

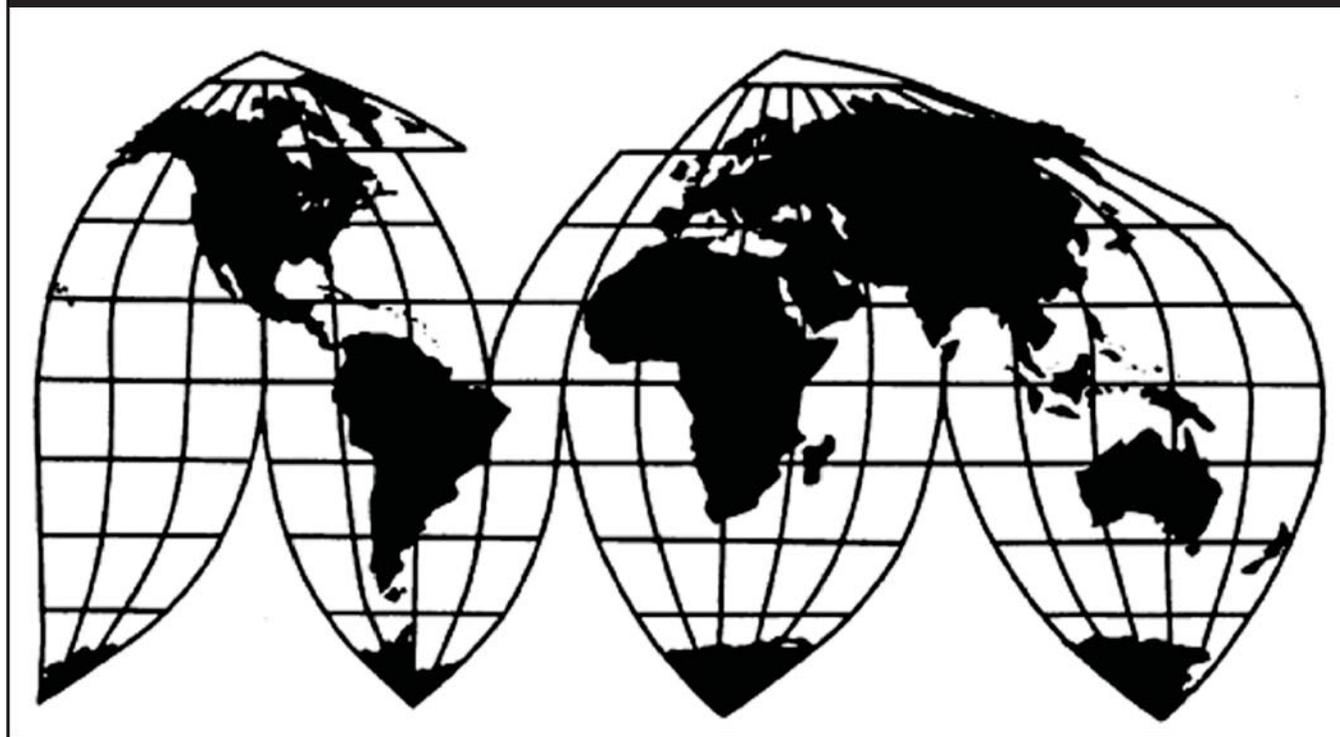
Large Residential Washers from China

Investigation No. 731-TA-1306 (Preliminary)

Publication 4591

February 2016

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

Meredith M. Broadbent, Chairman

Dean A. Pinkert, Vice Chairman

Irving A. Williamson

David S. Johanson

F. Scott Kieff

Rhonda K. Schmidlein

Catherine DeFilippo
Director of Operations

Staff assigned

Christopher Cassise, Senior Investigator

Dennis Fravel, Industry Analyst

Cindy Cohen, Economist

Michele Breaux, Economist

David Boyland, Accountant

Russell Duncan, Statistician

Karl von Schrittz, Attorney

Christopher Cassise, Acting 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

Large Residential Washers from China

Investigation No. 731-TA-1306 (Preliminary)

Publication 4591



February 2016

CONTENTS

	Page
Determination.....	1
Views of the Commission	3
Part I: Introduction	I 1
Background.....	I 1
Statutory criteria and organization of the report	I 1
Statutory criteria	I 1
Organization of report.....	I 3
Market summary	I 3
Summary data and data sources.....	I 4
Previous and related investigations	I 4
Nature and extent of sales at LTFV	I 5
The subject merchandise	I 5
Commerce’s scope	I 5
Scope of this investigation vs. scope of the prior investigations on LRWs	I 7
Tariff treatment.....	I 10
Physical characteristics and uses.....	I 10
Product features.....	I 14
Manufacturing processes	I 19
Domestic like product issues.....	I 23
Domestic like product issues in the Commission’s prior LRWs investigations	I 23
Domestic like product issues in the current LRWs investigation	I 25
Part II: Conditions of competition in the U.S. market.....	II 1
U.S. market characteristics.....	II 1
Channels of distribution	II 2
Geographic distribution	II 3
Supply and demand considerations.....	II 3
U.S. supply	II 3
U.S. demand	II 5

CONTENTS

	Page
Substitutability issues.....	II 8
Lead times	II 9
Factors affecting purchasing decisions.....	II 9
Comparison of U.S. produced and imported LRWs	II 12
Part III: U.S. producers' production, shipments, and employment	III 1
U.S. producers	III 1
Whirlpool	III 2
General Electric	III 3
Staber	III 4
Alliance	III 4
U.S. production, capacity, and capacity utilization	III 5
Potential product shifting in U.S. production facilities	III 5
Whirlpool's foreign trade zone (FTZ) production activities	III 6
U.S. producers' U.S. shipments and exports.....	III 7
U.S. producers' U.S. commercial shipments of LRWs by configuration and efficiency	III 8
U.S. producers' inventories.....	III 9
U.S. producers' imports and purchases	III 9
U.S. employment, wages, and productivity	III 9
Part IV: U.S. imports, apparent U.S. consumption, and market shares	IV 1
U.S. importers.....	IV 1
U.S. imports.....	IV 2
U.S. shipments of imports by configuration and efficiency	IV 3
Negligibility.....	IV 4
Apparent U.S. consumption and U.S. market shares.....	IV 4
Apparent U.S. consumption and U.S. market shares by configuration and efficiency.....	IV 5
Part V: Pricing data.....	V 1
Factors affecting prices	V 1
Raw material costs	V 1

CONTENTS

	Page
U.S. inland transportation costs	V 2
Pricing practices	V 2
Pricing methods.....	V 2
Sales terms and discounts	V 3
Price data.....	V 5
Price trends.....	V 8
Price comparisons	V 8
Lost sales and lost revenue	V 8
Part VI: Financial experience of U.S. producers.....	VI 1
Background.....	VI 1
Operations on LRWs.....	VI 2
Sales volume and value	VI 2
Cost of goods sold	VI 4
Gross profit or loss	VI 6
SG&A expenses and operating income or loss.....	VI 6
Interest expense, other expenses, and net income or loss	VI 7
Capital expenditures and research and development expenses	VI 8
Assets and return on investment.....	VI 8
Capital and investment	VI 9
Part VII: Threat considerations and information on nonsubject countries	VII 1
The industry in China.....	VII 2
Producers of LRWs in China.....	VII 3
Data for the LRW industry in China	VII 5
U.S. inventories of imported merchandise	VII 6
U.S. importers' outstanding orders.....	VII 6
Antidumping or countervailing duty orders in third country markets.....	VII 6
Information on nonsubject countries	VII 7
Exporters of LRWs	VII 7

CONTENTS

	Page
Appendixes	
A. <i>Federal Register</i> notices	A 1
B. List of conference witnesses	B 1
C. Summary data	C 1

Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731 TA 1306 (Preliminary)

Large Residential Washers from China

DETERMINATION

On the basis of the record¹ developed in the subject investigation, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of large residential washers from China, provided for in subheading 8450.20.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (“LTFV”).

COMMENCEMENT OF FINAL PHASE INVESTIGATION

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

BACKGROUND

On December 16, 2015, Whirlpool Corp., Benton Harbor, Michigan, filed a petition with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of large residential washers from China. Accordingly, effective December 16, 2015, the Commission, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)), instituted antidumping duty investigation No. 731 TA 1306 (Preliminary).

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

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of December 22, 2015 (80 FR 79611). The conference was held in Washington, DC, on January 6, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

PART I: INTRODUCTION

BACKGROUND

This investigation results from a petition filed on December 16, 2015, by Whirlpool Corporation (“Whirlpool”), Benton Harbor, Michigan, alleging that an industry in the United States is materially injured and threatened with material injury by reason of imports from China of large residential washers (“LRWs”) ¹ that are allegedly sold in the United States at less than fair value (“LTFV”). The following tabulation provides information relating to the background of this investigation.^{2 3}

Effective date	Action
December 16, 2015	Petition filed with Commerce and the Commission; institution of Commission investigation (80 FR 79611, December 22, 2015)
January 5, 2016	Commerce’s notice of initiation (81 FR 1398, January 12, 2016)
January 6, 2016	Commission’s conference
January 29, 2016	Commission’s vote
February 1, 2016	Commission’s determination
February 8, 2016	Commission’s views

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

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

shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and . . . may consider such other economic factors as are relevant to the

¹ See the section entitled “The Subject Merchandise” in *Part I* of this report for a complete description of the merchandise subject to this investigation.

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

³ A list of witnesses who appeared at the conference is presented in appendix B of this report.

determination regarding whether there is material injury by reason of imports.

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

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

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

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

⁴ Amended by PL 114 27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015

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

Organization of report

Part I of this report presents information on the subject merchandise, alleged dumping margins, and domestic like product. *Part II* of this report presents information on conditions of competition and other relevant economic factors. *Part III* presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. *Part VI* presents information on the financial experience of U.S. producers. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

MARKET SUMMARY

The U.S. market for LRWs totaled \$*** and *** units in 2014. Currently, four firms produce LRWs in the United States, (1) Whirlpool; (2) General Electric Co. ("GE"); (3) Alliance Laundry Systems, LLC ("Alliance"), and (4) Staber Industries, Inc. ("Staber"). These firms account for all U.S. production of LRWs in the United States during the period of investigation (January 1, 2012 through September 30, 2015).⁶ Whirlpool, the largest U.S. producer of LRWs, accounted for *** percent of total U.S. production of LRWs during the period of investigation. Four firms reported importing LRWs from China and nonsubject countries during the period of investigation. Of the four reporting U.S. importers, two firms, Samsung Electronics America, Inc. ("Samsung USA") and LG Electronics USA, Inc. ("LG USA"), U.S. affiliates of foreign producers of LRWs in China, accounted for virtually all of U.S. imports from China.⁷

U.S. producers' U.S. shipments of LRWs totaled *** units valued at \$*** in 2014, and accounted for *** percent of apparent U.S. consumption based on quantity (***) percent based on value). U.S. shipments of imports from China totaled *** units valued at \$*** in 2014, and accounted for *** percent of apparent U.S. consumption based on quantity (***) percent based on value). U.S. shipments of imports from all other sources combined totaled *** units in 2014 valued at \$***, and accounted for *** percent of apparent consumption by quantity (***) percent by value).

⁶ Three other firms (1) BSH Home Appliances ("BSH"), (2) Electrolux Home Products, Inc. ("Electrolux"), and (3) Fisher & Paykel Appliances, Inc. ("Fisher & Paykel")) domestically produced and subsequently ceased domestic production of LRWs prior to the period of investigation. BSH, which produced front load LRWs, closed its production line in New Bern, North Carolina in late 2010. Electrolux closed its LRW production facility in Webster City, Iowa in early 2011 and transferred production to its facility in Juarez, Mexico. Fisher & Paykel, which produced top load LRWs, transferred production from Ohio to Thailand in October 2009. *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. III 1 n. 1 & 2.

⁷ See, *Part IV, U.S. importers.*

SUMMARY DATA AND DATA SOURCES

Appendix C, table C 1, presents a summary of data collected in this investigation. U.S. industry data are based on questionnaire responses from four U.S. producers that accounted for all of U.S. production of LRWs during the period of investigation. Data for U.S. imports from China and nonsubject countries are based on questionnaire responses from U.S. importers and proprietary import data obtained from U.S. Customs and Border Protection (“CBP”). Information on the industry that produces LRWs in China is based on questionnaire responses from three foreign producers and exporters from China and publicly available data.

PREVIOUS AND RELATED INVESTIGATIONS

LRWs have been the subject of prior antidumping and countervailing duty investigations in the United States.⁸ On December 30, 2011, Whirlpool filed antidumping and countervailing duty petitions alleging that an industry in the United States was materially injured by reason of U.S. imports of LRWs⁹ from Korea and Mexico that were being sold in the United States at LTFV and subsidized by the Government of Korea. LG and Samsung participated in these investigations as respondents. In December 2012, Commerce determined that the subject merchandise was sold at LTFV and subsidized by the Government of Korea.¹⁰ In February 2013, the Commission determined that the U.S. industry was materially injured by reason of U.S. imports of LRWs from Korea and Mexico.¹¹ Commerce issued antidumping and countervailing duty orders on LRWs from Korea and Mexico in February 2013.¹²

⁸ *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013).

⁹ The scope definition of LRWs in these prior investigations differs slightly from this current investigation. See, *Part I, Scope of this investigation vs. scope of the prior investigations on LRWs, infra*.

¹⁰ *Large Residential Washers From the Republic of Korea: Final Affirmative Countervailing Duty Determination*, 77 FR 75975, December 26, 2012; *Notice of Final Determination of Sales at Less Than Fair Value: Large Residential Washers From the Republic of Korea*, 77 FR 75988, December 26, 2012; *Notice of Final Determination of Sales at Less Than Fair Value: Large Residential Washers from Mexico*, 77 FR 76288, December 27, 2012.

¹¹ *Large Residential Washers From Korea and Mexico: Determinations*, 78 FR 10636, February 14, 2013.

¹² *Large Residential Washers From Mexico and the Republic of Korea: Antidumping Duty Orders*, 78 FR 11148, February 15, 2013; *Large Residential Washers From the Republic of Korea: Countervailing Duty Order*, 78 FR 11154, February 15, 2013.

NATURE AND EXTENT OF SALES AT LTFV

On January 12, 2016, Commerce published a notice in the *Federal Register* of the initiation of its antidumping investigation on LRWs from China.¹³ The alleged estimated weighted average dumping margins (in percent *ad valorem*), as reported by Commerce are summarized in table I 1 below:

Table I 1

LRWs: Commerce's preliminary weighted average LTFV margins with respect to imports from China

Country	Estimated dumping margin (percent)
China	68.92 to 109.04

Source: *Large Residential Washers From the People's Republic of China: Initiation of Less Than Fair Value Investigation*, 81 FR 1398, January 12, 2016.

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of this investigation as follows:

The products covered by this petition are all large residential washers and certain parts thereof from China.

For purposes of this petition, the term "large residential washers" denotes all automatic clothes washing machines, regardless of the orientation of the rotational axis, with a cabinet width (measured from its widest point) of at least 24.5 inches (62.23 cm) and no more than 32.0 inches (81.28 cm), except as noted below.

Also covered are certain parts used in large residential washers, namely: (1) all cabinets, or portions thereof, designed for use in large residential washers; (2) all assembled tubs¹⁴ designed for use in large residential washers which incorporate, at a minimum: (a) a tub; and (b) a seal; (3) all assembled baskets¹⁵ designed for use in large residential washers which

¹³ *Large Residential Washers From the People's Republic of China: Initiation of Less Than Fair Value Investigation*, 81 FR 1398, January 12, 2016.

¹⁴ A "tub" is the part of the washer designed to hold water.

¹⁵ A "basket" (sometimes referred to as a "drum") is the part of the washer designed to hold clothing or other fabrics.

incorporate, at a minimum: (a) a side wrapper;¹⁶ (b) a base; and (c) a drive hub;¹⁷ and (4) any combination of the foregoing parts or subassemblies.

Excluded from the scope are stacked washer dryers and commercial washers. The term “stacked washer dryers” denotes distinct washing and drying machines that are built on a unitary frame and share a common console that controls both the washer and the dryer. The term “commercial washer” denotes an automatic clothes washing machine designed for the “pay per use” segment meeting either of the following two definitions:

(1) (a) it contains payment system electronics;¹⁸ (b) it is configured with an externally mounted steel frame at least six inches high that is designed to house a coin/token operated payment system (whether or not the actual coin/token operated payment system is installed at the time of importation); (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners;¹⁹ or

(2) (a) it contains payment system electronics; (b) the payment system electronics are enabled (whether or not the payment acceptance device has been installed at the time of importation) such that, in normal operation,²⁰ the unit cannot begin a wash cycle without first receiving a signal from a bona fide payment acceptance device such as an electronic credit card reader; (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin

¹⁶ A “side wrapper” is the cylindrical part of the basket that actually holds the clothing or other fabrics.

¹⁷ A “drive hub” is the hub at the center of the base that bears the load from the motor.

¹⁸ “Payment system electronics” denotes a circuit board designed to receive signals from a payment acceptance device and to display payment amount, selected settings, and cycle status. Such electronics also capture cycles and payment history and provide for transmission to a reader.

¹⁹ A “security fastener” is a screw with a non standard head that requires a non standard driver. Examples include those with a pin in the center of the head as a “center pin reject” feature to prevent standard Allen wrenches or Torx drivers from working.

²⁰ “Normal operation” refers to the operating mode(s) available to end users (*i.e.*, not a mode designed for testing or repair by a technician).

speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners.

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a vertical rotational axis; (2) are top loading;²¹ (3) have a drive train consisting, inter alia, of (a) a permanent split capacitor (PSC) motor,²² (b) a belt drive,²³ and (c) a flat wrap spring clutch.²⁴

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a horizontal rotational axis; (2) are front loading;²⁵ and (3) have a drive train consisting, inter alia, of (a) a controlled induction motor (CIM),²⁶ and (b) a belt drive.

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a horizontal rotational axis; (2) are front loading; and (3) have cabinet width (measured from its widest point) of more than 28.5 inches (72.39 cm).

The products subject to this petition are currently classifiable under subheadings 8450.20.0040 and 8450.20.0080 of the Harmonized Tariff System of the United States (HTSUS). Products subject to this petition may also enter under HTSUS subheadings 8450.11.0040, 8450.11.0080, 8450.90.2000, and 8450.90.6000. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise subject to this petition is dispositive.

Scope of this investigation vs. scope of the prior investigations on LRWs

In the Commission's prior investigations on LRWs, the definition of the scope originally included certain washers with a Department of Energy ("DOE") rated capacity less than 3.7 cubic feet. On May 17, 2012, before the commencement of the Commission's final phase

²¹ "Top loading" means that access to the basket is from the top of the washer.

²² A "PSC motor" is an asynchronous, alternating current (AC), single phase induction motor that employs split phase capacitor technology.

²³ A "belt drive" refers to a drive system that includes a belt and pulleys.

²⁴ A "flat wrap spring clutch" is a flat metal spring that, when engaged, links abutted cylindrical pieces on the input shaft with the end of the concentric output shaft that connects to the drive hub.

²⁵ "Front loading" means that access to the basket is from the front of the washer.

²⁶ A "controlled induction motor" is an asynchronous, alternating current (AC), polyphase induction motor.

investigations, petitioner requested that Commerce narrow the scope of the investigations to exclude these products.²⁷ The request sought to exclude most conventional top load washers, because of their smaller capacities, and high efficiency top load washers with capacities of less than 3.7 cubic feet. Petitioner contended that its request sought to focus the investigations on where competition with subject imports occurred, which in their view occurred in the following segments: (1) high efficiency front load LRWs and (2) high efficiency top load LRWs with capacities of 3.7 cubic feet or greater. On August 6, 2012, Commerce published a notice in the *Federal Register* amending the scope of the investigation by adding the following exclusion:

Also excluded from the scope are automatic clothes washing machines with a vertical rotational axis and a rated capacity of less than 3.7 cubic feet, as certified to the U.S. Department of Energy pursuant to 10 CFR § 429.12 and 10 CFR § 429.20, and in accordance with the test procedures established in 10 CFR Part 430.²⁸

The Commission ultimately included these products in its definition of the domestic like product finding no clear dividing lines between these products and other LRWs produced in the United States.²⁹

The scope definition of the current investigation does not include the exclusion of washing machines with a vertical rotational axis and a rated capacity of less than 3.7 cubic feet. The scope of the current investigation defines LRWs as the Commission defined its domestic like product in the prior final phase investigations with the addition of three new exclusions.³⁰ These exclusions, as defined by petitioner, are as follows:

(1) Top Loading “Low Tech” Residential Washers

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a vertical rotational axis; (2) are top loading;³¹ (3) have a drive train consisting, inter alia, of

²⁷ *Large Residential Washers From the Republic of Korea: Amendment to the Scope of the Countervailing Duty Investigation*, 77 FR 46715, August 6, 2012.

²⁸ *Ibid.*

²⁹ *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. 11.

³⁰ The scope definitions from both the prior LRWs investigations and the current investigation contained exclusions for stacked washer dryers and commercial washers.

³¹ “Top loading” means that access to the basket is from the top of the washer.

(a) a permanent split capacitor (PSC) motor,³² (b) a belt drive,³³ and (c) a flat wrap spring clutch.³⁴

(2) Front Loading “Low Tech” Residential Washers

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a horizontal rotational axis; (2) are front loading;³⁵ and (3) have a drive train consisting, inter alia, of (a) a controlled induction motor (CIM),³⁶ and (b) a belt drive.

(3) “Extra Wide” Residential Washers

Also excluded from the scope are automatic clothes washing machines that meet all of the following conditions: (1) have a horizontal rotational axis; (2) are front loading; and (3) have cabinet width (measured from its widest point) of more than 28.5 inches (72.39 cm).

Top load “low tech” residential washers are defined as those top load washers having a permanent split capacitor (“PSC”) motor, a belt drive, and a flat wrap spring clutch. Front load “low tech” residential washers are defined as those front load washers having a controlled induction motor (“CIM”), and a belt drive. “Extra wide” residential washers are defined as those washers with a cabinet width greater than 28.5 inches.³⁷

Petitioner stated that it sought these exclusions because it believes that washer models fitting these definitions are not produced in the United States. Petitioner estimated that none of the exclusions accounted for more than 0.5 percent of apparent domestic consumption in any given year during the period of investigation.³⁸

³² A “PSC motor” is an asynchronous, alternating current (AC), single phase induction motor that employs split phase capacitor technology.

³³ A “belt drive” refers to a drive system that includes a belt and pulleys.

³⁴ A “flat wrap spring clutch” is a flat metal spring that, when engaged, links abutted cylindrical pieces on the input shaft with the end of the concentric output shaft that connects to the drive hub.

³⁵ “Front loading” means that access to the basket is from the front of the washer.

³⁶ A “controlled induction motor” is an asynchronous, alternating current (AC), polyphase induction motor.

³⁷ Top load washers with an ordinary belt drive system, i.e., without a flat wrap spring clutch, are included in the scope of this investigation. Petitioner’s postconference brief, Answers to Staff Questions, p. 8.

³⁸ Petitioner’s postconference brief, Answers to Staff Questions, p. 8; Respondents argued that the definition of the domestic like product should be expanded to include the products included in these exclusions. Respondents’ postconference brief, pp. 4 18; See, Part I, Domestic Like Product Issues, *infra*.

Tariff treatment

LRWs are classifiable in subheading 8450.20.00³⁹ of the Harmonized Tariff Schedule of the United States (“HTS”), and imported under HTS statistical reporting numbers 8450.20.0040 and 8450.20.0080.⁴⁰ The general tariff duty rate for HTS subheading 8450.20.00 is 1 percent *ad valorem*.⁴¹

Physical characteristics and uses

LRWs are home appliances that remove soil from fabric, using water and detergent as the principal cleaning agents. All units feature wash, rinse, and spin cycles; have a cabinet width of at least 24.5 inches (62.23 cm) and no more than 32.0 inches (81.28 cm);⁴² and feature a rotational axis that is either vertical or horizontal. Further, all LRWs feature a metal drum or basket into which laundry is loaded, a plastic tub that holds water, a motor, a pump, and a user interface and control unit to set wash cycles. Single family households are the principal consumers of LRWs.⁴³

Configurations of LRWs in the U.S. market

Currently in the U.S. market, LRWs are typically produced and sold in two configurations, either with a vertical axis, generally referred to as a “top load” LRWs or a horizontal axis, generally referred to as “front load” LRWs. Both configurations can be equipped with various features, for instance, water heaters, different washing cycles, steam cleaning capabilities, and cabinet finishing. The primary distinctions between these configurations of LRWs are based on the location of the loading door, the orientation of the

³⁹ HTS subheading 8450.20.00 describes the article as: “Household or laundry type washing machines, including machines which both wash and dry; parts thereof: Machines, each of a dry linen capacity exceeding 10 kg.” Harmonized Tariff Schedule of the United States (2016).

⁴⁰ In 2015, the statistical reporting numbers HTS 8450.20.0040 (top load) and 8450.20.0080 (other) were added to create a separate provision for large capacity top load washers. Prior to 2015, HTS statistical reporting number HTS 8450.20.0090 included both top and front load non coin operated large capacity washers. Harmonized Tariff Schedule of the United States (2014).

⁴¹ Harmonized Tariff Schedule of the United States (2016); Petitioner claims that products subject to this petition may also enter under HTSUS statistical reporting numbers 8450.11.0040 (top load fully automatic washers), 8450.11.0080 (other fully automatic washers), 8450.90.2000 (parts: tubs and tub assemblies), and 8450.90.6000 (parts: other). The general tariff duty rate for HTS subheading 8450.11 and HTS subheading 8450.90 is 1.4 percent *ad valorem* and 2.6 percent *ad valorem*, respectively.

⁴² Petition, p. 8. Washers with a width less than 24.5 inches are “compact” and “portable” units that are generally not used in single family residences, while washers greater than 32.0 inches are too large to fit through a typical household door frame and are considered “commercial” washers.

⁴³ Petition, p. 11.

axis, and the cleaning mechanics.⁴⁴ A general description of each of these LRW configurations follows.

Top load LRWs

A top load LRW features a top loading door for loading clothes and contains a basket that spins on a vertical axis (see Figure I 1). Top load LRWs come equipped with a broad array of product features and are sold at a wide range of price points. The cleaning mechanics of a top load LRW consist of laundry being loaded into a basket that spins on a vertical axis. In order to further facilitate a cleaning motion, an agitator or impeller is placed in the center of the basket. The difference between these two cleaning technologies is explained further below.

Figure I 1
Top load washers



Source: Whirlpool. The washer on the left is more likely to contain an “agitator” as its means of moving clothes, water, and detergent around the basket whereas the washer on the right is more likely to contain an “impeller”.

⁴⁴ Petition, p. 11.

Cleaning technology: agitator vs. impeller

A top load LRW contains either an agitator or an impeller, both of which facilitate the cleaning movement of clothes, water, and detergent inside the basket of the machine.⁴⁵ Figure I 2 presents an example of an agitator and an impeller.

Figure I 2:
An example of an agitator and an impeller



Source: Whirlpool. An agitator (left). An impeller (right).

Agitator

An agitator is a center post that projects from the bottom of the wash basket and is equipped with fins or vanes that creates a washing action by rotating back and forth.

When a top load LRW with an agitator is set to clean a load of clothes, it first fills its tub with water and then creates the back and forth, washing motion through the use of its agitator. The force of the agitator and its motion tend to treat fabrics more harshly than LRWs with impellers, because the agitator often twists and tangles clothes. LRWs with agitators tend to use more water and more energy than LRWs with impellers because the agitator needs more water to operate effectively. They also generally spin clothes more slowly during the spin cycle, requiring longer use of a dryer and thus consuming more energy. Because of the higher water and electricity consumption used by LRWs with an agitator, they are less likely to meet energy standards for “high efficiency” or meet the Energy Star standard, although some agitator based LRWs have qualified for Energy Star certification. LRWs with an agitator generally occupy the “value” segment of the market and have the lowest price points.⁴⁶

⁴⁵ Petition, p. 12.

⁴⁶ Petition, p. 12.

Impeller

An impeller is a somewhat flat, rotating hub which does not contain a center post. It creates washing motion by rotating and creating currents in the water. Due to the lack of a center post, impellers occupy less space in the basket and consequently, top load LRWs with impellers generally have higher capacities than agitator based LRWs.⁴⁷

During the cleaning cycle of a top load LRW with an impeller, the tub fills only partly with water. Because so little water is used in the tub, a special detergent designated “HE” must be used. The HE detergent is formulated to create fewer suds thereby minimizing the water necessary to rinse. Top load LRWs with an impeller also spin at higher speeds than top load LRWs with an agitator, thereby extracting more water before clothes go into the dryer, and thus reducing energy consumption. Because of the lower water and electricity consumption, all LRWs with an impeller qualified as “high efficiency” and were Energy Star certified under the energy efficiency standards prior to March 7, 2015. Even after the more stringent energy efficiency standards become effective on March 7, 2015, these LRWs are more likely to meet high efficiency energy standards or meet the Energy Star standard, although all models currently do not.

Front load LRWs

Front load LRWs feature a front loading door for loading clothes and contains a drum that spins on a horizontal axis. (see Figure I 3). Front load LRWs are typically positioned at the premium end of the LRW market in terms of price and performance. They often come equipped with a broad variety of product features. The drums of front load LRWs fill only partly with water and clean clothes through a process of lifting them to the top of the tub and dropping them into the water by a “baffle” and using the centrifugal force of the spinning drum. Front load LRWs generally consume the least amount of water during the wash cycle and feature the fastest spinning speeds of all types of LRWs.⁴⁸ Because of the lower water and electricity consumption, all front load LRWs qualified as “high efficiency” and were Energy Star certified under the energy efficiency standards prior to March 7, 2015. Even after the more stringent energy efficiency standards become effective on March 7, 2015, these LRWs are more likely to meet high efficiency energy standards or meet the Energy Star standard, although all models currently do not.

Generally, front load LRWs work most effectively with low foaming, HE detergent. Most front load LRW load capacities are roughly equivalent to top load LRWs with an impeller but tend to have higher load capacities than top load LRWs with an agitator. Very fast spin cycles mean better moisture extraction compared even with top load LRWs with an impeller, thereby reducing drying time and energy consumption. However, front load LRWs have been reported to develop mold and odors because of moisture remaining in the drum. Although the industry

⁴⁷ Petition, p. 12.

⁴⁸ Petition, pp. 11 12.

appears to have addressed this issue with further product innovation, such as “dynamic venting technology,” this may cause some consumers to prefer top load LRWs to front load LRWs.⁴⁹

Figure I 3
Front load washer



Source: Whirlpool

Product features

Product features have become increasingly prevalent in the LRW marketplace, and are seen by many manufacturers as a vehicle for maintaining competitiveness. These features can include energy efficiency, capacity, appearance (color, cabinet finishing, decorative elements, etc.), and new innovations such as noise reduction and steam cleaning. A number of the features of LRWs are explained below.

⁴⁹ Mold accumulation can be mitigated in several ways including: (1) wiping the rubber seal dry with a towel and leaving the door ajar after a wash cycle; (2) using high efficiency detergent, which leaves less soap residue in the tub; and (3) regularly running the cleaning cycle, per the instruction manual. Mifflin, “Caring For Your HE Washer and Preventing Mold Issues,” July 2012.

Litigation on this issue is ongoing. For more information, please refer to, “Front Loading Washer Litigation” at: http://www.lieffcabraser.com/defective_products/case/126/front_loading_washer_litigation (retrieved January 8, 2016). *In re Whirlpool Corp. Front Loading Washer Prods. Liab. Litig.* is a class action civil lawsuit claiming a design defect and breach of implied warranty by Whirlpool in connection with its Duet front loading washing machines.

Energy efficiency

Consumers may prefer energy efficiency as a factor in buying LRWs not only because of the resulting lower utility bills, but also the availability of utility rebates, sales tax exemptions, and other state and federal tax credits that may exist with the purchase of certain energy efficient certified home appliances.

Energy efficiency standards for LRWs are promulgated by three entities: (1) the Consortium for Energy Efficiency (“CEE”),⁵⁰ (2) the U.S. Environmental Protection Agency (“EPA”), and (3) the U.S. Department of Energy (“DOE”). All of these entities establish standards for identifying energy efficient LRWs based largely on two factors: (1) energy utilization and (2) water consumption of the washer. More specifically, energy utilization is calculated using the “integrated modified energy factor” (“IMEF”), which represents the number of cubic feet of laundry that can be washed with one kilowatt hour of electricity taking into consideration the total energy consumption of the entire laundry cycle, which includes both washing and drying. The higher the IMEF number, the more laundry may be washed and dried with the same one kilowatt hour of energy; and therefore, the higher the energy efficiency of the washer. Water consumption is calculated using the “integrated water factor” (“IWF”), which is defined as the gallons of water needed to wash each cubic foot of laundry.⁵¹ The lower the IWF number the less water is used to clean each cubic foot of laundry; and therefore, the higher the water efficiency of the washer.

Based on the relative IMEF and IWF measures, the CEE categorizes LRWs into three tiers of energy efficiency, with the third tier reserved for the most energy efficient washers.

Also using IMEF and IWF measures, the EPA and the DOE assign the “Energy Star” classification to LRWs. In general, the EPA and DOE revise Energy Star standards periodically based on several factors, including changes to the Federal minimum efficiency standards,⁵² technological advances which generate greater energy efficiencies, and product availability.⁵³ Additionally, the EPA may revise these standards when the market share for Energy Star rated

⁵⁰ The CEE is a nonprofit agency that encourages greater adoption of energy efficient products and services through the development of various initiatives. According to the CEE web site, members include utility companies, environmental groups, research organizations, and state energy offices in the United States and Canada. The agency also solicits input from manufacturers and both the U.S. Department of Energy and the Environmental Protection Agency. <https://www.cee1.org/content/about>, accessed January 19, 2016.

⁵¹ Prior to March 2015, CEE and Energy Star standards were calculated using the “modified energy factor” (“MEF”), which represents the number of cubic feet of laundry that can be washed with one kilowatt hour of electricity and the “water factor” (“WF”)—the gallons of water needed to wash each cubic foot of laundry. *Super Efficient Home Appliances Initiative*, CEE, 2014.

⁵² Pursuant to the Energy Policy and Conservation Act of 1975, the U.S. Department of Energy (“DOE”) sets minimum energy efficiency standards for approximately 50 categories of appliances and equipment used in homes, businesses, and other applications, including LRWs. http://energy.gov/eere/buildings/about_appliance_and_equipment_standards_program, accessed January 19, 2016.

⁵³ http://energy.gov/eere/buildings/energy_star, accessed January 19, 2016.

LRWs reach or exceed 50 percent for a particular category of LRW.⁵⁴ The most recent change to the Energy Star energy efficiency standards occurred during the period of investigation and became effective March 7, 2015.⁵⁵

Table I 2 presents current and 2011 federal minimum, CEE and Energy Star energy efficiency standards. As shown in table I 2, the new efficiency standards that went into effect on March 7, 2015 required a dramatic increase in the efficiency of LRWs achieved in large part by a substantial decrease in the volume of water that can be used in the LRW wash and rinse cycles. These new efficiency standards have affected the way manufacturers produce top load washers⁵⁶ and have blurred the product categories, such as top load conventional, high efficiency top load, and high efficiency front load, that the Commission used in its prior LRWs investigations.⁵⁷

Table I 2
LRWs: Energy efficiency standards

Standard	Efficiency levels March 7, 2015 to present		Efficiency levels January 1, 2011 to March 6, 2015	
	IMEF	IWF	MEF	WF
Federal minimum—				
Top load	1.29	8.4	1.26	9.5
Front load	1.84	4.7	1.26	9.5
Energy Star—				
Top load	2.06	4.3	2.0	6.0
Front load	2.38	3.7	2.0	6.0
CEE Tier 1	2.38	3.7	2.0	6.0
CEE Tier 2	2.74	3.2	2.2	4.5
CEE Tier 3	2.92	3.2	2.4	4.0

Source: U.S. Department of Energy and *Super Efficient Home Initiative*, CEE.

⁵⁴ Ibid.

⁵⁵ Prior to March 7, 2015, Energy Star standards were revised effective January 1, 2011.

⁵⁶ Petitioner stated that subsequent to the new efficiency standards, all of its top load washers must now use shallow fill technology for its standard wash cycle and be designed to use HE detergent. Because of these changes, Whirlpool currently uses either an “agipeller” (“HE agitator”) or an impeller in its top load washers. Whirlpool stated that under the new standards, many impeller based top load LRWs, which would have qualified as Energy Star under the prior standards, do not currently qualify as Energy Star. Also, under the new standards, there are HE agitator based units that currently qualify as Energy Star. Petitioner’s postconference brief, Answers to Staff Questions, p. 11.

Whirlpool reported that in anticipation of the more stringent standards, it invested \$*** in a new top load platform, which was introduced to the market in 2014. Petitioner’s postconference brief, Answers to Staff Questions, p. 6.

⁵⁷ Petitioner’s postconference brief, p. 10. Petitioner argued that with the new energy efficiency standards blurring product lines, there is even more “cross shopping” among the product categories than there was in the prior LRW investigations. Ibid., p. 11.

Capacity

Capacity refers to the volume of clothes an LRW can wash per load. Capacity is among the most sought after features for consumers, especially for large households. Capacity ranges for different types of LRWs vary. For example, top load LRWs with an agitator feature the lowest capacity and range from 2.5 3.9 cubic feet (“cf.”), while the capacity of front load LRWs and top load LRWs with an impeller range from 3.3 4.3 cf. and 3.5 5.0 cf. of capacity, respectively. The DOE requires manufacturers to certify and declare the capacity of their LRWs at the time of sale. Producers of LRWs are constantly attempting to increase the capacity of their LRWs. In 2014, Samsung began producing a 5.6 cf. LRW. Whirlpool stated that it currently has the largest capacity LRW on the market at 6.2 cf.

Appearance

The appearance of LRWs can vary greatly depending on what appeals to the market. Color, cabinet finish, and decorative elements are examples of LRW features that can differ. Respondents emphasized the innovations that they have developed which improved the appearance of its LRWs, including the introduction of various colors into the marketplace. Respondents stated that approximately 35 percent of their total LRW sales are color models.⁵⁸ Petitioner disputed that claim and argued that the vast majority of LRWs, approximately *** percent are bought in white. It stated that color is not usually a significant factor for consumers given that washers are mostly placed in laundry rooms, basements, or utility closets.⁵⁹

Introduction of new and improved features

All parties agreed that creating new features and improving on existing ones is an important component of maintaining competitiveness in the LRW market. All parties also observed that many product features and new technologies are quickly replicated by other producers. During the period of investigation, Whirlpool, LG, and Samsung all reported that they brought new innovative features to the LRW market. Table I 3 highlights some of the features claimed to be introduced first into the marketplace by Whirlpool, LG, and Samsung.

⁵⁸ Conference transcript, pp. 201 202 (Kim).

⁵⁹ Petitioner’s postconference brief, Answers to Staff Questions, p. 8 (citing white and color market segment data from the Commission’s prior LRW investigations).

Table I 3

LRWs: Feature innovation by Whirlpool, LG, and Samsung, January 2012 to September 2015

Feature	Whirlpool	LG	Samsung
2012			
Overnight wash & dry cycle	✓		
Thermal overlay material	✓		
Deep fill option on Energy Star certified Top load	✓		
Speed spray			✓
Aqua jet wash action			✓
Wi Fi connectivity			✓
Largest capacity 4.5 cf.			✓
TurboWash		✓	
Front control panel on top load		✓	
2013			
Wi Fi Smart grid	✓		
Largest capacity 5.0 cf.			✓
2014			
Smooth wave basket	✓		
Enhanced wash algorithms	✓		
What to wash/how to wash	✓		
Colorlast cycle	✓		
HE agitator	✓		
Mechanical BPM Drive	✓		
Adaptive wash	✓		
Largest capacity 5.6 cf.			✓
2015			
NEST connected washer	✓		
Integrated controls in lid	✓		
Largest capacity 6.2 cf.	✓		
Load & Go detergent fill	✓		
ActiveWash with built in sink			✓
SuperSpeed			✓
TWIN wash		✓	

Source: Petitioner’s postconference brief, pp. 12 13 and attachment 8; Respondents’ postconference brief, pp. 27 32 and exhibits.

The features listed in table I 3 are only those reported as introduced during the period of investigation. All parties reported introducing additional features prior to January 2012. LG

identified several product innovations that occurred before the period of investigation,⁶⁰ some of which include direct drive technology in 2003, steam cycle innovation in 2006, the wild cherry red cabinet in 2006, and slam proof lid in 2010.⁶¹ Also, Samsung listed vibration reduction technology (“VRT”) in 2007,⁶² Powerfoam technology in 2010,⁶³ and self cleaning technology in 2010⁶⁴ as a few major innovations that it introduced prior to the period of investigation.⁶⁵ Respondents argued that some of the features listed by Whirlpool as innovative were of questionable utility or not received well by consumers in the marketplace.⁶⁶ Whirlpool argued that many of the features listed by LG and Samsung as innovative and first to market were, in fact, developed earlier by Whirlpool.⁶⁷

Manufacturing Processes

Development of product platforms

Generally, the manufacture of LRWs begins with the design and production of a LRW “platform.” A platform is the basic frame from which multiple models are built with a variety of features.⁶⁸ All producers of LRWs, Whirlpool, GE, LG, and Samsung, reported using “platforms” to develop product models. Samsung and LG view platforms as encompassing a broad engineering design that may be developed around a research and design project.⁶⁹ A platform would have certain parameters for items such as drive systems, size, and design

⁶⁰ Petitioner argued that any innovations by the respondents prior to the period of investigation were already considered by the Commission in the prior LRW investigations and the Commission concluded that subject imports were interchangeable and comparable to domestically produced LRWs. Petitioner’s postconference brief, p. 13.

⁶¹ Respondents’ postconference brief, p. 30.

⁶² According to Samsung, VRT technology reduces LRW noise to a low level through its innovative tub design, which improves the balance of heavy loads. Respondents’ postconference brief, exh. 18.

⁶³ According to Samsung, PowerFoam technology uses an innovative mixture of water, air and detergent to penetrate deep into fabric resulting in superior wash results. Respondents’ postconference brief, exh. 18.

⁶⁴ According to Samsung, Self Clean+ technology keeps the drum and gasket clean on its front load LRWs. Respondents’ postconference brief, exh. 18.

⁶⁵ Respondents’ postconference brief, p. 28.

⁶⁶ Respondents’ postconference brief, p. 27 n.70 (citing the undesirability of the NEST connected washer).

⁶⁷ Petitioner’s postconference brief, Answers to Staff Questions, pp. 6-7. Specifically, petitioner argued Whirlpool already had similar features available in the marketplace when Samsung introduced its “Aquajet” feature in 2013, its “SuperSpeed” feature in 2014, and its “ActiveWash” feature in 2015. It also argued that LG’s “Twin Wash” LRWs are produced in Korea and therefore not from a subject country. Ibid.

⁶⁸ Petitioner’s postconference brief, Answers to Staff Questions, p. 17, GE’s postconference brief, pp. 5-6.

⁶⁹ Conference transcript, pp. 242–244 (Brindle and Herring).

structure. Thus, models produced within a platform may have a particular width, such as 28 inches, but different features.⁷⁰

Whirlpool and GE stated that a platform is expected to last for an extended period of time, such as 10 to 20 years, or longer.⁷¹ A platform may be upgraded during its lifecycle, once every 2 to 3 years, and even 5 years.⁷² Samsung stated, and LG agreed, that a platform likely will have a lifecycle of 5 to 30 years, but may be upgraded every 2 to 5 years.⁷³

LRW manufacturers may have several platforms in operation at a given time. For example, Whirlpool has two to four platforms for its top load LRWs and one to two platforms for its front load LRWs.⁷⁴ New platforms will overlap the life of older platforms.⁷⁵

Development of product models and “stock keeping units” (“SKUs”)

A “model” is an LRW defined by various features or functionality. Whirlpool, GE, LG, and Samsung agreed that a particular LRW model will typically have a lifecycle of 1-3 years.⁷⁶

Whirlpool, GE, LG, and Samsung noted that terms “model” and “SKU” are generally synonymous. Whirlpool noted, however, that a model might have more than one SKU because that model is produced in more than one location or in different colors.⁷⁷

Production process

LRWs are typically mass produced in a production plant. Whirlpool produces all the LRWs that it sells in the United States in its Clyde, Ohio, manufacturing plant. Whirlpool stated that this plant is the largest in the world and covers 2.4 million square feet.⁷⁸

Whirlpool stated that all LRW producers use the same manufacturing technology and processes.⁷⁹ LRWs are produced through several distinct manufacturing processes that involve a wide variety of materials, which may be purchased in large quantities as cut, shaped, or painted pieces, or as component systems. Whirlpool listed nine separate modules or sub assemblies in a LRW.⁸⁰ The components for each module originate within five areas in the

⁷⁰ GE’s postconference brief, pp. 5-6.

⁷¹ Petitioner’s postconference brief, p. 17, GE’s postconference brief, p. 6, conference transcript, p. 131 (Tubman).

⁷² GE’s postconference brief, p. 6.

⁷³ Conference transcript, pp. 243–244 (Brindle and Herring).

⁷⁴ Conference transcript, p. 59 (Tubman).

⁷⁵ Conference transcript, p. 61 (Tubman).

⁷⁶ Petitioner’s postconference brief, p. 17, GE’s postconference brief, p. 6, conference transcript, pp. 241–242 (Brindle and Herring).

⁷⁷ Petitioner’s postconference brief, p. 17, GE’s postconference brief, pp. 5-6, conference transcript, pp. 242–244 (Brindle and Herring).

⁷⁸ Conference transcript, pp. 23–24 (Liotine).

⁷⁹ Petition, p. 18.

⁸⁰ The petitioner lists nine of these modules: the cabinet assembly; the drive system, which includes motors, gears, and shafts, and is commonly purchased from specialty manufacturers; the wash system,
(continued...)

petitioner's production plant, including materials receiving, cabinet assembly, fabrication support, plastics forming, and machining.⁸¹

Figure I 4

Production processes for LRWs

Operations in the plant

- Materials receiving
- Cabinet forming
- Fabrication support: blanking, stamping, and forging of metal; and machining of metal bar stock
- Plastics forming



LRW modules

- Cabinetry
- Drive system
- Wash system
- Control system
- Exterior features
- Interior features
- Literature
- Labels
- Packaging



Assembly line



Finished LRW ready for shipping

Source: Compiled by USITC staff from Petition, pp. 18–20

First, the materials department receives all purchased materials, including raw materials and purchased components, including pre stamped metal blanks, injection molded parts, electrical subassemblies, printed literature and labels, and packaging materials. Then, the materials department will maintain inventories and deliver material to the appropriate fabrication department or directly to the assembly line.⁸²

(...continued)

which joins the fabricated steel basket (drum) and the plastic tub together; the control system; the exterior features; the interior features; literature; labels; and packaging. Petition, pp. 18 20.

⁸¹ Petition, p. 18.

⁸² Petition, p. 18.

During the cabinet assembly stage, the exterior metal shell of the washer is created, including the top, lid, and door. Raw metal blanks, which are formed from steel coils, are then stamped and assembled. Some components are often pre fabricated in the fabrication support department before being delivered to the cabinet assemblers. Cabinets and lids are then fabricated and processed through the paint department. Completed, painted cabinets and lids are then delivered to the final assembly lines. Washer doors are typically purchased as an assembly and delivered to the assembly line to be attached to the cabinet.⁸³

Next, the fabrication support department processes raw materials such as steel bar stock and coil sheet steel. Purchased steel bar stock is formed and machined into components of the wash systems and drive. Cold rolled sheet steel is cut to the appropriate size, stamped, and formed using custom dies designed by the petitioner. The formed parts are cleaned and painted as necessary. Such fabricated steel components are used in the cabinet, drive and the wash unit assembly.⁸⁴

The plastics forming department processes raw plastic pellets or granules primarily into the plastic tubs used for the wash unit modules. The granules are melted and then injected into plastic molding equipment. The equipment uses molds to obtain the required geometry. Once the tubs are created through this process, they are delivered to the final assembly departments.⁸⁵

The wash system module consists of a basket (drum) and plastic tube joined together. This combines products from the fabrication and the plastics forming operations. The shell of the basket is made of steel that is stamped to shape and welded together. The fabrication of the basket is automated. The metal shell of the basket is fastened to the tube and shell to form the wash module.⁸⁶

LRW modules are designed in house in Whirlpool and then produced by specialty producers. These include the drive system, LRW controls, literature, and labels. The drive system components, which includes the motor, transmission, seals, metal, and plastic housings, are designed and sized by Whirlpool engineers. These components are purchased from specialized producers and then fabricated in other departments.⁸⁷

The controls, as well as interior and exterior feature components are designed by Whirlpool engineers and then supplied by specialty manufacturers. The company owns the dies for all feature components. Whirlpool also designs its own electronics hardware and software and then contracts with global suppliers for the production of electronic devices and assemblies.⁸⁸

The final assembly consists of integrating the purchased parts and the self produced subassemblies on an assembly line. All components are presented to the assembly line, which include the cabinet, wash unit, drive, control systems, interior and exterior features, literature,

⁸³ Petition, p. 19.

⁸⁴ Petition, p. 19.

⁸⁵ Petition, p. 19.

⁸⁶ Petition, p. 20.

⁸⁷ Petition, p. 19.

⁸⁸ Petition, p. 20.

labels, and packaging. All these components are assembled in a defined order to construct the finished washer. The final product undergoes testing and inspection and is visually inspected for fit and finish.⁸⁹

The finished and inspected product is then transferred to the packaging area where labels are applied, literature is included, and the washer is packaged. Before the unit is automatically shrink wrapped or packaged in a corrugated box, an external protective packaging is applied manually to the unit. The packaged unit is then shipped to a distribution center.⁹⁰

DOMESTIC LIKE PRODUCT ISSUES

Domestic like product issues in the Commission's prior LRWs investigations

In the prior LRWs investigations, the Commission addressed two issues with regard to the definition of the domestic like product. The first issue, raised by respondents in the preliminary phase, was whether conventional top load LRWs, high efficiency front load LRWs, and high efficiency top load LRWs should be considered three separate domestic like products. The second issue, raised in the final phase investigations as a result of petitioner's amendment of the scope definition was whether to include top load washers with a capacity of less than 3.7 cubic feet in the definition of the domestic like product after those products had been excluded from the scope. Each issue is discussed below.

Whether CTL, HEFL, and HETP LRWs are separate domestic like products

During the preliminary phase of the prior investigations, respondent Samsung argued that the Commission should find three separate domestic like products: (1) conventional top load LRWs with agitators ("CTL"); (2) high efficiency front load LRWs ("HEFL"), which do not have agitators; and (3) high efficiency top load LRWs ("HETL"), which also do not have agitators. The Commission defined a single domestic like product encompassing all LRWs within the scope of the investigations and stated:

{W}e find that, on balance, the preponderance of similarities over differences among CTL, HETL, and HEFL LRWs supports the definition of a single domestic like product that is coextensive with the scope of the investigations. All three types of LRWs overlap significantly in terms of their physical characteristics and uses; manufacturing facilities, processes, and employees; and channels of distribution. HETL and HEFL LRWs also overlap significantly in terms of interchangeability and customer and producer perceptions. Price is the factor that might suggest three domestic like products, but even with respect to price there is some

⁸⁹ Petition, p. 20.

⁹⁰ Petition, pp. 20–21.

*overlap. For these reasons, we define a single domestic like product encompassing all LRWs within the scope of the investigations for purposes of the preliminary phase of the investigations.*⁹¹

In the final phase of the prior investigations, the Commission again found a single domestic like product and stated that there was “no new information on the record of the final phase of the investigations that would warrant reconsideration of our previous finding that there is no clear dividing line separating CTL, HETL, and HEFL washers within the amended scope.”⁹²

Whether top load washers with a capacity of less than 3.7 cubic feet should be included in the definition of the domestic like product

Before the commencement of the Commission’s final phase investigations, the petitioner amended the scope to exclude top load washers with a capacity of less than 3.7 cubic feet. During the final phase of its investigations, the Commission considered the relevance of the amended scope to its definition of the domestic like product.⁹³ The Commission again defined the domestic like product as all LRWs and included top load washers with a capacity of less than 3.7 cubic feet. The Commission stated:

The record indicates a preponderance of similarities between top load washers with a capacity of less than 3.7 cubic feet and LRWs described by the amended scope. Top load washers with a capacity of less than 3.7 cubic feet and LRWs are generally interchangeable and similar in terms of their physical characteristics and uses; manufacturing facilities, processes, and employees; channels of distribution; and customer and producer perceptions. They generally differ from LRWs in terms of price, and even with respect to this factor there is overlap. Given the absence of any clear dividing line separating domestically produced top load washers with a capacity less than 3.7 cubic feet from those with larger capacity, we define the domestic like product to include both LRWs as described by the

⁹¹ *Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Preliminary)*, Publication No. 4306 (February 2012), p. 9.

⁹² *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. 8.

⁹³ *See, Part I, Scope of this investigation vs. scope of the prior investigation on LRWs, supra.*

During the final phase of the prior investigations, respondents Electrolux, Home Depot, LG, and Samsung argued that the Commission should find a single like product comprising LRWs as originally defined in the petition (including top load washers under 3.7 cubic feet in capacity. *Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*—Staff Report, INV LL 005, January 10, 2013), p. 1 22; *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. 7.

*scope definition, and top load washers with a capacity of less than 3.7 cubic feet.*⁹⁴

Domestic like product issues in the current LRWs investigation

In the present investigation, petitioner argued that the Commission should find one domestic like product that is co extensive with the scope of the investigation as defined by Commerce.⁹⁵ Respondents Samsung and LG argued that the Commission should define the domestic like product as the Commission did in its prior investigations and thereby expand the definition of the domestic like product to include the three exclusions that petitioner listed in the scope definition, namely (1) top load “low tech” residential washers, (2) front load “low tech” residential washers, and (3) “extra wide” residential washers.⁹⁶ They contended that the Commission should adopt a definition of the domestic like product consistent with its prior findings in its prior investigations, which requires a definition that includes all LRWs regardless of transmission technology or cabinet size. Petitioner stated that it sought these exclusions because they believed that washer models fitting these definitions are not produced in the United States. Petitioner estimated that none of the exclusions accounted for more than 0.5 percent of apparent domestic consumption in any given year during the period of investigation.⁹⁷ Respondents contested this assertion and stated that even the limited data on the record show that these excluded washers are a material and significant factor in the market.⁹⁸ The Commission inquired whether U.S. producers manufactured any “low tech” residential washers in the United States during the period of investigation.⁹⁹ Of the four U.S. producers, ***.¹⁰⁰ Its reported production, share of U.S. production, and share of U.S. apparent consumption are presented in table I 4.

⁹⁴ *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. 11.

⁹⁵ Petition, p. 36; Petitioner’s postconference brief, p. 21.

⁹⁶ Respondents’ postconference brief, pp.

⁹⁷ Petitioner’s postconference brief, “Answers to Staff Questions,” p. 8.

⁹⁸ Respondents’ postconference brief, p. 6.

⁹⁹ U.S. producer questionnaire, questions II 3a and II 5. The Commission did not request any data regarding “extra wide” residential washers.

¹⁰⁰ ***. Foreign producer questionnaire of ***, question II 4a.

Table I 4

LRWs: *** production of *** and ratios to U.S. production of LRWs and U.S. apparent consumption of LRWs, 2012 14, January September 2014, and January September 2015

* * * * *

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

Respondents argued that the excluded washers exist within the continuum of LRWs and that there is substantial overlap in physical characteristics and uses, interchangeability, channels of distribution, customer and producer perceptions of the products, common manufacturing facilities, production processes, and production employees, and price and that given the degree of similarity, there is no basis to exclude these washers from the definition of the domestic like product.¹⁰¹ Respondents further argued, citing four past Commission investigations from 1998 to 2000, that it is immaterial that the domestic industry does not produce the excluded washers and stated that they are unaware of any past Commission investigation in which the domestic industry produce every product along a continuum.¹⁰² Petitioner conceded that if there is indeed U.S. production of the excluded products then they are properly included in the definition of the domestic like product because there is no clear dividing line between such products and LRWs as currently defined in the scope of this investigation.¹⁰³

¹⁰¹ The Commission generally considers the following factors in determining which domestic products are “like” the subject imported products: (1) physical characteristics and uses; (2) common manufacturing facilities, production processes, and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and (6) price.

¹⁰² Respondents’ postconference brief, p. 16 citing *Extruded Rubber Thread from Malaysia*, Inv. No. 753 TA 34, Publication No. 3112 (June 1998), at 4 5; *Certain Cold Rolled Steel Products from Argentina et al*, USITC Pub. 3471 at 5 6; *Certain Hot Rolled Steel Products from Brazil, Japan, and Russia*, Inv. Nos. 701 TA 384 (Preliminary), USITC Pub. 3142 (November 1998) at 5, n. 14; *Extruded Rubber Thread from Malaysia*, Inv. No. 731 TA 527 (Review), Publication No. 3327 (July 2000) at 7.

¹⁰³ Petitioner’s postconference brief, p. 21. Petitioner stated that its pre petition market research showed that the largest U.S. producers of LRWs during the period of investigation, Whirlpool and GE, did not produce these excluded products. Petitioner did not concede, however, that the issue of whether the domestic industry produces the excluded products is immaterial to the Commission’s domestic like product analysis. *Ibid.*

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET¹

U.S. MARKET CHARACTERISTICS

Most sales of LRWs are directly to retailers. Five large national appliance retailers (Best Buy, Home Depot, hhgregg, Lowe's, and Sears) account for more than two thirds of sales of LRWs in the United States.² ³ Sears' share of the LRW market has declined but it reportedly remains the top one or two retailer.⁴ There are also a large number of smaller retailers of LRWs, many of which belong to one of the four or five major buying groups that negotiate prices for groups of these smaller retailers.⁵ Retailers tend to market a variety of LRWs, from more basic models to higher end models, and both front load and top load models, as well as a variety of brands.

Most sales in the U.S. market are of manufacturers' own brands. However, Original equipment manufacturer (OEM) sales, the vast majority of which are to Sears for resale under the Kenmore brand label, account for more than 10 percent of LRW sales.⁶ In store sales continue to dominate online purchases, although many consumers research prices, quality, and features online before going to the store.⁷

Firms described several changes in LRW product range and marketing since January 1, 2012. *** reported that changes included larger capacity machines and an increased percentage of top load models with impeller wash systems. *** described marketing changes, in particular increased leverage of retailers and price compression. *** reported several changes including consumers moving away from front load to top load machines,⁸ feature innovations, reduced demand for conventional washers,⁹ the decline in Sears' share of the appliance market, and continued product line expansion at Home Depot and Lowe's. New

¹ In this section, Whirlpool's responses to questions in the importers' questionnaire are not included when they are the same as its responses to questions in the U.S. producers' questionnaire.

² These five retailers accounted for approximately 68 percent of total U.S. purchases in 2014. Petition, p. 40. ***. Home Depot added Samsung in December 2012, and LG started selling to Lowe's in 2013. Conference transcript, p. 152 (Brindle) and pp. 172 173 (Toohy).

³ ***.

⁴ Conference transcript, p. 45 (Liotine). ***.

⁵ Conference transcript, p. 39 (Liotine).

⁶ Petition p. 46. Petitioners reported that Whirlpool is the principal supplier of Kenmore top loads; LG is the principal, but not exclusive, supplier of Kenmore front loads; and Electrolux may supply lower end Kenmore models. Conference transcript, p. 129 (Levy). Samsung reported that it hasn't participated in bids to Sears Kenmore since early 2012. Conference transcript, p. 240 (Brindle). GE reported that ***. GE's postconference brief, p. 5.

⁷ Online sales are less than 10 percent of total sales. This percentage includes "brick and click" in which the customer shopped at the store, but then purchased online. Conference transcript, p. 130 (Tubman).

⁸ ***.

⁹ ***.

feature innovations cited by *** were higher capacity extra wide washers, front control top load, faster wash cycles, and high efficiency top load washers.

Changes in the market over the past few years include the introduction of larger capacity top load machines.¹⁰ *** reported that capacity is the most important feature for consumers. As discussed in part I, product changes have also resulted from new energy efficiency regulations implemented in March 2015.¹¹ ***.¹²

Apparent U.S. consumption of LRWs increased during 2012-14, and was higher in interim 2015 than in interim in 2014. Overall, apparent U.S. consumption in 2014 was *** percent higher than in 2012.

CHANNELS OF DISTRIBUTION

Sales to distributors, such as large retailers, are the dominant channel of distribution (table II 1). Over 99 percent of U.S. produced LRWs and LRWs imported from China and nonsubject sources were sold to distributors (including retailers), as compared to end users.

A small percentage of sales in the U.S. market are to builder contractors, including building distributors.¹³ Respondents claim that builders represent over 8 percent of the LRW market, and that Whirlpool and GE dominate this part of the market.¹⁴ GE reported that *** percent of its LRW sales were direct to home builders.¹⁵ Samsung and LG reportedly do not sell to the contractor market because they don't have the required regional distribution infrastructure.¹⁶

Table II-1

LRWs: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, January 2012-September 2015

* * * * *

¹⁰ Samsung asserts that Whirlpool's introduction of low priced large capacity top load machines has led to price declines across the LRW market.

¹¹ Whirlpool has redesigned all of its entry level top load washers to use an agitator instead of a conventional agitator. Petition, p. 50.

¹² ***.

¹³ About 10 to 15 percent of Whirlpool's sales are to contractors. Direct sales to contractors are through distributors and Whirlpool's employee sales organization. Indirect sales are contract business sold through retailers such as Home Depot and Lowe's. Conference transcript, p. 106 (Liotine). Respondents define the builder market as direct to builders and building distributors. Conference transcript, p. 235 (Brindle).

¹⁴ Conference transcript p. 162 (Brindle).

¹⁵ GE's postconference brief, p. 6.

¹⁶ Conference transcript, p. 175 (Klett). ***.

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers sell LRWs to a national market (table II 2). All four U.S. producers and both subject importers reported selling LRWs to all regions in the contiguous United States. For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2

LRWs: Geographic market areas in the United States served by U.S. producers and importers

* * * * *

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of LRWs¹⁷ have the ability to respond to changes in demand with large changes in the quantity of shipments of U.S. produced LRWs to the U.S. market. The main contributing factor to this degree of responsiveness of supply is the availability of unused capacity.

Industry capacity

Domestic capacity utilization increased from *** percent in 2012 to *** percent in 2014 as a result of decreased industry capacity and increased production. This moderately low level of capacity utilization suggests that U.S. producers may have a substantial ability to increase production of LRWs in response to an increase in prices.

Alternative markets

U.S. producers' exports, as a percentage of total shipments, decreased from *** percent in 2012 to *** percent in 2014, reflecting decreased exports and increased U.S. shipments. This level of exports indicates that U.S. producers may have some ability to shift shipments between the U.S. market and other markets in response to price changes. ***.

¹⁷ There are four U.S. producers of LRWs: Whirlpool, GE, Staber, and Alliance.

Inventory levels

U.S. producers' inventories, as a ratio to U.S. shipments, declined from *** percent in 2012 to *** percent in 2014. These inventory levels suggest that U.S. producers may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Three of the four responding U.S. producers stated that they could switch production from LRWs to other products, although these products might have lower demand. ***.

Supply constraints

No U.S. producer reported supply constraints. ***.¹⁸

Subject imports from China¹⁹

Based on available information, producers of LRWs from China have the ability to respond to changes in demand with small to moderate changes in the quantity of shipments of LRWs to the U.S. market. The main contributing factors to this degree of responsiveness are the ability to produce other products, constrained by limited available capacity and a relatively small percentage of shipments to non U.S. markets.

Industry capacity

Chinese producers' capacity utilization increased from *** percent in 2012 to *** percent in 2014, with both industry capacity and production increasing over this period. This relatively high level of capacity utilization suggests that Chinese producers may have a limited ability to increase production of LRWs in response to an increase in prices.

Alternative markets

The U.S. market was the largest market for Chinese producers, although the share of total shipments to the U.S. market decreased from *** percent in 2012 to *** percent in 2014. This level of exports indicates that Chinese producers may have some ability to shift shipments between the U.S. market and other markets in response to price changes. ***.

¹⁸ ***.

¹⁹ The Commission received questionnaire responses from two Chinese producers, LG and Samsung. The exports of these two firms accounted for the vast majority of LRW imports from China.

Inventory levels

Chinese producers' inventories, as a ratio to total shipments, declined from *** percent in 2012 to *** percent in 2014. These inventory levels suggest that Chinese producers may have almost no ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

***.

Supply constraints

***.

Nonsubject imports

Nonsubject imports were *** percent of the U.S. market in 2014. The largest sources of nonsubject imports during January 2012 September 2015 were Korea and Mexico.

U.S. demand

Based on available information, LRWs demand is likely to exhibit small to moderate changes in responses to changes in price. The majority of purchases of LRWs are to replace existing units that have reached, or are close to, the end of their product life; a smaller share are initial purchases for a new home; and there are also some discretionary purchases.²⁰ About two thirds of LRW purchases are to replace an existing washer, and the remainder is related to home sales, renovations, and new construction, although the percentage of new versus replacement purchases varies depending on the housing market.²¹ LRWs reportedly have a 7 to 10 year lifespan.²²

The principal substitutes for LRWs are other residential washers, such as "low tech" and extra wide washers, and stacked washer/dryers. These other washers are a small part of the U.S. market for residential washers, and demand for these products likely has a small effect on demand for LRWs.

²⁰ ***. Respondents' postconference brief, p. 32.

²¹ Petition, p. 50. During periods of low housing growth, replacement demand may account for up to 70 percent of demand while in periods of high housing growth, the percentage may be as low as 55 percent. Conference transcript, p. 122 (Liotine).

²² Conference transcript, p. 183 (Klett).

Business cycles

Two of four U.S. producers²³ and two of three importers indicated that the LRW market was subject to business cycles or conditions of competition. Firms generally described LRW business cycles as consisting of important promotional periods (centered around particular holidays) in which large volumes of sales occur. Whirlpool estimates that sales during holiday promotional events (i. e., Presidents Day, Memorial Day, Labor Day, Columbus Day, and Black Friday) comprise at least half of its sales.²⁴ Retailer *** reported that *** percent of its sales were on Black Friday and July 4.²⁵

*** stated that Black Friday was the biggest promotion holiday, followed by Memorial Day, Labor Day, July 4th, Presidents Day and Earth Day. It also stated that promotions also occur around new product introductions. It reported increasingly frequent and aggressive promotions and pricing, particularly during holidays and the introduction of new products. *** stated that there is some seasonality in sales, with holiday promotions concentrated in the fourth quarter. *** also noted seasonality in sales, particularly around Black Friday, and, to a lesser extent, Labor Day and the Fourth of July. *** stated that holiday promotions drive purchaser demand.

In addition to shorter term cycles, *** also described longer term demand cycles based on the need to replace existing units and sales of new units tied to new residential housing, as well as a smaller portion of discretionary purchases. It stated that sales of new units and discretionary purchases tend to be tied more to the housing market and general economy. It also stated that for the replacement market, since washers are considered a necessity, purchases generally occur on average every 10 years. It added that since sales volumes were high in 2004 2007, replacement market sales are expected to be strong for the next several years.

Demand trends

Most firms reported an increase in U.S. demand for LRWs since January 1, 2012 (table II 3). On the other hand, most firms reported that demand outside the United States had fluctuated, with *** reporting that demand varied amongst international markets.

Petitioners attributed moderate growth in U.S. demand for LRWs to increased home sales, home construction, and home renovations.²⁶ Respondents also attributed increased demand to the improvement in the housing market and estimated that demand has increased by 25 percent from 2012 to 2015, and will grow by 6 percent in 2016.²⁷ They further stated that

²³ *** indicated that the LRW market was not subject to business cycles or distinctive conditions of competition.

²⁴ Petition, p. 43.

²⁵ Email from ***.

²⁶ Petition, p. 50. Conference transcript, pp. 121 122 (Liotine).

²⁷ Demand was reportedly particularly strong in the two most recent quarters of 2015. Conference transcript, p. 156 (Brindle), p. 182 (Klett).

consumers deferred purchases during 2006 12, creating pent up demand for LRWs.²⁸ In addition, Samsung stated that its innovations have helped create new demand for LRWs, with 50 percent of Samsung customers purchasing their product before their washer failed, including 28 percent buying with “no duress to their unit.”²⁹

Table II-3

LRWs: Firms’ responses regarding U.S. demand and demand outside the United States

* * * * *

The U.S. housing market improved during the period of investigation. Housing starts increased each year during 2012 15, up by 67 percent between January 2012 and September 2015 (figure II 1). Existing home sales also trended upwards, increasing by 24 percent from January 2012 to September 2015 (figure II 2). Similarly, home remodeling also increased, with the remodeling market index increasing by 21.6 percent between first quarter 2012 and third quarter 2015.³⁰

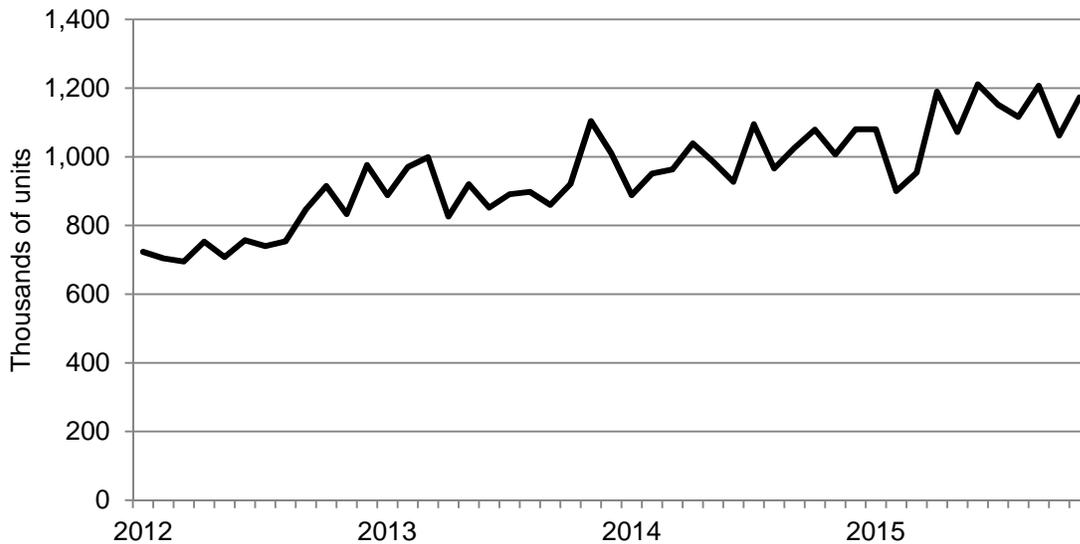
²⁸ Conference transcript, p. 183 (Klett).

²⁹ Conference transcript, pp. 155 156, 203 (Brindle). Petitioners do not agree that the introduction of new features and innovation increased aggregate demand in the market. Petitioners’ postconference brief, p. 19.

³⁰ National Association of Home Builders, Remodeling Market Index, http://www.nahb.org/en/research/housing_economics/housing_indexes/remodeling_market_index.aspx, retrieved January 12, 2016.

Figure II-1

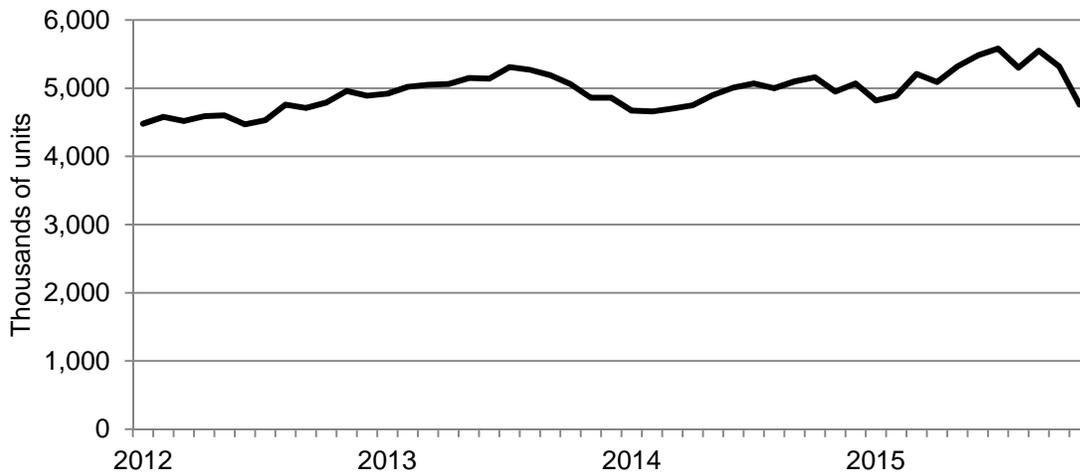
U.S. housing starts: New privately owned housing units started, seasonally adjusted annual rate, January 2012-November 2015



Source: U.S. Census Bureau, http://www.census.gov/construction/nrc/historical_data/index.html, retrieved January 12, 2016.

Figure II-2

U.S. home sales: Existing home sales, seasonally adjusted annual rate, January 2012-November 2015



Source: National Association of Realtors, <http://www.realtor.org/topics/existing-home-sales>, retrieved January 12, 2016.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported LRWs depends upon such factors as quality, features offered, and conditions of sale (e.g., price discounts/rebates, lead

times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes that there is a moderate to high degree of substitutability between domestically produced LRWs and LRWs imported from China.

Lead times

LRWs are primarily sold from inventory. U.S. producers reported that *** percent of their commercial shipments were sold from inventory, with lead times averaging about *** days. Importers of subject product reported that *** percent of sales were from U.S. inventories with lead averaging *** days, and *** percent were from foreign inventories with lead times averaging *** days. Less than *** of subject import shipments were produced to order, with lead times averaging *** days.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations³¹ were asked to identify the main purchasing factors their firm considered in their purchasing decisions for LRWs. The factors most often listed by firms were price, profitability, quality, product design, innovation, features, consumer demand, brand awareness, and availability.

Price was the most often reported first factor among the 19 purchasers responding to the survey. However, the largest retailers listed other factors first, including “feature/value equation,” appeal to customers, brand awareness, and marketing multiple major brands. Specifically, ***.

Large retailers provided many other factors considered in their LRW purchases. Other factors listed by ***,³² and ***.

In the previous LRW investigations, in rating the importance of 21 specified factors in their purchasing decisions, purchasers most often ranked availability, margin opportunity (i.e., potential profitability), and “fit, finish, and feel” as very important factors, followed by price, quality meeting industry standards, and design/styling.³³

Platforms

Sales of LRWs have shifted away from front load machines toward top load machines as the higher capacity top load machines have been introduced. Front load machines are now reportedly less than 25 to 30 percent of sales.³⁴ Consumers reportedly cross shop between top

³¹ This information is compiled from responses by purchasers identified by Petitioners and other U.S. producers to the lost sales lost revenue allegations. See Part V for additional information.

³² ***.

³³ Certain Large Residential Washers from Korea and Mexico, Investigation Nos. 701 TA 488 and 731 TA 1199 1200 (Final), USITC Publication 4378, February 2013, p. II 13.

³⁴ Postconference brief, p. 124 (Liotine) and p. 233 234 (Brindle).

load and front load platforms. Petitioners' contend that cross shopping has increased because of the changes in top load designs resulting from the federal energy standard changes.³⁵

Innovation and features

Both Whirlpool and respondents LG and Samsung claim to have led innovation in LRWs. Whirlpool claims to have first brought to the market a number of innovations in design, advanced technology, convenience, and performance.³⁶ Respondents assert that LG and Samsung have led in LRW innovation, and that Whirlpool has been a follower.³⁷ Innovations cited by respondents include Samsung's vibration reduction technology, reduced cycle times, larger capacity front load washers, and its ActiveWash feature, and LG's front control top load design, TurboWash, and "Twin Wash" systems.³⁸

Samsung and LG reported that about 35 percent of their LRW sales are colors other than white, with a higher percentage of color models in premium and front load models.³⁹ The percentage of color LRWs for front loaders has increased from 25 percent four years ago to 40 percent now, with similar percentages for Whirlpool front load models.⁴⁰

Branding and market studies

As noted previously, several purchasers named brand acceptance as a top factor in their purchase decisions. Whirlpool sells seven different LRW brands in the U.S. market, including Whirlpool, Maytag, and Amana.⁴¹ Whirlpool reported that Whirlpool and Maytag brand models are along the entire continuum of models, whereas the Amana brand is generally lower end, ("basic" or "good").⁴² According to respondents, LG and Samsung have a brand advantage over Whirlpool in LRWs, particularly among younger consumers.⁴³ Samsung stated that brand recognition and consumer preference for its brand has tripled since the previous LRW investigation.⁴⁴

Both Whirlpool and respondents cited to publications and surveys showing that their brands and models are rated highly by consumers and independent testers. According to the petitioner, Whirlpool and GE have consistently been ranked in the top 10 by Consumer Reports

³⁵ Petitioners' postconference brief, p. 11.

³⁶ Petitioners list these innovations in their postconference brief at exh. 8.

³⁷ Respondents' postconference brief, pp. 27-32. Petitioner disputes some of respondents claimed innovations. See Petitioners' postconference brief, Answers to Staff Questions, pp. 6-7.

³⁸ Respondents' postconference brief, pp. 27-32, and exh. 18.

³⁹ Conference transcript, p. 201 (Brindle and Kim).

⁴⁰ Conference transcript, p. 202 (Brindle).

⁴¹ Petition, p. 4.

⁴² See Petitioners' postconference brief, Answers to Staff Questions, p. 15.

⁴³ Respondents' postconference brief, pp. 19-22. Conference transcript, p. 151 (Brindle) and p. 168 (Herring).

⁴⁴ Conference transcript, p. 200 (Brindle).

for LRWs.⁴⁵ Samsung reportedly was ranked number one in customer satisfaction by JD Power in top load and front load washers.⁴⁶ Whirlpool's witness stated that Whirlpool may not do as well in JD Power rankings because JD Power surveys consumers and includes price, unlike Consumer Reports which uses independent lab testing.⁴⁷

Floor space

All of the large retailers, and many smaller retailers, allocate floor space for selected washer models. Retailers seek to display an assortment of models and brands at a range of price points to serve a wide variety of customers.⁴⁸ In addition to deciding whether or not to floor a model, retailers also allocate where on the floor a model is placed, for example, end caps at the end of aisles. Floor spots are awarded based on negotiations for the margins retailers can receive based on the lowest wholesale price and promotional support. There are additional negotiations during the big promotional periods such as Black Friday and July 4, for the best floor space (including end caps placements) and flyer or advertising support. Retailers do a line review on annual basis in which they review each product in a manufacturers' product line.⁴⁹ The petitioner emphasized the importance of products getting floor space, since most consumers want to see a washer before they buy it, and only those models on the floor are featured in advertising.⁵⁰ They also contend that loss of a floor spot affects the sales of other washers in a producer's lineup.⁵¹

Among purchasers surveyed in the previous investigation, of the purchasers that indicated that they allocated floor space to different types of LRWs at different prices, most cited consumer demand and the profitability of individual units as reasons for flooring.⁵² In that investigation, Home Depot stated that the difference in its margins between higher priced LRWs and lower priced washers are not usually large, so that it aims to floor models that will generate large sales volumes rather than flooring based predominantly on margin.⁵³ Purchasers' responses to the LSLR survey regarding floor space are discussed in part V.

⁴⁵ Petition, p. 52.

⁴⁶ Conference transcript, p. 157 (Brindle).

⁴⁷ Conference transcript, pp. 103 104 (Tubman).

⁴⁸ For example, ***.

⁴⁹ The line review involves discussions of each individual product, as well as margins, discounts, and promotions. Petition, p. 41. Conference transcript, pp. 116 118 (Tubman).

⁵⁰ Petitioners' postconference brief, pp. 9 10.

⁵¹ Petition, p. 41.

⁵² Certain Large Residential Washers from Korea and Mexico, Investigation Nos. 701 TA 488 and 731 TA 1199 1200 (Final), USITC Publication 4378, February 2013, p. II 17.

⁵³ Certain Large Residential Washers from Korea and Mexico, Investigation Nos. 701 TA 488 and 731 TA 1199 1200 (Final), USITC Publication 4378, February 2013, pp. II 16 17.

Comparison of U.S. produced and imported LRWs

In order to determine whether U.S. produced LRWs can generally be used in the same applications as imports from China, U.S. producers and importers were asked whether the products can “always,” “frequently,” “sometimes,” or “never” be used interchangeably. As shown in table II 4, U.S. producers reported that LRWs from all sources were always or frequently interchangeable. Importers *** reported that products for all sources were sometimes interchangeable, while *** reported that LRWs from other sources were always interchangeable with domestic product.

Respondents assert that interchangeability is limited because of differences in products and markets. LG and Samsung contend that they sell only in the high end of the market and do not compete in conventional top load washers with agitators which comprise a large portion on U.S. production.⁵⁴

Other product differences cited by respondents include features, branding, designs, ease of use, fit feel and finish, features (color, number of cycles, type of lid, heater, steam, control type, etc.), warranties, and innovations introduced before domestic producers.

Table II-4

LRWs: Interchangeability between LRWs produced in the United States and in other countries, by country pairs

* * * * *

In addition, producers and importers were asked to assess how often differences other than price were significant in sales of LRWs from the United States, subject, or nonsubject countries. As seen in table II 5, ***.

Table II-5

LRWs: Significance of differences other than price between LRWs produced in the United States and in other countries, by country pair

* * * * *

In further comments, ***.⁵⁵ ***.⁵⁶ ***. According to respondents, consumers’ purchasing decisions for higher end washers are not driven by price, but by other factors including brand perception, quality, reliability, consumer reviews, capacity, design, style, controls feel and use, and features.⁵⁷

⁵⁴ According to respondents, 39.5 percent of sales are in the “value” segment of the market consisting of top loaders with agitators. Conference transcript, p. 162 (Brindle), and pp. 170 72 (Toohy).

⁵⁵ ***.

⁵⁶ ***.

⁵⁷ Respondents’ postconference brief, p 3. Conference transcript, pp. 156 157 (Brindle).

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) and is based on the questionnaire responses of four firms that accounted for all U.S. production of LRWs during period of investigation.

U.S. PRODUCERS

The Commission sent U.S. producer questionnaires to seven firms¹ which included those firms identified in the petition as U.S. producers of LRWs as well as U.S. producers of LRWs in the Commission's prior investigations on LRWs.² The Commission received responses from four firms which accounted for all domestic production of LRWs during the period of investigation.³ Table III 1 lists U.S. producers of LRWs, their production location(s), positions on the petition, total production, and shares of total production during the period of investigation.

¹ These seven firms included: (1) Whirlpool; (2) GE; (3) Staber; (4) Alliance Laundry Systems LLC; (5) Electrolux Home Products, Inc.; (6) BSH Home Products, Inc. ("BSH"); and (7) Fisher & Paykel.

² During the period of investigation of the Commission's prior investigations on LRWs, three firms ceased LRW production operations in the United States. BSH, which produced front load LRWs, closed its New Bern, North Carolina facility in May 2011. Electrolux, which produced front load LRWs, closed its facility in Webster City, Iowa in April 2011. Electrolux currently produces and imports into the United States front load LRWs from its facility in Juarez, Mexico. Fisher & Paykel produced top load LRWs at its facility in Clyde, Ohio until late 2009. Subsequently, it transferred this production to its facility in Amata City, Thailand. In 2012, Haier Group of Qingdao, China purchased Fisher & Paykel. *Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)—Staff Report*, INV LL 005, January 10, 2013), p. III 1; *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication No. 4378 (February 2013), p. III 1.

³ The Commission also received a questionnaire response from BSH which stated ***. As of 2015, BSH, founded as a joint venture between Robert Bosch GmbH and Siemens AG is exclusively owned by the Bosch Group.

Table III 1

LRWs: U.S. producers of LRWs, their positions on the petition, production locations, production, and shares of reported production, January 2012 to September 2015

Firm	Position on petition	Production location(s)	Share of production (percent)
Alliance	***	Ripon, WI	***
GE ¹	***	Louisville, KY	***
Staber	***	Groveport, OH	***
Whirlpool ²	Petitioner	Clyde, OH	***
Total			100.0

¹ GE Appliances, LP (“GE”) is a wholly owned subsidiary of General Electric Corp. and a U.S. importer of LRWs from nonsubject countries. GE is a minority joint venture partner in Mabe S.A. de C.V., a producer of LRWs in Mexico and Little Swan General Appliance Co., Ltd. (China), a producer of out of scope LRWs in China.

² Whirlpool Overseas Manufacturing S.a.r.l. of Apodaca, Mexico is a wholly owned subsidiary of Whirlpool Corp. of Benton Harbor, MI and produces LRWs in Mexico. As of 2012, the firm did not export LRWs to the United States.

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

Whirlpool

Whirlpool, founded in 1898 and headquartered in Benton Harbor, Michigan, is a manufacturer and marketer of home appliances with net sales totaling approximately \$20 billion and net earnings of \$650 million in 2014. Globally, the firm employed approximately 100,000 employees in 70 manufacturing and technology research centers in 2014. It manufactures and markets products globally under brand names, such as Whirlpool, KitchenAid, Maytag, Consul, Brastemp, Amana, Bauknecht, Jenn Air and Indesit. Its principal products are laundry appliances, refrigerators and freezers, cooking appliances, dishwashers, mixers and other portable household appliances. The firm reports earnings by geographic segment, which consist of North America, Latin America, EMEA (Europe, Middle East and Africa) and Asia. The North America segment produces, markets, and distributes home appliances and portable appliances under a variety of brand names, primarily Whirlpool, Maytag, KitchenAid, Jenn Air, Amana, Roper, Admiral, Affresh and Gladiator, primarily to retailers, distributors and builders.⁴

In 2010, Whirlpool began production of front load LRWs in the United States after investing \$100 million to expand its existing facility in Clyde, Ohio. Prior to 2010, Whirlpool supplied front load LRWs to the U.S. market from Whirlpool’s facilities in Germany and Mexico.⁵ A wholly owned subsidiary, Whirlpool Overseas Manufacturing S.a.r.l. (“Whirlpool

⁴ Whirlpool SEC Form 10 Q, September 30, 2015; www.whirlpool.com/our_company/, accessed January 11, 2016.

⁵ Whirlpool stated that its manufacturing facility in Germany ceased production of LRWs in the first quarter of 2013 and that there is currently no production occurring at the facility. Whirlpool ceased its

(continued...)

Mexico”), produced and exported LRWs to the United States during the period of investigation of the prior investigation. However, effective July 16, 2012, Whirlpool Mexico ceased exports of LRWs to the United States and currently produces LRWs for sale in non U.S. markets. Another wholly owned subsidiary, Whirlpool Bauknecht Hausgerate GmbH (“Whirlpool Germany”), ***.

General Electric

General Electric, founded in 1892 and headquartered in Fairfield, Connecticut, is a global diversified infrastructure and financial services company offering products and services ranging from aircraft engines, power generation, oil and gas production equipment, and household appliances to medical imaging, business and consumer financing and industrial products. The Company operates in approximately 175 countries through eight business segments, which include (1) appliances & lighting; (2) aviation; (3) capital; (4) energy management; (5) healthcare; (6) oil and gas; (7) power and water; (8) transportation. In 2014, GE reported \$148.6 billion in revenue and \$15.3 billion in earnings from continuing operations. Globally, the firm employed approximately 305,000 employees 2014.⁶

In 2010, GE’s appliances division (“GE”) initiated a \$150 million investment at its Louisville, Kentucky facility (“Appliance Park”) to produce top load and front load LRWs in the United States. In 2012, GE began producing top load LRWs at Appliance Park. GE previously sourced its top load LRWs ***.⁷ In 2013, GE began production of front load LRWs at Appliance Park.

General Electric has been in the process of a multi year major restructuring where the company has announced that it wishes to focus on its core industrial businesses and thereby reduce the number of its consumer and financial business segments. As part of this restructuring, in September 2014, General Electric announced that it was selling its appliances division to Electrolux AD of Stockholm, Sweden. The U.S. Department of Justice filed to stop the merger in July 2015, arguing that it would lead to less competition and higher prices for buyers of appliances. On December 7, 2015, General Electric announced that it terminated its agreement to sell its appliances division to Electrolux and would now pursue other options to sell the division.⁸ On January 15, 2016, General Electric announced that it entered into a definitive agreement to sell its appliances division to the Chinese company, Qingdao Haier Co., Ltd. (“Haier”), for \$5.4 billion. The announcement stated that the transaction has been approved by the board of directors of General Electric and of Haier, but remains subject to

(...continued)

U.S. imports of LRWs from Mexico in mid 2012, however, the manufacturing facility continues to produce LRWs on a smaller scale for the Mexican home and South American markets. Whirlpool’s postconference brief, Answers to Commission Questions, p. 8; Conference transcript, p. 75 (Liotine).

⁶ General Electric Co. Form 10 K, 2014; http://www.ge.com/about_us/building, accessed January 11, 2016.

⁷ *Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*—Staff Report, INV LL 005, January 10, 2013), p. III 12.

⁸ GE Press Release, December 7, 2015, “GE Statement on Appliances Business.”

Haier shareholder and regulatory approvals. Parties estimate that the transaction will close in mid 2016.⁹

Staber

Staber is a private, family owned firm headquartered in Groveport, Ohio, that produces LRWs and drying cabinets, which serve the medical, fire and laundry equipment sectors. In 1976, Staber began as a firm that re manufactured laundry equipment from other manufacturers such as Maytag, Whirlpool, GE and Speed Queen. Subsequently, Staber implemented and patented design improvements for a new type of clothes washer. This unique top load washer technology uses a non circular tub on a horizontal axis, which can hold up to twice as much laundry than a top load LRW with an agitator.¹⁰ Staber washers have been produced in Groveport, Ohio since 1993 and most of its sales are shipped factory direct to the end user.¹¹

Alliance

Alliance is a privately held corporation which was founded in 1908 and headquartered in Ripon, Wisconsin. It manufactures and markets primarily commercial laundry equipment. The firm produces washers and dryers for coin operated laundries, multi housing laundries, and some LRWs for residential use. Alliance Laundry Systems manufactures products under the brands Speed Queen, Cissell, Huebsch, IPSO, and UniMac. Alliance produces and markets its residential LRWs under the Speed Queen brand name.¹² In 2014, Alliance reported total global revenues of \$726.3 million and net income of \$29.6 million.¹³ Alliance reported that in 2014, *** percent of its total production were LRWs whereas *** percent were commercial washers.¹⁴ It reported *** during the period of investigation.¹⁵

⁹ "GE Agrees to Sell Appliances Business", GE Press Release, January 15, 2016, <http://www.genewsroom.com/press-releases/ge-agrees-sell-appliances-business-282595>, accessed January 15, 2016.

¹⁰ Staber described its unique washer technology as consisting of a hexagonal inner basket that rotates inside a stationary outer octagonal tub to gently pump water through the holes of the inner basket and through the laundry. As the angles between the inner basket and outer tub change while the inner basket rotates, a passive pumping action is created between the two, which gently pumps water through the holes of the inner basket and through your laundry. Staber's postconference brief, pp. 1 2.

¹¹ <http://www.staber.com/aboutus>, accessed January 11, 2016.

¹² <http://www.alliancelandry.com/about-us/>, accessed January 11, 2016.

¹³ Alliance Laundry Holdings LLC, Annual Report, 2014.

¹⁴ U.S. producer questionnaire of Alliance, question II 3a.

¹⁵ Ibid. at question II 2.

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III 2 presents U.S. producers' production, capacity, and capacity utilization. Total U.S. capacity of LRWs decreased by *** percent from 2012 to 2014, but was higher by *** percent in January September 2015 than in January September 2014. Total U.S. production of LRWs increased from 2012 to 2014 by *** percent but was lower by *** percent in January September 2015 than in January September 2014. U.S. capacity utilization rates for LRW production increased for much of the period of investigation and ranged from *** percent in 2012 to *** in January September 2014.¹⁶

Table III 2

LRWs: U.S. producers' production, capacity, and capacity utilization, 2012 14, January September 2014, and January September 2015

* * * * *

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

Potential product shifting in U.S. production facilities

*** reported that they are able to switch production from LRWs to another product using the same manufacturing equipment and labor.¹⁷ *** reported that they produced products other than LRWs on the same manufacturing equipment. ***¹⁸ ***¹⁹ ***²⁰ ***²¹ *** of "low tech" LRWs which *** of total overall production during the period of investigation.²² Table III 3 presents overall U.S. capacity and production on manufacturing equipment used to produce LRWs and other products.

¹⁶ Petitioner stated that although U.S. capacity utilization rates increased this was largely due to a ***. Petitioner's postconference brief, p. 39.

¹⁷ U.S. producer questionnaire responses of ***, question II 3e(i).

¹⁸ U.S. producer questionnaire of ***, question II 3a.

¹⁹ U.S. producer questionnaire of ***, question II 3a.

²⁰ U.S. producer questionnaire of ***, question II 3a.

²¹ U.S. producer questionnaire of ***, question II 3a.

²² *Ibid*; Respondents argued that the definition of the domestic like product should be expanded to include these "low tech" LRWs. See *Part I, Domestic Like Product Issues*.

Table III 3

LRWs: U.S. producers' overall capacity and production on the same equipment as subject production, 2012 14, January September 2014, and January September 2015

* * * * *

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

Whirlpool's foreign trade zone (FTZ) production activities

In 2012, Whirlpool applied to the Foreign Trade Zone Board to create a foreign trade subzone that would encompass its entire Clyde, OH manufacturing facility.²³ Whirlpool stated that commencing in 2013, it admitted into the FTZ various out of scope LRW components from various countries of origin, including China, for use in the production of LRWs at the Clyde, OH manufacturing facility.²⁴ It further stated that using the FTZ structure allowed Whirlpool to minimize tariff liability while maintaining its global components supply chain.²⁵ Pursuant to FTZ regulations, production activities²⁶ must be approved by the FTZ board and U.S. Customs

²³ Foreign trade zones are secure areas under the supervision of U.S. Customs and Border Protection that are considered outside the customs territory of the United States for the purposes of duty payment. Authority for establishing these facilities is granted by the Foreign Trade Zones Board under the Foreign Trade Zones Act of 1934, as amended (19 U.S.C. 81a-81u), and the Board's regulations (15 C.F.R. Part 400). The Executive Secretariat of the Board is located within Enforcement and Compliance division of the U.S. Department of Commerce. *76th Annual Report of the Foreign Trade Zones Board to the U.S. Congress of the United States*, August 2015, p. 1. Whirlpool's FTZ subzone is 8I, located in Clyde. It is a subzone of FTZ 8, Toledo—Lucas County Port Authority.

²⁴ For an example of the type of foreign components admitted into the FTZ, Whirlpool submitted an application for production activities to the FTZ board that named the following components: self tapping screws, screws, bolts, washers, articles of steel, base metal mountings, housings for wax motors, appliance fans, water filters, various DC motors, various AC multi phase motors, lamp sockets, halogen lamps, power cords, wire harnesses, carbon brush assemblies, pressure sensors and thermostats. *Foreign Trade Zone (FTZ) 8—Toledo, Ohio, Notification of Proposed Production Activity, Whirlpool Corporation, Subzone 8I, (Washing Machines), Clyde and Green Springs, Ohio*, 78 FR 64197, October 28, 2013.

²⁵ Petitioner explained that tariff savings occurs when the foreign components admitted into the FTZ have a higher duty rate than a finished washer. In those cases, the foreign components will be classified as the finished washer when they are withdrawn from the FTZ and will be subject to the lower duty applicable to finished washers. U.S. producer questionnaire of Whirlpool, question II 6(b); Petitioner's postconference brief, Answers to Staff Questions, pp. 11-12.

²⁶ Under FTZ regulations, "manufacturing" means any production activities that result in a substantial transformation of a foreign article to a new and different article having a different name, character, and use, or which causes a change in its HTS classification of the merchandise or in its eligibility for entry for
(continued...)

entries must be made for finished goods leaving the FTZ for U.S. consumption that utilized foreign components in their production. According to these same FTZ regulations, the country of origin of the finished good for Customs purposes is the country of origin of the highest value foreign component, regardless of the number of foreign components or the share of U.S. content.²⁷

Because of this FTZ rule of origin, proprietary data obtained from CBP showed that ***.²⁸ Table IV 4 presents Whirlpool’s U.S. shipments of LRWs exiting its FTZ for U.S. consumption, the value of foreign content, total value of its U.S. shipments, the unit values, and ratios to total value of its U.S. shipments. As shown in table IV 4, in 2014, *** of Whirlpool’s total U.S. shipments exited through its FTZ. Of those shipments, *** percent of their content originated in the United States while *** percent were foreign components, some of which from China.²⁹ Due to the nature of these shipments, throughout this report, U.S. shipments of LRWs exiting Whirlpool’s FTZ have not been deemed U.S. imports and have not been included in data showing U.S. imports from China.

Table III 4

LRWs: Whirlpool’s U.S. shipments of its production of LRWs in its foreign trade zone (FTZ) , 2012 14, January September 2014, and January September 2015

* * * * *

Source: Compiled from data submitted in response to Commission questionnaires and proprietary Customs records under HTS statistical reporting numbers 8450.20.0040, 8450.20.0040, and 8450.20.0090, accessed January 7, 2015.

U.S. PRODUCERS’ U.S. SHIPMENTS AND EXPORTS

As presented in table III 5, the volume of U.S. shipments of LRWs increased by *** percent from 2012 to 2014 and was higher by *** percent in January September 2015 than in January September 2014. The value of U.S. shipments increased by *** percent from 2012 to 2014 and was higher by *** percent in January September 2015 than in January September 2014. The volume of export shipments of LRWs decreased by *** percent from 2012 to 2014

(...continued)

consumption. *Foreign Trade Zones Manual*, U.S. Customs and Border Protection, Publication no. 0000 0559A (2011), p. 102.

²⁷ Petitioner’s postconference brief, Answers to Staff Questions, pp. 11 12. *Foreign Trade Zones Manual*, U.S. Customs and Border Protection, Publication no. 0000 0559A (2011).

²⁸ In 2013, Whirlpool accounted for *** percent of total U.S. imports from China, in 2014, *** percent, and in January September 2015, *** percent. Proprietary data obtained from CBP for HTS statistical reporting numbers 8450.20.0040, 8450.20.0080, and 8540.20.0090.

²⁹ Again, under FTZ country of origin rules, all foreign components are deemed to be the country of origin of the highest value component. Petitioner’s postconference brief, Answers to Staff Questions, pp. 11 12 (example of FTZ country of origin rules).

and was lower by *** percent in January September 2015 than in January September 2014. The value of export shipments decreased by *** percent from 2012 to 2014 and was lower by *** percent in January September 2015 than in January September 2014. U.S. producers reported that their principal export markets were *** during the period of investigation.

Table III 5

LRWs: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2012 14, January September 2014, and January September 2015

* * * * *

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

U.S. producers' U.S. commercial shipments of LRWs by configuration and efficiency

U.S. producers were requested to report their U.S. commercial shipments by LRW configuration and whether the LRW is deemed non energy efficient or energy efficient.³⁰ As shown in table III 6, the share of U.S. shipments of top load non efficiency LRWs has been consistent, approximately *** of all U.S. shipments, throughout the period of investigation.³¹ The share of U.S. shipments of front load LRWs, although never exceeding *** of the total, increased steadily from 2012 to 2014 as GE began production in the United States and Whirlpool increased its shipments of front load LRWs.

³⁰ On March 7, 2015, new energy efficiency standards became effective. *See, Part I, Features, Energy efficiency.* Prior to March 7, 2015, generally, all top load LRWs with an agitator did not meet Energy Star standards and were not considered "high efficiency" while all top load LRWs with an impeller did meet those standards and were considered "high efficiency." Also, all front load LRWs did meet the Energy Star standards and were considered "high efficiency." After the new, more stringent energy efficiency standards became effective on March 7, 2015, those categories of LRW that were considered "high efficiency" were more difficult to discern and the definition of "high efficiency" became somewhat blurred.

Parties were asked how they defined "high efficiency" under the new standards. Three of the four U.S. producers, Whirlpool, GE, and Alliance, stated that they ***. U.S. producer questionnaire responses of Whirlpool, GE, and Alliance, question II 9 (Staber did not provide a response).

³¹ The exception is January September 2015 when the definition of "high efficiency" changed and the product categories became somewhat blurred. Petitioner's postconference brief, p. 10 ("distinctions between different product types of washers are even more blurred today due to a sea change in the way U.S. manufacturers design their top load models to comply with new federal energy efficiency standards"); Respondents' postconference brief, p. 44 n.117.

Table III 6

LRWs: U.S. producers' U.S. commercial shipments, by type, 2012 14, January September 2014, and January September 2015

* * * * *

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

U.S. PRODUCERS' INVENTORIES

Table III 7 presents U.S. producers' end of period inventories of LRWs and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments over the period of investigation.

Table III 7

LRWs: U.S. producers' inventories, 2012 14, January September 2014, and January September 2015

* * * * *

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

U.S. PRODUCERS' IMPORTS AND PURCHASES

*** U.S. producers, Whirlpool, GE, Staber, or Alliance, reported U.S. imports or purchases of U.S. imports of LRWs from China.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Data provided by U.S. producers on the number of production and related workers ("PRWs") engaged in the production of LRWs, the total hours worked by such workers, wages paid to such PRWs, productivity, and unit labor costs during the period of investigation are presented in table III 8.

Table III 8

LRWs: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2012 14, January September 2014, and January September 2015

* * * * *

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

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission sent U.S. importer questionnaires to 10 firms¹ identified in the petition and proprietary import data obtained from U.S. Customs and Border Patrol (“CBP”) as possible U.S. importers of LRWs as well as to all U.S. producers. The Commission received questionnaire responses from four firms. Among those responses, Samsung Electronics America, Inc. (“Samsung USA”) and LG Electronics USA, Inc. (“LG USA”) accounted for virtually all of U.S. imports of LRWs from China.² *** reporting U.S. importers reported U.S. imports from countries other than China. Reported U.S. imports from nonsubject countries accounted for approximately *** percent of total U.S. imports from nonsubject countries in 2014.³

Table IV 1 lists all responding U.S. importers of LRWs, their headquarter locations, and their share of quantities of U.S. imports, by source, during the period of investigation.

¹ The ten possible U.S. importers included: ***. GE reported that it ***. U.S. producer questionnaire of GE, ***.

² Proprietary data obtained from CBP show that in 2014, three firms, ***, accounted for *** percent of all U.S. imports under HTS statistical reporting numbers 8450.20.0040, 8450.20.0080, and 8540.20.0090. The remaining small volumes of U.S. imports from China were imported by ***. The proprietary data obtained from CBP showing U.S. imports from China by ***. *See, Part III, Whirlpool’s foreign trade zone (FTZ) production activities.*

³ Estimated data coverage of U.S. imports from nonsubject countries is calculated by comparing total U.S. imports from nonsubject countries as reported by those firms listed in table IV 1 with total U.S. imports from nonsubject sources as compiled by proprietary import data obtained from CBP ***}. Estimated data coverage of U.S. imports from nonsubject countries is likely understated because the HTS subheadings used to compile import data from CBP contain products outside the scope of this investigation.

Table IV 1
LRWs: U.S. importers by source, 2012 September 2015

Firm	Headquarters	Share of imports by source (percent)		
		China	All other sources	Total imports
Electrolux ¹	Charlotte, NC	***	***	***
Fisher & Paykel ²	Costa Mesa, CA	***	***	***
LG USA ³	Englewood Cliffs, NJ	***	***	***
Samsung USA ⁴	Ridgefield Park, NJ	***	***	***
Whirlpool ⁵	Benton Harbor, MI	***	***	***
Total		***	***	***

¹ Electrolux Home Products, Inc. (“Electrolux”) is a wholly owned subsidiary of AB Electrolux of Stockholm, Sweden. Electrolux is also affiliated with Electrolux Home Products, Corp. N.V. of Chihuahua, Mexico, a producer of LRWs in Mexico. Electrolux did not submit a U.S. importer questionnaire to the Commission. Electrolux’s U.S. imports from ***.

² Fisher & Paykel Appliances USA Holdings, Inc. (“Fisher & Paykel”) is a wholly owned subsidiary of Fisher & Paykel Appliances, Ltd. of East Tamaki, New Zealand. Fisher & Paykel produced top load LRWs its facility in Clyde, OH until late 2009. Subsequently, it transferred this production to its facility in Amata City, Thailand. In 2012, Haier Group of Qingdao, China purchased Fisher & Paykel.

³ LG Electronics USA, Inc. (“LG USA”) is a wholly owned subsidiary of LG Electronics, Inc. of Seoul, Korea, which is a producer of LRWs in Korea, and an affiliate of Nanjing LG Panda Appliances Co., Ltd. of Nanjing City, China, which is a producer of LRWs in China.

⁴ Samsung Electronics America, Inc. (“Samsung USA”) is a wholly owned subsidiary of Samsung Electronics Co., Ltd. of Gyeonggi do, Korea, which is a producer of LRWs in Korea, and an affiliate of Suzhou Samsung Electronics Co., Ltd. of Jangsu, China and Suzhou Samsung Electronics Co., Ltd.—Export of Jangsu, China, both of which are producers of LRWs in China. Samsung USA is also affiliated with Samsung Electronics Mexico, S.A. de C.V. of Queretaro, Mexico, which is a producer of LRWs in Mexico.

⁵ Maytag Sales, Inc. is a wholly owned subsidiary of Whirlpool and an affiliate of Whirlpool Overseas Manufacturing S.A.R.L. of Apodaca, Mexico, which is a producer of LRWs in Mexico. ***.

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

U.S. IMPORTS

Table IV 2 presents data for U.S. imports of LRWs from China and nonsubject countries. The U.S. import data are compiled using responses to the Commission’s U.S. importer questionnaire and proprietary import data obtained from CBP.⁴ As shown, the volume of U.S. imports of LRWs from China increased by *** percent from 2012 to 2014, and was higher by *** percent in January September 2015 than in January September 2014. The value of U.S. imports of LRWs from China increased by *** percent from 2012 to 2014, and was higher by *** percent in January September 2015 than in January September 2014. The volume of U.S. imports from nonsubject countries of LRWs decreased by *** percent from 2012 to 2014 and

⁴ Electrolux’s U.S. imports from ***.

was lower by *** percent in January September 2015 than in January September 2014. The value of U.S. imports from nonsubject countries of LRWs decreased by *** percent from 2012 to 2014 was lower by *** percent in January September 2015 than in January September 2014. The largest sources of U.S. imports of LRWs from nonsubject countries in 2014 were: ***.⁵

Table IV 2
LRWs: U.S. imports by source, 2012 14, January September 2014, and January September 2015

* * * * *

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

U.S. shipments of imports by configuration and efficiency

U.S. importers were requested to report their U.S. commercial shipments by LRW configuration and whether the LRW is deemed non energy efficient or energy efficient.⁶ As shown in table IV 3, U.S. shipments of U.S. imports from China did not include top load non efficiency LRWs and have been *** top load high efficiency and front load high efficiency throughout the period of investigation. Front load high efficiency LRWs, however, *** the share of U.S. shipments of U.S. imports from nonsubject countries.

Table IV 3
LRWs: U.S. shipments of imports by source, configuration, and efficiency, 2012 14, January September 2014, and January September 2015

* * * * *

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

⁵ Based on 2014 proprietary import data obtained from CBP of all U.S. imports under HTS statistical reporting numbers 8450.20.0040, 8450.20.0080, and 8540.20.0090.

⁶ On March 7, 2015, new energy efficiency standards became effective. *See, Part I, Features, Energy efficiency.* Prior to March 7, 2015, generally, all top load LRWs with an agitator did not meet Energy Star standards and were not considered “high efficiency” while all top load LRWs with an impeller did meet those standards and were considered “high efficiency.” Also, all front load LRWs did meet the Energy Star standards and were considered “high efficiency.” After the new, more stringent energy efficiency standards became effective on March 7, 2015, those categories of LRW that were considered “high efficiency” were more difficult to discern and the definition of “high efficiency” became somewhat blurred.

Parties were asked how they defined “high efficiency” under the new standards. Three of the four reporting U.S. importers provided a response. Samsung stated that ***. LG stated that ***. U.S. importer questionnaire responses of Samsung, LG, and Whirlpool, question II 7 (Fisher & Paykel did not provide a response).

NEGLIGENCE

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.⁷ Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12 month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12 month period, then imports from such countries are deemed not to be negligible.⁸ Based on data compiled from U.S. importer questionnaires and proprietary import data obtained from CBP, U.S. imports from China accounted for *** percent of total U.S. imports of LRWs by quantity during 2014 which is the most recent 12 month period for which data are available.

APPARENT U.S. CONSUMPTION AND U.S. MARKET SHARES

Data on apparent U.S. consumption of LRWs are presented in table IV 4. From 2012 to 2014, the quantity of apparent U.S. consumption of LRWs increased by *** percent and was higher by *** percent in January September 2015 than in January September 2014.⁹ The value of apparent U.S. consumption increased by *** percent from 2012 to 2014 and was higher by *** percent in January September 2015 than in January September 2014. In 2014, total U.S. capacity to produce LRWs accounted for *** percent of total apparent U.S. consumption.

Data on U.S. market shares for LRWs are also presented in table IV 4. From 2012 to 2014, U.S. producers' U.S. market share based on volume decreased by *** percentage points, and was lower by *** percentage points in January September 2015 than in January September 2014.¹⁰ From 2012 to 2014, U.S. producers' U.S. market share based on value increased by *** percentage points, but was lower by *** percentage points in January September 2015 than in

⁷ Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

⁸ Section 771 (24) of the Act (19 U.S.C § 1677(24)).

⁹ The parties agreed that the increase in apparent U.S. consumption during the period of investigation was due in large part to strength in the housing market, both housing starts and sales of existing homes, and pent up replacement demand following the last recession. Petitioner's postconference brief, pp. 18 19; Respondents' postconference brief, p. 40.

¹⁰ Petitioner argued that because of LTFV U.S. imports from China, it was neither able to capture any market share of the rising demand during the period of investigation nor recapture market share from U.S. imports after antidumping and countervailing duties were imposed on LRWs from Korea and Mexico in 2013. Petitioner's postconference brief, pp. 25 26.

January September 2014. U.S. imports from China increased their U.S. market share by *** percentage points from 2012 to 2014 based on volume and *** percentage points based on value and was higher by *** percentage points based on volume (*** percentage points based on value) in January September 2015 than in January September 2014. U.S. imports from nonsubject countries decreased their U.S. market share by *** percentage points from 2012 to 2014 based on volume and *** percentage points based on value and was lower by *** percentage points based on volume (*** percent based on value) in January September 2015 than in January September 2014.

Table IV 4

LRWs: U.S. shipments of domestic product, U.S. shipments of imports, apparent U.S. consumption, and U.S. market shares, 2012 14, January September 2014, and January September 2015

* * * * *

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

Apparent U.S. consumption and U.S. market shares by configuration and efficiency

Presented in tables IV 5 through IV 7 are apparent U.S. consumption and U.S. market share data broken out by LRW configuration and whether the LRW is deemed non energy efficient or energy efficient. Table IV 5 presents these data for top load non energy efficient LRWs. Table IV 6 presents these data for top load energy efficient LRWs. Table IV 7 presents these data for front load energy efficient LRWs.

Table IV 5

LRWs: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, and U.S. market shares, of top load non energy efficient LRWs, 2012 14, January September 2014, and January September 2015

* * * * *

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

Table IV 6

LRWs: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, and U.S. market shares, of top load energy efficient LRWs, 2012 14, January September 2014, and January September 2015

* * * * *

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

Table IV 7

LRWs: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, and U.S. market shares, of front load energy efficient LRWs, 2012 14, January September 2014, and January September 2015

* * * * *

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

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary raw materials used to produce LRWs are copper, aluminum, polypropylene, crude oil, carbon steel, stainless steel, and synthetic rubber.¹ Raw materials accounted for between *** and *** percent of U.S. producers' costs of goods sold during 2012-14. While these percentages did not vary widely among firms (see Part VI), producers and importers provided evidence of decreasing raw material costs since January 2012. *** of *** responding U.S. producers and *** of *** responding importers reported that raw material costs have decreased over the period of investigation.² U.S. producer Whirlpool reported that while the prices of raw materials decreased throughout the period of investigation, the total cost of raw materials increased. Whirlpool cited the need to create a new LRW platform to comply with new water and energy efficiency regulations, causing ***.³ U.S. producer *** reported that ***.⁴

Both *** reported buying commodities on a *** basis. *** reported that *** for cold rolled steel is *** stainless steel has a *** and for polypropylene has ***.⁵

The price of metals decreased gradually until mid 2014 then dropped dramatically (figure V 1). Cold rolled steel prices decreased by approximately *** percent. From January 2012 to May 2013, prices for cold rolled steel decreased by *** percent, increased by *** percent by May 2014, and then fell by *** percent by September 2015. The price of copper fluctuated, but decreased overall by *** percent over the period of investigation, peaking in March 2012.⁶ Prices for polypropylene resin, which is derived from oil, have fallen.⁷ Whirlpool reported that the prices for polypropylene resin have decreased by *** cents per pound or *** percent.⁸

¹ *Large Residential Washers from Korea and Mexico, Inv. Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, USITC Staff Report, INV LL 005, January 2013, p. V 1.

² U.S. producers *** and *** reported that raw material prices fluctuated over the period of investigation, and importer *** reported that raw material prices did not change over the period of investigation. None of these companies elaborated more on the raw material prices.

³ Petitioner's postconference brief, Answer to staff questions, p. 2.

⁴ GE's postconference brief, p 1.

⁵ Petitioner's postconference brief, Answer to staff questions, p. 9, and GE's postconference submission, p 1.

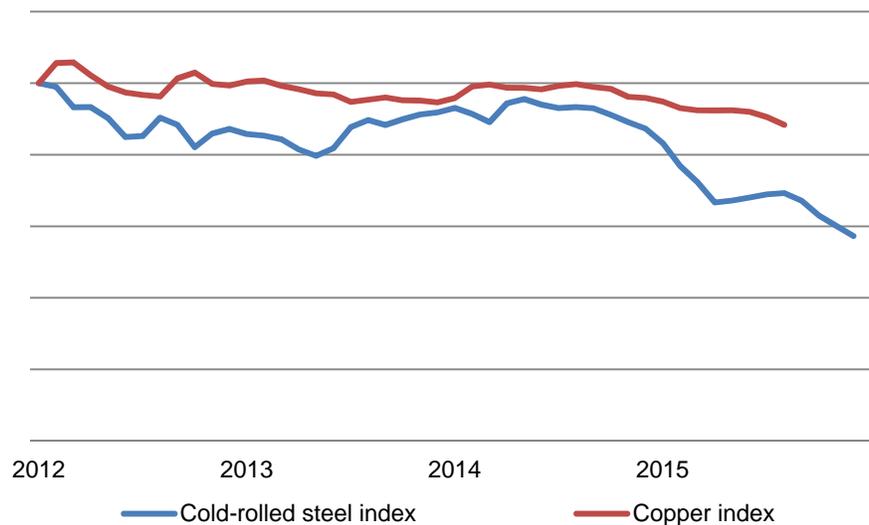
⁶ Data for copper were only available through August 2015.

⁷ *Commodity Resin Prices Drop*, *Plastics Technology*, November 2015, found at <http://www.ptonline.com/articles/commodity-resin-prices-drop>, retrieved January 15, 2016

⁸ Petitioner's postconference brief, Answer to staff questions, p. 2.

Figure V-1

Raw material costs: U.S. price indexes of cold-rolled steel, monthly, January 2012-September 2015



Note.--Data for cold-rolled steel and oil go through October 2015; data for copper were only available through August 2015.

Source: For steel, American Metal Market, November 18, 2015; for copper, BLS Producer Price Index-Commodities, January 15, 2016; for oil prices, EIA, January 15, 2016.

U.S. inland transportation costs

All responding U.S. producers and importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from *** to *** percent, averaging *** percent. Importer *** reported U.S. inland transportation costs of *** percent.⁹

PRICING PRACTICES

Pricing methods

U.S. producers and importers sell LRWs set prices on a variety of methods (table V 1). *** and *** reported selling LRWs on a transaction by transaction, contracts, and profit margin off of the minimum advertised price (MAP) basis.¹⁰ U.S. producer *** reported using *** to set

⁹ Importer *** reported that inland transportation costs of *** percent.

¹⁰ *** responded ***.

prices.¹¹ Importer *** reported selling LRWs on a flexible price list. It stated that it uses a set price list for negotiations with individual customers; however, its price lists can change with 60 to 90 days' notice.

Table V-1

LRWs: U.S. producers and importers reported price setting methods, by number of responding firms

* * * * *

U.S. producers reported selling most of their product on the spot market whereas importers reported selling the vast majority of their product in annual contracts. As shown in table V 2, U.S. producers and importers reported their 2014 U.S. commercial shipments of LRW by type of sale. Importers *** and *** reported that annual contracts have fixed prices and no meet or release clauses.

Table V-2

LRWs: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2014

* * * * *

Sales terms and discounts

Sales terms

*** of four responding U.S. producers reported quoting prices on an f.o.b. basis. *** reported selling on a delivered basis. Of the two responding importers, ***. Producers *** and *** and importers *** and *** reported sales terms of net 30 days. Producers *** and *** and importer *** reported sales terms of net 60 days. Producer *** and importer *** reported sales terms of cash in advanced of delivery.¹²

Direct discounts

Direct discounts are tied to sales of the specific LRWs, whether or not such discounts are given on the sales price to the customer or are in the form of a post sale discount. U.S. producers and importers use a variety of direct discounts to sell LRWS (table V 2). U.S. producers *** and *** reported using all of the listed discounts. Importer *** reported using all of the listed discounts except for quantity discounts. Importer *** reported using annual total volume discounts, promotional discounts, and co marketing funds.

¹¹ *** did not elaborate on how *** differed from ***.

¹² Additionally, producer *** reported sales terms of 2/10 net 30 days, and producer *** reported net 45 days.

Table V-3

LRWs: U.S. producers' and importers' discounts offered by type, January 2012-September 2015

* * * * *

*** reported that discounts are offered on a “sell out” basis and on a “sell through” basis. Sell out refers to discounts provided to the retailer when the retailer purchases the LRW. Sell through refers to discounts provided to the end use customer when the retail sale is made. U.S. producer *** reported offering quantity discounts, annual total volume discounts, sales incentives, promotional discounts, cooperative advertising, co marketing funds, sales person incentives, inventory financing, display allowances, and transition funds on a sell out basis. On a sell out basis, importer *** offers annual volume rebates. On a sell through basis, *** uses retail sales allowances during limited promotional windows. On a sell through basis, Samsung will offer dealer and sales allowances. *** offers rebate programs that will be tailored differently depending on the products covered (washer, dryer, or both), the time period, the type of retailer, and specific model. As a U.S. producer and importer, Whirlpool reported offering *** discounts to *** and *** for ***.

Indirect discounts

Indirect discounts, while not specifically tied to the products in question, are allocable to sales of such products because sales of such products were part of the basis on which the discount, incentive, allowance, etc. was given. Both U.S. producers and importers offer indirect discounts for LRWs. *** reported providing a variety of indirect discount programs across a range of appliances, customers, buy groups, and time periods. These indirect discounts include volume rebates, special price allowances, and other trailing allowances. *** added that some indirect discounts were offered on a conditional basis, while other programs were discretionary. *** reported that it offers backside adjustments or rebates on an ad hoc basis in order to meet a competitive offer. *** reported that at any given time, a retailer could be eligible for 20 30 distinct rebate programs over a given year. Importer *** reported offering off invoice discounts in the form of a percentage off the original invoice or as a trailing credit advertising support. *** reported offering indirect discounts and rebates on a customer specific basis, but did not elaborate on the types of indirect discounts. *** reported that it does not distinguish between direct and indirect discounts. It reported providing different rebate programs based on the products covered (washers or washers and dryers), the time period, the type of retailer, and specific model.

Floor space

*** reported offering direct and/or indirect discounts for floor space. *** reported offering display discounts to customers based on minimum floor requirements. *** reported negotiating with individual customers to offer discounts, rebates, and other allowance to secure floor space, end cap space, and promotional displays. *** reported providing specific indirect discounts or promotion for some retailers to support placement in stores. *** reported

offering allowances for promotional displays and additional allowances to maintain floor space, but could not afford allowances for end cap space.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value (net of direct and indirect discounts) of the following LRW products shipped to unrelated U.S. customers during January 2012 to September 2015.

Product 1. Front loading, Energy Star rated washer; direct drive; rated DOE capacity greater than or equal to 3.7 cubic feet but less than 4.2 cubic feet; no water heater included; no steam cycle(s) included; no LCD display; white finish.

Product 2. Top loading, Energy Star rated washer; direct drive; impeller; rated DOE capacity greater than or equal to 4.2 cubic feet but less than 4.7 cubic feet; no water heater included; no steam cycle(s) included; solid opaque lid; white finish.

Product 3. Front loading, Energy Star rated washer; direct drive; rated DOE capacity greater than or equal to 3.7 cubic feet but less than 4.2 cubic feet; water heater included; steam cycle(s) included; no LCD display; white finish.

Product 4. Front loading, Energy Star rated washer; direct drive; rated DOE capacity greater than or equal to 4.2 cubic feet but less than 4.7 cubic feet; no water heater included; no steam cycle(s) included; no LCD display; white finish.

Product 5. Top loading, Energy Star rated washer; direct drive; impeller; rated DOE capacity greater than or equal to 4.7 cubic feet but less than 5.2 cubic feet; water heater included; no steam cycle(s) included; lid includes clear or tinted window; white finish.

Product 6. Front loading, Energy Star rated washer; direct drive; rated DOE capacity greater than or equal to 4.2 cubic feet but less than 4.7 cubic feet; water heater included; steam cycle(s) included; no LCD display; any non white finish.

Product 7 Top loading washer; not Energy Star rated; no direct drive; impeller; no water heater included; no steam cycle(s) included; solid opaque lid; white finish.

Four U.S. producers and *** importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.¹³ Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of product and *** percent of U.S. shipments of subject imports from China. Models and skus for any given pricing products have a typical lifecycle of 1 3 years (see part 1).¹⁴

Price data for products 1 7 are presented in tables V 4 to V 10 and figures V 2 to V 8.

Table V-4

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 1¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Table V-5

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 2¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Table V-6

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 3¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Table V-7

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 4¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

¹³ Per unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

¹⁴ Respondents argue that pricing products are too narrow and specifically do not include lower end, non high efficiency top load LRWs. Conference transcript, pp. 188 9 (Durling), and LG and Samsung's postconference brief, p 53 4. The Petitioner argue that pricing products provided reliable price comparisons and were taken from the product criteria determined by the commission in previous investigations (*Large Residential Washers from Korea and Mexico*). Petitioner's postconference brief, pp. 27 9.

Table V-8

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 5¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Table V-9

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 6¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Table V-10

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 7¹ and margins of underselling/(overselling), by quarters, January 2012-September 2015

* * * * *

Figure V-2

LRWs: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2012-September 2015

* * * * *

Figure V-3

LRWs: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2012-September 2015

* * * * *

Figure V-4

LRWs: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2012-September 2015

* * * * *

Figure V-5

LRWs: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2012-September 2015

* * * * *

Figure V-6

LRWs: Weighted-average prices and quantities of domestic and imported product 5, by quarters, January 2012-September 2015

* * * * *

Figure V-7

LRWs: Weighted-average prices and quantities of domestic and imported product 6, by quarters, January 2012-September 2015

* * * * *

Figure V-8

LRWs: Weighted-average prices and quantities of domestic and imported product 7, by quarters, January 2012-September 2015

* * * * *

Price trends

As shown in the table V 11, yearly domestic prices for pricing products 1 6 decreased ranging from *** to *** percent from 2012 to 2014 while yearly domestic prices for pricing product 7 increased by *** percent. Yearly importer prices for pricing products 1 3 and 6 7 decreased ranging from *** to *** percent while quarterly importer prices for pricing products 4 and 5 increased *** and *** percent, respectively.

Table V-11

LRWs: Number of quarters containing observations, low price, high price and change in price over period by product and source, January 2012 through September 2015

* * * * *

Price comparisons

As shown in table V 12, prices for LRWs imported from China were below those for U.S. produced product in *** margins of underselling ranged from *** to *** percent. In the remaining *** instances, prices for LRWs from China were between *** to *** percent above prices for the domestic product.

Table V-12

LRWs: Instances of underselling/overselling and the range and average of margins, by country, January 2012-September 2015

* * * * *

LOST SALES AND LOST REVENUE

The Commission requested U.S. producers of LRWs to report purchasers in which producers experienced instances of lost sales or revenue due to competition from imports of LRWs from China, during January 2012 to September 2015. Of the 4 responding U.S. producers, *** reported that they had to reduce prices, and *** reported that they had to roll back announced price increases. *** U.S. producers reported that they had lost sales. *** U.S.

producers submitted the lost sale and lost revenue worksheet. The *** responding U.S. producers¹⁵ identified *** firms where they lost sales or revenue (*** units consisting of both types of allegations).¹⁶ U.S. producers were also asked to provide information regarding the timing, method of sale, and product type related to the lost sales and lost revenue allegations.

Staff contacted 28 purchasers and received responses from 20 purchasers.¹⁷ Responding purchasers reported purchasing *** brand LRWs (table V 13a) from 2012 to 2014 and *** LRWs (table V 13b) during 2012 14 (*** total LRWs). For brand purchases in 2014, purchasers purchased *** percent from U.S. producers, *** percent from China, and *** percent from nonsubject countries. For OEM purchases in 2014, purchasers purchased *** percent from U.S. producers, *** percent from China, and *** percent from nonsubject countries. Of the responding purchasers, 11 reported decreasing purchases from domestic producers, 7 reported increasing purchases, and 4 reported fluctuating purchases of domestic LRWs.^{18 19} Purchasers reported that their purchases of GE/Whirlpool decreased due to higher retail prices, lowered profit margins, and higher acquisition costs. On the other hand, purchasers reported that their purchases of GE/Whirlpool increased due to increased promotional activity and improved model performance. Of the responding purchasers, 15 reported increasing purchases of LG and/or Samsung LRWs, 1 reported no change, 2 reported fluctuating purchases, and 1 purchaser reported not purchasing. Of the 15 purchasers that reported increasing purchases of LG and/or Samsung, *** cited price and *** cited promotional activity as reasons for shifting purchases. Additional reasons for increased purchases included brand awareness and features available (e.g. soft close lids, stainless steel washplates and front controls).

Table V-13a
LRWs: Purchasers’ responses to brand purchasing patterns

* * * * *

Table V-13b
LRWs: Purchasers’ responses to OEM purchasing patterns

* * * * *

¹⁵ U.S. producer *** reported losing sales; however, could not provide purchaser contact information due to the time constraints of the preliminary.

¹⁶ U.S. producer *** provided purchaser contact information, but did not provide data on the total quantity of units.

¹⁷ Staff received a lost sales/ lost revenue survey from *** but was not able to incorporate it into the staff report.

¹⁸ Of the 18 responding purchasers, 10 purchasers indicated that they did not know the source of the LRWs they purchased. Purchaser *** was not counted due to conflicting answers.

¹⁹ Purchaser *** reported that purchases both decreased and increased because purchases from Whirlpool decreased but purchases from GE increased. Purchaser *** reported that domestic purchases of U.S. LRWs decreased and fluctuated due to competition and reduced promotional funding.

Of the 19 responding retail purchasers, 12 reported that they had shifted floor space for LRWs from U.S. producers to subject imports since 2012 because U.S. producers' prices (including direct and indirect discounts) were uncompetitive with the price of LRWs produced by LG and/or Samsung. Fourteen of 19 responding retail purchasers reported that promotional activity by LG and/or Samsung for large residential washers had an impact on the volume of large residential washers that they purchased from U.S. producers. OEM purchaser *** reported that final contract prices paid to *** final bid prices. It cited price as an important factor; however, it added that the following factors also affected negotiations: ***.

Of the 17 responding purchasers, 15 reported that U.S. producers had reduced prices in order to compete with lower priced imports from subject countries. Of the 16 responding purchasers, 14 reported that U.S. producers had reduced prices in order to maintain floor space from imports from subject countries.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Three U.S. producers reported usable financial results on their LRW operations: GE, Staber, and Whirlpool.¹ GE and Whirlpool (***) percent and ***) percent, respectively, of total sales) account for the majority of overall LRW operations.² Staber, the smallest U.S. producer, accounted for ***) percent of total sales.

As noted in Part III of this report, GE expanded its U.S. LRW operations during the period examined. With regard to this expansion, the company stated that “{n}ew domestic production at Appliance Park directly replaced ***, for high efficiency top load LRWs. The investments made at Appliance Park also upgraded and expanded long standing LRW production that had been occurring there.”³ As noted below, this expansion impacted aspects of GE’s LRW revenue and manufacturing costs. In 2015, efforts by the parent company to sell the Appliance division, of which U.S. LRW operations are a part, were unsuccessful with an anticipated sale to Electrolux terminated in December 2015 due to U.S. antitrust concerns.⁴ However, on January 15, 2016, General Electric announced that it entered into a definitive agreement to sell its appliances division to the Chinese company, Qingdao Haier Co., Ltd. (“Haier”), for \$5.4 billion. The announcement stated that the transaction has been approved by the board of directors of General Electric and of Haier, but remains subject to Haier shareholder and regulatory approvals. Parties estimate that the transaction will close in mid 2016.⁵

In the fourth quarter 2011, prior to the period examined, Whirlpool initiated a restructuring plan which impacted LRW and non LRW operations.⁶ As described at the Commission’s staff conference and with respect to LRW operations specifically, Whirlpool’s front load production was repatriated from Mexico to the United States during 2012 and 2013 along with additional U.S. investments in frontload and top load production (representing the

¹ ***. USITC auditor preliminary phase notes.

Financial results presented in this section were reported on the basis of generally accepted accounting principles (GAAP) and for calendar year periods.

² GE’s U.S. LRW operations are included in the company’s Appliances & Lighting sub segment which is itself part of GE’s Industrial segment. GE 2014 10 K, p. 51. As reported to the Commission, ***. USITC auditor preliminary phase notes.

Whirlpool organizes its segment by geographic region with its U.S. produced LRW operations included in the North American segment. Whirlpool 2014 10 K, p. 40. As reported to the Commission, ***. USITC auditor preliminary phase notes.

³ GE postconference brief, Answers to Follow Up Questions, p. 6.

⁴ *General Electric eyes appliances sale soon*, The Courier Journal retrieved at <http://www.courierjournal.com/story/money/companies/2015/12/16> on December 18, 2016.

⁵ *GE Agrees to Sell Appliances Business*, GE Press Release, January 15, 2016, <http://www.genewsroom.com/press-releases/ge-agrees-sell-appliances-business-282595>, accessed January 15, 2016.

⁶ Whirlpool 2011 10 K, p. F 36. The 2011 restructuring also consolidated previous on going restructuring activity.

update of existing platforms as well as the development of new platforms).⁷ In terms of how this restructuring impacted U.S. LRW financial results, the company stated that “. . . {t}here are no material non recurring expenses to be reported. ***.”⁸

OPERATIONS ON LARGE RESIDENTIAL WASHERS

Table VI 1 presents the aggregate income and loss data for the LRW operations of U.S. producers. Table VI 2 and table VI 3 present a variance analysis and corresponding company specific financial results information, respectively.⁹

Sales volume and value

The majority of LRW revenue represents commercial sales (*** percent of the total) with the remainder transfers (*** percent).¹⁰ No LRW internal consumption was reported.

Overall LRW sales volume increased during the full year period and then was somewhat lower in interim 2015 compared to interim 2014. While *** sales volume in 2013, the directional trend of each company’s sales volume subsequently diverged with *** sales volume in 2014 and *** sales volume. At the end of the period *** sales volume in interim 2015 compared to interim 2014 which partially offset the corresponding *** sales volume reported by ***. Table VI 3 shows that *** in sales volume throughout the period.

To a large extent, period to period changes in average sales value reportedly reflect changes in product mix. Whirlpool stated that it “. . . continued to add features (with attendant costs) to washer models across its product lineup. This was driven, in part, by the need to build more costly machines designed to comply with more stringent federal water/energy efficiency

⁷ Conference transcript (Liotine), pp. 23 24.

⁸ Whirlpool postconference brief, Answers to Staff Questions, p. 5. With regard to LRW operations in Mexico and the extent to which this restructuring impacted U.S. LRW financial results, Whirlpool confirmed that “{n}one of the costs and expenses associated with closing/reducing LRW operations in Mexico are captured in the U.S. LRW financials. No such costs were included in Table III 9a of Whirlpool’s U.S. Producer questionnaire response.” Ibid.

⁹ The Commission’s variance analysis is calculated in three parts: Sales variance, cost of goods sold (COGS) variance, and SG&A expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expenses variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per unit cost/expense. As summarized at the bottom of the table, the price variance is from sales, the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expenses variances. In general, the utility of the Commission’s variance analysis is enhanced when product mix remains the same throughout the period. As noted in the *Sales volume and value* and *Cost of goods sold* sections LRW product mix shifted throughout the period due to changes in LRW product features, as well as changes in the relative shares of specific LRW products.

¹⁰ ***. Whirlpool postconference brief, Answers to staff questions, p. 1.

Table VI-1

LRWs: Results of operations of U.S. producers, 2012-14, January-September 2014, and January-September 2015

* * * * *

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

Table VI-2

LRWs: Variance analysis on the operations of U.S. producers, 2012-14, January-September 2014, and January-September 2015

* * * * *

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

Table VI-3

LRWs: Results of operations of U.S. producers, by firm, 2012-14, January-September 2014, and January-September 2015

* * * * *

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

regulations, which took effect in Q1 2015.”¹¹ GE’s average sales value *** in interim 2015 due to changes in product mix. As described by GE, ***.¹²

*** consistently reported the *** average sales value (see table VI 3). Largely due to *** average sales value noted above, the difference in *** average sales values narrowed somewhat during the full year period. As shown in table VI 3, *** average sales values were *** compared to the averages sales values calculated for ***.¹³

The variance analysis in table VI 2 indicates that, while price variances were positive throughout the full year period, the overall increase in total LRW revenue was primarily due to positive volume variances. In contrast, lower LRW revenue in interim 2015 compared to

¹¹ Whirlpool postconference brief, Answers to Staff Questions, p. 1.

¹² GE postconference brief, Answers to Follow Up Questions, p. 1.

¹³ Staber described the unique features of its LRW (top load horizontal axis washer). Specifically, its design is based on hexagonal inner basket that rotates inside a stationary outer octagonal tub. According to Staber, its LRW use significantly less water, energy, and detergent. Staber postconference brief, p. 1, Answers to Staff Questions, p. 1. Staber also stated that “{s}ince we offer only three washer models, our average unit sales values are not influenced to a significant degree by changes in product mix. Subject import pricing for washers from China has significantly depressed and suppressed the prices that Staber Industries is able to charge for its washers during the period of investigation.” Ibid.

interim 2014 was due primarily to a negative price variance and to a lesser extent a negative volume variance.

Cost of goods sold

While overall unit COGS increased throughout the period (see table VI 1), the company specific pattern was somewhat *** (see table VI 3): *** in average unit COGS in 2013 (reflecting changes in product mix noted above), while *** reported somewhat smaller period to period ***. As shown in table VI 3, the COGS to sales ratio of *** throughout the period, fluctuated somewhat *** compared to the COGS to sales ratio calculated for ***.

Raw material cost, which represents a variety of inputs, ranged from *** percent of total COGS in 2012 to *** percent in interim 2014.¹⁴ As described at the Commission's staff conference, the cost of LRW raw materials and related inputs generally increased during the period as the level of technical sophistication increased along with other characteristics such as capacity and spin speed.¹⁵ The underlying cost of commodity inputs, however, generally declined.¹⁶

During the period of investigation, Whirlpool stated that there were no significant changes in its sourcing of commodity inputs (e.g., carbon and stainless steel, plastic resins), purchased components (e.g., motors, valves, hoses, wire harnesses), and/or printed circuit board assemblies. The company also noted that purchased commodities can represent approximately *** of total raw material cost.¹⁷ GE identified similar primary raw materials as follows: “. . . high grade rolled steel, polypropylene, motors (steel and copper/aluminum), electronic control boards, fabricated metal and plastic parts and packaging.” According to GE, sources of supply did not change significantly during the period and raw material prices fluctuated based on supply and demand.^{18 19}

¹⁴ Conference transcript (Liotine), p. 76.

¹⁵ Conference transcript (Liotine), pp. 76 77. Whirlpool noted that “{t}he cost of various raw material inputs decreased during the POI, but the total raw material cost increased ***. Whirlpool needed to launch a new platform to comply with new water/energy efficiency regulations being promulgated by the U.S. Government. This new platform required a *** in order to meet these higher regulatory standards. Consequently, although certain raw material inputs decreased in unit cost, the ***. Whirlpool postconference brief, Answers to Staff Questions, p. 2.

¹⁶ For a representative sample of common raw materials purchased during the period (austenitic stainless steel coil, low carbon cold rolled steel, and polypropylene resin), Whirlpool reported that the per pound cost generally declined during the period. Whirlpool postconference brief, Answers to Staff Questions, pp. 1 2. Based on the per pound cost information reported, these specific inputs were ***, respectively, in 2015 compared to 2012. USITC auditor preliminary phase notes.

¹⁷ Whirlpool postconference brief, Answers to Staff Questions, pp. 1 2.

¹⁸ GE postconference brief, Answers to Follow Up Questions, p. 1.

¹⁹ Staber identified the following primary raw materials and components used to produce LRW's: “. . . stainless steel grade 439, 0.18 gauge, 0.20 gauge galvanized steel (primarily for cabinets), 0.11 gauge hot rolled pickled and oiled, powder coated steel (for washer bases), and purchased components (e.g., plastics and plastic parts, pumps, hoses, motors and struts). Steel prices have fluctuated up and down during the period of investigation, but have been declining more recently. Prices we pay for the other

(continued...)

Although *** reported average raw material costs which were in a similar range, ***, with the exception of 2012, consistently reported a somewhat *** average raw material cost. The *** in *** average raw material cost in 2013 was attributed to the ***.²⁰

*** reported marginally *** average raw material costs in interim 2015 compared to interim 2014. As described at the staff conference, a Whirlpool company official indicated that the company did not achieve a favorable trend in raw material costs until recently because a large share of raw materials is purchased under contract and/or hedged such that the benefit of declines in spot raw material prices is not immediately recognized.²¹ For similar reasons, GE reported that its raw material costs also do not directly reflect changes in spot prices.²²

As described by Whirlpool at the staff conference, LRW manufacturing incurs a high level of fixed costs and requires a corresponding high level of capacity utilization to reduce unit costs.²³ For the industry as a whole, other factory costs (i.e., the line item where fixed manufacturing costs are usually reported) represented the second largest share of COGS and ranged from *** percent of total COGS in interim 2014 to *** percent in 2012. On an overall basis, average unit other factory costs remained within a fairly narrow range during the period. When comparing company specific average other factory costs (see table VI 3), *** reported consistently *** amounts which *** somewhat during the full year period while *** reported somewhat *** amounts which generally ***.^{24 25}

Direct labor accounts for the smallest share of COGS (ranging from *** percent of total COGS in 2012 and 2014 to *** percent in interim 2014). As shown in table VI 3 and while the average unit direct labor amounts remained within a relatively narrow range during the period, *** reported somewhat *** average unit amounts throughout the period.²⁶

(...continued)

materials we purchase have been relatively flat over the period of investigation.” Staber postconference brief, p. 1, Answers to Staff Questions, p. 1. With respect to its *** level of average raw material cost and average COGS in general, Staber, as noted previously, produces a relatively small volume of specialized washers.

²⁰ GE postconference brief, Answers to Follow Up Questions, p. 1.

²¹ Conference transcript (Liotine), p. 76.

²² GE postconference brief, Answers to Follow Up Questions, p. 1. According to GE, ***. Ibid.

²³ Conference transcript (Liotine), p. 30. The high level of fixed costs was specifically attributed to large investments in capital associated with new platforms, as well as corresponding engineering costs. Ibid.

²⁴ With regard to the underlying components of other factory costs, Whirlpool stated that they “. . . include ***. “Other Factory Costs” are comprised of both fixed and variable costs. There were some modest changes in the composition of “Other Factory Costs” throughout the POI ***. Whirlpool postconference brief, Answers to Staff Questions, p. 2. ***. GE postconference brief, Answers to Follow Up Questions, p. 2.

²⁵ Staber stated that “{t}he primary components of other factory costs include plant supplies, rent, utilities, and depreciation. There have been no significant changes in these components over the period of investigation. Most of these elements are fixed, although freight and utilities are primarily variable.” Staber postconference brief, p. 1, Answers to Staff Questions, p. 2.

²⁶ While each U.S. producer has its own unique product mix and manufacturing operations such that costs in each primary category can be expected to vary to some extent, it is also likely that differences in

(continued...)

Gross profit or loss

On an absolute basis and as ratio to sales, the industry generated its highest level of gross profit in 2012. During the full year period, the deterioration in the industry's overall gross profit generally reflects increases in average COGS which more than offset corresponding increases in average sales value.²⁷ In contrast, the industry's lower gross profit in interim 2015 compared to interim 2014 reflects the combination of lower average unit sales value and higher average COGS.

As shown in table VI 3 and as noted above, *** report identical directional trends in terms of averages unit sales value or COGS. As a result, the pattern of company specific gross profit ratios was also ***: *** gross profit ratio *** in 2013 and then increased in 2014 (to about the level reported in 2012), while *** full year gross profit ratio *** throughout the full year period. The more notable *** in company specific gross profit ratios occurred at the end of the period when *** gross profit ratio was *** in interim 2015 compared to interim 2014.²⁸ In contrast, *** gross profit ratio was the *** interim periods while its absolute gross profit amount was somewhat *** in interim 2015 compared to interim 2014.²⁹

SG&A expenses and operating income or loss

The U.S. industry's relatively narrow operating loss in 2012, as compared to subsequent periods, reflects a gross profit ratio which was only marginally smaller than the corresponding SG&A expense ratio (see table VI 1). In conjunction with increased revenue during the full year period, the expansion of the industry's operating losses in 2013 and 2014 reflects contractions in both gross profit ratios and corresponding increases in the SG&A expense ratio.

As shown in table VI 3, company specific SG&A expenses and corresponding ratios followed somewhat different patterns. While *** in total SG&A expenses during the full year period, the increase in the industry's total SG&A expenses and corresponding SG&A expense ratio in 2013 was ***. ***.³⁰ While *** SG&A expenses also *** during the full year period,

(...continued)

company specific raw material, direct labor, and other factory costs reflect variations in terms of how these costs are assigned/classified.

²⁷ With regard to the pattern of its full year gross profit, Whirlpool stated that "{c}osts increased ***. Gross margin decreased because Whirlpool was unable to increase prices commensurate with the increased costs. This price suppression was attributable to dumped pricing from subject imports." Whirlpool postconference brief, Answers to Staff Questions, p. 3.

²⁸ With regard to this pattern, GE stated that "{i}n 2015, we launched our top load program which had ***. We also continued ***. GE postconference brief, Answers to Follow Up Questions, p. 2.

²⁹ As shown in table VI 3 and while the level of Staber's absolute gross profit *** in each period, the company's gross profit ratio ***. As described by Staber, "{s}ince our production volumes are relatively low, we are able to maintain a relatively stable gross margin, and the margins reflected are expected. As evidenced in our questionnaire between 2012 and interim 2015 our costs reflect a reduction of *** percent, while over the same period our net sales values declined by a similar *** percent, representing a relatively stable gross profit ratio." Staber postconference brief, p. 1, Answers to Staff Questions, p. 2.

³⁰ ***. GE postconference brief, Answers to Follow Up Questions, p. 2.

the impact on corresponding SG&A expense ratios was ***. As described by Whirlpool, LRW “SG&A ratios {during the period} are slightly higher than planned. The variance is entirely attributable to depressed sales revenues which, in turn, are a function of adverse volume and price effects caused by subject imports.”³¹ GE and Whirlpool both confirmed that their R&D expenses *** in SG&A expenses (see also table VI 4).³²

Table VI 3 shows that the *** operating losses was more pronounced compared to *** due to a combination of sharper fluctuations in gross profitability and elevated SG&A expense ratios noted above.³³ The industry’s higher operating loss in interim 2015 compared to interim 2014 primarily reflects a further deterioration of gross profit ratio and an SG&A expense ratio which was about the same in both interim periods.

Interest expense, other expenses, and net income or loss

The U.S. industry reported net losses of increasing magnitude during the full year period (see table VI 1). While sharing the same directional trend, net losses are greater than corresponding operating losses due to the inclusion of interest expense and items classified as “other expenses.”

As shown in table VI 1, the industry’s total interest expense declined during the full year period which ***. In contrast and while *** interest expense was somewhat *** in interim 2015 compared to interim 2014, the company’s interest expense did not fluctuate notably during the full year period. “Other expenses,” were consistently larger compared to interest expense. As described by ***.³⁴ As indicated in footnote 8, Whirlpool confirmed that costs associated with closing/restructuring LRW operations in Mexico were not included in the LRW financial results reported to the Commission.

Energy Efficiency Tax Credits were available during 2012 13 and could be earned on relevant front load and top load washers meeting specified criteria regarding modified energy factors and water consumption. While relevant LRW production earned tax credits during 2012 13, Whirlpool noted that the tax credits were used to reduce corporate income tax liability and that U.S. LRW operations did not contribute taxable income.³⁵ At the staff conference, a Whirlpool company official also stated that the generation of tax credits is not a factor in evaluating the financial results of U.S. produced LRW operations (or relevant business unit).³⁶

³¹ Whirlpool postconference brief, Answers to Staff Questions, p. 3.

³² GE postconference brief, Answers to Follow Up Questions, p. 3. Whirlpool postconference brief, Answers to Staff Questions, p. 4.

³³ *** and consider the current antidumping proceeding quite relevant in that context.” GE postconference brief, Answers to Follow Up Questions, p. 3.

³⁴ Whirlpool postconference brief, Answers to Staff Questions, p. 5.

³⁵ Whirlpool postconference brief, Answers to Staff Questions, p. 10.

³⁶ Conference transcript (Tubman), pp. 138 139.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI 4 presents firm specific capital expenditures and research and development (R&D) expenses related to operations on LRWs.

Table VI-4

LRWs: Capital expenditures and research and development (R&D) expenses U.S. producers, 2012-14, January-September 2014, January-September 2015

* * * * *

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

The industry's highest level of capital expenditures was reported in 2014 with *** largest capital expenditures in that year. As shown in table VI 4, GE's capital expenditures *** somewhat in 2013 and then increased in 2014 while Whirlpool's capital expenditures *** throughout the full year period. According to GE, its reported ***.³⁷ Whirlpool stated that its capital expenditures "... are all specific to LRWs. The various projects/activities related almost entirely to the repatriation/expansion/update of the front load model lineup (2012 2015), and various updates/expansions of the top load model lineup (2012 2015)."³⁸

The industry's total R&D expenses, in addition to increasing throughout the period, consistently exceeded reported capital expenditures. With regard to its reported R&D expenses, GE stated that ***.³⁹ Whirlpool stated that its "R&D expenses are the engineering and related activities for the development and launch of new LRW models, as reflected in Whirlpool's Global Resource Planning ("GRP") system. In Whirlpool's experience, it is typical for R&D expenses to be greater than capital expenditures in any given year."⁴⁰ As noted previously and with respect to reported LRW financial results, GE and Whirlpool confirmed that R&D expenses are *** in SG&A expenses.

ASSETS AND RETURN ON INVESTMENT

Table VI 5 presents data on the U.S. producers total assets, asset turnover (sales divided by total assets), and return on assets.⁴¹ As reported to the Commission, ***.⁴²

³⁷ GE U.S. producer questionnaire response, response to III 13.

³⁸ Whirlpool postconference brief, Answers to Staff Questions, p. 3.

³⁹ GE postconference brief, Answers to Follow Up Questions, p. 3

⁴⁰ Whirlpool postconference brief, Answers to Staff Questions, p. 4.

⁴¹ With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which in many instances are not product specific. Accordingly, high-level allocation factors presumably were required in order to report a total asset value specific to U.S. LRW operations. As

(continued...)

Table VI-5
LRWs: U.S. producers' total assets, asset turnover, and return on assets, 2012-14

* * * * *

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

CAPITAL AND INVESTMENT

The Commission requested U.S. producers of LRWs to describe any actual or potential negative effects on their return on investment or their growth, investment, ability to raise capital, existing development and production efforts (including efforts to develop a derivative or more advanced version of the product), or the scale of capital investments as a result of imports of LRWs from China. Table VI 6 tabulates the responses on actual negative effects on investment, growth and development, as well as anticipated negative effects. Table VI 7 presents the narrative responses of U.S. producers regarding actual and anticipated negative effects on investment, growth and development.

Table VI-6
LRWs: Negative effects of imports from subject sources on investment, growth, and development since January 1, 2012

* * * * *

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

Table VI-7: Narrative responses by U.S. producers regarding actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2012

* * * * *

Source: Compiled from data submitted in response to Commission questionnaires

(...continued)

such, it should be noted that the pattern of asset values reported can reflect changes in underlying asset account balances, as well as period to period variations in relevant allocation factors. ***.

⁴² ***. GE postconference brief, Answers to Follow Up Questions, p. 3.

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors¹

- (I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
- (II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
- (III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
- (IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
- (V) inventories of the subject merchandise,*

¹ Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that “The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition.”

- (VI) *the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,*
- (VII) *in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),*
- (VIII) *the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and*
- (IX) *any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).²*

Information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product shifting;" any other threat indicators, if applicable; and any dumping in third country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

THE INDUSTRY IN CHINA

The petition listed three producers of LRWs in China.³ The Commission received questionnaire responses from those three producers of LRWs in China, which are believed to

² Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

³ The petition listed (1) Nanjing LG Panda Appliances Co., Ltd. ("LG") and two manufacturing facilities operating as affiliates of Samsung Electronics Co., Ltd., which are (2) Suzhou Samsung Electronics Co., Ltd. ("Samsung") and (3) Suzhou Samsung Electronics Co., Ltd.—Export ("Samsung—Export").

account for the vast majority of production of LRWs in China⁴ and virtually all of exports of LRWs from China to the United States during the period of investigation.⁵ These firms are identified in table VII 1 along with each firm’s capacity, production, and export shipment data.

Table VII 1

LRWs: Reporting producers of LRWs in China, capacity, production, share of reported production, capacity utilization, exports to the United States, and share of exports to the United States, by firm, 2012 September 2015

Firm	Production (units)	Share of reported production (percent)	Exports to the United States (units)	Share of reported exports to the United States (percent)	Total shipments (units)	Share of firm's total shipments exported to the United States (percent)
LG	***	***	***	***	***	***
Samsung	***	***	***	***	***	***
Samsung Export	***	***	***	***	***	***
Total	***	***	***	***	***	***

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

Producers of LRWs in China

LG Electronics

LG Electronics, Inc. is headquartered in Seoul, Korea and operates four business units (1) home entertainment, (2) mobile communications, (3) home appliances and air solutions, and (4) vehicle components, which produce an array of products such as flat panel televisions, mobile cellular devices, air conditioners, washing machines, and refrigerators. The firm employs 83,000 people worldwide and reported global sales of \$55.91 billion in 2014.⁶ The firm produces LRWs within its home appliances and air solutions business unit in Korea and at its

⁴ As of 2014, the major producers of LRWs in China include: (1) Haier Group, (2) Samsung, (3) LG, and (4) Whirlpool. Whirlpool has two subsidiaries in China, both of which it claimed do not produce LRWs (1) Hisense—Whirlpool (Zhejiang) Electric Appliances Co., Ltd.; and (2) in 2014, Whirlpool acquired a 51 percent majority ownership interest in Hefei Rongshida Sanyo Electric Co., Ltd., a leading Chinese appliance manufacturer in Hefei, China. This firm is now Whirlpool (China) Co., Ltd. “Whirlpool Completes Acquisition Of Majority Stake In Hefei Sanyo” Whirlpool press release, October 24, 2014. <http://investors.whirlpoolcorp.com/releasedetail.cfm?releaseid=877999>, accessed January 11, 2016.

The petition listed 14 other producers of washers in China which it claimed produced out of scope product. Among these listed producers were ***. Petition, pp. 22 26.

⁵ According to proprietary import data obtained from CBP, LG and Samsung accounted for *** percent of all exports of LRWs from China to the United States during the period of investigation.

⁶ http://www.lg.com/global/investor_relations/company_info/overview, accessed January 14, 2016.

affiliate in China, Nanjing LG Panda Appliances Co., Ltd. (“LG”). LG reported that it began production of LRWs in China for export to the U.S. market in ***.⁷

LG reported that *** percent of its total sales in the most recent fiscal year were sales of LRWs. It reported that its LRW capacity remained steady from 2012 to 2014 and remained steady through January September 2015. Its capacity is projected to *** from 2014 to 2016. LG reported that its production increased by *** percent from 2012 to 2014 and was higher by *** percent in January September 2015 than in January September 2014.⁸ Its production is projected to *** from 2015 to 2016. In 2014, *** percent of LG’s total shipments of LRWs were internal consumption, *** percent were commercial shipments in its home market, *** percent were exported to the United States, *** percent were exported to other export markets such as ***. LG reported that its sole U.S. importer of LRWs during the period of investigation was ***.⁹

Samsung Electronics

Samsung Electronics, Inc. is headquartered in Gyeonggi do, Korea and operates nine business units (1) visual display, (2) digital appliances, (3) printing solutions, (4) health and medical equipment, (5) mobile communications, (6) network businesses, (7) memory, (8) system LSI, and (9) LED business, which produce an array of products, such as flat panel televisions, printers, photocopiers, medical equipment, mobile cellular devices, computer networking devices, washing machines, and refrigerators. The firm reported global sales of \$305.0 billion in 2014.¹⁰ Samsung produces LRWs in its digital appliances business unit. The firm produces LRWs in Korea, Mexico, and at two affiliates in China (1) Suzhou Samsung Electronics Co., Ltd. (“Samsung”) and (2) Suzhou Samsung Electronics Co., Ltd.—Export (“Samsung—Export”). Samsung reported that it began production of LRWs in China for export to the U.S. market in ***.¹¹ Samsung—Export reported that it began production of LRWs in China for export to the U.S. market in ***.¹²

⁷ Foreign producer questionnaire response of LG, question II 2. LG reported that its LRW production facility in China was first established in 1995 and produced top load and front load LRWs for different markets, including China, Middle East and Africa. LG stated that because of cost factors, it had already considered the option of moving its LRW production for the U.S. market from Korea to China before the filing of the petition in the Commission’s first LRW investigations in 2011. Respondents’ postconference brief, exh. B, p. 2.

⁸ LG reported that ***. Foreign producer questionnaire of LG, question II 4a.

⁹ LG USA reported that ***. U.S. importer questionnaire of LG USA, question II 8.

¹⁰ Samsung Electronics Co., Ltd., Annual Report, 2014; http://www.samsung.com/us/aboutsamsung/samsung_group/our_performance/, accessed January 14, 2016.

¹¹ Foreign producer questionnaire response of Samsung, question II 2.

¹² Foreign producer questionnaire response of Samsung—Export, question II 2. Samsung stated that operating cost savings and its ability to consolidate LRW production from Korea and Mexico into one facility in China were the factors in its decision to move production of LRWs from Korea to China. Samsung currently produces LRWs in Korea for markets other than the United States. Respondents’ postconference brief, exh. C, p. 1.

Samsung

Samsung reported that *** percent of its total sales in the most recent fiscal year were sales of LRWs. It reported that its LRW capacity increased from *** in 2012 to *** units in 2013 as it began production of LRWs in China in ***. From 2013 to 2014, its capacity increased by *** percent and was higher by *** percent in January September 2015 than in January September 2014. Its capacity is projected to *** percent in 2015. Samsung reported that its production, which began in ***, increased by *** percent from 2013 to 2014 and was higher by *** percent in January September 2015 than in January September 2014.¹³ Its production is projected to *** from 2014 to 2015. In 2014, *** percent of Samsung's total shipments of LRWs were internal consumption, *** commercial shipments in its home market, *** percent were exported to the United States, *** percent were exported to other export markets such as ***. Samsung reported that its sole U.S. importer of LRWs during the period of investigation was ***.¹⁴

Samsung—Export

Samsung—Export reported that *** percent of its total sales in the most recent fiscal year were sales of LRWs. It reported that from 2012 to 2014, its LRW capacity increased by *** percent as it began production of LRWs in China in ***. Its capacity was higher by *** percent in January September 2015 than in January September 2014 and is projected to *** percent in 2015. Samsung—Export reported that its production increased by *** percent from 2012 to 2014 and was higher by *** percent in January September 2015 than in January September 2014.¹⁵ Its production is projected to *** from 2014 to 2015. In 2014, *** percent of Samsung—Export's total shipments of LRWs were internal consumption, *** commercial shipments in its home market, *** percent were exported to the United States, *** percent were exported to other export markets such as ***. Samsung—Export reported that its sole U.S. importer of LRWs during the period of investigation was ***.¹⁶

Data for the LRW industry in China

Table VII 2 presents data for reported capacity, production, and shipments of LRWs for all reporting producers in China. Collectively, producers in China reported that LRW capacity increased by *** percent from 2012 to 2014, and was higher by *** percent in January September 2015 than in January September 2014. Capacity is projected to ***. Their reported LRW production increased by *** percent from 2012 to 2014, but was higher by *** percent in January September 2015 than in January September 2014. Production is projected to ***. In 2014, producers in China reported that *** percent of their total shipments of LRWs were

¹³ Samsung reported that ***. Foreign producer questionnaire of Samsung, question II 4a.

¹⁴ Samsung USA reported that ***. U.S. importer questionnaire of Samsung USA, question II 8.

¹⁵ Samsung—Export reported that ***. Foreign producer questionnaire of Samsung—Export, question II 4a.

¹⁶ Samsung USA reported that ***. U.S. importer questionnaire of Samsung USA, question II 8.

internally consumed, *** percent were commercial sales to their home market, *** percent were exported to the United States, and *** percent were exported to other markets, including ***.

Table VII 2

LRWs: China's reported production capacity, production, shipments, and inventories, 2012 14, January September 2014, January September 2015, and projections for 2015 and 2016

* * * * *

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

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII 3 presents data on U.S. importers' reported inventories of LRWs.

Table VII 3

LRWs: U.S. importers' inventories, 2012 14, January September 2014, January September 2015

* * * * *

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

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested U.S. importers to indicate whether they imported or arranged for the importation of LRWs after September 30, 2015. *** U.S. importers indicated that they had imported or arranged for importation LRWs from China since September 30, 2015. Table VII 4 presents the U.S. importers that had imported or arranged for the importation of the subject product from China and the quantity of those U.S. imports.

Table VII 4

LRWs: U.S. importers' orders of subject imports from China subsequent to September 30, 2015

* * * * *

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

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD COUNTRY MARKETS

There have been no antidumping or countervailing duty orders in third country markets on LRWs or related washing machines from China.

INFORMATION ON NONSUBJECT COUNTRIES

In assessing whether the domestic industry is materially injured or threatened with material injury “by reason of subject imports,” the legislative history states “that the Commission must examine all relevant evidence, including any known factors, other than the dumped or subsidized imports, that may be injuring the domestic industry, and that the Commission must examine those other factors (including non subject imports) ‘to ensure that it is not attributing injury from other sources to the subject imports.’”¹⁷

Exporters of LRWs

The vast majority of production of LRWs occurs in the United States, China, EU member countries, Korea, and Mexico. Export data specifically for LRWs, as defined by the scope of this investigation, are not available from global trade databases. However, export data are available for a somewhat broader category of washing machines with a dry linen capacity exceeding 10 kilograms. This would include out of scope products such as coin operated washing machines, low technology LRWs, possibly some stackable units, and very large sized washing machines. These data, presented in table VII 5, provide an estimate of global exports of LRWs. In 2014, the five leading country exporters (China, Korea, Mexico, United States, and Thailand) accounted for 85 percent of global exports of washing machines of a capacity dry linen capacity exceeding 10 kilograms.

¹⁷ *Mittal Steel Point Lisas Ltd. v. United States*, Slip Op. 2007 1552 at 17 (Fed. Cir. Sept. 18, 2008), quoting from Statement of Administrative Action on Uruguay Round Agreements Act, H.R. Rep. 103 316, Vol. I at 851 52; see also *Bratsk Aluminum Smelter v. United States*, 444 F.3d 1369 (Fed.Cir. 2006).

Table VII 5
LRWs: Leading country exporters and total global exports, 2012 14

Item	Calendar year		
	2012	2013	2014
	Value (1,000 dollars)		
United States	325,672	307,202	330,890
China	258,367	681,382	901,381
All other major exporting countries.			
Korea*	1,139,585	795,802	624,720
Mexico*	475,534	449,446	485,006
Thailand	188,727	236,433	280,003
Germany	73,125	85,291	87,995
Sweden	48,218	61,551	63,269
Czech Republic	47,084	52,591	58,082
Spain	38,972	38,144	44,400
Belgium	38,017	44,339	43,742
Italy	15,708	23,082	28,048
Taiwan	21,076	15,487	17,952
All other exporting countries.	80,668	95,444	107,284
Total global exports	2,750,752	2,886,195	3,072,770
	Share of value (percent)		
United States	11.8	10.6	10.8
China	9.4	23.6	29.3
All other major exporting countries.			
Korea*	41.4	27.6	20.3
Mexico*	17.3	15.6	15.8
Thailand	6.9	8.2	9.1
Germany	2.7	3.0	2.9
Sweden	1.8	2.1	2.1
Czech Republic	1.7	1.8	1.9
Spain	1.4	1.3	1.4
Belgium	1.4	1.5	1.4
Italy	0.6	0.8	0.9
Taiwan	0.8	0.5	0.6
All other exporting countries.	2.9	3.3	3.5
Total global exports	100.0	100.0	100.0

* Antidumping duty orders entered into effect in February 2013 in the United States on U.S. imports of LRWs from Korea and Mexico. A countervailing duty order also went into effect in February 2013 on U.S. imports of LRWs from Korea.

Note. Quantity data are not reported since there is no consistent unit used across reporting countries. Some report in units or pieces, others in weight measures such as metric tons.

Source: Official exports statistics under HTS subheading 8450.20 as reported by various national statistical authorities in the GTIS/GTA database, accessed January 4, 2016.

Korea¹⁸

Dongbu Daewoo Electronics, LG, and Samsung are the major producers of LRWs in Korea. In February 2013, the Dongbu Group acquired Daewoo Electronics Corp.¹⁹ Daewoo was the one Korean producer/exporter subject to a high cash deposit rate, 79.11 percent, under the U.S. antidumping and countervailing duty orders on LRWs from Korea.²⁰ Dongbu Daewoo Electronics reportedly has been increasing production and exports, particularly to China and other third markets.²¹ Samsung produces LRWs and related dryers in Korea, but these products are not for the U.S. market.²² Samsung's LRW production for the U.S. market was moved to China, as was its Mexican production for the U.S. market.²³ LG currently produces LRWs and dryers in Korea.²⁴ Table VII 6 presents data for exports from Korea to its top destination markets.

¹⁸ Some information on the Korean LRW industry was taken from, *Certain Large Residential Washers from Korea and Mexico, Investigations Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication 4378, February 2013, pp. VII 5–VII 8).

¹⁹ The Korea Herald, “Dongbu Daewoo Electronics Sails Under New Name,” April 1, 2013. “http://www.koreaherald.com/common_prog/newsprint.php?ud=20130401000613&dt=2 (accessed January 11, 2016).

²⁰ *Large Residential Washers From Mexico and the Republic of Korea: Antidumping Duty Order*, 78 FR 11148, February 15, 2013. *Large Residential Washers From the Republic of Korea: Final Results of the Antidumping Duty Administrative Review; 2012–2014*, 80 FR 55595, September 16, 2015. *Large Residential Washers From the Republic of Korea: Countervailing Duty Order*, 78 FR 11154, February 15, 2013.

²¹ Yoo chul, Kim, “Dongbu Sees Steep Rise in Appliance Sales,” The Korea Times, November 19, 2015. http://www.koreatimes.co.kr/www/news/tech/2015/11/133_191383.html (accessed January 11, 2016). Minhyung, Lee, “Dongbu Daewoo Seeks to Have 300 Stores in China,” The Korea Times, August 4, 2015. http://www.koreatimes.co.kr/www/news/biz/2015/11/123_184175.html (accessed January 11, 2016).

²² Conference transcript, pp. 211 and 253 (Brindle).

²³ Conference transcript, p. 211 (Brindle).

²⁴ Conference transcript, p. 212 (Kim).

Table VII 6
Washers: Korean exports by destination market, 2012 14

Item	Calendar year		
	2012	2013	2014
	Quantity (units)		
Korea's exports to the United States*	1,126,896	556,072	286,803
Korea's exports to other major destination markets.			
Australia	90,303	93,639	96,369
Taiwan	78,521	85,975	83,996
Turkey	17,200	52,760	83,494
United Arab Emirates	28,090	15,208	73,459
Mexico	96,214	107,618	67,915
Colombia	70,207	95,212	59,482
Saudi Arabia	57,441	70,523	58,662
Brazil	86,048	41,793	55,486
All other destination markets	1,114,411	725,688	576,056
Total Korea exports	2,765,331	1,844,488	1,441,722
	Value (1,000 dollars)		
Korea's exports to the United States*	511,839	278,880	142,153
Korea's exports to other major destination markets.			
Australia	41,125	38,357	39,226
Taiwan	27,480	31,369	32,555
Turkey	8,416	21,893	29,544
United Arab Emirates	9,272	6,151	23,064
Mexico	28,425	39,529	32,608
Colombia	29,463	33,412	25,350
Saudi Arabia	26,065	34,192	28,566
Brazil	34,414	16,669	17,426
All other destination markets	423,087	295,351	254,229
Total Korea exports	1,139,585	795,802	624,720

Table continued.

Table VII 6—*Continued*

Washers: Korean exports by destination market, 2012 14

Item	Calendar year		
	2012	2013	2014
	Unit value (dollars per unit)		
Korea's exports to the United States*	454	502	496
Korea's exports to other major destination markets.			
Australia	455	410	407
Taiwan	350	365	388
Turkey	489	415	354
United Arab Emirates	330	404	314
Mexico	295	367	480
Colombia	420	351	426
Saudi Arabia	454	485	487
Brazil	400	399	314
All other destination markets	380	407	441
Total Korea exports	412	431	433
	Share of quantity (percent)		
Korea's exports to the United States*	40.8	30.1	19.9
Korea's exports to other major destination markets.			
Australia	3.3	5.1	6.7
Taiwan	2.8	4.7	5.8
Turkey	0.6	2.9	5.8
United Arab Emirates	1.0	0.8	5.1
Mexico	3.5	5.8	4.7
Colombia	2.5	5.2	4.1
Saudi Arabia	2.1	3.8	4.1
Brazil	3.1	2.3	3.8
All other destination markets	40.3	39.3	40.0
Total Korea exports	100.0	100.0	100.0

* Antidumping and countervailing duty orders entered into effect in February 2013 in the United States on U.S. imports of LRWs from Korea.

Source: Official Korean exports statistics under HTS subheading 8450.20 as reported by Korea Customs and Trade Development Institution in the GTIS/GTA database, accessed January 4, 2016.

Mexico²⁵

Currently, there are three major producers of LRWs in Mexico, Electrolux, Mabe, and Whirlpool. In 2011 and 2012, Electrolux moved its LRW manufacturing in the United States to Mexico, but retained some research and development jobs in the United States. Whirlpool moved its remaining Mexican production of front load LRWs from Mexico to the United States during 2012–13.²⁶ Currently, Whirlpool does produce some washing machines in Mexico, but these products are not within the scope of this investigation, and either supply the Mexican home market or other South American countries.²⁷ Mabe is a producer of LRWs in Mexico that has an alliance with GE for the production of large appliances, including LRWs. In 2012, Samsung transferred its LRW production from Mexico to China, and now only produces dryers in Mexico.²⁸ Table VII 7 presents data for exports from Mexico to its top destination markets.

²⁵ Some information on the Mexican LRW industry was taken from, *Certain Large Residential Washers from Korea and Mexico, Investigations Nos. 701 TA 488 and 731 TA 1199 1200 (Final)*, Publication 4378, February 2013, pp. VII 5–VII 8).

²⁶ Conference transcript, p. 23 (Liotine).

²⁷ Conference transcript, pp. 76–77 (Liotine).

²⁸ Conference transcript, p. 211 (Brindle).

Table VII 7

Washers: Mexican exports by destination market, 2012 14

Item	Calendar year		
	2012	2013	2014
	Quantity (units)		
Mexico's exports to the United States*	640,895	528,134	523,937
Mexico's exports to other major destination markets.			
Colombia	208,975	206,576	286,372
Peru	41,913	91,529	160,477
Chile	73,544	81,045	122,438
Ecuador	36,396	34,330	51,897
Canada	16,785	5,474	51,100
Guatemala	15,889	16,780	23,638
Panama	12,634	11,612	22,066
Venezuela	68,776	58,524	17,179
All other destination markets	59,701	74,023	89,336
Total Mexico exports	1,175,508	1,108,027	1,348,440
	Value (1,000 dollars)		
Mexico's exports to the United States*	327,919	264,446	259,590
Mexico's exports to other major destination markets.			
Colombia	55,408	55,128	75,931
Peru	11,189	26,390	40,885
Chile	19,745	21,625	30,651
Ecuador	9,398	9,829	13,531
Canada	6,113	2,831	22,749
Guatemala	4,115	4,258	5,908
Panama	3,159	3,214	5,943
Venezuela	22,775	41,137	5,549
All other destination markets	15,713	20,586	24,268
Total Mexico exports	475,534	449,446	485,006

Table continued.

Table VII 7—*Continued*

Washers: Mexican exports by destination market, 2012 14

Item	Calendar year		
	2012	2013	2014
	Unit value (dollars per unit)		
Mexico's exports to the United States*	512	501	495
Mexico's exports to other major destination markets.			
Colombia	265	267	265
Peru	267	288	255
Chile	268	267	250
Ecuador	258	286	261
Canada	364	517	445
Guatemala	259	254	250
Panama	250	277	269
Venezuela	331	703	323
All other destination markets	263	278	272
Total Mexico exports	405	406	360
	Share of quantity (percent)		
Mexico's exports to the United States*	54.5	47.7	38.9
Mexico's exports to other major destination markets.			
Colombia	17.8	18.6	21.2
Peru	3.6	8.3	11.9
Chile	6.3	7.3	9.1
Ecuador	3.1	3.1	3.8
Canada	1.4	0.5	3.8
Guatemala	1.4	1.5	1.8
Panama	1.1	1.0	1.6
Venezuela	5.9	5.3	1.3
All other destination markets	5.1	6.7	6.6
Total Mexico exports	100.0	100.0	100.0

* An antidumping duty order entered into effect in February 2013 in the United States on U.S. imports of LRWs from Mexico

Source: Official Mexican exports statistics under HTS subheading 8450.20 as reported by Mexico's INEGI in the GTIS/GTA database, accessed January 4, 2016.

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
80 FR 79611 December 22, 2015	<i>Large Residential Washers From China; Institution of an Antidumping Duty investigation and Scheduling of a Preliminary Phase Investigation</i>	https://www.federalregister.gov/articles/2015/12/22/2015-32083/large-residential-washers-from-china-institution-of-an-antidumping-duty-investigation-and-scheduling
81 FR 1398 January 12, 2016	<i>Large Residential Washers From the People's Republic of China: Initiation of Less Than Fair Value Investigation</i>	https://www.federalregister.gov/articles/2016/01/12/2016-00473/large-residential-washers-from-the-peoples-republic-of-china-initiation-of-less-than-fair-value

APPENDIX B
CONFERENCE WITNESSES

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission’s preliminary conference:

Subject: Large Residential Washers from China
Inv. No.: 731 TA 1306 (Preliminary)
Date and Time: January 6, 2016 9:30 a.m.

Sessions were held in connection with this preliminary investigation in the Main Hearing Room (Room 101), 500 E Street, S.W., Washington, D.C.

OPENING REMARKS:

Petitioner (Jack A. Levy, Cassidy Levy Kent (USA) LLP)
Respondents (Daniel L. Porter, Curtis, Mallet Prevost, Colt & Mosle LLP)

In Support of the Imposition of
Antidumping Duty Order:

Cassidy Levy Kent (USA) LLP
Washington, D.C.

and

Adduci Mastriani & Schaumberg LLP
Washington, D.C. on
behalf of

Whirlpool Corporation

Joseph Liotine, President, Whirlpool North America

Casey Tubman, General Manager for Laundry, Whirlpool
North America

Aaron Spira, Group Counsel, North America Region,
Whirlpool Corporation

Jack A. Levy)
Myles S. Getlan)
Jennifer A. Hillman) – OF COUNSEL
James R. Cannon, Jr.)
Deanna Tanner Okun)

**In Support of the Imposition of
Antidumping Duty Order (continued):**

TradeWins LLC
Washington, DC
on behalf of

GE Appliances & Lighting

John R. Magnus) – OF COUNSEL

**In Opposition to the Imposition of
Antidumping Duty Order:**

Curtis, Mallet Prevost, Colt & Mosle LLP
Washington, DC
on behalf of

LG Electronics

John R. Herring, Vice President of Sales, Home Appliances, Home Improvement Channel, LG Electronics USA, Inc.

John Toohey, Director of Strategy, LG Electronics USA, Inc.

Richard C. Wingate, Vice President Human Resources *and* General Counsel, LG Electronics USA, Inc.

Sung Han (Andrew) Kim, Product Manager for Laundry, LG Electronics USA, Inc.

Mun Gu (Moon) Park, Head of Trade & Customs, Management Consulting – Operation, KPMG Korea

Daniel Klett, Principal, Capital Trade, Inc.

Daniel L. Porter)
James P. Durling) – OF COUNSEL
Matthew P. McCullough)

**In Opposition to the Imposition of
Antidumping Duty Order (continued):**

Arnold & Porter LLP
Washington, DC
on behalf of

Suzhou Samsung Electronics Co. Ltd.
Suzhou Samsung Electronics Co. Ltd. – Export
Samsung Electronics America, Inc.
(collectively “Samsung”)

Dean Brindle, Director, Laundry Product Marketing, Samsung
Electronics America, Inc.

Michael T. Shor)
) – OF COUNSEL
J. David Park)

REBUTTAL/CLOSING REMARKS:

Petitioner (Jack A. Levy and Myles S. Getlan, Cassidy Levy Kent (USA) LLP)
Respondents (Michael T. Shor, Arnold & Porter LLP)

APPENDIX C
SUMMARY DATA

Table C 1

LRWs: Summary data concerning the U.S. market, 2012 14, January September 2014, and January September 2015

* * * * *

