup>70</sup> The number of potential Chinese HFC blend producers identified by both the domestic interested parties and respondent iGas is approximately 40. Additionally, based on GTA data, Chinese global export quantities of HFC blends since 2016 have been greater than those during the original investigation, suggesting that Chinese capacity has not declined since the original investigation.<sup>71</sup>

<sup>70</sup> The fluorocarbon market report from IHS Markit does not identify HFC blenders, only HFC component producers. IHS Markit, Chemical Economics Handbook, Fluorocarbons, pp. 104-106 (see domestic interested parties' response to notice of institution, August 2, 2021, exhibit 2).

<sup>71</sup> Domestic interested parties' response to notice of institution, August 2, 2021, table 3, p. 18. These GTA data are likely overstated since HTS subheading 3824.78 potentially contains products outside the scope of this review.

## Third-country trade actions

India initiated an antidumping investigation against HFC blends from China on September 30, 2020. All blends except R-407 and R-410 are excluded from this investigation.<sup>72</sup>

Argentina made an affirmative antidumping determination in February 2019 regarding mixtures containing tetrafluoroethane (R-134a) and pentafluoroethane (R-125) and mixtures containing difluoromethane (R-32) and pentafluoroethane (R-125) from China; however, it did not impose any duties.<sup>73</sup>

## The global market

The Netherlands and France are substantial nonsubject producers of HFC blends. The major producers in these countries are affiliated with the domestic interested parties (Arkema and Chemours).

The European Union (“EU”) F-Gas regulations are part of the European attempt to mitigate climate change and comply with the Kigali Amendment. These regulations, which limit the consumption and emissions of F-gases, reduce the size of the EU market for Chinese HFC blends.<sup>74</sup> The sale of F-gases is mandated to be reduced in steps to 20 percent of the 2014 sales level by 2030. Companies must have a quota to be able to sell bulk HFC gases in the EU market. Additionally, Under the F-Gas regulations, certain refrigeration and air conditioning equipment, based on the Global Warming Potential (“GWP”) of the refrigerant, are progressively banned from being sold in the EU. For example, commercial refrigeration and air conditioning units using refrigerants with a GWP of greater than 2,500 are banned from being sold as of 2020. The regulation will become stricter in 2022, when such units using refrigerants with a GWP greater than 150 will no longer be allowed to be sold. Emissions of F-gases are also to be reduced by 2030 to one-third of their 2014 levels.<sup>75</sup>

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<sup>72</sup> Anti-Dumping Investigation concerning imports of "Hydrofluorocarbon (HFC) Blends" from China PR. <https://www.dgtr.gov.in/anti-dumping-cases/anti-dumping-investigation-concerning-imports-hydrofluorocarbon-hfc-blends-china>, accessed September 2, 2021.

<sup>73</sup> WTO, Committee on Anti-Dumping Practices, Semi-Annual Report Under Article 16.4 of the Agreement: Argentina, G/ADP/N/350/ARG, March 19, 2021, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N350ARG.pdf&Open=True>

<sup>74</sup> “F-gases” refers to fluorinated greenhouse gases, including HFCs.

<sup>75</sup> Fluorinated greenhouse gases, [https://ec.europa.eu/clima/policies/f-gas\\_en](https://ec.europa.eu/clima/policies/f-gas_en), accessed September 20, 2021. HFC Cap and Phase Down, Guide to updated EU f-gas regulation (517/2014), July 2014, Linde GmbH, <https://www.linde->

(continued...)



Table I-7 presents global export data for HS subheading 3824.78, a category that includes the subject HFC blends and out-of-scope products, (by source in descending order of quantity for 2020).

**Table I-7**  
**Mixtures containing perfluorocarbons or hydrofluorocarbons, but not CFCs or HCFCs: Quantity of global exports by country and period**

Quantity in short tons

Exporting country	2016	2017	2018	2019	2020
China	120,881	130,747	141,584	136,429	139,685
Netherlands	23,776	27,129	25,716	15,701	18,467
United States	13,935	14,119	15,129	13,023	12,515
France	15,623	11,835	9,512	9,468	9,547
United Kingdom	2,939	3,621	4,143	3,232	3,446
India	1,308	3,363	5,268	3,890	3,358
Taiwan	3,197	2,774	2,640	1,854	2,496
Italy	1,723	2,169	1,982	1,734	1,967
Belgium	5,210	2,942	1,697	1,463	1,700
Spain	744	1,381	1,064	1,107	1,314
All other exporters	10,369	10,394	11,794	10,671	7,612
All exporters	199,704	210,475	220,531	198,572	202,106

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheadings 3824.78. These data may be overstated as HS subheadings 3824.78 may contain products outside the scope of this review.

Note: Because of rounding, figures may not add to total shown.

**APPENDIX A**  
**FEDERAL REGISTER NOTICES**



The Commission makes available notices relevant to its investigations and reviews on its website, [www.usitc.gov](http://www.usitc.gov). In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
86 FR 35070 July 1, 2021	<i>Initiation of Five-Year (Sunset) Reviews</i>	<a href="https://www.govinfo.gov/content/pkg/FR-2021-07-01/pdf/2021-14111.pdf">https://www.govinfo.gov/content/pkg/FR-2021-07-01/pdf/2021-14111.pdf</a>
86 FR 35131 July 1, 2021	<i>Hydrofluorocarbon Blends From China; Institution of a Five-Year Review</i>	<a href="https://www.govinfo.gov/content/pkg/FR-2021-07-01/pdf/2021-14018.pdf">https://www.govinfo.gov/content/pkg/FR-2021-07-01/pdf/2021-14018.pdf</a>

**APPENDIX B**  
**COMPANY-SPECIFIC DATA**



## RESPONSE CHECKLIST FOR U.S. PRODUCERS

**Table B-1**  
**HFC blends: Response checklist for U.S. producers (association members)**

Item	Arkema	Chemours	Honeywell	American HFC Coalition	iGas
Nature of operation	***	***	***	***	***
Statement of intent to participate	***	***	***	***	***
Statement of likely effects of revoking the order	***	***	***	***	***
U.S. producer list	***	***	***	***	***
U.S. importer list	***	***	***	***	***
Foreign producer list	***	***	***	***	***
List of 3-5 leading purchasers	***	***	***	***	***
List of sources for national/regional prices	***	***	***	***	***
Changes in supply/demand	***	***	***	***	***

Source: Domestic interested parties' response to the notice of institution, August 2, 2021 and iGas's response to the notice of institution, August 2, 2021.

**Table B-2**  
**HFC blends: Trade and financial data submitted by U.S. producers, 2020**

Quantity in short tons, value in 1,000 dollars, ratio in percent, Quantity in units, value in 1,000 dollars, ratio in percent

Item	Measure	Arkema	Chemours	Honeywell	Subtotal (American HFC Coalition)	iGas	Total
<b>Capacity</b>	Quantity	***	***	***	***	***	***
<b>Production</b>	Quantity	***	***	***	***	***	***
<b>Percent of total production reported</b>	Ratio	***	***	***	***	***	100.0
<b>Commercial U.S. shipments</b>	Quantity	***	***	***	***	***	***
<b>Commercial U.S. shipments:</b>	Value	***	***	***	***	***	***
<b>Internal consumption and company transfers</b>	Quantity	***	***	***	***	***	***
<b>Internal consumption and company transfers</b>	Value	***	***	***	***	***	***
<b>Net sales</b>	Value	***	***	***	***	***	***
<b>COGS</b>	Value	***	***	***	***	***	***
<b>Gross profit or (loss)</b>	Value	***	***	***	***	***	***
<b>SG&amp;A expenses</b>	Value	***	***	***	***	***	***
<b>Operating income or (loss)</b>	Value	***	***	***	***	***	***

Source: Domestic interested parties' response to the notice of institution, August 2, 2021, exh. 5 and. iGas's response to the notice of institution, August 2, 2021, pp. 9-10.

Note: The financial data are for fiscal year ended December 31, 2020.

Notes continued on next page.



**Table B-2 continued**  
**HFC blends: Trade and financial data submitted by U.S. producers, 2020**

Note: \*\*\*

Note: \*\*\*

## RESPONSE CHECKLIST FOR U.S. IMPORTERS FROM CHINA

**Table B-3**  
**HFC blends: Response checklist for U.S. importers from China**

Item	Scales N Stuff
<b>Nature of operation</b>	***
<b>Statement of intent to participate</b>	***
<b>Statement of likely effects of revoking the order</b>	***
<b>U.S. producer list</b>	***
<b>U.S. importer producer list</b>	***
<b>Foreign producer list</b>	***
<b>List of 3-5 leading purchasers</b>	***
<b>List of sources for national/regional prices</b>	***
<b>Changes in supply/demand</b>	***

Source: iGas's response to the notice of institution, August 2, 2021.

Note \*\*\*

**Table B-4**  
**HFC blends: Trade data submitted by U.S. importers from China, 2020**

Quantity in short tons, value in 1,000 dollars, ratio in percent

Item	Measure	Scales N Stuff
<b>Imports</b>	Quantity	***
<b>Imports</b>	Value	***
<b>Percent of total imports reported</b>	Ratio	100.0
<b>Commercial U.S. shipments</b>	Quantity	***
<b>Commercial U.S. shipments:</b>	Value	***
<b>Internal consumption and company transfers</b>	Quantity	***
<b>Internal consumption and company transfers</b>	Value	***

Source: iGas's response to the notice of institution, August 2, 2021, p. 11.

Note: \*\*\*

**APPENDIX C**  
**SUMMARY DATA COMPILED IN PRIOR PROCEEDINGS**



**Table C-2b**

**HFC: Summary data concerning the U.S. markets (separate domestic like products for blends and components co-extensive with Commerce's scope: blends), 2013-15**

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**APPENDIX D**  
**PURCHASER QUESTIONNAIRE RESPONSES**





As part of their response to the notice of institution, interested parties were asked to provide a list of three to five leading purchasers in the U.S. market for the domestic like product. Responses were received from the domestic interested parties and iGas and they named the following eleven firms as top purchasers of hydrofluorocarbon blends: \*\*\*) provided responses, which are presented below.

1. Have there been any significant changes in the supply and demand conditions for hydrofluorocarbon blends that have occurred in the United States or in the market for hydrofluorocarbon blends in China since January 1, 2016?

<b>Purchaser</b>	<b>Yes / No</b>	<b>Changes that have occurred</b>
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

2. Do you anticipate any significant changes in the supply and demand conditions for hydrofluorocarbon blends in the United States or in the market for hydrofluorocarbon blends in China within a reasonably foreseeable time?

<b>Purchaser</b>	<b>Yes / No</b>	<b>Changes that have occurred</b>
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Note: \*\*\*.The entirety of \*\*\* is contained in EDIS document 751166.