# Utility Scale Wind Towers from China and Vietnam

Investigation Nos. 701-TA-486 and 731-TA-1195-1196 (Second Review)



Washington, DC 20436

# **U.S. International Trade Commission**

### COMMISSIONERS

Amy A. Karpel, Chair David S. Johanson Rhonda K. Schmidtlein Jason E. Kearns

Catherine DeFilippo *Director of Operations* 

Staff assigned

Julie Duffy, Investigator Karl Tsuji, Industry Analyst James Horne, Economist Anthony Famiglietti, Attorney Calvin Chang, Supervisory Investigator

Address all communications to Secretary to the Commission United States International Trade Commission Washington, DC 20436

# **U.S. International Trade Commission**

Washington, DC 20436 www.usitc.gov

# Utility Scale Wind Towers from China and Vietnam

Investigation Nos. 701-TA-486 and 731-TA-1195-1196 (Second Review)

Publication 5553



October 2024

# CONTENTS

# Page

Determinations	1
Views of the Commission	3
Information obtained in these reviews	1.1
Packground	<b>L-I</b>
Decreases to the Commission's notice of institution	ב-ו
	۲-۱
Individual responses	1-2
Party comments on adequacy	1-2
The original investigations	1-3
The first five-year reviews	1-4
Previous and related investigations	1-5
Commerce's five-year reviews	I-6
The product	I-7
Commerce's scope	I-7
U.S. tariff treatment	I-8
Description and uses	I-9
Manufacturing process	I-17
The industry in the United States	I-23
U.S. producers	I-23
Recent developments	I-24
U.S. producers' trade and financial data	I-27
Definitions of the domestic like product and domestic industry	I-29
U.S. importers	I-30
U.S. imports	I-30
Cumulation considerations	I-32
Apparent U.S. consumption and market shares	I-32
The industry in China	I-34
Producers in China	I-34
Recent developments	I-35
Exports	I-37
The industry in Vietnam	I-39
Producers in Vietnam	I-39
Recent developments	I-40
Exports	I-41

Third-country trade actions	. I-42
The global market	. <b>I-45</b>

## Appendixes

Α.	Federal Register notices	A-1
В.	Company-specific data	B-1
C.	Summary data compiled in prior proceedings	C-1
D.	Purchaser questionnaire responses	D-1

Note: Information that would reveal confidential operations of individual concerns may not be published.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 Nos. 701-TA-486 and 731-TA-1195-1196 (Second Review)

Utility Scale Wind Towers from China and Vietnam

#### DETERMINATIONS

On the basis of the record<sup>1</sup> developed in the subject five-year reviews, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the countervailing duty order on utility scale wind towers from China and antidumping duty orders on utility scale wind towers from China and Vietnam would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

#### BACKGROUND

The Commission instituted these reviews on April 1, 2024 (89 FR 22445) and determined on July 5, 2024 that it would conduct expedited reviews (89 FR 73723, September 11, 2024).

<sup>&</sup>lt;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 these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the countervailing duty order on utility scale wind towers from China and the antidumping duty orders on utility scale wind towers from China and Vietnam 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

Following antidumping and countervailing duty petitions filed on December 29, 2011, by the Wind Tower Trade Coalition (the "Coalition" or "WTTC") on behalf of its members,<sup>1</sup> which consisted of domestic producers of wind towers, the Commission determined in February 2013 that an industry in the United States was materially injured or threatened with material injury by reason of imports of wind towers from China and Vietnam that the U.S. Department of Commerce ("Commerce") had determined were sold at less than fair value and subsidized by the government of China.<sup>2</sup> Commerce issued antidumping and countervailing duty orders on February 15, 2013.<sup>3</sup> Following litigation, Commerce published a notice on March 29, 2017, that

<sup>&</sup>lt;sup>1</sup> In the original investigations, the Coalition consisted of Broadwind Towers, Inc. of Manitowoc, Wisconsin; DMI Industries of Fargo, North Dakota; Katana Summit LLC of Columbus, Nebraska; and Trinity Structural Towers, Inc. of Dallas, Texas. *See Utility Scale Wind Towers from China and Vietnam*, Inv. Nos. 701-TA-486 and 731-TA-1195-1196 (Final), USITC Pub. 4372 (Feb. 2013) ("*Original Determinations*") at 1.

<sup>&</sup>lt;sup>2</sup> Original Determinations at 1. Commissioners Williamson and Aranoff determined that an industry in the United States was materially injured by reason of subject imports. Commissioner Pinkert determined that an industry in the United States was threatened with material injury by reason of subject imports. Commissioners Pearson, Johanson, and Broadbent reached negative determinations. *Id.* at 1 nn. 2, 3.

<sup>&</sup>lt;sup>3</sup> Utility Scale Wind Towers from the People's Republic of China: Antidumping Duty Order, 78 Fed. Reg. 11146 (Dep't of Comm. Feb. 15, 2013); Utility Scale Wind Towers from the Socialist Republic of (Continued...)

excluded wind towers produced and exported by CS Wind from the antidumping duty order regarding subject imports from Vietnam.<sup>4</sup>

*First Five-Year Reviews*. In the first five-year reviews of the orders, the Commission conducted full reviews and on May 2, 2019, determined that revocation of the countervailing duty order on wind towers from China, and the antidumping duty orders on wind towers from China and Vietnam, would be likely to lead to continuation or recurrence of material injury to a domestic industry.<sup>5</sup> Effective May 17, 2019, Commerce issued notices of continuation of the countervailing duty orders on wind towers from China and the antidumping duty orders on wind towers on wind towers from China and the antidumping duty orders on wind towers from China and the antidumping duty orders on wind towers from China and the antidumping duty orders on wind towers from China and the antidumping duty orders on wind towers from China and the antidumping duty orders on wind towers from China and Vietnam.<sup>6</sup>

Siemens Energy, Inc. ("Siemens"), an importer of wind towers, appealed the Commission's affirmative determinations to the U.S. Court of International Trade; the Court sustained the determinations as supported by substantial evidence and otherwise in accordance with law. *Siemens Energy, Inc. v. United States,* 992 F. Supp. 2d 315 (Ct. Int'l Trade 2014). On appeal, the U.S. Court of Appeals for the Federal Circuit rejected Siemens' claims and affirmed the Court of International Trade's judgment. *Siemens Energy, Inc. v. United States,* 806 F.3d 1367 (Fed. Cir. 2015).

<sup>5</sup> Utility Scale Wind Towers from China and Vietnam, Inv. Nos. 701-TA-486 and 731-TA-1195-1196 (Review), USITC Pub. 4888 (Apr. 2019) ("First Reviews"). Commissioner Johanson determined that revocation of the antidumping and countervailing duty orders on wind towers 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, and that revocation of the antidumping duty order on wind towers from Vietnam would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. *Id.* at 33-43 (Separate and Dissenting Views of Chairman David S. Johanson).

<sup>6</sup> Utility Scale Wind Towers From the People's Republic of China and the Socialist Republic of Vietnam: Continuation of Antidumping Duty Orders and Countervailing Duty Order, 84. Fed. Reg. 22442 (Dep't of Commerce May 17, 2019).

*Vietnam: Amended Final Determination of Sales at Less Than Fair Value and Antidumping Duty Order,* 78 Fed. Reg. 11150 (Dep't of Comm. Feb. 15, 2013); *Utility Scale Wind Towers from the People's Republic of China: Countervailing Duty Order,* 78 Fed. Reg. 11152 (Dep't of Comm. Feb. 15, 2013).

<sup>&</sup>lt;sup>4</sup> Utility Scale Wind Towers from the Socialist Republic of Vietnam: Notice of Court Decision Not in Harmony With the Final Determination of Less Than Fair Value Investigation and Notice of Amended Final Determination of Investigation, 82 Fed. Reg. 15493 (Dep't of Commerce Mar. 29, 2017).

*Current Reviews*. On April 1, 2024, the Commission instituted these second five-year reviews.<sup>7</sup> The Commission received a response to the notice of institution from the Coalition, a trade association whose individual members, Arcosa Wind Towers, Inc. ("Arcosa") and Broadwind Heavy Fabrications, Inc ("Broadwind"), are U.S. producers of wind towers.<sup>8</sup> No respondent interested party responded to the notice of institution or participated in these reviews. On July 5, 2024, the Commission found that the domestic interested party group response was adequate and that the respondent interested party group responses were inadequate.<sup>9</sup> Finding no other circumstances that would warrant conducting full reviews, the Commission determined that it would conduct expedited reviews of the antidumping and countervailing duty orders.<sup>10</sup> The Coalition submitted final comments pursuant to 19 C.F.R. § 207.62(d)(1), arguing that the Commission should reach affirmative determinations.<sup>11</sup>

In these reviews, U.S. industry data are based on information in the response to the notice of institution provided by the Coalition, whose members are estimated to have collectively accounted for \*\*\* percent of U.S. production of wind towers in 2023, as well as publicly available information compiled by the Commission.<sup>12</sup> U.S. import data are based on

<sup>&</sup>lt;sup>7</sup> Utility Scale Wind Towers from China and Vietnam; Institution of Five-Year Reviews, 89 Fed. Reg. 22445 (Apr. 1., 2024) ("Notice of Institution").

<sup>&</sup>lt;sup>8</sup> Confidential Domestic Response to Notice of Institution, EDIS Doc. 820168 (May 1, 2024) ("Domestic Response") at 2.

<sup>&</sup>lt;sup>9</sup> Explanation of Commission Determination on Adequacy, EDIS Doc. 826113 (July 16, 2024) ("Explanation on Adequacy").

<sup>&</sup>lt;sup>10</sup> Explanation on Adequacy. Commissioner Johanson determined that full reviews were warranted. *See id.* at n. 1.

<sup>&</sup>lt;sup>11</sup> Coalition's Final Comments, EDIS Doc. 832683 (Sep. 19, 2024).

<sup>&</sup>lt;sup>12</sup> Confidential Staff Report, INV-WW-069, EDIS Doc. 824276 (June 24, 2024) ("CR"), *Utility Scale Wind Towers from China and Vietnam*, Inv. Nos. 701-TA-486 and 731-TA-1195-1196 (Second Review), USITC. Pub. 5553(Oct. 2024) ("PR") at Table I-2. In its response to the notice of institution, the Coalition (Continued...)

Commerce's official import statistics and on information from the original investigations and first full five-year reviews.<sup>13</sup> Foreign industry data and related information are based on information from the original investigations and first full five-year reviews, information submitted by the Coalition in its response to the notice of institution, and publicly available information compiled by the Commission.<sup>14</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>15</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>16</sup> The Commission's practice in five-year reviews is to examine the domestic like product definition from the original

provided data from \*\*\* but those data are not included in the Coalition's estimated share of total U.S. production of wind towers in 2023. CR/PR at I-2. The Coalition estimates that \*\*\* separately accounted for \*\*\* percent of U.S. production of wind towers in 2023. Domestic Response at Exhibit 1.

<sup>&</sup>lt;sup>13</sup> CR/PR at Table I-6 and Table I-7. Import data are compiled from official Commerce statistics for HTS statistical reporting number 7308.20.0020, which may contain products outside the scope of these reviews. Thus, import data may be overstated.

<sup>&</sup>lt;sup>14</sup> Adequacy phase questionnaires were sent to four firms identified by the Coalition as top U.S. purchasers of wind towers, but no responses were received. CR/PR at D-3.

<sup>&</sup>lt;sup>15</sup> 19 U.S.C. § 1677(4)(A).

<sup>&</sup>lt;sup>16</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. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *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).

investigation and consider whether the record indicates any reason to revisit the prior

findings.17

Commerce has defined the imported merchandise within the scope of the orders under

review as follows:

The merchandise covered by these orders is certain wind towers, whether or not tapered, and sections thereof. Certain wind towers are designed to support the nacelle and rotor blades in a wind turbine with a minimum rated electrical power generation capacity in excess of 100 kilowatts and with a minimum height of 50 meters measured from the base of the tower to the bottom of the nacelle (i.e., where the top of the tower and nacelle are joined) when fully assembled.

A wind tower section consists of, at a minimum, multiple steel plates rolled into cylindrical or conical shapes and welded together (or otherwise attached) to form a steel shell, regardless of coating, end-finish, painting, treatment, or method of manufacture, and with or without flanges, doors, or internal or external components (e.g., flooring/decking, ladders, lifts, electrical buss boxes, electrical cabling, conduit, cable harness for nacelle generator, interior lighting, tool and storage lockers) attached to the wind tower section. Several wind tower sections are normally required to form a completed wind tower.

Wind towers and sections thereof are included within the scope whether or not they are joined with nonsubject merchandise, such as nacelles or rotor blades, and whether or not they have internal or external components attached to the subject merchandise. Specifically excluded from the scope are nacelles and rotor blades, regardless of whether they are attached to the wind tower. Also

<sup>&</sup>lt;sup>17</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).

excluded are any internal or external components which are not attached to the wind towers or sections thereof.<sup>18</sup>

Wind towers are large tubular steel towers that are part of wind turbines.<sup>19</sup> Wind turbines convert the mechanical energy of wind to electrical energy and are comprised of three main components – the nacelle, rotor, and tower.<sup>20</sup> The nacelle houses the wind turbine's main power generation components (the gearbox, generator, and other components), while the rotor typically consists of three blades and the hub. The nacelle sits on top of the wind tower.<sup>21</sup> Wind towers within the scope definition are 50 meters or more in height and designed to support the nacelle and rotor blades in a wind turbine with a minimum rated electrical power generation capacity in excess of 100 kilowatts ("kW").<sup>22</sup> Utility-scale wind turbines have generating capacities that exceed 1 megawatt ("MW," equivalent to 1,000 kW).<sup>23</sup> Utility-scale wind turbine installed in the United States increasing from 2.43 MW in 2018 to 3.23 MW in 2022.<sup>24</sup> Wind turbines can be installed individually or as part a of larger wind project such as a wind farm.

<sup>&</sup>lt;sup>18</sup> Utility Scale Wind Towers From the People's Republic of China and the Socialist Republic of Vietnam: Final Results of Expedited Second Sunset Review of Antidumping Duty Orders, 89 Fed. Reg. 65585 (Dep't of Comm. Aug. 12, 2024) and the accompanying Issues and Decision Memorandum for the Final Results of the Expedited Second Sunset Reviews of the Antidumping Duty Orders on Utility Scale Wind Towers from the People's Republic of China and the Socialist Republic of Vietnam EDIS Doc. 833074, at 2-3 ("Commerce AD I&D Memo"); Utility Scale Wind Towers From the People's Republic of China: Final Results of Expedited Second Sunset Review of the Countervailing Duty Order, 89 Fed. Reg. 60603 (Dep't of Comm. July 26, 2024) and the accompanying Decision Memorandum for the Final Results of Expedited Second Sunset Review of Utility Scale Wind Towers from the People's Republic of China, EDIS Doc. 833073, at 2-3 ("Commerce CVD I&D Memo").

<sup>&</sup>lt;sup>19</sup> CR/PR at I-9.

<sup>&</sup>lt;sup>20</sup> CR/PR at I-9.

<sup>&</sup>lt;sup>21</sup> CR/PR at I-9.

<sup>&</sup>lt;sup>22</sup> CR/PR at I-9.

<sup>&</sup>lt;sup>23</sup> CR/PR at I-10.

<sup>&</sup>lt;sup>24</sup> CR/PR at I-10.

The average height of wind towers installed in the United States has increased from 80.5 meters in 2013 to 98.1 meters in 2022, and taller towers offer better performance.<sup>25</sup> Wind towers can be installed in both on-shore and offshore wind projects.<sup>26</sup> Offshore wind towers are designed for the harsh conditions of marine environments, and are generally larger than onshore wind towers.<sup>27</sup> Offshore wind towers are commonly installed on tubular steel monopole foundations that are driven into the seafloor, but may also be installed on floating platforms that are moored to the seafloor.<sup>28</sup>

*Original Investigations.* In the original investigations, the Commission defined a single domestic like product consisting of wind towers, coextensive with Commerce's scope. The Commission found that differences between wind towers produced for different original equipment manufacturers ("OEM") (such as size, steel standards, welding standards, and components) were minor and did not constitute clear dividing lines.<sup>29</sup>

*First Reviews*. The Commission found that there was no new information in the record indicating that the pertinent characteristics and uses of wind towers had changed since the original investigations, and noted that no party had argued for a different definition of the domestic like product than that employed in the original investigations.<sup>30</sup> Thus, the

- <sup>27</sup> CR/PR at I-15.
- <sup>28</sup> CR/PR at I-16.

<sup>&</sup>lt;sup>25</sup> CR/PR at I-13.

<sup>&</sup>lt;sup>26</sup> CR/PR at I-14.

<sup>&</sup>lt;sup>29</sup> Original Determinations, USITC Pub. 4372 at 5-6.

<sup>&</sup>lt;sup>30</sup> *First Reviews*, USITC Pub. 4888 at 7.

Commission defined a single domestic like product consisting of wind towers, coextensive with Commerce's scope.<sup>31</sup>

In the current reviews, the record does not contain any new information suggesting that the pertinent product characteristics and uses of wind towers have changed since the original investigations or first five-year reviews so as to warrant revisiting the Commission's domestic like product definition. The Coalition agrees with the Commission's definition of the domestic like product from the prior proceedings.<sup>32</sup> Consequently, we again define a single domestic like product consisting of wind towers, coextensive with Commerce's scope.

#### B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."<sup>33</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 tollproduced, 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

<sup>&</sup>lt;sup>31</sup> *First Reviews*, USITC Pub. 4888 at 7.

<sup>&</sup>lt;sup>32</sup> Domestic Response at 24.

<sup>&</sup>lt;sup>33</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.

domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.<sup>34</sup> Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.<sup>35</sup>

Prior Proceedings. In the original investigations, the Commission did not exclude any

domestic producers under the related parties provision. Accordingly, the Commission defined

the domestic industry to include all U.S. producers of wind towers.<sup>36</sup>

In the first five-year reviews, domestic producer \*\*\* was subject to possible exclusion

pursuant to the related parties provision as an importer of subject merchandise during the

period of review.<sup>37</sup> The Commission determined that appropriate circumstances did not exist to

exclude \*\*\* from the domestic industry, because it imported subject merchandise only in the

\*\*\* of the period of review and its

<sup>&</sup>lt;sup>34</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>&</sup>lt;sup>35</sup> The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

<sup>(1)</sup> the percentage of domestic production attributable to the importing producer;

<sup>(2)</sup> 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);

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

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

<sup>(5)</sup> 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), *aff'd*, 879 F.3d 1377 (Fed. Cir. 2018); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

<sup>&</sup>lt;sup>36</sup> One domestic producer was subject to possible exclusion under the related parties provision because it imported subject merchandise during the period of investigation. The Commission concluded that appropriate circumstances did not exist to exclude the producer from the domestic industry, finding that its principal interest was in domestic production. *Original Determinations*, USITC Pub. 4372 at 6-8.

<sup>&</sup>lt;sup>37</sup> *First Reviews Confidential Opinion*, EDIS Doc. 820249, at 11.

increasing production and \*\*\* indicated that its primary interest was in domestic production.<sup>38</sup> Thus, the Commission defined the domestic industry to include all U.S. producers of wind towers.<sup>39</sup>

*Current Reviews.* In these second five-year reviews, the Coalition agrees with the Commission's definition of the domestic industry in the original investigations and prior reviews.<sup>40</sup> According to information submitted by the Coalition, CS Wind America and Vestas qualify for possible exclusion under the related parties provision because they imported subject merchandise during the period of review.<sup>41</sup> Because neither producer responded to the notice of institution, however, the record contains no information on either the volume of their imports of subject merchandise or their domestic production operations. Consequently, there is insufficient information on the record to determine whether appropriate circumstances exist to exclude either producer and no data on their domestic production operations that could be excluded from domestic industry data. Therefore, consistent with our definition of the domestic like product, we define the domestic industry as all domestic producers of wind towers.

<sup>&</sup>lt;sup>38</sup> First Reviews Confidential Opinion at 11. The Commission noted that during the period of review, \*\*\*. *Id.* at 12.

<sup>&</sup>lt;sup>39</sup> First Reviews Confidential Opinion at 11.

<sup>&</sup>lt;sup>40</sup> Domestic Response at 24.

<sup>&</sup>lt;sup>41</sup> Domestic Response at Attachment 1. CS Wind America is also the affiliate of a South Korean parent company with production facilities in China and Vietnam. *Id.* at 23-24; CR/PR at Table I-4. However, imports from CS Wind in Vietnam are excluded from the order, CR/PR at Table I-6, and there is no information on the record concerning whether CS Wind's production facility in China exported wind towers to the United States during the period of review, as would be necessary for CS Wind America to qualify as a related party by virtue of the affiliation.

## III. Cumulation

#### A. Legal Standard

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

the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.<sup>42</sup>

Cumulation therefore is discretionary in five-year reviews, unlike original investigations,

which are governed by section 771(7)(G)(i) of the Tariff Act.<sup>43</sup> The Commission may exercise its

discretion to cumulate, however, only if the reviews are initiated on the same day, the

Commission determines that the subject imports are likely to compete with each other and the

domestic like product in the U.S. market, and imports from each such subject country are not

likely to have no discernible adverse impact on the domestic industry in the event of

revocation. Our focus in five-year reviews is not only on present conditions of competition, but

also on likely conditions of competition in the reasonably foreseeable future.

<sup>&</sup>lt;sup>42</sup> 19 U.S.C. § 1675a(a)(7).

<sup>&</sup>lt;sup>43</sup> 19 U.S.C. § 1677(7)(G)(i); *see also, e.g., Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

#### **B.** Prior Proceedings and Arguments of the Parties

In the original investigations, all Commissioners cumulated imports from China and Vietnam for purposes of their material injury analysis.<sup>44</sup> The Commission found that the record indicated a reasonable degree of fungibility among the subject imports and between the subject imports and the domestic like product, similar channels of distribution with a majority of shipments to OEMs, geographic overlap in multiple regions of the United States, and the simultaneous presence of subject imports in the U.S. market.<sup>45</sup>

In the first five-year reviews, the Commission exercised its discretion to cumulate subject imports from China and Vietnam.<sup>46</sup> The Commission found that revocation of the orders on subject imports from China and Vietnam, respectively, would not likely have no discernible adverse impact on the domestic industry.<sup>47</sup> In considering the likelihood of a reasonable overlap of competition, the Commission found that wind towers were fungible, regardless of source.<sup>48</sup> The Commission also found that the domestic like product and subject imports from China were sold through the same channels of distribution, served overlapping geographic areas, and were simultaneously present in the U.S. market. Furthermore, although subject imports from Vietnam were absent from the U.S. market in the period of review, there was nothing in the record indicating that upon revocation, subject imports from Vietnam would

<sup>&</sup>lt;sup>44</sup> Original Determinations, USITC Pub. 4372 at 8-11. The four Commissioners who reached the issue also cumulated subject imports from China and Vietnam for threat analysis. *See id.* at 31-32 (views of Commissioner Pinkert), 47 (dissenting views).

<sup>&</sup>lt;sup>45</sup> Original Determinations, USITC Pub. 4372 at 8-11.

<sup>&</sup>lt;sup>46</sup> *First Reviews*, USITC Pub. 4888 at 14. Commissioner Johanson declined to exercise his discretion to cumulate subject imports from China and Vietnam for reaching the determinations with respect to the orders from each country. *Id*. at 33-35.

<sup>&</sup>lt;sup>47</sup> *First Reviews*, USITC Pub. 4888 at 10-12.

<sup>&</sup>lt;sup>48</sup> *First Reviews*, USITC Pub. 4888 at 14.

enter and be sold in the United States under different conditions than those observed in the original investigations.<sup>49</sup> Consequently, the Commission determined that there was likely to be a reasonable overlap of competition between and among subject imports and the domestic like product after revocation. Finding no differences in the likely conditions of competition that would apply to subject imports from China and Vietnam after revocation, the Commission exercised its discretion to analyze subject imports from China and Vietnam on a cumulated basis.<sup>50</sup>

In the current reviews, the Coalition argues that the Commission should again cumulate subject imports from China and Vietnam. It asserts that subject producers in both countries are likely to export a significant volume of subject imports that would have significant adverse effects on prices of the domestic like product if the orders were revoked, such that subject imports from each country would not have no discernible adverse impact.<sup>51</sup> The Coalition also argues that there has been no change in the other factors that led the Commission to cumulate subject imports from China and Vietnam in the original investigations and prior reviews.<sup>52</sup>

#### C. Analysis

The statutory threshold for cumulation is satisfied in these reviews, because the reviews were initiated on the same day: April 1, 2024.<sup>53</sup>

<sup>&</sup>lt;sup>49</sup> *First Reviews*, USITC Pub. 4888 at 14.

<sup>&</sup>lt;sup>50</sup> *First Reviews,* USITC Pub. 4888 at 14-15.

<sup>&</sup>lt;sup>51</sup> Domestic Response at 5-6.

<sup>&</sup>lt;sup>52</sup> Domestic Response at 6-7.

<sup>&</sup>lt;sup>53</sup> Notice of Institution.

In addition, we consider the following issues in deciding whether to exercise our discretion to cumulate subject imports: (1) whether imports from any of the subject countries are precluded from cumulation because they are likely to have no discernible adverse impact on the domestic industry; (2) whether there is a likelihood of a reasonable overlap of competition among subject imports and the domestic like product; and (3) whether subject imports are likely to compete in the U.S. market under different conditions of competition.

#### 1. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.<sup>54</sup> Neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.<sup>55</sup> With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

*China.* In the original investigations, U.S. shipments of subject imports from China were \*\*\* units in 2009, \*\*\* units in 2010, and \*\*\* units in 2011; they were \*\*\* units in interim

<sup>&</sup>lt;sup>54</sup> 19 U.S.C. § 1675a(a)(7).

<sup>&</sup>lt;sup>55</sup> SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

January through June ("interim") 2011 and \*\*\* units in interim 2012.<sup>56</sup> The share of the U.S. market held by subject imports from China increased overall during the period of investigation. They accounted for \*\*\* percent of apparent U.S. consumption in 2009, \*\*\* percent in 2010, \*\*\* percent in 2011, \*\*\* percent in interim 2011 and \*\*\* percent in interim 2012.<sup>57</sup> The Commission received questionnaire responses from five producers of wind towers in China, which estimated that they accounted for \*\*\* percent of total exports of wind towers from China to the United States in 2011.<sup>58</sup> Responding producers in China reported production capacity of 2,475 units in 2009, 2,732 units in 2010, 3,455 units in 2011, 1,637 units in interim 2011, and 1,777 units in interim 2012.<sup>59</sup> Based on publicly available data, total production capacity in China exceeded 16,000 wind towers in January 2012.<sup>60</sup> Responding foreign producers in China reported production of 1,888 units in 2009, 1,808 units in 2010, 2,563 units in 2011, 1,169 units in interim 2011, and 1,478 units in interim 2012.<sup>61</sup> Exports to the United States accounted for the largest share of the responding producers' total shipments throughout the period of investigation. They accounted for \*\*\* percent of shipments in 2009, \*\*\* percent in 2010, \*\*\* percent in 2011, \*\*\* percent in interim 2011, and \*\*\* percent in interim 2012.<sup>62</sup>

<sup>&</sup>lt;sup>56</sup> Original Determinations, USITC Pub. 4372, Confidential Report (INV-LL-002) at Table C-1 (EDIS Doc. 820240) ("Original Investigations Confidential Report").

<sup>&</sup>lt;sup>57</sup> Original Investigations Confidential Report at Table C-1.

<sup>&</sup>lt;sup>58</sup> Original Determinations, USITC Pub. 4372, Confidential Views at 4 (EDIS Doc. 820245).

<sup>&</sup>lt;sup>59</sup> Original Determinations, USITC Pub. 4372 at Table VII-2.

<sup>&</sup>lt;sup>60</sup> Original Determinations, USITC Pub. 4372 at Table VII-1.

<sup>&</sup>lt;sup>61</sup> Original Determinations, USITC Pub. 4372 at Table VII-2.

<sup>&</sup>lt;sup>62</sup> Original Investigations Confidential Report at Table VII-2.

In the first five-year reviews, no producer in China responded to the Commission's questionnaires. Available information indicated that production capacity for wind towers in China, for firms whose production or production capacity could be identified, ranged between 16,220 and 16,770 units annually in the first quarter of 2019.<sup>63</sup> Global Trade Atlas ("GTA") data, which may have included out-of-scope products, indicated that the United States was by far the largest export market for wind towers from China in 2012, although exports of wind towers from China to the United States subsequently declined substantially.<sup>64</sup>

In these reviews, subject imports from China decreased irregularly overall, declining from 16 units in 2019 to 3 units in 2020, increasing to 6 units in 2021 and 11 units in 2022, and declining to 2 units in 2023, accounting for \*\*\* percent of apparent U.S. consumption that year.<sup>65</sup>

The record contains limited information concerning the wind tower industry in China because no producer in China responded to the notice of institution. The Coalition provided a list of 48 possible producers of wind towers in China,<sup>66</sup> and assert that subject producers in China maintain large and available capacity to significantly increase wind tower exports to the United States after revocation. The information available also indicates that several new

<sup>&</sup>lt;sup>63</sup> *First Reviews,* USITC Pub. 4888 at 11.

<sup>&</sup>lt;sup>64</sup> *First Reviews,* USITC Pub. 4888 at 11. In 2017, the largest export markets for wind towers from China were Pakistan and Germany. *Id.* at 11 n.55.

<sup>&</sup>lt;sup>65</sup> CR/PR at Table I-6; Table I-7. These data are based on official Commerce statistics for HTS statistical reporting number 7308.20.0020, and may be overstated because the HTS reporting number may contain products outside the scope of these reviews. Quantity data for HTS statistical number 7308.20.0020 is presented in kilograms and has been converted into number of towers using the conversion rate from the first five-year reviews: 1 tower equals 132,449 kilograms. CR/PR at I-31.

<sup>&</sup>lt;sup>66</sup> CR/PR at I-34; Domestic Response at Exhibit 1.

Chinese producers entered the wind tower industry during the period of review, thereby expanding capacity in China.<sup>67</sup> Furthermore, according to information submitted by the Coalition, China is the world's largest wind tower producer, accounting for 60 percent of global production capacity in 2023.<sup>68</sup>

The information available also indicates that the wind tower industry in China is a large exporter of wind towers. According to GTA data, the value of exports from China of iron and steel towers and lattice masts under HS subheading 7308.20, a category that includes wind towers and out-of-scope products, increased irregularly during the period of review, from \$425 million in 2019 to \$502 million in 2023.<sup>69</sup> The GTA data indicate that China was the world's second leading exporter of iron and steel towers and lattice masts in 2023, accounting for 12.6 percent of global exports under HS subheading 7308.20.<sup>70</sup>

<sup>&</sup>lt;sup>67</sup> CR/PR at Table I-8. In December 2019, Tianshun Wind Energy (Suzhou) Co. Ltd. ("Titan Wind") commenced production of wind towers in Shandong Province. In March 2021, Titan Wind commenced operations at its tower-section facility in Inner Mongolia Autonomous Region, and shipped its first tower sections 10 days later. The facility will have a projected annual production of 120,000 metric tons (132,277 short tons). In January 2022, Titan Wind commenced operations at its new tower sections facility in Henan Province. In 2020, Dajin Heavy Industry Co. Ltd. ("Dajin"), commenced operations at its two new on-shore tower facilities in Inner Mongolia and Hebei Province. In 2022, Dajin commenced operations of an offshore-monopiles and on-shore towers facility in Guangdong Province. In 2023, Dajin commenced operations at facility in Liaoning Province that produces off-shore towers, monopoles, transition pieces and flowing foundations for wind towers. That same year, Dajin also completed a coating workshop in Shandong Province for the production of wind towers. *Id*.

<sup>&</sup>lt;sup>68</sup> Domestic Response at 9 (citing Andrew Hayley, *Explainer: China's dominance in wind turbine manufacturing*, REUTERS (Apr. 10, 2024), https://www.reuters.com/business/energy/chinas-dominance-wind-turbine-manufacturing-2024-04-

<sup>10/#:~:</sup>text=China%20has%20by%20far%20the,19%25%20and%209%25%20respectively).

<sup>&</sup>lt;sup>69</sup> CR/PR at Table I-13.

<sup>&</sup>lt;sup>70</sup> CR/PR at Table I-13. Turkey was the world's leading exporter in 2023, accounting for 18.6 percent of global exports by value under HS subheading 7308.20. *Id.* In 2023, the largest export markets for iron and steel towers and lattice masts from China were the Philippines, Malaysia, and Japan. CR/PR at I-37 and Table I-9.

In the original investigations and first reviews, the Commission did not collect quarterly pricing data for imports from either subject country because of the made-to order nature of wind towers and instead obtained purchaser pricing data. The purchaser pricing data collected in the prior proceedings indicated that subject imports generally had lower prices that domestic wind towers on an f.o.b. basis, but the prices of subject imports were higher when compared on the basis of total delivered cost to the purchaser, which was the purchasers' primary concern.<sup>71</sup> No product-specific pricing data concerning wind towers from China were obtained in these expedited reviews.

In light of the foregoing information available in these reviews, including the significant and increasing volume of subject imports from China in the original investigations, the continued presence of subject imports from China in the U.S. market while under the disciplining effect of the orders, and the size and volume of exports of the Chinese industry producing wind towers, we find that subject imports from China would not likely have no discernible adverse impact on the domestic industry if the antidumping and countervailing duty orders covering these imports were revoked.

*Vietnam.* In the original investigations, the Commission received questionnaire responses from two producers of wind towers in Vietnam, CS Wind (Vietnam) and UBI Tower Sole Member Company Ltd. ("UBI"), which together reportedly accounted for the majority of wind tower production in Vietnam. \*\*\* exports of wind towers from Vietnam to the United States in 2011 were attributed to CS Wind (Vietnam).<sup>72</sup> UBI started producing in 2010 and had

<sup>&</sup>lt;sup>71</sup> Original Determinations, USITC Pub. 4372 at 23; First Reviews, USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>72</sup> Original Investigations Confidential Report at VII-11.

\*\*\* towers, \*\*\* of which were exported to the United States, during the period of investigation. UBI projected, however, \*\*\*.<sup>73</sup> U.S. shipments of subject imports from Vietnam were \*\*\* units in 2009, \*\*\* units in 2010, \*\*\* units in 2011, \*\*\* units in interim 2011, and \*\*\* units in interim 2012.<sup>74</sup> The share of apparent U.S. consumption held by subject imports from Vietnam was \*\*\* percent in 2009, \*\*\* percent in 2010, and \*\*\* percent in 2011; it was \*\*\* percent in interim 2011 and \*\*\* percent in interim 2012.<sup>75</sup>

In the first five-year reviews, no wind tower producer in Vietnam responded to the Commission's questionnaire. CS Wind (Vietnam) was no longer subject to the order and any imports from this firm were considered nonsubject. Available information indicated that the production capacity of the wind tower producers in Vietnam that remained subject to the order remained the same as what was publicly reported in the original investigations: Vina Halla Heavy Industries Ltd. ("Vina Halla") had an annual capacity of 400 towers, and UBI of 300 towers.<sup>76</sup> GTA data indicated that the United States was the largest export market for wind towers from Vietnam in 2012, accounting for 30.5 percent of the total share of exports; exports

<sup>&</sup>lt;sup>73</sup> Original Investigations Confidential Report at VII-14.

<sup>&</sup>lt;sup>74</sup> Original Investigations Confidential Report at Table C-1.

<sup>&</sup>lt;sup>75</sup> Original Investigations Confidential Report at Table C-1.

<sup>&</sup>lt;sup>76</sup> *First Reviews*, USITC Pub. 4888 at 11-12.

to the United States accounted for 1.5 percent of total exports in 2014 and 14.0 percent in 2016.<sup>77</sup>

In these reviews, subject imports from Vietnam decreased from 497 units in 2019, to 20 units in 2020, and zero units in 2021, 2022, and 2023.<sup>78</sup>

The record contains limited information concerning the wind towers industry in Vietnam because no producer in Vietnam responded to the notice of institution. The Coalition provided a list of three possible producers of wind towers in Vietnam and asserts that subject producers in Vietnam maintain large and available capacity to increase wind tower exports to the United States after revocation. The available information indicates that one new Vietnamese producer/exporter entered the wind tower industry during the period of review.<sup>79</sup>

The information available also indicates that the wind tower industry in Vietnam is a large exporter of wind towers. According to GTA data, the value of exports from Vietnam of iron and steel towers and lattice masts under HS subheading 7308.20, a category that includes wind towers and out-of-scope products, was \$332 million in 2023, which accounted for 8.1 percent of global exports that year.<sup>80</sup> Exports to Germany, Sweden, the Netherlands, Finland,

<sup>&</sup>lt;sup>77</sup> *First Reviews*, USITC Pub. 4888 at 11-12. In 2017, the largest export market for wind towers from Vietnam was Australia. *Id*.

<sup>&</sup>lt;sup>78</sup> CR/PR at Table I-6. These data are based on official Commerce statistics for HTS statistical reporting number 7308.20.0020, and may be overstated because the HTS reporting number may contain products outside the scope of these reviews. Quantity data for HTS statistical number 7308.20.0020 is presented in kilograms and has been converted into number of towers using the conversion rate from the first five-year reviews: 1 tower equals 132,449 kilograms. CR/PR at I-31.

<sup>&</sup>lt;sup>79</sup> CR/PR at Table I-10. The Coalition reports that producer/exporter Southern Green Energy and Renewable Energy ("SRE") began manufacturing wind towers in Vietnam during the period of review. Domestic Response at 11. Available information indicates that SRE signed its first contract to manufacture wind tower sections for both Vietnamese and international wind energy projects in 2020. CR/PR at Table I-10.

<sup>&</sup>lt;sup>80</sup> CR/PR at Table I-13.

and the United Kingdom collectively accounted for 92.9 percent of all exports from Vietnam under HS subheading 7308.20 in 2022.<sup>81</sup>

As explained above, the Commission obtained purchaser pricing data rather than quarterly pricing data from U.S. producers and importers in the original investigations and first five-year reviews. The purchaser pricing data collected in the prior proceedings indicated that subject imports generally had lower prices than domestic wind towers on an f.o.b. basis, but the prices of subject imports were higher when compared on the basis of total delivered cost to the purchaser.<sup>82</sup> No product-specific pricing data concerning wind towers from Vietnam were obtained in these expedited reviews.

In light of the foregoing information available in these reviews, including the significant volume of subject imports from Vietnam in the original investigations, and the size and exports of the Vietnamese industry producing wind towers, we find that subject imports from Vietnam would not likely have no discernible adverse impact on the domestic industry if the antidumping duty order covering these imports were revoked.

#### 2. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like

<sup>&</sup>lt;sup>81</sup> CR/PR at Table I-11. Available information further shows that exports from Vietnam have grown substantially during the review period, as the average yearly export volume from 2019 to 2022 was much higher than during the first review period. Domestic Response at 12 and Exh. 6.

<sup>&</sup>lt;sup>82</sup> Original Investigations Confidential Opinion at 33; First Reviews Confidential Opinion at 42-43.

product.<sup>83</sup> Only a "reasonable overlap" of competition is required.<sup>84</sup> In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.<sup>85</sup>

*Fungibility*. In the original investigations, the Commission found a reasonable degree of fungibility among subject imports from each country and the domestic like product, observing that market participants reported domestically produced wind towers and subject imports to have some degree of interchangeability.<sup>86</sup> In the first five-year reviews, the majority of U.S. producers, importers, and purchasers reported that the domestic like product, subject imports from China, and subject imports from Vietnam were interchangeable.<sup>87</sup> In addition, most purchasers reported that domestically produced wind towers were comparable to subject imports from China with respect to 14 out of 18 purchasing factors and to subject imports from

<sup>&</sup>lt;sup>83</sup> The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality-related questions; (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product; (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and (4) whether subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States,* 718 F. Supp. 50 (Ct. Int'l Trade 1989).

<sup>&</sup>lt;sup>84</sup> See Mukand Ltd. v. United States, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); Wieland Werke, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); United States Steel Group v. United States, 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g., Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), aff'd sub nom, Ranchers-Cattlemen Action Legal Foundation v. United States, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

 <sup>&</sup>lt;sup>85</sup> See generally, Chefline Corp. v. United States, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).
<sup>86</sup> Original Determinations, USITC Pub. 4372 at 9-10; see also id. at 31-32.

<sup>&</sup>lt;sup>87</sup> *First Reviews*, USITC Pub. 4888 at 13.

Vietnam with respect to 15 out of 18 purchasing factors.<sup>88</sup> All purchasers reported that domestically produced wind towers and subject imports from China and Vietnam were comparable in terms of quality that meets or exceeds industry standards and most reported that they were comparable in terms of available capacity.<sup>89</sup>

In these expedited reviews, there is no new information in the record to indicate that the degree of fungibility between and among imports from China and Vietnam and the domestic like product has changed since the original investigations or prior reviews. The Coalition contends that wind towers continue to be fungible regardless of source.<sup>90</sup>

*Channels of Distribution.* In the original investigations, the Commission found that the majority of shipments of both domestically produced merchandise and subject imports were through the same channels of distribution, namely to unrelated OEMs of wind turbines.<sup>91</sup> In the first five-year reviews, the Commission found that U.S. producers and importers reported shipping wind towers almost exclusively to OEMs.<sup>92</sup>

<sup>90</sup> Domestic Response at 6.

<sup>&</sup>lt;sup>88</sup> First Reviews, USITC Pub. 4888 at 13. With respect to comparisons to wind towers from China, more purchasers reported that U.S. produced wind towers were superior in terms of transportation costs and inferior in terms of price; an equal number of purchasers reported U.S. produced wind towers to be comparable or inferior in terms of discounts offered and product range. *Id.* at 13 n.67. With respect to comparisons to wind towers from Vietnam, more purchasers reported that U.S. produced wind towers were superior in terms of transportation costs and inferior in terms of price; an equal number of purchasers reported U.S. produced wind towers to be comparable or inferior in terms of discounts offered. *Id.* 

<sup>&</sup>lt;sup>89</sup> *First Reviews*, USITC Pub. 4888 at 13.

<sup>&</sup>lt;sup>91</sup> Original Determinations, USITC Pub. 4372 at 10; see also id. at 31-32.

<sup>&</sup>lt;sup>92</sup> First Reviews, USITC Pub. 4888 at 13. Observations concerning subject sources were available for 2012 (China). Observations concerning the domestic product and imports from nonsubject countries were available for each year and interim period.

In these five-year reviews, there is no new information on the record to indicate that the channels of distribution used by the domestic industry and imports from each subject country have changed since the original investigations and prior reviews, or that such channels would be different upon revocation of the orders.

*Geographic Overlap*. In the original investigations, the Commission found that the domestic like product and subject imports from each subject source were marketed and shipped nationwide.<sup>93</sup> In the first five-year reviews, the Commission found that U.S. producers sold to all regions of the United States, with most shipments to the Midwest, Central Southwest, and Mountain Regions.<sup>94</sup> Subject imports from China entered primarily through Texas, Louisiana, and Oregon, and were shipped in the United States to the \*\*\* regions.<sup>95</sup> Although there was limited information on the record regarding subject imports from Vietnam, the Commission noted that there was nothing in the record suggesting that such imports would not resume the geographic patterns that were present during the original investigations if the order were to be revoked.<sup>96</sup>

<sup>&</sup>lt;sup>93</sup> Original Determinations, USITC Pub. 4372 at 10; see also id. at 31-32. Specifically, responding U.S. producers reported that approximately \*\*\* of their sales were destined for the Midwest and almost \*\*\* were destined for the Pacific Coast. Importers reported shipping subject imports from China to all U.S. geographic regions in 2011, and subject imports from Vietnam to all regions in the contiguous United States except the Southeast. Subject producers bid on projects across most regions of the United States, and U.S. imports of wind towers from China and Vietnam entered multiple U.S. ports of entry, although they were concentrated in the West and Gulf coasts. Original Determinations Confidential Views at 15.

<sup>&</sup>lt;sup>94</sup> *First Reviews*, USITC Pub. 4888 at 20.

<sup>&</sup>lt;sup>95</sup> *First Reviews Confidential Opinion* at 20. Importers of nonsubject wind towers from Vietnam reported shipments to the \*\*\* regions. *Id.* at 20 n.74.

<sup>&</sup>lt;sup>96</sup> *First Reviews*, USITC Pub. 4888 at 14-15.

In these reviews, subject imports from China entered through all four border regions (northern, southern, eastern, and western) throughout the period of review, with the exception of 2022 when they entered through the eastern, northern, and southern ports of entry.<sup>97</sup> Subject imports from Vietnam entered through southern borders of entry from 2018 through 2020, before ceasing.<sup>98</sup>

*Simultaneous Presence in the Market*. In the original investigations, the Commission found that bid data indicated that domestically produced wind towers were present in the U.S. market during each year of the period of investigation and that importers' questionnaires showed shipments of subject imports from China and Vietnam were also present throughout this period.<sup>99</sup> In the first five-year reviews, according to official import statistics, subject imports from China were present in each month during the January 2012 – June 2018 period of review (with the exceptions of December 2012, February and September 2014, and several months in 2016), while there were no subject imports from Vietnam.<sup>100</sup>

In the current reviews, imports from China were present in 56 of the 72 months between 2018 and 2023.<sup>101</sup> Imports from Vietnam were reported in 16 of the 36 months

<sup>99</sup> Original Determinations, USITC Pub. 4372 at 10; see also id. at 31-32.

<sup>97</sup> CR/PR at I-32.

<sup>&</sup>lt;sup>98</sup> CR/PR at I-32.

<sup>&</sup>lt;sup>100</sup> *First Reviews*, USITC Pub. 4888 at 14.

<sup>&</sup>lt;sup>101</sup> CR/PR at I-32. As explained above, import data are based on official import statistics for HTS statistical reporting number 7308.20.0020, which may contain products outside the scope of these reviews, and therefore these data may be overstated with respect to subject imports. CR/PR at I-31

between 2018 and 2020.<sup>102</sup> There were no imports of wind towers from Vietnam between 2021 and 2023.<sup>103</sup>

*Conclusion*. The record in these expedited reviews indicates that subject imports from China and Vietnam remain fungible with each other and the domestic like product. The record also indicates that subject imports from China and Vietnam overlapped with each other and the domestic like product in terms of channels of distribution and geographic markets, and that subject imports from China were present in the U.S. market throughout most of the period of review. Although subject imports from Vietnam were absent from the U.S. market during the final three years of the period of review, there is no information on the record indicating that such imports would not be simultaneously present in the U.S. market with subject imports from China and the domestic like product if the orders were revoked, as during the original investigations. In light of the above, and absent any information or argument to the contrary, we find that there would likely be a reasonable overlap of competition between subject imports from China and Vietnam and between the domestic like product and subject imports from each source if the orders were revoked.

#### 3. Likely Conditions of Competition

In determining whether to exercise our discretion to cumulate the subject imports, we assess whether subject imports from the subject countries would compete under similar or different conditions in the U.S. market if the orders under review were revoked. In the first

<sup>&</sup>lt;sup>102</sup> CR/PR at I-32. In addition to potentially being overstated by out-of-scope merchandise included in HTS statistical reporting number 7308.20.0020, import data from Vietnam may include imports from nonsubject producer CS Wind. CR/PR at I-31.

<sup>&</sup>lt;sup>103</sup> CR/PR at I-32.

five-year reviews, the Commission exercised its discretion to cumulate subject imports from both subject countries, noting that the record did not indicate any significant differences in the likely conditions of competition between subject imports from China and Vietnam upon revocation, with both countries having significant production capacity, both countries maintaining an interest in the U.S. market, and neither industry having any corporate affiliations with producers in the United States or other relationships that may affect their behavior differently if the orders were revoked.<sup>104</sup>

In these second five-year reviews, the Coalition argues that there have been no changes in the conditions of competition during the current period of review that would warrant the Commission not cumulating subject imports for the purpose of these reviews. There is no information in the record to suggest that subject imports from China and Vietnam are likely to compete under different conditions of competition if the orders were revoked. Based on the information available, and in the absence of any argument to the contrary, we find that imports from China and Vietnam are likely to compete under similar conditions of competition in the event of revocation of the orders.

#### 4. Conclusion

In sum, we determine that subject imports from China and Vietnam, considered individually, are not likely to have no discernible adverse impact on the domestic industry if the

<sup>&</sup>lt;sup>104</sup> *First Reviews*, USITC Pub. 4888 at 13-15. Commissioner Johanson, as noted above, did not exercise his discretion to cumulate subject imports in the first reviews. In these second reviews, given evidence of a new Vietnamese producer/exporter of wind towers (in SRE) during the review period, the additional capacity in Vietnam since the first reviews, and substantially increased exports from Vietnam since the first reviews and substantially increased exports from Vietnam since the first reviews and does not support finding likely significant differences in competitive conditions in the U.S. market that warrant not cumulating subject imports from China and Vietnam.

corresponding orders were revoked. We also find that there would likely be a reasonable overlap of competition between and among subject imports from China and Vietnam and the domestic like product if the orders were revoked. Finally, we do not find any likely significant differences in conditions of competition that would warrant not cumulating subject imports from China and Vietnam. We therefore exercise our discretion to cumulate subject imports China and Vietnam for purposes of our analysis in these five-year reviews.

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

#### A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."<sup>105</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>106</sup> Thus, the likelihood

<sup>&</sup>lt;sup>105</sup> 19 U.S.C. § 1675a(a).

<sup>&</sup>lt;sup>106</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.
standard is prospective in nature.<sup>107</sup> The U.S. Court of International Trade has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.<sup>108</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>109</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."110

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

<sup>&</sup>lt;sup>107</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.

<sup>&</sup>lt;sup>108</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>&</sup>lt;sup>109</sup> 19 U.S.C. § 1675a(a)(5).

<sup>&</sup>lt;sup>110</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*.

imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated."<sup>111</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>112</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>113</sup>

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>114</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

<sup>&</sup>lt;sup>111</sup> 19 U.S.C. § 1675a(a)(1).

<sup>&</sup>lt;sup>112</sup> 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings. *See* Commerce AD I&D Memo at 5.

<sup>&</sup>lt;sup>113</sup> 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

<sup>&</sup>lt;sup>114</sup> 19 U.S.C. § 1675a(a)(2).

country, which can be used to produce the subject merchandise, are currently being used to produce other products.<sup>115</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>116</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>117</sup> All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are

<sup>&</sup>lt;sup>115</sup> 19 U.S.C. § 1675a(a)(2)(A-D).

<sup>&</sup>lt;sup>116</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>&</sup>lt;sup>117</sup> 19 U.S.C. § 1675a(a)(4).

distinctive to the industry. As instructed by the statute, we have considered the extent to 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>118</sup>

No respondent interested party participated in these expedited reviews. The record, therefore, contains limited new information with respect to the wind tower industry in China and Vietnam. There also is limited information on the wind tower market in the United States during the period of review. Accordingly, for our determinations, we rely as appropriate on the facts available from the original investigations and first reviews, and the limited new information on the record in these second five-year reviews.

#### 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>119</sup> The following conditions of competition inform our determinations.

#### 1. Demand Conditions

Original Investigations and Prior Reviews. In its original determinations, the Commission found that wind towers provide the support for wind turbines used in electrical power generation projects, and therefore, demand for wind towers is derived from demand for wind

<sup>&</sup>lt;sup>118</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>&</sup>lt;sup>119</sup> 19 U.S.C. § 1675a(a)(4).

turbines and the installation of wind turbines in large wind projects. The Commission further found that a limited number of OEMs were generally the purchasers of wind towers and that, after a project developer or purchaser awarded a project or wind farm to an OEM, the OEM would secure a supply of wind towers for the project.<sup>120</sup>

The Commission found that government incentives historically had a powerful influence on demand for wind towers. It observed that the scheduled expiration at the end of 2012 of a major government incentive, the production tax credit ("PTC"), and other government incentives such as those under the American Recovery and Reinvestment Act of 2009 ("ARRA"), resulted in extraordinary demand for wind towers toward the end of the period of investigation, particularly the first six months of 2012. When the PTC lapsed, installations of wind turbines slowed dramatically. The Commission also found that, in addition to the Federal tax credits, a number of states had implemented renewable portfolio standards ("RPS") mandates that also contributed to the growth of wind installations and the demand for wind towers. The Commission observed that wind projects were generally concentrated in areas of higher wind speeds, predominantly in the Midwest corridor between the Mississippi River and the Rockies, in California, and in the Pacific Northwest.<sup>121</sup>

In addition to the government incentives, the Commission found that other factors influenced demand for wind towers during the period of investigation, including the financial crisis that began in 2008. The Commission also observed that low prices for natural gas, an alternative source of energy for the generation of electricity, may also have dampened demand

<sup>&</sup>lt;sup>120</sup> Original Determinations, USITC Pub. 4372 at 15.

<sup>&</sup>lt;sup>121</sup> Original Determinations, USITC Pub. 4372 at 15-16.

for wind projects to some extent, although it found that, with the push to benefit from the expiring tax credits, wind turbine installations increased during the latter portion of the period even though natural gas prices remained low.<sup>122</sup>

Apparent U.S. consumption of wind towers declined and then increased sharply during the original period of investigation. It decreased from 3,842 units in 2009 to 2,887 units in 2010, before increasing to \*\*\* units in 2011. Apparent U.S. consumption was \*\*\* units in interim 2011 and higher, at \*\*\* units, in interim 2012.<sup>123</sup>

In the first five-year reviews, the Commission found demand for wind towers continued to derive from demand for wind turbines. As in the original investigations, OEMs were the primary purchasers of wind towers, and wind towers were produced to their specifications.<sup>124</sup> Government incentive programs also continued to influence demand for wind towers, especially the PTC, which market participants reported would cause demand to increase when active and decrease when inactive.<sup>125</sup>

Apparent U.S. consumption was 3,935 units in 2012, \*\*\* units in 2013, 3,328 units in 2014, 4,003 units in 2015, 4,404 units in 2016, and 3,828 units in 2017; it was 2,107 units in interim 2017 and \*\*\* units in interim 2018.<sup>126</sup>

*Current Reviews*. The record indicates that demand for wind towers continues to be driven by demand for wind turbines used for electricity production. The Coalition argues that

<sup>&</sup>lt;sup>122</sup> Original Determinations, USITC Pub. 4372 at 16.

<sup>&</sup>lt;sup>123</sup> Original Determinations, USITC Pub. 4372 at 16.

<sup>&</sup>lt;sup>124</sup> *First Reviews*, USITC Pub. 4888 at 19.

<sup>&</sup>lt;sup>125</sup> *First Reviews*, USITC Pub. 4888 at 19.

<sup>&</sup>lt;sup>126</sup> First Reviews Confidential Opinion at 29.

government incentives continue to play an import role in driving demand, especially with the recent passage of the Inflation Reduction Act ("IRA") in 2022.<sup>127</sup> The Coalition states that the IRA provides a production credit to U.S. producers for each domestically produced wind tower, and also provides renewable energy production credits to wind farm developers for installing domestically produced wind towers.<sup>128</sup>

Apparent U.S. consumption of wind towers was \*\*\* units in 2023, down \*\*\* percent from 3,828 units in 2017.<sup>129</sup>

#### 2. Supply Conditions

*Original Investigations and Prior Reviews*. During the original investigations, the domestic industry was the largest source of wind towers in the U.S. market until interim 2012, when subject imports captured the largest share of the market. Nonsubject imports lost market share to subject imports throughout the period of investigation.<sup>130</sup>

The Commission observed that two domestic producers reported having supply agreements with OEMs during the period of investigation and that these agreements were subject to renegotiation by the parties, allowing the OEMs to reduce the number of towers

<sup>&</sup>lt;sup>127</sup> Domestic Response at 24.

<sup>&</sup>lt;sup>128</sup> Domestic Response at 24.

<sup>&</sup>lt;sup>129</sup> CR/PR at Table I-7. Apparent U.S. consumption in 2023 is likely understated relative to that in the prior proceedings because domestic industry data coverage is much lower in this review, than in the original investigations and first reviews; responding domestic producers accounted for \*\*\* percent of domestic production of wind towers in 2023, whereas responding domestic producers accounted for the substantial majority or all domestic production of wind towers in the previous proceedings. *Id.* at I-23.

<sup>&</sup>lt;sup>130</sup> Original Determinations, USITC Pub. 4372 at 16-17.

ordered in a given year below the contract commitment, extend the timing of deliveries, or change the types of towers ordered.<sup>131</sup>

In the first five-year reviews, the domestic industry's share of apparent U.S. consumption increased irregularly over the period of review, from 37.4 percent in 2012 to 69.4 percent in 2017 and \*\*\* percent in interim 2018, compared to 69.0 percent in interim 2017.<sup>132</sup> There were several changes to the domestic industry during the first reviews, with some plant closures as well as some capacity expansions and new entrants into the U.S. market.

Subject imports from China accounted for \*\*\* percent of apparent U.S. consumption in 2012, but subject imports were largely absent from the U.S. market for the remainder of the period of review following imposition of the orders.<sup>133</sup>

Nonsubject imports from sources other than nonsubject producer CS Wind (Vietnam) increased irregularly as a share of apparent U.S. consumption from \*\*\* percent in 2012 to \*\*\* percent in 2017, and \*\*\* percent in interim 2018, compared to \*\*\* percent in interim 2017.<sup>134</sup> Nonsubject wind towers from Vietnam accounted for \*\*\* percent of the U.S. wind towers market in 2012 and \*\*\* percent in 2016.<sup>135</sup>

*Current Reviews*. In the current reviews, the domestic industry was the second largest source of supply in 2023, accounting for \*\*\* percent of apparent U.S. consumption by

<sup>&</sup>lt;sup>131</sup> Original Determinations, USITC Pub. 4372 at 17.

<sup>&</sup>lt;sup>132</sup> *First Reviews Confidential Opinion* at 30.

<sup>&</sup>lt;sup>133</sup> First Reviews Confidential Opinion at 31.

<sup>&</sup>lt;sup>134</sup> First Reviews Confidential Opinion at 31.

<sup>&</sup>lt;sup>135</sup> *First Reviews Confidential Opinion* at 31. After 2016, imports from Vietnam were largely absent from the United States for the remainder of the period of review. *Id.* at 31 n.117.

quantity.<sup>136</sup> There have been numerous changes to the domestic industry since the prior reviews.<sup>137</sup> In January 2021, the New York State Energy Research and Development Authority selected the \$350 million investment proposal of Norwegian energy firm Equinor ASA, developed with Marmen Welcon, a joint venture between Marmen Energy Co. ("Marmen"), a major North American manufacturer of onshore wind towers, and Welcon AS, a Danish producer of offshore wind towers, and the Port of Albany, to construct the first U.S. facility to produce offshore wind towers, with production anticipated to commence in 2026.<sup>138</sup> In June 2021, South Korean producer CS Wind Corp. purchased Vestas American Wind Technology's production facility in Pueblo, Colorado and began expanding the facility in April 2023; the expansion is expected to double the facility's production capacity to 1,000 tower sections per year once it is completed in the summer of 2024.<sup>139</sup> In August 2021, Marmen-Welcon announced a partnership with a Belgian construction firm to manufacture transition pieces for offshore wind turbines at its Port of Albany facility.<sup>140</sup> In April 2024, Arcosa began production at its new \$60 million wind tower facility in New Mexico and it plans to expand the facility's workforce from 125 employees to 200 employees within six months.<sup>141</sup>

<sup>&</sup>lt;sup>136</sup> CR/PR at Table I-7. Domestic industry market share in 2023 is likely understated relative to that in the prior proceedings because domestic industry data coverage is much lower in this review, in which the responding domestic producers accounted for \*\*\* percent of domestic production of wind towers in 2023, than in the original investigations and first reviews, when responding domestic producers accounted for the substantial majority or all domestic production of wind towers. *Id.* at I-23.

<sup>&</sup>lt;sup>137</sup> CR/PR at Table I-4.

<sup>&</sup>lt;sup>138</sup> CR/PR at Table I-4.

<sup>&</sup>lt;sup>139</sup> CR/PR at Table I-4.

<sup>&</sup>lt;sup>140</sup> CR/PR at Table I-4.

<sup>&</sup>lt;sup>141</sup> CR/PR at Table I-4; *see also* Domestic Response at 22. Arcosa also has wind tower production facilities in Illinois, Iowa, and Oklahoma. CR/PR at Table I-4.

Subject imports were the smallest source of supply in 2023, accounting for \*\*\* percent of apparent U.S. consumption that year.<sup>142</sup> Nonsubject imports were the largest source of supply in 2023, accounting for \*\*\* percent of apparent U.S. consumption that year.<sup>143</sup> The largest sources of nonsubject imports in 2023 were Germany, South Korea, and India.<sup>144</sup>

#### 3. Substitutability and Other Conditions

*Original Investigations and Prior Reviews*. In the original investigations, the Commission found that subject imports and domestically produced wind towers were at least moderately substitutable once production facilities were qualified for a wind project. It observed that most OEMs required qualification or certification of wind tower producers and that, typically, an OEM would only order wind towers from a supplier it had qualified. However, as demand rose under uncertainty of the renewal of the PTC and other federal incentives, OEMs qualified more domestic suppliers and were sometimes willing to perform qualification after production had begun on tower orders.<sup>145</sup>

The Commission also found that, because wind towers are large, heavy, and require specialized equipment to lift and move, purchasers reported considering both the sales price and transportation costs when making purchase decisions. It observed that wind towers were typically sold on an ex-works basis in the case of domestic producers and f.o.b. port of export in the case of subject and nonsubject imports. The Commission further observed that shipping to

<sup>&</sup>lt;sup>142</sup> CR/PR at Table I-7.

<sup>&</sup>lt;sup>143</sup> CR/PR at Table I-7.

<sup>&</sup>lt;sup>144</sup> CR/PR at Table I-6.

<sup>&</sup>lt;sup>145</sup> Original Determinations, USITC Pub. 4372 at 17-18.

the project site was arranged by the OEM, which could be both logistically challenging and expensive given the wind towers' large size.<sup>146</sup>

In the first five-year reviews, the Commission found a moderate-to-high degree of substitutability between domestically produced wind towers and subject imports from China and Vietnam.<sup>147</sup> The Commission also found that price remained an important factor in purchasing decisions.<sup>148</sup> As in the original investigations, there were a limited number of OEMs that purchased wind towers and there was consolidation among purchasers during the period of review.<sup>149</sup> The Commission found that wind towers continued to be primarily produced to order, and that purchasers required suppliers to be certified or qualified to sell wind towers.<sup>150</sup> The record indicated that the vast majority of wind towers were sold via long term contracts.<sup>151</sup> Steel plate was the primary raw material used in making wind towers, and raw materials remained a substantial but declining share of the domestic industry's cost of goods sold ("COGS") for wind towers.<sup>152</sup>

*Current Reviews*. The record in these reviews contains no new information to indicate that the degree of substitutability between the domestic like product and subject imports, or the importance of price in purchasing decisions, have changed since the prior proceedings. The Coalition argues that subject imports and the domestic like product remain substitutable and

<sup>&</sup>lt;sup>146</sup> Original Determinations, USITC Pub. 4372 at 18.

<sup>&</sup>lt;sup>147</sup> *First Reviews*, USITC Pub. 4888 at 23.

<sup>&</sup>lt;sup>148</sup> *First Reviews*, USITC Pub. 4888 at 23.

<sup>&</sup>lt;sup>149</sup> *First Reviews*, USITC Pub. 4888 at 23.

<sup>&</sup>lt;sup>150</sup> *First Reviews*, USITC Pub. 4888 at 24.

<sup>&</sup>lt;sup>151</sup> *First Reviews,* USITC Pub. 4888 at 24.

<sup>&</sup>lt;sup>152</sup> *First Reviews*, USITC Pub. 4888 at 24.

that price remains an important factor in purchasing decisions.<sup>153</sup> Accordingly, we again find a moderate-to-high degree of substitutability between subject imports and the domestic like product, and that price is an important factor in purchasing decisions.

Effective August 23, 2018, wind towers originating from China, imported as a tower or tower section(s) alone under HTS subheading 7308.20.00, became subject to an additional 25 percent *ad valorem* duty under Section 301 of the Trade Act of 1974.<sup>154</sup> Effective July 6, 2018, wind towers originating from China, imported as part of a wind turbine with an appropriate number of nacelles and rotor blades under HTS subheading 8502.31.00, became subject to an additional 25 percent *ad valorem* duty under Section 301.<sup>155</sup>

#### C. Likely Volume of Subject Imports

Original Investigations and Prior Reviews. In its original determinations, the Commission found the volume of subject imports and the increase in volume to be significant, both in absolute terms and relative to consumption and production in the United States. It observed that demand for wind towers was particularly strong in interim 2012 as a result of the anticipated non-renewal of the PTC and that subject imports were substantially higher during that period, compared to interim 2011. In contrast, even though demand was higher, the domestic industry's market share was lower in interim 2012 than in interim 2011. The Commission found that the increase in subject import market share came primarily at the expense of the domestic industry. It also found that the gain in subject import market share

<sup>&</sup>lt;sup>153</sup> Domestic Response at 11-12.

<sup>&</sup>lt;sup>154</sup> CR/PR at I-8.

<sup>&</sup>lt;sup>155</sup> CR/PR at I-8.

was not the result of the domestic industry's inability to satisfy increased demand in interim 2012.<sup>156</sup>

In the first five-year reviews, the Commission found that the volume of cumulated subject imports was likely to be significant in the event of revocation. The Commission found that both subject countries had substantial production capacity. Although no foreign producer had participated in the reviews, available information indicated that producers in China and Vietnam had a minimum annual production capacity for wind towers of between 16,920 and 17,470 units, nearly four times the highest level of apparent U.S. consumption during the period of review.<sup>157</sup> The Commission also found that the subject industries continued to be export oriented, as wind tower producers in each country exported substantial volumes to third countries relative to apparent U.S. consumption, notwithstanding that exports to the United States decreased after imposition of the orders in 2012.<sup>158</sup> The Commission also found that absent the orders, subject producers would likely ship substantial quantities of subject merchandise to the United States as observed during the original investigations.<sup>159</sup> The Commission also determined that the existence of higher prices in the United States, along with barriers to imports of wind towers from China and Vietnam in third country markets, would likely make

<sup>&</sup>lt;sup>156</sup> Original Determinations, USITC Pub. 4372 at 19-21. For purposes of his threat determination, Commissioner Pinkert found that the trends in the volume of subject imports, particularly at the end of the period of investigation, to be particularly important, emphasizing that these trends reflected the interests and capabilities of subject producers to increase the volume of subject imports significantly over a short period of time and that subject producers were increasingly export-oriented. Id. at 32-34. The dissenting views on material injury and threat in the original investigations, which Commissioner Johanson joined, are set forth in USITC Pub. 4372 at 37-48.

<sup>&</sup>lt;sup>157</sup> *First Reviews*, USITC Pub. 4888 at 25.

<sup>&</sup>lt;sup>158</sup> *First Reviews*, USITC Pub. 4888 at 25.

<sup>&</sup>lt;sup>159</sup> *First Reviews*, USITC Pub. 4888 at 25.

the U.S. market relatively more attractive.<sup>160</sup> Additionally, the Commission determined that there was no information on the record indicating that Section 301 tariffs were likely to significantly curtail exports of wind towers from China in the reasonably foreseeable future.<sup>161</sup>

*Current Reviews*. In these reviews, subject imports maintained a presence in the U.S. market throughout the period of review, while under the disciplining effects of the orders. Cumulated subject import volume was 109 units in 2018, 513 units in 2019, 23 units in 2020, 6 units in 2021, 11 units in 2022, and 2 units in 2023.<sup>162</sup> Subject imports accounted for \*\*\* percent of apparent U.S. consumption of wind towers in 2023.<sup>163</sup>

The record in these reviews contains limited information on the wind tower industries in China and Vietnam. The information available, however, indicates that subject producers possess substantial and increasing capacity. As previously discussed, the Coalition has identified 48 possible producers of wind towers in China and three possible producers of wind towers in Vietnam.<sup>164</sup> As discussed in section IIIC.1 above, several Chinese wind tower producers entered the wind tower market, and several existing Chinese producers expanded

<sup>&</sup>lt;sup>160</sup> *First Reviews*, USITC Pub. 4888 at 26. The Commission noted that the record indicated that the average unit value for exports to the United States from China and Vietnam were substantially higher during the POR than the AUVs achieved by China and Vietnam in their leading third country export markets. *Id*.

<sup>&</sup>lt;sup>161</sup> *First Reviews*, USITC Pub. 4888 at 26. Commissioner Johanson's views on likely material injury, which were based on separate analyses for subject imports from China and Vietnam, are set forth in USITC Pub. 4888 at 35-43.

<sup>&</sup>lt;sup>162</sup> CR/PR at Table I-6.

<sup>&</sup>lt;sup>163</sup> CR/PR at Table I-7.

<sup>&</sup>lt;sup>164</sup> CR/PR at I-34; CR/PR at I-39.

their wind tower operations, during the period of review.<sup>165</sup> Similarly, a new producer entered the wind tower market in Vietnam.<sup>166</sup>

The information available also indicates that the industries in China and Vietnam remain substantial exporters of wind towers. According to GTA data concerning iron and steel towers and lattice masts under HS subheading 7308.20, a category including wind towers and out-ofscope products, China exported 340,689 short tons of such merchandise in 2023 and accounted for 12.6 percent of the value of global exports that year, making China the world's second largest exporter by value.<sup>167</sup> According to information from the Chinese Wind Energy Association, the Chinese wind tower industry exported 60 percent more wind turbines in 2023 than they did in 2022.<sup>168</sup> GTA data also show that Vietnam exported 154,293 short tons of iron and steel towers and lattice masts in 2023, accounting for 8.1 percent of the value of global exports that year.<sup>169</sup>

The information available also indicates that the U.S. market remains attractive to subject producers. Subject imports maintained a presence in the U.S. market throughout the period of review, indicating that subject producers have maintained customers and distribution networks in the United States.<sup>170</sup> The Coalition argues that Vietnamese producers must rely

<sup>&</sup>lt;sup>165</sup> CR/PR at Table I-8.

<sup>&</sup>lt;sup>166</sup> CR/PR at Table I-10.

<sup>&</sup>lt;sup>167</sup> CR/PR at Table I-9; CR/PR at I-45.

<sup>&</sup>lt;sup>168</sup> Domestic Response at 10, Exhibit 2.

<sup>&</sup>lt;sup>169</sup> CR/PR at Table I-11; CR/PR at I-45.

<sup>&</sup>lt;sup>170</sup> CR/PR at Tables I-6-7.

heavily on export markets because of limited domestic demand for wind power, which would encourage them to increase exports to the United States in the event of revocation.<sup>171</sup>

Trade measures on wind towers in third country markets would also make the U.S. market relatively more attractive to subject producers in the event of revocation. In November 2023, Canada imposed antidumping and countervailing duty orders on wind towers and sections thereof from China.<sup>172</sup> In December 2021, the European Union imposed antidumping duty orders on utility scale wind towers from China.<sup>173</sup> In October 2020, Mexico imposed antidumping duty orders on wind towers from China.<sup>174</sup> In September 2023, Vietnam's Ministry of Trade initiated an antidumping duty investigation into wind towers from China.<sup>175</sup>

Given the foregoing, including the significant and increasing volume of cumulated subject imports during the original investigations, the continued presence of cumulated subject imports in the U.S. market during the current and prior review periods, the subject industries'

<sup>&</sup>lt;sup>171</sup> Domestic Response at 12. As further evidence of the Vietnamese industry's continued interest in serving the U.S. market, the Coalition notes that imports of wind towers from Vietnam increased from 0 metric tons in 2017 to 69,000 metric tons in 2019 after Vietnamese producer CS Wind Vietnam was excluded from the order pursuant to Commerce's remand determination in an appeal of the original determination. *Id.* at 14. In response, the domestic industry filed new antidumping and countervailing duty petitions against wind towers from Vietnam, including those produced by CS Wind, and the subsequent orders again caused imports of wind towers from Vietnam to decline to zero. *Id.* 

<sup>&</sup>lt;sup>172</sup> CR/PR at Table I-12. The Canada Border Service Agency ("CBSA") found dumping margins ranging from 89.4 percent to 108.2 percent *ad valorem* for the responding Chinese exporters and 159.3 percent for nonresponding Chinese exporters. The CBSA also found countervailable subsidy margins from 3.0 percent to 5.6 percent *ad valorem* for the responding Chinese exporters and 21.8 percent for nonresponding Chinese producers.

<sup>&</sup>lt;sup>173</sup> CR/PR at Table I-12. The European Commission imposed antidumping duty orders with margins ranging from 7.2 percent to 11.2 percent *ad valorem* for responding Chinese exporters and 19.2 percent *ad valorem* for nonresponding Chinese exporters.

<sup>&</sup>lt;sup>174</sup> CR/PR at Table I-12.

<sup>&</sup>lt;sup>175</sup> CR/PR at Table I-12. A date for the preliminary determination in that investigation has not yet been scheduled.

substantial capacity and large volume of exports, and the attractiveness of the U.S. market to subject producers, we find that the volume of cumulated subject imports would likely be significant, both in absolute terms and relative to consumption in the United States, if the orders were revoked.<sup>176</sup>

#### D. Likely Price Effects

Original Investigations and Prior Proceedings. In the original investigations, the Commission reiterated that subject imports and domestically produced wind towers are generally substitutable. It also found that price or total cost was ranked the single most important factor in purchasing decisions by five of nine purchasers and that, despite steel and transportation costs being substantial, f.o.b. prices were the single largest component of total cost for purchasers.<sup>177</sup>

In light of the made-to-order nature of wind towers and the varying processes used by OEMs in purchasing wind towers, the Commission obtained purchase price data from purchasers, which accounted for both \*\*\* of subject imports and purchases of domestically produced wind towers during the period of investigation.<sup>178</sup> Purchase price data supplied by OEMs for individual wind projects indicated that the subject imports generally had lower prices than domestic wind towers on an f.o.b. basis. However, the Commission found

<sup>&</sup>lt;sup>176</sup> Although subject imports from China are currently subject to a 25 percent *ad valorem* duty under Section 301, given the Chinese industry's large and substantial capacity and export orientation, and the attractiveness of the U.S. market, the Section 301 tariffs are not likely to prevent subject imports from entering the market at significant levels after revocation.

The record of these expedited reviews contains no information concerning inventories of subject merchandise and product shifting.

<sup>&</sup>lt;sup>177</sup> Original Determinations, USITC Pub. 4372 at 22.

<sup>&</sup>lt;sup>178</sup> Original Determinations, USITC Pub. 4372 at 22-23.

that, in most instances, subject imports were priced higher than domestic product when the subject imports and domestic wind towers were compared on the basis of total delivered cost to the purchaser for the same project. Accordingly, because the record did not indicate that, at least on a delivered basis, subject imports were underselling domestic wind towers, it did not find evidence of significant underselling.<sup>179</sup>

Notwithstanding the lack of evidence of significant underselling, the Commission found that the small number of OEMs in the market, the importance of price, the OEMs' pattern of negotiating prices with domestic producers, and the availability of alternative sources of supply, particularly subject imports, combined to place pressure on domestic producers to discipline their prices. Given the strong demand for wind towers during the period of investigation, the domestic industry should have been able to increase prices; however, the record indicated that subject imports limited the domestic industry's ability to recover its costs. Accordingly, the Commission found that subject imports prevented price increases, which otherwise would have occurred, to a significant degree.<sup>180</sup>

In the first five-year reviews, there was limited information on the record regarding pricing comparisons, but the available purchase price data supplied by OEMs for individual wind products showed that subject imports generally had lower prices than domestic wind towers on

<sup>&</sup>lt;sup>179</sup> Original Determinations, USITC Pub. 4372 at 22-23.

<sup>&</sup>lt;sup>180</sup> Original Determinations, USITC Pub. 4372 at 23-25. For purposes of his threat analysis, Commissioner Pinkert emphasized that the gap between the delivered prices of domestically produced wind towers and subject imports shrank during the period of investigation. He found this trend towards converging prices to indicate that, as subject producers sought to maintain a significant volume of imports and share of the U.S. market, they would need to sell at increasingly competitive prices, which would lead U.S. producers to constrain their own pricing. Thus, he found that, absent relief, subject imports would have an adverse effect on domestic prices in the imminent future. *Id*. at 34-35.

an f.o.b. basis, but were priced higher than domestic wind towers when compared on the basis of total delivered cost.<sup>181</sup> The Commission also found that several of the factors that the Commission relied on in finding adverse price effects in the original investigations continued during the period of review, making it likely that subject imports would have significant price effects if the orders were revoked.<sup>182</sup> The limited numbers of OEMs that purchase wind towers decreased during the period of review due to consolidations and closures in the domestic industry, which resulted in \*\*\* accounting for 91 percent of the market.<sup>183</sup> Furthermore, unlike in the original investigations in which OEMs reported that they typically did not solicit multiple bids from wind tower producers, most purchasers reported contacting multiple suppliers before purchasing wind towers during the period of review.<sup>184</sup> The record indicated that wind tower prices were negotiated on an f.o.b. rather than a delivered basis, and purchasers used the high degree of interchangeability between wind towers from various sources and availability of other sources to put downward pressure on wind tower prices in initial sales and in the renegotiation of existing contract prices.<sup>185</sup> Based on the degree of interchangeability between the domestic like product and subject imports, the importance of price in purchasing decisions, the concentrated customer base and their bidding and negotiation processes, the Commission found that subject imports were likely to place downward pressure on domestic prices after revocation, as they did in the original

<sup>&</sup>lt;sup>181</sup> *First Reviews,* USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>182</sup> *First Reviews*, USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>183</sup> First Reviews Confidential Opinion at 42-43.

<sup>&</sup>lt;sup>184</sup> *First Reviews,* USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>185</sup> *First Reviews*, USITC Pub. 4888 at 28.

investigations.<sup>186</sup> Noting the increase in the domestic industry's raw material costs during the period of review due to the imposition of section 232 duties on steel inputs, the Commission also found that the increased competitive pressure from subject imports that was likely after revocation would likely prevent domestic producers from increasing their prices sufficiently to cover their increasing costs.<sup>187</sup> In light of the foregoing, the Commission concluded that the significant volume of subject imports that was likely after revocation would likely suppress prices for the domestic like product to a significant degree, as during the original investigations.<sup>188</sup>

*Current Reviews*. As discussed in section IV.B.3. above, we continue to find a moderateto-high degree of substitutability between the domestic like product and subject imports and that price remains an important factor in purchasing decisions.

The record in these expedited reviews does not contain product-specific pricing information. Based on the available information, including the moderate-to-high degree of substitutability between the domestic like product and subject imports and the importance of price to purchasing decisions, we find that if the orders were revoked, the likely significant volumes of subject imports would place competitive pressure on the prices of the domestic like product, as they did in the original investigations. There is no new information on the record indicating that the customer base is any less concentrated than in the prior review period. Nor is there new information on the record to indicate that customers would be any less likely to

<sup>&</sup>lt;sup>186</sup> *First Reviews*, USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>187</sup> *First Reviews*, USITC Pub. 4888 at 28.

<sup>&</sup>lt;sup>188</sup> *First Reviews*, USITC Pub. 4888 at 28-29.

use subject imports in the bidding and negotiation process to extract lower prices from domestic producers, than in the prior proceedings. Absent the discipline of the orders, the significant volumes of low-priced subject imports would likely take sales and market share from domestic producers and/or force the domestic industry to cut prices or forgo needed price increases, thereby depressing or suppressing prices for the domestic like product. Consequently, we find that if the orders were revoked, subject imports would likely have significant price effects.

#### E. Likely Impact<sup>189</sup>

Original Investigations and Prior Reviews. In the original investigations, the Commission found that the domestic industry's performance was adversely affected by cumulated subject imports during the period of investigation. In particular, the Commission found that the domestic industry was unable to benefit from the sharp increase in demand in interim 2012 due to subject imports, and instead, it experienced a decline in market share and only modest increases in production and U.S. shipments. In addition, as a result of the competitive pressure on the domestic industry to keep f.o.b. prices low or lose sales to subject imports, the domestic

<sup>&</sup>lt;sup>189</sup> In its expedited reviews, Commerce determined that revocation of the antidumping duty orders would result in the continuation or recurrence of dumping with margins up to 60.02 percent for subject imports from China, and up to 58.54 percent for subject imports from Vietnam. *Utility Scale Wind Towers From the People's Republic of China and the Socialist Republic of Vietnam: Final Results of Expedited Second Sunset Review of Antidumping Duty Order,* 89 Fed. Reg. 65585 (Dep't of Commerce Aug. 12, 2024). In its expedited review of the countervailing duty order, Commerce determined that revocation of the order would result in the continuation or recurrence of countervailable subsides at the rate of 21.86 percent for Tianjin Magnesium International Co., Ltd./Tianjin Magnesium Metal Co., Ltd., 34.81 percent for Titan Companies, and 28.34 percent for all others. *Utility Scale Wind Towers From the People's Republic of China: Final Results of Expedited Second Sunset Review of the Countervailing Duty Order,* 89 Fed. Reg. 60603 (Dep't of Commerce July 26, 2024).

industry was unable to raise prices sufficiently to cover increased costs, resulting in declines in operating income and capital expenditures.<sup>190</sup>

The Commission also considered other factors that may have had an impact on the domestic industry. In particular, the Commission observed that nonsubject imports had a declining presence during 2009 to 2011, and remained steady when comparing the interim periods. Consequently, the subject imports' higher market share in interim 2012 compared to interim 2011 came almost entirely at the expense of the domestic industry. In addition, the Commission rejected respondents' arguments that the domestic industry was unable to supply more wind towers during the period of investigation, finding that the domestic industry had excess capacity from which it could have supplied the U.S. market.<sup>191</sup>

In the first five-year reviews, the Commission found that the domestic industry's performance generally improved by nearly every measure over the period of review, due to the disciplining effects of the orders on subject imports.<sup>192</sup> Given the domestic industry's improved performance following the imposition of the orders, the Commission found that the domestic industry was not vulnerable.<sup>193</sup> The Commission found that that significant and increasing volumes of low-priced subject imports would likely have significant effects on the domestic industry's prices, and the domestic industry would likely face rising costs in the reasonably

<sup>&</sup>lt;sup>190</sup> Original Determinations, USITC Pub. 4372 at 25-27.

<sup>&</sup>lt;sup>191</sup> Original Determinations, USITC Pub. 4372 at 25-30. In his threat determination, Commissioner Pinkert found that the continued and likely intensifying price competition from the significant and increasing volume of subject imports likely would materially injure the domestic industry, which was already struggling, in the imminent future. *Id.* at 35.

<sup>&</sup>lt;sup>192</sup> *First Reviews*, USITC Pub. 4888 at 30.

<sup>&</sup>lt;sup>193</sup> *First Reviews*, USITC Pub. 4888 at 31.

foreseeable future. Consequently, the Commission determined that subject imports would preclude the domestic industry from being able to raise prices commensurately with its increased costs, and would cause the domestic industry to lose market share, revenues, or both, thereby having a significant impact on the domestic industry within a reasonably foreseeable time.

The Commission also considered the role of nonsubject imports and found that the increased presence of nonsubject imports in the U.S. market had not prevented the domestic industry from improving its performance. Based on the interchangeability of imports from all sources and the domestic like product, the importance of price in purchasing decisions, and the shifts in market share observed in the original investigations, the Commission found that the significantly increased volume of subject imports that was likely after revocation would again take market share from the domestic industry and nonsubject imports and place significant competitive pressure on domestic prices.<sup>194</sup>

*Current Reviews*. The record in these five-year reviews contains limited information concerning the domestic industry's performance since the last reviews. The available information shows that the domestic industry's trade and financial indicators were generally weaker in 2023 than in the last years examined in the original investigations and first reviews, with the exception of operating income and operating margin, and the industry's COGS-to-net-sales ratio.<sup>195</sup> The domestic industry's capacity and production, at \*\*\* units and \*\*\* units,

<sup>&</sup>lt;sup>194</sup> *First Reviews*, USITC Pub. 4888 at 36.
<sup>195</sup> CR/PR at Table I-5.

respectively, were \*\*\* than in 2011 and 2017.<sup>196</sup> Capacity utilization was lower in 2023, at \*\*\* percent, than in 2011, at \*\*\* percent, and 2017, when it was 67.9 percent. The domestic industry's U.S. shipments in 2023, at \*\*\* units, were also lower than in 2011, at \*\*\* units, and 2017, at 2,658 units.<sup>197</sup> The domestic industry's share of apparent U.S. consumption was \*\*\* percent in 2023, down from \*\*\* percent in 2011 and 69.4 percent in 2017.<sup>198</sup> The industry's net sales value (\$\*\*\*) and gross profit (\$\*\*\*) were lower in 2023 than in 2011 and 2017.<sup>199</sup> The industry's operating income of \$\*\*\* in 2023, was lower than in 2017, at \$105.8 million, but higher than in 2011, at \$14.1 million.<sup>200</sup> The industry's operating margin in 2023, at \*\*\* percent, was \*\*\* in 2017 but higher than in 2011, at 1.8 percent.<sup>201</sup> The industry's ratio of COGS to net sales of \*\*\* percent in 2023 was lower than in either 2011 or 2017, when it was 89.6 and 84.0 percent, respectively.<sup>202</sup> The domestic industry's performance in 2023 is likely understated relative to that in the prior proceedings because domestic industry data coverage is lower in this review, in which the responding domestic producers accounted for \*\*\* percent of domestic production of wind

<sup>&</sup>lt;sup>196</sup> CR/PR at Table I-5. In 2011, the domestic industry' capacity was \*\*\* units and its production was \*\*\* units. *Id*. In 2017, the domestic industry's capacity was 4,092 units and its production was 2,780. *Id*.

<sup>&</sup>lt;sup>197</sup> CR/PR at Table I-5, Table I-7.

<sup>&</sup>lt;sup>198</sup> CR/PR at Table I-7.

<sup>&</sup>lt;sup>199</sup> CR/PR at Table I-5. The domestic industry's net sales were \$766.5 million, and it had a gross profit of \$79.4 million in 2011. *Id*. The domestic industry's net sales were \$835.6 million, and it had a gross profit of \$133.8 million in 2017. *Id*.

<sup>&</sup>lt;sup>200</sup> CR/PR at Table I-5.

<sup>&</sup>lt;sup>201</sup> CR/PR at Table I-5.

<sup>&</sup>lt;sup>202</sup> CR/PR at Table I-5.

towers in 2023, than in the original investigations and first reviews, when responding domestic producers accounted for the substantial majority or all production of wind towers.<sup>203</sup>

The limited information on the record is insufficient for us to make a finding on whether the domestic industry is vulnerable to the continuation or recurrence of material injury in the event of revocation of the orders.

Based on the information available on the record, we find that revocation of the orders would likely result in a significant volume of cumulated subject imports that would likely exert significant pressure on prices for the domestic like product. Given the moderate-to-high degree of substitutability between the domestic like product and subject imports and the importance of price in purchasing decisions, the significant volume of low-priced cumulated subject imports likely after revocation would likely capture sales and market share from the domestic industry and/or significantly depress or suppress prices for the domestic like product. The likely volume of low-priced cumulated subject imports and their adverse price effects would likely have a significant adverse impact on the production, shipments, sales, market share, and revenues of the domestic industry, which in turn, would have a direct adverse impact on the industry's profitability and employment, as well as its ability to raise capital and make and maintain necessary capital investments. We thus conclude that if the orders were revoked, cumulated subject imports from China and Vietnam would be likely to have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

<sup>&</sup>lt;sup>203</sup> See CR/PR at I-23.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports. Nonsubject imports maintained a substantial presence in the U.S. market during the POR, accounting for \*\*\* percent of apparent U.S. consumption by quantity in 2023.<sup>204</sup> Nevertheless, the record provides no indication that the presence of nonsubject imports would prevent the volume of cumulated subject imports from China and Vietnam from being significant after revocation, given the subject industries' large capacity and exports and the relative attractiveness of the U.S. market. In light of the moderate-to-high degree of substitutability between subject imports and the domestic like product and the importance of price to purchasers, the significant volume of low-priced subject imports that we have found likely after revocation would likely take market share from the domestic industry at least in part, as well as potentially from nonsubject imports, and/or force domestic producers to either lower prices or forgo price increases to retain market share. Consequently, we find that any future effects of nonsubject imports would be distinct from the likely effects attributable to subject imports and that nonsubject imports would not prevent subject imports from having a significant impact on the domestic industry.

We recognize that apparent U.S. consumption of wind towers by quantity was \*\*\* percent lower in 2023 than in 2017.<sup>205</sup> As noted in section IV.B.1 above, the seemingly lower level of apparent U.S. consumption in 2023 as compared to 2017 is partly a function of the lower data coverage of the domestic industry in these reviews as compared to the first reviews.

<sup>&</sup>lt;sup>204</sup> CR/PR at Table I-7. Nonsubject imports were 798 units in 2023. *Id*.

<sup>&</sup>lt;sup>205</sup> CR/PR at Table I-7. Apparent U.S. consumption was 3,828 units in 2017 compared to \*\*\* units in 2023. *Id*.

Furthermore, the Coalition anticipates that domestic demand for wind towers will increase, due to the enactment of the IRA in 2022, and argues that domestic producers have made substantial capital investments in anticipation of an increase in demand.<sup>206</sup> Given the moderate-to-high degree of substitutability between subject imports and the domestic like product and the importance of price to purchasers, any additional declines in demand would not prevent low-priced imports from China and Vietnam from significantly increasing their presence in the U.S. market after revocation of the orders, but rather would exacerbate the likely adverse impact of subject imports on the domestic industry in a smaller U.S. market.

#### V. Conclusion

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

<sup>&</sup>lt;sup>206</sup> Domestic Response at 21-22.

# Information obtained in these reviews

## Background

On April 1, 2024, 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 reviews to determine whether revocation of the countervailing duty order on utility scale wind towers ("wind towers") from China and the antidumping duty orders on wind towers from China and Vietnam 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> Table I-1 presents information relating to the background and schedule of this proceeding:

Effective date	Action
April 1, 2024	Notice of initiation by Commerce (89 FR 22373, April 1, 2024)
April 1, 2024	Notice of institution by Commission (89 FR 22445, April 1, 2024)
July 5, 2024	Commission's vote on adequacy
July 26, 2024	Commerce's results of its expedited countervailing duty review (89 FR 60603, July 26, 2024)
August 12, 2024	Commerce's results of its expedited antidumping reviews (89 FR 65585, August 12, 2024)
October 3, 2024	Commission's vote
October 11, 2024	Commission's determinations and views

 Table I-1

 Wind towers: Information relating to the background and schedule of this proceeding

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

<sup>&</sup>lt;sup>2</sup> 89 FR 22445, April 1, 2024. In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 89 FR 22373, April 1, 2024. Pertinent Federal Register notices are referenced in app. A, and may be found at the Commission's website (www.usitc.gov).

<sup>&</sup>lt;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 investigations and subsequent full reviews are presented in app. C.

<sup>&</sup>lt;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 domestic like product and 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 one submission in response to its notice of institution in the subject reviews. It was filed on behalf of the following entity:

 Wind Tower Trade Coalition ("Coalition"), a trade association that a majority of members manufacture, produce or wholesale wind towers (collectively referred to herein as "domestic interested party").<sup>5</sup>

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 or explain deficiencies in their responses and to provide clarifying details where appropriate. A summary of the number of responses and estimates of coverage for each is shown in table I-2.

#### Table I-2

#### Wind towers: Summary of responses to the Commission's notice of institution

Interested party type	Number	Coverage
U.S. trade association	1	***%

Note: The U.S. trade association coverage figure presented is the domestic interested party's estimate of its share of total U.S. production of wind towers during 2023. This figure does not include \*\*\*. Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

### 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 Coalition. The Coalition requests that the Commission conduct expedited reviews of the antidumping and countervailing duty orders on wind towers.<sup>6</sup>

<sup>&</sup>lt;sup>5</sup> The members of trade association are as follows: Arcosa Wind Towers, Inc. and Broadwind Heavy Fabrications, Inc. The trade association's response to the notice of institution also included data for \*\*\*.

<sup>&</sup>lt;sup>6</sup> Domestic interested party's comments on adequacy, June 13, 2024, p. 1.

## The original investigations

The original investigations resulted from petitions filed on December 29, 2011 with Commerce and the Commission by Broadwind Towers, Inc., Manitowoc, Wisconsin; DMI Industries, Fargo, North Dakota; Katana Summit LLC, Columbus, Nebraska; and Trinity Structural Towers, Inc., Dallas, Texas.<sup>7</sup> On December 24, 2012, Commerce determined that imports of wind towers from China and Vietnam were being sold at less than fair value ("LTFV") and subsidized by the Government of China.<sup>8</sup> The Commission determined on February 8, 2013 that the domestic industry was materially injured or threatened with material injury by reason of LTFV imports of wind towers from China and Vietnam and subsidized imports of wind towers from China.<sup>9</sup> On February 15, 2013, Commerce issued antidumping duty orders with final weighted-average dumping margins ranging from 44.99 percent to 70.63 percent for China and 51.54 percent to 58.54 percent for Vietnam.<sup>10</sup> Commerce also issued a countervailing duty order on wind towers from China with net subsidy rates ranging from 21.86 percent to 34.81 percent.<sup>11</sup>

<sup>&</sup>lt;sup>7</sup> Utility Scale Wind Towers from China and Vietnam, Inv. Nos. 701-TA-486 and 731-TA-1195-1196 (Final), USITC Publication 4372, February 2013 ("Original publication"), p. I-1.

<sup>&</sup>lt;sup>8</sup> 77 FR 75992; 77 FR 75984; and 77 FR 75978, December 26, 2012.

<sup>&</sup>lt;sup>9</sup> Chairman Irving A. Williamson and Commissioner Shara L. Aranoff determined that an industry in the United States was materially injured by reason of imports of wind towers from China and Vietnam. Commissioner Dean A. Pinkert determined that an industry in the United States was threatened with material injury by reason of imports from China and Vietnam of wind towers. He further determined that he would not have found material injury but for the suspension of liquidation. 78 FR 10210, February 13, 2013.

<sup>&</sup>lt;sup>10</sup> 78 FR 11146 and 78 FR 11150, February 15, 2013.

<sup>&</sup>lt;sup>11</sup> 78 FR 11152, February 15, 2013.

### The first five-year reviews

On April 9, 2018, the Commission determined that it would conduct full reviews of the antidumping duty orders on wind towers from China and Vietnam and the countervailing duty order on wind towers from China.<sup>12</sup> On May 2, 2018, Commerce determined that revocation of the antidumping duty orders on wind towers from China and Vietnam would be likely to lead to continuation or recurrence of dumping.<sup>13</sup> On May 17, 2018, Commerce determined that revocation of the countervailing duty order on wind towers from China would be likely to lead to continuation or recurrence of subsidization.<sup>14</sup> On May 2, 2019, the Commission determined that material injury would be likely to continue or recur within a reasonably foreseeable time.<sup>15</sup> Following affirmative determinations in the five-year reviews by Commerce and the Commission, effective May 17, 2019, Commerce issued a continuation of the antidumping orders on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from China and Vietnam and the countervailing duty order on imports of wind towers from Vietnam.<sup>16</sup>

<sup>&</sup>lt;sup>12</sup> 83 FR 17446, April 19, 2018.

<sup>&</sup>lt;sup>13</sup> 83 FR 19220, May 2, 2018.

<sup>&</sup>lt;sup>14</sup> 83 FR 22960, May 17, 2018.

<sup>&</sup>lt;sup>15</sup> 84 FR 20164, May 8, 2019.

<sup>&</sup>lt;sup>16</sup> 84 FR 22442, May 17, 2019.

## **Previous and related investigations**

The Commission has conducted a number of previous import relief investigations on wind towers or similar merchandise, as presented in table I-3.

			ITC original	
Date	Number	Country	determination	Current status
				Order issued on
2019	701-TA-627	Canada	Affirmative	August 26, 2020
				Order issued on
2019	701-TA-628	Indonesia	Affirmative	August 26, 2020
				Order issued on
2019	701-TA-629	Vietnam	Affirmative	August 26, 2020
				Order issued on
2019	731-TA-1458	Canada	Affirmative	August 26, 2020
				Order issued on
2019	731-TA-1459	Indonesia	Affirmative	August 26, 2020
				Order issued on
2019	731-TA-1460	South Korea	Affirmative	August 26, 2020
				Order issued on
2019	731-TA-1461	Vietnam	Affirmative	August 26, 2020
				Order issued on
2020	701-TA-660	India	Affirmative	December 6, 2021
				Order issued on
2020	701-TA-661	Malaysia	Affirmative	August 4, 2021
				Order issued on
2020	731-TA-1543	India	Affirmative	December 6, 2021
				Order issued on
2020	731-TA-1544	Malaysia	Affirmative	December 6, 2021
				Order issued on
2020	731-TA-1545	Spain	Affirmative	August 16, 2021

 Table I-3

 Wind towers: Previous and related Commission proceedings and current status

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

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

## Commerce's five-year reviews

Commerce announced that it would conduct expedited reviews with respect to the orders on imports of wind towers from China and Vietnam with the intent of issuing the final results of these reviews based on the facts available not later than September 19, 2024.<sup>17</sup> Commerce publishes its Issues and Decision Memoranda and its final results concurrently, accessible upon publication at <u>https://access.trade.gov/public/FRNoticesListLayout.aspx</u> and subsequently on the Commission's Electronic Document Information System (EDIS). Issues and Decision Memoranda contain complete and up-to-date information regarding the background and history of the order, including scope rulings, duty absorption, changed circumstances reviews, and anticircumvention, as well as 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 or countervailing duty orders on imports of wind towers from China and the antidumping duty order on imports of wind towers from Vietnam are noted in the sections titled "The original investigations" and "U.S. imports," if applicable.

<sup>&</sup>lt;sup>17</sup> Letter from Jill E. Pollack, Senior Director, Office VII, AD/CVD Operations, Enforcement and Compliance, U.S. Department of Commerce to Nannette Christ, Director of Investigations, May 22, 2024.

## The product

#### Commerce's scope

Commerce has defined the scope as follows:

The merchandise covered by the Orders is certain wind towers, whether or not tapered, and sections thereof. Certain wind towers are designed to support the nacelle and rotor blades in a wind turbine with a minimum rated electrical power generation capacity in excess of 100 kilowatts and with a minimum height of 50 meters measured from the base of the tower to the bottom of the nacelle (i.e., where the top of the tower and nacelle are joined) when fully assembled.

A wind tower section consists of, at a minimum, multiple steel plates rolled into cylindrical or conical shapes and welded together (or otherwise attached) to form a steel shell, regardless of coating, end-finish, painting, treatment, or method of manufacture, and with or without flanges, doors, or internal or external components (e.g., flooring/ decking, ladders, lifts, electrical buss boxes, electrical cabling, conduit, cable harness for nacelle generator, interior lighting, tool and storage lockers) attached to the wind tower section. Several wind tower sections are normally required to form a completed wind tower.

Wind towers and sections thereof are included within the scope whether or not they are joined with nonsubject merchandise, such as nacelles or rotor blades, and whether or not they have internal or external components attached to the subject merchandise.

Specifically excluded from the scope are nacelles and rotor blades, regardless of whether they are attached to the wind tower. Also excluded are any internal or external components which are not attached to the wind towers or sections thereof. <sup>18</sup>

<sup>&</sup>lt;sup>18</sup> 84 FR 22442, May 17, 2019.

#### **U.S. tariff treatment**

Wind towers are currently imported under Harmonized Tariff Schedule of the United States ("HTSUS" or "HTS") statistical reporting numbers 7308.20.0020 and 8502.31.0000.<sup>19</sup> The general rate of duty is "Free" for HTS subheading 7308.20.00 and 2.5 percent ad valorem for HTS subheading 8502.31.00.<sup>20</sup> Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Effective August 23, 2018, wind towers originating in China, imported as a tower or tower section(s) alone under HTS subheading 7308.20.00, are subject to an additional 25 percent ad valorem duty under section 301 of the Trade Act of 1974.<sup>21</sup> Effective July 6, 2018, wind towers originating in China, imported as part of a wind turbine with an appropriate number of nacelles and rotor blades under HTS subheading 8502.31.00, are subject to an additional 25 percent ad valorem duty under section 301 of the Trade Act of 1974. Products of China subject to section 301 tariffs also continue to be subject to all applicable duties and charges, including the additional ad valorem rate of duty imposed by the HTS heading.<sup>22</sup>

Conversely, wind towers originating in China and Vietnam are not subject to an additional 25 percent ad valorem duty on steel articles, effective March 23, 2018, under section 232 of the Trade Expansion Act of 1962, as amended.<sup>23</sup>

<sup>&</sup>lt;sup>19</sup> Wind towers are classified under HTS statistical reporting number 7308.20.0020 when imported as a tower or tower section(s) alone. Wind towers imported as part of a complete wind turbine with an appropriate number of nacelles, generators, and rotor blades are classifiable under HTS subheading 8502.31.00, which covers wind-powered electric generating sets. Both statistical reporting numbers include products other than wind turbine towers.

<sup>&</sup>lt;sup>20</sup> USITC, HTSUS (2024) Revision 1, Publication 5491, January 2024, pp. 73-24, 73-43, 85-16, 85-85.

<sup>&</sup>lt;sup>21</sup> 83 FR 40823, August 16, 2018. See also HTS heading 9903.88.02 and U.S. notes 20(c) and 20(d) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 1, Publication 5491, January 2024, pp. 99-III-24 – 99-III-26, 99-III-301, 99-III-303 – 99-III-304, 99-III-307 – 99-III-309.

<sup>&</sup>lt;sup>22</sup> 83 FR 28710, June 20, 2018. See also HTS heading 9903.88.01 and U.S. notes 20(a) and 20(b) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 1, Publication 5491, January 2024, pp. 99-III-19 – 99-III-20, 99-III-22, 99-III-301 – 99-III-304, 99-III-307 – 99-III-309.

<sup>&</sup>lt;sup>23</sup> 83 FR 11625, March 15, 2018.

Cut-to-length plate, which accounts for the preponderance of the costs of wind towers, became subject to section 232 tariffs, with duty exemptions, and subsequently quotas and tariff-rate quotas ("TRQs") for imports originating in certain U.S. trade partners.
### Description and uses<sup>24</sup>

Wind turbines consist of three main components--the nacelle, rotor, and tower. The nacelle houses the wind turbine's main power-generating components (i.e., the gearbox, generator, and other components), while the rotor typically consists of three blades and the hub attached to the generator shaft (figure I-1). The nacelle sits atop a tower, which is typically a tubular steel structure for utility-scale wind turbines.<sup>25</sup>



#### Figure I-1 Wind towers: Utility-scale wind turbine

Source: Photo courtesy of DOE/NREL, credit: Dennis Schroeder.

Wind turbines convert the energy from wind to electrical energy. Wind turbines have capacities ranging from less than 1 kilowatt ("kW") to several megawatts ("MW," equivalent to

<sup>&</sup>lt;sup>24</sup> Unless otherwise noted, this information is based on Utility Scale Wind Towers from China and Vietnam, Investigation Nos. 701-TA-486 and 731-TA-1195–1196 (Review), USITC Publication 4888, April 2019 ("First review publication"), pp. I-18 – I-22; and Utility Scale Wind Towers from Canada, Indonesia, Korea, and Vietnam, Investigation Nos. 701-TA-627-629 and 731-TA-1458-1461 (Final), USITC Publication 5101, August 2020, pp. I-15 – I-24, I-31 – I-32.

<sup>&</sup>lt;sup>25</sup> While tubular steel towers are the most common design for utility-scale wind turbines, other tower technologies are being used or are under development, often to meet the increasing size of wind turbines. These include concrete and space frame towers.

1,000 kW). Utility-scale wind turbines have generating capacities that exceed 1 MW.<sup>26</sup> Utility-scale wind turbine sizes continue to increase over time, with the average capacity of a wind turbine installed in the United States increasing from 2.43 MW in 2018 to 3.23 MW in 2022 (figure I-2).<sup>27</sup>





Source: Ryan Wiser, Mark Bolinger, and others, Land-Based Wind Market Report: 2023 Edition, U.S. Department of Energy ("DOE"), Office of Energy Efficiency and Renewable Energy ("O/EERE"), August 2023, p. 27, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition.pdf</u>.

Wind turbines can be installed individually or as part of a larger wind project (i.e., a wind farm). Installations of one to two turbines are often, but not exclusively, for on-site use by entities such as towns and universities. Installations of wind turbines for utilities and

<sup>&</sup>lt;sup>26</sup> By contrast, generating capacities are typically 10 kW for residential-scale onsite wind turbines, 10–50 kW for small commercial-scale onsite wind turbines, 50–250 kW for commercial onsite wind turbines, and 500 kW–1.5 MW for large commercial or industrial wind turbines. WindExchange, "Wind Energy Market Sectors," U.S. Department of Energy ("DOE"), Office of Energy Efficiency and Renewable Energy ("O/EERE"), no date,

https://windexchange.energy.gov/markets#:~:text=The%20U.S.%20Department%20of%20Energy,any% 20other%20commercial%20power%20plant, retrieved June 6, 2024.

<sup>&</sup>lt;sup>27</sup> Ryan Wiser, Mark Bolinger, and others, Land-Based Wind Market Report: 2023 Edition, DOE, O/EERE, August 2023, data files, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition-data\_0.xlsx</u>.

independent power producers<sup>28</sup> can be a single turbine, but more commonly range from several turbines to more than 100. Wind projects and wind turbines, including towers, have a service-life expectancy of at least 20 years.

Utility-scale wind turbines generally use tubular steel towers that consist of multiple sections placed on a foundation and assembled at the project site, with the complete tower height generally ranging from 60 meters (197 feet) to more than 100 meters (328 feet), as measured from the base of the tower to the hub ("hub height") (figure I-3). The base of the tower can be up to 4.5 meters (15 feet) in diameter but varies with tower size. Smaller towers tend to have a smaller diameter base. The tower typically is tapered so that the diameter at the top is smaller than the diameter at the base. The tower comprises about two-thirds of the 200-to 400-short tons weight of the complete turbine, with steel comprising 98 percent of the tower weight (including the foundation). At the base of the tower is a door that allows entry to the tower, inside of which are the tower "internals" such as platforms, ladders, lighting, lifts, and cabling. For the typical structures and internals for each tower section, see figure I-4.

Figure I-3 Wind towers: Installed wind turbines



Source: Photos courtesy of DOE/NREL, credit: Iberdrola Renewables.

<sup>&</sup>lt;sup>28</sup> An independent power producer is an entity that primarily produces power for sale on the wholesale market. It is not a utility, does not own electricity transmission, and does not have a designated service area.

Figure I-4 Wind towers: Tower sections and corresponding internals



Source: Janda, "Wind Tower Manufacturing," Broadwind Energy Inc., 2017, p. 2 (presented at the USITC staff conference, July 30, 2019); Utility Scale Wind Towers from Canada, Indonesia, Korea, and Vietnam, Investigation Nos. 701-TA-627-629 and 731-TA-1458-1461 (Final), USITC Publication 5101, August 2020 ("Final publication"), p. I-19.

The average hub height of wind towers installed in the United States increased from 80.5 meters (264.1 feet) in 2013, to 88.1 meters (289.0 feet) in 2018, and to 98.1 meters (321.8 feet) in 2022 (figure I-2). Towers 80 to 90 meters (262 to 295 feet) in height accounted for most of the market during this period. However, the share of the market accounted for by towers less than 80 meters declined, while the share of 90- to 100-meter (295- to 328-feet) towers substantially increased (figure I-5).<sup>29</sup> Taller towers offer performance advantages by accommodating rotors with longer blades that can capture more energy from the faster and more constant wind speeds occurring at higher altitudes, with less friction from obstacles on

<sup>&</sup>lt;sup>29</sup> Ryan Wiser, Mark Bolinger, and others, Land-Based Wind Market Report: 2023 Edition, DOE, O/EERE, August 2023, p. 28, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition.pdf</u>; data files, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition-data\_0.xlsx</u>.

the earth's surface (figure I-6).<sup>30</sup> Wind projects that came online in 2022 featured average hub heights of 164 meters (538 feet), compared to 158 meters (518 feet) in 2021. Proposed projects for the next few years include even higher hub heights, averaging 195 meters (640 feet), with the tallest turbines in the permitting process exceeding 225 meters (738 feet).<sup>31</sup>





Source: Ryan Wiser, Mark Bolinger, and others, Land-Based Wind Market Report: 2023 Edition, DOE, O/EERE, August 2023, p. 27, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition.pdf</u>; data files, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition-data\_0.xlsx</u>.

<sup>&</sup>lt;sup>30</sup> Elizabeth Hartman, Wind Turbines: the Bigger, the Better, DOE, EERE, August 24, 2023, <u>https://www.energy.gov/eere/articles/wind-turbines-bigger-better</u>.

<sup>&</sup>lt;sup>31</sup> Ryan Wiser, Mark Bolinger, and others, Land-Based Wind Market Report: 2023 Edition, DOE, O/EERE, August 2023, pp. 31–32, <u>https://www.energy.gov/sites/default/files/2023-08/land-based-wind-market-report-2023-edition.pdf</u>.



Figure I-6 Wind towers: Increasing wind turbine heights and blade lengths over time

Rotor Diameter (feet)

Source: Elizabeth Hartman, Wind Turbines: the Bigger, the Better, DOE, EERE, August 24, 2023, <u>https://www.energy.gov/eere/articles/wind-turbines-bigger-better</u>.

For offshore wind projects, towers are designed for structural stability and rigidity to withstand the harsh conditions of marine environments, including strong winds, wave actions, corrosive saltwater, and seabed conditions.<sup>32</sup> In addition, offshore wind tower are larger, with base diameters varying as much as 5 meters (16 feet) to 10 meters (33 feet), and heavier with a 120 meters- (394 feet-) high tower weighing over 2,500 metric tons (2,756 short tons). In shallower waters below 15 meters (49 feet) in depth, offshore towers are commonly installed upon a tubular steel monopile foundation (substructure) driven into the seafloor. Other types of offshore fixed-bottom foundations for deeper waters are shown in figure I-7.<sup>33</sup> About two-thirds of identified offshore wind resources is in deeper waters where conventional fixed-bottom foundations are impractical. U.S. offshore wind projects are developing various types of moored floating foundations suitable for the specific conditions at each site (figure I-8).<sup>34</sup>

<sup>&</sup>lt;sup>32</sup> Information Research Insights, "Global Towers for Off-shore Wind Power Market Status and Future Forecasts to 2029," June 14, 2023, <u>https://www.linkedin.com/pulse/global-towers-off-shore-wind-power-market</u>.

<sup>&</sup>lt;sup>33</sup> Sarah Whiteford, "How Are Offshore Wind Turbines Installed?" OneStep Power, October 30, 2020, <u>https://www.onesteppower.com/post/how-are-offshore-wind-turbines-installed</u>.

<sup>&</sup>lt;sup>34</sup> Elizabeth Hartman, "Top 10 Things You Didn't Know About Offshore Wind Energy," DOE, EERE, August 24, 2023, <u>https://www.energy.gov/eere/wind/articles/top-10-things-you-didnt-know-about-offshore-wind-energy</u>.



Source: Sarah Whiteford, "How Are Offshore Wind Turbines Installed?" OneStep Power, October 30, 2020, <u>https://www.onesteppower.com/post/how-are-offshore-wind-turbines-installed</u>.



Source: Iberdrola S.A., "Floating Offshore Wind Power: a Milestone to Boost Renewables Through Innovation," ©2024, <u>https://www.iberdrola.com/innovation/floating-offshore-</u> wind#:~:text=A%20floating%20offshore%20wind%20platform,it%20with%20buoyancy%20and%20stability, retrieved June 6, 2024.

#### Manufacturing process<sup>35</sup>

Wind towers are produced to the specifications of each individual original equipment manufacturer ("OEM"), and each OEM typically has multiple tower designs. The wind turbine model and characteristics of the project site dictate which tower design will be used in a particular wind project.

Wind towers are produced from cut-to-length steel plates, typically 3 meters (10 feet) wide, 12 meters (40 feet) long, and 0.5 to 2 or more inches thick. Plate thickness is related to the rotor diameter, weight, and design specifications, with some wind turbine OEMs (who are generally the tower purchasers) using lighter towers. The plates at the base of the tower are the thickest and becomes thinner from the base to the top. \*\*\*.

\*\*\*. The plate typically meets either a U.S. specification (such as A36, A572-50, or A709 Grades 36 and 50) or a European specification (such as 10025 Grades S235, S275, and S355). \*\*\*.

Manufacturing of wind towers is a multi-step process which requires a wide variety of large-scale fabrication procedures (figure I-9). Depending on the overall height and design, the tower is generally manufactured and transported as three to five sections for assembly at the wind project site. The major steps are (1) plate cutting and rolling, (2) can welding, (3) can-to-can welding, (4) flange welding, (5) internal-supports installation, (6) door-frame installation, (7) metallizing and painting, and (8) final internals installation.

<sup>&</sup>lt;sup>35</sup> Unless otherwise noted, this information is based on Investigation Nos. 701-TA-486 and 731-TA-1195–1196 (Review): Utility Scale Wind Towers from China and Vietnam, Confidential Report, INV-RR-014, March 25, 2019 ("First review confidential report"), pp. I-28 – I-33; first review publication, pp. I-22 – I-26; and Utility Scale Wind Towers from Canada, Indonesia, Korea, and Vietnam, Investigation Nos. 701-TA-627-629 and 731-TA-1458-1461 (Final), USITC Publication 5101, August 2020, pp. I-25 – I-33.

#### Figure I-9 Wind towers: Production process



Source: Utility Scale Wind Towers from China and Vietnam, Investigation Nos. 701-TA-486 and 731-TA-1195-1196 (Final), USITC Publication 4372, February 2013, p. I-14.

In the first step of the production process, steel plates are received, checked for quality, and cleaned. A plasma and/or oxygen acetylene cutter is used to shape each plate, and then the edges of the plate are beveled.

The plate is then moved to a roller, which will form it into a cylindrical or conical shape. The longitudinal seam of the rolled plate is then welded, creating what is known as a can. A typical tower consists of 30 to 40 cans. \*\*\*. The quality of the weld is checked through ultrasonic testing. \*\*\*. A flange (through which bolts can be inserted during tower assembly) is then welded onto the cans that will be at the top and bottom of each tower section.

The individual cans are then welded together, creating a tower section. The tower sections vary in length and depend on the height of the tower and number of sections.<sup>36</sup> The welds are again checked, and brackets, clips, and lugs to which internals can be attached are welded to the interior of the tower. A door is added to the base section by cutting an opening for the door, welding a frame to the tower, and attaching the door. \*\*\*.

The tower sections are next blasted with grit to eliminate debris and create a rough surface that improves paint adherence. Portions of the tower surface may next be metalized<sup>37</sup> to reduce rust and corrosion. Towers are then painted with one or more layers on the interior and two or more layers on the exterior. It takes about 12 hours to paint and cure a tower section. After the "internals" are installed, the tower undergoes a quality-control inspection process.

The end of each tower section is covered with a tarp, and then moved to the storage area. Shipment of the towers to the wind project site is usually handled by the customer. \*\*\*. Towers are usually shipped from U.S. producers' plants by either rail or truck, though barges can also be used to ship

<sup>&</sup>lt;sup>36</sup> A taller tower does not necessarily require longer sections as the section lengths for an 80-meter tower that uses three sections can be longer than a 100-meter tower that uses five sections. However, a 100-meter tower will be substantially heavier overall.

<sup>&</sup>lt;sup>37</sup> Metalizing is "a thermal spray process that involves vaporizing zinc and aluminum alloy wire to impinge it upon the blasted profile steel surface." Utility Scale Wind Towers from China and Vietnam, Inv. Nos. 701-TA-486 and 731-TA-1195-1196 (Final), USITC Publication 4372, February 2013, p. I-13.

towers.<sup>38</sup> \*\*\*.

At onshore project sites, the base section of the tower is lifted by a crane and lowered straight down onto the foundation, over the power unit that sits in the base of the tower (figure I-10). The flange at the base of the tower is attached to the foundation, then the next section of the tower is added and the flanges at each end of the tower sections are bolted together with large structural nuts and bolts. Once all sections of the tower are constructed, the nacelle is added and then the rotor attached to the nacelle.

<sup>&</sup>lt;sup>38</sup> Some of the largest tower sections may be too large to be shipped by rail and need to be shipped by truck.

Figure I-10 Wind towers: Turbine installation on land



Raising the base section, with the foundation platform and power unit in the foreground.



Lowering the base section onto the foundation platform and over the power unit.



Raising and positioning the next tower section over those already in place.



Positioning tower sections for bolting together the flanges.



Raising the nacelle, containing the generator, for mounting onto the top-section flange.



Raising the rotor assembly for mounting onto the generator shaft at the front of the nacelle.

Source: Photos courtesy of DOE/NREL, credit: First Wind (top), Patrick Corkery (center), and Todd Spink (bottom).

For offshore wind projects, the turbine and foundation components are transported by "seajacking" (self-elevating) ships or barges to the project site (figure I-11). After the foundation base is set into the seabed by a shipboard hydraulic pile-driver, the transition piece is lowered

and attached onto the top. This transition piece, which includes a boat-mooring fixture, access ladder, and top platform, serves as the mounting platform protruding above the surface of the water for attaching the base section of the tower. A turbine on a floating foundation is preassembled prior to towing by tugboats and mooring to the seabed at the installation site.





Fixed-bottom wind turbine installation vessel.



Floating wind turbine being towed to the wind farm.

Source: Charlotte Waterman, "The Brain Power Behind Wind Power," Octopus Energy Ltd., May 14, 2022, <u>https://octopus.energy/blog/offshore-wind-farms-explained/</u>.

# The industry in the United States

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

During the final phase of the original investigations, the Commission received U.S. producer questionnaires from six firms, which accounted for the substantial majority of production of wind towers in the United States during 2011.<sup>39</sup> During the first five-year reviews, the Commission received U.S. producer questionnaires from seven firms, which accounted for all U.S. production of wind towers in the United States during 2017.<sup>40</sup>

In response to the Commission's notice of institution in these current reviews, the domestic interested party provided a list of six known and currently operating U.S. producers of wind towers. Three firms providing U.S. industry data in response to the Commission's notice of institution accounted for approximately \*\*\* percent of production of wind towers in the United States during 2023.<sup>41</sup>

<sup>&</sup>lt;sup>39</sup> Original publication, p. III-5.

<sup>&</sup>lt;sup>40</sup> First review publication, p. III-1.

<sup>&</sup>lt;sup>41</sup> Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

# **Recent developments**

Table I-4 presents events in the U.S. industry since the Commission's last five-year reviews.

Wind towers: D	evelopments in	the U.S. industry since January 1, 2018
ltem	Firm	Event
Additional duties	Executive Office of the President	March 2018— The President imposed an additional 25 percent ad valorem duty on imports of steel articles— including cut-to-length plate for manufacturing wind turbines— under section 232 of the Trade Expansion Act of 1962, as amended. The initial and subsequent Presidential Proclamations provided duty exemptions, and subsequently quotas and tariff-rate quotas ("TRQs"), for imports originating in certain U.S. trade partners.
Labor dispute settlement	GRI-Texas	May 2019— GRI Towers Texas Inc. ("GRI-Texas") reached a settlement agreement after the U.S. National Labor Relations Board ("NLRB") received court authorization to seek injunctive relief against the firm under the National Labor Relations Act ("NLRA"). GRI-Texas agreed to reinstate and reimburse employees who were either discharged or suspended during a union organizing campaign. The firm also agreed to recognize and bargain with the Plumbers and Pipefitters Local Union No. 404.
Joint venture	Marmen and Welcon	December 2019— Marmen Energy Co. ("Marmen"), a major North American manufacturer of onshore wind towers, and Welcon AS, a major Danish producer of offshore wind towers, formed a joint venture Marmen-Welcon LLC to develop offshore wind projects in the United States.
New offshore wind farm	Dominion Energy	2020— Dominion Energy Inc's. two wind turbines, with 12 MW of combined generating capacity, commenced operations at its Coastal Virginia Offshore Wind ("CVOW") Farm offshore from southeastern Virginia.
New plant	Equinor and Marmen- Welcon	January 2021— The New York State Energy Research and Development Authority ("NYSERDA") selected the \$350-million investment proposal of Norwegian-based energy firm Equinor ASA, developed with Marmen-Welcon and the Port of Albany, to construct the first U.S. facility to produce offshore wind towers. Wind tower production is anticipated in 2026.
Acquisition	CS Wind	June 2021— CS Wind Corp., a South Korean wind tower producing firm, with production facilities in China and Vietnam, purchased Vestas American Wind Technology's production facility in Pueblo, Colorado. The new CS Wind America Inc. will provide towers to North American wind turbine manufacturers including an agreed-upon amount to Vestas.
New plant	Marmen- Welcon and Smulders	August 2021— Marmen-Welcon announced a strategic partnership with the Smulders Group, a major Belgian multinational steel construction firm, to manufacture transition pieces for offshore wind turbines at the Port of Albany facility for the U.S. market.

Table I-4

Table I-4 ContinuedWind towers: Developments in the U.S. industry since January 1, 2018

ltem	Firm	Event
Infrastructure upgrades	Ventower	July 2022— Among the recent upgrades to the Port of Monroe, Michigan, is the acquisition of a new Manitowoc crawler crane capable of loading the tower sections produced by port-tenant Ventower Industries LLC ("Ventower"), the only U.S. wind tower producer operating at a major port.
Tax credits for wind turbine components	IRS	August 2022— The IRS implemented the Advanced Manufacturing Production Credit (section 45X) to the U.S. Internal Revenue Code ("IRC") under the 2022 Inflation Reduction Act ("IRA"). Among the provisions, section 45X provides production tax credits to manufacturers of wind energy components produced and sold after December 31, 2022, until December 31, 2032. Wind towers are eligible for an annual tax credit of \$0.03 times the total rated electric power-generating capacity (in watts) of the completed wind turbines.
New orders	Broadwind	January 2023— Broadwind Heavy Fabrications Inc. ("Broadwind") announced a \$175 million order from a leading global wind turbines manufacturer, the largest-ever received from this customer. The tower sections, to be produced at the firm's facilities in Abilene, Texas, and Manitowoc, Wisconsin, are to be shipped during 2023 and 2024. The order volume is anticipated to account for approximately one-half of the two facilities' optimal tower production capacity during these two years.
New orders	Arcosa	March 2023— Arcosa Wind Towers Inc. ("Arcosa") announced \$750 million of incoming orders for wind towers with deliveries starting in 2024 and continuing through 2028. The distribution of these new orders was not specified among the firm's current tower facilities located in Clinton, Illinois; Newton, Iowa; and Tulsa, Oklahoma.
New plant	Arcosa	March 2023— Arcosa announced investments totaling between \$55 million and \$60 million to construct a new tower production facility in Belen, New Mexico, which is anticipated to begin production in mid-2024.
Expansion	CS Wind America	April 2023— CS Wind America initiated the expansion of its tower facility in Pueblo, Colorado that will double the production capacity to about 1,000 tower sections annually. The first expansion phase is anticipated to be completed by summer-2024 with the second and third phases to be completed by 2028. To operate the expanded facility 24 hours per day, seven days per week, an additional 850 new employees are anticipated to be hired by 2026, in addition to the 250 new employees hired so far this year.
Expansion	Marmen	May 2023— On the tenth anniversary of its tower facility's founding in Brandon, North Dakota, Marmen announced plans to expand this facility and the workforce with 50 new employees.

# Table I-4 ContinuedWind towers: Developments in the U.S. industry since January 1, 2018

ltem	Firm	Event
Potential new plant	GRI and Mitsui USA	August 2023— GRI Renewable Industries ("GRI"), a manufacturer of wind turbine components, and Mitsui & Co. USA Inc., signed a memorandum of understanding ("MOU") to assess opportunities for forming an investment joint venture to construct a wind tower facility at a U.S. East Coast location to supply the growing U.S. offshore wind sector, with production anticipated to commence in 2026. Nucor Corp. is identified as the potential partner to supply the heavy steel plate for tower production.
Plant opening	Arcosa	Late-April 2024— Arcosa's new tower facility in Belen, New Mexico officially opened after production of the first tower sections. Arcosa plans to expand the facility's the current workforce from 125 employees to 200 employees over the next six months.

Source: 83 FR 11625, March 15, 2018;

NLRB, "Texas Wind Turbine Manufacturer Settles Unfair Labor Practice Charges After NLRB Files for Injunction," News Release, May 9, 2019,

https://content.govdelivery.com/accounts/USNLRB/bulletins/243faac;

Marmen, "Marmen and Welcon Will Build a New Plant for the Fabrication of Offshore Wind Towers in New York State," Press Release, January 13, 2021, <u>https://marmeninc.com/content/file/marmen-and-welcon-to-build-new-plant-for-offshore-wind-towers-fabrication-press-release.pdf;</u>

Welcon, "Marmen and Welcon Will Build a New Plant for the Fabrication of Offshore Wind Towers in New York State," Press Release, January 13, 2021, <u>https://www.welcon.dk/news/marmen-and-welcon-will-build-a-new-plant-for-the-fabrication-of-offshore-wind-towers-in-new-york-state/;</u>

Heather Doty, "What Does Offshore Wind Energy Look Like Today?" DOE, EERE, August 24, 2023, https://www.energy.gov/eere/wind/articles/what-does-offshore-wind-energy-look-today;

Walter Musial, Paul Spitsen, and others, Offshore Wind Market Report: 2023 Edition, DOE, EERE, May 31, 2023, pp. 17, 19, <u>https://www.energy.gov/sites/default/files/2023-09/doe-offshore-wind-market-report-2023-edition.pdf</u>;

Marmen, "Update on Upcoming Plant in Albany, New York, Marmen Welcon is Expanding and Opening a Plant in Albany, New York," Job Opening Notice, No date, <u>https://marmeninc.com/en/careers/working-in-the-usa/update-on-upcoming-plant-in-albany-new-york</u>, retrieved May 31, 2024;

Matthew Mercure, "CS Wind Acquiring Vestas Pueblo Tower Factory, North American Windpower," North American Windpower ("NAWP"), June 3, 2021, <u>https://nawindpower.com/cs-wind-signs-agreement-to-acquire-vestas-pueblo-towerfactory;</u>

Marmen, "Marmen Welcon and Smulders to Produce Offshore Wind Transition Pieces at the Port of Albany, New York," Press Release, August 24, 2021,

https://marmeninc.com/content/file/20210824-marmen-welcon-smulders-press-release-en-vf.pdf; Port of Monroe, "Trade Winds Blowing at the Port of Monroe," July 14, 2022,

https://portofmonroe.com/trade-winds-blowing-at-the-port-of-monroe/;

U.S. Department of Energy ("USDOE"), Office of Energy Efficiency and Renewable Energy ("OEERE"), Advancing the Growth of the U.S. Wind Industry: Federal Incentives, Funding, and Partnership Opportunities, DOE/GO-102022-5832, December 2023, p. 3,

https://www.energy.gov/sites/default/files/2023-12/EERE-wind-WETOFunding-TaxdayFactsheet-FY23-Dec-v2.pdf;

USDOE, OEERE, "Production Tax Credit and Investment Tax Credit for Wind Energy," Wind Exchange website, no date, <u>https://windexchange.energy.gov/projects/tax-credits</u>, retrieved June 3, 2024;

U.S. Department of the Treasury ("Treasury"), IRS, "Treasury, IRS Issue Guidance for the Advanced Manufacturing Production Credit," News Release IR-2023-238, December 14, 2023,

https://www.irs.gov/newsroom/treasury-irs-issue-guidance-for-the-advanced-manufacturing-productioncredit;

# Table I-4 ContinuedWind towers: Developments in the U.S. industry since January 1, 2018

Source: U.S. Department of the Treasury, IRS, "Section 45X Advanced Manufacturing Production Credit," 88 FR 86844, December 15, 2023, https://www.federalregister.gov/documents/2023/12/15/2023-27498/section-45x-advanced-manufacturing-production-credit; Broadwind, "Broadwind Announces Transformational Two-Year, \$175 Million Wind Tower Order with Global Wind Turbine Manufacturer," News Release, January 10, 2023, https://investors.bwen.com/investor-news/investor-news-details/2023/Broadwind-Announces-Transformational-Two-Year-175-Million-Wind-Tower-Order-With-Global-Wind-Turbine-Manufacturer/default.aspx: Arcosa, "Arcosa Inc. Announces \$750 Million of Additional Wind Tower Orders and Plans for New Facility in New Mexico," Press Release, March 14, 2023, https://ir.arcosa.com/news-events/pressreleases/newsdetails/2023/Arcosa-Inc.-Announces-750-Million-of-Additional-Wind-Tower-Orders-and-Plans-for-New-Facility-in-New-Mexico/default.aspx; Arcosa, "Locations" webpage, ©2024, https://arcosatowers.com/locations/, retrieved June 6, 2024; Burns & McDonnell, "CS Wind Breaks Ground on Expansion at World's Largest Wind Turbine Tower Manufacturing Plant, Plans to Create 850 New Jobs in Pueblo, Colorado," News Release, April 4, 2023, https://477837.fs1.hubspotusercontentna1.net/hubfs/477837/BMcD Web Assets/Insights%20and%20News/News/2023-04/RELEASE-MK-CS-Wind-Breaks-Ground-on-Expansion-at-Wind-Turbine-Tower-Manufacturing-Plant.pdf; Marmen, "Marmen Energy is Breaking Ground on Plant Expansion, Hiring 50 New People, and Celebrating 10 Years of Success," News Release, May 26, 2023, https://marmeninc.com/content/file/marmen-energy-expansion-pr-52623.pdf: GRI, "GRI Renewable Industries and Mitsui Signed an Memorandum of Understanding for the Investment in an Industrial Plant for US Offshore Wind Sector," News Release, August 17, 2023, https://www.gri.com.es/en/noticia/gri-renewable-industries-and-mitsui-signed-a-memorandum-ofunderstanding-for-the-investment-in-an-industrial-plant-for-us-offshore-wind-sector/: Megan Gleason, "First Wind Towers Come Off Arcosa Manufacturing Line," Albuquerque Journal, April 26, 2024, https://www.abgjournal.com/business/first-wind-towers-come-off-arcosa-manufacturingline/article 184936aa-0423-11ef-9218-6bd5a0cd3747.html; Wind Tower Trade Coalition's Response to Notice of Institution, May 1, 2024, pp., 22, 23-24, exh. 14, exh. 15.

### 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 reviews.<sup>42</sup> Table I-5 presents a compilation of the trade and financial data submitted from all responding U.S. producers in the original investigations, first five-year reviews and current five-year reviews.<sup>43</sup>

<sup>&</sup>lt;sup>42</sup> Individual company trade and financial data are presented in app. B.

<sup>&</sup>lt;sup>43</sup> U.S. producer trade and financial aata in these current reviews includes from data from \*\*\*.

# Table I-5Wind towers: Trade and financial data submitted by U.S. producers, by period

Item	Measure	2011	2017	2023
Capacity	Quantity	***	4,092	***
Production	Quantity	***	2,780	***
Capacity utilization	Ratio	***	67.9	***
U.S. shipments	Quantity	***	2,658	***
U.S. shipments	Value	***	835,570	***
U.S. shipments	Unit value	\$***	\$314,360	\$***
Net sales	Value	766,495	835,570	***
COGS	Value	687,080	701,805	***
COGS to net sales	Ratio	89.6	84.0	***
Gross profit or (loss)	Value	79,415	133,765	***
SG&A expenses	Value	65,286	28,004	***
Operating income or (loss)	Value	14,129	105,761	***
Operating income or (loss) to net				
sales	Ratio	1.8	12.7	***

Quantity in units; value in 1,000 dollars; unit value in dollars per unit; ratio in percent

Source: For the years 2011 and 2017, data are compiled using data submitted in the Commission's original investigations and full first five-year reviews, respectively. For the year 2023, data are compiled using data submitted by domestic interested party. Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

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

### 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. 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>44</sup>

In its original determinations and its full first five-year review determinations, the Commission defined a single domestic like product consisting of all wind towers coextensive with Commerce's scope definition. In its original determinations and its full first five-year review determinations, the Commission defined the domestic industry as all domestic producers of the domestic like product.<sup>45</sup>

<sup>&</sup>lt;sup>44</sup> Section 771(4)(B) of the Tariff Act of 1930, 19 U.S.C. § 1677(4)(B).

<sup>&</sup>lt;sup>45</sup> 89 FR 22445, April 1, 2024.

### **U.S. importers**

During the final phase of the original investigations, the Commission received U.S. importer questionnaires from 11 firms, which accounted for over 95 percent of total U.S. imports of wind towers from China and Vietnam during January 2009 to June 2012.<sup>46</sup> Import data presented in the original investigations are based on questionnaire responses. During the first five-year reviews, the Commission received U.S. importer questionnaires from six firms, which accounted for all U.S. imports of wind towers from China and Vietnam during 2017.<sup>47</sup> Import data presented in the first reviews are based on questionnaire responses.

Although the Commission did not receive responses from any respondent interested parties in these current reviews, in its response to the Commission's notice of institution, the domestic interested party provided a list of five potential U.S. importers of wind towers.<sup>48</sup>

### **U.S. imports**

Table I-6 presents the quantity, value, and unit value of U.S. imports from China and Vietnam as well as the other top sources of U.S. imports (shown in descending order of 2023 imports by quantity).

<sup>&</sup>lt;sup>46</sup> Original publication, p. IV-1.

<sup>&</sup>lt;sup>47</sup> First review publication, p. I-8.

<sup>&</sup>lt;sup>48</sup> Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

#### Table I-6 Wind towers: U.S. imports, by source and period

U.S. imports from	Measure	2018	2019	2020	2021	2022	2023
China	Quantity	3	16	3	6	11	2
Vietnam	Quantity	107	497	20			
Subject sources	Quantity	109	513	23	6	11	2
Germany	Quantity			1		7	576
South Korea	Quantity	264	378	99	257	205	41
India	Quantity		139	784	220	11	30
All other sources	Quantity	501	906	2,102	1,188	271	152
Nonsubject sources	Quantity	765	1,423	2,986	1,666	494	798
All import sources	Quantity	874	1,936	3,009	1,672	505	800
China	Value	815	8,797	877	1,818	5,189	642
Vietnam	Value	21,986	107,023	3,613			
Subject sources	Value	22,801	115,820	4,490	1,818	5,189	642
Germany	Value	38	20	6,981	706	673	177,025
South Korea	Value	59,737	91,834	22,828	68,231	52,122	9,678
India	Value	21	34,045	190,190	59,869	4,944	8,257
All other sources	Value	165,074	260,120	652,446	385,042	121,321	76,886
Nonsubject sources	Value	224,870	386,019	872,445	513,849	179,061	271,846
All import sources	Value	247,671	501,839	876,935	515,667	184,250	272,488
China	Unit value	271,608	549,785	292,199	303,074	471,760	320,859
Vietnam	Unit value	205,476	215,339	180,662			
Subject sources	Unit value	209,182	225,770	195,211	303,074	471,760	320,859
Germany	Unit value			6,981,157		96,198	307,335
South Korea	Unit value	226,278	242,946	230,583	265,492	254,253	236,039
India	Unit value		244,930	242,589	272,133	449,457	275,241
All other sources	Unit value	329,488	287,108	310,393	323,837	447,680	519,502
Nonsubject sources	Unit value	293,948	271,271	292,178	308,433	362,471	340,659
All import sources	Unit value	283,376	259,214	291,437	308,413	364,851	340,610

Quantity in units; value in 1,000 dollars; unit value in dollars per unit

Source: Compiled from official Commerce statistics for HTS statistical reporting number 7308.20.0020, accessed May 24, 2024. These data may be overstated as HTS statistical reporting numbers 7308.20.0020 may contain products outside the scope of these reviews. Additionally, Commerce determined that merchandise produced and exported by CS Wind is excluded from the antidumping duty order with respect to imports from Vietnam. 82 FR 15493, March 26, 2017. Quantity data for HTS statistical number 7308.20.0020 is presented in kilograms and has been converted into number of towers using the following conversion rate from the previous five-year review: 1 tower = 132,449 kilograms. On August 26, 2020, Commerce issued a countervailing duty order on wind towers from Vietnam. 85 FR 52543, August 26, 2020.

Note: Because of rounding, figure may not add to total shown. Zeros, null values, and undefined calculations are suppressed and shown as "---".

### Cumulation considerations<sup>49</sup>

In assessing whether imports should be cumulated in five-year reviews, the Commission considers, among other things, whether there is a likelihood of a reasonable overlap of competition among subject imports and the domestic like product. Additional information concerning geographical markets and simultaneous presence in the market is presented below.<sup>50</sup>

Imports from China were reported in 56 of the 72 months between 2018 and 2023. Imports from Vietnam were reported in 16 of the 36 months between 2018 and 2020. No imports from China were reported in nine months of 2023. No imports from Vietnam were reported between 2021 and 2023.

Imports from China entered through all four border regions (northern, southern, eastern, and/or western) in all years from 2018 through 2023, with the exception of 2022 where all imports were entered through eastern, northern, and southern borders of entry. Imports of wind towers from China in 2024 entered through all four border regions. All imports from Vietnam entered through southern borders of entry in all years from 2018 through 2020. There were no imports of wind towers from Vietnam from 2021 through 2023.

### Apparent U.S. consumption and market shares

Table I-7 presents data on U.S. producers' U.S. shipments, U.S. imports, apparent U.S. consumption, and market shares.

<sup>&</sup>lt;sup>49</sup> Unless otherwise noted, this information is based on official U.S. import statistics for HTS statistical reporting number 7308.20.0020.

<sup>&</sup>lt;sup>50</sup> In addition, available information concerning subject country producers and the global market is presented in the next section of this report.

# Table I-7 Wind Towers: Apparent U.S. consumption and market shares, by source and period

Source	Measure	2011	2017	2023
U.S. producers	Quantity	***	2,658	***
China	Quantity	***	***	2
Vietnam	Quantity	***	***	
Subject sources	Quantity	861	***	2
Nonsubject sources	Quantity	475	***	798
All import sources	Quantity	1,336	1,170	800
Apparent U.S. consumption	Quantity	***	3,828	***
U.S. producers	Value	***	835,570	***
China	Value	***	***	642
Vietnam	Value	***	***	
Subject sources	Value	265,862	***	642
Nonsubject sources	Value	155,942	***	271,846
All import sources	Value	421,804	221,118	272,488
Apparent U.S. consumption	Value	***	1,056,688	***
U.S. producers	Share of quantity	***	69.4	***
China	Share of quantity	***	***	***
Vietnam	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	***	30.6	***
U.S. producers	Share of value	***	79.1	***
China	Share of value	***	***	***
Vietnam	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	***	20.9	***

Quantity in units; value in 1,000 dollars; shares in percent

Source: For the years 2011 and 2017, data are compiled using data submitted in the Commission's original investigations and first five-year reviews. For the year 2023, U.S. producers' U.S. shipments are compiled from the domestic interested party's response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS statistical reporting number 7308.20.0020, accessed May 24, 2024.

Note: Share of quantity is the share of apparent U.S. consumption by quantity in percent; share of value is the share of apparent U.S. consumption by value in percent. Because of rounding, figure may not add to total shown. Zeros, null values, and undefined calculations are suppressed and shown as "---".

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

# The industry in China

### **Producers in China**

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from five firms, which accounted for approximately \*\*\* percent of production of wind towers in China during 2011, and approximately \*\*\* percent of wind towers exports from China to the United States during 2011.<sup>51</sup>

During the first five-year reviews, the Commission did not receive foreign producer/exporter questionnaires from any firms in China.<sup>52</sup>

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested party provided a list of 48 possible producers of wind towers in China.<sup>53</sup>

<sup>&</sup>lt;sup>51</sup> Original confidential report, p. VII-5.

<sup>&</sup>lt;sup>52</sup> First review publication, p. IV-5.

<sup>&</sup>lt;sup>53</sup> Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

# **Recent developments**

Table I-8 presents events in the Chinese industry since the Commission's last five-year reviews.

Table I-8	
Wind towers: Developments in the Chinese industry since January	y 1, 2018

Item	Firm	Event				
New orders	Vestas China	January 2019— Vestas Wind Technology (China) Co. Ltd. ("Vestas China") received an order for 46 V120-2.2 MW wind turbines for a wind farm that included the tallest towers in China with a hub heigh 152 meters (499 feet). In the prior year, Vestas provided wind turbin for another wind farm with hub heights of 137 meters (450 feet), wh was the existing height record in China's wind industry. The provider(s) of the towers was not identified. Vestas China's facility in Tianjin Municipality produces blades, rotors, generators, and nacell but not towers.				
Plant opening	Titan Wind	December 2019— Tianshun Wind Energy (Suzhou) Co. Ltd. ("Tita Wind") officially commenced production of tower sections at its new Heze facility in Juancheng Town, Shandong Province.				
New product	Titan Wind	December 2019— Titan Wind successfully produced its first 6.85- meter (22.47-feet)-diameter large-diameter tower section at its fac at Baotou, Inner Mongolia Autonomous Region.				
New orders	Vestas China	March 2020— Vestas China received the first order for the V155-3 MW turbine variant for two low wind-speed projects in China. The provider(s) of the towers was not identified.				
New plant	Titan Wind	May 2020— Tianshun Wind Energy broke ground on its new Sha tower-section facility in Ulanqab City, Inner Mongolia Autonomous Region. Annual production capacity for this facility is projected to 500 tower-section sets.				
Plant openings	Dajin	2020–21— Dajin Heavy Industry Co. Ltd. ("Dajin") commenced production at its new onshore-tower facilities in the Xing An'meng Economic Development Zone, Inner Mongolia, and in Zhang Jiakou, Hebei Province. The Xing An'meng facility has an annual capacity of 100,000 metric tons (110,231 short tons) and the Zhang Jiakou facility has an annual production capacity of 200,000 metric tons (220,462 short tons).				
Plant opening	Titan Wind	March 2021— Titan Wind commenced operations at its new Shangdu tower-section facility in Ulanqab City, Inner Mongolia Autonomous Region, on March 1, and shipped the first tower sections 10 days later. Once fully operational, the facility's annual production capacity was projected to be 120,000 metric tons (132,277 short tons).				
New plant	Dajin	2022— Dajin established an offshore-monopiles and onshore-towers facility in Yangjiang Port, Guangdong Province. This facility has an annual capacity of 200,000 metric tons (220,462 short tons).				

Table I-8 ContinuedWind towers: Developments in the Chinese industry since January 1, 2018

ltem	Firm	Event
New plants	Titan Wind	January 2022— Tianshun Wind Energy announced the commencement of operations at its new tower-sections facility in Puyang, Henan Province. The firm also completed construction of its new tower-sections facility in Tongliao City, Inner Mongolia Autonomous Region, with operations being anticipated to commence in the first quarter of the year.
New plant	Goldwind and CRRC	April 2022— Goldwind Science & Technology Co. Ltd. ("Goldwind") and CRRC Corp. Ltd. agreed to invest a total of 4.05 billion Chinese yuan renminbi ("CNY") (\$620 million) into an offshore wind turbine production facility in Dongying City, Shandong Province. More specifically for each partner:
		Goldwind will invest 2.05 billion CNY (\$314 million) in a production base for offshore wind turbines with an annual generating capacity of 1.5 gigawatts ("GW") and will produce offshore wind turbines with total generating capacity of 8.5–13.6 megawatts ("MW").
		CRRC Wind Power (Shandong) Co. Ltd. will establish a production base capable of providing 240 sets of complete wind turbines, 300 sets of towers and steel pipe piles, and 300 sets of blades annually.
New plant	Dajin	2023— Dajin established an offshore-towers, monopoles, transition pieces, and floating-foundations production facility in Panjin City, Liaoning Province. This facility has an annual capacity of 500,000 metric tons (551,156 short tons).
New plant	Dajin	October 2023— Dajin completed the new B4 Coating Workshop that will double the coating capacity at its facility in the Penglai District of Yantai City, Shandong Province. The Penglai facility has an annual capacity of 500,000 metric tons (551,156 short tons) for producing offshore wind towers, monopiles, multi-piles, and floating-foundation products.
New product	Titan Wind	January 2024— Tianshun Wind Energy successfully delivered its newly developed prototype Yunda-Zhangbei 10-MW onshore tower sections.
New orders	Chengxi Shipyard	First-quarter 2024— Chengxi Shipyard Co. Ltd. announced the delivery of 44 sets wind towers on schedule and signed tower supply contracts with wind-turbine manufacturers Enercon Global GmbH and Goldwind.

Source: Vestas China, "Vestas Receives 101 MW Wind Energy for V120-2.2 MW Wind Turbines Featuring the Tallest Towers in China," News Release, January 11, 2019, <a href="https://www.vestas.com/en/media/company-news/2019/vestas-receives-101-mw-order-for-v120-2-2-mw-">https://www.vestas.com/en/media/company-news/2019/vestas-receives-101-mw-order-for-v120-2-2-mw-</a>

https://www.vestas.com/en/media/company-news/2019/vestas-receives-101-mw-order-tor-v120-2turbines-f-c2963238;

EVwind, "Vestas Receives 101 MW Wind Energy for V120-2.2 MW Wind Turbines Featuring the Tallest Towers in China," January 11, 2019, <u>https://www.evwind.es/2019/01/11/vestas-receives-101-mw-wind-energy-for-v120-2-2-mw-wind-turbines-featuring-the-tallest-towers-in-china/65749</u>;

Power Insider ("PI"), "North China City Becomes Hotspot for Foreign Investment," November 30, 2020, https://www.pimagazine-asia.com/north-china-city-becomes-hotspot-for-foreign-investment/;

Titan Wind, "Juancheng Tower Factory Officially Put Into Production," News Release, March 23, 2020, <u>http://www.titanwind.com.cn/news/1921.html;</u>

# Table I-8 ContinuedWind towers: Developments in the Chinese industry since January 1, 2018

Source: Titan Wind, "The First Large-Diameter Tower Prototype of Baotou Factory was Successfully Put Into Trial Production," News Release, March 23, 2020, <u>http://www.titanwind.com.cn/news/1923.html;</u> Vestas China, "Vestas Wins First Order for New V155-3.3 MW Turbine in China," News Release, March 4, 2020, <u>https://www.vestas.com/en/media/company-news/2020/vestas-wins-first-order-for-new-v155-3-3-mw-turbine-in--c3051996;</u>

Titan Wind, "The Groundbreaking Ceremony of Tianshun Wind Energy Shangdu Wind Power Tower Project was Grandly Held," News Release, May 10, 2020, <u>http://www.titanwind.com.cn/news/1975.html;</u> Dajin, "Our Milestone" webpage, ©2023, <u>https://www.dajin.cn/html/aboutus/milestones/</u>, retrieved June 4, 2024;

Dajin, "Facilities & Ports" webpage, ©2023, <u>https://www.dajin.cn/html/manufacture/ports/#3</u>, retrieved June 4, 2024;

Titan Wind, "The Ignition Ceremony of Tianshun Wind Energy Shangdu Tower Factory Was Successfully Held," News Release, March 1, 2021, <u>http://www.titanwind.com.cn/news/2378.html;</u>

Titan Wind, "The First Set of Towers of Tianshun Wind Energy Shangdu Factory was Successfully Delivered," News Release, March 11, 2021, <u>http://www.titanwind.com.cn/news/2379.html;</u>

Equal Ocean, "Tianshun Wind Energy: Puyang Tower Factory of the Company Has Been Put Into Operation, and the Production Capacity Is In the Stage of Gradual Climbing," January 11, 2022, https://equalocean.com/briefing/20220111230111049;

Azure International, "Goldwind and CRRC Signed Contracts with Bozhong Offshore Wind Power Industry Base Worth 4 Billion CNY," April 25, 2022, <u>https://www.azure-international.com/goldwind-and-crrc-signed-contracts-with-bozhong-offshore-wind-power-industry-base-worth-4-billion-cny/;</u>

Dajin, "Completion of the New B4 Coating Workshop in Penglai Facility," News Release, October 20, 2023, <u>https://www.dajin.cn/html/news/2023/1020/79.html;</u>

Titan Wind, "Overcoming the Challenges of Building a 10MW Onshore Wind Power Tower," News Release, January 8, 2024, <u>http://www.titanwind.com.cn/news/2643.html;</u>

iMarine News, "CSSC Chengxi Shipyard Overachieved Its Target of the First Quarter," April 7, 2024, <u>https://www.imarinenews.com/7928.html</u>.

Note: There are numerous new orders that are not included, being of lesser magnitudes and shorter delivery time periods, and not consistently reported.

#### **Exports**

Table I-9 presents export data for iron and steel towers and lattice masts, a category that includes wind towers and out-of-scope products, from China (by export destination in descending order of quantity for 2023). The Philippines was the top destination market in 2023, accounting for 13.4 percent of exports from China, followed by Malaysia (6.1 percent), and Japan (5.6 percent). Together these top three accounted for approximately one-fourth (25.2 percent) of all destination markets in that year.

# Table I-9 Iron and steel towers and lattice masts: Quantity of exports from China, by destination and period

Quantity in short tons						
Destination market	2018	2019	2020	2021	2022	2023
Philippines	17,190	41,873	100,221	88,770	60,231	45,708
Malaysia	4,437	12,317	5,812	1,292	17,235	20,873
Japan	19,352	15,960	10,543	10,277	10,906	19,187
Uruguay	32	2	81	178	2,943	17,821
Pakistan	18,797	86,150	75,931	42,454	35,267	13,080
Australia	7,691	13,336	8,066	11,476	20,553	11,702
Chile	634	2,431	2,037	457	4,906	11,380
Democratic Republic						
of the Congo	3,186	4,460	5,465	4,785	12,096	9,434
Laos	19,770	12,299	13,743	20,869	10,804	9,266
Nigeria	1,213	2,303	8,910	10,002	12,447	8,715
All other markets	271,481	163,872	154,651	158,034	177,793	173,524
All markets	363,780	355,002	385,460	348,593	365,180	340,689

Source: Official exports statistics for China, under HS subheading 7308.20 as reported by China Customs in the Global Trade Atlas Suite database, accessed May 24, 2024. These data may be overstated as HS subheading 7308.20 contains products outside the scope of these reviews.

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

# The industry in Vietnam

#### **Producers in Vietnam**

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from two firms, which accounted for the vast majority of production of wind towers in Vietnam during 2011, and \*\*\* wind towers exports from China to the United States during 2011.<sup>54</sup> During the first five-year reviews, the Commission did not receive foreign producer/exporter questionnaires from any firms in Vietnam.<sup>55</sup>

Although the Commission did not receive responses from any respondent interested parties in these five-year reviews, the domestic interested party provided a list of three possible producers of wind towers in Vietnam.<sup>56</sup>

<sup>&</sup>lt;sup>54</sup> Original confidential report, p. VII-11.

<sup>&</sup>lt;sup>55</sup> First review publication, p. IV-11.

<sup>&</sup>lt;sup>56</sup> Domestic interested party's response to the notice of institution, May 1, 2024, exh. 1.

### **Recent developments**

Table I-10

Table I-10 presents events in the Vietnamese industry since the Commission's last fiveyear reviews.

Wind towers: D	Vind towers: Developments in the Vietnamese industry since January 1, 2018					
ltem	Firm	Event				
New equipment	CS Wind Vietnam	December 2019— CS Wind Vietnam ordered two "Super Gloria" heavy-duty reach-stackers from materials-handling equipment manufacturer Kalmar Global to lift and move the larger and heavier tower sections required for larger and heavier offshore wind turbines.				
Plant opening	SGE	2020— Southern Green Energy and Renewable Energy ("SGE") Co. Ltd. signs its first contracts to manufacture wind tower sections and flanges for both domestic and international wind energy projects.				
National energy development plan	Government of Vietnam	May 2023— The "National Electricity Development Plan for 2021– 2030 with a Vision to 2050" ("Power Development Plan 8" or "PDP8") provides production goals for future wind-generated electric power. By 2030: development of onshore wind power capacity to 21,880 megawatts ("MW") and offshore wind power capacity to 6,000 MW. By 2050: further development of offshore wind power capacity to 70,000–91,500 MW, as allowed by technical and cost considerations.				
Expansion	CS Wind Vietnam	March 2024— CS Wind Vietnam completed an \$80-million expansion of its offshore tower facility in Phu My Town, Ba Ria Vung Tau Province, which is anticipated to be fully operational in the second half of this year. This facility is now reportedly the largest in Southeast Asia, with an annual production capacity of 360,000 metric tons (396,832 short tons). It is also capable of producing wider sections up to 10 meters (32.8 feet) compared to the previous 7.0–7.5 meters (23.0– 24.6 feet) maximum diameters.				
New orders	CS Wind Vietnam	April 2024— CS Wind Vietnam produced the first tower sections for the Jeonnam I project, the first commercial-scale offshore wind farm in South Korea.				

Source: Kalmar Global, "Kalmar Helps CS Wind Extend Its Reach," September 30, 2020, https://www.kalmarglobal.com/news--insights/articles/2020/Kalmar-helps-cs-wind-extend-its-reach/;

SRE, "History of Development" webpage, ©2020, <u>https://sre-vn.com/en/introduce/history-of-development/</u>, retrieved May 24, 2024;

Mark Barnes, "Vietnam Government Approves Power Development Plan 8," Vietnam Briefing, May 17, 2023, <u>https://www.vietnam-briefing.com/news/vietnam-power-development-plan-approved.html/;</u> Melissa Cyrill, "Vietnam's National Electricity Development Plan 2021-2030: Roadmap Approved," Vietnam Briefing, April 3, 2024, <u>https://www.vietnam-briefing.com/news/vietnams-national-electricity-development-plan-2021-2030-roadmap-approved.html/;</u>

Government of Vietnam, Office of the Prime Minister, "Approval of the National Electricity Development Plan for 2021–2030 with a Vision to 2050," Decision No. 500/QD-TTg, May 15, 2023 (English translation), https://thuvienphapluat.vn/van-ban/Thuong-mai/Quyet-dinh-500-QD-TTg-2023-Quy-hoach-phat-triendien-luc-quoc-gia-2021-2030-tam-nhin-2050-566461.aspx;

CS Wind, "CS Wind Holds Completion Ceremony for Offshore Wind Tower Expansion in Vietnam," March 19, 2024, <u>https://www.cswind.com/en/media\_room/news/?v=558&board=common&category=news;</u>

# Table I-10 ContinuedWind towers: Developments in the Vietnamese industry since January 1, 2018

Source: Vietnam Ministry of Planning and Investment ("VMPI"), "CS Wind Vietnam, a Subsidiary of South Korea's CS Wind Corporation, Inaugurated an \$80 Million Offshore Wind Tower Facility in Phu My 1 Industrial Park, Ba Ria-Vung Tau, on March 13," Vietnam Investment Review, March 19, 2024, <u>https://vir.com.vn/south-koreas-cs-wind-inaugurates-a-80-million-offshore-wind-tower-plant-109604.html</u>; Adrijana Buljan, "CS Wind Vietnam Rolls Out First Towers for South Korean Offshore Wind Farm," April 15, 2024, <u>https://www.offshorewind.biz/2024/04/15/cs-wind-vietnam-rolls-out-first-towers-for-south-korean-offshore-wind-farm/;</u>

Wind Tower Trade Coalition's Response to Notice of Institution, May 1, 2024, p. 11, exh. 4, exh. 5.

#### **Exports**

Table I-11 presents export data for iron and steel towers and lattice masts, a category that includes wind towers and out-of-scope products, from Vietnam (by export destination in descending order of quantity for 2022).<sup>57</sup> Vietnam's exports are predominantly destined for Western Europe. Germany (25.0 percent), Sweden (22.4 percent), the Netherlands (19.5 percent), Finland (19.3 percent), and the United Kingdom (6.7 percent) together accounted for over nine-tenths (92.9 percent) of all exports from Vietnam in 2022.

<sup>&</sup>lt;sup>57</sup> Statistics for 2023 exports from Vietnam were not consistently available.

# Table I-11Iron and steel towers and lattice masts: Quantity of exports from Vietnam, by destination andperiod

Destination market	2018	2019	2020	2021	2022
Germany	2,317		15,841	30,228	38,622
Sweden	4,106	9,092	15,750	15,447	34,499
Netherlands		55	10,128	6,527	30,073
Finland			15,089	52,132	29,851
United Kingdom	15,549	20,257	6,354	21,939	10,338
Other Asia		11,452	13,760	2,849	9,567
Australia	24,079	46,483	9,592	9,580	669
Cambodia	117	621	223	876	340
New Zealand			1		136
Norway			4,025	1,567	93
All other markets	55,385	83,868	11,220	23,829	105
All markets	101,553	171,827	101,983	164,973	154,293

Quantity in short tons

Source: Official exports statistics for Vietnam, under HS subheading 7308.20 as reported by UN Comtrade in the Global Trade Atlas Suite database, accessed May 24, 2024. These data may be overstated as HS subheading 7308.20 contains products outside the scope of these reviews.

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

Note: Zeros, null values, and undefined calculations are suppressed and shown as "---".

### Third-country trade actions

Based on available information, wind towers from China are currently subject to other antidumping or countervailing duty orders in third-country markets outside the United States (table I-12).<sup>58</sup>

<sup>&</sup>lt;sup>58</sup> Information is not readily available about any third-country duty actions for wind towers originating in Vietnam.

Table I-12		
Wind towers:	<b>Third-country</b>	duty actions

Third-country market	Subject	
and subject product	country	Actions
<b>Canada</b> — Certain steel utility wind towers and sections thereof, a) with or without flanges, doors, or internal or external components attached or adjoined to the wind tower or section; and b) whether or not joined with non-subject merchandise and whether or not they have internal or external components attached.	China	November 2023— In its final investigations, the Canada Border Service Agency ("CBSA") found dumping margins ranging from 89.4 percent to 108.2 percent ad valorem for the responding Chinese exporters and 159.3 percent ad valorem for nonresponding Chinese exporters. The CBSA also found countervailable subsidy margins ranging from 3.0 percent to 5.6 percent ad valorem for the responding Chinese exporters and 21.8 percent ad valorem for nonresponding Chinese exporters.
<b>European Union</b> ("EU")— Certain utility scale wind towers of steel, whether or not tapered, and sections thereof, whether assembled or not, whether or not including an embedded tower foundation section, whether or not joined with nacelles or rotor blades, and that are designed to support the nacelle and rotor blades for use in wind turbines that have electrical power generation capacities— either in onshore or offshore applications— equal to or in excess of 1.00 megawatt ('MW') and with a minimum height of 50 meters measured from the base of the tower to the bottom of the nacelle when fully assembled.	China	December 2021— The European Commission imposed antidumping orders with margins ranging from 7.2 percent to 11.2 percent ad valorem for responding Chinese exporters and 19.2 percent ad valorem for nonresponding Chinese exporters, for five years.
<b>Mexico</b> — Structural steel tubular towers, assembled or unassembled, including sections, for wind energy {English translation}.	China	October 2020— Mexico imposed final antidumping orders with a 21 percent ad valorem margin on wind towers originating in China.
<b>Vietnam</b> — Wind towers, where or not imported as parts of complete wind-powered generator sets.	China	September 2023— Vietnam's Ministry of Industry and Trade initiated an antidumping investigation into wind towers originating in China, but the Ministry reportedly did not provide a scheduled date for its determination and imposition of any preliminary orders.

Source: CBSA, "Statement of Reasons—Final Determinations: Wind Towers," WT 2023 IN, November 2, 2023, <u>https://www.cbsa-asfc.gc.ca/sima-Imsi/i-e/wt2023/wt2023-fd-eng.html</u>;

CBSA, "Measures in Force: Wind Towers," December 5, 2023,

https://www.cbsa-asfc.gc.ca/sima-lmsi/mif-mev/wt-eng.html;

EC, "Commission Imposes Anti-dumping Duties of Imports of Steel Wind Towers from China," December 16, 2021, <u>https://policy.trade.ec.europa.eu/news/commission-imposes-anti-dumpingduties-imports-steel-wind-towers-china-2021-12-16 en;</u>

# Table I-12 ContinuedWind towers: Third-country duty actions since January 1, 2018

Source: EC, "Commission Implementing Regulation (EU) 2021/2239 of 15 December 2021 imposing a Definitive Anti-Dumping Duty on Imports of Certain Utility Scale Steel Wind Towers Originating in the People's Republic of China," Official Journal of the European Union, December 16, 2021, pp. L 450/59–L 450/136, <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2021:450:FULL&from=EN;</u> Government of Mexico, Semi-Annual Report Under Article 16.4 of the Agreement, World Trade Organization ("WTO") Committee on Anti-Dumping Practices G/ADP/N/391/MEX, April 10, 2024, <u>https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N391MEX.pdf&Open=True;</u> Government of Mexico, Secretariat of the Economy, "Final of the Antidumping Investigation on Imports of Wind Towers Originating in the People's Republic of China, Regardless of the Country of Origin," Official Diary of the Federation, October 5, 2020 (English translation),

https://www.dof.gob.mx/nota\_detalle.php?codigo=5601838&fecha=05/10/2020#gsc.tab=0;

Vietnam Chamber of Commerce and Industry ("VCCI"), "Wind Tower– Vietnam Investigates Antidumping (AD18)," WTO Center, September 25, 2023, <u>https://antidumping.vn/wind-tower--vietnam-investigates-antidumping-ad18-n26484.html;</u>

Reuters, "Vietnam Probes Wind Towers Imported from China, Weighs Anti-dumping Tax," September 30, 2023, <u>https://www.reuters.com/markets/asia/vietnam-probes-wind-towers-imported-china-weighs-anti-dumping-tax-2023-09-30/;</u>

Saigon Times, "Vietnam Initiates Anti-Dumping Probe into Chinese Wind Towers," October 2, 2023, <u>https://english.thesaigontimes.vn/vietnam-initiates-anti-dumping-probe-into-chinese-wind-towers/</u>; Wind Tower Trade Coalition's Response to Notice of Institution, May 1, 2024, pp. 10–13, exh. 9, exh. 10, exh. 11, exh. 12, exh. 13.
### The global market

Table I-13 presents global export data for iron and steel towers and lattice masts, a category that includes wind towers and out-of-scope products (by source in descending order of value for 2023). Turkey was the world's leading exporter, accounting for 18.6 percent of the total in 2023, followed by China (12.6 percent), India (11.8 percent), and Spain (11.2 percent). Together, these top four exporters accounted for more than one-half (54.3 percent) of all exports in that year. Vietnam's exports were \$332 million or 8.1 percent of all exports in 2022.<sup>59</sup> South Korea (\$59 million), Indonesia (\$53 million), Canada (\$38 million), and Malaysia (\$1 million), together accounted for 3.8 percent of global exports in 2023.

# Table I-13 Iron and steel towers and lattice masts: Value of global exports by country and period

Exporting country	2018	2019	2020	2021	2022	2023
Turkey	241	251	318	382	595	742
China	492	425	483	541	588	502
India	257	345	354	294	529	469
Spain	317	352	357	369	404	448
Germany	194	250	238	84	110	366
Denmark	507	215	279	407	122	233
Netherlands	48	111	219	59	135	207
Italy	71	76	88	89	99	190
Portugal	95	72	69	137	141	183
United States	31	47	24	27	48	72
All other exporters	1,095	1,177	1,350	1,713	1,342	571
All exporters	3,348	3,321	3,779	4,104	4,111	3,983

Value in millions of dollars

Source: Official exports statistics under HS subheading 7308.20 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed May 24, 2024. These data may be overstated as HS subheading 7308.20 contains products outside the scope of these reviews.

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

<sup>&</sup>lt;sup>59</sup> Official exports statistics for Vietnam, under HS subheading 7308.20 as reported by UN Comtrade in the Global Trade Atlas Suite database, accessed May 24, 2024.

**APPENDIX A** 

FEDERAL REGISTER NOTICES

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

Citation	Title	Link
89 FR 22445 April 1, 2024	Utility Scale Wind Towers From China and Vietnam; Institution of Five-Year Reviews	https://www.govinfo.gov/content/pkg/FR- 2024-04-01/pdf/2024-06743.pdf
89 FR 22373 April 1, 2024	Initiation of Five-Year (Sunset) Reviews	https://www.govinfo.gov/content/pkg/FR- 2024-04-01/pdf/2024-06793.pdf

**APPENDIX B** 

**COMPANY-SPECIFIC DATA** 

\* \* \* \* \* \* \*

**APPENDIX C** 

SUMMARY DATA COMPILED IN PRIOR POCEEDINGS

#### Table C-1 Wind towers: Summary data concerning the U.S. market, 2012-17, January to June 2017, and January to June 2018

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

	Reported data							
			Calenda	ar year			January t	o June
	2012	2013	2014	2015	2016	2017	2017	2018
U.S. consumption quantity:								
Amount	3,935	***	3,328	4,003	4,404	3,828	2,107	***
Producers' share (fn1)	37.4	***	69.5	66.7	70.3	69.4	69.0	***
Importers' share (fn1):								
China	***	***	***	***	***	***	***	***
Vietnam subject sources	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Vietnam nonsubject sources	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***
Nonsubject sources	0.0.0	***	20 5	00.0	00.7	20.0	04.0	***
All Import sources	62.6		30.5	33.3	29.7	30.6	31.0	
U.S. consumption value:	4 005 000	***	4 400 005	4 000 075	4 000 044	4 050 000	005 470	***
Amount	1,395,033	***	1,162,265	1,326,875	1,333,641	1,056,688	605,170	***
Producers' share (fn1)	44.6		/8./	74.8	74.9	79.1	78.0	
Importers' snare (fn1):	***	***	***	***	***	***	***	***
	***	***	***	***	***	***	***	***
Vietnam subject sources	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
All other courses	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***
	55 A	***	21.2	25.2	25.1	20.0	22.0	***
All Import sources	55.4		21.3	20.2	20.1	20.9	22.0	
Chine:								
Cililia.	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Viotnam subject sources:								
	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Linit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Subject sources:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
l Init value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Vietnam nonsubject sources:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
All other sources:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Nonsubject sources:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
All import sources:								
Quantity	2,464	***	1,016	1,331	1,306	1,170	653	***
Value.	772,894	***	247,929	333,875	335,195	221,118	132,928	***
Unit value	\$313,675	***	\$244,025	\$250,845	\$256,658	\$188,990	\$203,565	***
Ending inventory quantity	***	***	***	***	***	***	***	***

Table continued on next page.

### Table C-1---Continued

#### Wind towers: Summary data concerning the U.S. market, 2012-17, January to June 2017, and January to June 2018

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

	Period changes								
	Comparison years Jan-								
-	2012-17	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
U.S. consumption quantity:									
Amount	(2.7)	***	***	20.3	10.0	(13.1)	***		
Producers' share (fn1)	32.1	***	***	(2.7)	3.6	(0.9)	***		
Importers' share (fn1):									
China	***	***	***	***	***	***	***		
Vietnam subject sources	***	***	***	***	***	***	***		
Subject sources	***	***	***	***	***	***	***		
Vietnam nonsubject sources	***	***	***	***	***	***	***		
All other sources	***	***	***	***	***	***	***		
Nonsubject sources	***	***	***	***	***	***	***		
All import sources	(32.1)	***	***	2.7	(3.6)	0.9	***		
U.S. consumption value:									
Amount	(24.3)	***	***	14.2	0.5	(20.8)	***		
Producers' share (fn1)	34.5	***	***	(3.8)	0.0	4.2	***		
Importers' share (fn1):									
China	***	***	***	***	***	***	***		
Vietnam subject sources	***	***	***	***	***	***	***		
Subject sources	***	***	***	***	***	***	***		
Vietnam nonsubject sources	***	***	***	***	***	***	***		
All other sources	***	***	***	***	***	***	***		
Nonsubject sources	***	***	***	***	***	***	***		
All import sources	(34.5)	***	***	3.8	(0.0)	(4.2)	***		
U.S. shipments of imports from:						× /			
China:									
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
Unit value	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
Vietnam subject sources:									
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
Subject sources:									
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
Vietnem neneubiest sources:									
	***	***	***	***	***	***	***		
Quantity	***	***	***	***	***	***	***		
value	***	***	***	***	***	***	***		
	***	***	***	***	***	***	***		
Ending inventory quantity		000				000			
All other sources:	***	***	***	***	***	***	***		
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
Unit value	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
Nonsubject sources:									
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
Unit value	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
All import sources:									
Quantity	(52.5)	***	***	31.0	(1.9)	(10.4)	***		
Value	(71.4)	***	***	34.7	0.4	(34.0)	***		
Unit value	(39.7)	***	***	2.8	2.3	(26.4)	***		
Ending inventory quantity	***	***	***	***	***	***	***		

Table continued on next page.

## Table C-1--Continued Wind towers: Summary data concerning the U.S. market, 2012-17, January to June 2017, and January to June 2018

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

	Reported data							
-			Calenda	ar year			January	to June
-	2012	2013	2014	2015	2016	2017	2017	2018
U.S. producers':								
Average capacity quantity	2,548	2,371	2,876	3,164	3,843	4,092	2,030	2,075
Production quantity	1,564	1,453	2,392	2,727	3,070	2,780	1,479	1,262
Capacity utilization (fn1)	61.4	61.3	83.2	86.2	79.9	67.9	72.9	60.8
U.S. shipments:								
Quantity	1,471	1,304	2,312	2,672	3,098	2,658	1,454	1,345
Value	622,139	426,214	914,336	993,000	998,446	835,570	472,242	435,862
Unit value	\$422,936	326,851	\$395,474	\$371,632	\$322,287	\$314,360	\$324,788	324,061
Export shipments:	. ,	*	. ,	. ,	. ,	. ,	. ,	*
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***
Production workers	1.386	1.543	2.017	2.140	2.254	2.317	2.407	2.153
Hours worked (1.000s)	2.673	2.611	3.474	3.636	3,745	4.099	2.204	1.821
Wages paid (\$1,000)	76.502	97,775	131.254	134,560	145,474	152,633	81.017	70,587
Hourly wages	\$28.62	\$37.45	\$37.78	\$37.01	\$38.84	\$37.24	\$36.76	\$38.76
Productivity (units per 1,000 hours)	0.6	0.6	0.7	0.8	0.8	0.7	0.7	0.7
Unit labor costs	48.914	67.292	54.872	49.344	47.386	54,904	54.778	55.933
Net sales:	- / -	- , -	- ,-	- / -	,	- ,		,
Quantity	1,547	1,482	2,312	2,672	3,098	2,658	1,454	1,345
Value	661.031	503.632	914.336	993,000	998,443	835,570	472.242	435.862
Unit value	\$427,299	\$339,833	\$395,474	\$371,632	\$322,286	\$314,360	\$324,788	\$324,061
Cost of goods sold (COGS)	618,777	462,705	754,193	865,736	832,309	701,805	401,561	382,803
Gross profit of (loss)	42,254	40,927	160,143	127,264	166,134	133,765	70,681	53,059
SG&A expenses	22,881	21,015	27,098	26,074	26,367	28,004	14,104	13,698
Operating income or (loss)	19,373	19,912	133,045	101,190	139,767	105,761	56,577	39,361
Net income or (loss)	(3,762)	(32,157)	118,873	107,307	119,066	79,907	43,102	26,000
Capital expenditures	4,340	43,339	26,718	11,166	71,925	41,113	22,182	11,033
Unit COGS	\$399,985	\$312,217	\$326,208	\$324,003	\$268,660	\$264,035	\$276,177	\$284,612
Unit SG&A expenses	\$14,791	\$14,180	\$11,721	\$9,758	\$8,511	\$10,536	\$9,700	\$10,184
Unit operating income or (loss)	\$12,523	\$13,436	\$57,545	\$37,871	\$45,115	\$39,790	\$38,911	\$29,265
Unit net income or (loss)	(\$2,432)	(\$21,698)	\$51,416	\$40,160	\$38,433	\$30,063	\$29,644	\$19,331
COGS/sales (fn1)	93.6	91.9	82.5	87.2	83.4	84.0	85.0	87.8
Operating income or (loss)/sales (fn1).	2.9	4.0	14.6	10.2	14.0	12.7	12.0	9.0
Net income or (loss)/sales (fn1)	(0.6)	(6.4)	13.0	10.8	11.9	9.6	9.1	6.0

#### Table C-1--Continued Wind towers: Summary data concerning the U.S. market, 2012-17, January to June 2017, and January to June 2018

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

	Period changes								
			Comparis	on years			Jan-Jun		
-	2012-17	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
U.S. producers':									
Average capacity quantity	60.6	(6.9)	21.3	10.0	21.5	6.5	2.2		
Production quantity	77.7	(7.1)	64.6	14.0	12.6	(9.4)	(14.7)		
Capacity utilization (fn1)	6.6	(0.1)	21.9	3.0	(6.3)	(11.9)	(12.0)		
U.S. shipments:									
Quantity	80.7	(11.4)	77.3	15.6	15.9	(14.2)	(7.5)		
Value	34.3	(31.5)	114.5	8.6	0.5	(16.3)	(7.7)		
Unit value	(25.7)	(22.7)	21.0	(6.0)	(13.3)	(2.5)	(0.2)		
Export shipments:									
Quantity	***	***	***	***	***	***	***		
Value	***	***	***	***	***	***	***		
Unit value	***	***	***	***	***	***	***		
Ending inventory quantity	***	***	***	***	***	***	***		
Inventories/total shipments (fn1)	***	***	***	***	***	***	***		
Production workers	67.2	11.3	30.7	6.1	5.3	2.8	(10.6)		
Hours worked (1,000s)	53.3	(2.3)	33.1	4.7	3.0	9.5	(17.4)		
Wages paid (\$1,000)	99.5	27.8	34.2	2.5	8.1	4.9	(12.9)		
Hourly wages	30.1	30.8	0.9	(2.0)	5.0	(4.1)	5.5		
Productivity (units per 1,000 hours)	15.9	(4.9)	23.7	8.9	9.3	(17.3)	3.3		
Unit labor costs	12.2	37.6	(18.5)	(10.1)	(4.0)	15.9	2.1		
Net sales:									
Quantity	71.8	(4.2)	56.0	15.6	15.9	(14.2)	(7.5)		
Value	26.4	(23.8)	81.5	8.6	0.5	(16.3)	(7.7)		
Unit value	(26.4)	(20.5)	16.4	(6.0)	(13.3)	(2.5)	(0.2)		
Cost of goods sold (COGS)	13.4	(25.2)	63.0	14.8	(3.9)	(15.7)	(4.7)		
Gross profit of (loss)	216.6	(3.1)	291.3	(20.5)	30.5	(19.5)	(24.9)		
SG&A expenses	22.4	(8.2)	28.9	(3.8)	1.1	6.2	(2.9)		
Operating income or (loss)	445.9	2.8	568.2	(23.9)	38.1	(24.3)	(30.4)		
Net income or (loss)	(2224.1)	754.8	(469.7)	(9.7)	11.0	(32.9)	(39.7)		
Capital expenditures	847.3	898.6	(38.4)	(58.2)	544.1	(42.8)	(50.3)		
Unit COGS	(34.0)	(21.9)	4.5	(0.7)	(17.1)	(1.7)	3.1		
Unit SG&A expenses	(28.8)	(4.1)	(17.3)	(16.7)	(12.8)	23.8	5.0		
Unit operating income or (loss)	[fn2]	[fn2]	328.3	(34.2)	19.1	(11.8)	(24.8)		
Unit net income or (loss)	[fn2]	[fn2]	(337.0)	(21.9)	(4.3)	(21.8)	(34.8)		
COGS/sales (fn1)	(9.6)	(1.7)	(9.4)	4.7	(3.8)	0.6	2.8		
Operating income or (loss)/sales (fn1).	9.7	1.0	10.6	(4.4)	3.8	(1.3)	(2.9)		
Net income or (loss)/sales (fn1)	10.1	(5.8)	19.4	(2.2)	1.1	(2.4)	(3.2)		

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

fn1.--Reported data are in percent and period changes are in percentage points. fn2.--Undefined.

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

Table C-1 Wind towers: Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

(Quantity=units, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per unit; period changes=percent, except where noted)

_		Reported data				Period changes				
Item	2009	2010	2011	January- 2011	June 2012	2009-11	2009-10	2010-11	JanJune 2011-12	
Item	2000	2010	2011	2011	2012	2000-11	2000-10	2010-11	2011-12	
U.S. consumption quantity:										
Amount	3,842	2,887	***	***	***	***	-24.9	***	***	
Producers' share (1)	53.5	60.2	***	***	***	***	6.7	***	***	
Importers' share (1):	***	***	***	***	***	***	***	***	***	
Vietnam	***	***	***	***	***	***	***	***	***	
Subtotal	15.9	12.7	***	***	***	***	-3.2	***	***	
All other sources	30.6	27.1	***	***	***	***	-3.5	***	***	
Total imports	46.5	39.8	***	***	***	***	-6.7	***	***	
U.S. consumption value:										
Amount	1,248,167	922,282	***	***	***	***	-26.1	***	***	
Producers' share (1)	47.0	57.3	***	***	***	***	10.3	***	***	
China	***	***	***	***	***	***	-0.7	***	***	
Vietnam	***	***	***	***	***	***	***	***	***	
Subtotal	14.8	14.1	***	***	***	***	-0.7	***	***	
All other sources	38.2	28.6	***	***	***	***	-9.6	***	***	
Total imports	53.0	42.7	***	***	***	***	-10.3	***	***	
U.S. shipments of imports from:										
China:	***	***	***	***	***	***	***	***	***	
Valua	***	***	***	***	***	***	***	***	***	
Unit value	***	***	***	***	***	***	***	***	***	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
Vietnam:										
Ouantity	***	***	***	***	***	***	***	***	***	
Value	***	***	***	***	***	***	***	***	***	
Unit value	***	***	***	***	***	***	***	***	***	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
Subtotal (subject):										
Ouantity	610	366	861	429	1.256	41.1	-40.0	135.2	192.8	
Value	185,060	130,165	265,862	135.851	358,974	43.7	-29.7	104.2	164.2	
Unit value	\$303,377	\$355.642	\$308,783	\$316,669	\$285,807	1.8	17.2	-13.2	-9.7	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
All other sources:										
Quantity	1,175	783	475	246	382	-59.6	-33.4	-39.3	55.3	
Value	476,976	263,968	155,942	78,882	137,764	-67.3	-44.7	-40.9	74.6	
Unit value	\$405,937	\$337,124	\$328,299	\$320,659	\$360,639	-19.1	-17.0	-2.6	12.5	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
All sources:										
Quantity	1,785	1,149	1,336	675	1,638	-25.2	-35.6	16.3	142.7	
Value	662,036	394,133	421,804	214,733	496,738	-36.3	-40.5	7.0	131.3	
Unit value	\$370,889	\$343,023	\$315,722	\$318,123	\$303,259	-14.9	-7.5	-8.0	-4.7	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
U.S. producers':	2 2 4 2	3 808	***		***	***	16.6	***	***	
Average capacity quantity	3,343	3,898	***	***	***	***	16.6	***	***	
Capacity utilization (1)	2,009	1,731	***	***	***	***	-13.4	***	***	
U.S. shinments:	01.9	44.9	***	***	***	***	-17.0	***	***	
Quantity	2.057	1 738	***	***	***	***	-15.5	***	***	
Value	586 131	528 149	***	***	***	***	-15.5	***	***	
Unit value	\$284,945	\$303.883	***	***	***	***	6.6	***	***	
Export shipments:										
Ouantity	***	***	***	***	***	***	***	***	***	
Value	***	***	***	***	***	***	***	***	***	
Unit value	***	***	***	***	***	***	***	***	***	
Ending inventory quantity	***	***	***	***	***	***	***	***	***	
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	
Production workers	1,616	1,695	***	***	***	***	4.9	***	***	
Hours worked (1,000s)	3,021	3,332	***	***	***	***	10.3	***	***	
Wages paid (\$1,000s)	85,334	94,340	***	***	***	***	10.6	***	***	
Hourly wages	\$28.25	\$28.31	***	***	***	***	0.2	***	***	
Productivity (units/1,000 hours)	0.7	0.5	***	***	***	***	-24.8	***	***	
Unit labor costs	\$41,059	\$53,878	***	***	***	***	31.2	***	***	
Net sales:										
Quantity	***	***	2,072	969	1,092	***	***	***	12.7	
Value	***	***	766,495	307,139	470,754	***	***	***	53.3	
Unit value	***	***	\$369,930	\$316,965	\$431,093	***	***	***	36.0	
Cost of goods sold (COGS)	***	***	687,080	300,827	443,394	***	***	***	47.4	
Gross profit or (loss)	***	***	79,415	6,312	27,360	***	***	***	333.5	
SG&A expenses	***	***	65,286	28,774	70,751	***	***	***	145.9	
Operating income or (loss)	***	***	14,129	-22,462	-45,591	***	***	***	-95.2	
Capital expenditures	***	***	5,579	15,650	5,044	***	***	***	-80.5	
Unit COGS	***	***	\$331,602	\$310,451	\$406,038	***	***	***	30.8	
Unit operating income or (loss)	***	***	\$51,509	329,093 _\$22.191	\$04,790	***	***	***	118.2	
COGS/sales (1)	***	***	4 10,019 A 08	-923,101	-0.57,135	***	***	***	_3 9	
Operating income or (loss)/			07.0	11.1	77.2				-5.8	
sales (1)	***	***	1.8	-73	-9.2	***	***	***	-19	

(1) "Reported data" are in percent and "period changes" are in percentage points.
 (2) Undefined.
 Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

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. A response was received from domestic interested parties and it provided contact information for the following four firms as top purchasers of utility scale wind towers: \*\*\*. Purchaser questionnaires were sent to these four firms. No firms submitted a response to the Commission's request for information.