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February 25, 2021

VIA EDIS

The Honorable Lisa R. Barton
Secretary to the Commission
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

Re: *Certain Smart Thermostat Systems, Smart HVAC Systems, Smart HVAC Control Systems, And Components Thereof*, Investigation No. 337-TA-_____

Dear Secretary Barton:

Enclosed for filing on behalf of Complainant EcoFactor, Inc. are documents in support of Complainant's request that the Commission commence an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, concerning certain smart thermostat systems, smart HVAC systems, smart HVAC controls systems, and components thereof. A request for confidential treatment of Confidential Exhibits 12C and 67C is also being submitted.

In accordance with the Commission's Temporary Change to the Filing Procedures dated March 16, 2020 ("Temporary Procedures"), and the guidance provided on the Commission's "COVID-19-RELATED QUESTIONS" webpage, Complainant submits the following documents for filing via EDIS:

1. A Statement on the Public Interest with respect to the remedial orders Complainant seeks in the Complaint, pursuant to Commission Rule 210.8(b).
2. One (1) electronic copy of Complainants' Verified Complaint pursuant to Commission Rule 210.8(a)(1)(i);
3. One (1) electronic copy of the non-confidential exhibits to the Complaint, pursuant to Commission Rule 210.8(a)(1)(i);
4. One (1) electronic copy of the confidential exhibits to the Complaint, pursuant to Commission Rules 201.6(c) and 210.8(a)(1)(ii);
5. One (1) electronic certified copy of U.S. Patent Nos. 8,423,322; 8,019,567; 10,612,983; 8,596,550; and 8,886,488, included with the Complaint as Exhibits 1-5, pursuant to Commission Rule 210.12(a)(9)(i);
6. One (1) electronic certified copy of the U.S. Patent and Trademark Office prosecution

histories for U.S. Patent Nos. 8,423,322; 8,019,567; and 10,612,983; included with the Complaint as Appendices A1-C1, pursuant to Commission Rule 210.12(C)(1); and one (1) electronic copy of the U.S. Patent and Trademark Office prosecution histories for U.S. Patent Nos. 8,596,550 and 8,886,488, included with the Complaint as Appendices D1-E1;¹

7. One (1) electronic certified copy of the Assignment Records for U.S. Patent No. 8,019,567, included with the Complaint as Exhibits 6-8 and 68-69 pursuant to Commission Rule 210.12(a)(9)(ii);
8. One (1) electronic copy of each technical reference cited in the prosecution history for U.S. Patent Nos. 8,423,322; 8,019,567; 10,612,983; 8,596,550; and 8,886,488, included with the Complaint as Appendices A2-E2, pursuant to Commission Rule 210.12(c)(2); and
9. A letter and certification requesting confidential treatment for the information contained in Confidential Exhibits 12C and 67C to the Complaint, pursuant to Commission Rules 201.6(b) and 210.5(d).

Thank you for your attention to this matter. Please contact me should you have any question concerning this submission.

Respectfully submitted,

/s/ Matthew D. Aichele

Matthew D. Aichele

Enclosures

¹ Complainant has ordered certified copies of Appendices D1 and E1 and will supplement the Complaint with those documents once received.



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The Honorable Lisa R. Barton
Secretary to the Commission
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

Re: *Certain Smart Thermostats, Smart HVAC Systems, Smart HVAC Control Systems, And Components Thereof*, Investigation No. 337-TA-_____

Dear Secretary Barton:

Complainant EcoFactor, Inc., by counsel, hereby requests, pursuant to 19 C.F.R. §§ 210.5 and 201.6, confidential treatment of the confidential business information contained in Confidential Exhibits 12C and 67C to Complainants' Complaint transmitted herewith.

Confidential treatment is sought for Confidential Exhibit 12C, which discloses the licensees to the Asserted Patents. Confidential treatment is sought for Confidential Exhibit 67C, which details EcoFactor significant and substantial investments in the EcoFactor Platform, the domestic industry article.

The information described above qualifies as confidential information pursuant to 19 C.F.R. § 201.6 because:

- a. it is not available to the public;
- b. unauthorized disclosure of such information could cause substantial harm to the competitive position of Complainant and its licensees; and
- c. its disclosure could impair the Commission's ability to obtain information necessary to perform its statutory function.

Please contact me should you have any question concerning this submission.

Respectfully submitted,

/s/ Matthew D. Aichele

Matthew D. Aichele

Enclosures

**THE UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SMART THERMOSTAT
SYSTEMS, SMART HVAC SYSTEMS,
SMART HVAC CONTROL SYSTEMS
AND COMPONENTS THEREOF**

Investigation No. 337-TA-_____

STATEMENT REGARDING THE PUBLIC INTEREST

Pursuant to Commission Rule 210.8(b), 19 C.F.R. § 210.8(b), Complainant EcoFactor, Inc. (“EcoFactor” or “Complainant”) respectfully submits this Statement Regarding the Public Interest. EcoFactor seeks a limited exclusion order excluding from entry into the United States certain smart thermostats, smart HVAC systems, and components thereof that infringe certain claims of United States Patent Nos. 8,423,322 (“322 patent”); 8,019,567 (“567 patent”); 10,612,983 (“983 patent”); 8,596,550 (“550 patent”); and 8,886,488 (“488 patent”) (collectively, the “Asserted Patents”). EcoFactor also seeks permanent cease and desist orders prohibiting the Proposed Respondents, their subsidiaries, parents, related companies, and agents from engaging in the importation, sale for importation, marketing and/or advertising, distribution, offering for sale, sale, use after importation, sale after importation, or other transfer within the United States of certain smart thermostats and components thereof that infringe one or more claims of the Asserted Patents. Exclusion of such products from the United States will not have any material adverse effect on the public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers.

Exclusion of the Proposed Respondents’ infringing smart thermostats, smart HVAC systems, smart HVAC control systems, and components thereof would not “deprive the public of

products necessary for some important health or welfare need.” *Spansion, Inc. v. U.S. Int’l Trade Comm’n*, 629 F.3d 1331, 1360 (Fed. Cir. 2010). Further, because EcoFactor’s licensees and other companies supply the market for smart thermostats, consumers would not face any significant shortage of like or competitive products in the United States. As described in the Complaint, EcoFactor’s licensees, as well as third parties, supply smart thermostats to the U.S. market. Thus, this Investigation does not present an instance where a compelling public interest would supersede entry of the requested remedial orders.

I. Explanation of How the Articles Potentially Subject to the Remedial Orders Are Used in The United States

The products at issue in this investigation include smart thermostats, smart HVAC systems, smart HVAC control systems, and components thereof that are commonly used by consumers in residential and commercial applications. These smart thermostats often allow a consumer or a utility to control a building’s heating, ventilation, and air conditioning (“HVAC”) systems remotely, and further comprise the ability to operate more efficiently than traditional thermostats.

II. Identification of Any Public Health, Safety, or Welfare Concerns Relating to the Requested Remedial Orders

Issuance of the requested remedial orders would have no adverse effect on the public health, safety, or welfare in the United States. In general, concerns about a negative impact on public health, safety, or welfare have arisen in cases involving pharmaceuticals, essential equipment for medical treatment or implicated key national interests. *See Spansion*, 629 F.3d at 1360. For example, the Commission has previously concluded that access to essential medical equipment used to treat burn victims is a significant public interest consideration because the equipment “provide[s] benefits unavailable from any other device or method of treatment.” *Certain Fluidized Supporting Apparatus & Components Thereof*, Inv. No. 337-TA-182/ 188, USITC Pub. 1667, Comm’n Op. at 23-25 (Oct. 1984). None of these concerns are present here.

And as discussed further below, the requested remedial orders will not significantly impact the overall market for smart thermostats in the United States.

Accordingly, access to the accused products does not implicate any meaningful public health, safety, or welfare concern. Indeed, the requested relief serves the public interest because, as previously recognized by the Commission, there is a strong public interest in protecting intellectual property rights. *See, e.g., Certain Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets*, Inv. No. 337-TA-543, Comm'n Op. at 136–37 (June 19, 2007). This strong interest in protecting EcoFactor's intellectual property rights and the domestic industry set forth in the Complaint far outweighs any hypothetical adverse effect on the public.

III. Identification of Like or Directly Competitive Articles That Complainant, Its Licensees, or Third Parties Make Which Could Replace the Subject Article If They Were to Be Excluded

Smart thermostats are already available from multiple sources with which Proposed Respondents compete. EcoFactor's licensees and others adequately supply the market and will continue to do so irrespective of whether the requested remedial orders are issued. Proposed Respondents are a subset of the many suppliers of smart thermostats in the United States market, and Proposed Respondents' products do not contain any unique health or safety-related features. No public interest concerns exist where the market contains an adequate supply of competitive or substitute products for those subject to a remedial order. *See, e.g., Certain Lens Fitted Film Packages*, Inv. No. 337-TA-406, Comm'n Op. at 18 (June 28, 1999). The smart thermostat market is highly competitive, and numerous companies, including EcoFactor's licensees, have the capacity to replace Proposed Respondents' infringing products for the United States market without delay.

IV. Indication of Whether Complainant, Complainant's Licensees, and/or Third Party Suppliers Have the Capacity to Replace the Volume of Articles Subject to the Requested Remedial Orders in a Commercially Reasonable Time

Smart thermostats and components thereof are currently available in the United States including products from EcoFactor's licensees and non-Respondent third parties. EcoFactor's licensees and the non-Respondent third parties have the capacity to increase domestic production of smart thermostats should demand require. In addition, non-infringing smart thermostats will also continue to be available from third-party suppliers. Consequently, consumers would have access to competitive non-infringing products from EcoFactor's licensees and third parties in amounts sufficient to meet the demand should the accused products be excluded from the United States.

V. Statement of How the Requested Remedial Order Would Impact Consumers

Consumers will have available to them in the United States marketplace a wide variety of smart thermostats, including those supplied by EcoFactor's licensees, as well as other competitive non-infringing smart thermostats, if the accused products are excluded from the United States. In view of the availability of commercial alternatives to the accused products, the exclusion of the infringing smart thermostats and components thereof will not negatively impact consumers in the United States. Rather, the requested relief will serve the public interest by enforcing United States intellectual-property rights. Precluding the Proposed Respondents from importing and selling their infringing smart thermostats and components thereof will benefit the public interest by protecting innovators, such as EcoFactor and its licensees, who invest domestically to research and develop new energy-efficient technology. Permitting unlicensed entities like the Proposed Respondents to import and sell infringing smart thermostats, smart HVAC systems and components thereof would not only devalue the licenses EcoFactor granted to other companies but would also undermine

future investment in similar technology. *See Certain Display Controllers and Products Containing Same*, Inv. No. 337-TA-491/481, Comm'n Op. at 66 (Feb. 2005).

Dated: February 25, 2021

Respectfully submitted,

/s/ Matthew D. Aichele

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**THE UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SMART THERMOSTAT
SYSTEMS, SMART HVAC SYSTEMS,
SMART HVAC CONTROL SYSTEMS,
AND COMPONENTS THEREOF**

Investigation No. 337-TA-_____

**COMPLAINT UNDER SECTION 337 OF THE
TARIFF ACT OF 1930, AS AMENDED**

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Exhibits

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1	Certified Copy of U.S. Patent No. 8,423,322
2	Certified Copy of U.S. Patent No. 8,019,567
3	Certified Copy of U.S. Patent No. 10,612,983
4	Certified Copy of U.S. Patent No. 8,596,550
5	Certified Copy of U.S. Patent No. 8,886,488
6	Certified Assignment at Reel/Frame 025711/0873
7	Certified Assignment at Reel/Frame 028389/0621
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9	“CenterPoint Energy Demand Response Wins National Award”
10	“EcoFactor Named Innovator of the Year”
11	“EcoFactor and NV Energy Win PowerGrid International’s Project of the Year”
12C	EcoFactor’s Identification of Licensees
13	Infringement Claim Chart for U.S. Patent No. 8,019,567 to ecobee
14	Infringement Claim Chart for U.S. Patent No. 10,612,983 to ecobee
15	Infringement Claim Chart for U.S. Patent No. 8,596,550 to ecobee
16	Infringement Claim Chart for U.S. Patent No. 8,886,488 to ecobee
17	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Google
18	Infringement Claim Chart for U.S. Patent No. 10,612,983 to Google
19	Infringement Claim Chart for U.S. Patent No. 8,596,550 to Google
20	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Google
21	Infringement Claim Chart for U.S. Patent No. 8,423,322 to Carrier
22	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Carrier
23	Infringement Claim Chart for U.S. Patent No. 10,612,983 to Carrier
24	Infringement Claim Chart for U.S. Patent No. 8,596,550 to Carrier
25	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Carrier
26	Infringement Claim Chart for U.S. Patent No. 8,423,322 to Emerson
27	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Emerson

Exhibit Number	Description
28	Infringement Claim Chart for U.S. Patent No. 10,612,983 to Emerson
29	Infringement Claim Chart for U.S. Patent No. 8,596,550 to Emerson
30	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Emerson
31	Infringement Claim Chart for U.S. Patent No. 8,423,322 to Honeywell
32	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Honeywell
33	Infringement Claim Chart for U.S. Patent No. 10,612,983 to Honeywell
34	INTENTIONALLY LEFT BLANK
35	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Honeywell
36	Infringement Claim Chart for U.S. Patent No. 8,423,322 to Johnson
37	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Johnson
38	Infringement Claim Chart for U.S. Patent No. 10,612,983 to Johnson
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40	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Johnson
41	Infringement Claim Chart for U.S. Patent No. 8,423,322 to Siemens
42	Infringement Claim Chart for U.S. Patent No. 8,019,567 to Siemens
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44	Infringement Claim Chart for U.S. Patent No. 8,596,550 to Siemens
45	Infringement Claim Chart for U.S. Patent No. 8,886,488 to Siemens
46	Receipt from Amazon.com showing purchase of an <i>ecobee3 lite</i> and an <i>ecobee4 SmartThermostat with Voice Control</i>
47	Photograph(s) of products and packaging of the <i>ecobee3 lite</i> and <i>ecobee4 SmartThermostat with Voice Control</i>
48	Receipt from Google showing purchase of a <i>Nest Learning Thermostat, 3rd Generation</i>
49	Photograph(s) of product and packaging of the <i>Nest Learning Thermostat, 3rd Generation</i>
50	Receipt showing purchase of a <i>Carrier Infinity System Control</i>
51	Photograph(s) of product and packaging of the <i>Carrier Infinity System Control</i>
52	Receipt showing purchase of an Emerson <i>ST75, Sensi Touch Smart Thermostat</i>
53	Photograph(s) of product and packaging of the Emerson <i>ST75, Sensi Touch Smart Thermostat</i>
54	Receipt showing purchase of a Honeywell <i>Wi-Fi Smart Color Thermostat</i>

Exhibit Number	Description
55	Photograph(s) of product and packaging of the Honeywell <i>Wi-Fi Smart Color Thermostat</i>
56	Receipt showing purchase of an Johnson <i>TEC3000 Stand-alone Thermostat Controller w/Dehumidification (Black)</i>
57	Photograph(s) of product and packaging of the Johnson <i>TEC3000 Stand-alone Thermostat Controller w/Dehumidification (Black)</i>
58	Receipt showing purchase of a Siemens <i>RDS120 Residential/Light Commercial Smart Thermostat, Black</i>
59	Photograph(s) of product and packaging of the Siemens <i>RDS120 Residential/Light Commercial Smart Thermostat, Black</i>
60	INTENTIONALLY LEFT BLANK
61	INTENTIONALLY LEFT BLANK
62	Domestic Industry Claim Chart for U.S. Patent No. 8,423,322
63	Domestic Industry Claim Chart for U.S. Patent No. 8,019,567
64	Domestic Industry Claim Chart for U.S. Patent No. 10,612,983
65	Domestic Industry Claim Chart for U.S. Patent No. 8,596,550
66	Domestic Industry Claim Chart for U.S. Patent No. 8,886,488
67C	Declaration concerning Domestic Industry
68	Certified Assignment at Reel/Frame 024907/0382
69	Certified Assignment at Reel/Frame 027967/0487

Appendices

Appendix Letter	Description
A1	Certified copy of the prosecution history of U.S. Patent No. 8,423,322
A2	References cited in the prosecution history of U.S. Patent No. 8,423,322
B1	Certified copy of the prosecution history of U.S. Patent No. 8,019,567
B2	References cited in the prosecution history of U.S. Patent No. 8,019,567
C1	Certified copy of the prosecution history of U.S. Patent No. 10,612,983
C2	References cited in the prosecution history of U.S. Patent No. 10,612,983
D1	Prosecution history of U.S. Patent No. 8,596,550
D2	References cited in the prosecution history of U.S. Patent No. 8,596,550
E1	Prosecution history of U.S. Patent No. 8,886,488
E2	References cited in the prosecution history of U.S. Patent No. 8,886,488

I. INTRODUCTION

1. This Complaint is filed by Complainant EcoFactor, Inc. (“EcoFactor” or “Complainant”) pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”), based on the unlawful and unauthorized importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation, of certain smart thermostat systems, smart HVAC systems, smart HVAC control systems, and components thereof (the “Accused Products”) that infringe one or more claims of United States Patent Nos. 8,423,322 (“322 patent”); 8,019,567 (“567 patent”); 10,612,983 (“983 patent”); 8,596,550 (“550 patent”); and 8,886,488 (“488 patent”) (collectively, the “Asserted Patents”). Certified copies of the Asserted Patents are attached as Exhibit Nos. 1-5.

2. Complainant EcoFactor owns all right, title, and interest in each of the Asserted Patents. Certified copies of the recorded assignments of the Asserted Patents are attached as Exhibit Nos. 6-8 and 68-69. Copies of the prosecution history for each of the Asserted Patents are attached as App. No. A1-E1.

3. The proposed Respondents are Ecobee Ltd. and Ecobee, Inc. (collectively, “Ecobee”); Google LLC (“Nest”); Carrier Global Corporation (“Carrier”); Emerson Electric Co. (“Emerson”); Honeywell International Inc. and Resideo Technologies, Inc. (“Honeywell”); Johnson Controls International, PLC (“Johnson”); and Siemens Industry, Inc. and Siemens AG (“Siemens”) (collectively, the “Proposed Respondents”).

4. The Proposed Respondents’ Accused Products infringe at least the following claims of one or more Asserted Patents in violation of Section 337(a)(1)(B)(i) and 35 U.S.C. §§ 271(a), (b), and/or (c), either literally or under the doctrine of equivalents:

Table 1		
Asserted Patent	Asserted Claims	Respondents
U.S. Patent No. 8,423,322	Independent claim 1 and dependent claims 2, 5, and 7	Carrier, Emerson, Honeywell, Johnson, Siemens
U.S. Patent No. 8,019,567	Independent claims 1 and 15 and dependent claims 2, 5, 7, 16, 19, 20	ecobee, Google, Carrier, Emerson, Honeywell, Johnson, Siemens
U.S. Patent No. 10,612,983	Independent claim 1 and dependent claims 2, 3, 16, 17, 18	ecobee, Google, Carrier, Emerson, Honeywell, Johnson, Siemens
U.S. Patent No. 8,596,550	Independent claims 1, 9, and 17 and dependent claims 5, 6, 7, 13, 14, 15	ecobee, Google, Carrier, Emerson, Siemens
U.S. Patent No. 8,886,488	Independent claims 1 and 9, and dependent claims 2, 5, 7, 8, 10, 13, 14, 15	ecobee, Google, Carrier, Emerson, Honeywell, Johnson, Siemens

5. On information and belief, and as set forth in this Complaint, each of the Proposed Respondents imports into the United States, sells for importation into the United States, and/or sells in the United States after importation Accused Products that directly and/or indirectly infringe the Asserted Patents.

6. As required by 19 U.S.C. §§ 1337(a)(2) and (3), an industry in the United States relating to the articles protected by the Asserted Patents exists. A domestic industry exists as the result of activities and investments in the United States related to products that are protected by the Asserted Patents. These activities include the past, current and ongoing significant and substantial domestic investments in plant and equipment, labor and capital, and research and development of EcoFactor and its licensees.

7. Complainant EcoFactor seeks a permanent limited exclusion order (“LEO”) under Section 337(d)(1) that bars from entry into the United States products that infringe any asserted

claim of the Asserted Patents that are manufactured, imported, sold for importation into the United States, or sold within the United States after importation by or on behalf of the Proposed Respondents, their subsidiaries, related companies, and agents in violation of Section 337.

8. Complainant EcoFactor also seeks permanent cease-and-desist orders (“CDO”) under Section 337(f) against the Proposed Respondents, their affiliates, subsidiaries, successors, or assigns that prohibit the sale, offer for sale, advertising, marketing, packaging, distribution, maintenance of inventory, or solicitation of any sale of imported Accused Products that infringe the Asserted Patents.

9. Complainant EcoFactor further seeks the imposition of a bond under Section 337(j) that covers the importation, sale, or other transfer of the Accused Products that infringe one or more claims of the Asserted Patents during the 60-day Presidential review period to prevent further injury to EcoFactor’s domestic industry resulting from the Proposed Respondents’ infringement.

II. THE PARTIES

A. Complainant

10. EcoFactor is a privately held company, having its principal place of business at 441 California Avenue, Number 2, Palo Alto, CA 94301. EcoFactor was founded in 2006 and is headquartered in Palo Alto, California. EcoFactor is a leader in smart home energy management services. EcoFactor delivers smart home energy management services that improve energy efficiency, reduce energy bills and vastly increase demand response efficacy – all while maintaining consumer comfort. EcoFactor’s patented big-data analytics and machine learning algorithms collect and process massive amounts of residential data – including home thermodynamics, family comfort preferences and schedules, plus external data such as weather – to continually monitor, adapt and learn for optimum energy savings. The company provides homeowners significant cost savings and energy usage benefits. EcoFactor’s award-winning

service has been offered through channel partners such as utilities, energy retailers, broadband service providers and HVAC companies.

11. EcoFactor transformed how homes use energy by applying advanced analytics to connected devices in the home. EcoFactor developed a suite of software known as the “EcoFactor Platform” that incorporates EcoFactor’s patented data analytics and machine learning algorithms, as well as EcoFactor’s award-winning smart HVAC control technologies. The EcoFactor Platform is software that runs on servers, including cloud servers, in the United States, and provides service to customers in the United States. The source code of the EcoFactor Platform, including for example the platform, quant, and mobile application source code, that comprises the EcoFactor Platform was designed by, created by, and is continuously maintained and improved by EcoFactor employees working in the United States. The EcoFactor Platform actively manages thermostats on occupants’ behalf in intelligent ways that improve comfort while helping them save time, energy and money. Utilities, home service providers and homeowners rely on EcoFactor for demand response, energy efficiency, and HVAC performance monitoring services. The EcoFactor Platform includes the software that practices EcoFactor’s patents on these features. For example, the EcoFactor Platform includes EcoFactor’s patented techniques for monitoring the health and performance of HVAC systems over time, smart thermostat scheduling to improve energy savings and optimize comfort for occupants, and thermodynamic modeling of the user’s home and HVAC system to enable dynamic pre-cooling and pre-heating to further improve comfort, save energy, or both, by creating comfortable schedules that also shift energy usage out of periods of peak energy demand.

12. The HVAC industry and researchers in the field recognize the technological and commercial impact of EcoFactor’s patented technologies and innovations. For example, EcoFactor’s demand response solution has been recognized multiple times from the Association

of Energy Services Professionals (AESP) for outstanding achievement in pricing and demand response. Ex. 9. EcoFactor was also named “Innovator of the Year” by San Mateo County Economic Development Association for EcoFactor’s automated approach to energy efficiency and demand response services, and has also been named Owlser HOT in Redwood City, CA. Exs. 10, 60. Moreover, EcoFactor received Powergrid International’s Demand Response/Energy Efficiency Project of the Year award, Ex. 11, and was assessed as one of the top innovators with some of the most commercially important smart home patents.

13. The patented innovations at issue in this action were invented by EcoFactor engineers and researchers. EcoFactor has played a significant role in the development and advancement of such improvements to energy management technology—and the domestic market for them. EcoFactor has expended tens of millions of dollars of research and development and technical services and support in the United States. In recent years, an explosion of imported products that infringe EcoFactor’s innovative Asserted Patents has significantly eroded EcoFactor’s market standing for the domestic industry products that practice the Asserted Patents. EcoFactor, by this Complaint, seeks to prohibit and remedy these unfair and unlawful acts.

B. Proposed Respondents

1. ecobee

14. ecobee Ltd. is a Nevada limited company with its principal place of business at 334 Adelaide St. W, Toronto, ON M5V 0M1, Canada. Ecobee, Inc. is a Canadian corporation with its principal place of business at 207 Queens Quay West, Suite 600, Toronto, ON M5J 1A7, Canada.

15. ecobee, Ltd. designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.¹

16. ecobee, Inc. designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

2. Google

17. Google LLC is a wholly-owned subsidiary of Alphabet, Inc, and a Delaware limited liability company with a principal place of business at 1600 Amphitheatre Parkway, Mountain View, California 94043. Google LLC operates a division named Google Nest (“Google”) which, on information and belief, is the relevant division with respect to the Accused Products

18. Google designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

3. Carrier Global Corporation

19. Carrier Global Corporation is a Delaware corporation with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418.

20. Carrier designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are then sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

¹ All factual assertions throughout this Complaint, if not accompanied by a citation to an exhibit, are on information and belief.

4. Emerson Electric Co.

21. Emerson Electric Co. is a Missouri corporation with principal place of business at 8000 W. Florissant Ave., P.O. Box 4100, St. Louis, Missouri 63136.

22. Emerson designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are then sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

5. Honeywell International Inc. and Resideo Technologies, Inc.

23. Honeywell International Inc. is a Delaware corporation with principal place of business at 300 South Tryon Street, Charlotte, NC 28202.

24. Resideo Technologies, Inc. is a Delaware corporation with principal place of business at 901 E 6th Street, Austin, Texas 78702. Resideo was a part of Honeywell until October 2018. Resideo continues to sell Honeywell-branded products, including the Accused Products.

25. Honeywell and Resideo design and manufacture and/or have manufactured on their behalf abroad the Accused Products that are then sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

6. Johnson Controls International, PLC

26. Johnson Controls International, PLC is an Irish company with principal place of business at One Albert Quay, Cork, Ireland, T12 X8N6.

27. Johnson designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are then sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

7. Siemens AG and Siemens Industry, Inc.

28. Siemens AG is a German company with principal place of business at Werner-von-Siemens-Str. 1, 80333 Munich, Germany.

29. Siemens Industry, Inc. is a Delaware corporation with principal place of business at 1000 Deerfield Pkwy, Buffalo Grove, Illinois 60089. Siemens Industry is a wholly owned subsidiary of Siemens AG.

30. Siemens designs and manufactures and/or has manufactured on its behalf abroad the Accused Products that are then sold for importation into the United States, imported into the United States, and/or sold within the United States after importation.

III. THE TECHNOLOGY AND PRODUCTS AT ISSUE

31. Pursuant to 19 C.F.R. §§ 210.10(b)(1) and 210.12(a)(12), the products accused of infringing one or more of the Asserted Patents are smart thermostat systems, smart HVAC systems, smart HVAC control systems, and all components (including accessories) thereof offered for sale by the Proposed Respondents.

32. The Accused Products include thermostat systems that connect to and control an HVAC system, they include smart HVAC systems, and they include components of such systems such as, for example, hubs, panels, and remote sensors. These thermostat devices communicate over a network with other devices and systems offered by the same Proposed Respondent. The Accused Products connect to the network managed by the Proposed Respondent via the Internet. For example, the Accused Products connect to Respondents' networked servers and data centers, online interfaces, and related accessories.

33. When connected as designed, the Accused Products form a smart thermostat system, smart HVAC system, and/or smart HVAC control system. Proposed Respondents' smart thermostat systems are "smart" because they are designed to connect to Proposed Respondents' servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories (e.g., remote temperature sensors), upon importation. Further, Proposed Respondents' smart thermostat systems

are “smart” because they support and are marketed as providing features to end users that analyze thermostat and HVAC system data gathered by the smart thermostat systems.

34. The Accused Products constitute the “frontend” of the smart thermostat system, smart HVAC system, and/or smart HVAC control system. Such smart thermostat devices can be programmed using the servers and the network maintained by a Proposed Respondent and which form the “backend” for the smart thermostat. Such smart thermostat systems can be programmed remotely with a web or mobile application offered by a Proposed Respondent. The web or mobile application communicates with the smart thermostat via computer servers or data centers managed by the Proposed Respondent, who sells and imports the smart thermostat. Each Proposed Respondent allows an end user to use a web or mobile application on a mobile phone, tablet, laptop, or other computing device to control the smart thermostat systems, such as by adjusting temperature settings.

35. These smart thermostat systems also communicate data using the network. For example, Proposed Respondents’ smart thermostat systems send and receive temperature data and/or temperature settings using the network.

36. Proposed Respondents infringe the Asserted Patents and violate Section 337 through the sale for importation into the United States, importation into the United States, and/or sale within the United States after importation of such Accused Products. Proposed Respondents’ Accused Products are designed and specially made and adapted to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. Proposed Respondents’ Accused Products are imported into the United States with this infringing design. Proposed Respondents’ Accused Products are then installed and used in the United States according to Proposed Respondents’ design and instruction. These acts each constitute an unlawful and unfair act. Unlawful acts also occur when the Proposed Respondents’ Accused Products are used to infringe

claims of the Asserted Patents in the United States upon importation. Section IV identifies the Asserted Patents in detail, along with a further description of the technology covered by each. Exemplary identifications of such infringing products are provided in Section V.

37. EcoFactor's Platform practices claims of each asserted patent. The EcoFactor Platform consists of over thirty-four thousand (34,000) source code files, written and maintained by EcoFactor's software engineers since the company's founding. This software functions as a smart HVAC control system that actively manages thermostats on occupants' behalf in intelligent ways. For example, the EcoFactor Platform's software includes its patented big-data analytics and machine learning algorithms, which collect and process massive amounts of residential data – including home thermodynamics, family comfort preferences and schedules, plus external data such as weather – to continually monitor, adapt and learn for optimum energy savings, time savings, cost savings, and comfort improvements. The EcoFactor Platform software also includes its custom feature set for connecting to and programming connected thermostats based on its analytics engine and homeowner preferences. The EcoFactor Platform includes software programs that are stored in locations within the United States. The EcoFactor Platform software is stored and hosted with servers running in the United States, including servers wholly owned by EcoFactor and servers leased by EcoFactor through a cloud server software hosting service. The EcoFactor Platform has been designed to function as a smart HVAC control system together with a number of different programmable communicating thermostats available in the marketplace since the company was founded. The EcoFactor Platform also includes software programming that allows end users to adjust temperature settings and otherwise interface with the smart HVAC control system using a web browser on a mobile phone, tablet, or computer. The EcoFactor Platform also includes software programs for EcoFactor's mobile or web-based applications. In 2017, EcoFactor added the Simple Thermostat to its suite of smart thermostat and smart HVAC control system

products. EcoFactor designed the Simple Thermostat to integrate with the EcoFactor Platform software, as other programmable communicating thermostats do.

IV. THE ASSERTED PATENTS²

38. The Asserted Patents relate to heating, ventilation and cooling (“HVAC”) systems and smart thermostat systems that intelligently control HVAC systems in buildings and homes. All Asserted Patents have John Douglas Steinberg and Scott Douglas Hublou as co-inventors, and one of the Asserted Patents additionally has Leo Cheung as a co-inventor. The ’567, ’983, ’488, and ’322 patents are related and share substantially similar specifications.

39. The identification, ownership, non-technical description, foreign counterparts, and licensees for each Asserted Patent are identified below.

A. U.S. Patent No. 8,423,322

1. Identification of the Patent and Ownership

40. The ’322 patent, titled “system and method for evaluating changes in the efficiency of an HVAC system,” issued on April 16, 2013. Ex. 1 (’322 patent). Inventors of the ’322 patent are John Douglas Steinberg and Scott Douglas Hublou. The ’322 patent is based on U.S. Pat. App. No. 13/230,610 filed on Sept. 12, 2011, which is a continuation of App. No. 12/211,690 filed on Sept. 16, 2008. The ’322 patent also claims priority to Provisional App. No. 60/994,011, filed on Sept. 17, 2007.

41. A certified copy of the ’322 patent is attached as Exhibit 1. Pursuant to Commission Rule 210.12(c)(1), this Complaint is filed with four certified copies of the prosecution history of the ’322 patent as Appendix A1. Pursuant to Commission Rule 210.12(c)(2), this Complaint is

² The descriptions and any other non-technical descriptions of the Asserted Patents within this Complaint are for illustrative purposes only. Nothing in this Complaint is intended to express, either implicitly or explicitly, any position regarding the proper construction or scope of any claim of any of the Asserted Patents

also filed with four copies of each technical reference identified in the prosecution history of the '322 patent as Appendix A2.

42. The expiration date of the '322 patent is Sept. 16, 2028.

43. EcoFactor owns by assignment all rights, title, and interest in the '322 patent. Ex. 1, Appx A1.

2. Nontechnical Description of the Patent

44. The '322 patent relates to a smart HVAC control system that is configured to compare the inside temperature of a structure and the outside temperature over time, and to compare the inside temperatures recorded at multiple different times to determine whether operational efficiency of the HVAC system has decreased over time. The patented invention comprises innovative improvements to existing automated smart thermostat systems and solved technological problems in existing smart thermostat systems and computer networks/systems pertaining to HVAC systems. The claimed combinations (including, e.g., at least the system configured to compare the inside temperature of a structure and the outside temperature over time, and to compare the inside temperatures recorded at multiple different times to determine whether operational efficiency of the HVAC system has decreased over time) comprise innovative technological solutions. Indeed, the '322 patent overcame numerous references during prosecution. Moreover, approximately 132 later patents and patent applications cite to the '322 patent or its family, including patents and patent applications of a number of companies that develop smart thermostat systems (including, e.g., Nest) who tried to solve similar technological problems but only recognized those technological problems and technological solutions after EcoFactor.

3. Foreign Counterparts of the Patent

45. Pursuant to Commission Rule 210.12(a)(9)(v), there are no other foreign patents issued or foreign patent applications pending, filed, abandoned, withdrawn, or rejected corresponding to the '322 patent.

4. Licensees

46. Pursuant to Commission Rule 210.12(a)(9)(iii), all licensees to the '322 patent are identified in Confidential Exhibit 12C. There are no other known licenses relating to the '322 patent.

B. U.S. Patent No. 8,019,567

1. Identification of the Patent and Ownership

47. The '567 patent, titled "system and method for evaluating changes in the efficiency of an HVAC system," issued on September 13, 2011. Ex. 2 ('567 patent). Inventors of the '567 patent are John Douglas Steinberg and Scott Douglas Hublou. The '567 patent is based on U.S. Pat. App. No. 12/211,690 filed on September 16, 2008. The '567 patent claims priority to Provisional App. No. 60/994,011, filed on September 17, 2007.

48. A certified copy of the '567 patent is attached as Exhibit 2. Pursuant to Commission Rule 210.12(c)(1), this Complaint is filed with four certified copies of the prosecution history of the '567 patent as Appendix B1. Pursuant to Commission Rule 210.12(c)(2), this Complaint is also filed with four copies of each technical reference identified in the prosecution history of the '567 patent as Appendix B2.

49. The expiration date of the '567 patent is October 21, 2029.

50. EcoFactor owns by assignment all rights, title, and interest in the '567 patent. Exs. 6-8.

2. Nontechnical Description of the Patent

51. The '567 patent relates to a smart HVAC control system that is configured to compare the inside temperature of a structure and the outside temperature over time, and to compare the inside temperature with estimation for the rate of change in temperature to determine whether operational efficiency of the HVAC system has decreased over time. The patented invention comprises innovative improvements to existing automated smart thermostat systems and solved technological problems in existing smart thermostat systems and computer networks/systems pertaining to HVAC systems. The claimed combinations (including, e.g., at least the system configured to compare the inside temperature of a structure and the outside temperature over time, and to compare the inside temperature with estimation for the rate of change in temperature to determine whether operational efficiency of the HVAC system has decreased over time) comprise innovative technological solutions. Indeed, the '567 patent overcame numerous references during. Moreover, approximately 133 later patents and patent applications cite to the '567 patent or its family, including patents and patent applications of a number of companies that develop smart thermostat systems (including, e.g., Nest) who tried to solve similar technological problems but only recognized those technological problems and technological solutions after EcoFactor.

3. Foreign Counterparts of the Patent

52. Pursuant to Commission Rule 210.12(a)(9)(v), there are no other foreign patents issued or foreign patent applications pending, filed, abandoned, withdrawn, or rejected corresponding to the '567 patent.

4. Licensees

53. Pursuant to Commission Rule 210.12(a)(9)(iii), all licensees to the '567 patent are identified in Confidential Exhibit 12C. There are no other known licenses relating to the '567 patent.

C. U.S. Patent No. 10,612,983

1. Identification of the Patent and Ownership

54. The '983 patent, titled "system and method for evaluating changes in the efficiency of an HVAC system," issued on April 7, 2020. Ex. 3 ('983 patent). Inventors of the '983 patent are John Douglas Steinberg and Scott Douglas Hublou. The '983 patent is based on U.S. Pat. App. No. 16/374,083 filed on April 3, 2019. The '983 patent claims priority to Provisional App. No. 60/994,011, filed on September 17, 2007.

55. A certified copy of the '983 patent is attached as Exhibit 3. Pursuant to Commission Rule 210.12(c)(1), this Complaint is filed with four certified copies of the prosecution history of the '983 patent as Appendix C1. Pursuant to Commission Rule 210.12(c)(2), this Complaint is also filed with four copies of each technical reference identified in the prosecution history of the '983 patent as Appendix C2.

56. The expiration date of the '983 patent is September 16, 2028.

57. EcoFactor owns by assignment all rights, title, and interest in the '983 patent. Ex. 3, Appx C1.

2. Nontechnical Description of the Patent

58. The '983 patent relates to a smart HVAC control system that is configured to receive sensor measurement, data from a network connection, and temperature setpoint, is configured to predict the time necessary for the HVAC system to reach a temperature value, and to cause the building to reach the temperature by a time value. The patented invention comprises

innovative improvements to existing automated smart thermostat systems and solved technological problems in existing smart thermostat systems and computer networks/systems pertaining to HVAC systems. The claimed combinations (including, e.g., at least the system configured to receive sensor measurement, data from a network connection, and temperature setpoint, is configured to predict the time necessary for the HVAC system to reach a temperature value, and to cause the building to reach the temperature by a time value) comprise innovative technological solutions. Indeed, the '983 patent overcame numerous references during. Moreover, approximately 132 later patents and patent applications cite to the '983 patent or its family, including patents and patent applications of a number of companies that develop smart thermostat systems (including, e.g., Nest) who tried to solve similar technological problems but only recognized those technological problems and technological solutions after EcoFactor.

3. Foreign Counterparts of the Patent

59. Pursuant to Commission Rule 210.12(a)(9)(v), there are no other foreign patents issued or foreign patent applications pending, filed, abandoned, withdrawn, or rejected corresponding to the '983 patent.

4. Licensees

60. Pursuant to Commission Rule 210.12(a)(9)(iii), all licensees to the '983 patent are identified in Confidential Exhibit 12C. There are no other known licenses relating to the '983 patent.

D. U.S. Patent No. 8,596,550

1. Identification of the Patent and Ownership

61. The '550 patent, titled "system, method, and apparatus for identifying manual inputs to and adaptive programming of a thermostat," issued on December 3, 2013. Ex. 4 ('550 patent). Inventors of the '550 patent are John Douglas Steinberg, Scott Douglas Hublou, and Leo

Cheung. The '550 patent is based on U.S. Pat. App. No. 12/778,052 filed on May 11, 2010. The '550 patent claims priority to Provisional App. No. 61/215,999, filed on May 12, 2009.

62. A certified copy of the '550 patent is attached as Exhibit 4. Pursuant to Commission Rule 210.12(c)(1), this Complaint is filed with four certified copies of the prosecution history of the '550 patent as Appendix D1. Pursuant to Commission Rule 210.12(c)(2), this Complaint is also filed with four copies of each technical reference identified in the prosecution history of the '550 patent as Appendix D2.

63. The expiration date of the '550 patent is September 23, 2032.

64. EcoFactor owns by assignment all rights, title, and interest in the '550 patent. Ex. 7-8, 68.

2. Nontechnical Description of the Patent

65. The '550 patent relates to a smart thermostat system that is configured to access stored inside temperature and outside temperature measurements, predict the rate of change in inside temperature in response to changes in outside temperatures, calculate scheduled programming for a thermostatic controller based on the predicted rate of change that includes at least one automated setpoint, and compare the automated setpoints with the actual setpoint programming for the thermostatic controller. The patented invention comprises innovative improvements to existing automated smart thermostat systems and solved technological problems in existing smart thermostat systems and computer networks/systems pertaining to HVAC systems. The claimed combinations (including, e.g., at least the system configured to access stored inside temperatures and outside temperatures, calculate predicted rates of change in temperature, calculate scheduled programming for a thermostatic controller based on the predicted rate of change that includes at least one automated setpoint, and compare the automated setpoints with the actual setpoint programming for the thermostatic controller) comprise innovative technological

solutions. Indeed, the '550 patent overcame numerous references during. Moreover, approximately 101 later patents and patent applications cite to the '550 patent or its family, including patents and patent applications of a number of companies that develop smart thermostat systems (including, e.g., Nest) who tried to solve similar technological problems but only recognized those technological problems and technological solutions after EcoFactor.

3. Foreign Counterparts of the Patent

66. Pursuant to Commission Rule 210.12(a)(9)(v), there are no other foreign patents issued or foreign patent applications pending, filed, abandoned, withdrawn, or rejected corresponding to the '550 patent.

4. Licensees

67. Pursuant to Commission Rule 210.12(a)(9)(iii), all licensees to the '550 patent are identified in Confidential Exhibit 12C. There are no other known licenses relating to the '550 patent.

E. U.S. Patent No. 8,886,488

1. Identification of the Patent and Ownership

68. The '488 patent, titled "system and method for calculating thermal mass of a building," issued on November 11, 2014. Ex. 5 ('488 patent). Inventors of the '488 patent are John Douglas Steinberg and Scott Douglas Hublou. The '488 patent is based on U.S. Pat. App. No. 13/409,729 filed on March 1, 2012. The '488 patent claims priority to Provisional App. No. 60/994,011, filed on September 17, 2007.

69. A certified copy of the '488 patent is attached as Exhibit 5. Pursuant to Commission Rule 210.12(c)(1), this Complaint is filed with four certified copies of the prosecution history of the '488 patent as Appendix E1. Pursuant to Commission Rule 210.12(c)(2), this Complaint is also

filed with four copies of each technical reference identified in the prosecution history of the '488 patent as Appendix E2.

70. The expiration date of the '488 patent is September 16, 2028.

71. EcoFactor owns by assignment all rights, title, and interest in the '488 patent. Ex. 69.

2. Nontechnical Description of the Patent

72. The '488 patent relates to a smart HVAC control system that is configured to control an HVAC system at a first location, receive inside temperature measurements from the location and store them in a database, receive outside temperature measurements from a source other than the HVAC system, calculate one or more predicted rates of change in inside temperature based on the status of the HVAC system that are correlated to the outside temperature(s), and to compare a predicted temperature based on the predicted rate of change with an actual inside temperature measurement. The patented invention comprises innovative improvements to existing thermostats and solved technological problems in existing smart thermostat systems and computer networks/systems pertaining to HVAC systems. The claimed combinations (including, e.g., at least the system configured to control an HVAC system at a first location, receive inside temperature measurements from the location and store them in a database, receive outside temperature measurements from a source other than the HVAC system, calculate one or more predicted rates of change in inside temperature based on the status of the HVAC system and the outside temperature, and to compare a predicted temperature based on the predicted rate of change with an actual inside temperature measurement) comprise innovative technological solutions. Indeed, the '488 patent overcame numerous references during. Moreover, approximately 128 later patents and patent applications cite to the '488 patent or its family, including patents and patent applications of a number of companies that develop smart thermostat systems (including, e.g.,

Nest) who tried to solve similar technological problems but only recognized those technological problems and technological solutions after EcoFactor.

3. Foreign Counterparts of the Patent

73. Pursuant to Commission Rule 210.12(a)(9)(v), there are no other foreign patents issued or foreign patent applications pending, filed, abandoned, withdrawn, or rejected corresponding to the '488 patent.

4. Licensees

74. Pursuant to Commission Rule 210.12(a)(9)(iii), all licensees to the '488 patent are identified in Confidential Exhibit 12C. There are no other known licenses relating to the '488 patent.

V. SPECIFIC INSTANCES OF IMPORTATION

75. The unfair acts of the Proposed Respondents involve the design, manufacture, importation into the United States, sale for importation into the United States, and/or sale within the United States after importation, of certain smart thermostat systems, smart HVAC systems, smart HVAC control systems, and components thereof, including, without limitation, the Accused Products.

A. ecobee

76. The ecobee Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 46 is a receipt showing the purchase of an ecobee3 lite and an ecobee4 SmartThermostat with Voice Control for delivery to an address in the United States. Exhibit 47 contains photograph(s) of those products and products' packaging, delivered to an address in the United States, indicating that Malaysia is the country of origin and that the product was imported into the United States.

B. Google

77. The Google Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 48 is a receipt showing the purchase of a Nest Learning Thermostat, 3rd Generation for delivery to an address in the United States. Exhibit 49 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that Taiwan is the country of origin and that the product was imported into the United States.

C. Carrier

78. The Carrier Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 50 is a receipt showing the purchase of a Carrier Infinity System Control for delivery to an address in the United States. Exhibit 51 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that China is the country of origin and that the product was imported into the United States.

D. Emerson

79. The Emerson Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 52 is a receipt showing the purchase of a Emerson ST75, Sensi Touch Smart Thermostat for delivery to an address in the United States. Exhibit 53 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that China is the country of origin and that the product was imported into the United States.

E. Honeywell

80. The Honeywell Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 54 is a receipt showing the purchase of a Honeywell Wi-Fi Smart Color Thermostat for delivery to an address in the United States. Exhibit 55 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that Mexico is the country of origin and that the product was imported into the United States.

F. Johnson

81. The Johnson Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 56 is a receipt showing the purchase of a Johnson *TEC3000 Stand-alone Thermostat Controller w/Dehumidification (Black)* for delivery to an address in the United States. Exhibit 57 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that Mexico is the country of origin and that the product was imported into the United States.

G. Siemens

82. The Siemens Accused Products are manufactured outside of the United States and sold for importation into the United States, imported into the United States, and/or sold within the United States after importation. For example, Exhibit 58 is a receipt showing the purchase of a Siemens *RDS120 Residential/Light Commercial Smart Thermostat, Black* for delivery to an address in the United States. Exhibit 59 contains photograph(s) of the product and/or product packaging, delivered to an address in the United States, indicating that China is the country of origin and that the product was imported into the United States.

VI. UNLAWFUL AND UNFAIR ACTS OF THE PROPOSED RESPONDENTS

83. The Proposed Respondents have engaged in unfair trade practices, including the sale for importation, importation, and/or sale after importation of certain smart thermostat systems, smart HVAC systems, smart HVAC control systems, and components thereof, that infringe the asserted claims of the Asserted Patents. These activities by the Proposed Respondents constitute a violation of Section 337.

84. EcoFactor asserts that Proposed Respondents directly infringe, literally or under the doctrine of equivalents, actively induce the infringement of, and/or contributorily infringe one or more asserted claims of the Asserted Patents. Table 1 above identifies the claims asserted against each Proposed Respondent.

85. The infringement allegations contained in this Complaint include the Proposed Respondents' (i) direct infringement of the asserted claims (literally and/or under the doctrine of equivalents); (ii) contributory infringement by knowingly selling products or components thereof without substantial noninfringing uses that are the same or especially made or especially adapted for use in an infringement of the asserted claims; and/or (iii) infringement by inducement by exhibiting an affirmative intent to cause direct infringement of the asserted claims.

86. The Proposed Respondents have been given notice of their infringement by, among other things, the filing and service of this Complaint.

87. The Proposed Respondents have induced, and continue to induce, others to infringe the asserted claims. The Proposed Respondents have taken active steps to encourage and facilitate direct infringement by others, such as sellers, distributors, and users of the Accused Products, with knowledge that infringement, such as by contracting for the distribution of the Accused Products, by marketing the Accused Products, and by creating and/or distributing user manuals, white papers, datasheets, marketing materials, support and help web pages and tutorials, mobile

applications with instructions, instructional videos, and/or similar materials with instructions on using the Accused Products. The use of the Accused Products in their ordinary and customary fashion results in infringement of the asserted claims. *See* Exhibits 13-45.

88. The Proposed Respondents have contributorily infringed, and continue to contributorily infringe, the asserted claims. The Proposed Respondents have sold for importation into the United States, offered for sale within the United States, and/or imported into the United States Accused Products that embody a material part of the claimed inventions, that are known by Proposed Respondents to be specially made or specially adapted for use in an infringing manner and that are not staple articles or commodities suitable for substantial noninfringing use. *See* Exhibits 13-45.

89. Complainants provide detailed charts comparing claims of the Asserted Patents to exemplary products and photographs of the exemplary infringing devices and services. Complainants assert that the Accused Products infringe the claims set forth in Table 1. Discovery may reveal that the Accused Products infringe additional claims of the Asserted Patents.

A. ecobee

90. The ecobee Accused Products include ecobee's smart thermostat systems (e.g., ecobee3 lite, ecobee SmartThermostat with Voice Control), including device-side and cloud-based features thereof, and related accessories (e.g., ecobee SmartSensor). ecobee's smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. The ecobee Accused Products are imported into the United States with this infringing design. The ecobee Accused Products are then installed and used in the United States in ecobee users' homes according to ecobee's design and instructions. These acts each constitute an unlawful and unfair act.

91. ecobee's smart thermostat systems are designed to connect to ecobee's servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories, upon importation. ecobee's smart thermostat systems are designed and intended to be installed in a user's home, connected to the user's HVAC system, and connected to a wireless network for communication with ecobee's cloud-based or backend servers and data centers, the online interfaces for the smart thermostat systems (including the ecobee mobile application and web portal), and related accessories (including, e.g., an ecobee SmartSensor). ecobee's smart thermostat systems provide features to the user that are supported by the various components of the ecobee system. Users actually use the ecobee smart thermostat systems in this manner in the United States after they are imported and sold here.

92. The imported ecobee Accused Products (e.g., ecobee SmartThermostat with Voice Control) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, ecobee actively encourages users of the ecobee Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to ecobee's design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the ecobee SmartThermostat with Voice Control and other ecobee Accused Products imported by ecobee infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the ecobee SmartThermostat with Voice Control and the other ecobee Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '567 Patent

93. Exhibit 13 includes a chart comparing independent claims 1 and 15 of the '567 patent to the ecobee Accused Products, showing that they practice at least these claims.

2. Infringement of the '983 Patent

94. Exhibit 14 includes a chart comparing independent claims 1 and 24 of the '983 patent to the ecobee Accused Products, showing that they practice at least these claims.

3. Infringement of the '550 Patent

95. Exhibit 15 includes a chart comparing independent claims 1, 9, and 17 of the '550 patent to the ecobee Accused Products, showing that they practice at least these claims.

4. Infringement of the '488 Patent

96. Exhibit 16 includes a chart comparing independent claims 1 and 9 of the '488 patent to the ecobee Accused Products, showing that they practice at least these claims.

B. Google LLC / Google Nest

97. The Google Nest Accused Products include Google Nest's smart thermostat systems (e.g., Nest Learning Thermostat Third Generation and Nest Thermostat), including device-side and cloud-based features thereof, and related accessories (e.g., Nest Temperature Sensor). Google Nest smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. The Google Nest Accused Products are imported into the United States with this infringing design. The Google Nest Accused Products are then installed and used in the United States in Google Nest users' homes according to Google's design and instructions. These acts each constitute an unlawful and unfair act.

98. Google Nest smart thermostat systems are designed to connect to Google's servers and data centers (including, e.g., cloud-based servers and backend support), related online

interfaces (including, e.g., mobile apps and web portals), and related accessories upon importation. Google's Nest-branded smart thermostat systems are designed and intended to be installed in a user's home, connected to the user's HVAC system, and connected to a wireless network for communication with Google's cloud-based or backend servers and data centers, the online interfaces for the smart thermostat systems (including the Nest application and Google Home application), and related accessories (including, e.g., a Nest Temperature Sensor). Google's Nest-branded thermostats provide features to the user that are supported by the various components of the Google Nest system. Users actually use the Nest Learning Thermostat (3rd Gen.) and Nest Thermostat in this manner in the United States after they are imported and sold here.

99. The imported Google Nest Accused Products (e.g., Nest Learning Thermostat) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Google actively encourages users of the Google Nest Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Google's design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the Google Nest Learning Thermostat and other Google Accused Products imported by Google, including Nest Thermostat, infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the Nest Learning Thermostat and the other Google Nest Accused Products (e.g. Nest Thermostat) with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '567 Patent

100. Exhibit 17 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Nest Accused Products, showing that they practice at least these claims.

2. Infringement of the '983 Patent

101. Exhibit 18 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Nest Accused Products, showing that they practice at least these claims.

3. Infringement of the '550 Patent

102. Exhibit 19 includes a chart comparing independent claims 1, 9, and 17 of the '550 patent to the Nest Accused Products, showing that they practice at least these claims.

4. Infringement of the '488 Patent

103. Exhibit 20 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Nest Accused Products, showing that they practice at least these claims.

C. Carrier

104. The Carrier Accused Products include Carrier's smart thermostat systems (e.g., Infinity System Control), including device-side and cloud-based features thereof, and related accessories (e.g., Infinity Series, Infinity System products). Carrier's smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. The Carrier Accused Products are imported into the United States with this infringing design. The Carrier Accused Products are then installed and used in the United States in Carrier users' homes according to ecobee's design and instructions. These acts each constitute an unlawful and unfair act.

105. Carrier's smart thermostat systems are designed to connect to Carrier's servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories upon importation. Carrier's smart thermostat systems are designed and intended to be installed in a user's home, connected to the user's HVAC system, and connected to a wireless network for communication with Carrier's

backend system, online interfaces, and related accessories. Carrier's smart thermostat systems provide features to the user that are supported by the various components of the Carrier Infinity system. Users actually use the Carrier Infinity thermostat systems in this manner in the United States after they are imported and sold here.

106. The imported Carrier Accused Products (e.g., Infinity System Control) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Carrier actively encourages users of the Carrier Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Carrier's design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the Infinity System Control and other Carrier Accused Products imported by Carrier infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the Infinity System Control and the other Carrier Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '322 Patent

107. Exhibit 21 includes a chart comparing independent claim 1 of the '322 patent to the Carrier Accused Products, showing that they practice at least this claim.

2. Infringement of the '567 Patent

108. Exhibit 22 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Carrier Accused Products, showing that they practice at least these claims.

3. Infringement of the '983 Patent

109. Exhibit 23 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Carrier Accused Products, showing that they practice at least these claims.

4. Infringement of the '550 Patent

110. Exhibit 24 includes a chart comparing independent claims 1, 9, and 17 of the '550 patent to the Carrier Accused Products, showing that they practice at least these claims.

5. Infringement of the '488 Patent

111. Exhibit 25 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Carrier Accused Products, showing that they practice at least these claims.

D. Emerson

112. The Emerson Accused Products include Emerson's smart thermostat systems (e.g., Sensi Smart Thermostat and Sensi Touch Smart Thermostat) and Sensi Predict, including device-side and cloud-based features thereof, and related accessories. Emerson's smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. Emerson's Accused Products are imported into the United States with this infringing design. Emerson's Accused Products are then installed and used in the United States in Emerson users' homes according to Emerson's design and instructions. These acts each constitute an unlawful and unfair act.

113. The Emerson Accused Products are designed to connect to Emerson's servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories upon importation. Emerson's Accused Products are designed and intended to be installed in a user's home, connected to the user's HVAC system, and connected to a wireless network for communication with each other and with Emerson's backend servers, online interfaces, and related accessories. Emerson's Accused Products provide features to the user that are supported by the various components of the

Emerson Sensi system. Users actually use the Emerson Sensi systems in this manner in the United States after they are imported and sold here.

114. The imported Emerson Accused Products (e.g., Sensi Touch Smart Thermostat) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Emerson actively encourages users of the Emerson Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Emerson's design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the Sensi Touch Smart Thermostat and other Emerson Accused Products imported by Emerson infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the Sensi Touch Smart Thermostat and the other Emerson Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '322 Patent

115. Exhibit 26 includes a chart comparing independent claim 1 of the '322 patent to the Emerson Accused Products, showing that they practice at least this claim.

2. Infringement of the '567 Patent

116. Exhibit 27 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Emerson Accused Products, showing that they practice at least these claims.

3. Infringement of the '983 Patent

117. Exhibit 28 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Emerson Accused Products, showing that they practice at least these claims.

4. Infringement of the '550 Patent

118. Exhibit 29 includes a chart comparing independent claims 1, 9, and 17 of the '550 patent to the Emerson Accused Products, showing that they practice at least these claims.

5. Infringement of the '488 Patent

119. Exhibit 30 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Emerson Accused Products, showing that they practice at least these claims.

E. Honeywell

120. The Honeywell Accused Products include Honeywell's smart thermostat systems (e.g., Wi-Fi Smart Thermostat, Wi-Fi 7-Day Programmable Thermostat, WiFi 9000 Color Touchscreen Thermostat, WiFi Programmable Thermostat, T5 Programmable Thermostat, T5+ Programmable Thermostat, T6 Pro Smart Thermostat, The Round Smart Thermostat, T10 Pro Smart Thermostat, T9 Smart Thermostat, Wi-Fi Smart Color Thermostat, Wi-Fi Touchscreen Thermostat), including device-side and cloud-based features thereof, and related accessories (e.g., temperature sensor). Honeywell's smart thermostat systems are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. The Honeywell Accused Products are imported into the United States with this infringing design. The Honeywell Accused Products are then installed and used in the United States in Honeywell users' homes according to Honeywell's design and instructions. These acts each constitute an unlawful and unfair act.

121. The Honeywell Accused Products are designed to connect to Honeywell's servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals, e.g., Total Connect Comfort App), and related accessories upon importation. Honeywell's smart thermostat systems provide features to

the user that are supported by the various components of the Honeywell system. Users actually use the Honeywell systems in this manner in the United States after they are imported and sold here.

122. The imported Honeywell Accused Products (e.g., WiFi 9000 Color Touchscreen Thermostat) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Honeywell actively encourages users of the Honeywell Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Honeywell's design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the WiFi 9000 Color Touchscreen Thermostat and other Honeywell Accused Products imported by Honeywell infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the WiFi 9000 Color Touchscreen Thermostat and the other Honeywell Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '322 Patent

123. Exhibit 31 includes a chart comparing independent claim 1 of the '322 patent to the Honeywell Accused Products, showing that they practice at least this claim.

2. Infringement of the '567 Patent

124. Exhibit 32 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Honeywell Accused Products, showing that they practice at least these claims.

3. Infringement of the '983 Patent

125. Exhibit 33 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Honeywell Accused Products, showing that they practice at least these claims.

4. Infringement of the '488 Patent

126. Exhibit 35 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Honeywell Accused Products, showing that they practice at least these claims.

F. Johnson

127. The Johnson Accused Products include Johnson's smart thermostat systems (e.g., TEC3000 Series, T9100/T9180), including device-side and cloud-based features thereof, and related accessories (e.g., temperature sensor). Johnson smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted Patents and to embody a material part of the claimed inventions. The Johnson Accused Products are imported into the United States with this infringing design. The Johnson Accused Products are then installed and used in the United States in Johnson users' homes according to Johnson design and instructions. These acts each constitute an unlawful and unfair act. The Johnson Accused Products are designed to connect to Johnson's servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories upon importation. They are designed to be installed in the user's home, connect to the user's HVAC system, and connect to a network to communicate with Johnson's servers, related online interfaces, and related accessories. Johnson's smart thermostat systems provide features to the user that are supported by the various components of the Johnson system. Users actually use the Johnson systems in this manner in the United States after they are imported and sold here.

128. The imported Johnson Accused Products (e.g., TEC3000 series) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Johnson actively encourages users of the Johnson Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Johnson design and instructions,

which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the TEC3000 Series and other Johnson Accused Products imported by Johnson infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the TEC3000 Series and the other Johnson Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '322 Patent

129. Exhibit 36 includes a chart comparing independent claim 1 of the '322 patent to the Johnson Accused Products, showing that they practice at least this claim.

2. Infringement of the '567 Patent

130. Exhibit 37 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Johnson Accused Products, showing that they practice at least these claims.

3. Infringement of the '983 Patent

131. Exhibit 38 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Johnson Accused Products, showing that they practice at least these claims.

4. Infringement of the '488 Patent

132. Exhibit 40 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Johnson Accused Products, showing that they practice at least these claims.

G. Siemens

133. The Siemens Accused Products include Siemens's smart thermostat systems (e.g., RDS120 Smart Thermostat, RDS120-B Smart Thermostat), including device-side and cloud-based features thereof, and related accessories. Siemens smart thermostat systems and related accessories are specifically designed, and especially made and adapted, to infringe claims of the Asserted

Patents and to embody a material part of the claimed inventions. The Siemens Accused Products are imported into the United States with this infringing design. The Siemens Accused Products are then installed and used in the United States in Siemens users' homes according to Siemens design and instructions. These acts each constitute an unlawful and unfair act.

134. The Siemens Accused Products are designed to connect to Siemens servers and data centers (including, e.g., cloud-based servers and backend support), related online interfaces (including, e.g., mobile apps and web portals), and related accessories, upon importation. Siemens smart thermostat systems provide features to the user that are supported by the various components of the Siemens system. Users actually use the Siemens systems in this manner in the United States after they are imported and sold here.

135. The imported Siemens Accused Products (e.g., RDS120 Smart Thermostat) are not staple articles or commodities suitable for substantial noninfringing use. In the United States, Siemens actively encourages users of the Siemens Accused Products to use the products' smart thermostat features in the normal and intended manner, and according to Siemens design and instructions, which infringes certain claims of the Asserted Patents. The charts referenced below establish, based on publicly available information, that the RDS120 Smart Thermostat and other Siemens Accused Products imported by Siemens infringe certain claims of the Asserted Patents, either literally or pursuant to the doctrine of equivalents, and either directly or indirectly under a theory of inducement or contributory infringement. Upon information and belief, there are no material differences between the RDS120 Smart Thermostat and the other Siemens Accused Products with respect to the unlawful acts described here and illustrated in the charts referenced below.

1. Infringement of the '322 Patent

136. Exhibit 41 includes a chart comparing independent claim 1 of the '322 patent to the Siemens Accused Products, showing that they practice at least this claim.

2. Infringement of the '567 Patent

137. Exhibit 42 includes a chart comparing independent claims 1 and 15 of the '567 patent to the Siemens Accused Products, showing that they practice at least these claims.

3. Infringement of the '983 Patent

138. Exhibit 43 includes a chart comparing independent claims 1 and 24 of the '983 patent to the Siemens Accused Products, showing that they practice at least these claims.

4. Infringement of the '550 Patent

139. Exhibit 44 includes a chart comparing independent claims 1, 9, and 17 of the '550 patent to the Siemens Accused Products, showing that they practice at least these claims.

5. Infringement of the '488 Patent

140. Exhibit 45 includes a chart comparing independent claims 1 and 9 of the '488 patent to the Siemens Accused Products, showing that they practice at least these claims.

VII. CLASSIFICATION OF THE ACCUSED PRODUCTS UNDER THE HARMONIZED TARIFF SCHEDULE

141. The Accused Products are classified under at least the following subheadings of the Harmonized Tariff Schedule of the United States: 9032.10.00, 9032.20.00, and 9032.89.60 (thermostats). These classifications are exemplary in nature and not intended to restrict the scope of any exclusion order or other remedy ordered by the Commission.

VIII. RELATED LITIGATION

142. The unfair methods of competition and unfair acts contained in this Complaint, and the subject matter thereof, are not and have not been the subject of any current or prior court or agency litigation, other than as set forth below.

143. On October 23, 2019, EcoFactor filed a Complaint with the International Trade Commission. The complaint alleged violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain smart thermostat systems, smart HVAC systems, and components thereof by reason of infringement of certain claims of U.S. Patent No. 8,131,497 (“the ’497 patent”); U.S. Patent No. 8,423,322 (“the ’322 patent”); U.S. Patent No. 8,498,753 (“the ’753 patent”); and U.S. Patent No. 10,018,371 (“the ’371 patent”). The respondents remaining in that Investigation, Inv. No. 337-TA-1185, which is currently pending before ALJ Shaw, are ecobee Ltd., ecobee, Inc., Google LLC, Alarm.com Incorporated, Alarm.com Holdings, Inc., and Vivint Inc.

144. On January 31, 2020, EcoFactor filed three Complaints in the United States District Court for the Western District of Texas, Waco Division. The complaints alleged, *inter alia*, claims for patent infringement based on the making, use, sale, and offer for sale within the United States after importation of certain smart thermostat systems, smart HVAC control systems, smart HVAC systems, and components thereof by reason of infringement of certain claims of U.S. Patent No. 8,412,488, 8,180,492, 8,738,327, and 10,534,382. The defendants in the case include ecobee Ltd., ecobee, Inc., Google LLC, and Vivint Inc. The cases include EcoFactor, Inc. v. Google LLC (Case No. 6:20-cv-00075-ADA), EcoFactor, Inc. v. ecobee, Inc. (Case No. 6:20-cv-00078-ADA), and EcoFactor, Inc. v. Vivint, Inc. (Case No. 6:20-cv-00080-ADA).

145. On November 12, 2019, EcoFactor filed four Complaints in the United States District Court for the District of Massachusetts. The complaint alleged, *inter alia*, claims for patent infringement based on the making, use, sale, and offer for sale within the United States after importation of certain smart thermostat systems, smart HVAC control systems, smart HVAC systems, and components thereof by reason of patent infringement. The cases are EcoFactor, Inc. v. Google LLC (No. 1:19-cv-12322-LTS), EcoFactor, Inc. v. Alarm Inc. and Alarm.com Holdings

(1:19-cv-12323-LTS), EcoFactor, Inc. v. ecobee, Inc. and ecobee Ltd. (Case No. 1:19-cv-12325-MBB), and EcoFactor, Inc. v. Vivint Inc. (Case No. 1:19-cv-12327-FDS).

146. Google LLC filed IPR petitions regarding the patents asserted in the prior cases noted above: IPR2020-00946 (Pat. No. 8,131,497) (PTAB denied institution); IPR2020-00947 (Pat. No. 8,131,497) (PTAB denied institution); IPR2020-00968 (Pat. No. 8,423,322) (PTAB denied institution); IPR2020-01504 (Pat. No. 8,498,753) (institution decision yet to be issued); IPR2021-0054 (Pat. No. 10,534,382) (institution decision yet to be issued); IPR2021-0409 (Pat. No. 8,412,488) (institution decision yet to be issued); IPR2021-0454 (Pat. No. 8,738,327) (institution decision yet to be issued); and IPR2021-0488 (Pat. No. 8,180,492) (institution decision yet to be issued).

IX. DOMESTIC INDUSTRY

147. A domestic industry exists under Section 337(a)(2) and 337(a)(3). In particular, a domestic industry exists as a result of EcoFactor's significant investment in plant and equipment, significant employment of labor and capital, and substantial investment in engineering and research and development with respect to EcoFactor's energy platform ("EcoFactor Platform") that practices and is protected by the Asserted Patents. 19 U.S.C. § 1337(a)(3)(A)-(C).

1. Technical Prong

148. EcoFactor makes significant and substantial investments in plant and equipment, labor and capital, and engineering and research and development with respect to products that practice one or more claims of each of the Asserted Patents (the "EcoFactor Products"), including the EcoFactor Platform. The EcoFactor Platform consists of over thirty-four thousand (34,000) source code files, written and maintained by EcoFactor's software engineers since the company's founding. This software functions as a smart HVAC control system that actively manages thermostats on occupants' behalf in intelligent ways. For example, the EcoFactor Platform's

software includes its patented big-data analytics and machine learning algorithms, which collect and process massive amounts of residential data – including home thermodynamics, family comfort preferences and schedules, plus external data such as weather – to continually monitor, adapt and learn for optimum energy savings, time savings, cost savings, and comfort improvements. The EcoFactor Platform’s software also includes its custom feature set for connecting to and programming connected thermostats based on its analytics engine and homeowner preferences. The EcoFactor Platform includes software programs that are stored in locations within the United States. The EcoFactor Platform software is stored and hosted with servers running in the United States, including servers wholly owned by EcoFactor and servers leased by EcoFactor through a cloud server software hosting service. The EcoFactor Platform has been designed to function as a smart HVAC control system together with a number of different programmable communicating thermostats available in the marketplace since the company was founded. The EcoFactor Platform also includes software programming that allows end users to adjust temperature settings and otherwise interface with the smart HVAC control system using a web browser on a mobile phone, tablet, or computer. The EcoFactor Platform also includes software programs for EcoFactor’s mobile or web-based applications. In 2017, EcoFactor added the Simple Thermostat to its suite of smart thermostat and smart HVAC control system products. EcoFactor designed the Simple Thermostat to integrate with the EcoFactor Platform’s software programming, as other programmable communicating thermostats do.

149. Exhibits 62-66 are claim charts demonstrating that the EcoFactor Products practice at least one claim of the Asserted Patents.

2. Economic Prong

150. EcoFactor has in the United States, with respect to the EcoFactor Products, millions of dollars in investments in plant and equipment, significant employment of labor and capital, and

substantial investments in exploitation of the Asserted Patents, including in research and development. These investments and employment are all with respect to protected products, such as the EcoFactor Platform, and the Asserted Patents. Confidential Exhibit 67C is a declaration from EcoFactor's Chief Executive Officer, Shayan Habib, detailing EcoFactor's significant and substantial activities, investments, and employment with respect to the Asserted Patents.

151. EcoFactor is the assignee of the Asserted Patents. Exs. 1-8, 68-69, Appxs. A1, B1, C1, D1, and E1. EcoFactor designs, develops, manufactures, sells, and supports products, within the United States, that are protected by at least one claim of each of the Asserted Patents.

152. EcoFactor was founded in 2006 and is headquartered in Palo Alto, California. EcoFactor is a leader in smart home energy management services. EcoFactor delivers smart home energy management services that improve energy efficiency, reduce energy bills and vastly increase demand response efficacy – all while maintaining consumer comfort. EcoFactor's patented big-data analytics and machine learning algorithms collect and process massive amounts of residential data – including home thermodynamics, family comfort preferences and schedules, plus external data such as weather – to continually monitor, adapt and learn for optimum energy savings. The company provides homeowners significant cost savings automatically. EcoFactor's award-winning service has been offered through channel partners such as utilities, energy retailers, broadband service providers and HVAC companies.

153. EcoFactor has transformed how homes use energy by applying advanced analytics to connected devices in the home. The EcoFactor Platform actively manages thermostats on occupants' behalf in intelligent ways that improve comfort while helping them save time, energy and money. Utilities, home service providers and homeowners rely on EcoFactor for demand response, energy efficiency, and HVAC performance monitoring services.

154. EcoFactor has invested and continues to make significant investments in domestic labor and capital relating to the EcoFactor Product, including through its strategic partnership with Bidgely. Details relating to EcoFactor's domestic expenditures on labor and capital are set forth in Confidential Exhibit 67.

155. EcoFactor has also invested and continues to make significant investments in domestic plant and equipment relating to the EcoFactor Product. Details relating to EcoFactor's domestic expenditures on plant and equipment are set forth in Confidential Exhibit 67.

156. EcoFactor has also invested and continues to make substantial investments in engineering and research and development relating to the EcoFactor Product and the Asserted Patents. Details relating to EcoFactor's domestic expenditures on engineering and research and development are set forth in Confidential Exhibit 67.

X. RELIEF REQUESTED

157. The Proposed Respondents have infringed and will continue to infringe the Asserted Patents as specified in Sections V and VI above, unless the Commission prohibits the importation into and sale within the United States after importation of the Accused Products.

158. Accordingly, EcoFactor respectfully requests that the United States International Trade Commission:

a) institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, into Proposed Respondents' violations of Section 337 arising from the sale for importation into the United States, importation, and/or sale within the United States after importation of certain smart thermostat systems, smart HVAC systems, smart HVAC control systems, and components thereof that infringe the Asserted Patents;

b) schedule and conduct a hearing, pursuant to Section 337(c), for purposes of receiving evidence and hearing argument concerning whether Proposed Respondents have violated

Section 337 and, following the hearing, determine that Proposed Respondents have violated Section 337;

c) issue a permanent limited exclusion order, pursuant to Section 337(d) and (f)(1), specifically directed to each named Respondent and each of their respective subsidiaries and affiliates, excluding from entry into the United States all Accused Products that infringe one or more claims of the Asserted Patents;

d) issue permanent cease and desist orders, pursuant to Section 337(f), directing Proposed Respondents to cease and desist from importing, selling, selling for importation, offering for sale, using, demonstrating, promoting, marketing, and/or advertising in the United States Proposed Respondents' smart thermostat systems, smart HVAC systems, smart HVAC control systems, and components thereof that infringe one or more claims of the Asserted Patents;

e) impose a bond on importation and sales of infringing products during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j); and

f) grant all such other and further relief as it deems appropriate under the law, based upon the facts complained of herein and as determined by the investigation.

Dated: February 25, 2021

Respectfully submitted,

/s/ Matthew D. Aichele

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Attorneys for Complainant EcoFactor, Inc.

**THE UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

**CERTAIN SMART THERMOSTAT
SYSTEMS, SMART HVAC SYSTEMS,
SMART HVAC CONTROL SYSTEMS,
AND COMPONENTS THEREOF**

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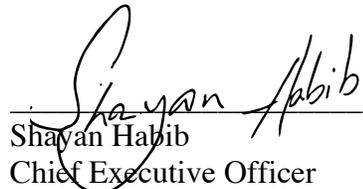
Investigation No. 337-TA-_____

I, Shayan Habib, declare, in accordance with 19 C.F.R. § 210.12(a)(1), as follows:

1. I am the Chief Executive Officer of EcoFactor, Inc. and I am duly authorized to sign this Complaint;
2. I have read the Complaint and am aware of its contents;
3. The Complaint is not being presented for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of the investigation or related proceeding;
4. To the best of my knowledge, information and belief founded upon reasonable inquiry, claims, defenses, and other legal contentions therein are warranted by existing law or by a non-frivolous argument for the extension, modification, or reversal of existing law or the establishment of new law;
5. The allegations and other factual contentions have evidentiary support or are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on February 25, 2021



Shayan Habib
Chief Executive Officer
EcoFactor, Inc.